**Updated** 04/30/13

# FEDERAL PROJECT

# BIDDING INSTRUCTIONS

FOR ALL PROJECTS:

1. Use pen and ink to complete all paper Bids.
2. As a minimum, the following must be received prior to the time of Bid opening:

For a Paper Bid:

a) a copy of the Notice to Contractors, b) the completed Acknowledgement of Bid Amendments form, c) the completed Schedule of Items, d) two copies of the completed and signed Contract Offer, Agreement & Award form, e) a Bid Guaranty, (if required), and f) any other certifications or Bid requirements listed in the Bid Documents as due by Bid opening.

For an Electronic Bid:

a) a completed Bid using Expedite® software and submitted via the Bid Express™ web-based service, b) an electronic Bid Guaranty (if required) or a faxed copy of a Bid Bond (with original to be delivered within 72 hours), and c) any other Certifications or Bid requirements listed in the Bid Documents as due by Bid opening.

3. Include prices for all items in the Schedule of Items (<u>excluding non-selected alternates</u>).
4. Bid Guaranty acceptable forms are:
   a) a properly completed and signed Bid Bond on the Department's prescribed form (or on a form that does not contain any significant variations from the Department's form as determined by the Department) for 5% of the Bid Amount or
   b) an Official Bank Check, Cashier's Check, Certified Check, U.S. Postal Money Order or Negotiable Certificate of Deposit in the amount stated in the Notice to Contractors or
   c) an electronic bid bond submitted with an electronic bid.

5. If a paper Bid is to be sent, "FedEx First Overnight" delivery is suggested as the package is delivered directly to the DOT Headquarters Building located at 16 Child Street in Augusta. Other means, such as U.S. Postal Service's Express Mail has proven not to be reliable.

IN ADDITION, FOR FEDERAL AID PROJECTS:

6. Complete the DBE Proposed Utilization form, and submit with your bid. If you are submitting your bid electronically, you must FAX the form to (207) 624-3431. This is a curable defect.

*If you need further information regarding Bid preparation, call the DOT Contracts Section at (207) 624-3410.*

*For complete bidding requirements, refer to Section 102 of the Maine Department of Transportation, Standard Specifications, Revision of December 2002.*

January 19, 2012
Supersedes September 09, 2011

# NOTICE

**The Maine Department of Transportation is attempting to improve the way Bid Amendments/Addendums are handled, and allow for an electronic downloading of bid packages from our website, while continuing to maintain an optional planholders list.**

**Prospective bidders, subcontractors or suppliers who wish to download a copy of the bid package and receive a courtesy notification of project specific bid amendments, must provide an email address to Diane Barnes or David Venner at the MDOT Contracts mailbox at: MDOT.contracts@maine.gov. Each bid package will require a separate request.**

**Additionally, interested parties will be responsible for reviewing and retrieving the Bid Amendments from our web site, and acknowledging receipt and incorporating those Bid Amendments in their bids using the Acknowledgement of Bid Amendment Form.**

**The downloading of bid packages from the MDOT website is not the same as providing an electronic bid to the Department. Electronic bids must be submitted via http://www.BIDX.com. For information on electronic bidding contact Patrick Corum at patrick.corum@maine.gov , Rebecca Snowden at rebecca.snowden@maine.gov or Diane Barnes at diane.barnes@maine.gov.**

# NOTICE

For security and other reasons, all Bid Packages which are mailed, shall be provided in double (one envelope inside the other) envelopes. The *Inner Envelope* shall have the following information provided on it:

Bid Enclosed - Do Not Open
PIN:
Town:
Date of Bid Opening:
Name of Contractor with mailing address and telephone number:

In Addition to the usual address information, the *Outer Envelope* should have written or typed on it:

Double Envelope: Bid Enclosed
PIN:
Town:
Date of Bid Opening:
Name of Contractor:
*This should not be much of a change for those of you who use Federal Express or similar services.*

Hand-carried Bids may be in one envelope as before, and should be marked with the following infrormation:

Bid Enclosed: Do Not Open
PIN:
Town:
Name of Contractor:

October 16, 2001

## STATE OF MAINE DEPARTMENT OF TRANSPORTATION

Bid Guaranty-Bid Bond Form

**KNOW ALL MEN BY THESE PRESENTS THAT**_____

_____, of the City/Town of _____and State of_____

as Principal, and _____as Surety, a

Corporation duly organized under the laws of the State of_____and having a usual place of

Business in _____and hereby held and firmly bound unto the Treasurer of

the State of Maine in the sum of_____,for payment which Principal and Surety bind

themselves, their heirs, executers, administrators, successors and assigns, jointly and severally.

The condition of this obligation is that the Principal has submitted to the Maine Department of Transportation, hereafter Department, a certain bid, attached hereto and incorporated as a part herein, to enter into a written contract for the construction of _____

_____

_____and if the Department shall accept said bid and the Principal shall execute and deliver a contract in the form attached hereto (properly completed in accordance with said bid) and shall furnish bonds for this faithful performance of said contract, and for the payment of all persons performing labor or furnishing material in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be null and void; otherwise it shall remain in full force, and effect.

Signed and sealed this_____day of _____20_____

WITNESS:

_____

_____

_____

WITNESS

_____

_____

_____

PRINCIPAL:

By_____

By:_____

By:_____

SURETY:

By_____

By:_____

Name of Local Agency: _____

SAMPLE

# NOTICE

Bidders:

Please use the attached "Request for Information" form when faxing questions and comments concerning specific Contracts that have been Advertised for Bid. Include additional numbered pages as required. Questions are to be faxed to the number listed in the Notice to Contractors. This is the only allowable mechanism for answering Project specific questions. Maine DOT will not be bound to any answers to Project specific questions received during the Bidding phase through other processes.

State of Maine
Department of Transportation

# REQUEST FOR INFORMATION

Date _____ Time _____

**Information Requested:** **PIN:** _____ **Town(s):** _____

_____

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_____

_____

_____

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**Request by:** _____ **Phone: (_____)**_____
**Bid Date:** _____ **Fax: (_____)**_____

**Complete top portion of form and transmit to the number listed in the Notice to Contractors**

**RFI No:** _____ **RFI received:** _____

**Response:**_____

_____

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_____

Response By:_____ Date: _____

# NOTICE

## Disadvantaged Business Enterprise Proposed Utilization

The Apparent Low Bidder shall submit the Disadvantaged Business Enterprise Proposed Utilization form with their bid. This is a curable bid defect.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form contains additional information that is required by USDOT.

The Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan form should be used.

A copy of the new Contractor's Disadvantaged Business Enterprise Proposed Utilization Plan and instructions for completing it are attached.

Note: Questions about DBE firms, or to obtain a printed copy of the DBE Directory, contact The Office of Civil Rights at (207) 624-3066.

MDOTs DBE Directory of Certified firms can also be obtained at www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php

# INSTRUCTIONS FOR PREPARING THE MaineDOT CONTRACTOR'S DBE/SUBCONTRACTOR UTILIZATION FORM

The Contractor Shall Extend equal opportunity to MaineDOT certified DBE firms (as listed in MaineDOT's DBE Directory of Certified Businesses) in the selection and utilization of Subcontractors and Suppliers.

SPECIFIC INSTRUCTIONS FOR COMPLETING THE FORM:

Insert Contractor name, the name of the person(s) preparing the form, and that person(s) telephone, fax number and e-mail address.

Calculate and provide percentage of your bid that will be allocated to DBE firms, Federal Project Identification Number, and location of the Project work.

In the columns, name each subcontractor, DBE and non-DBE firm to be used, provide the Unit/Item cost of the work/product to be provided by the subcontractor, give a brief description and the dollar value of the work.

Revised 1/12

# DBE GOAL NOTICE
## Maine Department of Transportation
## Disadvantaged Business Enterprise Program

Notice is hereby given that in accordance with US DOT regulation 49 CFR Part 26, the Maine Department of Transportation has established a DBE Program for disadvantaged business participation in the federal-aid highway and bridge construction program; MaineDOT contracts covered by the program include consulting, construction, supplies, manufacturing, and service contracts.

For FFY 2013-15 (October 1, 2012 through September 30, 2015) MaineDOT has established an annual DBE participation goal of **4.0%** to be achieved through race/gender neutral means. This goal has been approved by the Federal Highway Administration and remains in effect through September 30, 2015. Maine DOT must meet this goal each federal fiscal year. If the goal is not met, MaineDOT must provide a justification for not meeting the goal and provide a plan to ensure the goal is met, which may include contract goals on certain projects that contractors will be required to meet.

MaineDOT asks all contractors, consultants and subcontractors to seek certified DBE firms for projects and to work to meet the determined 4.0% goal without the need to impose contract goals. DBE firms are listed on the MaineDOT website at:

http://www.maine.gov/mdot/disadvantaged-business-enterprises/pdf/directory.pdf

Interested parties may view MaineDOT's DBE goal setting methodology also posted on this website. If you have questions regarding this goal or the DBE program you may contact Sherry Tompkins at the Maine Department of Transportation, Civil Rights Office by telephone at (207) 624-3066 or by e-mail at: sherry.tompkins@maine.gov

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# MaineDOT CONTRACTOR'S DBE/SUBCONTRACTOR PROPOSED UTILIZATION FORM

**All Bidders must furnish this form with their bid on Bid Opening day**

**Contractor:** _____ **Telephone:** _____ **Ext** _____

**Contact Person:** _____ **Fax:** _____

**E-mail:** _____

**BID DATE:** _____

**FEDERAL PROJECT PIN #** _____ **PROJECT LOCATION:** _____

**TOTAL ANTICIPATED DBE ____ % PARTICIPATION FOR THIS CONTRACT**

| WBE | DBE | Non DBE | Firm Name | Item Number & Description of Work | Quantity | Cost Per Unit/Item | Anticipated $ Value |
|---|---|---|---|---|---|---|---|
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| | | | | | | | |
| | | | | | | **Subcontractor Total>** | |
| | | | | | | **DBE Total >** | |

**NOTE: THIS INFORMATION IS USED TO TRACK AND REPORT ANTICIPATED DBE PARTICIPATION IN ALL FEDERALLY FUNDED MAINE DOT CONTRACTS. THE ANTICIPATED DBE AMOUNT IS VOLUNTARY AND WILL NOT BECOME A PART OF THE CONTRACTUAL TERMS.**

Equal Opportunity Use:

Form received: ___/___/___ Verified by: _____

FHWA ☐ FTA ☐ FAA ☐

**For a complete list of certified firms and company designation (WBE/DBE) go to http://www.maine.gov/mdot**

Rev. 05/13

# Maine Department of Transportation Civil Rights Office

# Directory of Certified Disadvantaged Business Enterprises

**Listing can be found at:**

**www.maine.gov/mdot/disadvantaged-business-enterprises/dbe-home.php**

**For additional information and guidance contact: Civil Rights Office at (207) 624-3066**

*It is the responsibility of the Contractor to access the DBE Directory at this site in order to have the most current listings.*

## Vendor Registration

Prospective Bidders must register as a vendor with the Department of Administrative & Financial Services if the vendor is awarded a contract. Vendors will not be able to receive payment without first being registered. Vendors/Contractors will find information and register through the following link –
http://www.maine.gov/purchases/venbid/index.shtml

# STATE OF MAINE DEPARTMENT OF TRANSPORTATION
# NOTICE TO CONTRACTORS

Sealed Bids addressed to the Maine Department of Transportation, Augusta, Maine 04333 and endorsed on the wrapper "Bids for **Highway Rehabilitation** in the towns of **Smithfield - Norridgewock**" will be received from contractors at the Reception Desk, Maine DOT Building, Capitol Street, Augusta, Maine, until 11:00 o'clock A.M. (prevailing time) on July 17, 2013 and at that time and place publicly opened and read. Bids will be accepted from all bidders. The lowest responsive bidder must have completed, or successfully complete, a Highway Construction prequalification), or project specific prequalification to be considered for the award of this contract. We now accept electronic bids for those bid packages posted on the bidx.com website. Electronic bids do not have to be accompanied by paper bids. Please note: the Department will accept a facsimile of the bid bond; however, the original bid bond must then be received at the MDOT Contract Section within 72 hours of the bid opening. Until further notice, dual bids (one paper, one electronic) will be accepted, with the paper copy taking precedence.

Description: Maine Federal Aid Project No. STP-1277(600)X, WIN. 12776.00

Location: In Somerset County, project is located on Rte.8 beginning at the intersection of Island Lane and extending 7.298 miles to Rte.2, including 0.5 mi. on Perkins St. from Rte.8 to Rte.2.

Outline of Work: Highway Rehabilitation and other incidental work.

**The Basis of Award will be Section 0001only.**

For general information regarding Bidding and Contracting procedures, contact George Macdougall at (207) 624-3410. Our webpage at http://www.maine.gov/mdot/contractors/ contains a copy of the schedule of items, Plan Holders List, written portions of bid amendments (not drawings), and bid results. For Project-specific information fax all questions to **Project Manager** Ernie Martin at (207) 624-3431. Questions received after 12:00 noon of Monday prior to bid date will not be answered. Bidders shall not contact any other Departmental staff for clarification of Contract provisions, and the Department will not be responsible for any interpretations so obtained. TTY users call Maine Relay 711.

Plans, specifications and bid forms may be seen at the Maine DOT Building in Augusta, Maine and at the Department of Transportation's Regional Office in Dixfield. They may be purchased from the Department between the hours of 8:00 a.m. to 4:30 p.m. by cash, credit card (Visa/Mastercard) or check payable to Treasurer, State of Maine sent to Maine Department of Transportation, Attn.: Mailroom, 16 State House Station, Augusta, Maine 04333-0016. They also may be purchased by telephone at (207) 624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Full size plans $540.00 ($565.00 by mail). Half size plans $270.00 ($285.00 by mail), Bid Book $10 ($13 by mail), Single Sheets $2, payment in advance, all non-refundable.

Each Bid must be made upon blank forms provided by the Department and must be accompanied by a bid bond at 5% of the bid amount or an official bank check, cashier's check, certified check, certificate of deposit, or United States postal money order in the amount of $175,000.00 payable to Treasurer, State of Maine as a Bid guarantee. A Contract Performance Surety Bond and a Contract Payment Surety Bond, each in the amount of 100 percent of the Contract price, will be required of the successful Bidder.

This Contract is subject to all applicable Federal Laws. This contract is subject to compliance with the Disadvantaged Business Enterprise program requirements as set forth by the Maine Department of Transportation.

All work shall be governed by "State of Maine, Department of Transportation, Standard Specifications, Revision of December 2002", price $10 [$13 by mail], and Standard Details, Revision of December 2002, price $20 [$25 by mail]. They also may be purchased by telephone at (207) 624-3536 between the hours of 8:00 a.m. to 4:30 p.m. Standard Detail updates can be found at http://www.maine.gov/mdot/contractors/publications/ .

The right is hereby reserved to the Maine DOT to reject any or all bids.

Augusta, Maine
June 26, 2013

STATE OF MAINE
Kenneth
L.
Sweeney
4028
LICENSED
PROFESSIONAL ENGINEER

KENNETH L. SWEENEY, P. E.
CHIEF ENGINEER

# NOTICE

All bids for Federal Projects **shall** be accompanied by the DBE Proposed Utilization form. If you are submitting an electronic bid, the DBE Utilization Form may be faxed to 207-624-3431. Failure to submit the form with the bid will be considered a curable defect.

**SPECIAL PROVISION 102.7.3**
**ACKNOWLEDGMENT OF BID AMENDMENTS**

With this form, the Bidder acknowledges its responsibility to check for all Amendments to the Bid Package. For each Project under Advertisement, Amendments are located at http://www.maine.gov/mdot/contractors/ . It is the responsibility of the Bidder to determine if there are Amendments to the Project, to download them, to incorporate them into their Bid Package, and to reference the Amendment number and the date on the form below. The Maine DOT will not post Bid Amendments any later than noon the day before Bid opening without individually notifying all the planholders.

| Amendment Number | Date |
|---|---|
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The Contractor, for itself, its successors and assigns, hereby acknowledges that it has received all of the above referenced Amendments to the Bid Package.

CONTRACTOR

_____
Date

_____
Signature of authorized representative

_____
(Name and Title Printed)

MAINE DEPARTMENT OF TRANSPORTATION

SCHEDULE OF ITEMS

PAGE: 1
DATE: 130620
REVISED:

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| | SECTION 0001 PROJECT ITEMS | | | | | |
| 0010 | 201.11 CLEARING | 3.000 AC | | | | |
| 0020 | 201.23 REMOVING SINGLE TREE TOP ONLY | 118.000 EA | | | | |
| 0030 | 201.24 REMOVING STUMP | 72.000 EA | | | | |
| 0040 | 202.15 REMOVING MANHOLE OR CATCH BASIN | 8.000 EA | | | | |
| 0050 | 202.202 REMOVING PAVEMENT SURFACE | 640.000 SY | | | | |
| 0060 | 203.20 COMMON EXCAVATION | 58300.000 CY | | | | |
| 0070 | 203.2312 HEALTH AND SAFETY PLAN | LUMP | LUMP | | | |
| 0080 | 203.2333 DISPOSAL OF SPECIAL EXCAVATION | 50.000 T | | | | |
| 0090 | 203.25 GRANULAR BORROW | 100.000 CY | | | | |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0100 | 206.061 STRUCTURAL EARTH EXCAVATION - DRAINAGE AND MINOR STRUCTURES, BELOW GRADE | 50.000 CY | | | | |
| 0110 | 304.10 AGGREGATE SUBBASE COURSE - GRAVEL | 41125.000 CY | | | | |
| 0120 | 309.36 FULL DEPTH RECYCLED PAVEMENT W/ FOAM ASPHALT - 6 INCH DEPTH | 136000.000 SY | | | | |
| 0130 | 403.209 HOT MIX ASPHALT 9.5 MM (SIDEWALKS, DRIVES, INCIDENTALS) | 1300.000 T | | | | |
| 0140 | 403.210 HOT MIX ASPHALT 9.5 MM | 11306.000 T | | | | |
| 0150 | 403.213 HOT MIX ASPHALT 12.5 MM BASE | 18816.000 T | | | | |
| 0160 | 409.15 BITUMINOUS TACK COAT - APPLIED | 6900.000 G | | | | |
| 0170 | 411.10 UNTREATED AGGREGATE SURFACE COURSE (TRUCK MEASURE) | 360.000 CY | | | | |
| 0180 | 504.07 CONCRETE PIPE TIES | 12.000 GP | | | | |
| 0190 | 602.30 FLOWABLE CONCRETE FILL | 54.000 CY | | | | |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0200 | 603.155 12 INCH REINFORCED CONCRETE PIPE CLASS III | 48.000 LF | | | | |
| 0210 | 603.159 12 INCH CULVERT PIPE OPTION III | 200.000 LF | | | | |
| 0220 | 603.16 15 INCH CULVERT PIPE OPTION I | 3100.000 LF | | | | |
| 0230 | 603.169 15 INCH CULVERT PIPE OPTION III | 380.000 LF | | | | |
| 0240 | 603.17 18 INCH CULVERT PIPE OPTION I | 1200.000 LF | | | | |
| 0250 | 603.175 18 INCH REINFORCED CONCRETE PIPE CLASS III | 120.000 LF | | | | |
| 0260 | 603.179 18 INCH CULVERT PIPE OPTION III | 1850.000 LF | | | | |
| 0270 | 603.19 24 INCH CULVERT PIPE OPTION I | 320.000 LF | | | | |
| 0280 | 603.199 24 INCH CULVERT PIPE OPTION III | 600.000 LF | | | | |
| 0290 | 603.205 30 INCH REINFORCED CONCRETE PIPE CLASS III | 64.000 LF | | | | |
| 0300 | 603.209 30 INCH CULVERT PIPE OPTION III | 60.000 LF | | | | |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0310 | 603.235 48 INCH REINFORCED CONCRETE PIPE CLASS III | 88.000 LF | | | | |
| 0320 | 603.239 48 INCH CULVERT PIPE OPTION III | 56.000 LF | | | | |
| 0330 | 603.255 60 INCH REINFORCED CONCRETE PIPE CLASS III | 108.000 LF | | | | |
| 0340 | 604.092 CATCH BASIN TYPE B1-C | 33.000 EA | | | | |
| 0350 | 604.096 60 INCH CATCH BASIN TYPE B1-C | 1.000 EA | | | | |
| 0360 | 604.2402 BEHIND CURB CATCH BASIN | 1.000 EA | | | | |
| 0370 | 604.242 CATCH BASIN TYPE F3 | 2.000 EA | | | | |
| 0380 | 604.243 CATCH BASIN TYPE F3-C | 1.000 EA | | | | |
| 0390 | 604.244 CATCH BASIN TYPE F4 | 15.000 EA | | | | |
| 0400 | 604.246 CATCH BASIN TYPE F5 | 3.000 EA | | | | |
| 0410 | 604.247 CATCH BASIN TYPE F5-C | 5.000 EA | | | | |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0420 | 604.249 CATCH BASIN TYPE F6-C | 9.000 EA | | | | |
| 0430 | 604.262 CATCH BASIN TYPE B5-C | 11.000 EA | | | | |
| 0440 | 605.09 6 INCH UNDERDRAIN TYPE B | 11500.000 LF | | | | |
| 0450 | 605.10 6 INCH UNDERDRAIN OUTLET | 480.000 LF | | | | |
| 0460 | 605.11 12 INCH UNDERDRAIN TYPE C | 3800.000 LF | | | | |
| 0470 | 605.12 15 INCH UNDERDRAIN TYPE C | 1900.000 LF | | | | |
| 0480 | 605.13 18 INCH UNDERDRAIN TYPE C | 2200.000 LF | | | | |
| 0490 | 606.1722 BRIDGE TRANSITION - TYPE 2 | 8.000 EA | | | | |
| 0500 | 606.23 GUARDRAIL TYPE 3C - SINGLE RAIL | 2500.000 LF | | | | |
| 0510 | 606.231 GUARDRAIL TYPE 3C - 15 FOOT RADIUS AND LESS | 63.000 LF | | | | |
| 0520 | 606.232 GUARDRAIL TYPE 3C - OVER 15 FOOT RADIUS | 280.000 LF | | | | |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0530 | 606.259 ANCHORAGE ASSEMBLY | 15.000 EA | | | | |
| 0540 | 606.265 TERMINAL END - SINGLE RAIL - GALVANIZED STEEL | 13.000 EA | | | | |
| 0550 | 606.353 REFLECTORIZED FLEXIBLE GUARDRAIL MARKER | 44.000 EA | | | | |
| 0560 | 606.356 UNDERDRAIN DELINEATOR POST | 75.000 EA | | | | |
| 0570 | 606.65 GUARDRAIL THRIE BEAM - SINGLE RAIL | 50.000 LF | | | | |
| 0580 | 606.66 TERMINAL END THRIE BEAM | 2.000 EA | | | | |
| 0590 | 606.71 GUARDRAIL THRIE BEAM - 15 FOOT RADIUS AND LESS | 50.000 LF | | | | |
| 0600 | 606.79 GUARDRAIL 350 FLARED TERMINAL | 7.000 EA | | | | |
| 0610 | 608.07 PLAIN CONCRETE SIDEWALK | 6.000 SY | | | | |
| 0620 | 608.26 CURB RAMP DETECTABLE WARNING FIELD | 60.000 SF | | | | |
| 0630 | 609.11 VERTICAL CURB TYPE 1 | 320.000 LF | | | | |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | | UNIT PRICE DOLLARS | CTS | BID AMOUNT DOLLARS | CTS |
|---|---|---|---|---|---|---|---|
| 0640 | 609.31 CURB TYPE 3 | 12800.000 | LF | | | | |
| 0650 | 609.38 RESET CURB TYPE 1 | 63.000 | LF | | | | |
| 0660 | 610.08 PLAIN RIPRAP | 1650.000 | CY | | | | |
| 0670 | 610.18 STONE DITCH PROTECTION | 590.000 | CY | | | | |
| 0680 | 613.319 EROSION CONTROL BLANKET | 26100.000 | SY | | | | |
| 0690 | 615.07 LOAM | 6850.000 | CY | | | | |
| 0700 | 618.1301 SEEDING METHOD NUMBER 1 - PLAN QUANTITY | 31.000 | UN | | | | |
| 0710 | 618.1401 SEEDING METHOD NUMBER 2 - PLAN QUANTITY | 1000.000 | UN | | | | |
| 0720 | 618.1411 SEEDING METHOD NUMBER 3 - PLAN QUANTITY | 49.000 | UN | | | | |
| 0730 | 619.1201 MULCH - PLAN QUANTITY | 1100.000 | UN | | | | |
| 0740 | 620.54 STABILIZATION GEOTEXTILE | 30.000 | SY | | | | |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0750 | 620.58 EROSION CONTROL GEOTEXTILE | 5650.000 SY | | | | |
| 0760 | 627.18 12 " SOLID WHITE PAVEMENT MARKING | 250.000 LF | | | | |
| 0770 | 627.733 4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE | 124200.000 LF | | | | |
| 0780 | 627.75 WHITE OR YELLOW PAVEMENT & CURB MARKING | 710.000 SF | | | | |
| 0790 | 627.76 TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW | LUMP | LUMP | | | |
| 0800 | 629.05 HAND LABOR, STRAIGHT TIME | 120.000 HR | | | | |
| 0810 | 631.10 AIR COMPRESSOR (INCLUDING OPERATOR) | 10.000 HR | | | | |
| 0820 | 631.11 AIR TOOL (INCLUDING OPERATOR) | 10.000 HR | | | | |
| 0830 | 631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR) | 75.000 HR | | | | |
| 0840 | 631.172 TRUCK - LARGE (INCLUDING OPERATOR) | 30.000 HR | | | | |
| 0850 | 631.20 STUMP CHIPPER (INCLUDING OPERATOR) | 15.000 HR | | | | |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0860 | 631.221 SMALL FRONT-END LOADER (INCLUDING OPERATOR) | 20.000 HR | | | | |
| 0870 | 631.32 CULVERT CLEANER (INCLUDING OPERATOR) | 20.000 HR | | | | |
| 0880 | 639.18 FIELD OFFICE TYPE A | 1.000 EA | | | | |
| 0890 | 645.292 REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGNS TYPE II | 160.000 SF | | | | |
| 0900 | 652.31 TYPE I BARRICADE | 20.000 EA | | | | |
| 0910 | 652.312 TYPE III BARRICADE | 2.000 EA | | | | |
| 0920 | 652.33 DRUM | 100.000 EA | | | | |
| 0930 | 652.34 CONE | 150.000 EA | | | | |
| 0940 | 652.35 CONSTRUCTION SIGNS | 1000.000 SF | | | | |
| 0950 | 652.36 MAINTENANCE OF TRAFFIC CONTROL DEVICES | 500.000 CD | | | | |
| 0960 | 652.38 FLAGGER | 23250.000 HR | | | | |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0970 | 656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL | LUMP | LUMP | | | |
| 0980 | 658.20 ACRYLIC LATEX COLOR FINISH, GREEN | 210.000 SY | | | | |
| 0990 | 659.10 MOBILIZATION | LUMP | LUMP | | | |
| 1000 | 660.21 ON-THE-JOB TRAINING (BID) | 1000.000 HR | | | | |
| 1010 | 801.141 4" PVC SANITARY SEWER (SDR-35) | 6.000 LF | | | | |
| 1020 | 801.16 6 INCH PVC SANITARY SEWER (SDR-35) | 70.000 LF | | | | |
| 1030 | 803.01 TEST PITS | 4.000 EA | | | | |
| 1040 | 822.301 PRE-INSULATED DUCTILE IRON PIPE | 20.000 LF | | | | |
| 1050 | 822.321 4 INCH CLASS 52 DUCTILE IRON PIPE | 10.000 LF | | | | |
| 1060 | 822.33 6 INCH CLASS 52 DUCTILE IRON PIPE | 10.000 LF | | | | |
| 1070 | 822.34 8 INCH CLASS 52 DUCTILE IRON PIPE | 9010.000 LF | | | | |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 1080 | 823.3251 8 INCH GATE VALVE WITH BOX | 16.000 EA | | | | |
| 1090 | 823.3252 8" TAPPING SLEEVE AND VALVE 8" X 10" | 2.000 EA | | | | |
| 1100 | 823.33 6 INCH GATE VALVE WITH BOX | 1.000 EA | | | | |
| 1110 | 823.335 4 INCH GATE VALVE W/ BOX | 1.000 EA | | | | |
| 1120 | 824.30 FIRE HYDRANT W/ ASSEMBLIES | 10.000 EA | | | | |
| 1130 | 825.441 SHORT SIDE SERVICES | 37.000 EA | | | | |
| 1140 | 825.4411 LONG SIDE SERVICES | 37.000 EA | | | | |
| 1150 | 827.33 TRENCH INSULATION | 800.000 LF | | | | |
| 1160 | 827.364 ASBESTOS CEMENT PIPE DISPOSAL | 10.000 T | | | | |
| 1170 | 830.102 WATERLINE RAILROAD CROSSING MECHANIC STREET | LUMP | LUMP | | | |
| 1180 | 830.103 WATERLINE STREAM CROSSING MILL STREAM | LUMP | LUMP | | | |
| | SECTION 0001 TOTAL | | | | | . |

CONTRACT ID: 012776.00 PROJECT(S): STP-1277(600)X

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| | SECTION 0002 SEWER ITEM | | | | | |
| 1190 | 812.162 ADJUSTING SEWER MANHOLE TO GRADE | 24.000 EA | | | | |
| | SECTION 0002 TOTAL | | | | | |
| | TOTAL BID | | | | | |

# CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and _____ a corporation or other legal entity organized under the laws of the State of _____, with its principal place of business located at _____ _____

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

**A. The Work.**

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN. **12776.00**, for the **Highway Rehabilitation** in the towns of **Smithfield - Norridgewock**, County of **Somerset**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

**B. Time.**

The Contractor agrees to complete all Work, except warranty work, on or before **June 26, 2015.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

**C. Price.**

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is

**Section 0001 $_____**

**Section 0002 $_____**

Performance Bond and Payment Bond each being 100% of the amount awarded under this Contract (see award amount in Section G below).

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December

2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **PIN. 12776.00 – Highway Rehabilitation – in the towns of Smithfield - Norridgewock**, State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

| | |
|---|---|
| _____ | _____ |
| Date | (Signature of Legally Authorized Representative of the Contractor) |
| _____ | _____ |
| Witness | (Name and Title Printed) |

**G. Award.**

Your offer is hereby accepted for (see checked boxes):

Section 0001 ❑
Section 0002 ❑

**Contract Amount: _____**

This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

| | |
|---|---|
| _____ | _____ |
| Date | By: David Bernhardt, Commissioner |
| _____ | |
| Witness | |

# CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and _____ a corporation or other legal entity organized under the laws of the State of _____, with its principal place of business located at _____ _____

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

**A. The Work.**

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN. **12776.00**, for the **Highway Rehabilitation** in the towns of **Smithfield - Norridgewock**, County of **Somerset**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

**B. Time.**

The Contractor agrees to complete all Work, except warranty work, on or before **June 26, 2015.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

**C. Price.**

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is

**Section 0001 $_____**

**Section 0002 $_____**

Performance Bond and Payment Bond each being 100% of the amount awarded under this Contract (see award amount in Section G below).

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications Revision of December 2002, Standard Details Revision of December

2002 as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of: **PIN. 12776.00 – Highway Rehabilitation – in the towns of Smithfield - Norridgewock**, State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of December 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

| | |
|---|---|
| _____ | _____ |
| Date | (Signature of Legally Authorized Representative of the Contractor) |
| _____ | _____ |
| Witness | (Name and Title Printed) |

**G. Award.**

Your offer is hereby accepted for (see checked boxes):

Section 0001 ❑
Section 0002 ❑

**Contract Amount: _____**

This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

| | |
|---|---|
| _____ | _____ |
| Date | By: David Bernhardt, Commissioner |
| _____ | |
| Witness | |

# CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and **(Name of the firm bidding the job)** a corporation or other legal entity organized under the laws of the State of Maine, with its principal place of business located at **(address of the firm bidding the job)**

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

SAMPLE

**A. The Work.**

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, PIN No.**1224.00**, for the **Hot Mix Asphalt Overlay** in the town/city of **South Nowhere,** County of **Washington**, Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

**B. Time.**

The Contractor agrees to complete all Work, except warranty work, on or before **November 15, 2006.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and related Special Provisions.

**C. Price.**

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is ____(**Place bid here in alphabetical form such as One Hundred and Two dollars and 10 cents**) _____ **$_ (repeat bid here in numerical terms, such as $102.10**)_____ Performance Bond and Payment Bond each being 100% of the amount of this Contract.

**D. Contract.**

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

**E. Certifications.**

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in Appendix A to Division 100 of the Standard Specifications Revision of December 2002 (Federal Contract Provisions Supplement), and the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

SAMPLE

**F. Offer.**

The undersigned, having carefully examined the site of work, the Plans, Standard Specifications, Revision of December 2002, Standard Details Revision of December 2002, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

**PIN 1234.00 South Nowhere, Hot Mix Asphalt Overlay,**

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items".

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items", which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the Standard Specifications, Revision of December 2002, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the Standard Specifications Revision of 2002 and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: The Contractor will be bound to the Disadvantaged Business Enterprise (DBE) Requirements contained in the attached Notice (Additional Instructions to Bidders) and submit a completed Contractor's Disadvantaged Business Enterprise Utilization Plan with their bid.

Fifth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

SAMPLE

Sixth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute two duplicate originals of this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

| | |
|---|---|
| _____ | **(Sign Here)** |
| Date | (Signature of Legally Authorized Representative of the Contractor) |
| ____(**Witness Sign Here)** | **(Print Name Here)** |
| Witness | (Name and Title Printed) |

SAMPLE

**G. Award.**

Your offer is hereby accepted. This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

| | |
|---|---|
| _____ | _____ |
| Date | By: David Bernhardt, Commissioner |

_____
(Witness)

BOND # _____

CONTRACT PERFORMANCE BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____ _____ **in the State of** _____, as principal, and…….....,
a corporation duly organized under the laws of the State of ..... and having a usual place of business ..... .....,
as Surety, are held and firmly bound unto the Treasurer of the State of Maine in the sum of _____ **and 00/100 Dollars ($ )**, to be paid said Treasurer of the State of Maine or his successors in office, for which payment well and truly to be made, Principal and Surety bind themselves, their heirs, executors and administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in the Contract to construct Project Number _____ in the Municipality of _____ promptly and faithfully performs the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the State of Maine.

Signed and sealed this ..... day of ....., 20….. .

| WITNESSES: | SIGNATURES: |
|---|---|
| | CONTRACTOR: |
| Signature..... | .....…..... |
| Print Name Legibly ..... | Print Name Legibly ...……..... |
| | SURETY: |
| Signature ..... | .....……..... |
| Print Name Legibly ..... | Print Name Legibly ..... |
| SURETY ADDRESS: | NAME OF LOCAL AGENCY: |
| ..... | ADDRESS ..... |
| ..... | ..……..... |
| ..... | .....……..... |
| TELEPHONE..... | .....……..... |

SAMPLE

BOND # _____

CONTRACT PAYMENT BOND
(Surety Company Form)

KNOW ALL MEN BY THESE PRESENTS: That _____ _____ **in the State of** _____, as principal, and.....….....
a corporation duly organized under the laws of the State of ..... and having a usual place of business in .....……., as Surety, are held and firmly bound unto the Treasurer of the State of Maine for the use and benefit of claimants as herein below defined, in the sum of _____ **and 00/100 Dollars ($ )** for the payment whereof Principal and Surety bind themselves, their heirs, executors and administrators, successors and assigns, jointly and severally by these presents.

The condition of this obligation is such that if the Principal designated as Contractor in the Contract to construct Project Number _____ in the Municipality of _____ promptly satisfies all claims and demands incurred for all labor and material, used or required by him in connection with the work contemplated by said Contract, and fully reimburses the obligee for all outlay and expense which the obligee may incur in making good any default of said Principal, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material or both, used or reasonably required for use in the performance of the contract.

Signed and sealed this ..... day of ...……....., 20 ... .

| | |
|---|---|
| WITNESS: | SIGNATURES: |
| | CONTRACTOR: |
| Signature……..... | .....…..... |
| Print Name Legibly .....…….. | Print Name Legibly ….....  |
| | SURETY: |
| Signature..... | ...…..... |
| Print Name Legibly ..... | Print Name Legibly ….....  |
| SURETY ADDRESS: | NAME OF LOCAL AGENCY: |
| ...…..... | ADDRESS ….....  |
| ..... | …….....  |
| TELEPHONE ..... | …….....  |

SAMPLE

July 16, 2009

# SPECIAL PROVISION
## SECTION 102.3
### EXAMINATION OF DOCUMENTS, SITE, AND OTHER INFORMATION
(Geotechnical Information)

Add the following to Section 102.3, Examination of Documents, Site and Other Information:

102.3.1 Geotechnical Information In most cases, Geotechnical Information pertaining to the project has been collected and assembled. Bidders and Contractors are obligated to examine and, if necessary, obtain geotechnical information. If one is available, the project geotechnical report may be accessed at the following web address:

http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php.

The Department shall not be responsible for the Bidders' and Contractors' interpretations of or estimates or conclusions drawn from the Geotechnical Information. Data provided may not be representative of the subsurface conditions between the boring locations.

This section does not diminish the duties imposed upon parties in Section 102 or in any other sections.

General Decision Number: ME130046 02/01/2013 ME46

Superseded General Decision Number: ME20120046

State: Maine

Construction Type: Highway

County: Somerset County in Maine.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

| Modification Number | Publication Date |
|---|---|
| 0 | 01/04/2013 |
| 1 | 02/01/2013 |

* ENGI0004-014 12/01/2012

| | Rates | Fringes |
|---|---|---|
| POWER EQUIPMENT OPERATOR: Bobcat/Skid Steer/Skid Loader, Mechanic | $ 26.21 | 23.64 |

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* SUME2011-041 09/14/2011

| | Rates | Fringes |
|---|---|---|
| CARPENTER, Includes Form Work | $ 18.34 | 2.84 |
| INSTALLER - GUARDRAIL | $ 11.53 | 1.55 |
| IRONWORKER, REINFORCING | $ 18.71 | 0.00 |
| LABORER: Asphalt Raker | $ 13.91 | 2.94 |
| LABORER: Flagger | $ 9.00 | 0.00 |
| LABORER: Landscape | $ 13.30 | 0.16 |
| LABORER: Pipelayer | $ 13.21 | 1.58 |
| LABORER: Wheelman | $ 13.81 | 1.47 |
| LABORER: Common or General, Including Highway/Parking Lot Striping | $ 12.05 | 1.38 |
| OPERATOR: Asphalt Roller | $ 18.92 | 7.24 |
| OPERATOR: Backhoe | $ 16.18 | 4.98 |
| OPERATOR: Bulldozer | $ 12.63 | 2.88 |
| OPERATOR: Cold Planer | $ 17.63 | 0.00 |

OPERATOR: Crane.....$ 21.21 6.19

OPERATOR: Excavator.....$ 15.41 3.86

OPERATOR: Grader/Blade.....$ 17.26 2.73

OPERATOR: Loader.....$ 15.69 2.87

OPERATOR: Milling Machine
Reclaimer Combo.....$ 13.00 0.80

OPERATOR: Paver (Asphalt,
Aggregate, and Concrete).....$ 21.49 5.20

OPERATOR: Screed.....$ 16.00 0.00

OPERATOR: Roller (Earth).....$ 11.55 1.72

TRUCK DRIVER, Includes All
Dump Trucks.....$ 12.60 5.82

TRUCK DRIVER: Lowboy Truck.....$ 12.35 0.00

TRUCK DRIVER: Semi-Trailer
Truck.....$ 16.36 9.09

TRUCK DRIVER: 1, 2, 3 Axle
Truck.....$ 12.40 2.19

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first

four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

Town: **Smithfield-Norridgewock**
Project: **12776.00**
Date: **June 5, 2013**

# SPECIAL PROVISIONS
# SECTION 104
# Utilities

## MEETING

A Preconstruction Utility Conference, as defined in Subsection 104.4.6 of the Standard Specifications **IS** required.

## GENERAL INFORMATION

These Special Provisions outline the arrangements that have been made by the Department for utility/railroad work to be undertaken in conjunction with this project. The following list identifies all known utilities or railroads having facilities presently located within the limits of this project or intending to install facilities during project construction.

**Overview:**

| Utility/Railroad | Aerial | Underground |
|---|---|---|
| Central Maine Power Company | X | |
| Time Warner Cable | X | |
| Somerset Telephone Company | X | |
| Town of Norridgewock | | X |
| Norridgewock Water District | | X |
| Pan Am Railways | X | X |

| | |
|---|---|
| Central Maine Power Company | Gerry Norton 779-9118 |
| Time Warner Cable | Jamie Labelle 458-8001 |
| | Tom Ludden 458-8078 |
| Somerset Telephone Company | Reggie Palmer 944-3621 |
| | Greg Hart 399-9932 |
| Town of Norridgewock | Michelle Flewelling 634-2252 |
| Norridgewock Water District | David Jones 634-3330 |
| Pan Am Railways | Ted Krug (978) 663-1108 |

Temporary utility adjustments are not anticipated on this project however, should the contractor choose to have any utilities temporarily relocate, all work will be done by the facility owner at the contractor's request and expense at no additional cost to the Department.

All utility crossings over highways will provide not less than 20 feet vertical clearance over finished grade elevation during construction of this project.

All adjustments are to be made by the respective utility unless otherwise specified herein.

Construction of any spot cuts or fills in excess of 2 feet must be complete prior to utility relocations.

It is the responsibility of the Contractor with the Utility Pole owner, to layout all of the proposed pole locations in the field prior to the start of utility relocations. Should any adjustments be needed, the Utility will document adjustments and inform the Department prior to utility relocations.

Utility working days are Monday through Friday. Times are estimated on the basis of a single crew for each utility. Any times and dates mentioned are **estimates only** and are dependent upon favorable weather, working conditions, and freedom from emergencies. The Contractor shall have no claim against the Department if they are exceeded.

***Aerial:***

**Central Maine Power (CMP)** will be moving **175 poles** as a result of this project. **CMP** plans to start pole sets on the southerly end of the project and work north.

*****CMP has several different systems configurations running throughout the Project. Specific information regarding the line voltage can be requested from CMP*****

Once the poles are set and power is transferred the remaining Utilities will be transferred in the order listed below.

*****Please See the Attached Pole List*****

| Utility | Pole Set | New Wires/Cables | Trans. Wires/Cables | Remove Poles | Estimated Working Days |
|---|---|---|---|---|---|
| Central Maine Power Company | 40 | | 65 | 20 | **125** |
| Time Warner Cable | | | 60 | | **60** |
| Somerset Telephone Company | | | 60 | | **60** |
| | | | | **Total:** | **245** |

## *Subsurface Utility Specific Issues:*

**Somerset Tel** has a duct bank crossing the Project at Sta. 382+40 +/- and running along the east side of the Project from 382+10 +/- to Rte. 2. During the excavation of the box culvert at Sta. 383+80 +/- **Somerset Tel** may need to support the duct, scheduling of this work need to be coordinated with **Somerset Tel. Somerset Tel** requires **48 hrs.** notification to have a person onsite.

The **Norridgewock Water District (NWD)** has a drinking water system located within the limits of the project. Due to the age and condition of the existing water main **NWD has** decided to replace their system. The existing water mains are asbestos cement (AC) pipe. AC water mains can be brittle and services can be pulled out of the main if hit near the main. The existing main will be abandoned in place following completion of the new water main work. Contractor should sequence utility and storm drainage work accordingly to limit potential disruption of the existing water system while it is still active. **NWD** has entered into an agreement with Maine DOT to include all proposed water work into the contract. The Contractor shall bid on the

proposed water work listed in the schedule of bid items. During the excavation of the box culvert at Sta. 383+80 +/-, it will be the responsibility of the Contractor to support the water line if it is needed. This will be done at no additional cost to the District or the Project.

The **Town of Norridgewock** has a sanitary sewer system located within the limits of the project. As a result of this project the **Town** will be adjusting **24 Sewer Manholes**. The **Town** has entered into an **opt-out** agreement with Maine DOT to have the Contractor bid to on sewer manhole adjustments to be paid for under **Item 812.162 Adjusting Sewer Manhole to Grade**. Should the bids come in over the estimated cost the Town has the option to do the work themselves. If the Town opts to do the work they will need **8 working days** to raise structures to grade. During the excavation of the box culvert at Sta. 383+80 +/- the **Town** may need to support the main, scheduling of this work needs to be coordinated with the **Town.** The **Town** requires **48 hrs** notification to have a person onsite while the contractor is digging near their facilities or to make any adjustments to them.

| Utility | Summary of Work | Working Days |
|---|---|---|
| Town of Norridgewock | Sewer Manholes to Grade | **8** |
| | **Total:** | **8** |

## *Railroad Specific Issues:*

**Pan Am Railways** has a rail crossing at approximate station 381+90. Any work conducted within the Railroad Right of Way as noted on the plans, needs to be coordinated with **Pan Am Railways** as per the attached PRTS.

*****Please See the Attached PRTS*****

The contractor shall give all Utilities and the Railroad **10 working days notice** prior to beginning any work on this project.

## *Notice to Contractors:*

***The Town of Norridgewock and the Norridgewock Water District are not members of Dig Safe the Contractor must contact them directly.***

**MAINTAINING UTILITY LOCATION MARKINGS**

The contractor will be responsible for maintaining the buried utility location markings following the initial locating by the appropriate utility or their designated representative.

THE CONTRACTOR SHALL PLAN AND CONDUCT HIS WORK ACCORDINGLY.

# Rt. 8 Smithfield/Norridgewock

**PIN # 12776.00**

| CMP Pole # | Tel. Pole # | Existing Station | Right or Left | Existing Offset from C.L. (ft). | | Right or Left | New Offset from C.L. (ft) | Cut/Fill (-/+) | Miscellaneous/Remarks |
|---|---|---|---|---|---|---|---|---|---|
| **Perkins St.** | | | | | | | | | |
| **18** | | | | | **500 + 75.** | **L** | **21.0** | | New pole to close gap. **(Span to CMP 30 = 88 ft.)** |
| **17** | | | | | **502 + 58.** | **L** | **21.0** | **+2.3'** | New pole to close gap. **(Set 1' shallow)** |
| **16** | | | | | **504 + 41.** | **L** | **21.0** | **+2.0'** | New pole to close gap. **(Set 1' shallow)** |
| 15 | 12 | 506 + 28. | L | 17.3 | **506 + 25.** | **L** | **21.0** | **+0.6'** | Set at new station & offset. |
| 15S | 12S | 506 + 38. | R | 23.5 | **506 + 35.5** | **R** | **21.0** | **+1.8'** | Set at new station & offset. **(Set 1' shallow)** |
| 14S | | 508 + 04.5 | R | 23.5 | | | | **+1.3'** | Existing location OK, repalce in place if condition warrants. |
| 14 | | 508 + 09. | L | 17.5 | **508 + 09.5** | **L** | **21.0** | **+0.4'** | Set at new station & offset. |
| **13S** | | | | | **509 + 64.5** | **R** | **21.0** | **-1.2'** | **New pole to hold reverse corner at pole 13 (Set 1.5' deeper)** |
| 13 | | 509 + 68. | L | 16.0 | **509 + 64.5** | **L** | **17.0** | | New pole already set is OK at new station & offset. |
| 12 | | 511 + 03. | L | 15.5 | **Existing** | **L** | **21.0** | | Set to new offset at existing station. |
| 11 | | 512 + 35.5 | L | 16.0 | **512 + 30.** | **L** | **21.0** | **+0.5'** | Set at new station & offset. **(span is to pole 7)** |
| **11S** | | | | | **512 + 32.** | **R** | **21.0** | **+0.6'** | Exact stationing will have to be determined in field for proper alignment to hold feed to Highway garage. |
| 7 | | 512 + 85.5 | R | 60.5 | | | | | Existing location OK, repalce in place if condition warrants. **Dead end single phase & add head guy. (Pole is off project)** |
| **10S** | | **513 + 37.** | **L** | 17.0 | | | | | **Eliminate & remove** |
| 10 | 11 | 513 + 55.5 | R | 15.8 | **Existing** | **R** | **18.0** | | Set to new offset at existing station. |
| **9** | | **515 + 54.5** | **R** | 20.0 | | | | | **Old pole - Eliminate & remove** |
| 9 | 10 | 515 + 52. | R | 21.0 | | | | **+0.5'** | Existing location OK, repalce in place if condition warrants. **(Add side guy)** |
| 8 | 9 | 517 + 61. | R | ?? | **517 + 73.** | **L** | **23.0** | | Move from right to left and set at new station & offset. **(End of line.)** |
| **6** | | | | | **519 + 34.** | **L** | **21.0** | **+1.4'** | **New pole to close gap.** |
| **5** | | | | | **520 + 95.** | **L** | **21.0** | | **New pole to close gap.** |
| 4 | | 522 + 55.5 | L | 20.5 | | | | **+0.5'** | Existing location OK, repalce in place if condition warrants. |
| 3 1/2 | | 523 + 62.5 | L | 21.0 | | | | **+1.0'** | Existing location OK, repalce in place if condition warrants. |
| 3.1 | | 523 + 44. | R | 20.5 | **Existing** | **R** | **22.0** | | Set to new offset at existing station. |
| 3 | | 524 + 59. | L | 19.5 | | | | **+0.6'** | Existing location OK, repalce in place if condition warrants. |
| 2 | | 525 + 76.5 | L | 20.0 | | | | **+0.9'** | Existing location OK, repalce in place if condition warrants. |
| 1 | | 526 + 81. | L | 18.5 | | | | | Existing location OK, repalce in place if condition warrants. |
| 21 | | 527 + 72. | R | 54.5 | | | | | Existing Location OK, change out guys to sidewalk anchor and guys. |
| | | | | | | | | | |
| **RT 8 - Smithfield/Norridgewock** | | | | | | | | | |
| 309 | 5000/30 | 1 + 97.4 | R | 29.7 | | | | | Existing loc OK, off project. (Belgrade Rd., Smithfield) |
| 1 | 1 | 2 + 50.9 | L | 21.0 | | | | **-0.5'** | Existing loc OK, (Rosenthal Ln. - 1 phase, Smithfield) **(Check set depth)** |
| 308 | 29 | 3 + 29.9 | R | 19.8 | **Existing** | **R** | **26.0** | **-0.3'** | Set back to new offset @ existing Station. **(Set 0.5' deeper)** |
| **307 1/2** | | | | | **4 + 60.** | **R** | **26.0** | **-0.1'** | **New pole to shorten spans. (Set 0.5' deeper)** |
| 307 | 28 | 5 + 89.1 | R | 19.1 | **Existing** | **R** | **26.0** | **-0.6'** | Set back to new offset @ existing Station. **(Set 1' deeper)** |
| 306 | 27 | 7 + 22.7 | R | 16.3 | **7 + 20.** | **R** | **26.0** | **+0.2'** | Set @ new station & offset. |
| 305 | 26 | 8 + 54.8 | R | 16.7 | **9 + 36.5** | **R** | **26.0** | **-1.7'** | Set @ new station & offset. **(Set 2' deeper)** |
| 304 | 25 | 11 + 55.1 | R | 22.4 | **Existing** | **R** | **26.0** | **-1.3'** | Set back to new offset @ existing Station. **(Road Xing) (Set 1.5' deeper)** |
| 304.1 | 25.1 | 11 + 56. | L | 24.7 | | | | | Existing location OK, replace in place if condition warranrs. |
| 303 | 24 | 13 + 47.5 | L | 20.0 | **13 + 12.** | **L** | **26.0** | | Set @ new station & offset. **(Road Xing)** |
| 302 | 23 | 15 + 01.3 | L | 18.1 | **14 + 81.** | **L** | **26.0** | **-1.0'** | Set @ new station & offset. **(Set 1' deeper)** |
| **302S** | **23S** | | | | **14 + 81.** | **R** | **21.0** | **-0.7'** | **New pole to hold reverse corner. (Set 1' deeper)** |
| 301S | 22S | 16 + 47.7 | R | 24.2 | | | | | Existing location OK, replace in place if condition warranrs. |
| 301 | 22 | 16 + 50.1 | L | 12.6 | **16 + 51.** | **L** | **26.0** | | Set @ new station & offset. |



* A - Anchor Easement, P - Pole Easement, W - Wire Easement, T - Trim Easement



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## Rt. 8 Smithfield/Norridgewock

**PIN # 12776.00**

| CMP Pole # | Tel. Pole # | Existing Station | Right or Left | Existing Offset from C.L. (ft). | | Right or Left | New Offset from C.L. (ft) | Cut/Fill (-/+) | Miscellaneous/Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 300 | 21 | 17 + 66.7 | L | 18.9 | 18 + 00. | L | 21.0 | +1.1' | Set @ new station & offset. |
| **300S** | **21S** | | | | 18 + 00. | R | 28.0 | | **New pole to hold reverse corner.** |
| 299.1 | 20.1 | 19 + 32.1 | R | 25.6 | 19 + 26.5 | R | 27.0 | | Set @ new station & offset. |
| 299 | 20 | 19 + 49.3 | L | 20.4 | Existing | L | 26.0 | -0.1' | Set back to new offset @ existing Station. **(Set 0.5' deeper)** |
| 298 | 19 | 22 + 19.7 | L | 21.3 | | | | -0.6' | Existing location OK, replace in place if condition warrants. **(Check set depth)** |
| 297 | 18 | 24 + 89. | L | 22.8 | | | | | Existing location OK, replace in place if condition warrants. |
| 296 | 17 | 27 + 56.5 | L | 25.1 | | | | | Existing location OK, replace in place if condition warrants. |
| 295 | 16 | 30 + 28.1 | L | 25.5 | | | | +0.3' | Existing location OK, replace in place if condition warrants. |
| 294 | 15 | 32 + 96.7 | L | 22.0 | | | | -0.1' | Existing location OK, replace in place if condition warrants. |
| 293 | 14 | 35 + 59.7 | L | 16.6 | Existing | L | 24.0 | -0.1' | Set back to new offset @ existing Station. **(Set 0.5' deeper)** |
| 293S | 14S | 35 + 61.7 | R | 23.4 | | | | -0.8' | Existing location OK, replace in place if condition warrants. **(Check set depth)** |
| 292 | 13 | 36 + 88.3 | L | 17.8 | Existing | L | 23.0 | | Set back to new offset @ existing Station. |
| 291 | 12 | 38 + 22.4 | L | 17.8 | Existing | L | 22.5 | +0.4' | Set back to new offset @ existing Station. |
| 290 | 11 | 39 + 57.2 | L | 19.3 | Existing | L | 22.0 | +0.1' | Set back to new offset @ existing Station. |
| 289 | 5000/10 | 42 + 24.9 | L | 21.7 | 41 + 35.5 | L | 22.5 | +0.7' | Set @ new station & offset. |
| **288 1/2** | 9 1/2 | | | | 43 + 14. | L | 24.0 | | **New pole to shorten spans.** |
| 288 | 9 | 44 + 95.2 | L | 20.5 | | | | -3.1' | Existing location OK, replace in place due to cut. **(3.1' spot cut needed)** |
| 288.1 | 9.1 | 44 + 95.3 | R | 18.1 | Existing | R | 21.0 | +0.2' | Set back to new offset @ existing Station. |
| 287 | 8 | 46 + 95.9 | L | 18.0 | Existing | L | 21.0 | -3.5' | Set back to new offset @ existing Station. **(3.5' spot cut needed)** |
| 287S | 8S | 46 + 96. | R | 20.6 | | | | | Existing location OK, replace in place if condition warrants. |
| 286 | 7 | 48 + 96.7 | L | 20.9 | | | | -0.1' | Existing location OK, replace in place if condition warrants. |
| 285 | 6 | 50 + 94.9 | L | 21.2 | 51 + 03. | L | 23.0 | +1.2' | Set @ new station & offset. |
| 284 | 5 | 53 + 93.6 | L | 21.7 | 53 + 08.5 | L | 26.0 | -0.7' | Set @ new station & offset. **(Set 1' deeper)** |
| 283 1/2 | 4 1/2 | | | | 55 + 13.5 | L | 26.0 | -2.8' | **New pole to shorten spans. (2.8' spot cut needed)** |
| 283 | 4 | 56 + 88.2 | L | 23.5 | 57 + 19. | L | 26.0 | -2.0' | Set @ new station & offset. **(Set 2' deeper)** |
| 282 | 3 | 59 + 83.5 | L | 23.6 | 59 + 24. | L | 26.0 | -1.7' | Set @ new station & offset. **(Set 2' deeper)** |
| 281 | 2 | 61 + 29.3 | L | 21.4 | 61 + 28. | L | 26.0 | -0.9' | Set @ new station & offset. **(Set 1' deeper)** |
| 281S | 2S | 61 + 37.7 | R | 22.2 | | | | +1.0' | Existing location OK, replace in place if condition warrants. |
| 280.02 | 2-2 | 61 + 78.2 | R | 20.8 | | | | +1.0' | Existing location OK, replace in place if condition warrants. |
| 280.01 | 1 | 62 + 55.7 | R | 21.9 | | | | +0.3' | Existing location OK, replace in place if condition warrants. |
| 280 | 1 | 62 + 58. | L | 26.4 | | | | +0.3' | Existing location OK, replace in place if condition warrants. |
| 279.01 | | 63 + 77.3 | R | 45.2 | | | | | Existing location OK, replace in place if condition warrants. |
| 279 | 1 | 63 + 89.8 | L | 33.2 | 63 + 88. | L | 19.0 | | Set @ new station & offset. **(Extend Curb Island 3' ahead station)** |
| 278 | 1 | 64 + 95.1 | L | 23.5 | | | | +0.4' | Existing location OK, replace in place if condition warranrs. **(Road Xing)** |
| 277.01 | | 65 + 67.8 | L | 55.4 | | | | | Existing location OK, replace in place if condition warrants. |
| 277 | | 65 + 97.4 | R | 25.3 | | | | | Existing location OK, replace in place if condition warrants. **(Road Xing)** |
| **277** | | **66 + 00.9** | **R** | 25.1 | | | | | **Eliminate & remove** |
| 276 | 2 | 66 + 79.2 | L | 23.5 | | | | +0.3' | Existing location OK, replace in place if condition warrants. **(Road Xing)** |
| 275S | 3S | 67 + 91.6 | L | 20.8 | | | | -0.5' | Existing location OK, replace in place if condition warrants. **(Check set depth)** |
| 275 | 3 | 68 + 22.4 | R | 22.5 | | | | | Existing location OK, replace in place if condition warrants. **(Road Xing)** |
| 273 | 4 | 69 + 77.1 | R | 22.2 | | | | +0.3' | No place to move to, maintain @ existing location, will need an exception from MDOT. **(No pole 274)** |
| **272** | 5 | 71 + 33.2 | R | 17.6 | 71 + 35. | R | 22.6 | -0.3' | **Maintain new pole that is already set at new station & offset. (Road Xing) (Check set depth)** |
| 271 | 6 | 72 + 16.6 | L | 65.8 | | | | | Existing location OK, replace in place if condition warrants. **2 phase stops. (Road Xing)** |
| 270 | 7 | 73 + 95.6 | R | 20.9 | | | | +0.6' | Existing location OK, replace in place if condition warrants. **(Road Xing)** |



* A - Anchor Easement, P - Pole Easement, W - Wire Easement, T - Trim Easement



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## Rt. 8 Smithfield/Norridgewock

**PIN # 12776.00**

| CMP Pole # | Tel. Pole # | Existing Station | Right or Left | Existing Offset from C.L. (ft). | | Right or Left | New Offset from C.L. (ft) | Cut/Fill (-/+) | Miscellaneous/Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 268 | 8 | 75 + 58.8 | R | 24.2 | | | | +3.8' | Existing location OK, replace in place if condition warrants. **(No pole 269)** |
| 267 | 9 | 77 + 26.5 | R | 24.7 | | | | +0.7' | Existing location OK, replace in place if condition warrants. |
| 266 | 10 | 79 + 01.1 | R | 24.3 | | | | | Existing location OK, replace in place if condition warrants. |
| 266S | 10S | 79 + 12.8 | L | 19.4 | 79 + 14.5 | I | 26.0 | -8.8' | Set @ new station & offset. **(8.8' spot cut needed)** |
| 265 | 11 | 81 + 18.6 | R | 21.4 | 80 + 67.5 | R | 27.0 | | Set @ new station & offset. |
| 264.1 | 10 | 81 + 56.1 | L | 71.3 | | | | | OK @ existing location. |
| 264S | 12S | 82 + 34.6 | L | 23.3 | 82 + 35.5 | L | 27.0 | -4.1' | Set @ new station & offset. **(4.1' spot cut needed)** |
| 264 | 12 | 82 + 34.6 | R | 16.9 | Existing | R | 24.0 | | Set back to new offset @ existing Station. |
| 263 | 13 | 84 + 25.5 | R | 28.7 | | | | | Existing location OK, replace in place if condition warrants. |
| 263.1 | 13.1 | 84 + 30.8 | L | 57.8 | | | | | OK @ existing location. |
| 261S | 14S | 86 + 07.8 | L | 23.1 | 86 + 12. | L | 28.0 | +0.7' | Set back to new offset @ existing Station. |
| 261 | 14 | 86 + 14.2 | R | 24.7 | | | | | Existing location OK, replace in place if condition warrants. **(No pole 262)** |
| 260 | 15 | 87 + 52.5 | R | 34.5 | | | | | Eliminate & remove **(Not shown on plans)** |
| 259 | 16 | 88 + 90.6 | R | 24.1 | 88 + 06. | R | 28.0 | | Set @ new station & offset. |
| 258 | 17 | 90 + 43.5 | R | 20.5 | 89 + 95.5 | R | 26.0 | -0.6' | Set @ new station & offset. **(Set 1' deeper)** |
| 255.1 | 18.1 | 91 + 85.6 | L | 25.7 | 91 + 87. | L | 26.0 | -0.9' | Set @ new station & offset. **(Set 1' deeper)** |
| 255 | 18 | 91 + 86.2 | R | 17.7 | Existing | R | 24.5 | -0.3' | Set back to new offset @ existing Station. **(No poles 257 & 256)** **(Set 0.5' deeper)** |
| 254 | 19 | 93 + 52.8 | R | 18.1 | | | | | **Eliminate & remove** |
| 254.1 | 19/1 | 93 + 35.2 | L | 33.3 | | | | -0.3' | OK @ existing location. **(Check set depth)** |
| 254 | 19 | 93 + 58.8 | R | 18.3 | Existing | R | 26.0 | +0.8' | Set back to new offset @ existing Station. |
| 253 | 20 | 94 + 97.5 | R | 17.1 | Existing | R | 24.5 | +0.4' | Set back to new offset @ existing Station. |
| 252 | 21 | 96 + 51.7 | R | 21.6 | Existing | R | 28.0 | | Set back to new offset @ existing Station. |
| 251 | 22 | 97 + 91.8 | R | 16.6 | | | | | **Eliminate & remove** |
| 250 | 23 | 99 + 32.7 | R | 14.9 | 98 + 69. | R | 26.0 | -3.4' | Set @ new station & offset. **(3.4' spot cut needed)** |
| 248 | 24 | 101 + 71.6 | R | 16.5 | 100 + 87.5 | R | 27.0 | | Set @ new station & offset. **(No pole 249)** |
| 247 | 25 | 103 + 07.5 | R | 18.1 | 103 + 05. | R | 26.5 | | Set @ new station & offset. |
| 245 | 26 | 105 + 53.1 | R | 17.2 | 104 + 87.5 | R | 27.0 | +3.7' | Set @ new station & offset. **(No pole 246)** **(3.7' spot fill needed)** |
| 244 | 27 | 106 + 69.4 | R | 15.8 | 106 + 72. | R | 27.0 | +2.4' | Set @ new station & offset. **(Set 1' shallow)** |
| 243 | 28 | 107 + 79.1 | R | 16.3 | | | | | **Eliminate & remove** |
| 242 | 29 | 109 + 07.1 | R | 16.5 | Existing | R | 25.0 | +2.6' | Set back to new offset @ existing Station. **(Set 1' shallow)** |
| 241 | 30 | 110 + 25.1 | R | 17.1 | | | | | **Eliminate & remove** |
| 240 | 31 | 111 + 37.2 | R | 17.9 | 110 + 90. | R | 27.5 | -2.6' | Set @ new station & offset. **(2.6' spot cut needed)** |
| 239 | 32 | 112 + 70.7 | R | 19.3 | Existing | R | 27.5 | -0.6' | Set back to new offset @ existing Station. **(Set 1' deeper)** |
| 238 | 33 | 113 + 92.2 | R | 19.0 | 115 + 07. | R | 28.0 | -1.0' | Set @ new station & offset. **(Set 1' deeper)** |
| 236 | 34 | 116 + 23.3 | R | 18.0 | | | | | **Eliminate & remove** **(No pole 237)** |
| 227S | 35S | 117 + 43.5 | L | 31.7 | 117 + 45. | L | 26.0 | | Set @ new station & offset. |
| 227 | 35 | 117 + 45.2 | R | 15.5 | Existing | R | 27.0 | -1.2' | Set back to new offset @ existing Station. **(No poles 235 - 228)** **(Pole plotted wrong on X-sect.)** **(Set 1.5' deeper)** |
| 217 | 36 | 118 + 97.3 | R | 31.2 | | | | | Existing location OK, replace in place if condition warrants. **(No poles 226 - 218)** |
| 216 | 37 | 120 + 44.9 | R | 32.3 | | | | | Existing location OK, replace in place if condition warrants. |
| 216.1 | 37/1 | 120 + 77.2 | L | 43.9 | | | | | Existing location OK, replace in place if condition warrants. |
| 215 | 38 | 123 + 83.5 | R | 31.9 | 122 + 66. | R | 30.0 | | Set @ new station & offset. |
| **214 1/2** | **38 1/2** | | | | 124 + 85.5 | R | 30.0 | +0.2' | **New pole to shorten spans.** |
| 214 | 39 | 127 + 07.4 | R | 32.2 | | | | | Existing location OK, replace in place if condition warrants. |
| 213 | 40 | 130 + 29.7 | R | 31.6 | 129 + 29. | R | 30.0 | | Set @ new station & offset. |



* A - Anchor Easement, P - Pole Easement, W - Wire Easement, T - Trim Easement



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## Rt. 8 Smithfield/Norridgewock

**PIN # 12776.00**

| CMP Pole # | Tel. Pole # | Existing Station | Right or Left | Existing Offset from C.L. (ft). | | Right or Left | New Offset from C.L. (ft) | Cut/Fill (-/+) | Miscellaneous/Remarks |
|---|---|---|---|---|---|---|---|---|---|
| **212 1/2** | **40 1/2** | | | | **131 + 50.** | **R** | **30.0** | | **New pole to shorten spans.** |
| 212 | 41 | 133 + 54.4 | R | 31.9 | **133 + 71.** | **R** | **30.0** | | Set @ new station & offset. |
| 211 | 42 | 136 + 83.1 | R | 30.8 | **135 + 93.** | **R** | **30.0** | **+3.0'** | Set @ new station & offset. **(Pole plotted wrong on X-sect.) (3.0' spot fill needed)** |
| **210 1/2** | **42 1/2** | | | | **138 + 14.** | **R** | **30.0** | **+0.8'** | **New pole to shorten spans.** |
| 210 | 43 | 140 + 09.3 | R | 30.2 | **140 + 40.5** | **R** | **30.0** | **+0.3'** | Set @ new station & offset. |
| 209 | 44 | 143 + 05.1 | R | 27.6 | **142 + 28.5** | **R** | **30.0** | | Set @ new station & offset. |
| **208 1/2** | **44 1/2** | | | | **144 + 17.** | **R** | **30.0** | **+0.3'** | **New pole to shorten spans.** |
| 208.1 | 45.1 | 145 + 85.8 | L | 34.8 | | | | **+0.6'** | Existing location OK, replace in place if condition warrants. |
| 208 | 45 | 146 + 04.9 | R | 32.9 | | | | | Existing location OK, replace in place if condition warrants. |
| **206** | **45 1/2** | | | | **148 + 30.** | **R** | **30.0** | **+0.2'** | **New pole to shorten spans. (No pole 207)** |
| 205 | 46 | 149 + 20.8 | R | 31.7 | **150 + 54.** | **R** | **30.0** | **+0.3'** | Set @ new station & offset. |
| 204 | 47 | 152 + 14.4 | R | 30.9 | **152 + 78.** | **R** | **30.0** | | Set @ new station & offset. |
| 201 | 48 | 154 + 74.3 | R | 30.2 | **155 + 03.** | **R** | **30.0** | **-0.3'** | Set @ new station & offset. **(No poles 203 & 202) (Set 0.5' deeper)** |
| 200 | 49 | 157 + 13.7 | R | 30.9 | **157 + 27.** | **R** | **30.0** | | Set @ new station & offset. |
| 199S | 50S | 159 + 33.6 | L | 21.8 | **159 + 32.** | **L** | **25.0** | | Set @ new station & offset. |
| 199 | 50 | 159 + 48.4 | R | 32.0 | | | | | Existing location OK, replace in place if condition warrants. |
| 198 | 51 | 161 + 34.2 | R | 32.0 | | | | | Existing location OK, replace in place if condition warrants. |
| 196 | 52 | 163 + 29.7 | R | 31.4 | | | | **+0.1'** | Existing location OK, replace in place if condition warrants. **(No pole 197)** |
| 194 | 53 | 165 + 35.4 | R | 29.1 | | | | | Existing location OK, replace in place if condition warrants. **(No pole 195)** |
| 193 | 54 | 167 + 23.9 | R | 26.9 | | | | | Existing location OK, replace in place if condition warrants. |
| 192 | 55 | 169 + 17. | R | 25.1 | **169 + 36.** | **R** | **27.5** | **-0.4'** | Set @ new station & offset. **(Set 0.5' deeper)** |
| 191 | 56 | 170 + 72.8 | R | 24.5 | **171 + 49.** | **R** | **27.5** | **-0.7'** | Set @ new station & offset. **(Set 1' deeper)** |
| **190** | **57** | **172+03 +/-** | **R** | 25 +/- | | | | | CMP records show a pole 190, not listed on MDOT pole list or shown on plans **(Eliminate & remove)** |
| 188 | 58 | 173 + 61.4 | R | 26.4 | | | | | Existing location OK, replace in place if condition warrants. **(No pole 189)** |
| 187 | 59 | 175 + 42.4 | R | 27.0 | | | | **-0.6'** | Existing location OK, replace in place if condition warrants. **(Check set depth)** |
| 185 | 60 | 177 + 21.1 | R | 27.2 | | | | | Existing location OK, replace in place if condition warrants. **(No pole 186)** |
| 184 | 61 | 179 + 00.5 | R | 27.0 | | | | | Existing location OK, replace in place if condition warrants. |
| 182S | 62S | 180 + 59.7 | L | 25.7 | | | | **+0.2'** | Existing location OK, replace in place if condition warrants. |
| 182 | 62 | 180 + 80.5 | R | 27.1 | **180 + 82.** | **R** | **30.0** | | Set @ new station & offset. **(No pole 183)** |
| 181 | 63 | 182 + 31.4 | R | 28.1 | **Existing** | **R** | **30.0** | | Set back to new offset @ existing Station. |
| 180 | 64 | 183 + 82.3 | R | 28.7 | **183 + 67.** | **R** | **29.5** | | Set @ new station & offset. |
| 179 | 132 | 185 + 01. | R | 29.3 | | | | | Existing location OK, replace in place if condition warrants. |
| 178 | 131 | 186 + 15.5 | R | 27.5 | **186 + 76.** | **R** | **27.5** | **-1.1'** | Set @ new station & offset. **(Set 1.5' deeper)** |
| 176 | 129 | 188 + 41.8 | R | 24.4 | **188 + 50.** | **R** | **26.0** | | Set @ new station & offset. **(No pole 177)** |
| **175** | **128** | **189 + 59.2** | **L** | 19.1 | | | | | **Eliminate & remove** |
| 172 | 127 | 190 + 92.5 | L | 18.4 | **190 + 45.5** | **R** | **26.0** | | Move from left to right and set at new station & offset. **(No poles 174 & 173)** |
| 171 | 126 | 192 + 35.2 | L | 19.0 | **192 + 16.** | **R** | **26.0** | **-3.1'** | Move from left to right and set at new station & offset. **(3.1' spot cut needed)** |
| 170 | 125 | 193 + 79. | L | 19.0 | **193 + 82.** | **R** | **26.0** | **-3.3'** | Move from left to right and set at new station & offset. **(3.3' spot cut needed)** |
| 170.1 | 125.1 | 193 + 85. | R | 17.0 | **193 + 76.5** | **L** | **26.0** | **-1.7'** | Move from right to left and set at new station & offset. **(Set 2' deeper)** |
| **169** | **124** | **195 + 23.** | **L** | 19.0 | | | | | **Eliminate & remove** |
| 168 | 123 | 196 + 68. | L | 18.0 | **196 + 00.** | **R** | **26.0** | **-2.4'** | Move from left to right and set at new station & offset. **(2.4' spot cut needed)** |
| 167 | 122 | 198 + 11.4 | L | 17.9 | **198 + 12.** | **R** | **26.0** | **-1.4'** | Move from left to right and set at new station & offset. **(Set 1.5' deeper)** |
| 167S | 122S | 198 + 11.9 | R | 18.5 | **198 + 01.** | **L** | **30.0** | | Move from right to left and set at new station & offset and renumber to 167.1. **(Align in field with new location of 167 and attachment point on building.)** |
| 165 | 121 | 199 + 49. | L | 18.1 | **199 + 56.** | **R** | **26.0** | **-1.3'** | Move from left to right and set at new station & offset. **(No pole 166) (Set 1.5' deeper)** |



* A - Anchor Easement, P - Pole Easement, W - Wire Easement, T - Trim Easement



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## Rt. 8 Smithfield/Norridgewock

**PIN # 12776.00**

| CMP Pole # | Tel. Pole # | Existing Station | Right or Left | Existing Offset from C.L. (ft). | | Right or Left | New Offset from C.L. (ft) | Cut/Fill (-/+) | Miscellaneous/Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 164 | 120 | 200 + 92.1 | L | 19.7 | 201 + 00. | R | 26.0 | -1.1' | Move from left to right and set at new station & offset. |
| 163 | 119 | 202 + 32.5 | L | 22.3 | | | | | Eliminate & remove |
| 162 | 118 | 203 + 45.9 | L | 23.2 | 203 + 00. | R | 26.0 | | Move from left to right and set at new station & offset. **(Take off for E. Pond Rd.)** |
| 162S | 118S | | | | 203 + 29. | L | 25.0 | | **New pole to hold takeoff for E. Pond Rd. (*Align in field with CMP 262 and pole 1 E. Pond Rd.*)** |
| 161S | 117S | 204 + 58.3 | R | 19.4 | | | | | Eliminate & remove |
| 161 | 117 | 204 + 63.9 | L | 24.7 | 204 + 57. | R | 26.0 | | Move from left to right and set at new station & offset. **(Takeoff for Sand Hill Rd.)** |
| 1/2 | | 204 + 63.9 | L | 24.7 | | | | | **This is existing CMP pole 161 to be left at existing location and renumbered to CMP pole 1/2 Sand Hill Rd.** |
| 158.1 | 116.1 | | | | 206 + 08. | L | 30.0 | -0.3' | **New pole to provide clearance for service over Rt. 8 (*Align in field with existing service pole and CMP pole 158 at new location.*) (Set 0.5' deeper)** |
| 158 | 116 | 206 + 12.1 | L | 20.8 | 206 + 15. | R | 26.0 | -0.2' | Move from left to right and set at new station & offset. **(Set 0.5' deeper)** |
| 157 | 115 | 207 + 62.7 | L | 20.0 | 208 + 47.5 | R | 27.0 | -0.9' | Move from left to right and set at new station & offset. **(Set 1' deeper)** |
| 156 | 114 | 209 + 17.8 | L | 19.7 | | | | | Eliminate & remove |
| 155 | 113 | 210 + 73.2 | L | 20.3 | 210 + 81. | R | 26.0 | -1.9' | Move from left to right and set at new station & offset. **(Set 2' deeper)** |
| 153 | 112 | 213 + 30.5 | L | 19.3 | 212 + 64. | R | 26.0 | -0.4' | Move from left to right and set at new station & offset. **(No pole 154) (Set 0.5' deeper)** |
| 151 | 111 1/2 | | | | 214 + 45.5 | R | 26.0 | -0.8' | Move from left to right and set at new station & offset. **(No pole 152) (Set 1' deeper)** |
| 150S | 111S | 216 + 12.7 | R | 27.1 | | | | | Eliminate & remove |
| 150.1 | 111.1 | | | | 216 + 09.5 | L | 28.0 | -0.2' | **New pole to provide clearance for service over Rt. 8 (*Align in field with CMP pole 158 at new location and service attachment point.*) (Set 0.5' deeper)** |
| 150 | 111 | 216 + 15.3 | L | 19.6 | 216 + 28.5 | R | 26.0 | | Move from left to right and set at new station & offset. |
| 149.1 | 110.1 | | | | 217 + 77. | L | 28.0 | | **New pole to provide clearance for service over Rt. 8 (*Align in field with CMP pole 149 at new location and service attachment point.*).** |
| 149 | 110 | 217 + 77.4 | L | 20.1 | 218 + 02. | R | 26.0 | -0.2' | Move from left to right and set at new station & offset. **(Set 0.5' deeper)** |
| 148 | 109 | 219 + 20.2 | L | 19.1 | 219 + 57. | R | 26.0 | | Move from left to right and set at new station & offset. |
| 146 | 108 | 220 + 68.5 | L | 17.4 | 221 + 75. | R | 26.0 | -0.9' | Move from left to right and set at new station & offset. **(No pole 147) (Set 1' deeper)** |
| 145 | 107 | 222 + 20.5 | L | 16.7 | 222 + 95. | R | 26.0 | | Move from left to right and set at new station & offset. **(Road Xing)** |
| 144 | 106 | 224 + 05.2 | L | 18.0 | 224 + 36. | L | 23.0 | | Set @ new station & offset. **(Road Xing)** |
| 142 | 105 | 225 + 69.2 | L | 17.6 | Existing | L | 25.0 | +0.2' | Set @ new station & offset. CATV P.S. at this location. **(No pole 143)** |
| 141 | 104 | 227 + 22.8 | L | 18.6 | 227 + 14. | L | 25.0 | +0.4' | Set @ new station & offset. |
| 140 | 103 | 228 + 50. | L | 20.2 | 228 + 59. | L | 25.5 | | Set @ new station & offset. |
| 140.1 | 103.1 | 228 + 62.9 | R | 22.7 | 228 + 85.5 | R | 30.0 | -0.3' | Set @ new station & offset. **(Align in field with service attachment point.) (Set 0.5' deeper)** |
| 138 | 102 | 229 + 93.7 | L | 18.2 | 230 + 23.5 | L | 26.0 | | Set @ new station & offset. **(No pole 139)** |
| 136 | 101 | 231 + 53.9 | L | 18.1 | 231 + 87. | L | 26.0 | -1.1' | Set @ new station & offset. **(No pole 137) (Set 1.5' deeper)** |
| 134 | 98 | 233 + 50.2 | L | 24.3 | | | | | Existing location OK, replace in place if condition warrants. **(No pole 135)** |
| 133 | 97 | 235 + 47. | L | 23.0 | | | | | Existing location OK, replace in place if condition warrants. |
| 131 | 96 | 237 + 43. | L | 24.0 | | | | | Existing location OK, replace in place if condition warrants or taller pole is needed. **(Road Xing) (No pole 132)** |
| 130.1 | 95.1 | 238 + 98. | L | 18.0 | 238 + 94. | L | 26.0 | | Set @ new station & offset. |
| 130 | 95 | 239 + 62. | R | 21.0 | | | | -0.4' | Existing location OK, replace in place if condition warrants or taller pole is needed. **(Road Xing) (Check set depth)** |
| 127 | 94 | 241 + 53. | R | 21.0 | | | | +0.9' | Existing location OK, replace in place if condition warrants or taller pole is needed. **(Road Xing) (No poles 129 & 128)** |
| 126 | 93 | 243 + 34. | L | 21.0 | Existing | L | 26.0 | -0.7' | Set back to new offset @ existing Station. **(Road Xing) (Set 1' deeper)** |
| 124 | 92 | 245 + 63. | L | 24.0 | 245 + 61. | L | 27.0 | | Set @ new station & offset. |
| 123 | 91 | 246 + 75. | L | 24.0 | | | | | Existing location OK, replace in place if condition warrants. |
| 121 | 90 | 248 + 36. | L | 23.0 | 248 + 42.5 | L | 27.0 | -0.5' | Set @ new station & offset. **(No pole 122) (Set 0.5' deeper)** |
| 120 | 89 | 250 + 00. | L | 21.0 | Existing | L | 26.5 | | Set back to new offset @ existing Station. |
| 119 | 88 | 251 + 91. | L | 21.0 | Existing | L | 26.0 | | Set back to new offset @ existing Station. |
| 117 | 87 | 253 + 72.3 | L | 24.0 | | | | | Existing location OK, replace in place if condition warrants. **(No pole 118)** |



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## Rt. 8 Smithfield/Norridgewock

**PIN # 12776.00**

| CMP Pole # | Tel. Pole # | Existing Station | Right or Left | Existing Offset from C.L. (ft). | | Right or Left | New Offset from C.L. (ft) | Cut/Fill (-/+) | Miscellaneous/Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 86 | 255 + 67.3 | L | 26.0 | | | | | Existing location OK, replace in place if condition warrants. **(No poles 116 & 115))** |
| 114.1 | 86.1 | 256 + 09. | R | 62.0 | | | | | Existing location OK, telephone only. |
| 113.1 | 85.1 | 257 + 01. | R | 42.0 | | | | | Existing location OK, CMP only. |
| 113 | 85 | 257 + 21. | L | 25.0 | **257 + 31.** | **L** | **25.0** | **-0.2'** | Set @ new station & offset. **(Exception - 1' behind ditch line) (Set 0.5' deeper)** |
| 109 | 84 | 259 + 18. | L | 23.0 | **259 + 13.** | **L** | **25.0** | **-0.4'** | Set @ new station & offset. **(Exception - 1' behind ditch line)(No poles 112 - 110) (Set 0.5' deeper)** |
| 108 | 79 | 261 + 43. | L | 24.0 | | | | | Existing location OK, replace in place if condition warrants. |
| 106 | 78 | 264 + 33. | L | 24.0 | **263 + 32.** | **L** | **23.5** | | Set @ new station & offset to balance spans. **(No pole 107) (Shown @ wrong location on X-sect.)** |
| 105 1/2 | 77 1/2 | 265 + 21. | L | 23.0 | | | | | Existing location OK, replace in place if condition warrants. |
| 105 | 77 | 266 + 30. | L | 23.0 | | | | **+0.4'** | Existing location OK, replace in place if condition warrants or taller pole is needed. **(Road Xing)** |
| 103 | 76 | 268 + 21. | R | 22.0 | **268 + 29.5** | **R** | **24.0** | **+0.4'** | Set @ new station & offset. **(Road Xing) (No pole 104)** |
| 102 | 75 | 270 + 63. | L | 23.0 | | | | **+0.3'** | Existing location OK, replace in place if condition warrants or taller pole is needed. **(Road Xing)** |
| 100 | 74 | 272 + 82. | L | 23.0 | | | | | Existing location OK, replace in place if condition warrants. **(No pole 101)** |
| 100S | 74S | 272 + 85. | R | 25.7 | | | | | Existing location OK, replace in place if condition warrants. |
| 98 | 73 | 275 + 10.5 | L | 21.9 | | | | **+1.4'** | Existing location OK, replace in place if condition warrants. **(No pole 99) (Check clearances)** |
| 97 | 72 | 277 + 04. | L | 24.9 | | | | | Existing location OK, replace in place if condition warrants. |
| 96 | 71 | 278 + 60.7 | L | 20.6 | **278 + 37.5** | **L** | **23.0** | | Set @ new station & offset to balance spans. |
| 95 | 5000/70 | 279 + 69.9 | L | 22.1 | | | | | Existing location OK, replace in place if condition warrants. |
| 95S | 70S | 279 + 73. | R | 22.6 | **Existing** | **R** | **27.0** | | Set back to new offset @ existing Station. |
| 94 | 69 | 281 + 22.7 | L | 22.6 | | | | **+0.2'** | Existing location OK, replace in place if condition warrants. |
| 93 | 68 | 282 + 59.8 | L | 22.1 | **283 + 18.** | **L** | **23.0** | | Set @ new station & offset. |
| **92** | **67** | **283 + 90.1** | **L** | 17.8 | | | | | **Eliminate & remove** |
| 91 | 66 | 285 + 19.8 | L | 17.5 | **285 + 22.** | **L** | **25.0** | | Set @ new station & offset. |
| 91.1 | 66-1 | 285 + 70.5 | R | 26.6 | | | | **-2.2'** | Existing location OK, replace in place due to cut. **(2.2' spot cut needed)** |
| **90 1/2** | **65 1/2** | | | | **286 + 54.** | **L** | **26.0** | | **New pole to shorten spans.** |
| 90 | 65 | 287 + 86.5 | L | 18.2 | **287 + 87.** | **L** | **26.5** | **-0.2'** | Set @ new station & offset. **(Set 0.5' deeper)** |
| 87 | 64 | 289 + 66.9 | L | 19.0 | **289 + 70.** | **L** | **26.0** | **-0.7'** | Set @ new station & offset. **(No poles 89 & 88) (Set 1' deeper)** |
| 86 | 63 | 291 + 53.6 | L | 20.9 | **291 + 28.** | **L** | **26.0** | | Set @ new station & offset. |
| 85PB | 62PB | 292 + 85.6 | L | 40.4 | | | | | Existing location OK, replace in place if condition warrants. |
| **85.1** | **62-1** | | | | **292 + 31.** | **R** | **31.0** | | **New point pole so service from pole 86 can be removed and fed from pole 85.** |
| 85 | 62 | 292 + 86.5 | L | 26.0 | | | | **-0.9'** | Existing location OK, Check set depth & replace in place if set depth warrants. **(Set 1' deeper)** |
| 84 | 61 | 294 + 06.2 | L | 22.6 | **294 + 37.** | **L** | **26.0** | **-0.2'** | Set @ new station & offset. **(Set 0.5' deeper)** |
| 84.1 | 61-1 | 294 + 51. | R | 43.8 | | | | | Existing location OK, replace in place if condition warrants. |
| 82 | 60 | 296 + 60.1 | L | 21.6 | **296 + 20.5** | **L** | **26.0** | **-1.0'** | Set @ new station & offset. **(No poles 83) (Set 1' deeper)** |
| **81** | **59 1/2** | | | | **298 + 04.** | **L** | **26.0** | | **New pole to shorten spans.** |
| 80 | 59 | 299 + 21.9 | L | 21.2 | **299 + 87.** | **L** | **26.0** | | Set @ new station & offset. **(Regulator on existing CMP pole 80)** |
| 78 | 58 | 301 + 70.3 | L | 20.0 | **301 + 69.5** | **L** | **26.0** | **-0.9'** | Set @ new station & offset. **(No poles79) (Set 1' deeper)** |
| 78S | 58S | 301 + 73.6 | R | 26.2 | | | | **-0.3'** | Existing location OK, replace in place if condition warrants. **(Check set depth)** |
| 77 | 57 | 302 + 96.4 | L | 22.4 | **303 + 56.** | **L** | **26.0** | **-0.6'** | Set @ new station & offset. **(Regulator on existing CMP pole77) (Set 1' deeper)** |
| **76** | **56** | **304 + 24.** | **L** | 23.0 | | | | | **Eliminate & remove** |
| 75 | 55 | 305 + 41.7 | L | 24.8 | | | | **-0.1'** | Existing location OK, replace in place if condition warrants. **(Check set depth)** |
| 74 | 54 | 306 + 70.6 | L | 25.3 | **307 + 13.** | **L** | **26.0** | **-1.1'** | Set @ new station & offset. **(Move regulator from existing CMP pole 73 to this location. )(Set 1.5' deeper)** |
| **73** | **53** | **307 + 99.5** | **L** | 26.2 | | | | | **Eliminate & remove** |
| 72 | 52 | 309 + 28.9 | L | 26.9 | **308 + 86.** | **L** | **26.0** | **-0.8'** | Set @ new station & offset. **(Set 1' deeper)** |



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## Rt. 8 Smithfield/Norridgewock

**PIN # 12776.00**

| CMP Pole # | Tel. Pole # | Existing Station | Right or Left | Existing Offset from C.L. (ft). | | Right or Left | New Offset from C.L. (ft) | Cut/Fill (-/+) | Miscellaneous/Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 71 | 51 | 310 + 56. | L | 27.6 | | | | -1.8' | Existing location OK, replace in place due to cut. (Set 2' deeper) |
| 70 | 50 | 312 + 08.3 | L | 28.7 | | | | | Existing location OK, replace in place if condition warrants. |
| 69 | 49 | 313 + 90.2 | L | 27.7 | | | | | Existing location OK, replace in place if condition warrants. |
| 68 | 48 | 315 + 57.7 | L | 27.9 | | | | -0.2' | Existing location OK, replace in place if condition warrants. (Check set depth) |
| 66 | 47 | 317 + 14.6 | L | 27.8 | | | | | Existing location OK, replace in place if condition warrants. **(No pole 67)** |
| 65 | 46 | 318 + 36. | L | 27.4 | | | | | Existing location OK, replace in place if condition warrants. |
| 64 | 45 | 319 + 70.8 | L | 26.0 | | | | -0.6' | Existing location OK, replace in place if condition warrants. (Check set depth) |
| 63 | 44 | 320 + 94.6 | L | 25.7 | 321 + 46.5 | L | 26.0 | -1.1' | Set @ new station & offset. (Set 1.5' deeper) |
| 62 | 43 | 322 + 16.6 | L | 25.9 | | | | | Eliminate & remove |
| 61 | 42 | 323 + 21.6 | L | 26.6 | | | | -0.5' | Existing location OK, replace in place if condition warrants. (Check set depth) |
| 60 | 41 | 324 + 46.6 | L | 25.0 | | | | | Eliminate & remove |
| 59 | 40 | 325 + 39. | L | 24.5 | 325 + 41.5 | L | 26.0 | -0.5' | Set @ new station & offset. (Set 0.5' deeper) |
| 59.1 | 40-1 | 325 + 40.6 | R | 22.3 | 325 + 42.5 | R | 27.0 | -1.4' | Set @ new station & offset. (Set 1.5' deeper) |
| 58 | 39 | 327 + 76.3 | L | 23.4 | Existing | L | 26.0 | -0.9' | Set back to new offset @ existing Station. **(Use alley arm construction)** (Set 1' deeper) |
| 57 | 38 | 328 + 92.9 | L | 23 +/- | 329 + 20. | L | 26.0 | -1.0' | Set @ new station & offset. **(Use alley arm construction)** (Set 1' deeper) |
| 56 | 37 | 330 + 35.9 | L | 23.1 | | | | | Eliminate & remove |
| 55 | 36 | 331 + 77.1 | L | 22.8 | 331 + 18. | L | 26.0 | -0.5' | Set @ new station & offset. **(Use alley arm construction)** (Set 0.5' deeper) |
| 54 | 35 | 333 + 19.6 | L | 23.9 | 333 + 15.5 | L | 27.0 | +0.1' | Set @ new station & offset. **(Use alley arm construction)** |
| 53 | 34 | 334 + 64.2 | L | 23.8 | Existing | L | 28.0 | | Set back to new offset @ existing Station. |
| 52 | 33 | 335 + 79.8 | L | 23.1 | Existing | L | 27.5 | | Set back to new offset @ existing Station. |
| 50 | 32 | 337 + 06.6 | L | 22.8 | Existing | L | 27.0 | | Set back to new offset @ existing Station. **(No pole 51)** |
| 49 | 31 | 338 + 81.2 | L | 23.6 | Existing | L | 26.5 | -0.2' | Set back to new offset @ existing Station. (Set 0.5' deeper) |
| 48 | 30 | 340 + 56.8 | L | 26.4 | | | | | Existing location OK, replace in place if condition warrants. |
| 48 | 30 | 340 + 57. | L | 25.6 | | | | | Old pole - Eliminate & remove |
| 47 | 29 | 342 + 04.6 | L | 27.9 | | | | | Old pole - Eliminate & remove |
| 47 | 29 | 342 + 07.2 | L | 26.0 | | | | -1.4' | Existing location OK, replace in place due to cut. (Set 1.5' deeper). |
| 46 | 28 | 343 + 30.7 | L | 25.9 | | | | -1.9' | Existing location OK, replace in place due to cut. (Set 2' deeper). |
| 46.1 | 28/1 | 343 + 42.9 | R | 21.6 | Existing | R | 27.0 | -1.3' | Set back to new offset @ existing Station. (Set 1.5' deeper) |
| 45 | 27 | 344 + 80.9 | L | 26.8 | | | | | Existing location OK, replace in place if condition warrants. |
| 43.1 | 26/1 | 347 + 09.1 | R | 21.3 | 347 + 07. | R | 27.0 | -1.2' | Set @ new station & offset. (Set 1.5' deeper) |
| 43 | 26 | 347 + 24.6 | L | 26.5 | | | | -1.0' | Existing location OK, Check set depth & replace in place if set depth warrants. **(No pole 44)** (Set 1' deeper) |
| 41 | 25 | 349 + 90.6 | L | 26.1 | 349 + 21.5 | L | 26.0 | -1.3' | Set @ new station & offset. **(No pole 42)** (Set 1.5' deeper) |
| 40 | 24 | 351 + 17.9 | L | 25.4 | | | | -1.1' | Existing location OK, Check set depth & replace in place if set depth warrants. **(No pole 44)** (Set 1.5' deeper) |
| 38 | 23 | 353 + 02.8 | L | 24.4 | | | | | Old pole - Eliminate & remove |
| 38 | 23 | 353 + 03.6 | L | 24.8 | 353 + 14. | L | 24.8 | | Set @ new station & offset. **(Use alley arm construction)** |
| 37 | 22 | 354 + 80.7 | L | 23.3 | | | | +0.6' | Existing location OK, replace in place if condition warrants. **(Change to alley arm construction)** |
| 36 | 21 | 356 + 01.1 | L | 22.9 | | | | | Existing location OK, replace in place if condition warrants. |
| 34 | 20 | 357 + 78.2 | :L | 21.6 | | | | +0.5' | Existing location OK, replace in place if condition warrants. **(No pole 35)** |
| 33PB | 19PB | 359 + 53.4 | L | 36.6 | | | | | Existing location OK, replace in place if condition warrants. |
| 33 | 19 | 359 + 55.2 | L | 21.5 | | | | | Existing location OK, replace in place if condition warrants. |
| 32 | 18 | 360 + 51. | L | 22.6 | | | | | Existing location OK, replace in place if condition warrants. |
| 31 | 5000/17 | 362 + 22.2 | L | 14.8 | Existing | L | 20.0 | +0.9' | Set back to new offset @ existing Station. **(Road Xing)** |
| 30 | 16 | 363 + 34.3 | R | 24.1 | | | | +0.9' | Existing location OK, replace in place if condition warrants. **(No poles 29 - 21)** |
| 20 | 15 | 365 + 82. | R | 20.7 | | | | +1.0' | Existing location OK, replace in place if condition warrants. |



* A - Anchor Easement, P - Pole Easement, W - Wire Easement, T - Trim Easement



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## Rt. 8 Smithfield/Norridgewock

**PIN # 12776.00**

| CMP Pole # | Tel. Pole # | Existing Station | Right or Left | Existing Offset from C.L. (ft). | | Right or Left | New Offset from C.L. (ft) | Cut/Fill (-/+) | Miscellaneous/Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 19 | 14 | 366 + 79.4 | R | 19.1 | **366 + 84.** | **R** | **20.5** | **+1.0'** | Set @ new station & offset. |
| 18 | 13 | 367 + 95.3 | R | 18.7 | **368 + 05.** | **R** | **20.0** | **+1.7'** | Set @ new station & offset. **(Set 1' shallow)** |
| 17 | 12 | 369 + 01.4 | R | 17.8 | | | | **+0.4'** | Existing location OK, replace in place if condition warrants. |
| 16 | 11 | 370 + 29.8 | R | 16.9 | **Existing** | **R** | **18.5** | **+1.1'** | Set back to new offset @ existing Station |
| 15 | 10 | 371 + 51.8 | R | 17.1 | **Existing** | **R** | **19.0** | **+0.5'** | Set back to new offset @ existing Station |
| **14S** | **9S** | | | | **372 + 78.5** | **L** | **22.0** | | **New stub pole to hold reverse corner.** |
| 14 | 9 | 372 + 78.6 | R | 16.0 | **Existing** | **R** | **18.0** | **-0.3'** | Set back to new offset @ existing Station **(Set 0.5' deeper)** |
| 13 | 8 | 373 + 98. | R | 20.2 | | | | | Existing location OK, replace in place if condition warrants. |
| **12S** | **7S** | | | | **375 + 49.5** | **L** | **34.5** | | **New stub pole to hold reverse corner.** |
| 12 | 7 | 375 + 49.7 | R | 16.0 | **Existing** | **R** | **18.0** | **+2.4'** | Set back to new offset @ existing Station **(Set 1' shallow)** |
| 11 | 6 | 376 + 29. | R | 21.0 | | | | **+1.0'** | Existing location OK, replace in place if condition warrants. |
| 10 | 5 | 377 + 31.4 | R | 19.3 | | | | **+0.3'** | Existing location OK, replace in place if condition warrants. |
| **9** | **4** | **378 + 34.4** | **R** | 17.1 | | | | | **Old pole - Eliminate & remove** |
| 9 | 4 | 378 + 42.6 | R | 17.1 | | | | **+0.5'** | Existing location OK, replace in place if condition warrants. |
| 8 | 3 | 379 + 38.9 | R | 18.6 | | | | **+0.4'** | Existing location OK, replace in place if condition warrants. |
| 7 | 2 | 380 + 62.8 | R | 21.1 | | | | **+0.3'** | Existing location OK, replace in place if condition warrants. |
| 6 | 1 | 381 + 53.3 | R | 19.1 | | | | **+1.1'** | Existing location OK, replace in place if condition warrants. **(R.R. Xing)** |
| 6S | 1S | 381 + 64.5 | L | 33 | | | | | Existing location OK, replace in place if condition warrants. |
| 5 | 2 | 382 + 11.1 | R | 24.8 | | | | **+0.8'** | Existing location OK, replace in place if condition warrants. **(Fiber optic on standoff brackets) (R.R. Xing)** |
| 4.1 | | 382 + 17. | L | 29 | | | | | Existing location OK, replace in place if condition warrants. **(Tel. riser for cables to/from CO)** |
| 4 | 3 | 382 + 84.3 | R | 26.7 | | | | | Existing location OK, replace in place if condition warrants. |
| 3 | 4 | 383 + 93.7 | R | 28.7 | | | | | Existing location OK, replace in place if condition warrants. |
| 2 | 5 | 385 + 18.3 | R | 28.4 | | | | | Existing location OK, replace in place if condition warrants. |
| 1 | 6 | 385 + 83.2 | R | 23.7 | | | | **-0.5'** | Existing location OK, replace in place if condition warrants. **(Check set depth)** |



* A - Anchor Easement, P - Pole Easement, W - Wire Easement, T - Trim Easement



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# SPECIAL PROVISION
# PROTECTION OF RAILROAD TRAFFIC AND STRUCTURES

## 1. GENERAL REQUIREMENTS

Part of the work required by the Contract will be performed within a railroad right of way and/or adjacent to the tracks, telephone, telegraph, signal and electric supply lines of a railroad or railroads. The Contractor agrees to perform all such work in compliance with all of the terms of this Special Provision and all safety rules, regulations, or standards applicable to the Railroad. The Contractor shall be fully responsible for all damages arising from his failure to comply with the requirements of this Special Provision. The Contractor shall be deemed to have included all costs in the unit prices of the Schedule of Prices and the Proposal.

## 2. AMOUNT OF RAILROAD WORK

The estimated amount of work to be done within 15.24 Meters (50 feet) of the track of the **Pan Am Railways** is **1%** of the contract.

## 3. NUMBER OF TRAINS AND TRAIN SPEED

The Contractor is notified that a maximum speed of (**10** mph) will be considered as prevailing for the operation of trains of the Railroad at this project and that the approximate number of trains per day at this project is **2.**

## 4. PRIORITY OF RAILROAD OPERATIONS

The train movements of the Railroad, and its lessees, and licensees shall have absolute priority over the performance of the Construction Project within the railroad right of way. The Contractor hereby agrees that the hours and times of work within the Railroad right of way must be coordinated through the Railroad and that such hours and times are subject to change without prior notice to the Contractor, unless other prior arrangements have been made through the Railroad.

## 5. AUTHORITY OF RAILROAD TO STOP WORK

If the Contractor fails to comply with the safety terms of this Special Provision, or if the Chief Engineer of the Railroad determines that the Contractor is using unsafe practices that threaten the safety of rail traffic, rail workers, or the general public, the Railroad shall have the right to immediately order the Contractor to cease work and vacate the Railroad's property. The Railroad agrees to confirm any cessation of work in writing by delivering to the Department's Construction Manager a completed Stop Work Order form attached as Exhibit A within 24 hours of giving any such order.

## 6. ENTRY UPON RAILROAD PROPERTY

The Railroad hereby agrees to permit the Contractor, together with their subcontractors, suppliers, consultants and engineers (the "Contractor"), to enter upon the Railroad property for the purpose of performing the Construction Project, PROVIDED THAT the Contractor complies with all of the terms of this Special Provision and all safety requirements and directions of the Chief Engineer of the Railroad, or his authorized representative (the "Railroad's Chief Engineer").

## 7. NOTICE REQUIRED BEFORE ENTRY

The Contractor shall give written notice to the Railroad's Chief Engineer at least **(7)** calendar day(s) in advance of the time it proposes to do work within the limits of the Railroad right-of-way or perform operations that may create a Hazard as specified by this Special Provision. The Contractor shall give such notice regardless of whether the work may also be within the limits of a public highway.

## 8. HAZARDS

The Contractor shall assess to its own satisfaction hazards which may be caused by its operations. At a minimum, the Contractor agrees that the following shall constitute Hazards.

An operating track shall be considered fouled and subject to hazard when any object is brought nearer than (**15** feet) to the gauge line of the near rail of the track.

A signal line or communication line shall be considered fouled and subject to hazard when any object is brought nearer than (**4** feet) to any wire or cable.

An electric supply line shall be considered fouled and subject to hazard when any object is brought nearer than (**10** feet) to any wire of the line.

Cranes, trucks, power shovels or any other equipment shall be considered as fouling and subjecting to hazard a track, signal line, communication or electric supply line when working in such position that failure of equipment, with or without load, could foul the track, signal line, communication or electric supply line.

Railroad operation will be considered subject to hazard when explosives are used in the vicinity of railroad premises, or during the driving or pulling of sheeting for any footing adjacent to a track, or when erecting structural steel adjacent to a track, or when performing work under, across or adjacent to a track, or when operations involve, swinging booms or chutes that could in any way come nearer then (**15** feet) to the gauge line of the near rail of the track, or when erection or removal of staging, false work or forms fouls a track or wire line.

None of the operations specified as a Hazard above shall be carried on during the approach or passing of a train or without permission from the Railroad's Chief Engineer and the presence of a railroad inspector/flagman, unless other prior arrangements have been made through the Railroad.

## 9. MINIMUM CLEARANCES

During the construction of staging, false work or forms, the Contractor shall at all times maintain a minimum vertical clearance of (**22.5** feet) above the top of high rail and a minimum side clearance of (**10** feet) from the gauge line of the near rail where track is tangent. Additional side clearance must be maintained where track is on a curve.

## 10. WORK PLAN SUBMITTAL AND APPROVAL

The Contractor shall submit in writing to the Railroad's Chief Engineer or duly authorized representative, and the Departments Railroad Property Manager or his appointed representative, at least **30** calendar day(s) in advance of the start of the project, an outline of his plan for work within the Railroad right of way including contemplated method(s) of construction. This plan must meet with the approval of the Railroad's Chief Engineer and the Department's Railroad Property Manager in every respect. If the Contractor contemplates the use of "on the track equipment", it should so state and obtain from the Railroad the conditions pertaining to such operations. All Railroad costs included in this operation will be borne by the Contractor. In a like manner, any of the Contractor's equipment or material on cars for this project shall be handled in conformance with existing traffic rules with all costs borne by the Contractor.

Prior to submitting his Proposal, the Contractor shall have ascertained from the Railroad and from the Department's Railroad Property Manager or his appointed representative, all information relating to its requirements and regulations and all costs in connection with compliance thereto.

## 11. EXCAVATIONS

Before excavation for footings adjacent to tracks and/or within the Railroad's right-of-way may commence, whether or not also within the limits of a public highway, plans and calculations for such excavations, prepared by a Professional Engineer authorized to practice in Maine, shall be submitted to the Railroad's Chief Engineer for review and approval. Unless other prior arrangements have been made, the Railroad's Chief Engineer shall have **2** week(s) to perform such review and approval and issue a written permission to proceed with the excavation. No excavation shall proceed without such permission.

At a minimum, excavations must utilize proper bracing, shoring, sheeting or other support as determined by the Railroad's Chief Engineer, to support the tracks with railroad traffic. Open excavation shall be suitably planked over when construction operations are not in progress, the location of any wires, conduits, pipes, cables or other railroad facilities below the surface of the ground. Damage to any such facilities caused by the failure of the Contractor to ascertain the location of such facilities or by failure to use due care to avoid injury to such facilities shall be at the expense of the Contractor.

## 12. EQUIPMENT

Equipment of the Contractor shall be in such condition so as to prevent failure that would cause delay in the operation of trains or damage to railroad facilities. Equipment shall not be placed or put in operation adjacent to a track without first obtaining permission of the Railroad. The Railroad agrees that such permission shall not be unreasonably withheld.

## 13. RAILROAD SERVICES - GENERALLY

When work is to be performed within the Railroad’s right-of-way, the Railroad shall provide the services, equipment and materials provided in this Special Provision including, but not limited to, engineering, flagging, inspection, signal protection and/or relocation, and restoration or replacement of the Railroad’s track structure of ballast. Further, if the Railroad's Chief Engineer determines that the Contractor’s operations do not comply with all of the safety requirements of this Special Provision and all safety requirements and directions of said Chief Engineer, the Railroad will employ the necessary qualified employees to protect its trains and other facilities. The Contractor shall pay to the Railroad the cost for performing all Railroad Services unless said costs are to be paid by the Department as specified in this Special Provision.

## 14. INSPECTION / FLAGGING

The Railroad shall furnish and assign all inspectors / flaggers for general inspection purposes of general protection of railroad property and operations during construction as the Railroad’s Chief Engineer determines are necessary to preserve safety.

(a) Responsibility for Cost. The Department will bear the cost of flagging or inspection (including travel time) or any combination thereof up to **10 man days** of said flagging or inspection. If, in the opinion of the Railroad's Chief Engineer, further services of a flagger or inspector will be required due to the operations of the Contractor, the services will be furnished and the cost thereof (salary, expenses, insurance, taxes and vacation allowance, etc.) shall be paid to the Railroad by the Department, and will be recovered by the Department from the Contractor.

(b) Terms. The minimum hours per day for the Railroad employees engaged in inspection flagging services shall be eight (8) hours. Time at rates for straight time, overtime or for deadheading starts in accordance with established practices in effect in the territory in which the project is located. Information as to these practices should be obtained from the Railroad's Chief Engineer.

The Contractor shall notify the Railroad's Chief Engineer and the Chief Engineer of the Department in writing **7** calendar day(s) before beginning, resuming or suspending work within (**25** feet) of the track, so that an inspector may be provided or removed in accordance with the requirements of this Special Provision. An inspector may be removed upon **3** calendar day(s) notice, but not before the inspector has worked five (5) consecutive days. Failure to give notice of intent to suspend work shall be cause of charge to the Contractor the cost of inspection during the period when work is suspended.

(c) Estimated Cost. The following is an estimate of the cost per day of inspection/flagging necessary for this project. The rates shown include all overhead charges, travel time, deadheading and personal expenses.

Date of estimate **12-28-2012**.

Estimated daily rate for eight (8) consecutive hours Monday-Friday (straight time): **$322.08**

Estimated daily rate for four (4) consecutive hours Saturday, Sunday, Holiday (overtime): **$241.56**

Estimated rate for hours worked in excess of eight (8) hours in any one day: **$60.39/hr**
Rates charged will be those in effect at the time of the performing the inspection/ flagging which may be different than the rates used at the date of the Estimate.

(d) Definitions.

Man day (M.D.) - eight (8) consecutive hours or any portion thereof.

Overtime - Each additional hour or fraction thereof consecutive to and beyond the standard man day will count as 3/16 of a man day.

Standard Man day - Eight (8) consecutive hour, Monday - Friday between the hours of **07:00** a.m. to **15:30** p.m. unless otherwise noted and agreed to by all parties. *(Note: Does not include lunch period from 12:00 pm to 12:30 pm)*

Travel Time - Time required by flagger and/or inspector to commute between his or her point of headquarters to the project site. This time shall not be charged used in determining available man days.

## 15. OTHER CONTRACTOR RESPONSIBILITIES

The restoring and resurfacing of tracks, if disturbed due to Contractor's operations, shall be at the expense of the Contractor.

Any other changes made or services furnished by the Railroad as a result of the Contractor will be at the Contractor's expense.

## 16. EXTRA-CONTRACT SERVICES

Temporary and permanent changes of tracks and telephone, signal and electric supply lines made necessary by or to clear the permanent work of the Contractor as shown on the construction plans and included in the Railroad force account as recollectable from the State will be made or caused to be made by the Railroad without expense to the Contractor.

## 17. INDEMNIFICATION

Where work is being performed over, under, across or adjacent to Railroad premises, the Contractor shall defend, indemnify and save harmless the Railroad and the Maine Department of Transportation from and against any and all loss, cost, damage, claims, suits, demands, or liability for damages for personal injury including death and for damage to property, which may arise from or out of the operations conducted under his contract, occurring by reason of any act or omission of the Contractor, his agents, servants or employees, or by reason of any act or omission of any subcontractor, his agents, servants or employees.

## 18. INSURANCE

In addition to any other forms of insurance or bonds required under the terms of the Contract, the Contractor will be required to procure and maintain, at its sole cost and expense, the following insurance coverages naming the Railroad as an insured.

(a) Railroad Protective Liability Insurance with limits not less than **$2M** per single occurrence and **$6M** per aggregate total occurrences.

(b) Comprehensive General Liability Insurance protecting against liability from bodily injury or property damage arising out of the Construction Project with limits of not less than **$2M** per single occurrence and **$6M** per aggregate total occurrences.

(c) Workers Compensation and Occupational Disease Insurance, as required by law.

(d) Automobile Liability Insurance covering all motor vehicles used about or in connection with the Construction Project.

If any part of the work is sublet, these insurance coverages shall be provided by or on behalf of the subcontractors to cover their operations

Each policy shall carry an endorsement covering the “save harmless” clause in favor of the Railroad and the Maine Department of Transportation, as set forth in the paragraph, “Responsibility for Damage Claims”.

If blasting is to be done in the vicinity of the Railroad, the insurance policies shall include such coverage.

The policies shall be in force before any work is done on the project and shall remain in effect until all work required to be performed under the terms of the contract is satisfactorily completed as evidenced by the formal acceptance by the State and the Railroad.

Before any work is done on the project, the Department of Transportation and the Railroad's Chief Engineer shall be furnished certificates of each policy. Further, the original policy of the Comprehensive General Liability Insurance and the Railroad Protective Liability Insurance shall be furnished to the Railroad's Chief Engineer and a duplicate shall be furnished to the Department of Transportation.

The policy or policies of the Railroad’s protective public liability and property damage liability shall be written by a Company authorized to do business in the State of Maine, and shall be signed by the President and Secretary of the Insurance Company and shall be countersigned by an authorized representative of the Company.

## 19. **ROADWAY WORKER SAFETY REGULATION**

Notice to all Contractors/Subcontractors and individuals must be aware of the Federal Roadway Worker Safety Regulation, CFR 49, Part 214(c). They may be required to comply with this regulation. Any requirements for them to comply will be discussed at the pre-construction utility meeting.

EXHIBIT A
ORIGINAL TO CONTRACTOR

**MDOT/RAILROAD STOP WORK ORDER**

| | |
|---|---|
| Section A - Contractor | Town |
| | DOT Railroad Project # |
| Railroad Name | Location |
| | Notice # |
| DESCRIPTION OF SAFETY HAZARD/REASON FOR ORDER | |
| Standard Violated | RAC (Risk Assessment Code)<br>**N/R** |
| Railroad Official (Flagger/Inspector)<br>Name<br><br>Signature | Date |
| | |
| **SECTION B - ACTION TAKEN:** | |

cc:

1. Risk Assessment. Each identified/validated hazard shall be assigned a Risk Assessment Code (RAC) by the Safety Office. The RAC represents the degree of risk associated with the deficiency and combines the elements of hazard severity and mishap probability. The RAC is derived as follows:

a. Hazard Severity. The hazard severity is an assessment of the worst potential consequence: Defined by degree of injury, occupational illness, or property damage, which is likely to occur as a result of a deficiency. Hazard severity categories shall be assigned by roman numeral according to the following criteria.

(1) Category I - Catastrophic: The hazard may cause death or loss of a facility.

(2) Category II - Critical: May cause severe injury, severe occupational illness, or major property damage.

(3) Category III - Marginal: May cause minor injury, minor occupational illness, or minor property damage.

(4) Category IV - Negligible: Probably would not affect personnel safety or health, but is nevertheless in violation of a NAVOSH standard.

b. Mishap Probability. The mishap probability is the probability that a hazard will result in a mishap, based on an assessment of such factors as location, exposure in terms of cycles or hours of operation, and affected population. Mishap probability shall be assigned an Arabic letter according to the following criteria:

(1) Sub-category A - Likely to occur immediately or within a short period of time.

(2) Sub-category B - Probably will occur in time.

(3) Sub-category C - May occur in time.

(4) Sub-category D - Unlikely to occur.

c. Risk Assessment Code. The RAC is an expression of risk which combines the elements of hazard severity and mishap probability. Using the matrix shown below, the RAC is expressed as a single Arabic number that can be used to help determine hazard abatement priorities.

| | Mishap Probability | | | | | RAC |
|---|---|---|---|---|---|---|
| | | A | B | C | D | 1 - Critical |
| Hazard Severity | I | 1 | 1 | 2 | 3 | 2 - Serious |
| | II | 1 | 2 | 3 | 4 | 3 - Moderate |
| | III | 2 | 3 | 4 | 5 | 4 - Minor |
| | IV | 3 | 4 | 5 | 5 | 5 - Negligible |

December 17, 2010
Supersedes December 30, 2009

# SPECIAL PROVISION
# SECTION 104
# GENERAL RIGHTS AND RESPONSIBILITIES
(Electronic Payroll Submission)
(Payment Tracking)

104.3.8.1 Electronic Payroll Submission The prime contractor and all subcontractors and lower-tier subcontractors will submit their certified payrolls electronically on this contract utilizing the Elation System web based reporting. There is no charge to the contracting community for the use of this service. The submission of paper payrolls will not be allowed or accepted. Additional information can be found at http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php under the first "Notice".

104.3.8.2 Payment Tracking The prime contractor and all subcontractors and lower-tier subcontractors will track and confirm the delivery and receipt of all payments through the Elation System

# SPECIAL PROVISION
# SECTION 104.5.5
# GENERAL RIGHTS AND RESPONSIBILITIES
## Prompt Payment of Subcontractors

104.5.5

104.5.5 Prompt Payment of Subcontractors

A. Pay When Paid The Contractor shall pay Subcontractors for all Work satisfactorily performed and Invoiced by the Subcontractor no later than 30 Days from the date the Contractor receives payment from the Department for such Subcontractor's Work.

B. Payment Tracking Federal Projects On federally funded projects, the prime contractor, subcontractors and lower-tier subcontractors will track and confirm the delivery and receipt of all payments through the Elation System. They will be responsible for entering all payments to all sub and lower tier contractors. MaineDOT will run a query monthly to ensure that contractors are complying and generate an e-mail to contractors who have not responded to confirm receipt of MaineDOT payment or contractor payment to lower tier subcontractors.

~~B~~ C. Retainage The Contractor shall return to the Subcontractor all retainage withheld from the Subcontractor within 30 Days after the date the Subcontractor's Work is satisfactorily completed. If there is a Delay in such return of retainage, the Subcontractor may pursue all rights it may have under the claims procedure referenced in Section 104.5.6 - Subcontractor Claims for Payment.

December 5, 2011
Supersedes December 1, 2010

# SPECIAL PROVISION
## SECTION 105
## GENERAL SCOPE OF WORK
(Buy America Certification)

105.11 Federal Requirements Add the following as the third and subsequent paragraphs:

"Prior to payment by the Department, the Contractor shall provide a certification from the producer of steel or iron, or any product containing steel or iron as a component, stating that all steel or iron furnished or incorporated into the furnished product was manufactured in the United States in accordance with the requirements of the Buy America provisions of 23 CFR 635.410, as amended. Such certification shall also include (1) a statement that the iron or steel product or component was produced entirely within the United States, or (2) a statement that the iron or steel product or component was produced within the United States except for minimal quantities of foreign steel and iron valued at $ (actual value).

All manufacturing processes must take place domestically. Manufacturing begins with the initial melting and mixing, and continues through the coating stage. Any process which modifies the chemical content, the physical size and shape, or the final finish is considered a manufacturing process. These processes include rolling, extruding, machining, bending, grinding, drilling, and coating. "Coating" includes epoxy coating, galvanizing, painting, or any other coating that protects or enhances the value of the material.

A Buy America Certification is required from each manufacturer, fabricator, supplier, subcontractor, etc. that meets the "manufacturing" definition above.

Buy America does not apply to raw materials (iron ore and alloys), scrap, pig iron, or processed, pelletized, and reduced iron ore."

# SPECIAL PROVISION 105
# GENERAL SCOPE OF WORK
## Equal Opportunity and Civil Rights
(Disadvantaged Business Enterprises Program)

105.10.1.1 Disadvantaged Business Enterprises Program The Maine Department of Transportation (MaineDOT) has established a Disadvantaged Business Enterprise (DBE) program in accordance with regulations of the United States Department of Transportation (USDOT), 49 CFR Part 26. The MaineDOT receives federal financial assistance from USDOT, and as a condition of receiving this assistance, the Department has signed an assurance that it will comply with 49 CFR Part 26.The MaineDOT is responsible for determining the eligibility of and certifying DBE firms in Maine.

A DBE is defined as a for-profit business that is owned and controlled by one or more socially and economically disadvantaged person(s). For the purpose of this definition:

1. "Socially and economically disadvantaged person" means an individual who is a citizen or lawful permanent resident of the United States and who is Black, Hispanic, Native American, Asian, Female; or a member of another group or an individual found to be disadvantaged by the Small Business Administration pursuant to Section 3 of the Small Business Act.
2. "Owned and controlled" means a business which is:
   a. A sole proprietorship legitimately owned and controlled by an individual who is a disadvantaged person.
   b. A partnership or limited liability company in which at least 51% of the beneficial ownership interests legitimately are held by a disadvantaged person(s).
   c. A corporation or other entity in which at least 51% of the voting interest and 51% of the beneficial ownership interests legitimately are held by a disadvantaged person(s).

The disadvantaged group owner(s) or stockholder(s) must possess control over management, interest in capital, and interest in earnings commensurate with the percentage of ownership. If the disadvantaged group ownership interests are real, substantial and continuing and not created solely to meet the requirements of this program, a firm is considered a bona fide DBE.

105.10.1.2 Commercially Useful Function MaineDOT will count expenditures of a DBE contractor toward DBE goals only if the DBE is performing a commercially useful function on that contract. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. Credit will only be given when the DBE meets all conditions for a CUF. Credit for labor will be in accordance with the responsibilities outlined in the contract. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the Contract, for negotiating price, determining quality and quantity, ordering the materials, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, MaineDOT will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the Contract is commensurate with the work it is actually performing and DBE credit claimed for its performance of the work, and other relevant factors.

Rented equipment used by the DBE must not be rented from the Prime Contractor on a job that the DBE is subcontracted with that Prime Contractor for regular course of business.

A current listing of certified DBEs that may wish to participate in the highway construction program and the scope of work for which they are certified can be found at http://www.maine.gov/mdot/disadvantaged-business-enterprises/pdf/directory.pdf. Credit will be given for the value described by a DBE performing as:

A. A prime contractor; 100% of actual value of work performed by own workforces.
B. An approved subcontractor; 100% of work performed by own workforces.
C. An owner-operator of construction equipment; 100% of expenditures committed.
D. A manufacturer; 100% of expenditures committed. The manufacturer must be a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Contractor. Brokers and packagers shall not be regarded as manufacturers.
E. A regular dealer; 60% of expenditures committed. A regular dealer is defined as a firm that owns, operates, or maintains a store, warehouse or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public. For purposes of this provision a "Broker" is a DBE that has entered into a legally binding relationship to provide goods or services delivered or performed by a third party. Brokers and packagers shall not be regarded as regular dealers.
F. A bona fide service provider; 100% of reasonable fees or commissions. Eligible services include professional, technical, consultant, or managerial, services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for the performance of the contract. Eligible services also include agencies providing bonding and insurance specifically required for the performance of the contract.
G. A trucking, hauling or delivery operation. 100% of expenditures committed when trucks are owned, operated, licensed and insured by the DBE and used on the contract and, if applicable, includes the cost of the self supplied materials and supplies.100% of expenditures committed when the DBE leases trucks from another DBE firm including an owner-operator. 100% of reasonable fees or commissions the DBE receives as a result of a lease arrangement for trucks from a non-DBE, including an owner-operator.
H. Any combination of the above.

105.10.1.3 Race-neutral Goals The Maine DOT is required to set an annual goal (approved on a three year basis) for DBE participation in Federal-aid projects. In order to fulfill that goal, bidders are encouraged to utilize DBE businesses certified by the MaineDOT. MaineDOT seeks to meet the established DBE goal solely through race-neutral means. *Race-neutral* DBE participation occurs when a DBE is awarded a prime contract through customary competitive procurement procedures, is awarded a subcontract on a contract that does not carry a DBE contract goal, or wins a subcontract from a prime contractor that did not consider its DBE status in making the award. A DBE/subcontractor Utilization Proposed Form is required to be included in bid documents.

MaineDOT will analyze each project and create a Project Availability Target (PAT), based on a number of factors including project scope, available DBE firms, firms certified in particular project work, etc. Each bid will request that the contractor attempt to meet the PAT. This PAT is developed to assist contractors to better understand what the MaineDOT expectations are for a

specific project. The PAT is NOT a mandate but an assessment of what this particular project can bear for DBE participation. The Department anticipates that each contractor will make the best effort to reach or exceed this PAT for the project.

105.10.1.4 Race-conscious Project Goals If it is determined by the Department that the annual DBE goal will not be met through *race-neutral* means, the Department may implement *race-conscious contract goals* on some projects. Race-conscious contract goals are goals that are enforceable by the Department and require that the prime contractor use good faith effort to achieve the goal set by the Department for that particular project. If race conscious means are implemented on a project, the Prime must comply with the requirements of 49 CFR.

At the time of the bid opening, all Bidders shall submit with their bid a Disadvantaged Business Enterprise (DBE) Commitment Form provided by the Department. This form will list the DBE and non-DBE firms that are proposed to be used during the execution of the Work. The list shall show the name of the firm, the item/material/type of work involved and the dollar amount of work to be performed. The dollar total of each commitment shall be totaled and a percentage determined.

If the project goal is not met, acceptable documentation showing all good faith efforts made to obtain participation may be required in order to award the project. Failure to provide the required listing with the dollar participation total or acceptable documentation of good faith efforts to obtain DBE participation within 3 days after the bid opening date will be considered a lack of responsiveness on the part of the low bidder. Rejection of the low bid under these circumstances will require the low bidder to surrender the Proposal Guaranty to the Department. The submission and approval of the above forms does not constitute a formal subcontract.

If for any reason during the progress of the Work the Contractor finds that DBEs included on the list are unable to perform the proposed work, the Contractor, with written release by the committed DBE or approval of the Department, may substitute other DBE firms for those named on the list. If the Contractor is able to clearly document their inability to find qualified substitute firms to meet the project goal, the Contractor may request in writing approval to substitute the DBE with a non-DBE firm. If at any time during the life of the Contract it is determined that the Contractor is not fulfilling the goal or commitment(s) and is not making a good faith effort to fulfill the DBE requirement, the Department may withhold progress payments. If good faith effort is determined by the Department, failure to meet the DBE contract goal will not be a detriment to the bid award. Fulfillment of the goal percentage shall be determined by dividing the dollars committed to the DBEs by the actual contract dollars. These requirements are in addition to all other Equal Employment Opportunity requirements on Federal-aid contracts.

105.10.1.5 Certification of DBE attainment on Contracts The MaineDOT must certify that it has conducted post-award monitoring of all contracts to ensure that DBEs had done the work for which credit was claimed. The certification is for the purpose of ensuring accountability for monitoring which the regulation already requires. The MaineDOT will certify these contracts through review of CUF forms, Elations sub-contract payment tracking as well as occasional on-site reviews of projects and through the project's final closeout documentation provided by our Contracts Section.

105.10.1.6 Bidders' List Survey Pursuant to 49 CFR 26.11 the MaineDOT is required to "create and maintain" a bidders list and gather bidder information on our construction/consultant projects, Contractors will maintain information on all subcontract bids submitted by DBE and Non-DBE firms and provide that information to the Department. The Following information is required:

Firm Name
Firm Address
Firm status (DBE or non-DBE)
Age of firm (years)
And the annual gross receipts amount as indicated by defined brackets, i.e. $500,000 to $800,000, rather than requesting exact figures.

Not only is this information critical in determining the availability of DBE businesses relative to other businesses that do similar work, but the Federal Highway Administration requires that we obtain this information.

MaineDOT DBE Project Attainment Target (PAT)
for this Project is 4 %

The MaineDOT seeks to meet the specified annual Disadvantaged Business Enterprise (DBE) usage goal set out by 49 CFR 26.45 through the efforts of contractors seeking to employ qualified DBE subcontractors. We seek to meet this goal by race neutral means and do not, at this time, use contract specific requirements for each project. We do however, understand the capacity of Maine's DBE community and the unique characteristics a project may have that would differ from the broad annual goal.

Taking this into consideration, the MaineDOT will review each project and develop an anticipated attainment or Project Attainment Target (PAT) based on several factors that are project specific. Those factors include:

- ☐ Scope of Work
- ☐ DBE availability according to Specification Item
- ☐ Geographic location
- ☐ DBE capacity

This PAT is developed to assist contractors to better understand the DBE participation that the MaineDOT can reasonably expect for a specific project. The PAT is NOT a mandate but an assessment of the DBE opportunities that this project could meet or exceed. MaineDOT anticipates that each contractor will make the best effort to reach or exceed the PAT for this project.

Town: Smithfield-Norridgewock
PIN #: 12776.00
Date: 5/20/13

SPECIAL PROVISION
SECTION 105
General Scope of Work
(Environmental Requirements)

In-Water work consists of any activity conducted below the normal high water mark of a river, steam, brook, lake, pond or "Coastal Wetland" areas that are subject to tidal action during the highest tide level for the year which an activity is proposed as identified in the tide tables published by the National Ocean Service. http://www.oceanservice.noaa.gov/ For the full definition of "Coastal Wetlands", please refer to 38 MRSA 480-B(2)

I. **In-Water work is allowed Anytime.**

II. In-Water work window applies to the following water bodies at the following station #'s:

1. **85+50**
2. **94+75**
3. **135+00**
4. **223+73**
5. **313+00**
6. **384+00**
7. **514+50**

III. Special Conditions:

1. See ACOE permit for all Special Conditions or see page 2-4 of this special provision

IV. Approvals:

1. Temporary Soil Erosion and Water Pollution Control Plan

V. All activities are prohibited (including placement and removal of cofferdams unless otherwise permitted by Regulatory Agencies) below the normal high water mark if outside the prescribed in-water work window, except for the following:

1. Work within a cofferdam constructed according to MaineDOT's Standard Specifications and in adherence with the contractors approved "Soil Erosion and Water Pollution Control Plan".

VI. No work is allowed that completely blocks a river, stream, or brook without providing downstream flow. When working in Tidal streams flow needs to be provided in both directions

NOTE: Regulatory Review and Approval is required to modify the existing In-Water work window.

1. The permittee and contractor shall comply with all terms and conditions of this permit and with the permittee's construction plan. Modifications to the approved plan may require re- initiation of Endangered Species Consultation between the Corps and Service and therefore, should not be implemented without first contacting the Corps.

2. All projects authorized by this permit shall be designed in accordance with Maine DOT's 2008 Waterway and Wildlife Crossing Policy and Design Guide[1].

3. A fish evacuation plan must be implemented by appropriate Maine DOT staff during construction and dewatering of all cofferdams to carefully remove fish from the work area.

4. All instream work (which includes the installation and removal of cofferdams, as well as other activities) shall be conducted according to the work windows specified in the BA.

**Instream work is allowed anytime**

5. Any cofferdam constructed as part of the authorized projects shall adhere to the specifications contained in Section 2.0 (Cofferdam Descriptions) of the BA.

6. All culvert installations authorized by this permit must adhere to the specifications contained in Section 2.1 (Culvert Replacement Projects) of the BA.

**(Excerpts from the BA)**

**Cofferdam Descriptions**

While the crossing strategies and individual details may vary by type, size, and location within the project action area, the same conceptual construction guidelines for the installation of cofferdams are employed.

The initial step for instream construction work for new culvert, box, and span projects is to dewater the work area, in conjunction with the installation of cofferdams, so that all in-stream work is conducted in the dry.

*Cofferdam Placement*

Cofferdams, which can consist of various materials including sheet pile, sand bags, industrial sandbags, or an inflatable dam, would be placed to keep water out of the work area by blocking flow both upstream and downstream. This has the added benefit of keeping all sediment released by construction in the dry work area where it can be removed before stream flow is restored.

1. The upstream cofferdam would be installed first. Heavy duty plastic sheeting would be laid along the width of the stream when practicable. The sand bags would then be placed on the plastic up to a height somewhat higher than the current level of the stream, working from the stream bank to the center.
2. The excess plastic would then be folded over the dam in the upstream direction and another layer of sand bags would be laid on the plastic to help seal the dam from infiltration. The plastic would be extended along the stream bottom as far upstream as practicable.
3. The downstream cofferdam would then be installed. This second dam is a safeguard against a failure of the upstream dam. Most cofferdams leak somewhat, so a pump may be placed within the work area to catch accumulating water, which would then be pumped into the "dirty water" treatment system.

*Stream Diversion*

Stream flow can be diverted around the work area either by pumping it around through hoses or by diverting flow through a temporary culvert or plastic sheet-lined channel installed next to the stream using sandbags, sheet piles, jersey barriers, etc. The description below outlines the process for using pumps and hoses to divert flow from one side of a project to the other.

1. Prior to in-stream work, a diversion culvert may be placed under the road away from the stream to run a diversion hose. This protects the hose during the construction activities. Another common way of doing this is running the hose over the road and blocking up around it with wood to protect it from traffic.
2. The intake hose will be placed at the upstream end of the culvert, just upstream of the cofferdam. In order to minimize impact on the streambed, the hose end will be placed in a bucket and/or the stream bottom will be lined with geotextile fabric. A screen will be placed at the intake hose end to prevent injury to fish and entrapment within the work area. To prevent fish entrainment into the hose, the screen openings shall not exceed 3/32-inches (2.38 mm) in the narrow direction. In order to prevent impingement of Atlantic salmon parr on the screened intake hoses, additional barriers consisting of either placing the intake within a 5-gallon bucket or creating a barrier with a ¼-in (6.35 mm) knotless block seine around the perimeter of the intake will be utilized. Other additional barriers,

including barriers made of sand bags, plastic sheeting, or other suitable materials may be utilized depending on site conditions. The approach velocity will be kept below 0.2 ft/second (0.06 m/sec) to avoid impingement of Atlantic salmon juvenile (NMFS 2008).
3. The gasoline diversion pumps will then be setup as far away from the stream as possible. The number and size of pumps used varies depending on the water level present when the work is being conducted.
4. Non-woven geotextile fabric will be laid along the streambed to protect the stream from scour caused by the high water velocity coming from the hose(s) at the downstream end.

*"Dirty Water" Treatment System Installation*
After the cofferdams and water diversion pumps have diverted the stream around the work area, it will be necessary to dewater the work area itself. This water will be pumped into a sediment basin for filtration.
1. The system will be installed according to MaineDOT's BMP Manual (MaineDOT 2008)
2. The sediment basin will either be comprised of hay bales or "dirt bags". Sometimes erosion control fabric is placed under the hay bale filter to catch sediment. These sediments will be disposed of away from the stream in a manner that they cannot erode back into the stream.
3. The sediment basin will be located close to the project location with adequate vegetation between it and the stream to act as a filter.

*Pumping*
A) Hoses will be setup between the treatment basin and the downstream scour pool within the work area.
B) The "dirty water" pump(s) will then be started in the downstream scour pool
C) The pool will be slowly dewatered and any stranded aquatic organisms, (including Atlantic salmon) will be caught and transferred to the downstream channel by a MaineDOT biologist.
D) The work area will then be pumped dry, with this water going to the "dirty water" treatment system prior to its release back into the stream.
E) If there is leakage around the cofferdam, or upwelling in the work area, pockets will be excavated in the work area to collect the water. This water will be pumped into the "dirty water" system for treatment, prior to its release back into the stream.

**Pile Driving**
The driving of sheet pile cofferdams may be required for the installation of the crossing structures. The piles will likely be driven with a vibratory hammer that grabs the pile at the top and pushes it into the substrate with a rapid up and down motion. This creates lower levels of noise than use of an impact hammer and can generate small amounts of sedimentation. Piles are also removed using this type of hammer. Further information on pile driving effects is discussed in Chapter 6 – Project Effects.
**Culvert Replacements**
Once flow is diverted and the work area is dewatered, the culvert installation can commence. At this point, the crews are working in the dry and there is no sediment being released into the stream. All pumps, hoses, dams, and the sediment basin are monitored closely and maintained throughout construction. The culvert will be installed and embedded in the dry stream bed. The culvert will have material similar to the adjacent stream installed inside to create a natural substrate bottom. When the culvert and rip rap installation is complete, all headwalls, disturbed areas, and permanent drainage ditches are stabilized with final treatments, using BMP and permanent erosion controls as necessary.
*Closeout Procedures*
1. The upstream "dirty water" pump will then be removed.
2. The diversion pump system will be stopped and the upstream cofferdam will slowly be breached. The first flush of dirty water will be captured by the downstream "dirty water" pump, which will then pump the water into the dirty water treatment system.
3. When the water behind the remaining intact cofferdam is clean, that dam will be breached as well.
4. The remainder of the upstream cofferdam and the diversion pump system will then be removed.
5. All disturbed areas will be stabilized, and all permanent erosion control BMPs will be installed.

Any work that is not expected to be inundated with water will employ proper BMPs as stated in MaineDOT Best Management Practices for Erosion and Sedimentation Control (MaineDOT 2008). In some areas the construction of the retaining wall would start on ledge, while in other areas they would start on fill.

7. Maine DOT and their contractors shall minimize the potential for impacts to Atlantic salmon habitat by conducting all construction activities for each project in accordance with the Maine DOT approved Soil Erosion and Water Pollution Control Plan.

8. Maine DOT shall use a screen on each pump intake sufficiently large enough that the approach velocity does not exceed 0.20 ft/s. Designing the screen for these approach velocities will minimize screen contact and/or impingement of juvenile fish. Square or round screen face openings not to exceed 2.38 mm (3/32 inch) on a diagonal. Criteria for slotted face opening must not exceed 1.75mm (approximately 1/16$^{th}$ inch) in the narrow direction. Intake hoses shall be regularly monitored while pumping.

9. Maine DOT or their contractor will follow measures designed to avoid effects to rivers and streams from hazardous materials associated with construction activities, including:

a. All vehicles refueling shall occur more than 100 feet from any water course.

b. All vehicles carrying fuel shall have specific equipment and materials needed to contain or clean up any incidental spills at the project site. Equipment and materials would include spill kits appropriately sized for specific quantities of fuel, shovels, absorbent pads, straw bales, containment structures and liners, and/or booms.

c. During use, all pumps and generators shall have appropriate spill containment structures and/or absorbent pads in place.

d. All equipment used for instream work shall be cleaned of external oil, grease, dirt, and mud. Any leaks or accumulations of grease would be corrected before entering streams or areas that drain directly to streams or wetlands.

10. Noxious Weeds: All off-road equipment and vehicles (operating off of existing open and maintained roads) must be cleaned prior to entering the construction site(s) to remove all soil, seeds, vegetation, or other debris that could contain seeds or reproductive portions of plants. Equipment operators may employ whatever cleaning methods are necessary to ensure that off-road equipment is free of the above material prior to entering the easement portion of the access road. The equipment will be inspected prior to off-loading.

11. All cofferdams shall be removed from the stream immediately following completion of construction, allowing for minor delays due to high stream flows following heavy precipitation, so that fish and other aquatic life passage is not unnecessarily restricted. If a project is not completed but there will be substantial delays in construction, cofferdams will need to be at least partially removed to allow unobstructed fish passage until construction resumes.

12. If any listed Atlantic salmon is encountered in the project areas of this permit, including dewatering of coffer dams, all work must cease and USFWS (Maine Field Office; 207-866-3344) and the Corps (Maine Project Office; 207-623-8367) shall be contacted immediately. Work may not resume until the Corps and the USFWS conclude supplemental endangered species consultation as necessary.

13. All areas of temporary waterway or wetland fill will be restored to their original contour and character upon completion of the projects.

14. Disturbed areas adjacent to streams will be stabilized and re-vegetated with a seed mix and tree/shrub plantings appropriate for riparian areas in Maine. Only native species that reflect the existing natural riparian community in the general area may be used. The permittee shall take all available and practicable steps to ensure that tree/shrub plantings remain viable and are protected from future disturbance.

15. A post-project report, confirming completion of construction and the successful application of all terms and conditions of this permit, shall be submitted within four (4) weeks of project completion. The report shall include, but not be limited to, a narrative and photos documenting project elements outlined in the construction plan and referenced in these conditions e.g. installation of erosion control measures, installation of the work platform, and debris removal. This report may accompany the Compliance Certification Form referenced in Condition 16.

16. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals).

17. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub- contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.

# SPECIAL PROVISION 105
# CONSTRUCTION AREA

A Construction Area located in the **Towns of Smithfield - Norridgewock** has been established by the Maine Department of Transportation (MDOT) in accordance with provisions of 29-A § 2382 Maine Revised Statutes Annotated (MRSA).

(a) (Rte.8) The section of highway under construction beginning at Sta. 0+85.00 and ending at Sta. 386+20.66 of the construction centerline plus approaches.

Per 29-A § 2382 (7) MRSA, the MDOT may "*issue permits for stated periods of time for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:*

*A. Must be procured from the municipal officers for a construction area within that municipality;*

*B. May require the contractor to be responsible for damage to ways used in the construction areas and may provide for:*

*(1) Withholding by the agency contracting the work of final payment under contract; or*

*(2) The furnishing of a bond by the contractor to guarantee suitable repair or payment of damages.*

*The suitability of repairs or the amount of damage is to be determined by the Department of Transportation on state-maintained ways and bridges, otherwise by the municipal officers;*

*C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and*

*D. For construction areas, carries no fee and does not come within the scope of this section."*

The Municipal Officers for the **Towns of Smithfield - Norridgewock** agreed that an Overlimit Permit will be issued to the Contractor for the purpose of using loads and equipment on municipal ways in excess of the limits as specified in 29-A MRSA, on the municipal ways as described in the "Construction Area".

As noted above, a bond may be required by the municipality, the exact amount of said bond to be determined prior to use of any municipal way. The MDOT will assist in determining the bond amount if requested by the municipality.

The maximum speed limits for trucks on any town way will be 25 mph (40 km per hour) unless a higher legal limit is specifically agreed upon in writing by the Municipal Officers concerned.

# SPECIAL PROVISION 105
# OVERLIMIT PERMITS

## Title 29-A § 2382 MRSA Overlimit Movement Permits.

**1. Overlimit movement permits issued by State.** The Secretary of State, acting under guidelines and advice of the Commissioner of Transportation, may grant permits to move nondivisible objects having a length, width, height or weight greater than specified in this Title over a way or bridge maintained by the Department of Transportation

**2. Permit fee.** The Secretary of State, with the advice of the Commissioner of Transportation, may set the fee for single trip permits, at not less than $6, nor more than $30, based on weight, height, length and width. The Secretary of State may, by rule, implement fees that have been set by the Commissioner of Transportation for multiple trip, long-term overweight movement permits. Rules established pursuant to this section are routine technical rules pursuant to Title 5, chapter 375, subchapter II-A.

**3. County and municipal permits.** A county commissioner or municipal officer may grant a permit, for a reasonable fee, for travel over a way or bridge maintained by that county or municipality

**4. Permits for weight.** A vehicle granted a permit for excess weight must first be registered for the maximum gross vehicle weight allowed for that vehicle.

**5. Special mobile equipment.** The Secretary of State may grant a permit, for no more than one year, to move pneumatic-tire equipment under its own power, including Class A and Class B special mobile equipment, over ways and bridges maintained by the Department of Transportation. The fee for that permit is $15 for each 30-day period.

**6. Scope of permit.** A permit is limited to the particular vehicle or object to be moved, the trailer or semitrailer hauling the overlimit object and particular ways and bridges.

**7. Construction permits.** A permit for a stated period of time may be issued for loads and equipment employed on public way construction projects, United States Government projects or construction of private ways, when within construction areas established by the Department of Transportation. The permit:

A. Must be procured from the municipal officers for a construction area within that municipality;

B. May require the contractor to be responsible for damage to ways used in the construction areas and may provide for:

(1) Withholding by the agency contracting the work of final payment under contract; or

(2) The furnishing of a bond by the contractor to guarantee suitable repair or payment of damages.

The suitability of repairs or the amount of damage is to be determined by the Department of Transportation on state-maintained ways and bridges, otherwise by the municipal officers;

C. May be granted by the Department of Transportation or by the state engineer in charge of the construction contract; and

D. For construction areas, carries no fee and does not come within the scope of this section.

**8. Gross vehicle weight permits.** The following may grant permits to operate a vehicle having a gross vehicle weight exceeding the prescribed limit:

A. The Secretary of State, with the consent of the Department of Transportation, for state and state aid highways and bridges within city or compact village limits;

B. Municipal officers, for all other ways and bridges within that city and compact village limits; and

C. The county commissioners, for county roads and bridges located in unorganized territory.

**9. Pilot vehicles.** The following restrictions apply to pilot vehicles.

A. Pilot vehicles required by a permit must be equipped with warning lights and signs as required by the Secretary of State with the advice of the Department of Transportation.

B. Warning lights may be operated and lettering on the signs may be visible on a pilot vehicle only while it is escorting a vehicle with a permit on a public way.

With the advice of the Commissioner of Transportation and the Chief of the State Police, the Secretary of State shall establish rules for the operation of pilot vehicles.

**9-A. Police escort.** A person may not operate a single vehicle or a combination of vehicles of 125 feet or more in length or 16 feet or more in width on a public way unless the vehicle or combination of vehicles is accompanied by a police escort. The Secretary of State, with the advice of the Commissioner of Transportation, may require a police escort for vehicles of lesser dimensions.

A. The Bureau of State Police shall establish a fee for state police escorts to defray the costs of providing a police escort. A county sheriff or municipal police department may establish a fee to defray the costs of providing police escorts.

B. The Bureau of State Police shall provide a police escort if a request is made by a permittee. A county sheriff or municipal police department may refuse a permittee's request for a police escort.

C. A vehicle or combination of vehicles for which a police escort is required must be accompanied by a state police escort when operating on the interstate highway system.

**10. Taxes paid.** A permit for a mobile home may not be granted unless the applicant provides reasonable assurance that all property taxes, sewage disposal charges and drain and sewer assessments applicable to the mobile home, including those for the current tax year, have been paid or that the mobile home is exempt from those taxes. A municipality may waive the requirement that those taxes be paid before the issuance of a permit if the mobile home is to be moved from one location in the municipality to another location in the same municipality for purposes not related to the sale of the mobile home.

**11. Violation.** A person who moves an object over the public way in violation of this section commits a traffic infraction.

Section History:
PL 1993, Ch. 683, §A2 (NEW).
PL 1993, Ch. 683, §B5 (AFF).
PL 1997, Ch. 144, §1,2 (AMD).
PL 1999, Ch. 117, §2 (AMD).
PL 1999, Ch. 125, §1 (AMD).
PL 1999, Ch. 580, §13 (AMD).
PL 2001, Ch. 671, §30 (AMD).
PL 2003, Ch. 166, §13 (AMD).
PL 2003, Ch. 452, §Q73,74 (AMD).
PL 2003, Ch. 452, §X2 (AFF).

# SPECIAL PROVISION
## SECTION 105
## GENERAL SCOPE OF WORK
(Project Survey Control & Construction Layout)

Description The Contractor may elect to utilize electronic methods of project location layout and control (such as, but not limited to, Global Position System (GPS) and/or Robotic Total Station (RTS) equipment) provided the following requirements are met.

Project Control Work Plan The Contractor shall provide a Project Control Work Plan to the Department at least 14 days prior to the preconstruction meeting. The Project Control Work Plan shall include:

- Design software and version used to develop Digital Terrain Model (DTM)
- Make and model of equipment and software used for project layout/staking
- Make and model of equipment and software used for machine guidance/control and the make and model of machine to be used
- Manufacturer stated vertical and horizontal accuracy attainable by equipment
- Site Calibration and control verification procedures including timetable and tolerances
- Calibration procedure and records for equipment used for machine guidance/control
- Description of procedure used to integrate vertical refinement equipment (i.e. laser), including process of determining and verifying transmitter set-up location and communicating any necessary adjustments to the machine control equipment
- Narrative description of methods used to establish any additional project control points (horizontal or vertical)
- Type(s) and locations of base stations to be used, including methods for determining on-site bases and localization procedure for off-site bases
- Name, title and role of all contractor personnel involved with equipment utilized on the project (including development of DTM)
- Designated on-site contractor person to be primary contact for issues arising from Contractor's use of GPS or RTS equipment

The Department will review and provide comments to the Contractor within 14 days of receipt of the Project Control Work Plan.

Digital Terrain Model (DTM) Any electronic project design data provided to the Contractor will not be deemed a part of the contract. Any electronic data provided to the Contractor is done as a courtesy by the Department. The Contractor shall not take advantage of any Ambiguity, error, omission, conflict, or discrepancy contained in the electronic data. If the Contractor discovers any such ambiguity, etc., the Contractor shall notify the Department before performing any Work related to the ambiguity, etc.

The Contractor shall convert any electronic data provided by the Department into the format required by the Contractor's system and equipment at the Contractor's expense.

The completed Digital Terrain Model (DTM) to be used for construction shall be submitted to the Department in InRoads DTM, LandXML, or other format acceptable to the Department for review with the Project Control Work Plan. No changes shall be made to the electronic model after submittal without prior written consent by the Project Resident.

Department Verification The Contractor shall furnish a GPS Rover or RTS equipment with the same capabilities as units used by the Contractor and compatible with the system(s) used by the Contractor to the Project Resident prior to commencing work utilizing electronic layout methods. The unit(s) shall stay in the possession of the Department for the duration of the project and shall be returned, in good condition, to the Contractor upon final acceptance of the field work.

Any augmented features (such as laser refinement) used by the contractor shall be included in the features available on the equipment provided to the Department.

With the equipment, the Contractor shall provide eight hours of manufacturer certified training on the use of the GPS or RTS and the Contractor's systems to Department project personnel prior to beginning any work. This training is for the purpose of providing Department project personnel with an understanding of the equipment, software, and electronic data being used by the Contractor.

Equipment Use All work accomplished through electronic layout methods and/or machine control must meet the same accuracy requirements as conventional grading construction as detailed in the Standard Specifications. The contractor shall not utilize GPS or RTS equipment for a construction activity that requires a greater precision than the machine's capability as per the manufacturer's recommendation.

Basis of Payment No payment shall be made for the elected use of electronic methods of project location layout and control. Any delays arising from the operation of GPS or RTS layout or machine control systems will not result in adjustment to the bid price or quantity of any construction items or be justification for granting any type of contract extension. Any costs incurred through incorrect use of GPS or RTS layout or machine control systems or re-construction necessary through their use are the sole responsibility of the Contractor. Training of Department project personnel in the use of GPS or RTS will be paid on a reimbursable basis based on submitted invoices, without Contractor markup.

# SPECIAL PROVISION
## SECTION 107
## TIME
(Scheduling of Work – Projected Payment Schedule)

Description The Contractor shall also provide the Department with a Quarterly Projected Payment Schedule that estimates the value of the Work as scheduled, including requests for payment of Delivered Materials. The Projected Payment Schedule must be in accordance with the Contractor's Schedule of Work and prices submitted by the Contractor's Bid. The Contractor shall submit the Projected Payment Schedule as a condition of Award.

# SPECIAL PROVISION
# SECTION 107
# SCHEDULING OF WORK

Replace Section 107.4.2 with the following:

"107.4.2 Schedule of Work Required Within 21 Days of Contract Execution and before beginning any on-site activities, the Contractor shall provide the Department with its Schedule of Work. The Contractor shall plan the Work, including the activity of Subcontractors, vendors, and suppliers, such that all Work will be performed in Substantial Conformity with its Schedule of Work. The Schedule must include sufficient time for the Department to perform its functions as indicated in this Contract, including QA inspection and testing, approval of the Contractor's TCP, SEWPCP and QCP, and review of Working Drawings.

At a minimum, the Schedule of Work shall include a bar chart which shows the major Work activities, milestones, durations, **submittals and approvals**, and a timeline. Milestones to be included in the schedule include: (A) start of Work, (B) beginning and ending of planned Work suspensions, (C) Completion of Physical Work, and (D) Completion. If the Contractor Plans to Complete the Work before the specified Completion date, the Schedule shall so indicate.

Any restrictions that affect the Schedule of Work such as paving restrictions or In-Stream Work windows must be charted with the related activities to demonstrate that the Schedule of Work complies with the Contract.

The Department will review the Schedule of Work and provide comments to the Contractor within 20 days of receipt of the schedule. The Contractor will make the requested changes to the schedule and issue the finalized version to the Department."

# SPECIAL PROVISION
## SECTION 107
## TIME
(Limitation of Operations)
and
(Supplemental Liquidated Damages)

Where existing pavement carries traffic and is removed to install (or remove) drainage or utility structures, recycled asphalt pavement will be allowed daily and prior to weeks end, trenches will receive a 3" minimum of acceptable hot or cold bituminous mixture. Should maintenance of trenches become an issue, RAP will not be allowed and all trenches will be paved daily as directed. Cold bituminous mixture shall contain aggregates, asphalt cutbacks, liquefiers and wetting agents. No separate payment will be made for furnishing, placing, maintaining, and removing temporary pavement and all cost of such work will be considered incidental to the various drainage items.

Where existing pavement is excavated or covered by fill as a part of the general grading operations prior to November 1, 2013 and November 1, 2014, the binder course of the hot bituminous pavement shall be installed and completed on or before November 1, 2013 and November 1, 2014. Supplemental liquidated damages shall be assessed the Contractor in the amount of Five Hundred Dollars ($500.00) per day for each calendar day, beginning November 2, 2013 and November 2, 2014 that above stated binder course remains incomplete. This assessment of supplemental liquidated damages shall be in addition to the liquidated damages per working day, as specified in Section 108 of the Standard Specifications.

Grading operations which excavate or fill over existing pavement being used to carry traffic shall be suspended on November 1, 2013 and November 1, 2014 and not be resumed until the Spring of 2014 and Spring of 2015.

# Special Provision
# Section 107
# Prosecution and Progress
# (Contract Time)

**The contractor will be allowed to commence work on this project as long as all applicable plans as required under this contract have been submitted and approved.**

**The completion date for this contract is June 26, 2015.**

**The Contractor shall adhere to Section 107.3.3 Sundays and Holidays**

**All work schedule changes must be submitted for approval to the Department a minimum of 10 calendar days prior to the requested change.**

**For every weekday not worked once operations commence, the contractor will be charged Supplemental Liquidated Damages per Section 107.7.2 (excluding days lost to inclement weather.)**

# SPECIAL PROVISION
## SECTION 108
## PAYMENT
(Asphalt Escalator)

108.4.1 Price Adjustment for Hot Mix Asphalt: For all contracts with hot mix asphalt in excess of 500 tons total, a price adjustment for performance graded binder will be made for the following pay items:

Item 403.102 Mot Mix Asphalt – Special Areas
Item 403.206 Hot Mix Asphalt - 25 mm
Item 403.207 Hot Mix Asphalt - 19 mm
Item 403.2071 Hot Mix Asphalt - 19 mm (Polymer Modified)
Item 403.2072 Hot Mix Asphalt - 19 mm (Asphalt Rich Base)
Item 403.2073 Warm Mix Asphalt - 19 mm
Item 403.208 Hot Mix Asphalt - 12.5 mm
Item 403.2081 Hot Mix Asphalt - 12.5 mm (Polymer Modified)
Item 403.20813 Warm Mix Asphalt - 12.5 mm (Polymer Modified)
Item 403.2083 Warm Mix Asphalt - 12.5 mm
Item 403.209 Hot Mix Asphalt - 9.5 mm (sidewalks, drives, & incidentals)
Item 403.210 Hot Mix Asphalt - 9.5 mm
Item 403.2101 Hot Mix Asphalt - 9.5 mm (Polymer Modified)
Item 403.2102 Hot Mix Asphalt - 9.5 mm (Asphalt Rich Base)
Item 403.2103 Warm Mix Asphalt - 9.5 mm
Item 403.2104 Hot Mix Asphalt - 9.5 mm (3/4" Surface)
Item 403.211 Hot Mix Asphalt – Shim
Item 403.2111 Hot Mix Asphalt – Shim (Polymer Modified)
Item 403.2113 Warm Mix Asphalt - Shim
Item 403.212 Hot Mix Asphalt - 4.75 mm (Shim)
Item 403.2123 Warm Mix Asphalt - 4.75 mm (Shim)
Item 403.213 Hot Mix Asphalt - 12.5 mm (base and intermediate course)
Item 403.2131 Hot Mix Asphalt - 12.5 mm (base and intermediate course Polymer Modified)
Item 403.2132 Hot Mix Asphalt - 12.5 mm (Asphalt Rich Base and intermediate course)
Item 403.2133 Warm Mix Asphalt - 12.5 mm (base and intermediate course)
Item 403.214 Hot Mix Asphalt - 4.75 mm (Surface)
Item 403.2143 Warm Mix Asphalt - 4.75 mm (Surface)
Item 403.301 Hot Mix Asphalt (Asphalt Rubber Gap-Graded)
Item 404.70 Colored Hot Mix Asphalt – 9.5mm (Surface)
Item 404.72 Colored Hot Mix Asphalt – 9.5mm (Islands, sidewalks, & incidentals)
Item 461.13 Maintenance Surface Treatment

Price adjustments will be based on the variance in costs for the performance graded binder component of hot mix asphalt. They will be determined as follows:

The quantity of hot mix asphalt for each pay item will be multiplied by the performance graded binder percentages given in the table below times the difference in price between the base price and the period price of asphalt cement. Adjustments will be made upward or downward, as prices increase or decrease.

| | | | |
|---|---|---|---|
| Item 403.102–6.2% | | | |
| Item 403.206–4.8% | | | |
| Item 403.207–5.2% | Item 403.2071–5.2% | Item 403.2072–5.8% | Item 403.2073–5.2% |
| Item 403.208–5.6% | Item 403.2081–5.6% | Item 403.20813–5.6% | Item 403.2083–5.6% |
| Item 403.209–6.2% | | | |
| Item 403.210–6.2% | Item 403.2101–6.2% | Item 403.2102–6.8% | Item 403.2103–6.2% |
| Item 403.2104–6.2% | | | |
| Item 403.211–6.2% | Item 403.2111–6.2% | | Item 403.2113–6.2% |
| Item 403.212–6.8% | | | Item 403.2123–6.8% |
| Item 403.213–5.6% | Item 403.2131–5.6% | Item 403.2132–6.2% | Item 403.2133–5.6% |
| Item 403.214–6.8% | | | Item 403.2143–6.8% |
| Item 403.301–6.2% | | | |
| Item 404.70–6.2% | | | |
| Item 404.72–6.2% | | | |
| Item 461.13–6.4% | | | |

Hot Mix Asphalt**:** The quantity of hot mix asphalt will be determined from the quantity shown on the progress estimate for each pay period.

Base Price: The base price of performance graded binder to be used is the price per standard ton current with the bid opening date. This price is determined by using the average New England Selling Price (Excluding the Connecticut market area), as listed in the Asphalt Weekly Monitor.

Period Price: The period price of performance graded binder will be determined by the Department by using the average New England Selling Price (Excluding the Connecticut market area), listed in the Asphalt Weekly Monitor current with the paving date. The maximum Period Price for paving after the adjusted Contract Completion Date will be the Period Price on the adjusted Contract Completion Date.

# SPECIAL PROVISIONS
## SECTION 202
## REMOVING STRUCTURES AND OBSTRUCTIONS
(Removing Pavement Surface)

The December 2002 Revision of the Standard Specifications, Section 202-Removing Structures and Obstructions, subsection 202.061-Removing Pavement Surface, has been removed and replaced in it's entirety by the following:

202.061 Removing Pavement Surface The equipment for removing the bituminous surface shall be a power operated milling machine or grinder capable of removing bituminous concrete pavement to the required depth, transverse cross slope, and profile grade by the use of an automated grade and slope control system. The controls shall automatically increase or decrease the pavement removal depth as required, and readily maintain desired cross slope, to compensate for surface irregularities in the existing pavement course. The equipment shall be capable of accurately establishing profile grades by referencing from a fixed reference such as a grade wire, or from the existing pavement surface using a 30 foot (9m) minimum contact ski (floating beam), or 24 foot (8m) non-contact grade control beam.

The Contractor shall locate and remove all objects in the pavement through the work area that would be detrimental to the planing or grinding machine. Any structures or obstructions left within the travel lane or shoulders shall have tapers installed according to Standard Detail 202(01).

The finished milled surface will be inspected before being accepted, and any deviations in the profile exceeding 12 mm [1/2 inch] under a 5 meter [16 foot] string line or straightedge placed parallel to the centerline will be corrected. Any deviations in the cross-slope that exceed 10 mm [3/8 inch] under a 3 meter [10 foot] string line or straightedge placed transversely to centerline will be corrected. All corrections will be made with approved methods and materials. Any areas that require corrective measures will be subject to the same acceptance tolerances. Excess material that becomes bonded to the milled surface will be removed to the Resident's satisfaction before the area is accepted.

On highways or expressways with directional traffic, the Contractor will be required to remove the pavement surface on the adjacent sections of travel lane and designated portions of adjacent shoulder before the end of the following calendar day unless the centerline edge is tapered to a 12:1. Failure to remove the centerline vertical edge by milling, using the approved taper, or matching the adjacent course the following day will constitute a traffic control violation unless an excusable delay is granted by the Department. The Contractor will be required to remove the specified pavement course over the full width of the mainline traveled ways prior to opening the sections to weekend or holiday traffic.

On roadways with two-way traffic, the Contractor will be required to remove the specified pavement course over the full width of the mainline traveled ways prior to opening the sections to weekend or holiday traffic.

During any period that a centerline vertical or tapered edge exists, the Contractor will be responsible for installing additional warning signage that clearly defines the centerline vertical or tapered edge and elevation differential hazard, as well as additional centerline delineation such as double RPM application, or temporary painted line. The Traffic Control Plan shall include the additional requirements. All signs and traffic control devices will conform to Section 719.01, and Section 652, and will be installed prior to the work, at a maximum spacing of 0.50 mile [0.80 km] for the entire length of the effected roadway section. All additional signing, labor, traffic control devices, or incidentals will not be paid for directly, but will be considered incidental to the appropriate 652 bid items.

Any areas of concern, such as de-lamination or pot-holing shall be identified on a continuous basis as milling progresses. Proper corrective action will be determined by the Resident and paid for under the appropriate contract items, and if required, completed prior to opening lane to traffic. Any issues that arise **up to** 7 calendar days after being milled will be the responsibility of the MaineDOT as noted in Special Provision Section 105 – Limitations Of Operations.

# SPECIAL PROVISION
## SECTION 203
## EXCAVATION AND EMBANKMENT
## (Dredge Materials)

***Description:*** Dredge Material (See MaineDOT Standard Specifications § 101.2) is regulated as a Special Waste.

Culvert work associated with the Smithfield-Norridgewock Route 8 Highway Rehabilitation Project will require the excavation of select Dredge Material at several stream locations. It is anticipated that less than 100-cubic yards of Dredge Material will be excavated at each site. There is onsite Beneficial Use for all of the Dredge Materials.

It is acknowledged that the excavation of Dredge may include some boulders. The Maine Department of Environmental Protection has determined that sound boulders (rock 12-inches or more in diameter), that are free of adhering sediment or other contaminants, shall be deemed to be Inert Fill material and shall not be included in the Dredge Material Quantities.

The contractor shall Beneficially Use all Dredge Material excavated from the various stream locations in areas adjacent to and draining into the dredged water body. No more than 100-cubic yards of Dredge Material may be excavated at each culvert location.

## CONSTRUCTION REQUIREMENTS

***Management:*** The contractor shall Beneficially Use all Dredge Material excavated at the individual culvert sites in areas adjacent to and draining into the dredged water body. No more than 100-cubic yards of Dredge Material may be excavated at the individual culvert site.

***Method of Measurement:*** Dredge Material will be measured by the cubic yard of material removed.

***Basis of Payment:*** Payment for the Beneficial Use of Dredge Material will be incidental to the Contract Pay Items.

Payment shall be full compensation for excavation, dewatering, managing, transporting, and placement of the Dredge Materials.

**SPECIAL PROVISION**
**SECTION 203**
**EXCAVATION AND EMBANKMENT**
**(CONTAMINATED SOIL AND GROUNDWATER MANAGEMENT)**

General. The work under this specification shall be performed in conformance with all the procedures and requirements described herein for the following activities: contaminated soil handling, reuse, temporary stockpiling, transportation, storage and disposal and, contaminated water handling, storage, treatment and disposal. This specification also addresses contaminated soil location, identification, and classification. The intent of this specification is to ensure that any contaminated soil and/or water encountered during construction will be managed in a manner that protects worker health and safety, public welfare and the environment.

Environmental Site Conditions. The Maine Department of Transportation's Environmental Office (MaineDOT's-ENV.) has conducted a series of assessments related to the Smithfield/Norridgewock Route 8 Improvement Project. An initial Phase I Environmental Assessment for the project area was completed to obtain a general understanding of the environmental conditions along the project corridor. Data garnered from this assessment was used to design a Modified, Phase II Contamination Assessment for the project. The primary focus of the assessments was to evaluate the type and extent of subsurface contamination along the project corridor. The Phase I Assessment included a review of relevant Maine Department of Environmental Protection's (MaineDEP's) and Environmental Protection Agency's (EPA's) databases and field reconnaissance of the project area. During Phase II, borings were advanced along the project's length for investigative purposes. During the advancement of these borings, three areas with impacted soil were identified. A photo-ionization detector (PID) was used to test soil grab samples from select explorations for volatile organic compound (VOC) concentrations indicative of petroleum products. (See *Identified Areas of Contamination* below). Select samples for laboratory testing were also taken to further aid in evaluating subsurface conditions. The results of these investigations are available for review from the Hydrogeologist at MaineDOT's Environmental Office in Augusta (207-624-3100).

Identified Area of Contamination. MaineDOT's-ENV investigation identified three areas of soil contamination associated with the Route 8 Highway Improvement Project. For reference, these areas are designated as "**Area A", "Area B",** and **"Area C"** respectively. The location of **Area A** is defined as located in the vicinity of the

Cumberland Farms roughly between MaineDOT survey stations 384+50 to 386+50, right and left of centerline along Route 8. Within **Area A**, poly-bag field samples screened with a photo-ionization detector (PID) were below detection limit 10 parts per million (ppm)$_{\text{gasoline equivalent}}$ to 31 PPM$_{\text{gasoline equivalent}}$. Laboratory results for the following VOCs were detected; Acetone at 82 parts per billion (ppb), Benzene at 50ppb, Ethylbenzene at 39ppb, m,p Xylene at 120ppb and 1,2,4-Trimethethylbenzene at 28ppb. Diesel Range Organics (DRO) at 34ppm and gasoline range Organics (GRO) at 3.2ppm. These concentrations define the soils as potential special waste per State remedial guidelines. Soil contamination in **Area A** appears to be related to the past use and storage of gasoline.

The location of **Area B** is defined as in the vicinity of the Smithfield General Store located roughly between MaineDOT stations 600+50 to 601+00 right of center and roughly 72+50 to 74+50 left of center line. Within **Area B**, poly-bag field samples screened with a PID were BDL to 6 ppm. The laboratory results indicate the following VOCs were detected: Naphthalene at 450ppb. DRO was detected at 190ppm and GRO at 15ppm. These concentrations define the soils as potential special waste per State remedial guidelines. Soil contamination in **Area B** appears to be related to the past use and storage of gasoline.

The location of **Area C** is defined as in the vicinity of a historic gasoline station along Main Street (Route 2) located roughly between MaineDOT stations 62+50 to 64+00 left of center line. Within **Area C**, poly-bag field samples screened with a PID were BDL to 10 ppm. The laboratory results indicate that VOCs were BDL. DRO was detected at 670ppm and GRO was 5.8ppm. These concentrations define the soils as potential special waste per State remedial guidelines. Soil contamination in Area C appears to be related to the past use and storage of gasoline.

Identifying and Screening Contaminated Soil and Groundwater. Within the contaminated sections designated **Area A**, **Area B**, and **Area C**, excavated soils will be classified by the Resident (or a MaineDOT-ENV representative) based on photo-ionization detector (PID) field screening measurements. Field screening with a PID shall be performed according to the MDEP SOP No. TS004, Compendium of Field Testing of Soil Samples for Gasoline and Fuel Oil dated April 20, 2011.

The excavated soils shall be classified as Group 1 or Group 2.

Group 1 soils shall have PID field screening measurements indicating relative concentrations of volatile organic compounds (VOCs) less then or equal to 20 parts per million (ppm) as measured in the soil headspace.

Group 2 soils in **Area B** and **C** shall have PID field screening measurements indicating VOC concentrations in ppm equal to or greater than the value indicated in Table 1 of SOP-TS004 when screened in accordance with the "Leaching to Groundwater" clean-up scenario. In **Area A**, soils shall have PID field screening measurements indicating VOC concentrations in ppm equal to or greater than the value indicated in Table 1 of SOP-TS004 when screened in accordance with the

"Outdoor Commercial Worker/Excavation-Construction Worker" clean-up scenario.

Group 3 soils shall be "petroleum saturated." Analysis to determine "petroleum saturation" shall be performed according to MaineDEP guidance in *Procedural Guidelines for Establishing Standards for Remediation of Oil Contaminated Soil and Ground Water in Maine* (MAINE DEP, 1/11/95).

Handling and Disposition of Soil Materials. Within **Area A, Area B,** and **Area C**, soil material excavated during construction shall be handled as follows:

Group 1 soils are not considered contaminated. Thus, special handling and disposal are not required for Group 1 soils.

Group 2 soils shall be placed back into their excavation section of origin. The Contractor shall make every attempt to side cast any Group 2 soils next to their excavation site. Upon completion of the given constructional feature, the Group 2 soils shall be placed back into the excavation. Group 2 materials not handled in this manner shall be considered Surplus Group 2 soils. Surplus Group 2 soils must be disposed of or treated at a facility licensed by the MDEP to accept petroleum contaminated special waste. The Contractor is solely responsible for obtaining the associated permits and approvals for the disposal or treatment of the Surplus Group 2 soils from all relevant Municipal, State, and Federal agencies at no additional cost to the State. Notification shall be given to the Resident once approval is granted for the acceptance of this material at the off site facility. No removal of Surplus Group 2 soils from the project shall occur without prior approval by the Resident. If any Surplus Group 2 soils cannot be transported to the pre-approved, properly licensed facility within 8 hours of their excavation, they must be placed in a Temporary Secure Stockpile Area somewhere within the project limits (See Temporary Secured Stockpile Area below).

Group 3 soils shall not be excavated without prior approval by the Resident. The Contractor shall arrange and undertake disposal of all Group 3 soils at a landfill or treatment facility licensed to accept petroleum contaminated special waste. The Contractor is responsible for all additional testing required by the receiving facility. Group 3 soils that cannot be disposed of within 8 hours of excavation shall be stored in a Temporary Secured Stockpile area. If the Contractor proposes other disposal or treatment options, the Contractor is solely responsible for obtaining the associated permits and approvals from all relevant Municipal, State, and Federal agencies at no additional cost to the State.

The Resident is responsible for signing any manifests or bills of lading required to transport and dispose of contaminated soil. The Resident will send all manifests and bills of lading to MaineDOT, Environmental Office, Station 16, Augusta, Maine 04333.

Trench and Underdrain/Stormdrain Design in Contaminated Sections. In **Area A, Area B,** and **Area C** solid, Option III, non-perforated pipe shall be used instead of perforated underdrain pipe to help prevent the infiltration and transportation of potentially contaminated groundwater within the underdrain/stormdrain system. The Contractor shall backfill around the pipe and trenches in this section with uncontaminated material. Backfilling of the trench shall be in accordance with Section 206.03. All stones larger than 3 inches, frozen lumps, dry chunks of clay or any other objectionable matter shall be removed before backfilling.

Seepage control dikes (SCD) shall be installed roughly every 60 feet along the stormwater pipe trench

The SCDs shall consist of a mineral clay material with a liquid limit of equal to or greater than 24 and a natural moisture content of at least 20 percent. The clay should be placed in dry excavations in 6 inch maximum, thick lifts and compacted to 90% of the maximum dry unit weight as determined by AASHTO T99 (Standard Proctor). The SCDs shall be 5 feet long, be in intimate contact with the trench floor, trench walls and circumference of the pipe and extend up to the bottom of the road base. The excavated existing road base or similar material may be placed on top of the SCDs. The Contractor shall take care to ensure that no voids or uncompacted soil is left beside or beneath the Option III culvert pipe.

Secured Stockpile Area. Direct transport of Surplus Group 2 or Group 3 soils to a pre-approved management facility is recommended. However, should the Contractor temporarily store any Surplus Group 2 or Group 3 soils at the site for more than 8 hours following excavation, they must be placed into a properly constructed Temporary Secured Stockpile Area. The Temporary Secured Stockpile Area must be constructed as defined herein and must be approved by the Resident prior to its use.

Should the Contractor utilize a Temporary Secured Stockpile Area, they shall install a continuous 0.3 meter high compacted soil berm around the Secured Stockpile. The Secured Stockpile shall be placed on a liner of 20-mil polyethylene and securely covered with 20-mil polyethylene. The polyethylene liner and cover shall be placed over the soil berm and be installed to ensure that precipitation water drains directly to the outside of the berm perimeter while leachate from the contaminated soil is retained within the stockpile. The Secured Stockpile and soil berm shall be enclosed within a perimeter of concrete Jersey barriers or wooden barricades. The area within the Jersey barriers (or wooden barricades) shall be identified as a "restricted area" to prevent unauthorized access to the contaminated soils.

Secured Stockpile Area - Materials.

A. Polyethylene. Polyethylene used for liner in the Secured Stockpile Area shall have a minimum of 20-mil thickness and shall meet the requirements of ASTM D3020.

B. Common Borrow. Fill used in the construction of the Temporary Secured Stockpile Area soil berm shall consist of Common Borrow and meet the requirements of Section 703.18

C. Concrete Barriers or Wooden Barricades. Concrete barriers or Wooden Barricades to form the sides of the Temporary Secured Stockpile Area shall meet the requirements of Section 526 or 652.05.

Health and Safety/Right-to-Know. Contractors and subcontractors are required to notify their workers of the history of the site and contamination that may be present and to be alert for evidence of contaminated soil and groundwater. The Contractor shall notify the Resident at least three business days prior to commencing any excavation in **Areas A, Area B,** and **Area C**.

The Contractor shall prepare a site specific Health and Safety Plan (HASP) for its workers and subcontractors who may work in the contaminated areas of the site. A Qualified Health and Safety Professional shall complete the HASP. The Qualified Health and Safety Professional will be an expert in field implementation of the following federal regulations:

| | |
|---|---|
| 29 CFR 1910.120 or<br>29 CFR 1926.65 | Hazardous Waste Operations and<br>Emergency Response |
| 29 CFR 1910.134 | Respiratory Protection |
| 29 CFR 1926.650 | Subpart D - Excavations |
| 29 CFR 1926.651 | General Requirements |
| 29 CFR 1926.652 | Requirements for Protective Systems |

MaineDOT is voluntarily ameliorating the contamination in **Areas A, Area B,** and **Area C.** The remedial efforts defined herein have been reviewed and approved by MaineDEP. Given that this is a voluntary clean up effort approved by a regulatory agency, the OSHA requirements as defined in 29 CFR 1910.120 apply. These requirements mandate that workers and any subcontractors working in the contaminated areas shall comply with all OSHA regulations for Hazardous Waste Operations and Emergency Response including a 40 hour initial hazardous waste operations certification [OSHA 1910.120(e)], annual 8 hour refresher course within the last 12 months and medical surveillance [OSHA 1910.120(f)] within the last 12 months.

The contractor shall designate a person to provide direct on-site supervision of the work in the contaminated areas. This person shall have the training under OSHA 1910.120 (e) as above and in addition be qualified as a construction Competent Person.

It is the responsibility of the competent person to make those inspections necessary to identify situations that could result in hazardous conditions (e.g., possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions), and then to insure that corrective measures are taken.

Submittals. The Contractor shall submit a site specific Health and Safety Plan (HASP) to the Resident at least two weeks in advance of any excavation work on the project. The Contractor shall not proceed with work until MaineDOT has reviewed the plan and notified the Contractor that it is acceptable.

Health and Safety Monitoring. Within the contaminated areas of the project, the Contractor's designated on-site person shall monitor the worker breathing zone for those constituents specified in the Contractor's HASP. The Contractor shall provide all required health and safety monitoring equipment.

Dewatering. Groundwater may be encountered and its removal necessary to complete work within **Area A, Area B,** and **Area C.** It will be treated as "contaminated" water. The Contractor shall inform the Resident before any dewatering commences. The "contaminated" water shall be pumped into a temporary holding tank(s). The Contractor will be responsible for the procurement of any holding tank(s). Any testing, treatment and/or disposal of the stored, petroleum-contaminated water shall be undertaken by the Contractor in accordance with applicable Federal, State and local regulatory requirements.

On-Site Water Storage Tanks - Materials. If dewatering within the identified contaminated area becomes necessary the holding tanks used for temporary storage of contaminated water pumped from excavations shall be contamination free and have a minimum capacity of 2,000 gallons.

Dust Control. The Contractor shall employ dust control measures to minimize the creation of airborne dust during the construction process in potentially contaminated areas. As a minimum, standard dust control techniques shall be employed where heavy equipment and the public will be traveling. These may include techniques such as watering-down the site or spreading hygroscopic salts.

Unanticipated Contamination. If the Contractor encounters previously undiscovered contamination or potentially hazardous conditions related to contamination, the Contractor shall immediately suspend work and secure the area. The Contractor will then notify the Resident immediately. These potentially hazardous conditions include, but are not limited to, buried containers, drums, tanks, "oil saturated soils", strong odors,

or the presence of petroleum sufficient to cause a sheen on the groundwater. The area of potential hazard shall be secured to minimize health risks to workers and the public and to prevent a release of contaminants into the environment. The source of any suspected contamination shall be evaluated by the Resident (or MaineDOT's -ENV representative). As appropriate, the Resident will notify the MDEP's Response Services Unit in Augusta and MaineDOT's Environmental Office. The Smithfield/Norridgewock Fire Departments must also be notified prior to removal of buried storage tanks and associated piping. The Contractor will evaluate the impact of the hazard on construction, amend the HASP if necessary, and with the Resident's approval, recommence work in accordance with the procedures of this Special Provision.

Method of Measurement. There will be no measurement for identification and environmental screening of contaminated soil material (this will be done by the Resident or MaineDOT-ENV representative).

Measurement for the development of a Health and Safety Plan (HASP) and providing health and safety equipment and personnel shall be by lump sum.

Measurement of the off site treatment or disposal of Surplus Group 2 and all Group 3 soils will be by the ton of Special Excavation.

There will be no measurement for construction of a Temporary Secured Stockpile Area. Construction of a Temporary Secured Stockpile Area, if necessary, is considered incidental to project construction. There will be no measurement for hauling Surplus Group 2 material or Group 3 soils to the Temporary Secure Stockpile area or placement and removal of Surplus Group 2 or Group 3 soils in or out of the Temporary Secure Stockpile area. All hauling and any subsequent management/placement of contaminated soils are considered incidental to project construction.

There will be no measurement for additional laboratory testing of contaminated soil that is required by the landfill or treatment facility. Testing is incidental to the disposal of Special Excavation.

Measurement for the following items shall be according to Subsection 109:04 ("Change Order"/Force Account): any necessary contaminated water holding tank(s); and treatment or disposal of any contaminated groundwater.

Basis of Payment. There will be no payment for the identification and environmental screening of contaminated soil material (this will be done by the Resident or MaineDOT-ENV representative).

Payment for the development of a Health and Safety Plan (HASP) and providing health and safety equipment and personnel shall be by the lump sum

Payment for off site disposal or treatment of contaminated Surplus Group 2 and all Group 3 soils at a MDEP licensed facility shall be by the ton of Special Excavation.

There will be no payment for the construction of the Temporary Secured Stockpile Area or hauling/management/placement of contaminated soils to the Temporary Secured Stockpile Area. The Temporary Secured Stockpile Area shall be considered incidental to project construction.

Payment for the following items shall be according to Subsection 109:04 ("Change Order"/Force Account): any necessary contaminated water holding tank(s); and treatment or disposal of any contaminated groundwater.

| Pay Item | | Pay Unit |
|---|---|---|
| 203.2312 | Health and Safety Plan (HASP) | L.S. |
| 203.2333 | Disposal/Treatment of Special Excavation | Ton |

# SPECIAL PROVISIONS
## SECTION 304
## AGGREGATE BASE AND SUBBASE COURSE
(Aggregate Subbase)

If the Contractor wishes to route public traffic over the completed Aggregate Subbase Course for a period of time greater than 48 hours, the Aggregate Subbase Course shall be constructed with a minimum 50 mm [2 in] surcharge above the design grade. Whenever the surcharge is used, it shall be constructed with material meeting the requirements of Section 703.06(b), Type D Aggregate. Also, whenever, the surcharge is used, it shall be placed on all the Aggregate Subbase Course subjected to public traffic. When the surcharge is removed, it may be placed in driveways, sidewalks, approach roads, or the outer portions of the shoulders. Removal of the surcharge shall be followed immediately in succession by the fine grading of the aggregate subbase and construction of the next course.

The furnishing, placing, maintaining, and removal of the surcharge will not be paid for directly, but will be considered incidental to the Aggregate Subbase Course pay item.

If salvaged bituminous pavement is placed as the top layer of the aggregate subbase course, a surcharge is not required.

# SPECIAL PROVISION
# SECTION 309
# FULL DEPTH RECYCLED PAVEMENT
(With Foamed Asphalt)

309.01 Description This work shall consist of pulverizing a portion of the existing roadway structure into a homogenous mass, treating the pulverized material with the foamed asphalt process, and the placing and compacting of this material to the lines, grades, and dimensions shown on the plans or established by the Resident.

## MATERIALS

309.020 Pulverized Material Pulverized material shall consist of the entire existing bituminous pavement and, if specified, a designated portion of the underlying gravel, pulverized and blended into a homogenous mass. Pulverized material will be processed to 100 percent passing a 50 mm [2 in] square mesh sieve.

309.021 New Aggregate and Additional Recycled Material New aggregate, if required by the contract or job mix, shall meet the requirements of Section 411.02 Untreated Aggregate Surface Course. New aggregate required as part of the job mix shall be considered part of the 309 item and will not be measured for payment. New aggregate required to restore grade and/or cross-slope shall be measured for payment.

Recycled material, if required, shall consist of material from the project or from off-site stockpiles that have been processed, prior to use to 100 percent passing a 50 mm [2 in] square mesh sieve. The Resident shall conditionally accept recycled material at the source; it shall be free of winter sand, granular fill, construction debris, and other materials not generally considered to be bituminous pavement.

309.022 Asphalt Binder The asphalt binder used in the foamed asphalt process shall be Performance Grade 64-28 meeting the requirements of AASHTO M320.

309.023 Portland Cement The Portland Cement shall be Type I or II meeting the requirements of AASHTO M85.

309.024 Lime Lime for soil stabilization shall meet the requirements of AASHTO M216.

309.025 Crusher Dust Crusher dust, if required by the job mix, shall be free from friable or deleterious material, including excessive mica, and shall meet the following gradation requirements:

| Sieve Size | Percent Passing |
|---|---|
| 12.5 mm [½ in] | 100 |
| 0.075 mm [No. 200] | 10 - 15 |

309.026 Water Water shall be clean and free from deleterious concentrations of acids, alkalis, salts or other organic or chemical substances.

EQUIPMENT

309.030 Pulverizer The modified milling or recycling machine shall, as a minimum, have the following features:

a. A minimum power capability of 600 horsepower.
b. Two microprocessor-controlled systems, complete with 2 independent pumping systems and spraybars, to regulate the application of foamed bitumen stabilizing agent, separate from water (for increasing the moisture content of the recycled material), in relation to the forward speed and mass of the material being recycled.
c. Two spray bars shall each be fitted with self-cleaning nozzles at a maximum spacing of one nozzle for each 155 mm [6 in] width of the chamber.
d. The foamed bitumen shall be produced at the spraybar in individual expansion chambers into which both hot bitumen and water are injected under pressure through individual and separate small orifices that promote atomization. The rate of addition of water into hot bitumen shall be kept at a constant (percentage by mass of bitumen) by the same microprocessor.
e. An inspection (or test) nozzle shall be fitted at one end of the spraybar that produces a representative sample of foamed bitumen.
f. An electrical heating system capable of maintaining the temperature of all bitumen flow components above 150°C [300°F].
g. A single bitumen feed pipe installed between the modified milling or recycling machine and the supply tanker. Circulating systems that incorporate a return pipe to the supply tanker shall not be used.
h. The recycler shall be fitted with a front breaker bar system to ensure that the reclaimed material is broken down to the sizing outlined in 309.020.

309.031 Liquid Mixer Unit or Distributor Only tankers with a capacity exceeding 10,000 L [2500 gal] shall be used to supply the recycling machine with bitumen. Each tanker shall be fitted with two recessed pin-type tow hitches, one in front and the other behind, thereby allowing the tanker to be pushed from behind by the recycling machine, and to push a water tanker in front. No leaking tanker will be permitted on the job site. In addition, each tanker shall be equipped with the following:

a. A thermometer to show the temperature of the contents in the bottom third of the tank.
b. A rear feed valve, with a minimum internal diameter of 75 mm [3 in], capable of draining the contents of the tank when fully opened.
c. Insulation to retain heat.
d. A calibrated dipstick marked at intervals of no more than 100 L [25 gal], for measuring the contents of the tank.

309.032 Placement Equipment Placement of the full depth recycled material to the required slope and grade shall be done with an approved highway grader or by another method approved by the Resident.

309.033 Rollers The full depth recycled material shall be rolled with a vibratory pad/tamping foot roller, a vibratory steel drum soil compactor and a Type II pneumatic tire roller. The pad/tamping foot roller drum shall have a minimum of 112 tamping feet 73 mm [3 in] in height, a minimum contact area per foot of 110 $cm^2$ [17 $in^2$], and a minimum width of 2.15 m [84 in]. The vibratory steel drum roller shall have a minimum 2.15 meter [84 in] width single drum. The pneumatic tire roller shall meet the requirements of Section 401.10 and the minimum allowable tire pressure shall be 586 kPa [85 psi].

## MIX DESIGN

The Department will supply a mix design for the foamed asphalt based on test results from pavement and soil analysis taken to the design depth. The Department will provide the following information prior to construction:

1. Percent of bitumen to be used.
2. Percent of water to be used in the foaming process.
3. Quantity (if any) of crusher dust to be used.
4. Quantity of lime or cement to be added.
5. Optimum moisture content for proper compaction and dispersion of foamed asphalt.
6. Additional aggregate (if required).

After a test strip has been completed or as the work progresses, it may be necessary for the Resident to make necessary adjustments to the mix design. Changes to compensation will be in accordance with the Mix Design Special Provision.

## CONSTRUCTION REQUIREMENTS

309.04 Weather Limitations When foamed asphalt is used, full depth recycled work shall be performed when;

a. Foaming operations will be allowed between May 15$^{th}$ and September 15$^{th}$ inclusive in Zone 1 - Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais. Foaming operations will be allowed between May 1$^{st}$ and September 30$^{th}$ inclusive in Zone 2 - Areas south of Zone 1 including the US Route 2 and Route 9 boundaries.
b. The atmospheric temperature, as determined by an approved thermometer placed in the shade at the recycling location, is 10°C [50$^{0}$F] and rising.
c. When there is no standing water on the surface.
d. During generally dry conditions, or when weather conditions are such that proper pulverizing, adding, mixing, and curing can be obtained using proper procedures, and when compaction can be accomplished as determined by the Resident.
e. When the surface is not frozen and when overnight temperatures are expected to be above 0°C [32$^{0}$F].
f. Wind conditions as such that the spreading of lime or cement on the roadway ahead of the recycling machine will not adversely affect the operation.

309.05 Full Depth Recycling Procedure If required by the mix design, a uniform layer of crusher dust shall be spread over the full width of the roadway just prior to the foaming procedure. New aggregate or recycled pavement meeting the requirements of Section 309.021 - New Aggregate, and Recycled Material shall be added as necessary to restore cross-slope and/or grade. Locations will be shown on the plans or described in the construction notes; the Resident may add other locations while construction of the project is in progress. The Contractor will use recycled pavement to the extent it is available, in lieu of new aggregate. The material shall then be pulverized, processed, and blended into a homogeneous mass passing a 50 mm [2 in] square mesh sieve. Material found not pulverized down to a 50mm [2 in] size will be required to be reprocessed by the recycler with successive passes until approved by the Resident. The material shall then be shaped to the cross-slope and grade shown on the plans, typicals, or as directed by the Resident. This pulverized material shall be fine-graded to ±13 mm [±½ in] tolerance. The initial reclaiming process density requirements will be the same as Section 309.07 unless otherwise directed by the Resident.

The dry stabilizing agents (lime or cement) shall be spread uniformly over the full width of roadway to be recycled prior to each pass of the foaming operation, in a continuous process by means of a mechanical spreader. Dry stabilizing agents shall be spread at the prescribed rate of application provided by the Department. Foamed asphalt shall be incorporated into the material to a depth determined by the pavement design. These additives shall then be uniformly blended into a homogeneous mass until an apparent uniform distribution has occurred. The Resident may adjust the rate of application as necessary.

Asphalt binder shall be added to the milling or recycling process by pumping from a mobile bulk tanker that is pushed from behind by the recycling machine. Tankers shall be equipped with a built-in thermometer to ensure that the bituminous stabilizing agent is maintained at 190°C ± 5°C [375°F ± 10°F]. The system employed to add the foamed asphalt to the recycling process shall conform to the equipment requirements specified in these Special Provisions.

Sufficient water shall be added during the recycling process to meet the moisture requirements as specified. Water shall be added only by means of the microprocessor control system on the recycling machine and care shall be taken to prevent excessive wetting. A second water truck will be available during foaming operation to assist in the compaction and water control efforts.

The resultant material shall be graded and compacted to the cross-slope and profile shown on the plans or as directed by the Resident. The Contractor will also be responsible for re-establishing the existing profile grade. The completed surface of the full depth recycled course shall be shaped and maintained to a tolerance, above or below the required cross sectional shape, of 10 mm [⅜ in]. Areas not meeting this tolerance will be repaired as described in Section 309.051.

After compaction, the roadway surface shall be treated with a light application of water, and rolled with pneumatic-tired rollers to create a close-knit texture. The finished layer shall be free from:

a. Surface laminations.
b. Segregation of fine and coarse aggregate.
c. Corrugations, centerline differential, potholes, or any other defects that may adversely affect the performance of the layer.

The Contractor shall protect and maintain the recycled layer until a lift of pavement is applied. Frequent light watering shall be performed to prevent the surface from drying out. Any damage or defects in the layer shall be repaired immediately. An even and uniform surface shall be maintained. The recycled material shall be swept prior to hot mix asphalt placement.

309.051 Repairs Repairs and maintenance of the recycled layers, during and after the curing period, resulting from damage caused by traffic, weather or environmental conditions, or resulting from damage caused by the Contractor's operations or equipment, shall be completed at no additional cost to the Department.

Low areas will be repaired using a hot mix asphalt shim. Areas up to 25mm [1 in] high can be repaired by milling or shimming with hot mix asphalt. Areas greater than 25mm [1 in] high will be repaired using a hot mix asphalt shim. All repair work will be done with the Resident's approval at the Contractor's expense.

TESTING REQUIREMENTS

309.06 Quality Control The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The QCP shall meet the requirements of Section 106.4 - Quality Control and this Section. The Contractor shall not begin recycling operations until the Department approves the QCP in writing.

Prior to performing any recycling process, the Department and the Contractor shall hold a Pre-recycle conference to discuss the recycling schedule, type and amount of equipment to be used, sequence of operations, and traffic control. A copy of the QC random numbers to be used on the project shall be provided to the Resident. All field and plant supervisors including the responsible onsite recycling process supervisor shall attend this meeting.

The QCP shall address any items that affect the quality of the Recycling Process including, but not limited to, the following:

a. JMF(s) including sources for all materials.
b. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers.
c. Testing Plan.
d. Recycling operations including recycling speed, yield monitoring, procedures for avoiding recycling and curing in inclement weather, methods to ensure that segregation is minimized, procedures for mix design modification, grading and compacting operations, and cement and lime application procedure.
e. Methods for protecting the finished product from damage and procedures for any necessary corrective action.
f. Method of grade checks.
g. Examples of Quality Control forms.
h. Name, responsibilities, and qualifications of the Responsible onsite Recycling Supervisor experienced and knowledgeable with the process.
i. A note that all testing will be done in accordance with AASHTO and MDOT/ACM procedures.

The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

The Contractor shall sample, test, and evaluate the full depth reclamation process in accordance with the following minimum frequencies:

MINIMUM QUALITY CONTROL FREQUENCIES

| Test or Action | Frequency | Test Method |
|---|---|---|
| Density | 1 per 300 m [1000 ft] / lane | AASHTO T 310 |
| Air Temperature | 4 per day at even intervals | |
| Surface Temperature | At the beginning and end of each days operation | |
| Yield of all materials (The daily yield, yield since last test, and total project yield.) | 1 per 300 m [1000 ft] / lane | |

The Department has the right to view any QC test and to request a QC test at any time.

The Contractor shall submit all QC test reports and summaries in writing, signed by the appropriate technician, and present them to the Department's onsite representative by 1:00 P.M. on the next working day, except when otherwise noted in the QCP due to local restrictions. The Contractor shall make all test results, including randomly sampled densities, available to the Department onsite.

Penalties for QCP non-compliance will be in accordance with Standard Specification 106.4.6

The Contractor shall cease recycling operations whenever one of the following occurs:

a. The computed yield differs from the approved Job Mix Formula by 10% or more.
b. The Contractor fails to follow the approved QCP.
c. The Contractor fails to achieve 98% density after corrective action has been taken.
d. The finished product is visually defective, as determined by the Resident.

Recycling operations shall not resume until the Department agree on the corrective action to be taken.

309.07 Test Strip The contractor shall assemble all items of equipment for the recycling operation on the first day of the foamed asphalt work. The Contractor shall construct a test strip for the project at a location approved by the Resident. The Responsible onsite Recycling Supervisor will work with Department personnel to determine the suitability of the mixed material, bitumen dispersion within the mixed material, moisture control within the mixed material, and compaction and surface finish. The test strip section is required to:

a. Demonstrate that the equipment and processes can produce recycled layers to meet the requirements specified in these special provisions.
b. Determine the effect on the gradation of the recycled material by varying the forward speed of the recycling machine and the rotation rate of the milling drum.
c. Determine the sequence and manner of rolling necessary to obtain the compaction requirements and establish a target TMD. The Contractor and the Department will calibrate their respective gauges at this time.

The test strip shall be at least 100 m [300 ft] in length of a full lane-width (or a half-road width).

Full recycling production will not start until a passing test strip has been accomplished. If a test strip fails to meet the requirements of this specification, the Contractor will be required to repair or replace the test strip to the satisfaction of the Resident. Any repairs, replacement, or duplication of the test strip will be at the Contractor's expense.

Quality Assurance density testing of the recycled material will be performed by the Department using the nuclear method. After the test strip has been pulverized, the foamed asphalt added and mixed, and the roadway brought to proper shape, it will be rolled as directed until the nuclear density readings show an increase in dry density of less than 16 kg/m³ [1 pcf] for the final four roller passes. This density will be used as the target TMD for the recycled material. The remaining full depth recycled material shall be compacted to a minimum density of 98% of the target density as determined in the control section.

ACCEPTANCE TEST FREQUENCY

| Property | Frequency | Test Method |
|---|---|---|
| In-place Density | 1 per 600 m [2000 ft] / lane | AASHTO T 310 |

309.08 Miscellaneous No new pavement shall be placed on the full depth recycled pavement until a curing period of 48 hours has elapsed. If inclement weather occurs, the Department reserves the right to extend the curing period.

309.09 Method of Measurement Full Depth recycled material (with Foamed Asphalt) will be measured by the square meter [$yd^2$]. New aggregate, as defined under section 309.021, added to restore grade and/or cross-slope shall be measured for payment.

309.10 Basis of Payment The accepted quantity of Full Depth Recycled Pavement with Foamed Asphalt shall be paid for at the contract unit price per square meter [$yd^2$], complete in-place to the specified limits, which price shall be full compensation for furnishing all equipment and labor for pulverizing, blending, placing, grading, compacting and for all incidentals necessary to complete the work including asphalt binder, water, Portland Cement, lime, and crusher dust.

Payments will be made under:

| Pay Item | Pay Unit |
|---|---|
| 309.35 Full Depth Recycled Pavement with Foamed Asphalt 125mm [5 in] depth | Square Meter [$yd^2$] |
| 309.36 Full Depth Recycled Pavement with Foamed Asphalt 150mm [6 in] depth | Square Meter [$yd^2$] |

SPECIAL PROVISION
SECTION 309
FULL DEPTH RECYCLED ASPHALT PAVEMENT
(with foamed asphalt)

# Mix Design

The Full Depth Recycled Pavement on this project will be treated with the following material proportions:

| | |
|---|---|
| PG 58-28 asphalt binder | 3.25% |
| Water needed to ensure proper foaming | 3.00 % |
| Portland cement (Type I or II) | 1.00 % |

The optimum moisture content for compaction shall be determined by the Department using samples obtained from the pulverized material prior to addition of the foamed asphalt, by means of AASHTO T 180, Method D.

A contract modification will be executed if percentages change from the requirements above for added asphalt, Portland cement or lime changes by more than 0.10%. Positive and negative price adjustments will be made. The price adjustment will be based upon receipted bills for materials delivered the project site. If a price adjustment is warranted, the contractor will supply the Department with all receipted bills for PG asphalt binder, Portland cement or lime for the entire project. Adjustments in water content exceeding the initial targets shall not be paid for directly, but shall be incidental.

# SPECIAL PROVISION
# DIVISION 400
# PAVEMENTS

## SECTION 401 - HOT MIX ASPHALT PAVEMENT

401.01 Description The Contractor shall furnish and place one or more courses of Hot Mix Asphalt Pavement (HMA) on an approved base in accordance with the contract documents and in reasonably close conformity with the lines, grades, thickness, and typical cross sections shown on the plans or established by the Resident. The Department will accept this work under Quality Assurance provisions, in accordance with these specifications and the requirements of Section 106 – Quality, the provisions of AASHTO M 323 except where otherwise noted in sections 401 and 703 of these specifications, and the Maine DOT Policies and Procedures for HMA Sampling and Testing.

401.02 Materials Materials shall meet the requirements specified in Section 700 - Materials:

| | |
|---|---|
| Asphalt Cement | 702.01 |
| Aggregates for HMA Pavement | 703.07 |
| HMA Mixture Composition | 703.09 |

401.021 Recycled Asphalt Materials Recycled Asphalt Pavement (RAP) may be introduced into the mixture at percentages approved by the Department according to the Maine DOT Policies and Procedures for HMA Sampling and Testing. If approved by the Department, the Contractor shall provide documentation stating the source, test results for average residual asphalt content, and stockpile gradations showing RAP materials have been sized to meet the maximum aggregate size requirements of each mix designation. The Department will obtain samples for verification and approval prior to its use.

For specification purposes, RAP will be categorized as follows:

Class III – The Contractor may use a maximum of 10 percent Class III RAP in any base, binder, surface, or shim course. Class III RAP will be allowed in hand-placed mixes for item 403.209 at a rate of up to 20 percent.

Class II – The Contractor may use a maximum of 20 percent Class II RAP in any base, binder, surface, or shim course.

Class I – The Contractor may use a maximum of 30 percent Class I RAP in any base, binder, surface, or shim course provided that PG 58-34 asphalt binder is used in the mixture. A PG 52-34 may be used when approved by the Department.

In the event that RAP source or properties change, the Contractor shall notify the Department of the change and submit new documentation stating the new source or properties a minimum of 72 hours prior to the change to allow for obtaining new samples and approval.

401.03 Composition of Mixtures The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. HMA shall be designed and tested according to AASHTO R35 and the volumetric criteria in Table 1. The Contractor shall size, uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF).

The Contractor shall submit for Department approval a JMF to the Central Laboratory in Bangor for each mixture to be supplied. The Department may approve 1 active design per nominal maximum size, per traffic level, per plant, plus a 9.5mm "fine" mix for shimming and where required, a non-RAP design for bridge decks. The Department shall then have 15 calendar days in which to process a new design before approval. The JMF shall establish a single percentage of aggregate passing each sieve size within the limits shown in section 703.09. The mixture shall be designed and produced, including all production tolerances, to comply with the allowable control points for the particular type of mixture as outlined in 703.09. The JMF shall state the original source, gradation, and percentage to be used of each portion of the aggregate including RAP when utilized, and mineral filler if required. It shall also state the proposed PGAB content, the name and location of the refiner, the supplier, the source of PGAB submitted for approval, the type of PGAB modification if applicable, and the location of the terminal if applicable.

In addition, the Contractor shall provide the following information with the proposed JMF:

- Properly completed JMF indicating all mix properties (Gmm, VMA, VFB, etc.)
- Stockpile Gradation Summary
- Design Aggregate Structure Consensus Property Summary
- Design Aggregate Structure Trial Blend Gradation Plots (0.45 power chart)
- Trial Blend Test Results for at least three different asphalt contents
- Design Aggregate Structure for at least three trial blends
- Test results for the selected aggregate blend at a minimum of three binder contents
- Specific Gravity and temperature/viscosity charts for the PGAB to be used
- Recommended mixing and compaction temperatures from the PGAB supplier
- Material Safety Data Sheets (MSDS) For PGAB
- Asphalt Content vs. Air Voids trial blend curve
- Test report for Contractor's Verification sample
- Summary of RAP test results (if used), including count, average and standard deviation of binder content and gradation

At the time of JMF submittal, the Contractor shall identify and make available the stockpiles of all proposed aggregates at the plant site. There must be a minimum of 150 Mg [150 ton] for stone stockpiles, 75 Mg [75 ton] for sand stockpiles, and 50 Mg [50 ton] of blend sand before the Department will sample. The Department shall obtain samples for laboratory testing. The Contractor shall also make available to the Department the PGAB proposed for use in the mix in sufficient quantity to test the properties of the asphalt and to produce samples for testing of the mixture. Before the start of paving, the Contractor and the Department shall split a production sample for evaluation. The Contractor shall test its split of the sample and determine if the results meet the requirements of the Department's written policy for mix design verification (See Maine DOT Policies and Procedures for HMA Sampling and Testing available at the Central Laboratory in Bangor). If the results are found to be acceptable, the Contractor will forward their results to the Department's Lab, which will test the Department's split of the sample. The results of the two split samples will be compared and shared between the Department and the Contractor. If the Department finds the mixture acceptable, an approved JMF will be forwarded to the Contractor and paving may commence. The first day's production shall be monitored, and the approval may be withdrawn if the mixture exhibits undesirable characteristics such as checking, shoving or displacement.

The Contractor shall be allowed to submit aim changes within 24 hours of receipt of the first Acceptance test result. Should all of the Acceptance samples of a Lot be obtained prior to the receipt of the first Acceptance result, the Department will not allow the aim changes to be applied to that Lot. Adjustments will be allowed of up to 2% on the percent passing the 2.36 mm sieve through the 0.075 mm and 3% on the percent passing the

4.75 mm or larger sieves. Adjustments will be allowed on the %PGAB of up to 0.2%. Adjustments will be allowed on GMM of up to 0.010.

The Contractor shall submit a new JMF for approval each time a change in material source or materials properties is proposed. The same approval process shall be followed. The cold feed percentage of any aggregate may be adjusted up to 10 percentage points from the amount listed on the JMF, however no aggregate listed on the JMF shall be eliminated. The cold feed percentage for RAP may be reduced up to 10 percentage points from the amount listed on the JMF and shall not exceed the percentage of RAP approved in the JMF or for the specific application under any circumstances.

TABLE 1: VOLUMETRIC DESIGN CRITERIA

| Design ESAL's (Millions) | Required Density (Percent of $G_{mm}$) | | | Voids in the Mineral Aggregate (VMA)(Minimum Percent) | | | | | Voids Filled with Binder (VFB) (Minimum %) | Fines/Eff. Binder Ratio |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Nominal Maximum Aggregate Size (mm) | | | | | | |
| | $N_{initial}$ | $N_{design}$ | $N_{max}$ | 25 | 19 | 12.5 | 9.5 | 4.75 | | |
| <0.3 | ≤91.5 | 96.0 | ≤98.0 | 13.0 | 14.0 | 15.0 | 16.0 | 16.0 | 70-80 | 0.6-1.2 |
| 0.3 to <3 | ≤90.5 | | | | | | | | 65-80 | |
| 3 to <10 | ≤89.0 | | | | | | | | 65-80* | |
| 10 to <30 | | | | | | | | | | |
| ≥ 30 | | | | | | | | | | |

*For 9.5 mm nominal maximum aggregate size mixtures, the maximum VFB is 82.
*For 4.75 mm nominal maximum aggregate size mixtures, the maximum VFB is 84.

401.04 Temperature Requirements After the JMF is established, the temperatures of the mixture shall conform to the following tolerances:

In the truck at the mixing plant – allowable range 135° to 163°C [275 to 325°F]
At the Paver – allowable range 135° to 163°C [275 to 325°F]

The JMF and the mix subsequently produced shall meet the requirements of Tables 1 and Section 703.07.

401.05 Performance Graded Asphalt Binder Unless otherwise noted in Special Provision 403 - Hot Mix Asphalt Pavement, the Contractor may utilize either a 64-28 or 58-28 PGAB. The Contractor must stipulate which PGAB grading will be used to construct the entire HMA pavement structure prior to starting work. For mixtures containing greater than 20 percent but no more than 30 percent RAP the PGAB shall be PG 58-34 (or PG 52-34 when approved by the Department). The PGAB shall meet the applicable requirements of AASHTO M320 - Standard Specification for PGAB. The Contractor shall provide the Department with an approved copy of the Quality Control Plan for PGAB in accordance with AASHTO R 26 Certifying Suppliers of PGAB. The Contractor shall request approval from the Department for a change in PGAB supplier or source by submitting documentation stating the new supplier or source a minimum of 24 hours prior to the change. In the event that the PGAB supplier or source is changed, the Contractor shall make efforts to minimize the occurrence of PGAB co-mingling.

401.06 Weather and Seasonal Limitations The State is divided into two paving zones as follows:

a. Zone 1 Areas north of US Route 2 from Gilead to Bangor and north of Route 9 from Bangor to Calais.
b. Zone 2 Areas south of Zone 1 including the US Route 2 and Route 9 boundaries.

The Contractor may place Hot Mix Asphalt Pavement for use other than a traveled way wearing course in either Zone between the dates of April 15th and November 15th, provided that the air temperature as determined by an approved thermometer (placed in the shade at the paving location) is 4°C [40°F] or higher.
The Contractor may place Hot Mix Asphalt Pavement produced with an accepted WMA technology for any base, intermediate base, or shim course in either Zone between the dates of April 15th and November 15th, provided that the air temperature as determined by an approved thermometer (placed in the shade at the paving location) is 2°C [35°F] or higher, and the area to be paved is not frozen. The Hot Mix Asphalt Pavement produced with an approved WMA technology shall meet the requirements of section 401.04 - Temperature Requirements, unless otherwise approved by the Department.

The Contractor may place Hot Mix Asphalt Pavement as traveled way wearing course in Zone 1 between the dates of May 1st and the Saturday following October 1st and in Zone 2 between the dates of April 15th and the Saturday following October 15th, provided the air temperature determined as above is 10°C [50°F] or higher. For the purposes of this Section, the traveled way includes truck lanes, ramps, approach roads and auxiliary lanes. The atmospheric temperature for all courses on bridge decks shall be 10°C [50°F] or higher.

Hot Mix Asphalt Pavement used for curb, driveways, sidewalks, islands, or other incidentals is not subject to seasonal limitations, except that conditions shall be satisfactory for proper handling and finishing of the mixture. All mixtures used for curb, driveways, sidewalks, islands, or other incidentals shall conform to section 401.04 - Temperature Requirements. Unless otherwise specified, the Contractor shall not place Hot Mix Asphalt Pavement on a wet or frozen surface and the air temperature shall be 4°C [40°F] or higher.

On all sections of overlay with wearing courses less than 25 mm [1 in] thick, the wearing course for the travelway and adjacent shoulders shall be placed between the dates of May 15th and the Saturday following September 15th.

On all sections of overlay with wearing courses less than 1 inch thick, the wearing course for the travelway and adjacent shoulders shall be placed between the dates of June 1st and the Saturday following September 1st if the work is to be performed, either by contract requirement, or Contractor option, during conditions defined as "night work".

401.07 Hot Mix Asphalt Plant

401.071 General Requirements HMA plants shall conform to AASHTO M156.

a. Truck Scales When the hot mix asphalt is to be weighed on scales meeting the requirements of Section 108 - Payment, the scales shall be inspected and sealed by the State Sealer as often as the Department deems necessary to verify their accuracy.

Plant scales shall be checked prior to the start of the paving season, and each time a plant is moved to a new location. Subsequent checks will be made as determined by the Resident. The Contractor will have at least ten 20 Kg [50 pound] masses for scale testing.

401.072 Automation of Batching Batch plants shall be automated for weighing, recycling, and monitoring the system. In the case of a malfunction of the printing system, the requirements of Section 401.074 c. of this specification will apply.

The batch plant shall accurately proportion the various materials in the proper order by weight. The entire batching and mixing cycle shall be continuous and shall not require any manual operations. The batch plant

shall use auxiliary interlock circuits to trigger an audible alarm whenever an error exceeding the acceptable tolerance occurs. Along with the alarm, the printer shall print an asterisk on the delivery slip in the same row containing the out-of-tolerance weight. The automatic proportioning system shall be capable of consistently delivering material within the full range of batch sizes. When RAP is being used, the plant must be capable of automatically compensating for the moisture content of the RAP.

All plants shall be equipped with an approved digital recording device. The delivery slip load ticket shall contain information required under Section 108.1.3 - Provisions Relating to Certain Measurements, Mass and paragraphs a, b, and c of Section 401.073

401.073 Automatic Ticket Printer System on Automatic HMA Plant An approved automatic ticket printer system shall be used with all approved automatic HMA plants. The requirements for delivery slips for payment of materials measured by weight, as given in the following Sections, shall be waived: 108.1.3 a., 108.1.3 b., 108.1.3 c., and 108.1.3 d. The automatic printed ticket will be considered as the Weight Certificate.

The requirements of Section 108.1.3 f. - Delivery Slips, shall be met by the weigh slip or ticket, printed by the automatic system, which accompanies each truckload, except for the following changes:

a. The quantity information required shall be individual weights of each batch or total net weight of each truckload.
b. Signatures (legible initials acceptable) of Weighmaster (required only in the event of a malfunction as described in 401.074 c.).
c. The MDOT designation for the JMF.

401.074 Weight Checks on Automatic HMA Plant At least twice during each 5 days of production either of the following checks will be performed:

a. A loaded truck may be intercepted and weighed on a platform scale that has been sealed by the State Sealer of Weights and Measures within the past 12 months. The inspector will notify the producer to take corrective action on any discrepancy over 1.0%. The producer may continue to operate for 48 hours under the following conditions.

1. If the discrepancy does not exceed 1.5%; payment will still be governed by the printed ticket.
2. If the discrepancy exceeds 1.5%, the plant will be allowed to operate as long as payment is determined by truck platform scale net weight.

If, after 48 hours the discrepancy has not been addressed and reduced below 1.0%, than plant operations will cease. Plant operation may resume after the discrepancy has been brought within 1.0%.

b. Where platform scales are not readily available, a check will be made to verify the accuracy and sensitivity of each scale within the normal weighing range and to assure that the interlocking devices and automatic printer system are functioning properly.

c. In the event of a malfunction of the automatic printer system, production may be continued without the use of platform truck scales for a period not to exceed the next two working days, providing total weights of each batch are recorded on weight tickets and certified by a Licensed Public Weighmaster.

401.08 Hauling Equipment Trucks for hauling Hot Mix Asphalt Pavement shall have tight, clean, and smooth metal dump bodies, which have been thinly coated with a small amount of approved release agent to prevent

the mixture from adhering to the bodies. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.

All truck dump bodies shall have a cover of canvas or other water repellent material capable of heat retention, which completely covers the mixture. The cover shall be securely fastened on the truck, unless unloading.

All truck bodies shall have an opening on both sides, which will accommodate a thermometer stem. The opening shall be located near the midpoint of the body, at least 300 mm [12 in] above the bed.

401.09 Pavers Pavers shall be self-contained, self-propelled units with an activated screed (heated if necessary) capable of placing courses of Hot Mix Asphalt Pavement in full lane widths specified in the contract on the main line, shoulder, or similar construction.

On projects with no price adjustment for smoothness, pavers shall be of sufficient class and size to place Hot Mix Asphalt Pavement over the full width of the mainline travel way with a 3 m [10 ft] minimum main screed with activated extensions.

The Contractor shall place Hot Mix Asphalt Pavement on the main line with a paver using an automatic grade and slope controlled screed, unless otherwise authorized by the Department. The controls shall automatically adjust the screed and increase or decrease the layer thickness to compensate for irregularities in the preceding course. The controls shall maintain the proper transverse slope and be readily adjustable so that transitions and superelevated curves can be properly paved. The controls shall operate from a fixed or moving reference such as a grade wire or ski type device (floating beam) with a minimum length of 10 m [30 ft], a non-contact grade control with a minimum span of 7.3 m [24 ft], except that a 12 m [40 ft] reference shall be used on Expressway projects.

The Contractor shall operate the paver in such a manner as to produce a visually uniform surface texture and a thickness within the requirements of Section 401.101 - Surface Tolerances. The paver shall have a receiving hopper with sufficient capacity for a uniform spreading operation and a distribution system to place the mixture uniformly, without segregation in front of the screed. The screed assembly shall produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture. Pavers with extendible screeds shall have auger extensions and tunnel extenders as per the manufacturer's recommendations, a copy of which shall be available if requested.

The Contractor shall have the paver at the project site sufficiently before the start of paving operations to be inspected and approved by the Department. The Contractor shall repair or replace any paver found worn or defective, either before or during placement, to the satisfaction of the Department. Pavers that produce an unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MaineDOT projects.
On a daily basis, the Contractor shall perform nuclear density testing across the mat being placed, prior to being compacted by equipment., at 300 mm [12 in] intervals, If the density values vary by more than 2.0% from the mean, the Contractor shall make adjustments to the screed until the inconsistencies are remedied.

Failure to replace or repair defective placement equipment may result in a letter of suspension of work and notification of a quality control violation resulting in possible monetary penalties as governed by Section 106 - Quality

401.10 Rollers Rollers shall be static steel, pneumatic tire, oscillatory, or approved vibrator type. Rollers shall be in good mechanical condition, capable of starting and stopping smoothly, and be free from backlash when

reversing direction. Rollers shall be equipped and operated in such a way as to prevent the picking up of hot mixed material by the roller surface. The use of rollers, which result in crushing of the aggregate or in displacement of the HMA will not be permitted. Any Hot Mix Asphalt Pavement that becomes loose, broken, contaminated, shows an excess or deficiency of Performance Graded Asphalt Binder, or is in any other way defective shall be removed and replaced at no additional cost with fresh Hot Mix Asphalt Pavement, which shall be immediately compacted to conform to the adjacent area.

The Contractor shall repair or replace any roller found to be worn or defective, either before or during placement, to the satisfaction of the Department. Rollers that produce grooved, unevenly textured or non-uniform mat will be repaired or replaced before continuing to place HMA on MaineDOT projects.
The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided specification densities are attained and with the following requirements:

a. On variable-depth courses, the first lift of pavement over gravel, reclaimed pavement, on irregular or milled surfaces, or on bridges, at least one roller shall be 14.5 Mg [16 ton] pneumatic-tired. Unless otherwise allowed by the Resident, pneumatic-tired rollers shall be equipped with skirting to minimize the pickup of HMA materials from the paved surface. When required by the Resident, the roller shall be ballasted to 18.1 Mg [20 ton].

b. Compaction with a vibratory or steel wheel roller shall precede pneumatic-tired rolling, unless otherwise authorized by the Department.

c. Vibratory rollers shall not be operated in the vibratory mode when checking or cracking of the mat occurs, or on bridge decks.

d. Any method, which results in cracking or checking of the mat, will be discontinued and corrective action taken.

The maximum operating speed for a steel wheel or pneumatic roller shall not exceed the manufacturer's recommendations, a copy of which shall be available if requested.

<u>401.101 Surface Tolerances</u> The Department will check surface tolerance utilizing the following methods :

a.) A 5 m [16 ft] straightedge or string line placed directly on the surface, parallel to the centerline of pavement.
b.) A 3 m [10 ft] straightedge or string line placed directly on the surface, transverse to the centerline of pavement.

The Contractor shall correct variations exceeding 6 mm [¼ in] by removing defective work and replacing it with new material as directed by the Department. The Contractor shall furnish a 10 foot straightedge for the Departments use.

<u>401.11 Preparation of Existing Surface</u> The Contractor shall thoroughly clean the surface upon which Hot Mix Asphalt Pavement is to be placed of all objectionable material. When the surface of the existing base or pavement is irregular, the Contractor shall bring it to uniform grade and cross section. All surfaces shall have a tack coat applied prior to placing any new HMA course. Tack coat shall conform to the requirements of Section 409 – Bituminous Tack Coat, Section 702 – Bituminous Material, and all applicable sections of the contract.

401.12 Hot Mix Asphalt Documentation The Contractor and the Department shall agree on the amount of Hot Mix Asphalt Pavement that has been placed each day.

401.13 Preparation of Aggregates The Contractor shall dry and heat the aggregates for the HMA to the required temperature. The Contractor shall properly adjust flames to avoid physical damage to the aggregate and to avoid depositing soot on the aggregate.

401.14 Mixing The Contractor shall combine the dried aggregate in the mixer in the amount of each fraction of aggregate required to meet the JMF. The Contractor shall measure the amount of PGAB and introduce it into the mixer in the amount specified by the JMF.

The Contractor shall produce the HMA at the temperature established by the JMF.

The Contractor shall dry the aggregate sufficiently so that the HMA will not flush, foam excessively, or displace excessively under the action of the rollers. The Contractor shall introduce the aggregate into the mixer at a temperature of not more than 14°C [25°F] above the temperature at which the viscosity of the PGAB being used is 0.150 Pa•s.

The Contractor shall store and introduce into the mixer the Performance Graded Asphalt Binder at a uniformly maintained temperature at which the viscosity of the PGAB is between 0.150 Pa•s and 0.300 Pa•s. The aggregate shall be coated completely and uniformly with a thorough distribution of the PGAB. The Contractor shall determine the wet mixing time for each plant and for each type of aggregate used.

401.15 Spreading and Finishing On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impracticable, the Contractor shall spread, rake, and lute the HMA with hand tools to provide the required compacted thickness. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.

On roadways with adjoining lanes carrying traffic, the Contractor shall place each course over the full width of the traveled way section being paved that day, unless otherwise noted by the Department in Section 403 - Hot Bituminous Pavement.

401.16 Compaction Immediately after the Hot Mix Asphalt Pavement has been spread, struck off, and any surface irregularities adjusted, the Contractor shall thoroughly and uniformly compact the HMA by rolling.

The Contractor shall roll the surface when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking, or shoving. The Contractor shall prevent adhesion of the HMA to the rollers or vibrating compactors without the use of fuel oil or other petroleum based release agents. Solvents designed to strip asphalt binders from aggregates will not be permitted as release agents on equipment, tools, or pavement surfaces.
The Contractor shall immediately correct any displacement occurring as a result of the reversing of the direction of a roller or from other causes to the satisfaction of the Department. Any operation other than placement of variable depth shim course that results in breakdown of the aggregate shall be discontinued. Any new pavement that shows obvious cracking, checking, or displacement shall be removed and replaced for the full lane width as directed by the Resident at no cost to the Department.

Along forms, curbs, headers, walls, and other places not accessible to the rollers, the Contractor shall thoroughly compact the HMA with mechanical vibrating compactors. The Contractor shall only use hand

tamping in areas inaccessible to all other compaction equipment. On depressed areas, the Contractor may use a trench roller or cleated compression strips under a roller to transmit compression to the depressed area.

Any HMA that becomes unacceptable due to cooling, cracking, checking, segregation or deformation as a result of an interruption in mix delivery shall be removed and replaced, with material that meets contract specifications at no cost to the Department.

401.17 Joints The Contractor shall construct wearing course transverse joints in such a manner that minimum tolerances shown in Section 401.101 - Surface Tolerances are met when measured with a straightedge.

The paver shall maintain a uniform head of HMA during transverse and longitudinal joint construction.

The HMA shall be free of segregation and meet temperature requirements outlined in section 401.04. Transverse joints of the wearing course shall be straight and neatly trimmed. The Contractor may form a vertical face exposing the full depth of the course by inserting a header, by breaking the bond with the underlying course, or by cutting back with hand tools. The Department may allow feathered or "lap" joints on lower base courses or when matching existing base type pavements.

Longitudinal joints shall be generally straight to the line of travel, and constructed in a manner that best ensure joint integrity. Methods or activities that prove detrimental to the construction of straight, sound longitudinal joints will be discontinued.

The Contractor shall apply a coating of emulsified asphalt immediately before paving all joints to the vertical face and 75 mm [3 in] of the adjacent portion of any pavement being overlaid except those formed by pavers operating in echelon. The Contractor shall use an approved spray apparatus designed for covering a narrow surface. The Department may approve application by a brush for small surfaces, or in the event of a malfunction of the spray apparatus, but for a period of not more than one working day.

Where pavement under this contract joins an existing pavement, or when the Department directs, the Contractor shall cut the existing pavement along a smooth line, producing a neat, even, vertical joint. The Department will not permit broken or raveled edges. The cost of all work necessary for the preparation of joints is incidental to related contract pay items.

401.18 Quality Control Method A, B & C The Contractor shall operate in accordance with the approved Quality Control Plan (QCP) to assure a product meeting the contract requirements. The QCP shall meet the requirements of Section 106.6 - Acceptance and this Section. The Contractor shall not begin paving operations until the Department approves the QCP in writing.

Prior to placing any mix, the Department and the Contractor shall hold a Pre-paving conference to discuss the paving schedule, source of mix, type and amount of equipment to be used, sequence of paving pattern, rate of mix supply, random sampling, project lots and sublots and traffic control. A copy of the QC random numbers to be used on the project shall be provided to The Resident. The Departments' random numbers for Acceptance testing shall be generated and on file with the Resident and the Project Manager. All field and plant supervisors including the responsible onsite paving supervisor shall attend this meeting.

The QCP shall address any items that affect the quality of the Hot Mix Asphalt Pavement including, but not limited to, the following:

a. JMF(s)
b. Hot mix asphalt plant details
c. Stockpile Management (to include provisions for a minimum 2 day stockpile)
d. Make and type of paver(s)
e. Make and type of rollers including weight, weight per inch of steel wheels, and average contact pressure for pneumatic tired rollers
f. Name of QCP Administrator, and certification number
g. Name of Process Control Technician(s) and certification number(s)
h. Name of Quality Control Technicians(s) and certification number(s)
i. Mixing & transportation including process for ensuring that truck bodies are clean and free of debris or contamination that could adversely affect the finished pavement
j. Testing Plan
k. Laydown operations including longitudinal joint construction, procedures for avoiding paving in inclement weather, type of release agent to be used on trucks tools and rollers, compaction of shoulders, tacking of all joints, methods to ensure that segregation is minimized, procedures to determine the maximum rolling and paving speeds based on best engineering practices as well as past experience in achieving the best possible smoothness of the pavement. Solvent based agents developed to strip asphalts from aggregates will not be allowed as release agents.
l. Examples of Quality Control forms including a daily plant report and a daily paving report
m. Silo management and details (can show storage for use on project of up to 36 hours)
n. Provisions for varying mix temperature due to extraordinary conditions.
o. Name and responsibilities of the Responsible onsite Paving Supervisor.
p. Method for calibration/verification of Density Gauge
q. A note that all testing will be done in accordance with AASHTO and the Maine DOT Policies and Procedures for HMA Sampling and Testing.
r. A detailed description of RAP processing, stockpiling and introduction into the plant as well as a note detailing conditions under which the percent of RAP will vary from that specified on the JMF.
s. A detailed procedure outlining when production will be halted due to QC or Acceptance testing results.
t. A plan to address the change in PGAB source or supplier and the potential co-mingling of differing PGAB's.
u. A procedure to take immediate possession of acceptance samples once released by MaineDOT and deliver said samples to the designated acceptance laboratory.
v. Provisions for how the QCP will be communicated to the Contractor's field personnel

The QCP shall include the following technicians together with following minimum requirements:

a. QCP Administrator - A qualified individual shall administer the QCP. The QCP Administrator must be a full-time employee of or a consultant engaged by the Contractor or paving subcontractor. The QCP Administrator shall have full authority to institute any and all actions necessary for the successful operation of the QCP. The QCP Administrator (or its designee in the QCP Administrator's absence) shall be available to communicate with the Department at all times. The QCP Administrator shall be certified as a Quality Assurance Technologist certified by the New England Transportation Technician Certification Program (NETTCP).

b. Process Control Technician(s) (PCT) shall utilize test results and other quality control practices to assure the quality of aggregates and other mix components and control proportioning to meet the JMF(s). The PCT shall inspect all equipment used in mixing to assure it is operating properly and that mixing conforms to the mix design(s) and other Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one PCT is required. The Plan shall include the criteria to be utilized by the PCT to correct or reject unsatisfactory materials. The PCT shall be certified as a Plant Technician by the NETTCP.

c. Quality Control Technician(s) (QCT) shall perform and utilize quality control tests at the job site to assure that delivered materials meet the requirements of the JMF(s). The QCT shall inspect all equipment utilized in transporting, laydown, and compacting to assure it is operating properly and that all laydown and compaction conform to the Contract requirements. The QCP shall detail how these duties and responsibilities are to be accomplished and documented, and whether more than one QCT is required. The QCP shall include the criteria utilized by the QCT to correct or reject unsatisfactory materials. The QCT shall be certified as a Paving Inspector by the NETTCP.

The QCP shall detail the coordination of the activities of the Plan Administrator, the PCT and the QCT. The Project Superintendent shall be named in the QCP, and the responsibilities for successful implementation of the QCP shall be outlined.

The Contractor shall sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with the following minimum frequencies:

TABLE 2 : MINIMUM QUALITY CONTROL FREQUENCIES

| Test or Action | Frequency | Test Method |
|---|---|---|
| Temperature of mix | 6 per day at street and plant | - |
| Temperature of mat | 4 per day | - |
| %TMD (Surface) | 1 per 125 Mg [125 ton] (As noted in QC Plan) | ASTM D2950 |
| %TMD (Base) | 1 per 250 Mg [250 ton] (As noted in QC Plan) | AASHTO T269 |
| Fines / Effective Binder | 1 per 500 Mg [500 ton] | AASHTO T 312* |
| Gradation | 1 per 500 Mg [500 ton] | AASHTO T30 |
| PGAB content | 1 per 500 Mg [500 ton] | AASHTO T164 or T308 |
| Voids at $N_{design}$ | 1 per 500 Mg [500 ton] | AASHTO T 312* |
| Voids in Mineral Aggregate at $N_{design}$ | 1 per 500 Mg [500 ton] | AASHTO T 312* |
| Rice Specific Gravity | 1 per 500 Mg [500 ton] | AASHTO T209 |
| Coarse Aggregate Angularity | 1 per 5000 Mg [5000 ton] | ASTM D5821 |
| Flat and Elongated Particles | 1 Per 5000 Mg [5000 ton] | ASTM D4791 |
| Fine Aggregate Angularity | 1 Per 5000 Mg [5000 ton] | AASHTO T304 |

*Method A and B only

The Contractor may utilize innovative equipment or techniques not addressed by the Contract documents to produce or monitor the production of the mix, subject to approval by the Department.

The Contractor shall submit all Hot Mix Asphalt Pavement plant test reports, inspection reports and updated pay factors in writing, signed by the appropriate technician and present them to the Department by 1:00 P.M. on the next working day, except when otherwise noted in the QCP due to local restrictions. The Contractor shall also

retain splits of the previous 5 QC tests, with QC results enclosed for random selection and testing by The Department during QA inspections of the HMA production facility. Test results of splits that do not meet the Dispute Resolution Variance Limits in Table 10 shall trigger an investigation by the MDOT Independent Assurance Unit, and may result in that lab losing NETTCP certification and the ability to request a dispute [Section 401.223 - Process for Dispute Resolution (Methods A , B and C only)].

The Contractor shall make density test results, including randomly sampled densities, available to the Department onsite. Summaries of each day's results, including a daily paving report, shall be recorded and signed by the QCT and presented to the Department by 1:00 p.m. the next working day.

The Contractor shall have a testing lab at the plant site, equipped with all testing equipment necessary to complete the tests in Table 2. The Contractor shall locate an approved Gyratory Compactor at the plant testing lab or within 30 minutes of the plant site.

The Contractor shall fill all holes in the pavement resulting from cutting cores by the Contractor or the Department with a properly compacted, acceptable mixture no later than the following working day. Before filling, the Contractor shall carefully clean the holes and apply a coating of emulsified asphalt. On surface courses, cores shall not be cut except for Verification of the Nuclear Density Gauge, at a rate not to exceed 3 per day or 2 per 1000 Mg [1000 ton] placed.
The Contractor shall monitor plant production using running average of three control charts as specified in Section 106 - Quality. Control limits shall be as noted in Table 3 below. The UCL and LCL, shall not exceed the allowable gradation control points for the particular type of mixture as outlined in Table 1 of section 703.09

TABLE 3: Control Limits

| Property | UCL and LCL |
|---|---|
| Passing 4.75 mm and larger sieves | Target +/-4.0 |
| Passing 2.36 mm sieve | Target +/-2.5 |
| Passing .075 mm sieve | Target +/-1.2 |
| PGAB Content* | Target +/-0.3 |
| Voids in the Mineral Aggregate | LCL = LSL + 0.2 |
| % Voids at $N_{design}$ | JMF Target +/-1.3 |

*Based on AASHTO T 308

The Contractor shall cease paving operations whenever one of the following occurs on a lot in progress:

a. Method A: The Pay Factor for VMA, Voids @ $N_d$, Percent PGAB, composite gradation, VFB, fines to effective binder or density using all Acceptance or all Quality Control tests for the current lot is less than 0.85.
b. Method B: The Pay Factor for VMA, Voids @ $N_d$, Percent PGAB, composite gradation, VFB, fines to effective binder or density using all Acceptance or all Quality Control tests for the current lot is less than 0.90.
c. Method C: The Pay Factor for VMA, Voids @ $N_{d,}$ Percent PGAB, percent passing the nominal maximum sieve, percent passing 2.36 mm sieve, percent passing 0.300 mm sieve, percent passing 0.075 mm sieve or density using all Acceptance or all available Quality Control tests for the current lot is less than 0.85.
d. The Coarse Aggregate Angularity or Fine Aggregate Angularity value falls below the requirements of Table 3: Aggregate Consensus Properties Criteria in Section 703.07 for the design traffic level.
e. Each of the first 2 control tests for a Method A or B lot fall outside the upper or lower limits for VMA, Voids @ Nd, or Percent PGAB; or under Method C, each of the first 2 control tests for the lot fall

outside the upper or lower limits for the nominal maximum, 2.36 mm, 0.300 mm or 0.075 mm sieves, or percent PGAB.

f. The Flat and Elongated Particles value exceeds 10% by ASTM D4791.
g. There is any visible damage to the aggregate due to over-densification other than on variable depth shim courses.
h. The Contractor fails to follow the approved QCP.

The Contractor shall notify the Resident in writing as to the reason for shutdown, as well as the proposed corrective action, by the end of the work day. Failure to do so will be treated as a second incident under 106.4.6 QCP Non-compliance. The Department will consider corrective action acceptable if the pay factor for the failing property increases, based on samples already in transit, or a verification sample is tested and the property falls within the specification limits.

In cases where the corrective action can be accomplished immediately, such as batch weight or cold feed changes, the Contractor may elect to resume production once the corrective action is completed. Additional QC testing shall be performed to verify the effectiveness of the corrective action. Subsequent occurrences of shutdown for the same property in a Lot in progress will require paving operations to cease. Paving operations shall not resume until the Contactor and the Department determines that material meeting the Contract requirements will be produced. The Department may allow the Contractor to resume production based upon a passing QC sample, with a split of the sample being sent to the Department for verification testing. If the submitted verification sample test results fall outside the specification limits, the Contractor shall cease production until a verification sample is submitted to the Department has been tested by the Department and found to be within specification limits.
If the Contractor's control chart shows the process to be out of control (defined as a single point outside of the control limits on the running average of three chart) on any property listed in Table 3: Control Limits, the Contractor shall notify the Resident in writing of any proposed corrective action by 1:00 PM the next working day.

The Department retains the exclusive right, with the exception of the first day's production of a new JMF, to determine whether the resumption of production involves a significant change to the production process. If the Department so determines, then the current lot will be terminated, a pay factor established, and a new lot will begin.

<u>401.19 Quality Control Method D</u> For Items covered under Method D, the Contractor shall submit a modified QC Plan detailing, how the mix is to be placed, what equipment is to be used, and what HMA plant is to be used. All mix designs (JMF) shall be approved and verified by MDOT prior to use. Certified QC personnel shall not be required. The Contractor shall certify the mix and the test results for each item by a Certificate of Compliance.

<u>401.20 Acceptance Method A, B & C</u> These methods utilizes Quality Level Analysis and pay factor specifications.
For Hot Mix Asphalt Pavement designated for acceptance under Quality Assurance provisions, the Department will sample once per sublot on a statistically random basis, test, and evaluate in accordance with the following Acceptance Criteria:

TABLE 4: ACCEPTANCE CRITERIA

| PROPERTIES | POINT OF SAMPLING | TEST METHOD |
|---|---|---|
| Gradation | Paver Hopper | AASHTO T30 |
| PGAB Content | Paver Hopper | AASHTO T308 |
| %TMD (Surface) | Mat behind all Rollers | AASHTO T269 |
| %TMD (Base or Binder) | Mat behind all Rollers | AASHTO T269 |
| Air Voids at $N_d$ | Paver Hopper | AASHTO T 312 |
| %VMA at $N_d$ | Paver Hopper | AASHTO T 312 |
| Fines to Effective Binder | Paver Hopper | AASHTO T 312 |
| %VFB | Paver Hopper | AASHTO T 312 |

In the event the Department terminates a Lot prematurely but fails to obtain the required number of acceptance samples to calculate the volumetric property pay factor under the test method specified in the contract, the pay factor shall be calculated using the number of samples actually obtained from the contract. Should the number of acceptance samples taken total less than three, the resulting pay factor shall be 1.0 for volumetric properties. A minimum of three cores will be used for a density pay factor, if applicable, for quantities placed to date.

Should the Contractor request a termination of the Lot in progress prior to three acceptance samples being obtained, and the Department agrees to terminate the Lot, then the pay factor for mixture properties shall be 0.80. A minimum of three cores will be used to determine a density pay factor, if applicable, for quantities placed to date.

Lot Size For purposes of evaluating all acceptance test properties, a lot shall consist of the total quantity represented by each item listed under the lot size heading.

Sublot size - Refer to section 401.201, 401.202, and 401.203 for minimum size and number of sublots. The quantity represented by each sample will constitute a sublot.

If there is less than one-half of a sublot remaining at the end, then it shall be combined with the previous sublot. If there is more than one-half sublot remaining at the end, then it shall constitute the last sublot and shall be represented by test results. If it becomes apparent partway through a Lot that, due to an underrun, there will be insufficient mix quantity to obtain the minimum number of sublots needed, the Resident may adjust the size of the remaining sublots and select new sample locations based on the estimated quantity of material remaining in the Lot.

Acceptance Testing The Department will obtain samples of Hot Mix Asphalt Pavement in conformance with AASHTO T168 Sampling Bituminous Paving Mixtures, and the Maine DOT Policies and Procedures for HMA Sampling and Testing, which will then be transported by the Contractor to the designated MDOT Laboratory within 48 hours (except when otherwise noted in the project specific QCP due to local restrictions), as directed by MDOT in approved transport containers to be provided by the Department, unless otherwise directed by the Resident. Failure to deliver an acceptance sample to the designated acceptance laboratory will be considered the second incident under 106.4.6–QCP Non-Compliance.

The Department will take the sample randomly within each sublot. Target values shall be as specified in the JMF. The Department will use Table 5 for calculating pay factors for gradation, PGAB Content, Air Voids at $N_{design}$, VMA, Fines to Effective Binder and VFB. The Department will withhold reporting of the test results for the Acceptance sample until 7:00 AM, on the second working day of receipt of the sample, or after receipt of the Contractors results of the Acceptance sample split. Upon conclusion of each lot, where there is a minimum of four sublots, results shall be examined for statistical outliers, as stated in Section 106.7.2 - Statistical Outliers.

Isolated Areas During the course of inspection, should it appear that there is an isolated area that is not representative of the lot based on a lack of observed compactive effort, excessive segregation or any other questionable practice, that area may be isolated and tested separately. An area so isolated that has a calculated pay factor below 0.80, based on three random tests shall be removed and replaced at the expense of the Contractor for the full lane width and a length not to be less than 50 m [150 ft].

Pavement Density The Department will measure pavement density using core samples tested according to AASHTO T-166. The Department will randomly determine core locations. The Contractor shall cut 6 inch diameter cores at no additional cost to the Department by the end of the working day following the day the pavement is placed, and immediately give them to the Department. Cores for Acceptance testing shall be cut such that the nearest edge is never within 0.225 m (9 inches) of any joint. The cores will be placed in a transport container provided by the Department and transported by the Contractor to the designated MDOT Lab as directed by the Department. Pre-testing of the cores will not be allowed. At the time of sampling, the Contractor and the Department shall mutually determine if a core is damaged. If it is determined that the core(s) is damaged, the Contractor shall cut new core(s) at the same offset and within 1 m [3 ft] of the initial sample. At the time the core is cut, the Contractor and the Department will mutually determine if saw cutting of the core is needed, and will mark the core at the point where sawing is needed. The core may be saw cut by the Contractor in the Department's presence onsite, or in an MDOT Lab by The Department, without disturbing the layer being tested to remove lower layers of Hot Mix Asphalt Pavement, gravel, or RAP. No recuts are allowed at a test location after the core has been tested. Upon conclusion of each lot, density results shall be examined for statistical outliers as stated in Section 106.7.2.

On all sections of overlay with wearing courses designed to be 19 mm [3/4 in] or less in thickness, there shall be no pay adjustment for density otherwise noted in Section 403 - Hot Bituminous Pavement. For overlays designed to be 19 mm [3/4 in] or less in thickness, density shall be obtained by the same rolling train and methods as used on mainline travelway surface courses with a pay adjustments for density, unless otherwise directed by the Department.

There shall be no pay adjustment for density on shoulders unless otherwise noted in Section 403 - Hot Bituminous Pavement. Density for shoulders shall be obtained by the same rolling train and methods as used on mainline travelway, unless otherwise directed by the Department. Efforts to obtain optimum compaction will not be waived by the Department unless it is apparent during construction that local conditions make densification to this point detrimental to the finished pavement surface course.

401.201 Method A Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4500 Mg [4500 tons], with unanticipated over-runs of up to 1500 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 750 Mg [750 ton] for mixture properties, 500 Mg [500 ton] for base or binder densities and 250 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 5: METHOD A ACCEPTANCE LIMITS

| Property | USL and LSL |
|---|---|
| Passing 4.75 mm and larger sieves | Target +/-7% |
| Passing 2.36 mm to 1.18 mm sieves | Target +/-4% |
| Passing 0.60 mm | Target +/-3% |
| Passing 0.30 mm to 0.075 mm sieve | Target +/-2% |
| PGAB Content | Target +/-0.4% |
| Air Voids | 4.0% +/-1.5% |
| Fines to Effective Binder | 0.9 +/-0.3 |
| Voids in the Mineral Aggregate | LSL Only from Table 1 |
| Voids Filled with Binder | Table 1 values plus a 4% production tolerance for USL only |
| % TMD (In place density) | 95.0% +/- 2.5% |

401.202 Method B Lot Size will be the entire production per JMF for the project and shall be divided into 3 equal sublots for Mixture Properties and 3 equal sublots for density.

TABLE 6: METHOD B ACCEPTANCE LIMITS

| Property | USL and LSL |
|---|---|
| Percent Passing 4.75 mm and larger sieves | Target +/-7 |
| Percent Passing 2.36 mm to 1.18 mm sieves | Target +/-5 |
| Percent Passing 0.60 mm | Target +/-4 |
| Percent Passing 0.30 mm to 0.075 mm sieve | Target +/-3 |
| PGAB Content | Target +/-0.5 |
| Air Voids | 4.0% +/-2.0 |
| Fines to Effective Binder | 0.9 +/-0.3 |
| Voids in the Mineral Aggregate | LSL from Table 1 |
| Voids Filled with Binder | Table1 plus a 4% production tolerance for USL. |
| % TMD (In-place Density) | 95.0% +/- 2.5% |

401.203 Testing Method C Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4500 Mg [4500 tons], with unanticipated over-runs of up to 1500 Mg [1500 ton] rolled into the last lot. Sublot sizes shall be 750 Mg [750 ton] for mixture properties, 500 Mg [500 ton] for base or binder densities and 250 Mg [250 ton] for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 7: METHOD C ACCEPTANCE LIMITS

| Property | USL and LSL |
|---|---|
| Passing 4.75 mm and larger sieves | Target +/-7% |
| Passing 2.36 mm to 1.18 mm sieves | Target +/-5% |
| Passing 0.60 mm | Target +/-4% |
| Passing 0.30 mm to 0.075 mm sieve | Target +/-2% |
| PGAB Content | Target +/-0.4% |
| Air Voids | 4.0% +/-1.5% |
| Fines to Effective Binder | 0.9 +/-0.3 |
| Voids in the Mineral Aggregate | LSL Only from Table 1 |
| Voids Filled with Binder | Table 1 values plus a 4% production tolerance for USL only |
| % TMD (In place density) | 95.0% +/- 2.5% |

401.204 Testing Method D For hot mix asphalt items designated as Method D in Section 403 - Hot Bituminous Pavement, one sample will be taken from the paver hopper or the truck body per 250 Mg [250 ton] per pay item. The mix will be tested for gradation and PGAB content. Disputes will not be allowed. If the mix is within the tolerances listed in Table 8: Method D Acceptance Limits, the Department will pay the contract unit price. Contractor shall cut two 150 mm [6 in] cores, which shall be tested for percent TMD per AASHTO T-269 unless otherwise noted in Section 403 - Hot Bituminous Pavement. If the average for the two tests falls below 92.5% the disincentive shall apply. If the test results for each 250 Mg [250 ton] increment are outside these limits, the following deductions (Table 8b) shall apply to the HMA quantity represented by the test.

TABLE 8: METHOD D ACCEPTANCE LIMITS

| Property | USL and LSL |
|---|---|
| Percent Passing 4.75 mm and larger sieves | Target +/-7 |
| Percent Passing 2.36 mm to 1.18 mm sieves | Target +/-5 |
| Percent Passing 0.60 mm | Target +/-4 |
| Percent Passing 0.30 mm to 0.075 mm sieve | Target +/-3 |
| PGAB Content | Target +/-0.5 |
| % TMD (In-place Density) | 95.0% +/- 2.5% |

TABLE 8b Method "D" Price Adjustments

| PGAB Content | -5% |
|---|---|
| 2.36 mm sieve | -2% |
| 0.30 mm sieve | -1% |
| 0.075 mm sieve | -2% |
| Density | -10% |

401.21 Method of Measurement The Department will measure Hot Mix Asphalt Pavement by the Mg [ton] in accordance with Section 108.1 - Measurement of Quantities for Payment.

401.22 Basis of Payment The Department will pay for the work, in place and accepted, in accordance with the applicable sections of this Section, for each type of HMA specified.

The Department will pay for the work specified in Section 401.11, for the HMA used, except that cleaning objectionable material from the pavement and furnishing and applying bituminous material to joints and contact surfaces is incidental.

Payment for this work under the appropriate pay items shall be full compensation for all labor, equipment, materials, and incidentals necessary to meet all related contract requirements, including design of the JMF, implementation of the QCP, obtaining core samples, transporting cores and samples, filling core holes, applying emulsified asphalt to joints, and providing testing facilities and equipment.
The Department will make a pay adjustment for quality as specified below.

401.221 Pay Adjustment The Department will sample, test, and evaluate Hot Mix Asphalt Pavement in accordance with Section 106 - Quality and Section 401.20 - Acceptance, of this Specification.

401.222 Pay Factor (PF) The Department will use the following criteria for pay adjustment using the pay adjustment factors under Section 106.7 - Quality Level Analysis:

Density If the pay factor for Density falls below 0.80 for Method A or C or 0.86 for Method B, all of the cores will be randomly re-cut by Sublot. A new pay factor will be calculated that combines all initial and retest results. If the resulting pay factor is below 0.80 for Method A or C or below 0.86 for Method B, the entire Lot shall be removed and replaced with material meeting the specifications at no additional cost to the Department, except that the Department may, when it appears that there is a distinct pattern of defective material, isolate any defective material by investigating each mix sample sublot and require removal of defective mix sample sublots only, leaving any acceptable material in place if it is found to be free of defective material. Pay factors equal to or greater than the reject level will be paid accordingly.

Gradation For HMA evaluated under Acceptance Method A or B, the Department will determine a composite pay factor (CPF) using applicable price adjustment factors “f“ from Table 9: Table of Gradation Composite “f” Factors, and Acceptance limits from Table 5: Method A Acceptance Limits, for Method A or Table 6: Method B Acceptance Limits, for Method B. The Department will not make price adjustments for gradation on Methods A and B, but will monitor them as shutdown criteria.

TABLE 9: TABLE OF GRADATION COMPOSITE " f " FACTORS (Methods A and B)

| Constituent | | "f" Factor | | | |
|---|---|---|---|---|---|
| | | 19 mm | 12.5 mm | 9.5 mm | 4.75 mm |
| Gradation | 25 mm | - | - | - | - |
| | 19 mm | 4 | - | - | - |
| | 12.5 mm | | 4 | 4 | - |
| | 9.50 mm | | | | 4 |
| | 2.36 mm | 6 | 6 | 6 | 8 |
| | 1.18 mm | | | | |
| | 0.60 mm | 2 | 2 | 2 | 2 |
| | 0.30 mm | 2 | 2 | 2 | 2 |
| | 0.075 mm | 6 | 6 | 6 | 8 |

For HMA evaluated under Acceptance Method C, the Department will determine a pay factor using acceptance limits from Table 7: Method C Acceptance Limits.

VMA, Air Voids, VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using the applicable Acceptance Limits.

The following variables will be used for pay adjustment:

PA = Pay Adjustment
Q = Quantity represented by PF in Mg [ton]
P = Contract price per Mg [ton]
PF = Pay Factor

Pay Adjustment Method A

The Department will use the following criteria for pay adjustment: density, Performance Graded Asphalt Binder content, voids @$N_d$, VMA, VFB, F/$B_{eff}$, and the screen sizes listed in Table 9 for the type of HMA represented in the JMF. If any single pay factor for PGAB Content, VMA, or Air Voids falls below 0.80, then the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.55.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 5: Method A Acceptance Limits:

PA = (density PF- 1.0)(Q)(P)x0.50

PGAB Content, VMA and Air Voids: The Department will determine a pay adjustment using Table 5: Method A Acceptance Limits as follows:

PA = (voids @ $N_d$ PF- 1.0)(Q)(P)x0.20 + (VMA @ $N_d$ PF- 1.0)(Q)(P)x0.20 + (PGAB PF- 1.0)(Q)(P)x0.10

VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 5: Method A Acceptance Limits. The Department will not make price adjustments for VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method B

The Department will use the following criteria for pay adjustment: density, Performance Graded Asphalt Binder content, voids @$N_d$, VMA, VFB, F/$B_{eff}$, and the screen sizes listed in Table 9 for the type of HMA represented in the JMF. If any single pay factor for PGAB Content, VMA, or Air Voids falls below 0.86, then the composite pay factor for PGAB Content, VMA, and Air Voids shall be 0.70.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 6: Method B Acceptance Limits:

PA = (density PF- 1.0)(Q)(P)x0.50

PGAB Content, VMA and Air Voids: The Department will determine a pay adjustment using Table 6: Method B Acceptance Limits as follows:

PA = (voids @ $N_d$ PF- 1.0)(Q)(P)x0.20 + (VMA @ $N_d$ PF- 1.0)(Q)(P)x0.20 + (PGAB PF- 1.0)(Q)(P)x0.10

VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 6: Method B Acceptance Limits. The Department will not make price adjustments for VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method C

The Department will use density, Performance Graded Asphalt Binder content, and the percent passing the nominal maximum, 2.36 mm, 0.300 mm and 0.075 mm sieves for the type of HMA represented in the JMF. If the PGAB content falls below 0.80, then the PGAB pay factor shall be 0.55.

Density: For mixes having a density requirement, the Department will determine a pay factor using Table 7: Method C Acceptance Limits:

PA = (density PF- 1.0)(Q)(P)x0.50

PGAB Content and Gradation The Department will determine a pay factor using Table **7**: Method C Acceptance Limits. The Department will calculate the price adjustment for Mixture Properties as follows:

PA = (% Passing Nom. Max PF-1.0)(Q)(P)X0.05+(% passing 2.36 mm PF-1.0)(Q)(P)X0.05+(%passing 0.30 mm PF-1.0)(Q)(P)X0.05+(%passing 0.075 mm PF-1.0)(Q)(P)X0.10+(PGAB PF-1.0)(Q)(P)X0.25

VMA, Air Voids, VFB and Fines to Effective Binder The Department will determine a pay factor (PF) using Table 7: Method C Acceptance Limits. The Department will not make price adjustments for VMA, Air Voids, VFB or Fines to Effective Binder, but will monitor them as shutdown criteria.

Pay Adjustment Method D

The Department will use density, Performance Graded Asphalt Binder content, and the screen sizes listed in Table 8b for the type of HMA represented in the JMF. If test results do not meet the Table 8 requirements, deducts as shown in Table 8b shall be applied to the quantity of mix represented by the test.

401.223 Process for Dispute Resolution (Methods A B & C only)

a. Dispute Resolution sampling At the time of Hot-Mix Asphalt sampling, the Department will obtain a split sample of each Acceptance test random sample for possible dispute resolution testing. The Contractor shall also obtain a split sample of the HMA at this same time. If the Contractor wishes to retain the option of requesting dispute testing of the initial Acceptance sample, the Contractor will test their split of the

Acceptance sample and shall report their results to the Resident, with a copy to the QA Engineer at the Central Laboratory in Bangor by 7:00 AM, on the second working day from time of QA sampling, otherwise dispute resolution will not be initiated. The Department's dispute resolution split sample will be properly labeled and stored for a period of at least two weeks, or until the sample is tested.

b. Disputing Acceptance results The Contractor may dispute the Department's Acceptance results and request (Methods A, B, & C) that the dispute resolution split sample be tested by notifying the Department's Resident and the QA Engineer at the Central Laboratory in Bangor in writing within two

working days after receiving the results of the Acceptance test. The following shall be provided in the request:

- Acceptance sample reference number
- The specific test result(s) or property(ies) being disputed, and
- The complete, signed report of the Contractor's testing (In a lab certified by the NETTCP and MDOT) of their split of the Acceptance sample indicating that the variances in Table10: Dispute Resolution Variance Limits, for the specific test result(s) or property(ies) were exceeded.

c. Disputable items The Contractor may dispute any or all of the following Method A or B test results when the difference between the Department's value and the Contractor's value for that test equals or exceeds the corresponding allowable variation in Table 10: Dispute Resolution Variance Limits, PGAB content, $G_{mb}$, and $G_{mm}$. In addition, if the allowable variation for these tests is not met or exceeded, the Contractor may dispute either or both of the following material properties provided the difference between results for them equals or exceeds the corresponding allowable variation in Table 10: Voids at $N_{design}$, and VMA.
For Method C only: The results for PGAB content and the screen sizes used for pay adjustment may be disputed.

d. Outcome The value of any disputed result or property reported for the initial Acceptance sample shall stand if the value reported for the dispute resolution sample is not closer to the value the Contractor reported for their split sample than to the value reported for the initial Acceptance sample. If the value reported for the dispute resolution falls precisely half-way between the other two values the value reported for the dispute resolution will replace the original acceptance value. Otherwise, the value reported for the dispute resolution sample will replace the value reported for the initial Acceptance sample, and will be used to re-calculate any other affected results or properties.

TABLE 10: DISPUTE RESOLUTION VARIANCE LIMITS

| | |
|---|---|
| PGAB Content | +/-0.4% |
| $G_{mb}$ | +/-0.030 |
| $G_{mm}$ | +/-0.020 |
| Voids @ $N_d$ | +/-0.8% |
| VMA | +/-0.8% |
| Passing 4.75 mm and larger sieves | +/- 4.0% |
| Passing 2.36 mm to 0.60 mm sieves | +/- 3.0% |
| Passing 0.30 mm to 0.15 | +/- 2.0 % |
| 0.075 mm sieve | +/- 1.0% |

## SECTION 402 - PAVEMENT SMOOTHNESS

402.00 Smoothness Projects Projects to have their pavement smoothness analyzed in accordance with this Specification will be so noted in Special Provision 403 - Bituminous Box

402.01 Pavement Smoothness The final pavement surface shall be evaluated for smoothness using a Class I or Class II profiler as defined by ASTM E950 (94). Smoothness measurements will be expressed in terms of the International Roughness Index (IRI) as defined by the World Bank, in units of inches/mile.

402.02 Lot Size Lot size for smoothness will be 1000 lane-meters [3000 lane-feet]. A sublot will consist of 20 lane-meters [50 lane-feet]. Partial lots will be included in the previous lot if less than one-half the size of a normal lot. If equal to or greater than one-half the normal lot size, it will be tested as a separate lot.

402.03 Acceptance Testing The Department will conduct Acceptance testing following completion of the surface course. Sections to be excluded from testing include the following:

Bridge decks and joints (no smoothness measurements will be taken within 30 m [100 ft] of bridge joints)
Acceleration and deceleration lanes
Shoulders and ramps
Side streets and roads
Within 30 m [100 ft] of transverse joints at the beginning and end of the project
Within 30 m [100 ft] of railroad crossings
Urban areas with speed limits of 50 kph [30 mph] or lower

Each lot shall have 2 measurements made in each wheel path. The average of the 4 measurements will determine the smoothness for that lot.

The smoothness measurements will be statistically evaluated for pay factors as described in Subsection 106.7 - Quality Level Analysis, using the specification limits shown below.

ACCEPTANCE LIMITS

| Level | USL |
|---|---|
| I | 0.95 m/km [60 in/mile] |
| II | 1.10 m/km [70 in/mile] |
| III | 1.25 m/km [80 in/mile] |

Computation of Smoothness Pay Adjustment:

PA = (PF-1.0)(Q)(P)
where:
Q = Quantity of surface course in the Lot (excluding shoulders, side streets, bridge decks, ramps, acceleration and deceleration lanes)
PF = smoothness pay factor for the Lot
P = Contract unit price for surface pavement
PA = pay adjustment

402.04 Unacceptable Work In the event that any Lot is found to have a pay factor less than 0.80, the Contractor shall take whatever remedial action is required to correct the pavement surface in that Lot at no additional expense to the Department. Such remedial action may include but is not limited to removal and replacement of the unacceptable pavement. In the event remedial action is necessary, the Contractor shall submit a written plan to the Resident outlining the scope of the remedial work. The Resident must approve this plan before the remedial work can begin. Following remedial work, the Lot shall be retested, and will be subject to the specification limits listed above. The resulting pay factor, if within the acceptable range, will be used in the final pay adjustment. The Contractor shall pay the cost of retesting the pavement following corrective action.

Localized surface tolerance defects will be subject to the provisions outlined in Section 401.101 Surface Tolerances.

Payment will be made under:

| Pay Item | Pay Unit |
|---|---|
| 402.10 Incentive/Disincentive - Pavement Smoothness | Lump Sum |

## SECTION 403 - HOT BITUMINOUS PAVEMENT

403.01 Description This work shall consist of constructing one or more courses of bituminous pavement on an approved base in accordance with these specifications, and in reasonably close conformity with the lines, grades, thickness and typical cross sections shown on the plans or established.

The bituminous pavement shall be composed of a mixture of aggregate, filler if required, and bituminous material.

403.02 General The materials and their use shall conform to the requirements of Section 401 - Hot Mix Asphalt Pavement.

403.03 Construction The construction requirements shall be as specified in Section 401 - Hot Mix Asphalt Pavement.
In addition, hot bituminous pavement placed on bridges shall also conform to the following requirements.

a. The mixture shall be composed of aggregate, PGAB and mineral filler but no recycled asphalt pavement and placed in courses as specified in the Special Provisions.

b. The bottom course shall be placed with an approved rubber mounted bituminous paver of such type and operated in such a manner that the membrane waterproofing will not be damaged in any way.

c. The top course shall not be placed until the bottom course has cooled sufficiently to provide stability.

d. The Contractor will not be required to cut sample cores from the compacted pavement on the bridge deck.

e. After the top course has been placed, the shoulder areas shall be sealed 1 meter [3 ft] wide with two applications of an emulsified bituminous sealer meeting the requirements of Section 702.12 - Emulsified Bituminous Sealing Compound. The first application shall be pre-mixed with fine, sharp sand, similar to mortar sand, as needed to fill all voids in the mix in the area being sealed. The second application may be applied without sand. The sealer shall be carried to the curb at the gutter line in sufficient quantity to leave a bead or fillet of material at the face of the curb. The area to be sealed shall be clean, dry and the surface shall be at ambient temperature.

f. The furnishing and applying of the required quantity of sealer for the bridge shoulder areas shall be incidental to placing the hot bituminous pavement.

g. The atmospheric temperature for all courses on bridge decks shall be 10°C [50°F] or higher.

h. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on bridge decks.

403.04 Method of Measurement Hot bituminous pavement will be measured as specified in Section 401.21-Method of Measurement.

403.05 Basis of Payment The accepted quantities of hot bituminous pavement will be paid for at the contract unit price per Megagram [ton] for the bituminous mixtures, including bituminous material complete in place.

Method A, Method B, Method C and Method D shall be used for acceptance as specified in Section 401 - Hot Mix Asphalt Pavements. (See Complementary Notes, Section 403 - Hot Bituminous Pavement, for Method location).

Payment will be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 403.102 | Hot Mix Asphalt Pavement for Special Areas | MG [Ton] |
| 403.206 | Hot Mix Asphalt, 25 mm Nominal Maximum Size | MG [Ton] |
| 403.207 | Hot Mix Asphalt, 19.0 mm Nominal Maximum Size | MG [Ton] |
| 403.2071 | Hot Mix Asphalt , 19.0 mm Nominal Maximum Size | MG [Ton] |
| 403.2072 | Asphalt Rich Hot Mix Asphalt,19.0 mm Nominal Maximum Size (Asphalt Rich Base and Intermediate course) | MG [Ton] |
| 403.208 | Hot Mix Asphalt, 12.5 mm Nominal Maximum Size | MG [Ton] |
| 403.2081 | Hot Mix Asphalt - 12.5 mm Nominal Maximum Size (PG 70-28) | MG [Ton] |
| 403.209 | Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (sidewalks, drives, islands & incidentals) | MG [Ton] |
| 403.210 | Hot Mix Asphalt, 9.5 mm Nominal Maximum Size | MG [Ton] |
| 403.2101 | Hot Mix Asphalt - 9.5 mm Nominal Maximum Size (PG 70-28) | MG [Ton] |
| 403.2102 | Asphalt Rich Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Asphalt Rich Intermediate course) | MG [Ton] |
| 403.211 | Hot Mix Asphalt (shimming) | MG [Ton] |
| 403.212 | Hot Mix Asphalt, 4.75 mm Nominal Maximum Size | MG [Ton] |
| 403.2131 | Hot Mix Asphalt, 12.5 mm Nominal Maximum Size, (PG 70-28) (Base and Intermediate Base course) | MG [Ton] |
| 403.2132 | Asphalt Rich Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base course) | MG [Ton] |

# SPECIAL PROVISION
## SECTION 703
## AGGREGATES

The Standard Specifications, Revision of 2002 Section 700 - Materials, Subsection 703.09 HMA Mixture Composition has been revised as follows:

703.09 HMA Mixture Composition The coarse and fine aggregate shall meet the requirements of Section 703.07. The several aggregate fractions for mixtures shall be sized, graded, and combined in such proportions that the resulting composite blends will meet the grading requirements of the following tables or as otherwise specified.

TABLE 1: COMPOSITION OF MIXTURES - CONTROL POINTS

| SIEVE SIZE | GRADING | | | |
|---|---|---|---|---|
| | TYPE 19 mm | TYPE 12.5 mm | TYPE 9.5 mm | TYPE 4.75 mm |
| | PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE | | | |
| 37.5 mm | | | | |
| 25 mm | 100 | | | |
| 19 mm | 90-100 | 100 | | |
| 12.5 mm | -90 | 90-100 | 100 | 100 |
| 9.5 mm | - | -90 | 90-100 | 95-100 |
| 4.75 mm | - | - | -90 | 80-100 |
| 2.36 mm | 23-49 | 28-58 | 32-67 | 40 - 80 |
| 1.18 mm | - | - | - | - |
| 600 µm | - | - | - | - |
| 300 µm | - | - | - | - |
| 75 µm | **2.0-7.0** | **2.0-7.0** | **2.0-7.0** | **2.0-7.0** |
| SIEVE SIZE | RESTRICTED ZONES | | | |
| | TYPE 19 mm [¾ in] | TYPE 12.5 mm [½ in] | *TYPE 9.5 mm [⅜ in] | TYPE 4.75 mm [#40] |
| | PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE | | | |
| 37.5 mm [1½ in] | - | - | - | - |
| 25 mm [1 in] | - | - | - | - |
| 19 mm [¾ in] | - | - | - | - |
| 12.5 mm [½ in] | - | - | - | - |
| 9.5 mm [⅜ in] | - | - | - | - |
| 4.75 mm [No. 4] | - | - | - | - |
| 2.36 mm [No. 8] | 34.6 | 39.1 | 47.2 | - |
| 1.18 mm [No. 16] | 22.3-28.3 | 25.6-31.6 | 31.6-37.6 | - |
| 600 µm [No. 30] | 16.7-20.7 | 19.1-23.1 | 23.5-27.5 | - |
| 300 µm [No. 50] | 13.7 | 15.5 | 18.7 | - |
| 75 µm [No. 200] | - | - | - | - |

* The restricted zone is presented for information and definition of "Fine" 9.5mm mixes only.

**SPECIAL PROVISION**
**SECTION 403**
**HOT MIX ASPHALT**

| Desc. Of Course | Grad Design. | Item Number | Bit Cont. % of Mix | Total Thick | No. Of Layers | Comp. Notes |
|---|---|---|---|---|---|---|
| **4" HMA Overlay Areas** | | | | | | |
| **Mainline Travelway, Shoulders, & Side Roads** | | | | | | |
| Wearing | 9.5 mm | 403.210 | N/A | 1 ½" | 1 | 4,7,20,22 |
| Base | 12.5 mm | 403.213 | N/A | 2 ½" | 1 | 4,7 |
| **Pipe Trench Areas** | | | | | | |
| **3" HMA Overlay Areas** | | | | | | |
| Base | 12.5 mm | 403.213 | N/A | 3" | 2 | 2,4,7,16 |
| **Sidewalks, Islands, Drives, Misc.** | | | | | | |
| Wearing | 9.5 mm | 403.209 | N/A | 2" | 1/more | 2,3,10,11,14 |
| **Commercial Drives** | | | | | | |
| Wearing | 9.5 mm | 403.209 | N/A | 3" | 2/more | 2,3,10,11,14 |

## COMPLEMENTARY NOTES

2. The incentive/disincentive provisions for density shall not apply. Rollers shall meet the requirements of this special provision. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on bridge decks.
3. The design traffic level for mix placed shall be <0.3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations**.
4. The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations**.
7. Section 106.6 Acceptance, (1) Method A.
10. Section 106.6 Acceptance, (2) Method D.
11. The combined aggregate gradation required for this item shall be classified as a 9.5mm "**fine graded "** mixture, (using the Primary Control Sieve control point) as defined in 703.09.
14. A mixture meeting the requirements of section 703.09 Grading 'D', with a minimum PGAB content of 6%, and the limits of Special Provision 401, Table 9 (Drives and Sidewalks) for PGAB content and gradation may be substituted for this item. A job mix formula shall be submitted to the department for approval.
16. Compaction of the new Hot Mix Asphalt Pavement will be obtained using a minimal roller train consisting of a **3-5 ton** vibratory roller. An approved release agent is required to ensure the mixture dose not adhere to hand tools, rollers, pavers, and truck bodies. The use of petroleum based fuel oils, or asphalt stripping solvents will not be permitted.

20. The Contractor may place the specified HMA pavement course, not to exceed 2" inch (50mm) compacted depth, over the full single travel lane width, for each production day. If this option is utilized the Contractor will be required to place a matching course of HMA over the adjacent section of travel lane before the end of the following calendar day. The Contractor will also be responsible for installing additional warning signage that clearly defines the centerline elevation differential hazard, as well as additional centerline delineation such as double RPM application, or temporary painted line. The Traffic Control Plan shall be amended to include this option and the additional requirements. All signs and traffic control devices will conform to Section 719.01, and Section 652, and will be installed to the work, at a maximum spacing of 0.50 mile [0.80 km] for the entire length of effected roadway section. On roadways with two-way traffic, the Contractor will be required to place the specified course over the full width of the mainline traveled way being paved prior to opening the sections to weekend or holiday traffic. If this option is utilized, all additional signing, labor, traffic control devices, or incidentals will not be paid for directly, will be considered incidental to the appropriate 652 items.
22. The final pavement surface shall be evaluated for smoothness in accordance with the most current 400 Special Provision section 402 – Pavement Smoothness. Acceptance limits shall be as outlined under the **Level II** classification.

Tack Coat

A tack coat of emulsified asphalt, RS-1, Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.025 gal/yd², and on milled pavement approximately 0.05 gal/yd² prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim /base courses and the surface course, at a rate not to exceed 0.025 gal/yd². Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

# SPECIAL PROVISION
## SECTION 504
## CONCRETE PIPE TIES

Description This work shall consist of furnishing and installing concrete pipe ties in conformance with the Standard Details.

Materials All materials shall meet the requirements shown in the Standard Details.

Method of Measurement Concrete pipe ties shall be measured per Group (2 ties per Group).

Basis of Payment The accepted quantity of concrete pipe ties will be paid for at the contract unit price per Group. Such payment will be full compensation for furnishing, installing, and all other necessary incidentals for satisfactory completion of the work. Any grout or mortar necessary to repair chipping shall be incidental to the installation of the pipe ties.

| Pay Item | Pay Unit |
|---|---|
| 504.07 Concrete Pipe Ties | Group |

# SPECIAL PROVISION
## SECTION 603
## PIPE CULVERTS AND STORM DRAINS

603.12 Basis of Payment: This section shall be amended with the addition of the following:

| Pay Item | | Pay Unit |
|---|---|---|
| 603.155 | 12” RCP Class III | LF |
| 603.175 | 18” RCP Class III | LF |
| 603.205 | 30” RCP Class III | LF |
| 603.235 | 48” RCP Class III | LF |
| 603.255 | 60” RCP Class III | LF |

# SPECIAL PROVISION
# SECTION 604 – MANHOLES AND CATCH BASINS

## (BEHIND THE CURB CATCH BASINS)

Description. This work shall consist of constructing, altering or adjusting-to-grade manholes, catch basins and behind-the-curb catch basins in accordance with these specifications, and in close conformity with the lines and grades shown on the plans and details or as established.

## MATERIALS

Castings for Behind-the-Curb Catch Basins. All castings shall be gray iron conforming to the requirements of AASHTO M105-82 as furnished by the Neenah Foundry Company (Catalog No. R-3303; Heavy Duty Catch Basin Frame and Lid), or an approved equal. The castings shall be of uniform quality, free from blowholes, shrinkage, distortion, or other defects. They shall be smooth and well cleaned by shot-blasting.

All castings for behind-the-curb catch basins shall be manufactured true to pattern; component parts shall fit together in a satisfactory manner. Frames and lids shall have continuously machined bearing surfaces to prevent rocking and rattling. All cast dimensions may vary one-half the maximum shrinkage possessed by the metal or +/- 2mm (1/16" per foot).

Manufacturer's shop drawings shall be submitted to the Engineer for approval prior to the manufacture or shipping of the castings to the job site. The Engineer shall retain the right to reject castings not conforming to specification and/or approved submittal drawings.

## CONSTRUCTION REQUIREMENTS

"Concrete catch basins, Behind-the-Curb catch basins, and manholes shall be constructed of pre-cast units, except that concrete blocks may be used around inlet and outlet pipes."

## METHOD OF MEASUREMENT

"Catch basins, Behind-the-Curb catch basins, manholes and accessories of the respective types will be measured by the number of units, measured as follows, complete and accepted in place."

"Complete structures. Each catch basin, behind-the-curb catch basin and manhole having a depth up to 2.5 m [8 feet] from the top of the grate or cover to the top of the floor, measured to the nearest 0.5 m [foot], will be one unit."

BASIS OF PAYMENT

"The accepted quantities of catch basins, behind-the-curb catch basins, manholes, traps and steps, will be paid for at the contract unit price each of the respective types complete and in place."

| Pay Item | | Pay Unit |
|---|---|---|
| 604.2402 | Behind-the-Curb Catch Basin | Each |

# SPECIAL PROVISION
## SECTION 606
## GUARDRAIL
(Anchorage Assembly)

Description This work shall consist of furnishing and installing anchorage assemblies in accordance with current Standard Specifications and as shown in the attached detail on both sides of each 1.2 m guardrail opening as indicated on the plans.

Materials Materials shall meet the requirements specified in the following subsections of Division 700 - Materials:

| | |
|---|---|
| Timber Preservative | 708.05 |
| Metal Beam Rail | 710.04 |
| Timber Posts | 710.07 |
| Guardrail Hardware | 710.08 |

CONSTRUCTION REQUIREMENTS

Posts Posts shall be laid out at the typical offset as if no gaps were being introduced into the guardrail. Gap shall be located as shown on project plans or as directed by the Resident. The first post on either side of the gap shall be offset 0.3 m (1 ft) and the second post shall be offset 0.15 m (0.5 ft). This approximates a 46 m (151 ft) radius. The Contractor shall stake the spacing of posts in the field for the approval of the Resident prior to excavating post holes. See the attached detail.

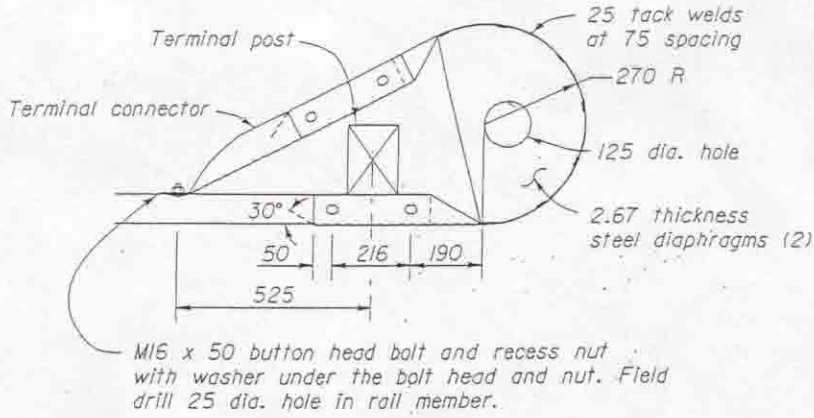
Rails The beam immediately adjacent to the gap shall be a full length 3.81 m (12.5 ft) beam. It may be necessary to use a half length of beam in order to get the gap where it needs to be. Cut areas around the ends and at additional bolt holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint, or as directed by the project Resident. Holes shall not be burned.

Method of Measurement Anchorage assemblies will be measured by the unit (each) complete in place and will include one 3.81 m (12.5 ft) beam and all components shown on the attached detail.

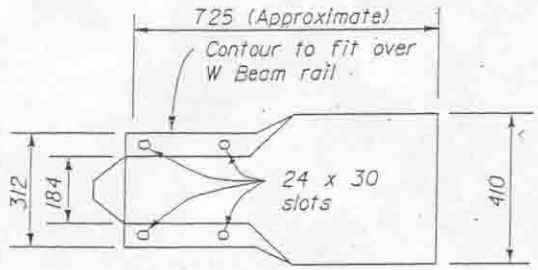
Basis of Payment The accepted quantity of anchorage assemblies will be paid for at the contract unit price per each, complete in place and will include one 3.81 m (12.5 ft) beam and all components shown on the attached detail. Payment shall be full compensation for furnishing and installing all components as shown on the attached detail and for incidentals necessary to complete the work.

Payment will be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 606.259 | Anchorage Assembly | Each |

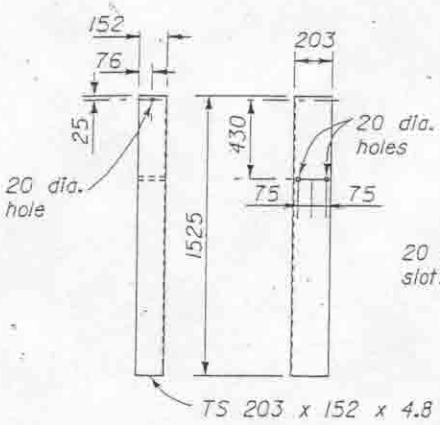



PLAN

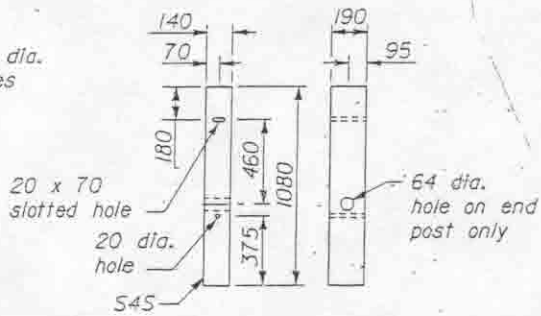



ELEVATION

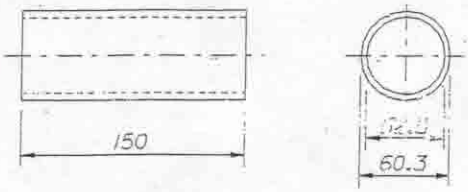
TYPE I END SECTION ASSEMBLY



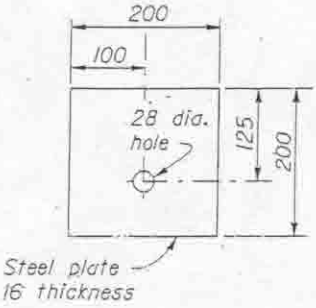

STEEL TUBE ANCHOR




TERMINAL POST



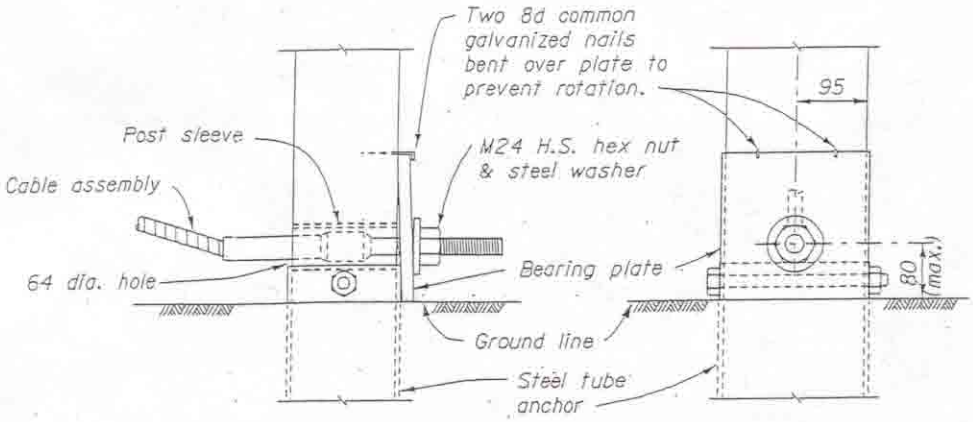

GALVANIZED STANDARD PIPE POST SLEEVE



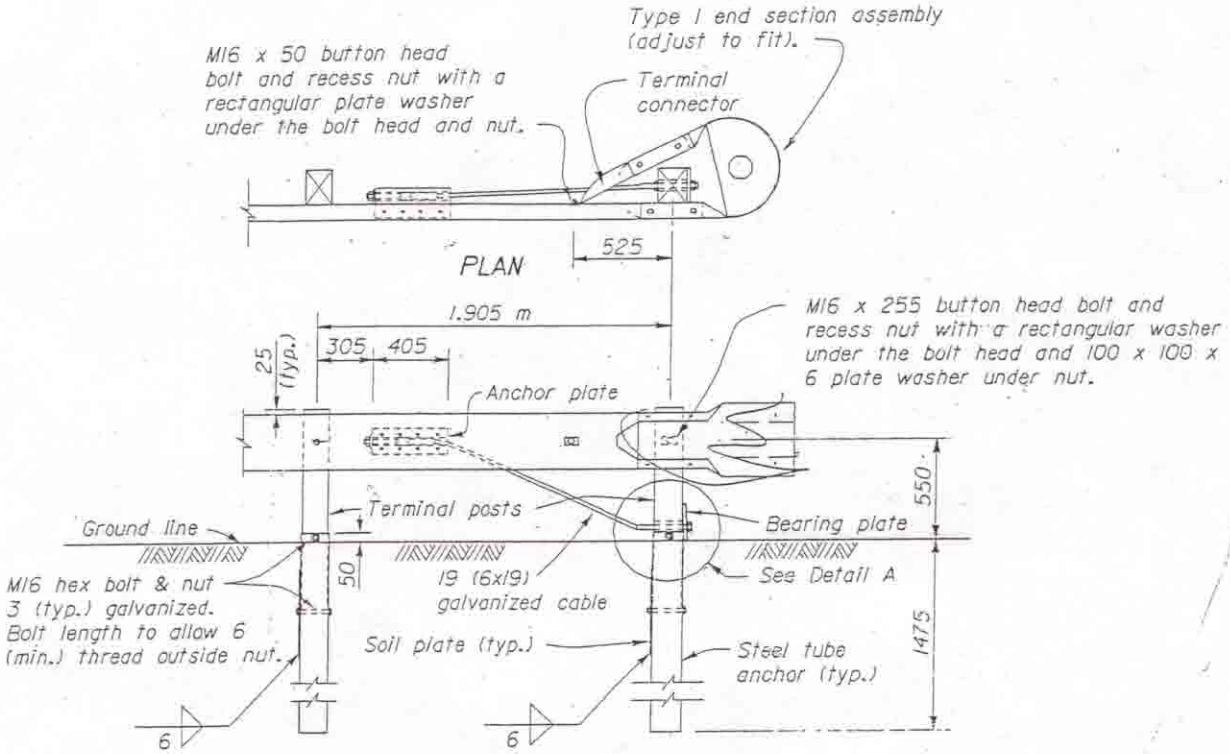

BEARING PLATE



# Anchorage Assembly



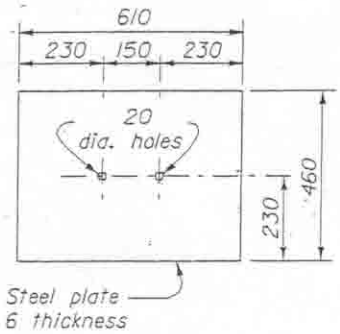

DETAIL A




PLAN

ELEVATION

ANCHORAGE ASSEMBLY



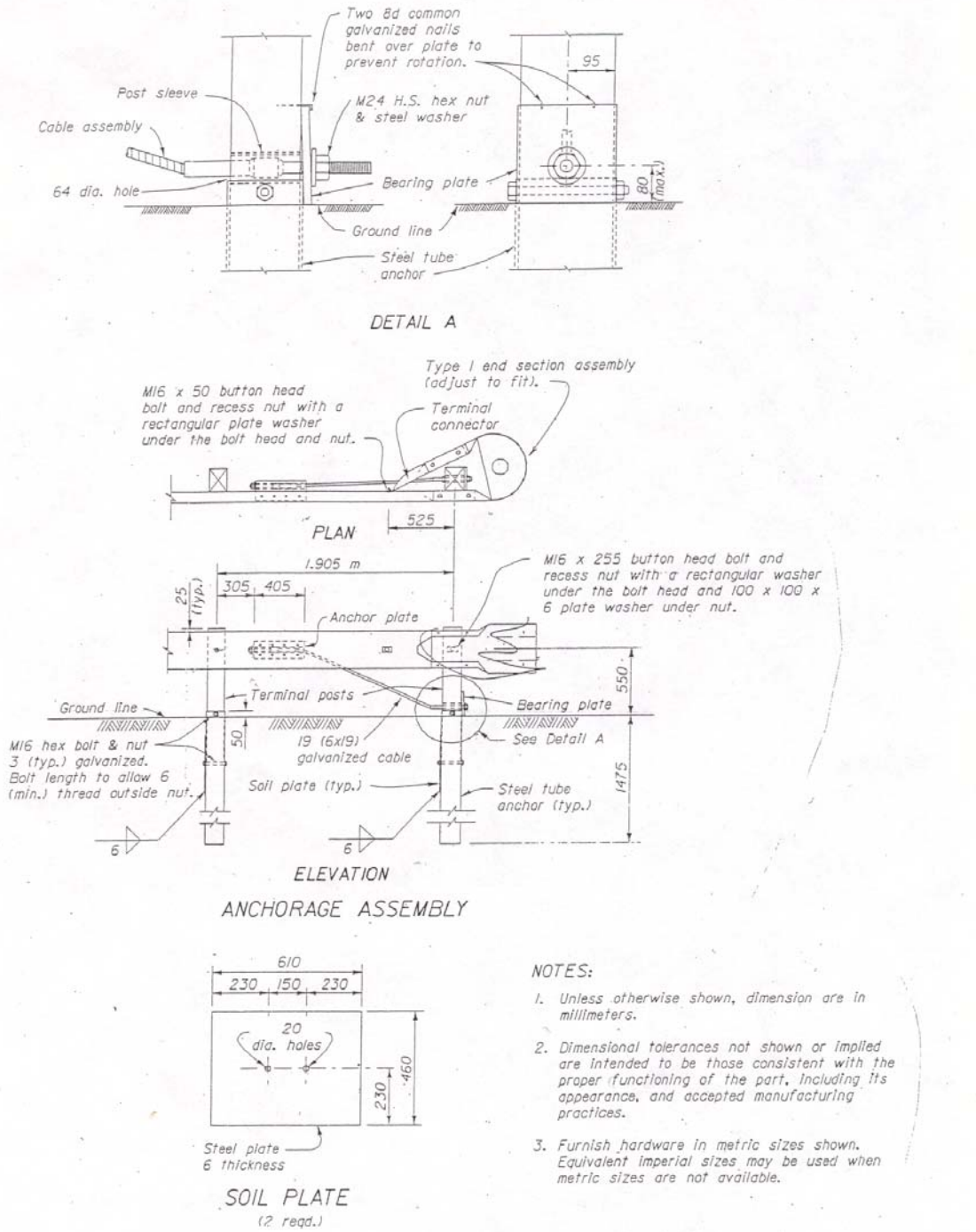

SOIL PLATE

(2 reqd.)

NOTES:

1. Unless otherwise shown, dimension are in millimeters.
2. Dimensional tolerances not shown or implied are intended to be those consistent with the proper functioning of the part, including its appearance, and accepted manufacturing practices.
3. Furnish hardware in metric sizes shown. Equivalent imperial sizes may be used when metric sizes are not available.

# Anchorage Assembly




**Anchorage Assembly**

# SPECIAL PROVISION
# SECTION 606
# GUARDRAIL

606.01 Description This work shall consist of furnishing and installing guardrail components in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or as established. The types of guardrail are designated as follows:

Type 3-Galvanized steel "w" beam, wood posts or galvanized steel posts.
Type 3a-Galvanized steel "w" beam, wood posts, wood or composite offset blocks.
Type 3aa-Corrosion resistant steel "w" beam, wood posts, wood or composite offset blocks.
Type 3b-Galvanized steel "w" beam, galvanized steel posts, galvanized steel offset blocks.
Type 3c-Galvanized steel "w" beam, wood posts or galvanized steel posts, wood or composite offset blocks.
Type 3d-Galvanized steel "w" beam, galvanized steel posts, wood or composite offset blocks.
Thrie Beam-Galvanized steel thrie beam, wood posts or galvanized steel posts, wood or composite offset blocks.

Median barriers shall consist of two beams of the above types, mounted on single posts. Except for thrie beam, median barriers may include rub rails when called for.

Bridge mounted guardrail shall consist of furnishing all labor, materials, and equipment necessary to install guardrail as shown on the plans. This work shall also include drilling for and installation of offset blocks if specified, and incidental hardware necessary for satisfactory completion of the work.

Remove and Reset and Remove, Modify, and Reset guardrail shall consist of removing the existing designated guardrail and resetting in a new location as shown on the plans or directed by the Resident. Remove, Modify, and Reset guardrail and Modify guardrail include the following guardrail modifications: Removing plate washers at all posts, except at anchorage assemblies as noted on the Standard Details, Adding offset blocks, and other modifications as listed in the Construction Notes or General Notes. Modifications shall conform to the guardrail Standard Details.

Bridge Connection shall consist of the installation and attachment of beam guardrail to the existing bridge. This work shall consist of constructing a concrete end post or modifying an existing endpost as required, furnishing, and installing a terminal connector, necessary hardware, and incidentals required to complete the work as shown on the plans. Bridge Transition shall consist of a bridge connection and furnishing and installing guardrail components as shown in the Standard Details.

606.02 Materials Materials shall meet the requirements specified in the following Sections of Division 700 - Materials:

| | |
|---|---|
| Timber Preservative | 708.05 |
| Metal Beam Rail | 710.04 |
| Guardrail Posts | 710.07 |
| Guardrail Hardware | 710.08 |

Guardrail components shall meet the applicable standards of "A Guide to Standardized Highway Barrier Hardware" prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Task Force 13 Report.

Posts for underdrain delineators shall be “U” channel steel, 2.44m [8 ft] long, 3.72 kg/m [2 ½ lb/ft] minimum and have 9.5 mm [3/8 in] round holes, 25 mm [1 in] center to center for a minimum distance of 610 mm [2 ft] from the top of the post.

Reflectorized Flexible Guardrail Markers shall be mounted on all guardrails. A marker shall be mounted onto guardrail posts at the flared end treatment’s terminal and its tangent point, both at the leading and trailing ends of each run of guardrail. The marker’s flexible posts shall be grey with either silver-white or yellow reflectors (to match the edge line striping) at the tangents, red at leading ends, and green at trailing ends. Whenever the end treatment is not flared, markers will only be required at the end treatment’s terminal. These shall be red or green as appropriate. Markers shall be installed on the protected side of guardrail posts unless otherwise approved by the Resident. Reflectorized flexible guardrail markers shall be from the Maine DOT’s Approved Product List of Guardrail Material. The marker shall be grey, flexible, durable, and of a non-discoloring material to which 75 mm [3 in] by 225 mm [9 in] reflectors shall be applied, and capable of recovering from repeated impacts. Reflective material shall meet the requirements of Section 719.01 for ASTM D 4956 Type III reflective sheeting. The marker shall be secured to the guardrail post with two fasteners, as shown in the Standard Details.

Reflectorized beam guardrail (“butterfly”-type) delineators shall be mounted on all “w”-beam guardrail. The delineators shall be mounted within the guardrail beam at guardrail posts. Delineators shall be fabricated from high-impact, ultraviolet & weather resistant thermoplastic. Reflectorized beam guardrail delineators shall be placed at approximately 20 m [62.5 ft] intervals or every tenth post on tangents and at approximately 10 m [31.25 ft] intervals or every fifth post on curves. Exact locations of the delineators shall be as directed by the Resident. On divided highways, the left hand delineators shall be yellow and the right hand delineators shall be silver/white. On two directional highways, the right hand side shall be silver/white and no reflectorized delineator used on the left. All reflectors shall have reflective sheeting applied to only one side of the delineator facing the direction of traffic as shown in the Standard Detail 606(07). Reflectorized sheeting for guardrail delineators shall meet the requirements of Section 719.01.

Single wood post shall be of cedar, white oak, or tamarack, well seasoned, straight, and sound and have been cut from live trees. The outer and inner bark shall be removed and all knots trimmed flush with the surface of the post. Posts shall be uniform taper and free of kinks and bends.

Single steel post shall conform to the requirements of Section 710.07 b.

Single steel pipe post shall be galvanized, seamless steel pipe conforming to the requirements of ASTM A120, Schedule No. 40, Standard Weight.

Acceptable multiple mailbox assemblies shall be listed on the Department’s Approved Products List and shall be NCHRP 350 tested and approved.

The Guardrail 350 Flared Terminal shall be a terminal with a 1.2 m [4 ft] offset as shown in the Manufacturer's installation instructions.

Existing materials damaged or lost during adjusting, removing and resetting, or removing, modifying, and resetting, shall be replaced by the Contractor without additional compensation. Existing guardrail posts and guardrail beams found to be unfit for reuse shall be replaced when directed by the Resident.

606.03 Posts Posts for guardrail shall be set plumb in holes or they may be driven if suitable driving equipment is used to prevent battering and distorting the post. When posts are driven through pavement, the damaged area around the post shall be repaired with approved bituminous patching. Damage to lighting and signal conduit and conductors shall be repaired by the Contractor.

When set in holes, posts shall be on a stable foundation and the space around the posts, backfilled in layers with suitable material, thoroughly tamped.

The reflectorized flexible guardrail markers shall be set plumb with the reflective surface facing the oncoming traffic. Markers shall be installed on the protected side of guardrail posts. Markers, which become bent or otherwise damaged, shall be removed and replaced with new markers.

Single wood posts shall be set plumb in holes and backfilled in layers with suitable material, thoroughly tamped. The Resident will designate the elevation and shape of the top. The posts, that are not pressure treated, shall be painted two coats of good quality oil base exterior house paint.

Single steel posts shall be set plumb in holes as specified for single wood posts or they may be driven if suitable driving equipment is used to prevent battering and distorting the post.

Additional bolt holes required in existing posts shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.04 Rails Brackets and fittings shall be placed and fastened as shown on the plans. Rail beams shall be erected and aligned to provide a smooth, continuous barrier. Beams shall be lapped with the exposed end away from approaching traffic.

End assemblies shall be installed as shown on the plans and shall be securely attached to the rail section and end post.

All bolts shall be of sufficient length to extend beyond the nuts but not more than 13 mm [½ in]. Nuts shall be drawn tight.

Additional bolt holes required in existing beams shall be drilled or punched, but the size of the holes shall not exceed the dimensions given in the Standard Details. Metal around the holes shall be thoroughly cleaned and painted with two coats of approved aluminum rust resistant paint. Holes shall not be burned.

606.045 Offset Blocks The same offset block material is to be provided for the entire project unless otherwise specified.

606.05 Shoulder Widening At designated locations the existing shoulder of the roadway shall be widened as shown on the plans. All grading, paving, seeding, and other necessary work shall be in accordance with the Specifications for the type work being done.

606.06 Mail Box Post Single wood post shall be installed at the designated location for the support of the mailbox. The multiple mailbox assemblies shall be installed at the designated location in accordance with the Standard Details and as recommended by the Manufacturer. Attachment of the mailbox to the post will be the responsibility of the home or business owner.

606.07 Abraded Surfaces All galvanized surfaces of new guardrail and posts, which have been abraded so that the base metal is exposed, and the threaded portions of all fittings and fasteners and cut ends of bolts shall be cleaned and painted with two coats of approved rust resistant paint.

606.08 Method of Measurement Guardrail will be measured by the meter [linear foot] from center to center of end posts along the gradient of the rail except where end connections are made to masonry or steel structures, in which case measurement will be as shown on the plans.

Terminal section, low volume end, NCHRP 350 end treatments, reflectorized flexible guardrail marker, terminal end, bridge transition, bridge connection, multiple mailbox post, and single post will be measured by each unit of the kind specified and installed.

Widened shoulder will be measured as a unit of grading within the limits shown on the plans.

Excavation in solid rock for placement of posts will be measured by the cubic meter [cubic yard] determined from the actual depth of the hole and a hypothetical circle diameter of 600 mm [2 ft].

606.09 Basis of Payment The accepted quantities of guardrail will be paid for at the contract unit price per meter [linear foot] for the type specified, complete in place. Reflectorized beam guardrail ("butterfly"-type) delineators will not be paid for directly, but will be considered incidental to guardrail items. Terminal section, buffer end, NCHRP 350 end treatment, bridge connection, single post and reflectorized flexible guardrail markers will be paid for at the contract unit price each for the kind specified complete in place.

NCHRP 350 end treatments and low volume guardrail ends will be paid for at the contract price each, complete in place which price shall be full payment for furnishing and installing all components including the terminal section, posts, offset blocks, "w" beam, cable foundation posts, plates and for all incidentals necessary to complete the installation within the limits as shown on the Standard Details or the Manufacturer's installation instructions. Each end treatment will be clearly marked with the manufacturers name and model number to facilitate any future needed repair. Such payment shall also be full compensation for furnishing all material, excavating, backfilling holes, assembling, and all incidentals necessary to complete the work, except that for excavation for posts or anchorages in solid ledge rock, payment will be made under Pay Item 206.07. Type III Retroreflective Adhesive Sheeting

shall be applied to the approach buffer end sections and sized to substantially cover the end section. On all roadways, the ends shall be marked with alternating black and retroreflective yellow stripes. The stripes shall be 75 mm [3 in] wide and sloped down at an angle of 45 degrees toward the side on which traffic is to pass the end section. Guardrail 350 flared terminal shall also include a set of installation drawings supplied to the Resident.

Anchorages to bridge end posts will be part of the bridge work. Connections thereto will be considered included in the unit bid price for guardrail.

Guardrail to be placed on a radius of curvature of 45 m [150 ft] or less will be paid for under the designated radius pay item for the type guardrail being placed.

Widened shoulder will be paid for at the contract unit price each complete in place and will be full compensation for furnishing and placing, grading and compaction of aggregate subbase and any required fill material.

Adjust guardrail will be paid for at the contract unit price per meter and will be full compensation for adjusting to grade. Payment shall also include adjusting terminal end treatments where required.

Modify guardrail will be paid for at the contract unit price per meter and will be full compensation for furnishing and installing offset blocks, additional posts, and other specified modifications; removing, modifying, installing, and adjusting to grade existing posts and beams; removing plate washers and backup plates, and all incidentals necessary to complete the work. Payment shall also include removing and resetting terminal ends where required.

Remove and Reset guardrail will be paid for at the contract unit price per meter and will be full compensation for removing, transporting, storing, reassembling all parts, necessary cutting, furnishing new parts when necessary, reinstalling at the new location, and all other incidentals necessary to complete the work. Payment shall also include removing and resetting terminal ends when required. No payment will be made for guardrail removed, but not reset and all costs for such removal shall be considered incidental to the various contract pay items.

Remove, Modify, and Reset guardrail will be paid for at the contract unit price per meter and will be full compensation for the requirements listed in Modify guardrail and Remove and Reset guardrail.

Bridge Connections will be paid for at the contract unit price each. Payment shall include, attaching the connection to the endpost including furnishing and placing concrete and reinforcing steel necessary to construct new endposts if required, furnishing and installing the terminal connector, and all miscellaneous hardware, labor, equipment, and incidentals necessary to complete the work.

Bridge Transitions will be paid for at the contract unit price each. Payment shall include furnishing and installing the thrie beam or “w”-beam terminal connector, doubled beam section, and transition section, where called for, posts, hardware, precast concrete transition curb, and any other necessary materials and labor, including the bridge connection as stated in the previous paragraph.

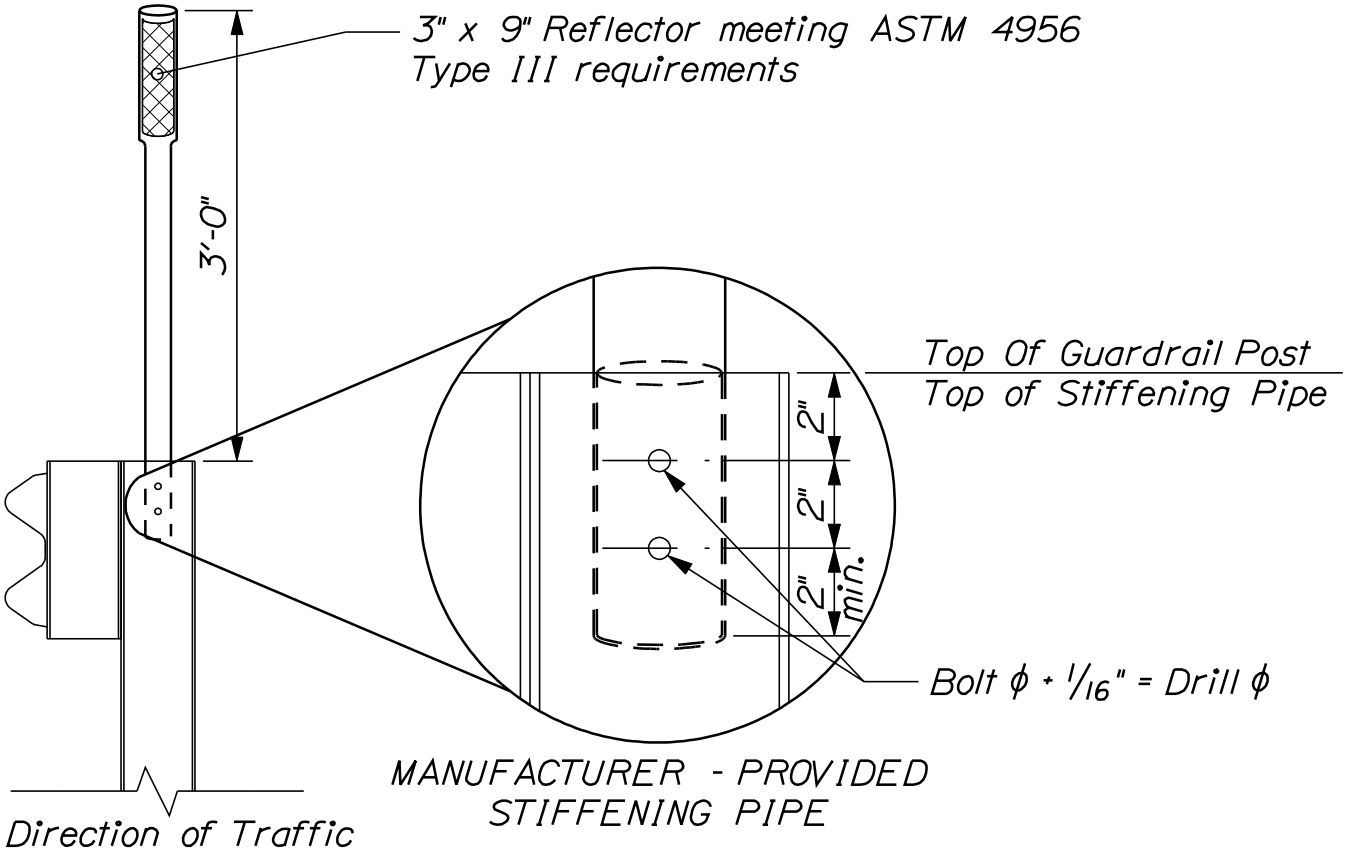
Payment will be made under:

| | Pay Item | Pay Unit |
|---|---|---|
| 606.15 | Guardrail Type 3a-Single Rail | meter [Linear Foot] |
| 606.151 | Guardrail Type 3aa-Single Rail | meter [Linear Foot] |
| 606.17 | Guardrail Type 3b-Single Rail | meter [Linear Foot] |
| 606.1721 | Bridge Transition - Type I | Each |
| 606.1722 | Bridge Transition - Type II | Each |
| 606.1731 | Bridge Connection - Type I | Each |
| 606.1732 | Bridge Connection - Type II | Each |
| 606.178 | Guardrail Beam | meter [Linear foot] |
| 606.18 | Guardrail Type 3b - Double Rail | meter [Linear foot] |
| 606.19 | Guardrail Type 3a - 4.5 m [15 ft] radius and less | meter [Linear Foot] |
| 606.191 | Guardrail Type 3aa - 4.5 m [15 ft] radius and less | meter [Linear Foot] |
| 606.20 | Guardrail Type 3a - over 4.5 m [15 ft] radius | meter [Linear Foot] |
| 606.201 | Guardrail Type 3aa - over 4.5 m [15 ft] radius | meter [Linear Foot] |
| 606.21 | Guardrail Type 3b - 4.5 m [15 ft] radius and less | meter [Linear Foot] |
| 606.22 | Guardrail Type 3b - over 4.5 m [15 ft] radius | meter [Linear Foot] |
| 606.23 | Guardrail Type 3c - Single Rail | meter [Linear Foot] |
| 606.2301 | Guardrail Type 3c - Double Rail | meter [Linear Foot] |
| 606.231 | Guardrail Type 3c - 4.5 m [15 ft] radius and less | meter [Linear Foot] |
| 606.232 | Guardrail Type 3c - over 4.5 m [15 ft] radius | meter [Linear Foot] |
| 606.24 | Guardrail Type 3d - Single Rail | meter [Linear Foot] |
| 606.2401 | Guardrail Type 3d - Double Rail | meter [Linear Foot] |
| 606.241 | Guardrail Type 3d - 4.5 m [15 ft] radius and less | meter [Linear Foot] |
| 606.242 | Guardrail Type 3d - over 4.5 m [15 feet] radius | meter [Linear Foot] |
| 606.25 | Terminal Connector | Each |
| 606.257 | Terminal Connector - Thrie Beam | Each |
| 606.265 | Terminal End-Single Rail - Galvanized Steel | Each |
| 606.266 | Terminal End-Single Rail - Corrosion Resistant Steel | Each |
| 606.275 | Terminal End-Double Rail - Galvanized Steel | Each |
| 606.276 | Terminal End-Double Rail - Corrosion Resistant Steel | Each |
| 606.353 | Reflectorized Flexible Guardrail Marker | Each |
| 606.354 | Remove and Reset Reflectorized Flexible Guardrail Marker | Each |
| 606.356 | Underdrain Delineator Post | Each |
| 606.358 | Guardrail, Modify, Type 3b to 3c | meter [Linear Foot] |
| 606.3581 | Guardrail, Modify Existing to Type 3d | meter [Linear Foot] |
| 606.362 | Guardrail, Adjust | meter [Linear Foot] |
| 606.365 | Guardrail, Remove, Modify, and Reset, Type 3b to 3c | meter [Linear Foot] |
| 606.3651 | Guardrail, Remove, Modify, and Reset Existing to Type 3d | meter [Linear Foot] |
| 606.366 | Guardrail, Removed and Reset, Type 3c | meter [Linear Foot] |
| 606.367 | Replace Unusable Existing Guardrail Posts | Each |
| 606.47 | Single Wood Post | Each |
| 606.48 | Single Galvanized Steel Post | Each |
| 606.50 | Single Steel Pipe Post | Each |

| | | |
|---|---|---|
| 606.51 | Multiple Mailbox Support | Each |
| 606.55 | Guardrail Type 3 - Single Rail | meter [Linear Foot] |
| 606.551 | Guardrail Type 3 - Single Rail with Rub Rail | meter [Linear Foot] |
| 606.56 | Guardrail Type 3 - Double Rail | meter [Linear Foot] |
| 606.561 | Guardrail Type 3 - Double Rail with Rub Rail | meter [Linear Foot] |
| 606.568 | Guardrail, Modify Type 3c -Double Rail | meter [Linear Foot] |
| 606.59 | Guardrail Type 3 - 4.5 m [15 ft] radius and less | meter [Linear Foot] |
| 606.60 | Guardrail Type 3 - over 4.5 m [15 ft] radius | meter [Linear Foot] |
| 606.63 | Thrie Beam Rail Beam | meter [Linear Foot] |
| 606.64 | Guardrail Thrie Beam - Double Rail | meter [Linear Foot] |
| 606.65 | Guardrail Thrie Beam - Single Rail | meter [Linear Foot] |
| 606.66 | Terminal End Thrie Beam | Each |
| 606.70 | Transition Section - Thrie Beam | Each |
| 606.71 | Guardrail Thrie Beam - 4.5 m [15 ft] radius and less | meter [Linear Foot] |
| 606.72 | Guardrail Thrie Beam - over 4.5 m [15 ft] radius | meter [Linear Foot] |
| 606.73 | Guardrail Thrie Beam - Single Rail Bridge Mounted | meter [Linear Foot] |
| 606.74 | Guardrail Type 3 - Single Rail Bridge Mounted | meter [Linear Foot] |
| 606.753 | Widen Shoulder for Low Volume Guardrail End - Type 3 | Each |
| 606.754 | Widen Shoulder for Guardrail 350 Flared Terminal | Each |
| 606.78 | Low Volume Guardrail End - Type 3 | Each |
| 606.79 | Guardrail 350 Flared Terminal | Each |

1. Reflectorized Flexible Guardrail Markers shall be from Maine DOT's Approved Product List of Guardrail Material.

2. Installation:
   a. Each bolt-hole diameter shall be the bolt diameter + 1/16".
   b. Wood post attachment - attach marker with 2, 5/16" diameter zinc-coated lag bolts, having 2" of embedment into wood post.
   c. Steel post attachment - attach marker with 2, 1/4" diameter zinc-coated bolt, washer and nut assemblies, having 1/2" of bolt extension behind steel post.
   d. When provided by the marker manufacturer, a stiffening pipe shall be inserted into the base of the marker prior to drilling bolt holes and shall remain in-place.




# REFLECTORIZED FLEXIBLE GUARDRAIL MARKER DETAILS

606(34)

# SPECIAL PROVISION
## SECTION 608
## DETECTABLE WARNINGS
## (Cast Iron)

Description This work shall consist of furnishing and installing curb ramp detectable warning plates with truncated domes at the locations shown on the plans or as established by the Resident.

## MATERIALS

Detectable Warnings The Contractor shall provide new cast iron detectable warning plates as manufactured by one of the manufacturers listed on Maine DOT's Qualified Products list of Cast Iron Detectable Warning Plates. This list can be found at:

http://www.maine.gov/mdot/tr/qpl/

Each field shall match the width of the ramp and shall have a natural finish.

Prior to starting this work, the Contractor shall submit for approval the name of the selected supplier, manufacturer's literature describing the product, installation procedures, and routine maintenance required.

Concrete Portland cement concrete shall meet the requirements of Section 502, Structural Concrete, Class A

## CONSTRUCTION REQUIREMENTS

Existing Concrete Curb Ramps Existing Concrete shall be saw-cut to a dimension 100mm [4 in] larger than the detectable warning plates. New concrete shall be placed in the resulting opening and finished, and the new plates set into the wet concrete, according to manufacturer recommendations. New plates shall be set square with the curb edge and the base of the truncated domes shall be flush with adjacent surfaces to allow proper drainage.

New Concrete Curb Ramps New concrete shall be placed and finished for the ramp, and the new plates set into the wet concrete, according to manufacturer recommendations. New plates shall be set square with the curb edge and the base of the truncated domes shall be flush with adjacent surfaces to allow proper drainage

New Asphalt Ramps Asphalt shall be saw cut and removed to provide an opening that will allow for the dimensions of the cast iron plate surrounded by an additional 100mm [4 in] border on all sides of the plate. New concrete shall be placed in the resulting opening and finished, and the new plates set into the wet concrete, according to manufacturer

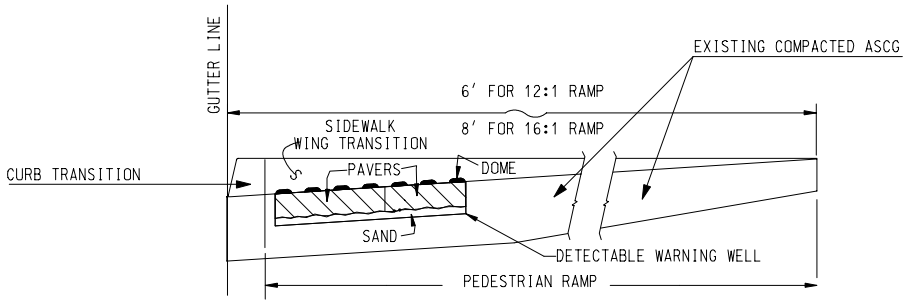
recommendations. New plates shall be set square with the curb edge and the base of the truncated domes shall be flush with adjacent surfaces to allow proper drainage.

Method of Measurement Detectable warning fields properly placed and accepted shall be measured for payment by the square meter [$ft^2$]. Measurement shall include actual plate area, not surrounding concrete.

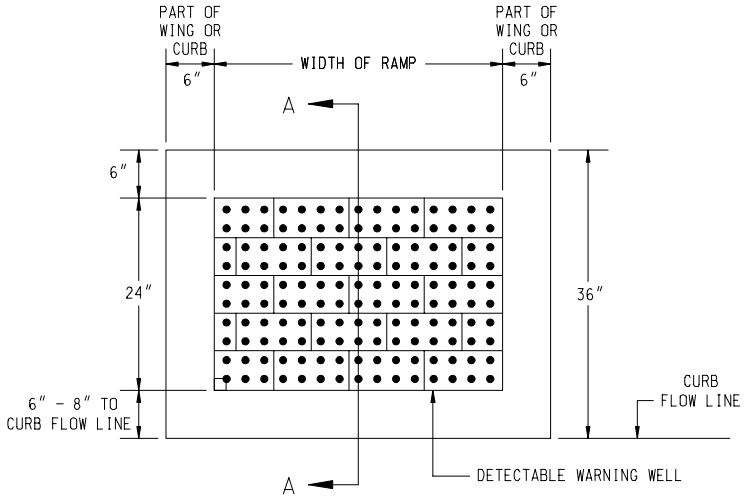
Basis of Payment Payment will be full compensation at the contract unit price for all labor, materials, and equipment required to install the detectable warning fields. This shall include surface preparation and removal of concrete or asphalt, and necessary replacement concrete. On new concrete ramps, concrete shall be paid for under separate items

| Pay Item | | Pay Unit |
|---|---|---|
| 608.26 | Curb Ramp Detectable Warning Field | Square Meter [Square Foot] |

# VIEWS AND DETAILS OF THE DETECTABLE WARNING

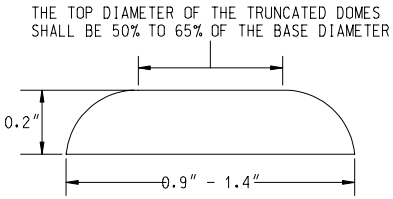



SIDE SECTION VIEW OF
DETECTABLE WARNING, WELL, CURB, AND GUTTER

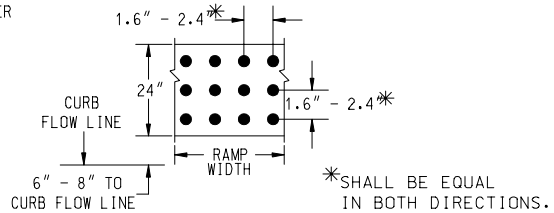



PLAN VIEW OF
DETECTABLE WARNING AND WELL

(PAVERS NOT DRAWN TO SCALE)

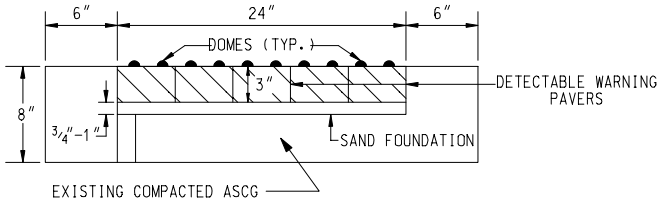



ELEVATION VIEW




PLAN VIEW

DOME AND DETECTABLE WARNING DETAILS




SECTION A–A

NOTE:
ALL DETECTABLE WARNING AREAS SHALL START 6 INCHES FROM THE FLOW LINE OF THE CURB, AND BE 24 INCHES IN DEPTH, AND COVER THE COMPLETE WIDTH OF THE RAMP AREA ONLY.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

CURB RAMP

VIEWS AND DETAILS OF THE DETECTABLE WARNING

DETAILS

SHEET NUMBER

1

# SPECIAL PROVISION
## SECTION 627
## PAVEMENT MARKINGS

The last paragraph of Subsection 627.10, Basis of Payment is revised by the addition of the following:

| Pay Item | | Pay Unit |
|---|---|---|
| 627.733 | 4" White or Yellow Painted Pavement Marking Line | LF |

# SPECIAL PROVISION
## SECTION 645
### HIGHWAY SIGNING

Under 645.023 Support Structures, add the following to the first paragraph just prior to the last sentence:

Minimum fatigue design default values for cantilever & butterfly sign support structures shall be classified as Fatigue Category I with Fatigue Importance Factors ( $I_f$ ) of 1.0 for Galloping, 1.0 for Natural Wind Gusts and 1.0 for Truck-Induced Gusts. Bridge type sign support structures supporting variable message signs (VMS) shall also use this fatigue criteria in their design.

Minimum fatigue design default values for bridge type structures, without VMS, shall be classified as Fatigue Category II with Importance Factors ($I_f$) of 0.65 for Galloping, 0.75 for Natural Wind Gusts and 0.89 for Truck-Induced Gusts.

Under 645 Support Structures, b. Bridge, Cantilever, and Butterfly Type Sign Supports, modify the 1st sentence in paragraph 2 to read:

"Signs shall be placed on the support structure such that the bottom edges are aligned (unless written consent from the Fabrication Engineer is obtained), while accommodating the minimum height requirement - see Section 645.06.

Modify the 4th sentence of paragraph 2 to read:

"This additional theoretical sign load shall be computed by: For single signs increasing the sign widths an additional 25% without changing the horizontal midpoint of the sign; For multiple signs the sign widths shall be increased 25% toward the outside sign edges. The height shall be increased 25% without changing the bottom edge elevation of the signs."

Under 645.06 Installation of Type I Signs, b. Sign Panels, modify the 4th sentence of the 1st paragraph to read:

"Sign panels on overhead structures shall provide a minimum vertical clearance of 5.5 meters [18 ft] to the highest point of the roadway surface under the sign(s).

February 4, 2011
Supersedes February 27, 2003

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC

Approaches Approach signing shall include the following signs as a minimum. Field conditions may warrant the use of additional signs as determined by the Resident.

Road work Next x Miles
Road work 500 Feet
End Road Work

Work Area At each work site, signs and channelizing devices shall be used as directed by the Resident. Signs include:

Road Work xxxx [1]
One Lane Road Ahead
Flagger Sign

Other typical signs include:

Be Prepared to Stop
Low Shoulder
Bump
Pavement Ends

The above lists of Approach signs and Work Area signs are representative of the contract Requirements. Other sign legends may be required.

The Contractor shall conduct their operations in such a manner that the roadway will not be restricted to one lane for more than 800 m [2,500 ft] at each work area. To encourage quality paving in warm-weather conditions, the length can be extended to 4,000 ft depending on the traffic impacts. Where more than one work area restricts traffic to one lane operation, these work areas shall be separated by at least 1.6 km [1 mile] of two way operation.

**Temporary Centerline** A temporary centerline shall be placed each day on all new pavement to be used by traffic. The temporary centerline, when specified of reflectorized traffic paint, shall conform to the standard marking patterns used for permanent markings.

Failure to apply a temporary centerline daily will result in a Traffic Control Violation and suspension of paving operations until temporary markers are applied to all previously placed pavement.

[1] "Road Work Ahead" to be used in mobile operations and "Road Work xx ft" to be used in stationary operations as directed by the Resident.

# SPECIAL PROVISION
## SECTION 652
## MAINTENANCE OF TRAFFIC
(Traffic Control)

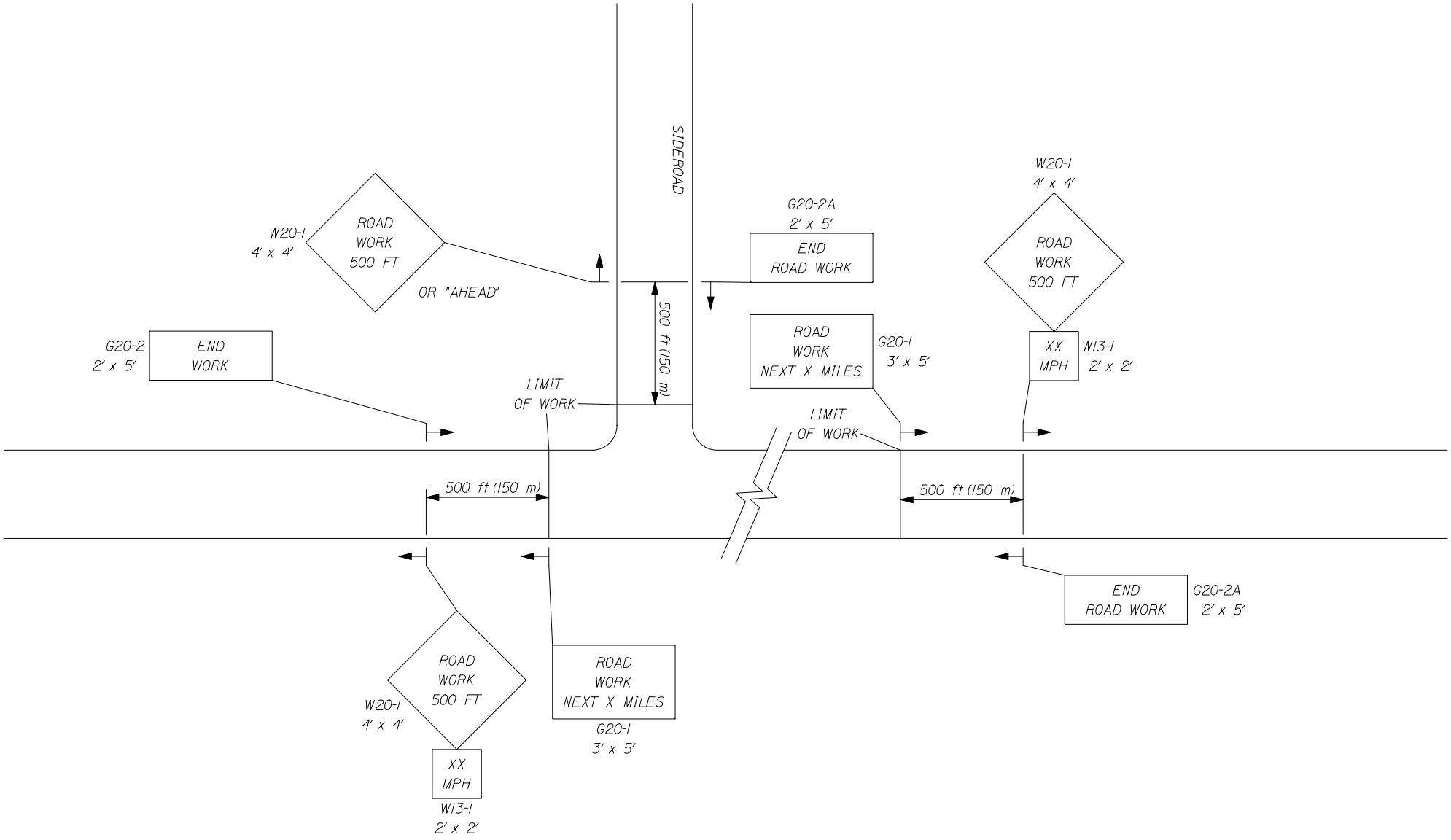
Failure by the contractor to follow the Contracts 652 Special Provisions and Standard Specification and/or The Manual on Uniform Traffic Control Devices (MUTCD) and/or The Contractors own Traffic Control Plan will result in a violation letter and result in a reduction in payment as shown in the schedule below. The Department's Resident or any other representative of The Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Any reduction in payment under this Special Provision will be in addition to forfeiting payment of maintenance of traffic control devices for that day.

| **ORIGINAL CONTRACT AMOUNT** | | | | |
|---|---|---|---|---|
| **From** | **Up to and** | **Amount of Penalty Damages per Violation** | | |
| **More Than** | **Including** | **1st** | **2nd** | **3rd & Subsequent** |
| $0 | $1,000,000 | $250 | $500 | $1,250 |
| $1,000,000 | $2,000,000 | $500 | $1,000 | $2,500 |
| $2,000,000 | $4,000,000 | $1,000 | $2,000 | $5,000 |
| $4,000,000 | and more | $2,000 | $4,000 | $10,000 |

April 17, 2007
Supersedes May 10, 2006

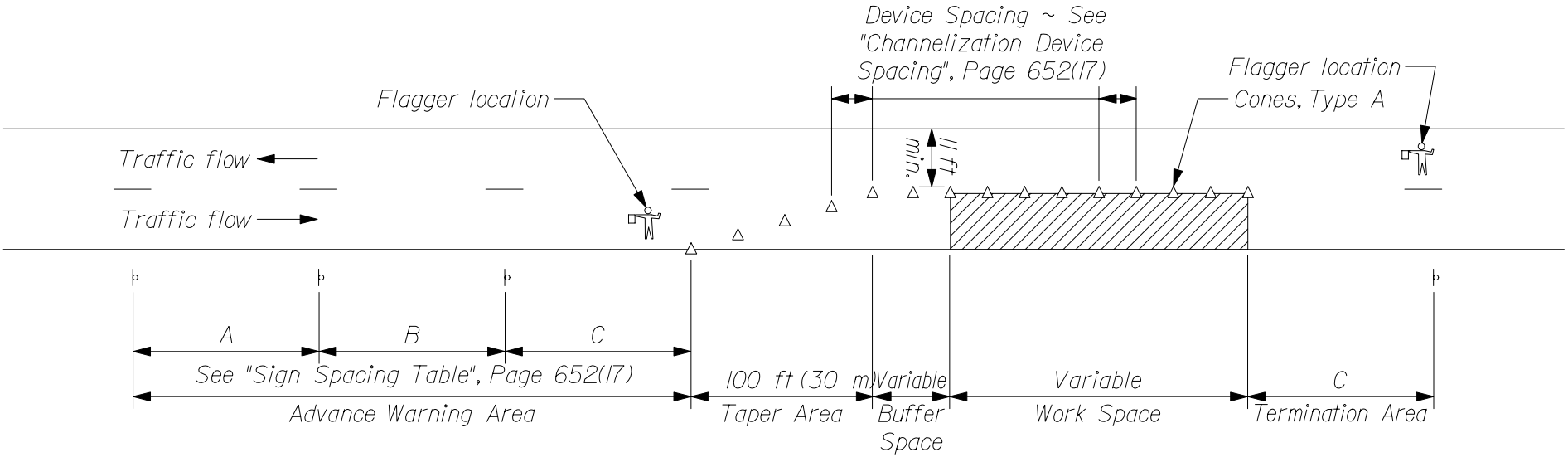
# SPECIAL PROVISION
# SECTION 652
## MAINTENANCE OF TRAFFIC
### Construction Sign Sheeting Material

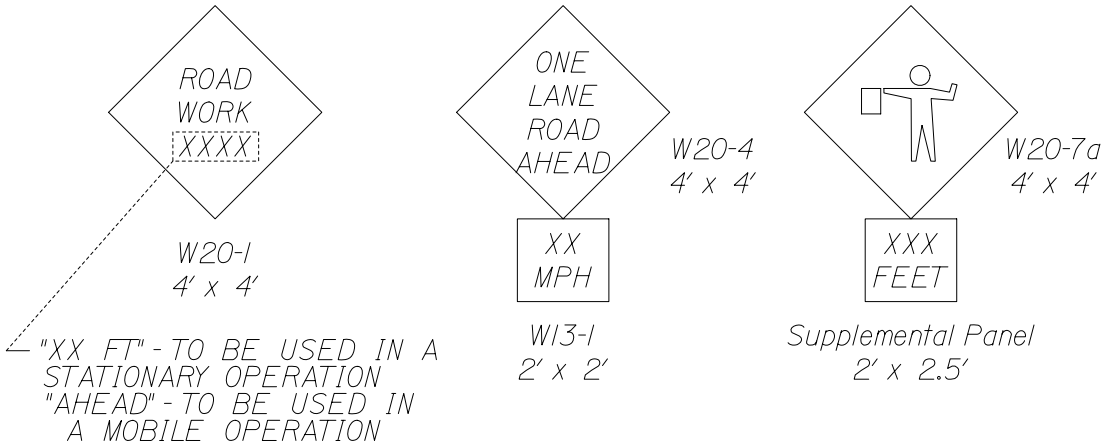
Super high intensity fluorescent retroreflective sheeting, ASTM D 4956 - Type VII, Type VIII, or Type IX (prismatic), is required for all construction signs.




1 of 3

# -- PROJECT APPROACH SIGNING --
# TWO WAY TRAFFIC




# TYPICAL APPLICATION: TWO - WAY, TWO LANE ROADWAY, CLOSING ONE LANE USING FLAGGERS

| TYPE OF TAPER | TAPER LENGTH (L)* |
|---|---|
| Merging Taper | at least L |
| Shifting Taper | at least 0.5L |
| Shoulder Taper | at least 0.33L |
| One-Lane, Two-Way Traffic Taper | 100 ft (30 m) maximum |
| Downstream Taper | 100 ft (30 m) per lane |

* Formulas for L are as follows:

For speed limits of 40 mph (60 km/h) or less:

$L = \frac{WS^2}{60}$ $\quad (L = \frac{WS^2}{155})$

For speed limits of 45 mph (70 km/h) or greater:

$L = WS$ $\quad (L = \frac{WS}{1.6})$

* Formulas for L are as follows:

A minimum of 5 channelization devices shall be used in the taper.

CHANNELIZATION DEVICE SPACING

The spacing of channelization devices shall not exceed a distance equal to 1.0 times the speed limit in mph when used for taper channelization, and a distance in feet of 2.0 times the speed limit in mph when used for tangent channelization.

| SIGN SPACING TABLE | | | |
|---|---|---|---|
| Road Type | Distance Between Signs** | | |
| | A | B | C |
| Urban 30 mph (50 km/h) or less | 100 (30) | 100 (30) | 100 (30) |
| Urban 35 mph (55 km/h) and greater | 350 (100) | 350 (100) | 350 (100) |
| Rural | 500 (150) | 500 (150) | 500 (150) |
| Expressway / Urban Parkway | 2,640 (800) | 1,500 (450) | 1000 (300) |

**Distances are shown in feet (meters).

## GENERAL NOTES;

1. Final placement of signs and devices may be changed to fit field conditions as approved by the Resident.

## SUGGESTED BUFFER ZONE LENGTHS

| Speed (mph) | Length (feet) | Speed (mph) | Length (feet) |
|---|---|---|---|
| 20 | 115 | 40 | 325 |
| 25 | 155 | 45 | 360 |
| 30 | 200 | 50 | 425 |
| 35 | 250 | 55 | 495 |

# SPECIAL PROVISION
# SECTION 656
Temporary Soil Erosion and Water Pollution Control

The following is added to Section 656 regarding Project Specific Information and Requirements. All references to the Maine Department of Transportation Best Management Practices for Erosion and Sedimentation Control (a.k.a. Best Management Practices manual or BMP Manual) are a reference to the latest revision of said manual. The latest version is dated "February 2008" and is available at:

http://www.maine.gov/mdot/environmental-office-homepage/surface-water-resources.php

**Procedures specified shall be according to the BMP Manual unless stated otherwise.**

## Project Specific Information and Requirements

The following information and requirements apply specifically to this Project. The temporary soil erosion and water pollution control measures associated with this work shall be addressed in the Soil Erosion and Water Pollution Control Plan (SEWPCP.)

1. This project is located in a section of the Kennebec River watershed that is Classified as Class B waters by Maine DEP (§467 - Classification of major river basins). In accordance with Section IID of the 2008 BMP Manual, projects within this section of the Kennebec River watershed are designated as SENSITIVE PROJECTS due the watershed's location in the GOM Atlantic Salmon Distinct Population Segment.

2. The Contractor shall provide continuous and effective temporary soil erosion and water pollution control for the Project that is appropriate to the construction means, methods and sequencing allowed by the Contract and selected by the Contractor. To do so, the Contractore shall prepare and submit a Soil Erosion and Water Pollution Control Plan (SEWPCP) and properly implement its approved SEWPCP. The Contractor shall have its SEWPCP approved, perform a preconstruction field review, and install and certify initial controls before commencing any Work that could disturb soils or impact water quality.

3. The SEWPCP must be in accordance with all applicable laws, rules, regulations, permit requirements and conditions, this specification, all other contractual provisions, and the latest version of the Department's "Best Management Practices for Erosion & Sedimentation Control" (the "BMP Manual").

4. General SEWPCP Elements In addition to other requirements provided for or referenced in this specification, the SEWPCP must include the following elements:

    a. The name and qualifications of the person preparing the SEWPCP.

    b. The name of the on-site person responsible for implementation of the SEWPCP, with their contact information (including emergency phone numbers).

**SPECIAL PROVISION**
**SECTION 656**
Temporary Soil Erosion and Water Pollution Control

c. The schedule and sequence of all activities that involve soil disturbance including staging areas, equipment storage sites, waste disposal sites, etc.

d. Emergency procedures for storms, including availability of materials and procedures and time frames for corrective action if controls fail.

e. Inspection and maintenance schedules for all erosion and water pollution control measures.

5. Newly disturbed earth shall be mulched by the end of each workday. Mulch shall be maintained on a daily basis.

6. The SEWPCP shall describe the location and method of temporary erosion and sediment control for any existing and proposed catch basins, outlet areas and culvert inlets and outlets.

7. All disturbed ditches/slopes shall be stabilized by the end of each workday. Stabilization shall be maintained on a daily basis.

8. Dust control items other than those under Standard Specification 637, if applicable, shall be included in the plan.

9. Permanent slope stabilization measures shall be applied within one week of the last soil disturbance. Temporary slope stabilization is required on a daily basis.

10. Permanent seeding shall be done in accordance with *Special Provision, Section 618, Seeding* unless the Contract states otherwise.

11. Temporary winter stabilization must be used between November 1st and April 1st or outside of that time period if the ground is frozen or snow covered. Temporary winter stabilization involves, at a minimum, covering all disturbed soils and seeded ground that is not Acceptable Work with an approved method. If temporary winter stabilization practices are used then spring procedures for permanent stabilization shall also be described in the SEWPCP. Use of these methods for over-winter temporary erosion control will be incidental to the contract and be paid for as part of Pay Item 656.75.

12. Except as allowed by an approved permit or otherwise authorized by the Department in writing, pollutants and construction debris including excavated material, aggregate, cement mixtures, fuels, lubricants, etc. shall not be discharged into water bodies, wetlands, or natural or man-made channels leading thereto and such materials shall not

**SPECIAL PROVISION**
**SECTION 656**
Temporary Soil Erosion and Water Pollution Control

be located alongside water bodies, wetlands, or such channels such that it will be washed away by high water or runoff.

13. Mechanized equipment shall not be operated in water bodies or wetlands except as allowed by approved permit or otherwise authorized by the Department in writing.

14. Spill Prevention If the Work includes the handling, use or storage of petroleum products or hazardous matter/substances including the on-site fueling of equipment, the SEWPCP must include a Spill Prevention Control and Countermeasure Plan (SPCCP). At a minimum, the SPCCP must include:

    a. The name and emergency response contact information of the Contractor's representative responsible for spill prevention and response.

    b. General description and the location of (1) handling, transfer, storage, and containment facilities of such products or hazardous materials, and (2) potential receptors of such products or hazardous materials including lakes, ponds, rivers, streams, wetlands, and sand and gravel aquifers ("sensitive resources") including the distances between said activities and facilities and said sensitive resources.

    c. Description of the preventative measures to be used to minimize the possibility of a spill including the equipment and/or materials to be used to prevent discharges (containment and diversionary structures), inspections and personnel training.

    d. A contingency response plan to be implemented if spill should occur including a list of emergency contact numbers including the Contractor's representative, MDEP Spill Response, the Resident, and local police and fire authorities, a list of emergency response equipment and locations, descriptions of the general response and clean up protocols by product, and overview of the verbal/written notification procedures for federal, state and local officials.

# SPECIAL PROVISION
# SECTION 801
# SANITARY SEWER

Description This work shall consist of constructing cellar drain inspection standpipes, in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans and as directed by the resident in the field.

Materials Meet Sections:

| | |
|---|---|
| Sewer Line Bedding and Initial Backfilling Stone | 703.02 for class AA |
| PVC Pipes & Fittings (100 mm [4 in] ) | ASTM D3034 (SDR 35) |

Construction Requirements

Excavation Trenches shall be excavated in accordance with the requirements of Section 206 - Structural Excavation and wide enough to allow joining the pipe and compacting the bedding and backfill material under and around the pipe. Unless otherwise designated, trench walls shall be as nearly vertical as possible and the trench width no greater than necessary for installation of the pipe.

Bedding The inspection standpipe and pipe line shall be bedded in original material.

Laying The Contractor shall not install nor backfill cellar drain inspection standpipes between December 15th and April 1st without written permission. Installing shall begin at the downhill end of the cellar drain line. Bell or groove ends shall be placed facing uphill.

Joining The pipe ends shall be thoroughly cleaned before the joint is made. Joints shall be made in accordance with the manufacturer's recommended procedures.

Backfilling After the inspection standpipe and pipe are installed, it will be inspected before any backfill material is placed. All pipe found to be out of alignment, unduly settled or damaged to the extent that full performance is impaired, shall be taken up and re-laid or replaced. One bag of concrete mix shall be installed around the foot of the standpipe, placement as per manufacturer’s recommendations.

Trenches shall be backfilled in accordance with Section 206.03 and as follows. The backfill shall be original excavation in 300 mm [12 in] maximum lifts and shall be thoroughly compacted with power tampers or vibratory compactors or other approved equipment or combination of equipment.

Method of Measurement PVC pipe will be measured by the length in meter [foot] along the invert, horizontally and vertically, including fittings and caps, laid as directed, complete

in place, and accepted. Pipe laid in excess of the authorized length will not be included. Pipe installed inside a manhole will not be measured for payment.

Basis of Payment The accepted quantities of pipe will be paid for at the contract unit price per meter [linear foot], for the types and sizes specified, complete in place and shall be full compensation for all labor, materials, equipment, excavation, dewatering, bedding, furnishing and installing pipe, removal and disposal of existing pipes, connecting to manholes, connecting to existing cellar drain, concrete footing, backfill, compacting, cleaning, testing, maintaining existing flows, and all other incidental required.

No payment will be made for pipe ordered without written approval of the Resident when such pipe is not required to be installed for completion of the work.

Payment will be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 801.141 | 100 mm [4 in] PVC Sanitary Sewer (SDR-35) | meter [Linear Foot] |
| 801.16 | 150 mm [6 in] PVC Sanitary Sewer (SDR-35) | meter [Linear Foot] |

January 3, 2003

# SPECIAL PROVISION
# SECTION 812
# SEWER MANHOLE

Description This work shall consist of the installation and adjustment of manholes as indicated in the Bid Book, Plans, or as directed by the Resident.

Sewer Manhole shall consist of removing an existing manhole and replacing with a new manhole in accordance with Section 604 - Manholes, Inlets, and Catch Basins.

Adjust Sewer Manhole to Grade shall consist of adjusting a manhole to the required final grade, including any lowering and any other adjustments that may be necessary prior to setting the final grade and in accordance with this Section and Section 604 - Manholes, Inlets, and Catch Basins.

Rebuild Sewer Manhole shall consist of rebuilding and adjusting a sewer manhole in accordance with this Section and Section 604 - Manholes, Inlets, and Catch Basins

| Pay Item | | Pay Unit |
|---|---|---|
| 812.06 | Sewer Manhole | Each |
| 812.162 | Adjust Sewer Manhole to Grade | Each |
| 812.164 | Rebuild Sewer Manhole | Each |

# STANDARD DETAIL UPDATES

Standard Details and Standard Detail updates are available at:
http://www.maine.gov/mdot/contractor-consultant-information/ss_standard_details_updates.php

| Detail # | Description | Revision Date |
|---|---|---|
| 203(03) | Backslope Rounding | 1/29/08 |
| 502(03) | Concrete Curb - Bituminous Wearing Surface | 8/08/11 |
| 502(03)A | Concrete Curb - Concrete Wearing Surface | 2/2/09 |
| 502(07) | Precast Concrete Deck Panels - Layout Plan | 2/2/09 |
| 502(07)A | Precast Concrete Deck Panels - Layout Plan | 2/2/09 |
| 502(08) | Precast Concrete Deck Panels - Panel Plan | 2/2/09 |
| 502(09) | Precast Concrete Deck Panels - Blocking Detail | 2/2/09 |
| 502(10) | Precast Concrete Deck Panels | 2/2/09 |
| 502(11) | Precast Concrete Deck Panels | 2/2/09 |
| 502(12) | Precast Concrete Deck Panels - Notes | 10/28/09 |
| 502(12)A | Precast Concrete Deck Panels - Notes | 2/2/09 |
| 504(15) | Diaphragms | 5/19/11 |
| 504(21) | Tension Flange Connection for Diaphragm and Cross Frames | 10-11-12 |
| 504(22) | Diaphragm & Crossframe Notes | 10/11/12 |
| 504(23) | Hand-Hold Details | 12/08/05 |
| 502(24) | Hand-Hold Details | 10/11/12 |
| 507(04) | Steel Bridge Railing | 2/05/03 |
| 507(09) | Steel Bridge Railing | 5/19/11 |

| | | |
|---|---|---|
| 507(09)A | Steel Bridge Railing | 5/19/11 |
| 526(06) | Permanent Concrete Barrier | 2/2/09 |
| 526(08) | Permanent Concrete Barrier – Type IIIA | 10/07/10 |
| 526(08)A | Permanent Concrete Barrier – Type IIIA | 12/07/10 |
| 526(13) | Permanent Concrete Barrier – Type IIIB | 2/2/09 |
| 526(14) | Permanent Concrete Barrier – Type IIIB | 2/2/09 |
| 526(21) | Concrete Transition Barrier | 2/2/09 |
| 526(33) | Concrete Transition Barrier | 8/18/03 |
| 526(39) | Texas Classic Rail – Between Window | 2/2/09 |
| 526(40) | Texas Classic Rail – Through Window | 2/2/09 |
| 526(41) | Texas Classic Rail – Through Post | 2/2/09 |
| 526(42) | Texas Classic Rail – Through Nose | 2/2/09 |
| 535(01) | Precast Superstructure - Shear Key | 10/12/06 |
| 535(02) | Precast Superstructure - Curb Key & Drip Notch | 5/20/08 |
| 535(03) | Precast Superstructure - Shear Key | 12/5/07 |
| 535(04) | Precast Superstructure - Shear Key | 12/05/07 |
| 535(05) | Precast Superstructure - Post Tensioning | 5/20/08 |
| 535(06) | Precast Superstructure - Sections | 10/12/06 |
| 535(07) | Precast Superstructure - Precast Slab & Box | 10/12/06 |
| 535(08) | Precast Superstructure - Sections | 10/12/06 |
| 535(09) | Precast Superstructure - Sections | 10/12/06 |
| 535(10) | Precast Superstructure - Sections | 10/12/06 |
| 535(11) | Precast Superstructure - Sections | 10/12/06 |

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|---|---|---|
| 535(12) | Precast Superstructure - Sections | 10/12/06 |
| 535(13) | Precast Superstructure - Sections | 10/12/06 |
| 535(14) | Precast Superstructure - Stirrups | 10/12/06 |
| 535(15) | Precast Superstructure - Plan | 10/12/06 |
| 535(16) | Precast Superstructure - Reinforcing | 10/12/06 |
| 535(17) | Precast Superstructure - Notes | 12/05/07 |
| 604(01) | Catch Basins | 11/16/05 |
| 604(05) | Type “A” & “B” Catch Basin Tops | 11/16/05 |
| 604(06) | Type “C” Catch Basin Tops | 11/16/05 |
| 604(07) | Manhole Top “D” | 11/16/05 |
| 604(09) | Catch Basin Type “E” | 11/16/05 |
| 606(02) | Multiple Mailbox Support | 11/16/05 |
| 606(03) | Guardrail Standard Detail | 9/19/12 |
| 606(07) | Reflectorized Beam Guardrail Delineator Details | 11/16/05 |
| 606(20) | Guardrail - Type 3 - Single Rail - Bridge Mounted | 2/2/09 |
| 606(21) | Guardrail - Type 3 - Single Rail - Bridge Mounted | 2/2/09 |
| 606(22) | Guardrail - Type 3 - Single Rail - Bridge Mounted | 2/2/09 |
| 606(23) | Guardrail - Type 3 - Single Rail - Bridge Mounted | 2/2/09 |
| 609(03) | Curb Type 3 | 6/27/06 |
| 609(06) | Vertical Bridge Curb | 2/12/09 |
| 609(07) | Curb Type 1 | 6/27/06 |

| | | |
|---|---|---|
| 609(08) | Precast Concrete Transition Curb | 2/2/09 |
| 610(02) | Stone Scour Protection | 8/9/11 |
| 610(03) | Stone Scour Protection | 5/19/11 |
| 610(04) | Stone Scour Protection | 5/19/11 |
| 620(05) | Geotextile Placement for Protection of Slopes Adjactent to Stream & Tidal Areas | 5/19/11 |
| 626(09) | Electrical Junction Box for Traffic Signals and Lighting | 8/27/10 |
| 645(06) | H-Beam Posts – Highway Signing | 7/21/04 |
| 645(09) | Installation of Type II Signs | 7/21/04 |
| 801(01) | Drives on Sidewalk Sections | 12/13/07 |
| 801(02) | Drives on Non-Sidewalk Sections | 12/13/07 |

# SUPPLEMENTAL SPECIFICATION

(Corrections, Additions, & Revisions to Standard Specifications - Revision of December 2002)

## SECTION 101
## CONTRACT INTERPRETATION

101.2 Definitions

Closeout Documentation Replace the sentence "A letter stating the amount….. DBE goals." with "DBE Goal Attainment Verification Form"

Add "Environmental Information Hazardous waste assessments, dredge material test results, boring logs, geophysical studies, and other records and reports of the environmental conditions. For a related provision, see Section 104.3.14 - Interpretation and Interpolation."

Add "Fabrication Engineer The Department's representative responsible for Quality Assurance of pre-fabricated products that are produced off-site."

Geotechnical Information Replace with the following: "Boring logs, soil reports, geotechnical design reports, ground penetrating radar evaluations, seismic refraction studies, and other records of subsurface conditions. For a related provision, see Section 104.3.14 - Interpretation and Interpolation."

## SECTION 102
## DELIVERY OF BIDS

102.7.1 Location and Time Add the following sentence "As a minimum, the Bidder will submit a Bid Package consisting of the Notice to Contractors, the completed Acknowledgement of Bid Amendments form, the completed Schedule of Items, 2 copies of the completed Agreement, Offer, & Award form, a Bid Bond or Bid Guarantee, and any other Certifications or Bid Requirements listed in the Bid Book."

102.11.1 Non-curable Bid Defects Replace E. with "E. The unit price and bid amount is not provided or a lump sum price is not provided or is illegible as determined by the Department."

## SECTION 103
## AWARD AND CONTRACTING

103.3.1 Notice and Information Gathering Change the first paragraph to read as follows: "After Bid Opening and as a condition for Award of a Contract, the Department may require an Apparent Successful Bidder to demonstrate to the Department's satisfaction that the Bidder is responsible and qualified to perform the Work."

## SECTION 104
## GENERAL RIGHTS AND RESPONSIBILITIES

104.3.14 Interpretation and Interpolation In the first sentence, change "…and Geotechnical Information." to "…Environmental Information, and Geotechnical Information."

# SECTION 105
# GENERAL SCOPE OF WORK

Delete the entire Section 105.6 and replace with the following:

105.6.1 Department Provided Services The Department will provide the Contractor with the description and coordinates of vertical and horizontal control points, set by the Department, within the Project Limits, for full construction Projects and other Projects where survey control is necessary. For Projects of 1,500 feet in length, or less: The Department will provide three points. For Projects between 1,500 and 5,000 feet in length: The Department will provide one set of two points at each end of the Project. For Projects in excess of 5,000 feet in length, the Department will provide one set of two points at each end of the Project, plus one additional set of two points for each mile of Project length. For non-full construction Projects and other Projects where survey control is not necessary, the Department will not set any control points and, therefore, will not provide description and coordinates of any control points. Upon request of the Contractor, the Department will provide the Department's survey data management software and Survey Manual to the Contractor, or its survey Subcontractor, for the exclusive use on the Department's Projects.

105.6.2 Contractor Provided Services Utilizing the survey information and points provided by the Department, described in Subsection 105.6.1, Department Provided Services, the Contractor shall provide all additional survey layout necessary to complete the Work. This may include, but not be limited to, reestablishing all points provided by the Department, establishing additional control points, running axis lines, providing layout and maintenance of all other lines, grades, or points, and survey quality control to ensure conformance with the Contract. The Contractor is also responsible for providing construction centerline, or close reference points, for all Utility Facilities relocations and adjustments as necessary to complete the Work. When the Work is to connect with existing Structures, the Contractor shall verify all dimensions before proceeding with the Work. The Contractor shall employ or retain competent engineering and/or surveying personnel to fulfill these responsibilities.

The Contractor must notify the Department of any errors or inconsistencies regarding the data and layout provided by the Department as provided by Section 104.3.3 - Duty to Notify Department If Ambiguities Discovered.

105.6.2.1 Survey Quality Control The Contractor is responsible for all construction survey quality control. Construction survey quality control is generally defined as, first, performing initial field survey layout of the Work and, second, performing an independent check of the initial layout using independent survey data to assure the accuracy of the initial layout; additional iterations of checks may be required if significant discrepancies are discovered in this process. Construction survey layout quality control also requires written documentation of the layout process such that the process can be followed and repeated, if necessary, by an independent survey crew.

105.6.3 Survey Quality Assurance It is the Department's prerogative to perform construction survey quality assurance. Construction survey quality assurance may, or may not, be performed by the Department. Construction survey quality assurance is generally defined as an independent check of the construction survey quality control. The construction survey

quality assurance process may involve physically checking the Contractor's construction survey layout using independent survey data, or may simply involve reviewing the construction survey quality control written documentation. If the Department elects to physically check the Contractor's survey layout, the Contractor's designated surveyor may be required to be present. The Department will provide a minimum notice of 48 hours to the Contractor, whenever possible, if the Contractor's designated surveyor's presence is required. Any errors discovered through the quality assurance process shall be corrected by the Contractor, at no additional cost to the Department.

105.6.4 Boundary Markers The Contractor shall preserve and protect from damage all monuments or other points that mark the boundaries of the Right-of-Way or abutting parcels that are outside the area that must be disturbed to perform the Work. The Contractor indemnifies and holds harmless the Department from all claims to reestablish the former location of all such monuments or points including claims arising from 14 MRSA § 7554-A. For a related provision, see Section 104.3.11 - Responsibility for Property of Others.

## SECTION 106
## QUALITY

106.4.3 Testing Change the first sentence in paragraph three from "…maintain records of all inspections and tests." to "…maintain original documentation of all inspections, tests, and calculations used to generate reports."

106.6 Acceptance Add the following to paragraph 1 of A: "This includes Sections 401 - Hot Mix Asphalt, 402 - Pavement Smoothness, and 502 - Structural Concrete - Method A - Air Content."

Add the following to the beginning of paragraph 3 of A: "For pay factors based on Quality Level Analysis, and"

106.7.1 Standard Deviation Method Add the following to F: "Note: In cases where the mean of the values is equal to either the USL or the LSL, then the PWL will be 50 regardless of the computed value of s."

Add the following to H: "Method C Hot Mix Asphalt: PF = [55 + (Quality Level *0.5)] * 0.01"

## SECTION 107
## TIME

107.3.1 General Add the following: "If a Holiday occurs on a Sunday, the following Monday shall be considered a Holiday. Sunday or Holiday work must be approved by the Department, except that the Contractor may work on Martin Luther King Day, President's Day, Patriot's Day, the Friday after Thanksgiving, and Columbus Day without the Department's approval."

107.7.2 Schedule of Liquidated Damages Replace the table of Liquidated Damages as follows:

| From More Than | Up to and Including | Amount of Liquidated Damages per Calendar Day |
|---|---|---|
| $0 | $100,000 | $225 |

| | | |
|---|---|---|
| $100,000 | $250,000 | $350 |
| $250,000 | $500,000 | $475 |
| $500,000 | $1,000,000 | $675 |
| $1,000,000 | $2,000,000 | $900 |
| $2,000,000 | $4,000,000 | $1,000 |
| $4,000,000 | and more | $2,100 |

## SECTION 108
## PAYMENT

Remove Section 108.4 and replace with the following:

"108.4 Payment for Materials Obtained and Stored Acting upon a request from the Contractor and accompanied by bills or receipted bills, the Department will pay for all or part of the value of acceptable, non-perishable Materials that are to be incorporated in the Work, including Materials that are to be incorporated into the Work, not delivered on the Work site, and stored at places acceptable to the Department. Examples of such Materials include steel piles, stone masonry, curbing, timber and lumber, metal Culverts, stone and sand, gravel, and other Materials. The Department will not make payment on living or perishable Materials until acceptably planted in their final locations.

If payment for Materials is made to the Contractor based on bills, only, then the Contractor must provide receipted bills to the Department for these Materials within 14 days of the date the Contractor receives payment for the Materials. Failure of the Contractor to provide receipted bills for these Materials within 14 days of the dated the Contractor receives payment will result in the paid amount being withheld from the subsequent progress payment, or payments, until such time the receipted bills are received by the Department.

Materials paid for by the Department are the property of the Department, but the risk of loss shall remain with the Contractor. Payment for Materials does not constitute Acceptance of the Material. If Materials for which the Department has paid are later found to be unacceptable, then the Department may withhold amounts reflecting such unacceptable Materials from payments otherwise due the Contractor.

In the event of Default, the Department may use or cause to be used all paid-for Materials in any manner that is in the best interest of the Department."

## SECTION 109
## CHANGES

109.1.1 Changes Permitted Add the following to the end of the paragraph: "There will be no adjustment to Contract Time due to an increase or decrease in quantities, compared to those estimated, except as addressed through Contract Modification(s)."

109.1.2 Substantial Changes to Major Items Add the following to the end of the paragraph: "Contract Time adjustments may be made for substantial changes to Major Items when the change affects the Critical Path, as determined by the Department"

109.4.4 Investigation / Adjustment Third sentence, delete the words "subsections (A) - (E)"

109.5.1 Definitions - Types of Delays

B. Compensable Delay Replace (1) with the following; "a weather related Uncontrollable Event of such an unusually severe nature that a Federal Emergency Disaster is declared. The Contractor will only be entitled to an Equitable Adjustment if the Project falls within the geographic boundaries prescribed under the disaster declaration."

109.7.2 Basis of Payment Replace with the following: "Adjustments will be established by mutual Agreement based upon Unit or Lump Sum Prices. These agreed Unit or Lump Sum prices will be full compensation and no additions or mark-ups are allowed. If Agreement cannot be reached, the Contractor shall accept payment on a Force Account basis as provided in Section 109.7.5 - Force Account Work, as full and complete compensation for all Work relating to the Equitable Adjustment."

109.7.3 Compensable Items Delete this Section entirely.

109.7.4 Non-Compensable Items Replace with the following: "The Contractor is not entitled to compensation or reimbursement for any of the following items:

A. Total profit or home office overhead in excess of 15%,
B. ……."

109.7.5 Force Account Work

C. Equipment
Paragraph 2, delete sentence 1 which starts; "Equipment leased…."

Paragraph 6, change sentence 2 from "The Contractor may furnish…" to read "If requested by the Department, the Contractor will produce cost data to assist the Department in the establishment of such rental rate, including all records that are relevant to the Actual Costs including rental Receipts, acquisition costs, financing documents, lease Agreements, and maintenance and operational cost records."
Add the following paragraph; "Equipment leased by the Contractor for Force Account Work and actually used on the Project will be paid for at the actual invoice amount plus 10% markup for administrative costs."

Add the following section;

"F. Subcontractor Work When accomplishing Force Account Work that utilizes Subcontractors, the Contractor will be allowed a maximum markup of 5% for profit and overhead on the Subcontractor's portion of the Force Account Work. If the Department does not accept the Subcontractor quote, then the Subcontractor work will be subject to the Force Account provisions with a 5% markup for profit & overhead.."

## SECTION 110
## INDEMNIFICATION, BONDING, AND INSURANCE

Delete the entire Section 110.2.3 and replace with the following:

110.2.3 Bonding for Landscape Establishment Period The Contractor shall provide a signed, valid, and enforceable Performance, Warranty, or Maintenance Bond complying with the Contract, to the Department at Final Acceptance.

The bond shall be in the full amount for all Pay Items for work pursuant to Sec 621, Landscape, payable to the "Treasurer - State of Maine," and on the Department's forms, on exact copies thereof, or on forms that do not contain any significant variations from the Department's forms as solely determined by the Department.

The Contractor shall pay all premiums and take all other actions necessary to keep said bond in effect for the duration of the Landscape Establishment Period described in Special Provision 621.0036 - Establishment Period. If the Surety becomes financially insolvent, ceases to be licensed or approved to do business in the State of Maine, or stops operating in the United States, the Contractor shall file new bonds complying with this Section within 10 Days of the date the Contractor is notified or becomes aware of such change.

All Bonds shall be procured from a company organized and operating in the United States, licensed or approved to do business in the State of Maine by the State of Maine Department of Business Regulation, Bureau of Insurance, and listed on the latest Federal Department of the Treasury listing for "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies."

By issuing a bond, the Surety agrees to be bound by all terms of the Contract, including those related to payment, time for performance, quality, warranties, and the Department's self-help remedy provided in Section 112.1 - Default to the same extent as if all terms of the Contract are contained in the bond(s).

Regarding claims related to any obligations covered by the bond, the Surety shall provide, within 60 Days of Receipt of written notice thereof, full payment of the entire claim or written notice of all bases upon which it is denying or contesting payment. Failure of the Surety to provide such notice within the 60-day period constitutes the Surety's waiver of any right to deny or contest payment and the Surety's acknowledgment that the claim is valid and undisputed.

## SECTION 202
## REMOVING STRUCTURES AND OBSTRUCTIONS

202.02 Removing Buildings Make the following change to the last sentence in the final paragraph, change "…Code of Maine Regulations 401." to "…Department of Environmental Protection Maine Solid Waste Management Rules, 06-096 CMR Ch. 401, Landfill Siting, Design and Operation."

## SECTION 203
## EXCAVATION AND EMBANKMENT

203.01 Description Under b. Rock Excavation; add the following sentence: "The use of perchlorate is not allowed in blasting operations."

Delete the entire Section 203.041 and replace with the following:
"203.041 Salvage of Existing Hot Mix Asphalt Pavement All existing hot mix asphalt pavement designated to be removed under this contract must be salvaged for utilization. Existing hot mix asphalt pavement material shall not be deposited in any waste area or be placed below subgrade in any embankment.

Methods of utilization may be any of the following:

1. Used as a replacement for untreated aggregate surface course on entrances provided the material contains no particles greater than 50 mm [2 in] in any dimension. Payment will be made under Pay Item 411.09, Untreated Aggregate Surface Course or 411.10, Untreated Aggregate Surface Course, Truck Measure. Material shall be placed, shaped, compacted and stabilized as directed by the Resident.

2. Used as the top 3" of gravel. Recycled Asphalt Pavement (RAP) shall be process to 1½" minus and blending will not be allowed. When this method is utilized, a surcharge will not be required

3. Stockpiled at commercial or approved sites for commercial or MaineDOT use.

4. Other approved methods proposed by the Contractor, and approved by the Resident which will assure proper use of the existing hot mix asphalt pavement.

The cost of salvaging hot mix asphalt material will be included for payment under the applicable pay item, with no additional allowances made, which will be full compensation for removing, temporarily stockpiling, and rehandling, if necessary, and utilizing the material in entrances or other approved uses, or stockpiling at an approved site as described above. The material will also be measured and paid for under the applicable Pay Item if it is reused for aggregate in entrances, or other approved uses."

## SECTION 502
## STRUCTURAL CONCRETE

502.05 Composition and Proportioning; TABLE #1; NOTE #2; third sentence; Change "…alcohol based saline sealer…" to "alcohol based silane sealer…". Add NOTE #6 to Class S Concrete.

502.0502 Quality Assurance Method A - Rejection by Resident Change the first sentence to read: "For an individual sublot with test results failing to meet the criteria in Table #1, or if the calculated pay factor for Air Content is less than 0.80……"

502.0503 Quality Assurance Method B - Rejection by Resident Change the first sentence to read: "For material represented by a verification test with test results failing to meet the criteria in Table #1, the Department will……"

502.0505 Resolution of Disputed Acceptance Test Results Combine the second and third sentence to read: "Circumstances may arise, however, where the Department may ……"
502.10 Forms and False work
D. Removal of Forms and False work 1., First paragraph; first, second, and third sentence; replace "forms" with "forms and false work"

502.11 Placing Concrete
G. Concrete Wearing Surface and Structural Slabs on Precast Superstructures Last paragraph; third sentence; replace "The temperature of the concrete shall not exceed 24° C [75° F} at the time of placement." with "The temperature of the concrete shall not exceed 24° C [75° F} at the time the concrete is placed in its final position."

502.15 Curing Concrete First paragraph; replace the first sentence with the following; "All concrete surfaces shall be kept wet with clean, fresh water for a curing period of at least 7 days after concrete placing, with the exception of vertical surfaces as provided for in Section 502.10 (D) - Removal of Forms and False work."

Second paragraph; delete the first two sentences.
Third paragraph; delete the entire paragraph which starts "When the ambient temperature…."
Fourth paragraph; delete "approved" to now read "…continuously wet for the entire curing period…"

Fifth paragraph; second sentence; change "…as soon as it is possible to do so without damaging the concrete surface." to "…as soon as possible."

Seventh paragraph; first sentence; change "…until the end of the curing period." to "…until the end of the curing period, except as provided for in Section 502.10(D) - Removal of Forms and False work."

502.19 Basis of Payment First paragraph, second sentence; add "pier nose armor" to the list of items included in the contract price for concrete.

## SECTION 503
## REINFORCING STEEL

503.06 Placing and Fastening Change the second paragraph, first sentence from: "All tack welding shall be done in accordance with Section 504, Structural Steel." to "All tack welding shall be done in accordance with AWS D1.4 Structural Welding Code - Reinforcing Steel."

## SECTION 504
## STRUCTURAL STEEL

504.09 Facilities for Inspection Add the follow as the last paragraph: "Failure to comply with the above requirements will be consider to be a denial to allow access to work by the Contractor. The Department will reject any work done when access for inspection is denied."

504.18 Plates for Fabricated Members Change the second paragraph, first sentence from: "…ASTM A 898/A 898 M…" to "…ASTM A 898/A 898 M or ASTM A 435/A 435 M as applicable and…"

504.31 Shop Assembly Add the following as the last sentence: "The minimum assembly length shall include bearing centerlines of at least two substructure units."

504.64 Non Destructive Testing-Ancillary Bridge Products and Support Structures Change the third paragraph, first sentence from "One hundred percent…" to "Twenty five percent…"

## SECTION 535
## PRECAST, PRESTRESSED CONCRETE SUPERSTRUCTURE

535.02 Materials Change "Steel Strand for Concrete Reinforcement" to "Steel Strand." Add the following to the beginning of the third paragraph; "Concrete shall be Class P conforming to the requirements in this section. 28 day compressive strength shall be as stated on the plans. Coarse aggregate…."

535.05 Inspection Facilities Add the follow as the last paragraph: "If the above requirements are not met, the Contractor shall be considered to be in violation of Standard Specification 104.2.5 – Right to Inspect Work. All work occurring during a violation of this specification will be rejected."

535.26 Lateral Post-Tensioning Replace the first paragraph; "A final tension…" with "Overstressing strands for setting losses cannot be accomplished for chuck to chuck lengths of 7.6 m [25 ft] and less. In such instances, refer to the Plans for all materials and methods. Otherwise, post-tensioning shall be in accordance with PCI standards and shall provide the anchorage force noted in the Plans. The applied jacking force shall be no less than 100% of the design jacking force."

## SECTION 603
## PIPE CULVERTS AND STORM DRAINS

603.0311 Corrugated Polyethylene Pipe for Option III Replace the Minimum Mandrel Diameter Table with the following:

| Nominal Size US Customary (in) | Minimum Mandrel Diameter (in) | Nominal Size Metric (mm) | Minimum Mandrel Diameter (mm) |
|---|---|---|---|
| 12 | 11.23 | 300 | 280.73 |
| 15 | 14.04 | 375 | 350.91 |
| 18 | 16.84 | 450 | 421.09 |
| 24 | 22.46 | 600 | 561.45 |
| 30 | 28.07 | 750 | 701.81 |
| 36 | 33.69 | 900 | 842.18 |
| 42 | 39.30 | 1050 | 982.54 |
| 48 | 44.92 | 1200 | 1122.90 |

## SECTION 604
## MANHOLES, INLETS, AND CATCH BASINS

604.02 Materials Add the following:

"Tops and Traps 712.07

| | |
|---|---|
| Corrugated Metal Units | 712.08 |
| Catch Basin and Manhole Steps | 712.09” |

## SECTION 605
## UNDERDRAINS

605.05 Underdrain Outlets Make the following change:

In the first paragraph, second sentence, delete the words “metal pipe”.

## SECTION 606
## GUARDRAIL

606.02 Materials Delete the entire paragraph which reads “The sole patented supplier of multiple mailbox….” and replace with “Acceptable multiple mailbox assemblies shall be listed on the Department’s Approved Products List and shall be NCHRP 350 tested and approved.”
Delete the entire paragraph which reads “Retroreflective beam guardrail delineators….” and replace with “Reflectorized sheeting for Guardrail Delineators shall meet the requirements of Section 719.01 - Reflective Sheeting. Delineators shall be fabricated from high-impact, ultraviolet and weather resistant thermoplastic.

606.09 Basis of Payment First paragraph; delete the second and third sentence in their entirety and replace with “Butterfly-type guardrail reflectorized delineators shall be mounted on all W-beam guardrail at an interval of every 10 posts [62.5 ft] on tangents sections and every 5 posts [31.25 ft] on curved sections as directed by the Resident. On divided highways, the delineators shall be yellow on the left hand side and silver/white on the right hand side. On two-way roadways, the delineators shall be silver/white on the right hand side. All delineators shall have retroreflective sheeting applied to only the traffic facing side. Reflectorized guardrail delineators will not be paid for directly, but will be considered incidental to the guardrail items.”

## SECTION 609
## CURB

609.04 Bituminous Curb f., Delete the requirement “Color Natural (White)”

## SECTION 610
## STONE FILL, RIPRAP, STONE BLANKET, AND STONE DITCH PROTECTION

Add the following paragraph to Section 610.02:
“Materials shall meet the requirements of the following Sections of Special Provision 703:

| | |
|---|---|
| Stone Fill | 703.25 |
| Plain and Hand Laid Riprap | 703.26 |
| Stone Blanket | 703.27 |
| Heavy Riprap | 703.28 |

| | |
|---|---|
| Definitions | 703.32” |

Add the following paragraph to Section 610.032.a.
“Stone fill and stone blanket shall be placed on the slope in a well-knit, compact and uniform layer. The surface stones shall be chinked with smaller stone from the same source.”

Add the following paragraph to Section 610.032.b:
“Riprap shall be placed on the slope in a well-knit, compact and uniform layer. The surface stones shall be chinked with smaller stone from the same source.”

Add the following to Section 610.032: “Section 610.032.d. The grading of riprap, stone fill, stone blanket and stone ditch protection shall be determined by the Resident by visual inspection of the load before it is dumped into place, or, if ordered by the Resident, by dumping individual loads on a flat surface and sorting and measuring the individual rocks contained in the load. A separate, reference pile of stone with the required gradation will be placed by the Contractor at a convenient location where the Resident can see and judge by eye the suitability of the rock being placed during the duration of the project. The Resident reserves the right to reject stone at the job site or stockpile, and in place. Stone rejected at the job site or in place shall be removed from the site at no additional cost to the Department.”

## SECTION 615
## LOAM

615.02 Materials Make the following change:

| Organic Content | Percent by Volume |
|---|---|
| Humus | “5% - 10%”, as determined by Ignition Test |

## SECTION 618
## SEEDING

618.01 Description Change the first sentence to read as follows: “This work shall consist of furnishing and applying seed …..” Also remove “,and cellulose fiber mulch” from 618.01(a).
618.03 Rates of Application In 618.03(a), remove the last sentence and replace with the following: “These rates shall apply to Seeding Method 2, 3, and Crown Vetch.”

In 618.03(c) “1.8 kg [4 lb]/unit.” to “1.95 kg [4 lb]/unit.”

618.09 Construction Method In 618.09(a) 1, sentence two, replace “100 mm [4 in]” with “25 mm [1 in] (Method 1 areas) and 50 mm [2 in] (Method 2 areas)”

618.15 Temporary Seeding Change the Pay Unit from Unit to Kg [lb].

## SECTION 620
## GEOTEXTILES

620.03 Placement Section (c)
Title: Replace “Non-woven” in title with “Erosion Control”.

First Paragraph: Replace first word "Non-woven" with "Woven monofilament".
Second Paragraph: Replace second word "Non-woven" with "Erosion Control".

620.07 Shipment, Storage, Protection and Repair of Fabric Section (a)
Replace the second sentence with the following: "Damaged geotextiles, as identified by the Resident, shall be repaired immediately."

620.09 Basis of Payment
Pay Item 620.58: Replace "Non-woven" with "Erosion Control"
Pay Item 620.59: Replace "Non-woven" with "Erosion Control"

## SECTION 621
## LANDSCAPING

621.0036 Establishment Period In paragraph 4 and 5, change "time of Final Acceptance" to "end of the period of establishment". In Paragraph 7, change "Final Acceptance date" to ""end of the period of establishment" and change "date of Final Acceptance" to "end of the period of establishment".

## SECTION 626
## HIGHWAY SIGNING

626.034 Concrete Foundations Add to the following to the end of the second paragraph: "Pre-cast and cast-in-place foundations shall be warranteed against leaning and corrosion for two years after the project is completed. If the lean is greater than 2 degrees from normal or the foundation is spalling within the first two years, the Contractor shall replace the foundation at no extra cost."

## SECTION 627
## PAVEMENT MARKINGS

627.10 Basis of Payment Add to the following to the end of the third paragraph: "If allowed by Special Provision, the Contractor may utilize Temporary Bi-Directional Yellow and White(As required) Delineators as temporary pavement marking lines and paid for at the contract lump sum price. Such payment will include as many applications as required and removal."

## SECTION 637
## DUST CONTROL

637.06 Basis of Payment Add the following after the second sentence of the third paragraph: "Failure by the Contractor to follow Standard Specification or Special Provision - Section 637 and/or the Contractor's own Soil Erosion and Pollution Control Plan concerning Dust Control and/or the Contractor's own Traffic Control Plan concerning Dust Control and/or visible evidence of excessive dust problems, as determined by the Resident, will result in a reduction in payment, computed by reducing the Lump Sum Total by 5% per occurrence per day. The Department's Resident or any other representative of the Department reserves the right to

suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Additional penalties may also be assessed in accordance with Special Provision 652 - Work Zone Traffic Control and Standard Specification 656 - Temporary Soil Erosion and Water Pollution Control."

## SECTION 639
## ENGINEERING FACILITIES

639.04 Field Offices Change the forth to last paragraph from: "The Contractor shall provide a fully functional desktop copier…" to "….desktop copier/scanner…"

Description Change "Floor Area" to "Floor Area (Outside Dimension)". Change Type B floor area from "15 (160)" to "20 (217)".

639.09 Telephone Paragraph 1 is amended as follows:
"The contractor shall provide **two** telephone lines and two telephones,…."

Add- "In addition the contractor will supply one computer broadband connection, modem lease and router. The router shall have wireless access and be 802.11n or 802.11g capable and wireless. The type of connection supplied will be contingent upon the availability of services (i.e. DSL or Cable Broadband). It shall be the contractor's option to provide dynamic or static IP addresses through the service. **The selected service will have a minimum downstream connection of 1.5 Mbps and 384 Kbps upstream.** The contractor shall be responsible for the installation charges and all reinstallation charges following suspended periods. Monthly service and maintenance charges shall be billed by the Internet Service Provider (ISP) directly to the contractor."

## SECTION 652
## MAINTENANCE OF TRAFFIC

652.2.3 Flashing Arrow Board Delete the existing 5 paragraphs and replace with the following: Flashing Arrow Panels (FAP) must be of a type that has been submitted to AASHTO's National Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine Department of Transportations' Approved Products List of Portable Changeable Message Signs & Flashing Arrow Panels.

FAP units shall meet requirements of the current Manual on Uniform Traffic Control Devices (MUTCD) for Type "C" panels as described in Section 6F.56 - Temporary Traffic Control Devices. An FAP shall have matrix of a minimum of 15 low-glare, sealed beam, Par 46 elements capable of either flashing or sequential displays as well as the various operating modes as described in the MUTCD, Chapter 6-F. If an FAP consisting of a bulb matrix is used, each element should be recess-mounted or equipped with an upper hood of not less than 180 degrees. The color presented by the elements shall be yellow.

FAP elements shall be capable of at least a 50 percent dimming from full brilliance. Full brilliance should be used for daytime operation and the dimmed mode shall be used for nighttime operation. FAP shall be at least 2.4 M x 1.2 M [96" x 48"] and finished in non-

reflective black. The FAP shall be interpretable for a distance not less than 1.6 km [1 mile].

Operating modes shall include, flashing arrow, sequential arrow, sequential chevron, flashing double arrow, and flashing caution. In the three arrow signals, the second light from the arrow point shall not operate.

The minimum element on-time shall be 50 percent for the flashing mode, with equal intervals of 25 percent for each sequential phase. The flashing rate shall be not less than 25 nor more than 40 flashes per minute. All on-board circuitry shall be solid state.

Primary power source shall be 12 volt solar with a battery back-up to provide continuous operation when failure of the primary power source occurs, up to 30 days with fully charged batteries. Batteries must be capable of being charged from an onboard 110 volt AC power source and the unit shall be equipped with a cable for this purpose.

Controller and battery compartments shall be enclosed in lockable, weather-tight boxes.
The FAP shall be mounted on a pneumatic-tired trailer or other suitable support for hauling to various locations, as directed. The minimum mounting height of an arrow panel should be 2.1 M [7 feet] from the roadway to the bottom of the panel.

The face of the trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers.

A portable changeable message sign may be used to simulate an arrow panel display."

652.2.4 Other Devices Delete the last paragraph and add the following:
"652.2.5 Portable Changeable Message Sign Trailer mounted Portable Changeable Message Signs (PCMS) must be of a type that has been submitted to AASHTO's National Transportation Product Evaluation Program (NTPEP) for evaluation and placed on the Maine Department of Transportations' Approved Products List of Portable Changeable Message Signs & Flashing Arrow Panels. The PCMS unit shall meet or exceed the current specifications of the Manual on Uniform Traffic Control Devices (MUTCD), 6F.55.

The front face of the sign should be covered with a low-glare protective material. The color of the LED elements shall be amber on a black background. The PCMS should be visible from a distance of 0.8 km [0.5 mile] day and night and have a minimum 15º viewing angle. Characters must be legible from a distance of at least 200 M [650 feet].

The message panel should have adjustable display rates (minimum of 3 seconds per phase), so that the entire message can be read at least twice at the posted speed, the off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed. Each message shall consist of either one or two phases. A phase shall consist of up to eight characters per line. The unit must be capable of displaying at least three lines of text with eight characters per line. Each character shall be 457 mm [18"] high. Each character module shall use at least a five wide and seven high pixel matrix. The text of the messages shall not scroll or travel horizontally or vertically across the face of the sign.

Units shall automatically adjust their brightness under varying light conditions to maintain legibility.

The control system shall include a display screen upon which messages can be reviewed before being displayed on the message sign. The control system shall be capable of maintaining memory when power is unavailable. Message must be changeable with either a notebook computer or an on-board keypad. The controller shall have the capability to store a minimum of 200 user-defined and 200 pre-programmed messages. Controller and battery compartments shall be enclosed in lockable, weather-tight boxes.

PCMS units shall have the capability of being made programmable by means of wireless communications. PCMS units shall also be fully capable of having an on-board radar system installed if required for a particular application.

PCMS' primary power source shall be solar with a battery back-up to provide continuous operation when failure of the primary power source occurs. Batteries must be capable of being charged from a 110 volt AC power source. The unit must also be capable of being operated solely from a 110 volt AC power source and be equipped with a cable for this purpose.

The PCMS shall be mounted on a trailer in such a way that the bottom of the message sign panel shall be a minimum of 2.1 M [7 ft] above the roadway in urban areas and 1.5 M [5 ft] above the roadway in rural areas when it is in the operating mode. PCMS trailers should be of a heavy duty type with a 51 mm [2"] ball hitch and a minimum of four leveling jacks (at each corner). The sign shall be capable of being rotated 360° relative to the trailer. The face of the trailer shall be delineated on a permanent basis by affixing retro-reflective material, known as conspicuity material, in a continuous line as seen by oncoming drivers."

652.3.3 Submittal of Traffic Control Plan In item e. change "A list of all certified flaggers…" to "A list of all the Contractor's certified flaggers…"

Change a. in the list of requirements to: "a. The name, telephone number, and other contact numbers (cellular phone, pager, if any) of the Contractor's Traffic Control Supervisor (the person with overall responsibility for following the TCP), who has received Work Zone Traffic Control Training commensurate with the level of responsibility shown in the requirements of the Contract, and who is empowered to immediately resolve any work zone traffic control deficiencies or issues. Provide documentation that the Traffic Control Supervisor has completed a Work Zone Traffic Control Training Course (AGC, ATSSA, or other industry-recognized training), and a Supervisory refresher training every 5 years thereafter. Submit the course name, training entity, and date of training.

Traffic Control Training Course curriculum must be based on the standards and guidelines of the MUTCD and must include, at a minimum, the following:

1. Parts of Temporary Traffic Control Zone
2. Appropriate use and spacing of signs
3. Use and spacing of channelizing devices
4. Flagging basics
5. Typical examples and applications

The Traffic Control Supervisor, or designee directly overseeing physical installation, adjustment, and dismantling of work zone traffic control, will ensure all personnel performing

those activities are trained to execute the work in a safe and proper manner, in accordance with their level of decision-making and responsibility."

Add the follow to the list of requirements: "k. The plan for unexpected nighttime work along with a list of emergency nighttime equipment available on-site."

In the last paragraph add the following as the second sentence: "The Department will review and provide comments to the Contractor within 14 days of receipt of the TCP." Add the following as the last sentence: "The creation and modification of the TCP will be considered incidental to the related 652 items."

652.3.5 Installation of Traffic Control Devices In the first paragraph, first sentence; change "Signs shall be erected…" to "Portable signs shall be erected.." In the third sentence; change "Signs must be erected so that the sign face…" to "Post-mounted signs must also be erected so that the sign face…"

652.4 Flaggers Replace the first paragraph with the following; "The Contractor shall furnish flaggers as required by the TCP or as otherwise specified by the Resident. All flaggers must have successfully completed a flagger test approved by the Department and administered by a Department-approved Flagger-Certifier who is employing that flagger. All flaggers must carry an official certification card with them while flagging that has been issued by their employer. Flaggers shall wear safety apparel meeting ANSI 107-2004 Class 2 risk exposure that clearly identifies the wearer as a person, and is visible at a minimum distance of 300 m [1000 ft], and shall wear a hardhat with 360° retro-reflectivity. For nighttime conditions, Class 3 apparel, meeting ANSI 107-2004, shall be worn along with a hardhat with 360° retro-reflectivity. Retro-reflective or flashing SLOW/STOP paddles shall be used, and the flagger station shall be illuminated to assure visibility in accordance with 652.6.2."

Second paragraph, first sentence; change "…have sufficient distance to stop before entering the workspace." to "…have sufficient distance to stop at the intended stopping point." Third sentence; change "At a spot obstruction…" to "At a spot obstruction with adequate sight distance,…"

Fourth paragraph, delete and replace with "Flaggers shall be provided as a minimum, a 10 minute break, every 2 hours and a 30 minute or longer lunch period away from the work station. Flaggers may only receive 1 unpaid break per day; all other breaks must be paid. Sufficient certified flaggers shall be available onsite to provide for continuous flagging operations during break periods. If the flaggers are receiving the appropriate breaks, breaker flagger(s) shall be paid starting 2 hours after the work begins and ending 2 hours before the work ends. A maximum of 1 breaker per 6 flaggers will be paid. (1 breaker flagger for 2 to 6 flaggers, 2 breaker flaggers for 7 to 12 flaggers, etc)"

Add the following:

"652.5.1 Rumble Strip Crossing When lane shifts or lane closures require traffic to cross a permanent longitudinal rumble strip for 7 calendar days or less, the Contractor shall install warning signs that read "RUMBLE STRIP CROSSING" with a supplemental Motorcycle Plaque, (W8-15P).

When lane shifts or lane closures require traffic to cross a permanent longitudinal rumble strip for more than 7 calendar days, the Contractor shall pave in the rumble strips in the area that

traffic will cross, unless otherwise directed by the Resident. Rumble strips shall be replaced prior to the end of the project, when it is no longer necessary to cross them."

652.6 Nightwork Delete this section entirely and replace with the following:
"652.6.1 Daylight Work Times Unless otherwise described in the Contract, the Contractor is allowed to commence work and end work daily according to the Sunrise/Sunset Table at: http://www.sunrisesunset.com/usa/Maine.asp . If the Project town is not listed, the closest town on the list will be used as agreed at the Preconstruction Meeting. Any work conducted before sunrise or after sunset will be considered Night Work.

652.6.2 Night Work When Night Work occurs (either scheduled or unscheduled), the Contractor shall provide and maintain lighting on all equipment and at all work stations.

The lighting facilities shall be capable of providing light of sufficient intensity to permit good workmanship, safety and proper inspection at all times. The lighting shall be cut off and arranged on stanchions at a height that will provide perimeter lighting for each piece of equipment and will not interfere with traffic, including commercial vehicles, approaching the work site from either direction.

The Contractor shall have available portable floodlights for special areas.

The Contractor shall utilize padding, shielding or other insulation of mechanical and electrical equipment, if necessary, to minimize noise, and shall provide sufficient fuel, spare lamps, generators, etc. to maintain lighting of the work site.

The Contractor shall submit, as a subset of the Traffic Control Plan, a lighting plan at the Preconstruction Conference, showing the type and location of lights to be used for night work. The Resident may require modifications be made to the lighting set up in actual field conditions.

Prior to beginning any Night Work, the Contractor shall furnish a light meter for the Residents use that is capable of measuring the range of light levels from 5 to 20 foot-candles.

Horizontal illumination, for activities on the ground, shall be measured with the photometer parallel to the road surface. For purposes of roadway lighting, the photometer is placed on the pavement. Vertical illumination, for overhead activities, shall be measured with the photometer perpendicular to the road surface. Measurements shall be taken at the height and location of the overhead activity.

Night Work lighting requirements:

Mobile Operations: For mobile-type operations, each piece of equipment (paver, roller, milling machine, etc) will carry indirect (i.e. balloon type) lights capable of producing at least 10 foot-candles of lighting around the work area of the equipment.

Fixed Operations: For fixed-type operations (flaggers, curb, bridge, pipes, etc.), direct (i.e. tower) lighting will be utilized capable of illuminating the work area with at least 10 foot-candles of light.

Hybrid Operations: For hybrid-type operations (guardrail, sweeping, Inslope excavation, etc.), either direct or indirect lighting may be utilized. The chosen lights must be capable of producing at least 10 foot-candles of light around the work area of the equipment
Inspection Operations: Areas required to be inspected by the Department will require a minimum of 5 foot-candles of lighting. This may be accomplished through direct or indirect means.

All workers shall wear safety apparel labeled as meeting the ANSI 107-2004 standard performance for Class 3 risk exposure.

The Contractor shall apply 2- inch wide retro-reflective tape, with alternating red and white segments, to outline the front back and sides of construction vehicles and equipment, to define their shape and size to the extent practicable. Pickup trucks and personal vehicles are exempt from this requirement. The Contractor shall furnish approved signs reading "Construction Vehicle - Keep Back" to be used on trucks hauling to the project when such signs are deemed necessary by the Resident. The signs shall be a minimum of 30 inches by 60 inches, Black and Orange, ASTM D 4956 - Type VII, Type VIII, or Type IX (prismatic).

All vehicles used on the project, including pickup trucks and personal vehicles, shall be equipped with amber flashing lights, visible from both front and rear, or by means of single, approved type, revolving, flashing or strobe lights mounted so as to be visible 360º. The vehicle flashing system shall be in continuous operation while the vehicle is on any part of the project.

The Resident or any other representative of the Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item. Failure to follow the approved Lighting Plan will result in a Traffic Control violation.

Payment for lighting, vehicle mounted signs and other costs accrued because of night work will not be made directly but will be considered incidental to the related contract items."

652.8.2 Other Items Replace the first paragraph with the following: "The accepted quantities of flagger hours will be paid for at the contract unit price per hour for each flagging station occupied excluding lunch breaks, and for each approved breaker flagger. Overtime hours, as reported on the certified payrolls, will be paid an additional 30% of the bid price for 652.38. The computation and additional payment for overtime hours will occur during the project close-out process and will be paid as additional hours of 652.38 to the nearest ¼ hour. The contract unit price shall be full compensation for hiring, transporting, equipping, supervising, and the payment of flaggers and all overhead and incidentals necessary to complete the work."
Replace the last paragraph with the following: "There will be no payment made under any 652 pay items after the expiration of the adjusted total contract time."

## SECTION 653
## POLYSTYRENE PLASTIC INSULATION

653.05 Placing Backfill In the second sentence; change "…shall be not less than 150 mm [6 in] loose measure." to "…shall be not less than 250 mm [10 in] loose measure." In the third sentence; change "…crawler type bulldozer of not more than 390 kg/m$^2$ [80 lb/ft$^2$] ground contact pressure…" to "…crawler type bulldozer of not more than 4875 kg/m$^2$ [2000 lb/ft$^2$] ground contact pressure…"

653.06 Compaction In the last sentence; change "…not more than 390 kg/m$^2$ [80 lb/ft$^2$] ground contact…" to "…not more than 4875 kg/m$^2$ [2000 lb/ft$^2$] ground contact…"

## SECTION 656
## TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL

656.5.1 If Pay Item 656.75 Provided Replace the second paragraph with the following: "Failure by the Contractor to follow Standard Specification or Special Provision - Section 656 and/or the Contractor's own Soil Erosion and Water Pollution Control Plan (SEWPCP) will result in a violation letter and a reduction in payment as shown in the schedule below. The Department's Resident or any other representative of The Department reserves the right to suspend the work at any time and request a meeting to discuss violations and remedies. The Department shall not be held responsible for any delay in the work due to any suspension under this item.

**ORIGINAL CONTRACT AMOUNT**

| **From More Than** | **Up to and Including** | **Amount of Penalty Damages per Violation 1st** | **2nd** | **3rd & Subsequent** |
|---|---|---|---|---|
| $0 | $1,000,000 | $250 | $500 | $1,250 |
| $1,000,000 | $2,000,000 | $500 | $1,000 | $2,500 |
| $2,000,000 | $4,000,000 | $1,000 | $2,000 | $5,000 |
| $4,000,000 | and more | $2,000 | $4,000 | $10,000" |

## SECTION 701
## STRUCTURAL CONCRETE RELATED MATERIALS

701.10 Fly Ash - Chemical Requirements Change all references from "ASTM C311" to "ASTM C114".

## SECTION 703
## AGGREGATES

703.05 Aggregate for Sand Leveling Change the percent passing the 9.5 mm [3/8 in] sieve from "85 – 10" to "85 – 100"

703.06 Aggregate for Base and Subbase Delete the first paragraph: "The material shall have…" and replace with "The material shall have a minimum degradation value of 15 as determined by Washington State DOT Test Method T113, Method of Test for Determination of Degradation Value (January 2009 version), except that the reported degradation value will be the result of testing a single specimen from that portion of a sample that passes the 12.5 mm [½ in] sieve and is retained on the 2.00 mm [No. 10] sieve, minus any reclaimed asphalt pavement used."

703.07 Aggregates for HMA Pavements Delete the forth paragraph: "The composite blend shall have…" and replace with "The composite blend, minus any reclaimed asphalt pavement used, shall have a Micro-Deval value of 18.0 or less as determined by AASHTO T 327. In the event the material exceeds the Micro Deval limit, a Washington Degradation test shall be performed. The material shall be acceptable if it has a value of 30 or more as determined by Washington State DOT Test Method T 113, Method of Test for Determination of Degradation Value (January 2009 version) except that the reported degradation value will be the result of testing a single composite specimen from that portion of the sample that passes the 12.5mm [1/2 inch] sieve and is retained on the 2.00mm [No 10] sieve, minus any reclaimed asphalt pavement used."

703.09 HMA Mixture Composition The coarse and fine aggregate shall meet the requirements of Section 703.07. The several aggregate fractions for mixtures shall be sized, graded, and combined in such proportions that the resulting composite blends will meet the grading requirements of the following table.

AGGREGATE GRADATION CONTROL POINTS

| SIEVE SIZE | Nominal Maximum Aggregate Size---Control Points (Percent Passing) | | | | |
|---|---|---|---|---|---|
| | TYPE 25 mm | TYPE 19 mm | TYPE 12.5 mm | TYPE 9.5 mm | TYPE 4.75 mm |
| | PERCENT BY WEIGHT PASSING - COMBINED AGGREGATE | | | | |
| 37.5 mm | 100 | | | | |
| 25 mm | 90-100 | 100 | | | |
| 19 mm | -90 | 90-100 | 100 | | |
| 12.5 mm | | -90 | 90-100 | 100 | 100 |
| 9.5 mm | | - | -90 | 90-100 | 95-100 |
| 4.75 mm | | - | - | -90 | 80-100 |
| 2.36 mm | 19-45 | 23-49 | 28-58 | 32-67 | 40 - 80 |
| 1.18 mm | | - | - | - | - |
| 600 µm | | - | - | - | - |
| 300 µm | | - | - | - | - |
| 75 µm | 1-7 | 2-8 | 2-10 | 2-10 | 2-10 |

Gradation Classification---- The combined aggregate gradation shall be classified as coarse-graded when it passes below the Primary Control Sieve (PCS) control point as defined in the following table. All other gradations shall be classified as fine-graded.

**GRADATION CLASSIFICATION**

| PCS Control Point for Mixture Nominal Maximum Aggregate Size (% passing) | | | | |
|---|---|---|---|---|
| Nominal Maximum Aggregate Size | TYPE 25 mm | TYPE 19 mm | TYPE 12.5 mm | TYPE 9.5 mm |
| Primary Control Sieve | 4.75 mm | 4.75 mm | 2.36 mm | 2.36 mm |
| PCS Control Point (% passing) | 40 | 47 | 39 | 47 |

If a Grading "D" mixture is allowed per Special Provision Section 403, it shall meet the following gradation and the aggregate requirements of Section 703.07.

| Sieve Designation | Percentage by Weight Passing Square Mesh Sieves |
|---|---|
| ½ inch | 100 |
| ⅜ inch | 93-100 |
| No. 4 | 60-80 |
| No. 8 | 46-65 |
| No. 16 | 25-55 |
| No. 30 | 16-40 |
| No. 50 | 10-30 |
| No. 100 | 6-22 |
| No. 200 | 3.0-8.0 |

703.18 Common Borrow Replace the first paragraph with the following: "Common borrow shall consist of earth, suitable for embankment construction. It shall be free from frozen material, perishable rubbish, peat, and other unsuitable material including material currently or previously contaminated by chemical, radiological, or biological agents unless the material is from a DOT project and authorized by DEP for use."

703.22 Underdrain Backfill Material Change the first paragraph from "…for Underdrain Type B…" to "…for Underdrain Type B and C…"

Replace subsections 703.25 through 703.28 with the following:
"703.25 Stone Fill Stones for stone fill shall consist of hard, sound, durable rock that will not disintegrate by exposure to water or weather. Stone for stone fill shall be angular and rough. Rounded, subrounded, or long thin stones will not be allowed. Stone for stone fill may be obtained from quarries or by screening oversized rock from earth borrow pits. The maximum allowable length to thickness ratio will be 3:1. The minimum stone size (10 lbs) shall have an average dimension of 5 inches. The maximum stone size (500 lbs) shall have a maximum dimension of approximately 36 inches. Larger stones may be used if approved by the Resident. Fifty percent of the stones by volume shall have an average dimension of 12 inches (200 lbs).

703.26 Plain and Hand Laid Riprap Stone for riprap shall consist of hard, sound durable rock that will not disintegrate by exposure to water or weather. Stone for riprap shall be angular and rough. Rounded, subrounded or long thin stones will not be allowed. The maximum allowable length to width ratio will be 3:1. Stone for riprap may be obtained from quarries or by screening oversized rock from earth borrow pits. The minimum stone size (10 lbs) shall have an average dimension of 5 inches. The maximum stone size (200 lbs) shall have an average dimension of approximately 12 inches. Larger stones may be used if approved by the Resident. Fifty percent of the stones by volume shall have an average dimension greater than 9 inches (50 lbs).

703.27 Stone Blanket Stones for stone blanket shall consist of sound durable rock that will not disintegrate by exposure to water or weather. Stone for stone blanket shall be angular and rough. Rounded or subrounded stones will not be allowed. Stones may be obtained from

quarries or by screening oversized rock from earth borrow pits. The minimum stone size (300 lbs) shall have minimum dimension of 14 inches, and the maximum stone size (3000 lbs) shall have a maximum dimension of approximately 66 inches. Fifty percent of the stones by volume shall have average dimension greater than 24 inches (1000 lbs).

703.28 Heavy Riprap Stone for heavy riprap shall consist of hard, sound, durable rock that will not disintegrate by exposure to water or weather. Stone for heavy riprap shall be angular and rough. Rounded, subrounded, or thin, flat stones will not be allowed. The maximum allowable length to width ratio will be 3:1. Stone for heavy riprap may be obtained from quarries or by screening oversized rock from earth borrow pits. The minimum stone size (500 lbs) shall have minimum dimension of 15 inches, and at least fifty percent of the stones by volume shall have an average dimension greater than 24 inches (1000 lbs)."

Add the following paragraph:
"703.32 Definitions (ASTM D 2488, Table 1).
Angular: Particles have sharp edges and relatively plane sides with unpolished surfaces
Subrounded: Particles have nearly plane sides but have well-rounded corners and edges
Rounded: Particles have smoothly curved sides and no edges"

## SECTION 706
## NON-METALLIC PIPE

706.06 Corrugated Polyethylene Pipe for Underdrain, Option I and Option III Culvert Pipe Change the first sentence from "…300 mm diameters to 900 mm" to "…300 mm diameters to 1200 mm" Delete, in its' entirety, the last sentence which begins "This pipe and resins…" and replace with the following; "Manufacturers of corrugated polyethylene pipe must participate in, and maintain compliance with, AASHTO's National Transportation Product Evaluation Program (www.ntpep.org) which audits producers of plastic pipe. A certificate of compliance must be provided with each shipment."

## SECTION 708
## PAINTS AND PERSERVATIVES

708.03 Pavement Marking Paint Change the first sentence from "…AASHTO M248" to "…the Maine DOT Maintenance Fast-Dry Water-Based Traffic Paint on file at the Traffic Section in Augusta". Delete, in its' entirety, the last sentence.

## SECTION 709
## REINFORCING STEEL AND WELDED STEEL WIRE FABIC

709.03 Steel Strand Change the second paragraph from "…shall be 12mm [½ inch] AASHTO M203M/M203 (ASTM A416/A416M)…" to "…shall be 15.24 mm [0.600 inch] diameter AASHTO M203 (ASTM A416)…"

## SECTION 710
## FENCE AND GUARDRAIL

710.03 Chain Link Fabric Add the following sentence: "Chain Link fabric for PVC coated shall conform to the requirements of AASHTO M181, Type IV-Class B."

710.04 Metal Beam Rail Replace with the following: "Galvanized steel rail elements shall conform to the requirements of AASHTO M 180, Class A, Type II.

When corrosion resistant steel is specified, rail shall conform to AASHTO M 180, Class A, Type IV. Beams of corrosion resistant steel shall not be painted or galvanized. They shall be so handled and stored that the traffic face of these beams, used in a continuous run of guardrail, shall not show a distinctive color differential.

When metal beam rail is to be installed on a curve having a radius of curvature of 150 ft. or less, the beam sections shall be fabricated on an arc to the required radius and permanently stamped or embossed with the designated radius.

The engineer may take one piece of guardrail, a backup plate, and end or buffer section from each 200 pieces in a lot, or from each lot if less than 200 pieces are included therein for determination of compliance with specification requirements. If one piece fails to conform to the requirements of this specification, two other pieces shall be tested. If either of these pieces fails to conform to the requirements of this specification, the lot of material represented by these samples shall be rejected. A lot shall be considered that quantity of material offered for inspection at one time that bears the same heat and coating identification."

710.07 Guardrail Posts Section b. change "…AASHTO M183/M183M…" to "…AASHTO M 270M/M 270 Grade 250 (36)…"

## SECTION 712
## MISCELLANEOUS HIGHWAY MATERIALS

712.04 Stone Curbing and Edging Delete the existing and replace with the following: "Stone for curbing and edging shall be approved granite from acceptable sources. The stone shall be hard and durable, predominantly gray in color, free from seams that would be likely to impair its structural integrity, and of a smooth splitting character. Natural grain size and color variations characteristic of the source deposit will be permitted. Such natural variations may include bands or clusters of mineral crystallization provided they do not impair the structural integrity of the curb stone. The Contractor shall submit for approval the name of the quarry that is the proposed source of the granite for curb materials along with full scale color photos of the granite. Such submission shall be made sufficiently in advance of ordering so that the Resident may have an opportunity to judge the stone, both as to quality and appearance. Samples of curbing shall be submitted for approval only when requested by the Resident. The dimensions, shape, and other details shall be as shown on the plans."

712.06 Precast Concrete Units In the first paragraph, change "…ASTM C478M…" to "…AASHTO M199…" Delete the second paragraph and replace with the following; "Approved structural fibers may be used as a replacement of 6 x 6 #10 gauge welded wire fabric when used at an approved dosage rate for the construction of manhole and catch basin units. The material used shall be one of the products listed on the Maine Department of Transportation's Approved Product List of Structural Fiber Reinforcement." Delete the fifth paragraph and replace with the following; "The concrete mix design shall be approved by the Department. Concrete shall contain 6% air content, plus or minus 1½% tolerance when tested according to AASHTO T152. All concrete shall develop a minimum compressive strength of 28 MPa [4000 psi] in 28 days when tested according to AASHTO T22. The absorption of a

specimen, when tested according to AASHTO T280, Test Method "A", shall not exceed nine percent of the dry mass."

Add the following:
"712.07 Tops, and Traps These metal units shall conform to the plan dimensions and to the following specification requirements for the designated materials.

Gray iron or ductile iron castings shall conform to the requirements of AASHTO M306 unless otherwise designated."

712.08 Corrugated Metal Units The units shall conform to plan dimensions and the metal to AASHTO M36/M36M. Bituminous coating, when specified, shall conform to AASHTO M190 Type A.

712.09 Catch Basin and Manhole Steps Steps for catch basins and for manholes shall conform to ASTM C478M [ASTM C478], Section 13 for either of the following material:

(a) Aluminum steps-ASTM B221M, [ASTM B211] Alloy 6061-T6 or 6005-T5.

(b) Reinforced plastic steps Steel reinforcing bar with injection molded plastic coating copolymer polypropylene. Polypropylene shall conform to ASTM D 4101.

712.23 Flashing Lights Flashing Lights shall be power operated or battery operated as specified.

(a) Power operated flashing lights shall consist of housing, adapters, lamps, sockets, reflectors, lens, hoods and other necessary equipment designed to give clearly visible signal indications within an angle of at least 45 degrees and from 3 to 90 m [10 to 300 ft] under all light and atmospheric conditions.

Two circuit flasher controllers with a two-circuit filter capable of providing alternate flashing operations at the rate of not less than 50 nor more than 60 flashes per minute shall be provided.

The lamps shall be 650 lumens, 120 volt traffic signal lamps with sockets constructed to properly focus and hold the lamp firmly in position.
The housing shall have a rotatable sun visor not less than 175 mm [7 in] in length designed to shield the lens.

Reflectors shall be of such design that light from a properly focused lamp will reflect the light rays parallel. Reflectors shall have a maximum diameter at the point of contact with the lens of approximately 200 mm [8 in].

The lens shall consist of a round one-piece convex amber material which, when mounted, shall have a visible diameter of approximately 200 mm [8 in]. They shall distribute light and not diffuse it. The distribution of the light shall be asymmetrical in a downward direction. The light distribution of the lens shall not be uniform, but shall consist of a small high intensity portion with narrow distribution for long distance throw and a larger

low intensity portion with wide distribution for short distance throw. Lenses shall be marked to indicate the top and bottom of the lens.

(b) Battery operated flashing lights shall be self- illuminated by an electric lamp behind the lens. These lights shall also be externally illuminated by reflex-reflective elements built into the lens to enable it to be seen by reflex-reflection of the light from the headlights of oncoming traffic. The batteries must be entirely enclosed in a case. A locking device must secure the case. The light shall have a flash rate of not less than 50 nor more than 60 flashes per minute from minus 30 °C [minus 20 °F] to plus 65 °C [plus 150 °F]. The light shall have an on time of not less than 10 percent of the flash cycle. The light beam projected upon a surface perpendicular to the axis of the light beam shall produce a lighted rectangular projection whose minimum horizontal dimension shall be 5 degrees each side of the horizontal axis. The effective intensity shall not have an initial value greater than 15.0 candelas or drop below 4.0 candelas during the first 336 hours of continuous flashing. The illuminated lens shall appear to be uniformly bright over its entire illuminated surface when viewed from any point within an angle of 9 degrees each side of the vertical axis and 5 degrees each side of the horizontal axis. The lens shall not be less than 175 mm [7 in] in diameter including a reflex-reflector ring of 13 mm [½ in] minimum width around the periphery. The lens shall be yellow in color and have a minimum relative luminous transmittance of 0.440 with a luminance of 2854° Kelvin. The lens shall be one-piece construction. The lens material shall be plastic and meet the luminous transmission requirements of this specification. The case containing the batteries and circuitry shall be constructed of a material capable of withstanding abuse equal to or greater than 1.21 mm thick steel [No. 18 U.S. Standard Gage Steel]. The housing and the lens frame, if of metal shall be properly cleaned, degreased and pretreated to promote adhesion. It shall be given one or more coats of enamel which, when dry shall completely obscure the metal. The enamel coating shall be of such quality that when the coated case is struck a light blow with a sharp tool, the paint will not chip or crack and if scratched with a knife will not powder. The case shall be so constructed and closed as to exclude moisture that would affect the proper operation of light. The case shall have a weep hole to allow the escape of moisture from condensation. Photoelectric controls, if provided, shall keep the light operating whenever the ambient light falls below 215 lx [20 foot candles]. Each light shall be plainly marked as to the manufacturer's name and model number.

If required by the Resident, certification as to conformance to these specifications shall be furnished based on results of tests made by an independent testing laboratory. All lights are subject to random inspection and testing. All necessary random samples shall be provided to the Resident upon request without cost to the Department. All such samples shall be returned to the Contractor upon completion of the tests.

712.32 Copper Tubing Copper tubing and fittings shall conform to the requirements of ASTM B88M Type A [ASTM B88, Type K] or better.

712.33 Non-metallic Pipe, Flexible Non-metallic pipe and pipe fittings shall be acceptable flexible pipe manufactured from virgin polyethylene polymer suitable for transmitting liquids intended for human or animal consumption.

712.34 Non-metallic Pipe, Rigid Non-metallic pipe shall be Schedule 40 polyvinylchloride (PVC) that meets the requirement of ASTM D1785. Fittings shall be of the same material.

712.341 Metallic Pipe Metallic pipe shall be ANSI, Standard B36.10, Schedule 40 steel pipe conforming to the requirements of ASTM A53 Types E or S, Grade B. End plates shall be steel conforming to ASTM A36/A36M.

Both the sleeve and end plates shall be hot dip galvanized. Pipe sleeve splices shall be welded splices with full penetration weld before galvanizing.

712.35 Epoxy Resin Epoxy resin for grouting or sealing shall consist of a mineral filled thixotropic, flexible epoxy resin having a pot life of approximately one hour at 10°C [50°F]. The grout shall be an approved product suitable for cementing steel dowels into the preformed holes of curb inlets and adjacent curbing. The sealant shall be an approved product, light gray in color and suitable for coating the surface.

712.36 Bituminous Curb The asphalt cement for bituminous curb shall be of the grade required for the wearing course, or shall be Viscosity Grade AC-20 meeting the current requirements of Subsection 702.01 Asphalt Cement. The aggregate shall conform to the requirements of Subsection 703.07. The coarse aggregate portion retained on the 2.36 mm [No. 8] sieve may be either crushed rock or crushed gravel.

The mineral constituents of the bituminous mixture shall be sized and graded and combined in a composite blend that will produce a stable durable curbing with an acceptable texture.

Bituminous material for curb shall meet the requirements of Section 403 - Hot Bituminous Pavement.

712.37 Precast Concrete Slab Portland cement concrete for precast slabs shall meet the requirements of Section 502 - Structural Concrete, Class A.

The slabs shall be precast to the dimension shown on the plans and cross section and in accordance with the Standard Detail plans for Concrete Sidewalk Slab. The surface shall be finished with a float finish in accordance with Subsection 502.14(c). Lift devices of sufficient strength to hold the slab while suspended from cables shall be cast into the top or back of the slab.

712.38 Stone Slab Stone slabs shall be of granite from an acceptable source, hard, durable, predominantly gray in color, free from seams which impair the structural integrity and be of smooth splitting character. Natural color variations characteristic of the deposit will be permitted. Exposed surfaces shall be free from drill holes or indications of drill holes. The granite slabs in any one section of backslope must be all the same finish.

The granite slabs shall be scabble dressed or sawed to an approximately true plane having no projections or depressions over 13 mm [½ in] under a 600 mm [2 ft] straightedge or over 25 mm [1 in] under a 1200 mm [4 ft] straightedge. The arris at the intersection of the top surface and exposed front face shall be pitched so that the arris line is uniform throughout the length of the installed slabs. The sides shall be square to the exposed face unless the slabs are to be set

on a radius or other special condition which requires that the joints be cut to fit, but in any case shall be so finished that when the stones are placed side by side no space more than 20 mm [3/4 in] shall show in the joint for the full exposed height.

Liftpin holes in all sides will be allowed except on the exposed face.

## SECTION 717
## ROADSIDE IMPROVEMENT MATERIAL

717.03 C. Method #3 - Roadside Mixture #3 Change the seed proportions to the following:

| | |
|---|---|
| Crown Vetch | 25% |
| Perennial Lupine | 25% |
| Red Clover | 12.5% |
| Annual Rye | 37.5% |

717.05 Mulch Binder Change the third sentence to read as follows:

"Paper fiber mulch may be used as a binder at the rate of 2.3 kg/unit [5 lb/unit]."

## SECTION 720
## STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS

720.08 U-Channel Posts Change the first sentence from "…, U-Channel posts…" to "…, Rib Back U-Channel posts…"

## SECTION 722
## GEOTEXTILES

722.01 Stabilization/Reinforcement Geotextile Add the following to note #3; "The strengths specified in the columns labeled"<50%" and "≥ 50%" refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the "<50%" column. Submittals must include the percent elongation at which the material was tested."

722.02 Drainage Geotextile Add the following to note #3; "The strengths specified in the columns labeled"<50%" and "≥ 50%" refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the "<50%" column. Submittals must include the percent elongation at which the material was tested."

722.01 Erosion Control Geotextile Add the following note to Elongation in the Mechanical Property Table; "The strengths specified in the columns labeled"<50%" and "≥ 50%" refer to the elongation at which the geotextile material was tested. For example; if a fabric is tested at 15% elongation then it must meet or exceed the minimum strength shown in the "<50%" column. Submittals must include the percent elongation at which the material was tested."

# APPENDIX A TO DIVISION 100

## SECTION 1 - BIDDING PROVISIONS

A. Federally Required Certifications By signing and delivering a Bid, the Bidder certifies as provided in all certifications set forth in this Appendix A - Federal Contract Provisions Supplement including:

- Certification Regarding No Kickbacks to Procure Contract as provided on this page 1 below.
- Certification Regarding Non-collusion as provided on page 1 below.
- Certification Regarding Non-segregated Facilities as provided by FHWA Form 1273, section III set forth on page 21 below.
- "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion" as provided by FHWA Form 1273, section XI set forth on page 32 below.
- "Certification Regarding Use of Contract Funds for Lobbying" as provided by FHWA Form 1273, section XII set forth on page 35 below.

Unless otherwise provided below, the term "Bidder", for the purposes of these certifications, includes the Bidder, its principals, and the person(s) signing the Bid. Upon execution of the Contract, the Bidder (then called the Contractor) will again make all the certifications indicated in this paragraph above.

CERTIFICATION REGARDING NO KICKBACKS TO PROCURE CONTRACT Except expressly stated by the Bidder on sheets submitted with the Bid (if any), the Bidder hereby certifies, to the best of its knowledge and belief, that it has not:

(A) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other then a bona fide employee working solely for me) to solicit or secure this contract;

(B) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or;

C) paid, or agreed to pay, to any firm, organization, or person (other than a bona fide employee working solely for me) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the contract;

By signing and submitting a Bid, the Bidder acknowledges that this certification is to be furnished to the Maine Department of Transportation and the Federal Highway Administration, U.S. Department of Transportation in connection with this contract in anticipation of federal aid highway funds and is subject to applicable state and federal laws, both criminal and civil.

CERTIFICATION REGARDING NONCOLLUSION Under penalty of perjury as provided by federal law (28 U.S.C. §1746), the Bidder hereby certifies, to the best of its knowledge and belief, that:

the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with the Contract.

For a related provisions, see Section 102.7.2 (C) of the Standard Specifications - "Effects of Signing and Delivery of Bids" - "Certifications", Section 3 of this Appendix A entitled "Other Federal Requirements" including section XI - "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion" and section XII. - "Certification Regarding Use of Contract Funds for Lobbying."

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B. Bid Rigging Hotline To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

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## SECTION 2 - FEDERAL EEO AND CIVIL RIGHTS REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 2 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

A. Nondiscrimination & Civil Rights - Title VI The Contractor and its subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Department deems appropriate. The Contractor and subcontractors shall comply with Title VI of the Civil Rights Act of 1964, as amended, and with all State of Maine and other Federal Civil Rights laws.

For related provisions, see Subsection B - "Nondiscrimination and Affirmative Action - Executive Order 11246" of this Section 2 and Section 3 - Other Federal Requirements of this "Federal Contract Provisions Supplement" including section II - "Nondiscrimination" of the "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273.

B. Nondiscrimination and Affirmative Action - Executive Order 11246 Pursuant to Executive Order 11246, which was issued by President Johnson in 1965 and amended in 1967 and 1978, this Contract provides as follows.

The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its efforts to achieve maximum results from its actions. The Contractor shall

document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

Ensure and maintain a working environment free of harassment, intimidations, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all forepersons, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and to maintain a record of the organization's responses.

Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

Provide immediate written notification to the Department's Civil Rights Office when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Design-Builder's efforts to meet its obligations.

Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under B above.

Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligation; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review

of these items with on-site supervisory personnel such as Superintendents, General Forepersons, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractor's and Subcontractors with whom the Contractor does or anticipates doing business.

Direct its recruitment efforts, both orally and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later that one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above describing the openings, screenings, procedures, and test to be used in the selection process.

Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth, both on the site and in other areas of a Contractor's workforce.

Validate all tests and other selection requirements.

Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor's and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.

Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

C. Goals for Employment of Women and Minorities Per Executive Order 11246, craft tradesperson goals are 6.9% women and .5% minorities employed. However, goals may be

adjusted upward at the mutual agreement of the Contractor and the Department. Calculation of these percentages shall not include On-the-Job Training Program trainees, and shall not include clerical or field clerk position employees.

For a more complete presentation of requirements for such Goals, see the federally required document "Goals for Employment of Females and Minorities" set forth in the next 6 pages below.

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Start of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

§60-4.2 Solicitations

(d) The following notice shall be included in, and shall be part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of $10,000 to be performed in geographical areas designated by the Director pursuant to §60-4.6 of this part (see 41 CFR 60-4.2(a)):

Notice of Requirement for Affirmative Action to Ensure Equal Opportunity (Executive Order 11246)

1. The Offeror's or bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

Goals for female participation in each trade 6.9%

Goals for minority participation for each trade
Maine
001 Bangor, ME 0.8%
Non-SMSA Counties (Aroostook, Hancock, Penobscot, Piscataquis, Waldo, Washington)

002 Portland-Lewiston, ME
SMSA Counties: 4243 Lewiston-Auburn, ME 0.5%
(Androscoggin)

6403 Portland, ME 0.6%
(Cumberland, Sagadahoc)

Non-SMSA Counties: 0.5%
(Franklin, Kennebec, Knox, Lincoln, Oxford, Somerset, York)

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs

construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non federally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be in violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract; estimated started and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the Contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

## STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:

   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

   b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

   c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department form 941;

   d. "Minority" includes:
      (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
      (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of the North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the contractor, is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors for Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a. through p. of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical areas where the work is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specific.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant, thereto.

6. In order for the non working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of

employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as expensive as the following:

   a. Ensure and maintain a working environment free of harassment, intimidation, coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, when possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.

   c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment sources or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

   d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

   e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources complied under 7b above.

   f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female

employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment, efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing prior to the date for the acceptance of applications for apprenticeship or the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are non segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of

solicitation to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7 a through p.). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7 a through p. of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program and reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions take on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both make and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, specific minority group of women is underutilized.)

10. The Contractor shall not use the goals and timetables or affirmative action even through the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementation regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the

requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.6.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g. mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and location sat which the work was performed. Records be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

End of GOALS FOR EMPLOYMENT OF FEMALES AND MINORITIES
Federally Required Contract Document

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D. Disadvantaged Business Enterprise (DBE) Requirements The Department has established an annual Disadvantaged Business Enterprise goal to be achieved through race neutral means. This goal will be adjusted periodically and will be provided by Supplemental Provision. The Contractor shall comply with all provisions of this section regarding DBE participation and the Department's latest version of the Disadvantaged Business Enterprise Program Manual, said Manual being incorporated herein by reference. In the case of conflict between this Contract and said Manual, this Contract shall control. The Department reserves the right to adjust DBE goals on a project-by-project basis by addendum.

Policy. It is the Department's policy that DBEs as defined in 23 CFR Part 26 and referenced in the Transportation Equity Act for 21st Century of 1998, as amended from the Surface Transportation Uniform Relocation Assistance Act of 1987, and the Intermodal Surface Transportation Efficiency Act of 1991. The intent hereto remains to provide the maximum opportunity for DBEs to participate in the performance of contracts financed in whole or in part with federal funds.

The Department and its Contractors shall not discriminate on the basis of race, color, national origin, ancestry, sex, age, or disability in the award and performance of DOT assisted contracts.

Disadvantaged Business Enterprises are those so certified by the Maine Department of Transportation Civil Rights Office prior to bid opening date.

The Department has determined that elements of a good faith effort to meet the contract goal include but are not limited to the following:

1. Whether the Contractor advertised in general circulation, trade association, and minority/women's-focus media concerning the subcontracting opportunities;

2. Whether the Contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;

3. Whether the Contractor followed up on initial solicitations of interest by contacting DBEs to determine with certainty whether the DBEs were interested;

4. Whether the Contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals;

5. Whether the Contractor provided interested DBEs with adequate information about the plans, specification and requirements of the contract;

6. Whether the Contractor negotiated in good faith with interested DBEs, not rejecting the DBE as unqualified without sound reasons based on a thorough investigation of their capabilities;

7. Whether the Contractor made efforts to assist interested DBEs with other appropriate technical/financial assistance required by the Department or Contractor;

8. Whether the Contractor effectively used the services of available minority/women's community organizations, minority/women's business assistance offices; and other organizations that provide assistance in the recruitment and placement of DBEs.

Substitutions of DBEs. The following may be acceptable reasons for Civil Rights Office approval of such a change order:

- The DBE defaults, voluntarily removes itself or is over-extended;
- The Department deletes portions of the work to by performed by the DBE.

It is not intended that the ability to negotiate a more advantageous contract with another certified DBE be considered a valid basis for such a change in DBE utilization once the DBE Bid Submission review has been passed. Any requests to alter the DBE commitment must be in writing and included with the change order.

Failure to carry out terms of this Standard Specification shall be treated as a violation of this contract and will result in contract sanctions which may include withholding of partial payments totaling the creditable dollars amount which would have been paid for said DBE participation, termination of this contract or other measures which may affect the ability of the Contractor to obtain Department contracts.

Copies of the Maine Department of Transportation's DBE Program may be obtained from:

Maine Department of Transportation
Civil Rights Office
#16 State House Station
Augusta, Maine 04333-0016
tel. (207) 624-3519

Quarterly Reporting Requirement. The Contractor must submit Semi-annual reports of actual dollars paid to Disadvantaged Business Enterprises (DBE's) on this Project to the MaineDOT Civil Rights Office by the end of the third week of April and October for the period covering the preceding six months considered Federal Fiscal Year periods. The reports will be submitted directly to the Civil Rights Office on the form provided in the latest version of the DBE Program Manual. Failure to submit the report by the deadline may result in a withholding of approval of partial payment estimates by the Department.

## SECTION 3 - OTHER FEDERAL REQUIREMENTS

Unless expressly otherwise provided in the Bid Documents, the provisions contained in this Section 3 of this "Federal Contract Provisions Supplement" are hereby incorporated into the Bid Documents and Contract.

### A. Buy America

If the cost of products purchased for permanent use in this project which are manufactured of steel, iron or the application of any coating to products of these materials exceeds 0.1 percent of the contract amount, or $2,500.00, whichever is greater, the products shall have been manufactured and the coating applied in the United States. The coating materials are not subject to this clause, only the application of the coating. In computing that amount, only the cost of the product and coating application cost will be included.

Ore, for the manufacture of steel or iron, may be from outside the United States; however, all other manufacturing processes of steel or iron must be in the United States to qualify as having been manufactured in the United States.

United States includes the 50 United States and any place subject to the jurisdiction thereof.

Products of steel include, but are not limited to, such products as structural steel, piles, guardrail, steel culverts, reinforcing steel, structural plate and steel supports for signs, luminaries and signals.

Products of iron include, but are not limited to, such products as cast iron grates.

Application of coatings include, but are not limited to, such applications as epoxy, galvanized and paint.

To assure compliance with this section, the Contractor shall submit a certification letter on its letterhead to the Department stating the following:

> "This is to certify that products made of steel, iron or the application of any coating to products of these materials whose costs are in excess of $2,500.00 or 0.1 percent of the original contract amount, whichever is greater, were manufactured and the coating, if one was required, was applied in the United States."

### B. Materials

a. Convict Produced Materials References: 23 U.S.C. 114(b)(2), 23 CFR 635.417

Applicability: FHWA's prohibition against the use of convict material only applies to Federal-aid highways. Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if: 1) such materials have been produced by convicts who are on parole, supervised release, or probation from a prison; or 2) such material has been produced in a qualified prison facility, e.g., prison industry, with the amount produced during any 12-month period, for use in Federal-aid projects, not exceeding the amount produced, for such use, during the 12-month period ending July 1, 1987.

Materials obtained from prison facilities (e.g., prison industries) are subject to the same requirements for Federal-aid participation that are imposed upon materials acquired from other sources. Materials manufactured or produced by convict labor will be given no preferential treatment.

The preferred method of obtaining materials for a project is through normal contracting procedures which require the contractor to furnish all materials to be incorporated in the work. The contractor selects the source, public or private, from which the materials are to be obtained (23 CFR 635.407). Prison industries are prohibited from bidding on projects directly (23 CFR 635.112e), but may act as material supplier to construction contractors.

Prison materials may also be approved as State-furnished material. However, since public agencies may not bid in competition with private firms, direct acquisition of materials from a prison industry for use as State-furnished material is subject to a public interest finding with the Division Administrator's concurrence (23 CFR 635.407d). Selection of materials produced by convict labor as State-furnished materials for mandatory use should be cleared prior to the submittal of the Plans Specifications & Estimates (PS&E).

b. Patented/Proprietary Products References: 23 U.S.C. 112, 23 CFR 635.411

FHWA will not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

- the item is purchased or obtained through competitive bidding with equally suitable unpatented items,
- the STA certifies either that the proprietary or patented item is essential for synchronization with the existing highway facilities or that no equally suitable alternative exists, or
- the item is used for research or for a special type of construction on relatively short sections of road for experimental purposes. States should follow FHWA's procedures for "Construction Projects Incorporating Experimental Features" (expermnt.htm) for the submittal of work plans and evaluations.

The primary purpose of the policy is to have competition in selection of materials and allow for development of new materials and products. The policy further permits materials and products that are judged equal may be bid under generic specifications. If only patented or proprietary products are acceptable, they shall be bid as alternatives with all, or at least a

reasonable number of, acceptable materials or products listed; and the Division Administrator may approve a single source if it can be found that its utilization is in the public interest.

Trade names are generally the key to identifying patented or proprietary materials. Trade name examples include 3M, Corten, etc. Generally, products identified by their brand or trade name are not to be specified without an "or equal" phrase, and, if trade names are used, all, or at least a reasonable number of acceptable "equal" materials or products should be listed. The licensing of several suppliers to produce a product does not change the fact that it is a single product and should not be specified to the exclusion of other equally suitable products.

c. State Preference References: 23 U.S.C. 112, 23 CFR 635.409

Materials produced within Maine shall not be favored to the exclusion of comparable materials produced outside of Maine. State preference clauses give particular advantage to the designated source and thus restrict competition. Therefore, State preference provisions shall not be used on any Federal-aid construction projects.

This policy also applies to State preference actions against materials of foreign origin, except as otherwise permitted by Federal law. Thus, States cannot give preference to in-State material sources over foreign material sources. Under the Buy America provisions, the States are permitted to expand the Buy America restrictions provided that the STA is legally authorized under State law to impose more stringent requirements.

d. State Owned/Furnished/Designated Materials References: 23 U.S.C. 112, 23 CFR 635.407

Current FHWA policy requires that the contractor must furnish all materials to be incorporated in the work, and the contractor shall be permitted to select the sources from which the materials are to be obtained. Exceptions to this requirement may be made when there is a definite finding, by MaineDOT and concurred in by Federal Highway Administration's (FHWA) Division Administrator, that it is in the public interest to require the contractor to use materials furnished by the MaineDOT or from sources designated by MaineDOT. The exception policy can best be understood by separating State-furnished materials into the categories of manufactured materials and local natural materials.

Manufactured Materials When the use of State-furnished manufactured materials is approved based on a public interest finding, such use must be made mandatory. The optional use of State-furnished manufactured materials is in violation of our policy prohibiting public agencies from competing with private firms. Manufactured materials to be furnished by MaineDOT must be acquired through competitive bidding, unless there is a public interest finding for another method, and concurred in by FHWA's Division Administrator.

Local Natural Materials When MaineDOT owns or controls a local natural materials source such as a borrow pit or a stockpile of salvaged pavement material, etc., the materials may be designated for either optional or mandatory use; however, mandatory use will require a public interest finding (PIF) and FHWA's Division Administrator's concurrence.

In order to permit prospective bidders to properly prepare their bids, the location, cost, and any conditions to be met for obtaining materials that are made available to the contractor shall be stated in the bidding documents.

Mandatory Disposal Sites Normally, the disposal site for surplus excavated materials is to be of the contractor's choosing; although, an optional site(s) may be shown in the contract provisions. A mandatory site shall be specified when there is a finding by MaineDOT, with the concurrence of the Division Administrator, that such placement is the most economical or that the environment would be substantially enhanced without excessive cost. Discussion of the mandatory use of a disposal site in the environmental document may serve as the basis for the public interest finding.

Summarizing FHWA policy for the mandatory use of borrow or disposal sites:

- mandatory use of either requires a public interest finding and FHWA's Division Administrator's concurrence,
- mandatory use of either may be based on environmental consideration where the environment will be substantially enhanced without excessive additional cost, and
- where the use is based on environmental considerations, the discussion in the environmental document may be used as the basis for the public interest finding.

Factors to justify a public interest finding should include such items as cost effectiveness, system integrity, and local shortages of material.

C. Standard FHWA Contract Provisions - FHWA 1273

Unless expressly otherwise provided in the Bid Documents, the following "Required Contract Provisions, Federal Aid Construction Contracts", FHWA-1273, are hereby incorporated into the Bid Documents and Contract.
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Start of FHWA 1273 REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS (As revised through May 1, 2012)

FHWA-1273 -- Revised May 1, 2012

## REQUIRED CONTRACT PROVISIONS
## FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination

III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

## I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

## II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

**1. Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield

qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

**6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with

Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

**10. Assurance Required by 49 CFR 26.13(b):**

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-

minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

## III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

## IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

### 1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to

such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the

classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

**2. Withholding**

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

**3. Payrolls and basic records**

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the

registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee ( e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the “Statement of Compliance” required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the

contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

**4. Apprentices and trainees**

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

## V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages**. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages.

Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

## VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

## VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not

permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

## VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

## IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

## X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

**2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

## XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

End of FHWA 1273

# Water Utility Related
# General Requirements
# And
# Special Provisions

# For the
# Route 8 Highway Project
# STP-1277(600)X

**Water Utility:**

**Norridgewock Water District**

**Norridgewock, Maine**

**Water Utility Engineer:**

**Dirigo Engineering**
**2 Dirigo Drive**
**Fairfield, Maine 04937**
**(207) 453-2401**

Project #34809

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SPECIAL PROVISION
WATER UTILITY GENERAL REQUIREMENTS

## 1 – DESCRIPTION

This section includes the General Requirements for completing the water utility installation portion of this contract. It includes general specifications for those items that are common to the water utility work.

The term Engineer used in the Water Utility related specifications refers to Dirigo Engineering, Fairfield, ME (207) 453-2401.

## 2 - SUBMITTALS

A.) General - Submit to the Engineer copies of shop drawings, project data and samples for all products, materials and equipment proposed for the completed project. A 14-day review period will be required for all submittals. Review of submittals is for general compliance with the contract documents. No responsibility is assumed by the Utility District or Engineer for the correctness of dimensions or details. Electronic copies of submittals are acceptable if they are in pdf format and legible. If submitting paper submittals, four (4) copies are required. Illegible copies will be rejected.

Review of submittals by the Engineer shall not relieve the Contractor from responsibility for any variation from the requirements of the contract documents unless the Contractor has in writing called the Engineer's attention to each such variation at the time of submission and the Engineer has given written approval of each such variation by a specific written notation thereof. The Engineer's review of submittals shall not relieve the Contractor from responsibility for errors or omissions in the shop drawings.

B.) Shop Drawings, Project Data and Samples - All submittals shall bear a note and signature indicating that they were reviewed by the Contractor and found to be in conformance with the contract documents.

Any material or equipment submitted for review, which is arranged differently or is a different physical size from that shown or specified shall be accompanied by shop drawings indicating the different arrangements of size and the method of making the various connections to the equipment. The final result will be compatible with the system or structure as designed.

C.) Schedules - Submit a time schedule, showing complete sequence of construction by activity, prior to commencement of work. Update the schedule monthly showing changes occurring since previous submission.

Distribute copies of reviewed schedules to subcontractors and other concerned parties. Instruct recipients to report any inability to comply and provide detailed explanation with suggested remedies.

D. Work Plans related to Utility Installation

Erosion Control Plan - Submit a detailed erosion and sediment control plan showing materials, methods, and locations of proposed erosion and sediment control measures. Temporary Water Main Plan - Submit a detailed plan showing configuration, sizes, locations and materials for temporary water main and services.

## 3 - QUALITY CONTROL

A.) Construction Materials - It is the Contractor's sole responsibility to provide and use only new materials, new products and new equipment that meet the requirements of the plans and specifications and will result in a completed project that is durable and of high quality in all respects. The Engineer may request samples of any material that the Contractor proposes to use. Such samples shall be of sufficient size and quantity to allow appropriate testing of the sample.

The Contractor shall provide equipment and parts from a single manufacturer to the greatest extent possible. This is to facilitate ease of service, maintenance and parts replacement. Engineer reserves the right to reject proposed equipment from various manufacturers if suitable materials are available from fewer manufacturers, and to require that source of materials be unified to the maximum extent possible.

B.) Construction Review - The Utility District or Engineer or his representative will provide whatever Construction Review that he feels is necessary. Such Construction Review in no way reduces the Contractor's responsibility for supervision or quality control. The Contractor shall cooperate fully in the Utility District's or Engineer's Construction Review efforts. The Contractor shall keep the Engineer informed of work in progress as well as the schedule of work to be done. The Contractor shall allow complete access to the project by the Utility District, Engineer, and any representatives of any regulatory or funding agencies. The Engineer will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

C.) Testing - The Contractor shall perform all testing specified in the contract documents unless the test is specifically noted to be done by the Utility District or Engineer. The Contractor shall notify the Engineer at least 48 hours in advance of any proposed testing or disinfection, and obtain approval for the proposed testing time. Testing and disinfection times must be coordinated with the Engineer so that samples can be delivered to labs and tested properly. In general, Fridays and weekends are not acceptable times for testing and sampling.

The Engineer shall collect all bacteriological samples and deliver them to the lab.

## 4 - MATERIAL DELIVERY, STORAGE AND HANDLING

In addition to the requirements of the Standard Specifications for material delivery, storage and handling, the following shall apply. Materials shall be new and delivered and stored according to manufacturers' recommendations. Original labels shall be

maintained so that they are legible at least until they are installed. Materials shall be transported and stored in such a manner that they do not cause or receive damage.

5 - REPAIRS TO EXISTING FACILITIES AND TEMPORARY CONNECTIONS

A.) General - The Contractor will be responsible for interruption of service, or other damage to existing water and sewer utilities as stated in the Standard Specifications. The Contractor shall make all temporary connections necessary for the proper completion of the project. The temporary connections shall be maintained by the Contractor until no longer needed and then they shall be removed with fittings properly capped and holes properly plugged. Contractor shall maintain an inventory of repair couplings onsite.

B.) Maintenance of Service to Customers - The Contractor shall be responsible for maintaining water service to customers at all times. Interruption of service for final connections shall be scheduled and coordinated with Engineer and the District. The Contractor shall utilize construction and excavation procedures that minimize disruption of service to utility customers. Obtain approval of Engineer regarding proposed methods and schedule for installing connections. Temporary water services are required and they shall be installed at the Contractor's expense.

Temporary water service methods, materials and connections must be approved by the local water utility. Submit a layout plan showing proposed piping, sizes, valving, connections, etc. Temporary water services shall consist of a temporary polyethylene main (HDPE) and service installed above ground between fire hydrants or temporary taps. The temporary main shall be of adequate size to service the customers. All street and driveway crossings shall be protected from traffic. Temporary water services shall not be installed from houses on adjacent streets without Water Utility approval. Obtain property owner’s permission for locating temporary water services across private property.

All temporary piping shall be disinfected by the Contractor and approved by the local water utility prior to being put into service. All connections to hydrants and existing mains shall utilize dual check valve or RPZ that has been tested within the previous 12 months. All temporary piping and taps shall be removed once the temporary services are no longer needed.

Minimum size of temporary mains shall be as follows: 2” for 3-10 services; 3” for 10-50 services. Minimum size for individual services shall be 1”. All taps and services shall include ball valves. All temporary piping and taps shall be removed once the temporary services are no longer needed. Fittings shall be properly capped and holes properly plugged.

C.) Repairs - The methods and equipment to complete repairs must be approved by the Utility District and Engineer. In general, the following methods of connecting and repairing pipes shall apply:

Water Mains and Sewer Force Mains:

Cast couplings, MJ solid sleeves; fittings made specifically for the pipe materials used.

Water Services:

Brass compression couplings; cast couplings; fittings made specifically for the pipe materials used. Connections to PE tubing shall utilize SS inserts and brass compression couplings.

## 6 - DISCONTINUED FACILITIES

A.) Mains - Discontinued water mains may be left in place. All discontinued mains that have been cut shall have an MJ cap or plug installed on them to prevent migration of water and soil through abandoned lines. Grouting of abandoned lines is not an acceptable alternative to caps or plugs. Discontinued mains abandoned in-place under roadways shall either be removed or shall be filled with flowable fill. See Section 827A.

B.) Hydrants and Branch Valves - Discontinued hydrants and branch valves shall be removed and delivered to the Utility District. Excavate, cut and cap branch main. Do not pull hydrants or valves out of ground without cutting main.

C.) Valves, Boxes and Curb Boxes - Valve box top sections and curb boxes shall be removed from discontinued valves and curb stops. Removed facilities shall be delivered to the Utility District. Coordinate with Utility District regarding position to leave abandoned valves in. In general, valves shall be closed. Abandoned valve boxes shall be filled with flowable fill after top sections have been removed.

D.) Flowable Fill – See Section 827A.

## 7 - AS-BUILT RECORDS

A.) General - Maintain accurate as-built records throughout the construction project. A complete bound copy of these as-built records shall be delivered to the Engineer before final payment is made.

B.) As-Built Drawings - The Contractor shall maintain a set of the construction drawings on the site at all times for the purpose of recording the actual configuration of the final work. The drawings shall show in a neat and legible fashion the final configuration of the constructed project, existing utilities, ledge, etc. A complete list of suppliers for each material item used on the project shall also be kept. This information shall be submitted to the Utility District at the conclusion of the work.

C.) Utility Locations - The Contractor shall maintain a neat and accurate bound utility location book on the site at all times for the purpose of recording the location and arrangement of all valves, tees, bends, fittings, service corporations, curb stops, couplings, repairs, etc. The type of pipe and depth shall be noted.

## 9 – NSF REQUIREMENTS, POTABLE WATER

All components and materials that will be in contact with the finished water when the project is complete shall be certified to be in compliance with ANSI / NSF Standard 61. This includes but is not limited to piping, valves, fittings, hydrants and other appurtenances, etc.

## 11 – WATER PROJECT FUNDING

The Water Utility portion of the work is expected to be funded in part by the United States Department of Agriculture – Rural Development. The funding is limited and project scope may need to be adjusted to match available funding.

## 10 - BASIS OF PAYMENT

The work specified in this section is incidental to the overall water utility portion of the project. No payment will be made under this section.

SPECIAL PROVISION
SECTION 803
TEST PITS

## 803.01 GENERAL

Furnish all labor, materials and equipment necessary to complete test pits for water utility purposes as notated on the contract drawings or requested by the water utility engineer.

Water utility test pits shall be excavated to help resolve unknown subsurface pipe information prior to installation of new water utilities. The unknown information may include: pipe outside diameters, pipe materials, pipe depth, pipe location or configuration.

## 803.02 METHODS

Utilize pipe location and utility location methods prior to excavating test pits. Coordinate with all related utilities and location services. Coordinate with water utility engineer and conduct test pit in his presence.

Excavate test pits utilizing proper sitework/earthwork methods per project standard specifications. Utilize hand methods and care when approaching any utility.

Complete location drawing for test pit including depth of utility, size, type, configuration, etc. Take digital photograph of uncovered utility.

Backfill the excavation and restore the surface.

## 803.03 METHOD OF MEASUREMENT

Water utility test pits shall be measured per test pit complete. Individual test pits requiring 1 to14 cubic yards of excavation shall be paid for as 1 test pit. Individual test pits requiring more than 14 cubic yards of excavation shall be paid for on a proportional basis (# of test pits = excavation volume/14 cy).

## 803.04 BASIS OF PAYMENT

This item includes all labor and materials required to complete test pits as described above.

Payment will be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 803.01 | Water Utility Test Pits | each |

SPECIAL PROVISION
SECTION 822
WATER MAIN AND APPURTANCES

## 822.01 GENERAL

Furnish, install and test all water mains and fittings as specified in the contract documents. The minimum depth of cover specified in the contract documents refers to cover relative to the pipe location not relative to the profile drawing.

Unless specifically stated on the Plans, Contractor may use ductile iron (DI), high density polyethylene (HDPE), or polyvinyl chloride (PVC) water pipe for the water mains. These piping types must comply with this section. Whichever pipe type is selected, it must be used throughout the project except where specific pipe types are noted on the plans, or unless otherwise authorized by the Water Utility.

Plans indicate nominal pipe size. For 3” and larger pipe, inside diameters (for PVC or HDPE) must be no more than ½” smaller than nominal DI size specified on the plans. No PVC fittings shall be allowed for 3” and larger pipes.

## 822.02 MATERIALS

A. Ductile Iron Pipe

Ductile iron pipe shall be double cement lined, tar coated, 18-20 foot lengths. DI pipe shall be in full conformance with AWWA C151 and AWWA C111 and AWWA C104. All DI pipe shall be push on unless indicated otherwise on the drawings. Push-on DI pipe shall be Class 52. Flanged DI pipe shall be flanged joint Class 53. Mechanical joint DI pipe shall be mechanical joint Class 52.

B. PVC Pipe

PVC water main shall meet the requirements of AWWA C900 "Standard for PVC Pressure Pipe, 4" to 12" for Water" and shall be furnished in cast-iron pipe equivalent outside diameters with rubber gasketed joints. Pipe shall be Class 150, DR 18, 20' laying lengths and shall have integral bell joints. Pipe shall conform to ASTM D-2241 and be UL approved.

Each length of pipe and integral bell shall pass a hydrostatic integrity test at the factory of four times the class pressure of the pipe for a minimum of 5 seconds. Pipe and couplings shall pass the sustained pressure, burst pressure, flattening and extrusion quality tests as outlined in AWWA C900.

C. Fittings for Ductile Iron Pipe or PVC Pipe

All fittings shall be mechanical joint, ductile iron. Mechanical joint compact fittings shall be ductile iron Class 350, asphaltic coated with cement-mortar lining or fusion bonded epoxy inside and outside. Fittings shall include gaskets and corten bolts. Fittings shall be in accordance with AWWA C-153, AWWA C111 for joints, AWWA C104 for cement lining, and AWWA C116 for epoxy coating.

All fittings for buried service shall be mechanical joint. Fittings shall be manufactured by Tyler, U.S. Pipe, Griffin, Union, or approved equal.

D. HDPE Pipe and Fittings

The terms PE, HDPE and PE 3408 all refer to PE 3408 high-density polyethylene pipe.

This specification subsection shall also apply to the pipe used in Horizontal Directional Drilling applications (when applicable).

Materials used for the manufacturing of polyethylene pipe and fittings shall be PE 3408 High Density Polyethylene (HDPE) meeting the ASTM D3350 cell classification of 345434C. The material shall have a minimum Hydrostatic Design Basis (HDB) of 1600 psi at 73 degrees F when tested in accordance with PPI TR-3 and shall be listed in the name of the pipe and fitting manufacturer in PPI TR-4. The Manufacturer shall certify that the materials used to manufacture pipe and fittings meet the requirements of this specification.

Polyethylene fittings shall be made from material meeting the same requirements as the pipe. Polyethylene fittings shall be molded or fabricated by the manufacturer of the pipe. Where applicable, fittings shall meet the requirements of AWWA C906. Molded fittings shall be manufactured in accordance with either ASTM D2683 (socket fused) or ASTM D3261 (butt fused) and shall be so marked.

Pipe shall be DIPS or IPS SDR 11 with a 160 psi pressure rating. Pipe shall be Driscopipe 1000 or approved equal. Fittings and flange adapters shall be molded.

E. Mechanical Joint Restraint

All mechanical joint fittings and connections shall utilize mechanical joint restraints. The restraining devices shall be of ductile iron construction and shall utilize standard MJ gaskets. Mechanical joint restrainers shall be Megalug (EBAA Iron Sales), Uniflange Series 1400, or approved equal. Conventional retainer glands with set screws are <u>not</u> acceptable.

The mechanical joint restrainers shall be installed according to AWWA standards and the manufacturer's latest recommendations.

F. Foster Adapter (or approved equal)

When shown on the drawings, mechanical joint valves and fittings shall be connected using a bolt-through positive restraining device manufactured of ductile iron conforming to ASTM A 80-55-06. Device shall be Foster Adapter (Infact Corporation), or approved equal, and shall be furnished with required accessories.

G. Push-On Joint Restraint

All push-on joints within 35 feet of elbows, caps and plugs shall be restrained. Also, when shown on the drawings, additional push-on pipe joints shall be restrained. Push-on joint restraint shall be Field-Lok 350 gaskets by US Pipe, Gripper Gasket by Gripper Gasket, LLC, or approved equal. Install according to manufacturer's latest recommendations.

H. Couplings

Couplings shall be used in new piping connections when shown on the drawings and to make repairs to existing utilities. Couplings may be straight, transition, reducing or repair type couplings. Install couplings according to the manufacturer's latest recommendations.

1. Cast Couplings

Cast couplings shall have ductile iron sleeves and follower flanges per ASTM A-536. Sleeve ends shall have a smooth inside taper for uniform gasket sealing. Follower flanges shall be designed for a high strength/weight ratio. Bolts shall be high strength low alloy steel bolts per ASTM A-325 with heavy, semi-finished hexagon nuts per ASTM A-563 and AWWA C111. When specified on the drawings, nuts and bolts shall be 316 Stainless Steel. Gaskets shall be virgin SBR compounded for water service. Gaskets shall meet ASTM D2000 3 BA715.

Sleeves and follower flanges shall be painted with shopcoat enamel. When specified on the drawings, epoxy coated sleeves and flanges shall be provided.

Cast coupling center sleeves lengths shall be as shown in the following table.

| Pipe Ø | 4” | 6” & 8” | 10” & 12” | over 12” |
|---|---|---|---|---|
| Minimum Center Sleeve Length | 5” | 7” | 10” | 12” |

Acceptable manufacturers of cast couplings shall be Viking Johnson (Maxifit), Smith-Blair, Rockwell, Dresser, Romac or approved equal. Cast couplings shall be used on AC pipe, PVC pipe and cast iron pipe.

2. Solid Sleeves

Solid sleeves shall be ductile iron Class 350 mechanical joint fittings per 02701.02B. Solid sleeves shall be “long” type (12” minimum length). Mechanical joint restrainers shall be utilized per Section 02701.02C. Solid sleeves shall be used on ductile iron pipe.

## 822.03 HDPE PIPE AND FITTING FUSION

Pipe fuser shall be certified by Pipe Manufacturer or Supplier as a certified pipe fuser. Submit a copy of certification to Engineer.

Connections from polyethylene to ductile iron shall utilize a mechanical joint as shown on the drawings. Joints between plain ends of polyethylene pipe shall be made by butt fusion when possible. The pipe manufacturer's fusion procedures shall be followed at all times as well as the recommendations of the fusion machine manufacturer. The wall thicknesses of the adjoining pipes shall have the same DR at the point of fusion.

When saddle connections are fusion welded the manufacturer's recommended saddle fusion procedures shall be used.

If mechanical fittings (which are designed for, or tested and found acceptable for use with polyethylene pipe) are utilized for transitions between pipe materials, repairs, joining pipe sections, saddle connections, or at other locations, the recommendation of the fitting manufacturer must be followed. These procedures may differ from other pipe materials.

On each day butt fusions are to be made, the first fusion of the day shall be a trial fusion. The trial fusion shall be allowed to cool completely, and then fusion test straps shall be cut out. The test strap shall be 12" or 30 times the wall thickness in length (minimum) and 1" or 1.5 times the wall thickness in width (minimum). Bend the test strap until the ends of the strap touch. If the fusion fails at the joint, a new trial fusion shall be made, cooled completely and tested. Butt fusion of pipe to be installed shall not commence until a trial fusion has passed the bent strap test.

Socket and saddle fusions shall be tested by a bent strap test as described by the pipe manufacturer. The pipe manufacturer shall provide visual guidelines for inspecting the butt, saddle, and socket fusion joints.

## 822.04 INSTALLATION IN OPEN EXCAVATIONS

Installation shall follow the general AWWA and Uni-Bell (where applicable) standards for installation of water mains. The only exception is that backfill material for buried pipes shall have no stones larger than 6 inches in diameter. Installation shall also follow the manufacturer's latest recommendations

Foreign material shall be prevented from entering the pipe at all times (including during storage, installation and while in the trench). No debris, tools, clothing, trench water, or other materials shall be placed in the pipe at any time. Immediately following installation of a pipe in the trench (prior to backfilling and moving of trench box) a secure cap or plug shall be installed in the bell end of the pipe. The cap or plug shall be steel or plastic and shall be gasketed and designed to prevent debris and water from entering the pipe during excavation work.

A. Ductile Iron Pipe Installation

When ductile iron pipe is installed in earth excavations it shall be laid on the undisturbed bottom of trench. Backfill from the trench bottom to 1 foot over the pipe shall be select excavated material with no stones larger than 1 inch. This material shall be placed in 6 inch lifts and compacted. Backfill to grade shall be per MDOT Standard Specification Section 206.

All trench ledge excavations shall be extended to at least 6 inches below the bottom of the pipe and then brought to grade with screened base gravel (1” max. stone). The screened gravel is considered incidental to the ledge excavation. The pipe shall be placed on this compacted bed and bedded with compacted screened base gravel (1” max. stone) to 6 inches above the pipe.

B. PVC Pipe Installation

The pipe shall be bedded with screened (not crushed) stone (1” max. stone size) from 6" below the pipe to 6" above the pipe. The trench shall be excavated to the required grade and 6" of bedding installed and compacted. The pipe shall be installed on the bedding and the joints assembled in accordance with the recommendations of the manufacturer. Bedding material shall then be installed to the mid-point of the pipe. The bedding shall be worked and packed under the edges of the pipe with hand shovels and then it shall be compacted. Bedding material shall then be installed to 6" above the pipe and compacted. Install Mirafi 160N filter fabric over stone bedding as shown on the plans. All compaction of bedding material shall be done with a vibrating plate compactor for the full trench width. Care shall be taken to prevent movement of the pipe during bedding installation, compaction, and backfilling.

Blocking (installation of the pipe prior to bedding and then support of the pipe while bedding is installed under it) shall not be allowed. All field cutting and beveling of pipe shall comply with the manufacturer's recommendations. Ends shall be cut square and perpendicular to the pipe axis. Ends shall be beveled, filed smooth and stop marked with a felt tip marker so that they are comparable to factory pipe spigots.

Water Service taps to PVC mains require service saddles per Section 825.

C. HDPE Pipe Installation

For trenches, the pipe shall be bedded with screened (not crushed) stone (1” max. stone size) from 6" below the pipe to 6" above the pipe. The trench shall be excavated to the required grade and 6" of bedding installed and compacted. The pipe shall be installed on the bedding and the joints assembled in accordance with the recommendations of the manufacturer. Bedding material shall then be installed to the mid-point of the pipe. The bedding shall be worked and packed under the edges of the pipe with hand shovels and then it shall be compacted. Bedding material shall then be installed to 6" above the pipe and compacted. Install Mirafi 160N filter fabric over stone bedding as shown on the plans. All compaction of bedding material shall be done with a vibrating plate compactor for the full trench width. Care shall be taken to prevent movement of the pipe during bedding installation, compaction, and backfilling.

Blocking (installation of the pipe prior to bedding and then support of the pipe while bedding is installed under it) shall not be allowed.

Water Service taps to HDPE mains require service saddles per Section 825.

## 822.05 PIPE LOCATING SYSTEM

Conductive Trace Wire and Non-Detectable Warning Tape shall be installed on all pipes in accordance with Section 835 and as shown on the plans.

## 822.06 SEPARATIONS AND CROSSINGS OF WATER MAINS AND SEWERS

Water mains shall be laid at least 10 feet horizontally from any existing or proposed sanitary sewer, force main, storm sewer or sewer manhole, per State of Maine Department of Health and Human Services Regulations. The distance shall be measured edge of pipe to edge of pipe.

Water mains crossing sewers (including force mains or storm drains) shall be laid to provide a minimum vertical distance of 18 inches of free earth between the water main and the sewer. This shall be the case where the water main is either above or below the sewer. At crossings, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes may be required.

## 822.07 TESTING AND DISINFECTION

The pipe (water main) shall be tested and disinfected per Sections 832 and 833.

## 822.08 NITRILE GASKETS

Where specified on the drawings the pipe shall be ductile iron only and nitrile gaskets shall be utilized.

## 822.09 METHOD OF MEASUREMENT

The pipe (water main) shall be measured by the installed length to the nearest whole foot continuous through fittings.

822.10 BASIS OF PAYMENT

The accepted and measured quantities of pipe (water main) will be paid at the contract unit price per foot for the types and sizes specified, complete in place. This includes all labor materials and equipment required to install the mains as described in the contract documents. For buried pipe this includes: excavations to locate existing pipe, excavating and maintaining the trench, shoring, dewatering, bedding material and placement, filling abandoned facilities with flowable fill or gravel, including fill material, pipe, gaskets, fittings (including tees and bends), bolts, mechanical joint restrainers, fusing, couplings, thrust blocks, flushing, backfilling, compaction, surface restoration (where applicable), disinfecting and testing. Payment of the unit price for pipe (water main) shall be full compensation for the incidental work items needed for a complete water main installation including: capping of existing mains, removal of hydrants, valves, valve and curb boxes, cutting and capping pipes and thrust blocks.

Payment shall be at the unit price in the bid schedule. Partial payments shall be according to the following schedule:

| | |
|---|---|
| Installation, Backfill & Surface Restoration | Bid Price less $10.00/linear foot |
| Successful Testing and Disinfection | $10.00/linear foot |

Payment shall be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 822.321 | 4” Water Main | Linear foot |
| 822.33 | 6” Water Main | Linear foot |
| 822.34 | 8” Water Main | Linear foot |

SPECIAL PROVISION
SECTION 823
GATE VALVES WITH BOXES

## 823.01 GENERAL

Furnish and install all gate valves with boxes and appurtenances as specified in the contract documents.

## 823.02 MATERIAL

A.) Gate Valves for Buried Service - Gate valves shall be Resilient Seat Type, mechanical joint, NRS. The valve design and construction shall comply with AWWA C515. The body and bonnet shall be ductile and shall conform in thickness to those listed for gray iron in the applicable AWWA gate valve standards. The valve stem root diameter shall exceed AWWA C500 and the valve shall have a bronze thrust collar bushing. Valves shall have heat fusion bonded epoxy coating inside and out. Acceptable manufacturers and models are:

Clow R/W
Metroseal 250 RS
Mueller Resilient Wedge Model 2360
American Flow 2500 Series C
Approved Equal

Gate valves shall open left.

B.) Valve Boxes - Valve boxes shall be cast iron, two piece, sliding type with a top flange and a minimum inside shaft diameter of 5 ¼". Boxes shall have the word "Water" clearly cast into the cover. Valve box bases shall be belled and valve box tops shall be flanged. The top shall be approved posi-cap type and shall fit tight against the bell of the base section of the valve box. Valve box covers shall be CI construction drop type. Valve boxes of the appropriate length shall be provided for all buried service valves and are considered incidental to the valve bid item.

C.) Valve Box Aligners - Valve (Gate) Box Aligners shall be a high strength, plastic device designed to be installed under the valve's operating nut and over the valve's stem. The aligners shall be designed to facilitate valve box base centering, to resist box shifting, to prevent backfill material from interfering with valve operation and to allow surface water to drain out. Valve box aligners shall be "Posi-Cap" or approved equal.

D.) Tapping Sleeves and Gate Valves - When shown on the plans tapping sleeves and gate valves (TS&V) shall be furnished and installed. Tapping sleeves shall be of ductile iron construction or stainless steel construction with ductile iron flange. Tapping valves shall be designed for connection to a tapping sleeve on one end and shall be MJ on the other end. Valves shall be as specified above. Prior to ordering the tapping sleeve and valve, the Contractor shall verify by test pit the size of the water main to be tapped.

Tapping sleeve and valve shall be installed while the main remains fully charged, avoiding the need to interrupt service to the water system. The tapping machine shall be properly disinfected prior to being used. The pipe coupon shall be retracted by the tapping machine.

Tapping sleeve and valves shall only be installed by experienced and approved specialty contractors with experience in this type of work.

## 823.03 INSTALLATION

Installation shall follow the general AWWA standard for installation of pipe and fittings - AWWA C600. The only exception is that backfill material for buried valves shall have no stones larger than 2" in diameter. Installation shall also follow the manufacturer's latest recommendations. Care shall be taken to insure that the valve box base is supported by compacted select backfill rather than the valve body. Valve boxes shall be centered over the operating nut and installed plumb. Install a Posi-Cap device on valve prior to installing valve box.

## 823.04 METHOD OF MEASUREMENT

Gate Valves with boxes shall be measured by the number of units of each size, complete and accepted in place.

## 823.05 BASIS OF PAYMENT

This item includes all labor, materials and equipment required to furnish and install gate valves with boxes as described in the contract documents. This includes: valves, gaskets, bolts, mechanical joint restrainers, valve boxes, posi-caps, and installation. Removal of the valve box (when delineated on the plans) shall be incidental to the appropriate valve pay item. Site work is incidental to the applicable water main. Test pits for tapping sleeves and valves are incidental to the TS&V. Valves on hydrant assemblies are incidental to the hydrant assembly and not paid for under the following items.

Payment shall be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 823.335 | 4" Gate Valve with Box | each |
| 823.3251 | 8" Gate Valve with Box | each |
| 823.3252 | 10" x 8" Tapping Sleeve & Valve with Box | each |
| 823.33 | 6" Gate Valve with Box | each |

SPECIAL PROVISION
SECTION 824
HYDRANT ASSEMBLIES

## 824.01 GENERAL

Furnish and install the fire hydrant assemblies as specified in the contract documents.

## 824.02 MATERIAL

Acceptable hydrants shall be:

Mueller Centurion Model A-423
Metropolitan 94
Waterous Pacer WB-67
Approved Equal

Hydrants shall have 5-1/4" main valve. The correct depth of bury for each hydrant shall be obtained without the use of extension kits.

Obtain the following information from the Owner prior to ordering hydrants:

1. Size of operating nuts
2. Type of threads for hose and steamer nozzles

Two safety flange repair kits and one operating wrench shall be supplied to the Owner.

## 824.03 HYDRANT BRANCH MAIN

Branch main shall be 6 inch ductile iron per Special Provision Section 822. Joints or fittings shall not be allowed between hydrant gate valve and hydrant boot without Engineer's approval. All fittings and joints (if allowed) shall utilize mechanical joint restrainers.

## 824.04 HYDRANT BRANCH MAIN GATE VALVE

Hydrant branch main gate valves shall be installed directly on the hydrant anchoring tee per Special Provision Section 823.

## 824.05 INSTALLATION

Obtain approval of final hydrant locations from Utility District prior to installation. Hydrant shall be installed plumb with pumper connection facing access to hydrant. Hydrant breakaway connection shall be installed no more than 6 inches or less than 4 inches above finish grade. Hydrant assemblies shall utilize hydrant-anchoring tees. Centerline of hydrant to branch valve centerline shall be 3 feet minimum. Valve box top shall be 3 inches maximum under shoulder or unpaved area, or flush with pavement. Thrust blocks shall be installed behind hydrant as shown on the drawings. Paint exposed hydrant to conform to Owner's color standard. Paint exposed hydrant to conform to Owner's color standard (Sherwin Williams Pro Industrial Urethane Alkyd Enamel, 2 coats @ 4 dry mils min. each.)

Lay out hydrant location and obtain approval of hydrant locations from Utility District prior to installation. Check grade of main and hydrant location as the main line approaches the hydrant tee. Adjust depth of bury as needed for proper hydrant breakaway flange elevation. Adjust with fittings on branch main as required.

## 824.06 TESTING

Hydrant branch mains and hydrants shall be tested per Special Provision Section 832 to the hydrant boot.

## 824.07 METHOD OF MEASUREMENT

Hydrants will be measured by the number of units complete and accepted in place.

## 824.08 BASIS OF PAYMENT

This item includes all labor, materials and equipment required to furnish and install hydrant assemblies as described in the contract documents. This includes: site preparation, excavation, shoring, dewatering, bedding material, hydrant, fittings, tee at main, 6” ductile iron branch main, trench insulation, 6” branch valve with box, gaskets, bolts, mechanical joint restrainers, couplings, thrust blocks, installation, indicator post with reflector, painting, flushing, testing, backfilling, surface restoration (where applicable), and compaction. Payment is for a complete hydrant assembly as shown on the contract drawings.

Payment shall be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 824.30 | Hydrant Assemblies | each |

SPECIAL PROVISION
SECTION 825
WATER SERVICES

## 825.01 GENERAL

Furnish and install water services as specified in the contract documents. Each home or business along the route of the water main replacement shall receive a new water service including corporation, service line and curb stop with box. Water services shall be as specified in this Section and shown on the details on the drawings.

## 825.02 MATERIAL

All service brass shall conform to AWWA C-800. The pack joint end connection shall consist of a Buna-N beveled gasket for watertight fit and an independent, slip-clamp locking device which is grooved on the inside for additional restraint.

A.) Copper Tubing -- Copper tubing shall be Type K as manufactured by Revere or Bridgeport Brass, or approved equal. Tubing shall conform to ASTM B-88 and AWWA C-800. Tubing shall be of the diameters shown on the drawings. Unless otherwise noted, individual house services shall be 3/4" in diameter.

B.) Corporations -- Corporations shall be ball valve type. Corporation inlets shall have AWWA taper and outlets shall have a compression pack joint. Unless otherwise noted, corporations for individual house services shall be 3/4". Corporations shall be manufactured by Ford or McDonald, or approved equal. Corporation taps to PE mains of all sizes shall utilize an electro-fusion saddle. Corporation taps to PVC mains of all sizes or ductile iron mains 6 inches and smaller shall utilize a service saddle. All corporations larger than 1 inch shall utilize a service saddle.

C.) Curb Stops -- All curb stops shall be ball valves as manufactured by Ford or McDonald, or approved equal. Curb stops shall have solid one-piece tee head and stem. Curb stops shall have copper packed joints on inlets and outlets. Curb stops shall not have drains. Unless otherwise noted, curb stops for individual house services shall be 3/4".

D.) Curb Boxes -- Curb boxes shall be cast iron extension type with arch pattern base. Curb box tops (covers) shall come complete with pentagon brass plug and shall be marked "Water." A ½" stainless steel service box rod shall be included. All curb stop box tops shall be threaded. No setscrew type box tops shall be utilized. Curb stop boxes shall be of sufficient length to not require extensions. Curb boxes for 1" and larger curb stops shall have heavy design foot piece.

E.) Service Saddles -- Service saddles shall have ductile iron (65-45-12) body and double strap type. Straps shall be 304 (18-8) SS with Teflon coated threads. Saddle body shall have 10 mils of fusion applied nylon coating. Saddles for PVC piping shall be pre-formed at the factory to the exact pipe size to avoid over-stressing the pipe during installation. Corporation taps to PVC or HDPE mains of all sizes or ductile iron mains 6" and smaller shall utilize a service saddle. All corporations larger than 1" shall utilize a service saddle.

## 825.03 INSTALLATION

Following successful testing and acceptance of the new water mains, connect the new services to the existing water services on the customer side of the curbstop. Installation shall follow the general AWWA standards and manufacturers latest recommendations. Curb stops and boxes for individual services shall be installed at the right-of-way limit. Curb boxes shall be installed plumb with the box lid installed flush with the finish grade. Curb stops and boxes shall be supported so that they do not put pressure on the service line. Copper tubing shall be bedded with 8" of clean sand bedding (from 4" below to 4" above the pipe).

Water service pipes and curb stops shall be installed with the same amount of cover as specified for the associated water main (6'-0" unless noted otherwise on the plans). Connections to existing service pipes which have less cover than required shall be done with copper tubing and couplings on the private side of the curb stop.

Flush the service line prior to connecting to existing services. Pressurize the service line and inspect for leaks prior to backfilling. All corporations requiring a service saddle shall be installed prior to pressure/leakage test (Section 832). All water services shall be continuous (no 3-part couplings allowed) from the corporation to the curb stop.

## 825.04 PIPE LOCATING SYSTEM

Conductive Trace Wire and Non-Detectable Warning Tape shall be installed on all pipes in accordance with Section 835 and as shown on the plans.

## 825.05 1" BLOWOFFS

Permanent 1" blowoffs shown on the plans shall be considered equal to a short side water service for payment purposes.

## 825.06 METHOD OF MEASUREMENT

Services shall be measured per long side or short side water service completed. Service related work for testing and disinfection purposes is incidental to the testing or disinfection and will not be paid for as services.

825.07 BASIS OF PAYMENT

A.) Long Side Water Services - This item includes all labor, materials and equipment required to install long side water services (where the water service crosses the street center line and extends to the opposite right-of-way line) as shown on the plans. Services may be completed by either open excavation or trenchless methods. This includes: all required site work, site preparation, excavation, drilling and receiving pits, drilling, 2" CTS HDPE carrier pipe for trenchless installations, 3/4" or 1" copper water service pipe, saddle, tap, corporation, curb stop, curb box, connection to existing service, trench insulation at corporation tap, bedding, backfill, compaction, cleanup and surface restoration (including gravel surface, loam and seed and erosion control).

B.) Short Side Water Services - This item includes all labor, materials and equipment required to install short side water services (where the water service does not cross the street center line but extends to the near side right-of-way line) as shown on the plans. This includes: all required site work, site preparation, excavation, 3/4" or 1" copper water service pipe, saddle, tap, corporation, curb stop, curb box, connection to existing service, bedding, backfill, compaction, cleanup and surface restoration (including gravel surface, loam and seed and erosion control).

Payment will be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 825.441 | Short Side Water Services | each |
| 825.4411 | Long Side Water Services | each |

SPECIAL PROVISION
SECTION 827A
REMOVAL OF STRUCTURES
REMOVE ABANDONED WATER LINE

## 827A.01 GENERAL

This project includes work near and on existing transite/asbestos cement pipe. Comply with all Federal, State and local regulations regarding disturbing, modifying or working on existing asbestos utility pipes. Abandon intact AC pipe in place as described below. Broken AC pipe, or AC pipe that is in the way of utilities, shall be removed and disposed of as described below.

The existing asbestos cement water main, which is to be discontinued, and filled with flowable fill as described herein, or removed and properly disposed of, is located throughout the project area.

## 827A.02 ABANDONMENT OF INTACT AC PIPE

Intact asbestos cement pipe (which does not interfere with utility installation) may be left in place, backfilled and filled with flowable fill. Incidental breaks totaling less than three (3) linear feet of pipe, as defined by the Maine DEP, may be left in place and backfilled. Breakage of pipe greater than that must be removed and disposed of accordingly.

Fill abandoned AC pipe with flowable fill as described below:

### A.) FLOWABLE FILL REQUIREMENTS

Flowable fill (controlled low strength material) shall be a cementitious mixture with low strength, flowable characteristics. The flowable fill shall have early setting and strength additives to allow for traffic and construction loads. Flowable fill shall have an unconfined compressive strength of between 75 psi and 150 psi at 56 days. Flowable fill shall be self leveling. Flowable fill shall be non-shrink flowable fill. Flowable fill shall have a minimum wet density of 90 pounds per cubic foot.

### B.) EQUIPMENT

Mix flowable fill in automated batch plant and deliver it to site in ready-mix trucks. Performance additives may be added at placement site if required. Use concrete or grout pumps capable of continuous delivery at the planned placement rate.

### C.) INSTALLATION

Submit flowable fill mix designs and installation procedures to Engineer at least 7 days prior to start of placement.

Completely dewater abandoned water main prior to placement of fill. Fill sections shall not exceed 500 feet in length. Contractor shall continuously place flowable fill in each section until section is full. Filling operations shall be

performed by experienced crews with equipment to monitor density of flowable fill and pressure.

Install caps on ends of each section to seal section prior to placement of fill. Pump flowable fill through injections ports that ensure flowable fill is contained in pipe. Utilize 2" PVC pipes as injection ports and vents on opposite ends to show when pipe section is full.

Place flowable fill under pressure flow conditions into properly vented open system until flowable fill emerges from vent pipes. Pump flowable fill with sufficient pressure to overcome friction and to fill pipes from downstream end to discharge on upstream end.

At the completion of filling sections, backfill and restore surface area in accordance with Contract Documents.

## 827A.03 REMOVAL, TRANSPORT AND DISPOSAL

Furnish all labor, materials, training, notifications, permits, and equipment necessary to remove, transport and dispose of sections of broken, disturbed or interfering sections of abandoned asbestos cement (Transite) water mains, as specified in the contract documents. CONTRACTOR shall remove only those sections necessary for the installation of the new utilities.

Asbestos cement pipes and fittings that are to be removed and disposed of shall be done using Best Management Practices. Best Management Practices shall include as a minimum:

- Using care to limit breakage
- If breaks occur, wet down pieces with water/detergent solution prior to entering trench or handling pieces
- Place broken pieces in 2 layers of 6 mil polyethylene bags and seal
- Place unbroken pipe and fittings, and bags with broken pieces in containers (dumpsters) that are lined with 2 layers of 6 mil polyethylene
- Container shall be labeled
- Container shall be locked when left unattended during non-working hours such as nights and weekends

Containers must be transported by a driver with a Special Non-Hazardous Waste transporters license. Disposal must be at a landfill approved by the State of Maine to accept non-friable asbestos cement pipe.

All employees who will be in the trench collecting the asbestos cement pipe and fittings shall be trained in accordance with 29 CFR 1926.1101 Class II. Contractor shall utilize all required safety equipment and procedures.

No special permits or notifications are needed provided these Best Management Practices are followed. It is recommended that the Maine DEP Asbestos Program and OSHA are notified prior to the start of construction to review requirements and proposed methods.

## 827A.03 METHOD OF MEASUREMENT

Removal and Disposal of Abandoned Asbestos Cement Pipe – The removal and disposal shall be measured to the nearest 1/10th of a ton as measured at the disposal facility and shown on their certified slips.

Filling Abandoned Mains with flowable fill – The installation of flowable fill shall be measured to the nearest cubic yard of pipe filled and properly abandoned.

## 827A.04 BASIS OF PAYMENT

Removal and Disposal of Abandoned Asbestos Cement Pipe – The accepted and measured tonnage of removed asbestos cement pipe will be paid at the contract unit price per ton complete and disposed of at the Waste Management Landfill. This includes all labor, materials, training, notifications, permits, and equipment necessary to remove, transport and dispose of Abandoned Asbestos Cement (Transite) Water Mains, as specified in the contract documents. This includes removal, transport and disposal of only the asbestos cement pipe. All excavation, maintaining trench, shoring, dewatering, backfilling, compaction, furnishing replacement material, and surface restoration are to be included as incidental work related to the installation of the piping and not the removal of the asbestos cement pipe. Furnishing replacement material to fill voids created by removal of water line shall be incidental to the removal of the Abandoned Asbestos Cement Water Line. Payment of the unit price for removal, transport, and disposal of Asbestos Cement Pipe shall be full compensation for the incidental work items needed to complete disposal of the Asbestos Cement Pipe including: removal of excessive dirt, applying water to Asbestos Cement Pipe, Containerizing broken sections, and other requirements needed to comply with **Asbestos Management Regulations**, Chapter 424.2(F)(5) and **Landfill Siting, Design and Operations**, Chapter 401.7(H)(20).

Payment shall be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 827.364 | Removal and Disposal of Abandoned Asbestos Cement Pipe | ton |
| 602.30 | Filling Abandoned Mains with flowable fill | cubic yard |

SPECIAL PROVISION
Section 827B

# TRENCH AND PIPE INSULATION

## 827B.01 GENERAL

Furnish all labor, materials, equipment and appurtenances necessary to install the trench and pipe insulation as specified in the Contract Documents Trench insulation refers to insulation board installed between mains and storm drains or over mains where cover is insufficient or where it is otherwise specified. Pipe insulation refers to insulation which completely surrounds and encases a sewer or water main.

## 827B.02 MATERIALS

A.) Trench insulation – Trench insualtion shall be extruded polystyrene plastic foam insulation board equal to STYROFOAM brand as manufactured by the Dow Chemical Company or approved equal and as meeting ASTM C-578 Type IV. Insulation shall be Dow STYROFOAM T&G, or Owens Corning Foamular 250 T&G, or equal. Insulation shall be 2” thick and have a minimum compression strength of 25 psi (ASTM D-1621).

B.) Pipe insulation - Pipe insulation shall be Trymer 2000, or approved equal, as manufactured by Dow Chemical Company. The insulation shall be 2" thick polyisocyanurate having a K-factor of 0.14, a density of 2.0 #/ft$^3$ and water absorption no greater than 0.05 #/ft$^2$. The insulation shall be tapered and shaped to surround and encase the pipe, bells and fittings in the areas specified on the plans.

C.) Pittwrap - All pipe insulation buried underground shall be weather-proofed with Pittwrap jacketing as manufactured by Pittsburgh Corning Corporation or approved equal.

## 827B.03 INSTALLATION

A.) Trench Insulation - The insulation shall be a minimum of 2 feet wide and shall extend a minimum of 6” beyond the outside edge of the pipe. The insulation thickness shall be 2” unless otherwise specified on the drawings or required by the Engineer. In general it shall be used where the top of the pipe is less than5’ below finish grade.

The insulation shall be installed on top of a smooth, flat surface of compacted select backfill or bedding. The insulation shall be 6” above the top of the pipe. Joints shall be butted tightly for maximum protection. Backfilling over the insulation shall be done by hand for the first 8” and compacted before remaining backfill is applied.

Installation for each type of insulation shall be according to the manufacturers' recommendations. In general, backfill shall be clean, dry, and be free of any material which can dissolve or harm the plastic such as petroleum products.

B.) Pipe Insulation - The pipe and insulation shall be installed to the lines and grades shown on the Contract Documents and in accordance with the manufacturer's recommendations. All jacketing shall be installed per the manufacturer's recommendations.

## 827B.04 BASIS OF PAYMENT

A.) Trench Insulation - This item includes all labor, materials and equipment required to furnish and install trench insulation as described in the contract documents. This includes insulation and installation. Measurement of each linear foot installed shall be based on a thickness of 2" and width of 2'.

B.) Pipe Insulation - This item includes all labor, materials and equipment required to furnish and install pipe insulation as described in the contract documents. This includes insulation, pittwrap jacketing and installation. Measurement shall be per linear foot of pipe insulation installed.

Payment shall be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 827.33 | Trench Insulation | linear foot |
| 822.301 | Pipe Insulation | linear foot |

SPECIAL PROVISION
SECTION 830A
MILL STREAM CROSSING

## 830A.01 GENERAL

Furnish all labor, materials and equipment necessary to install the Mill Stream Crossing as specified in the contract documents. The crossing as specified is by Horizontal Directional Drilling.

A. Alternative crossing methods – Alternative crossing methods that would be accepted are open excavation with ductile iron ball and socket pipe (8" Class 55) or open excavation with DR 9 HDPE and concrete anchors. If selected contractor proposes to use one of the alternative methods a design would need to be submitted to engineer for approval showing proposed alternative including anchors, erosion control, coffer dams, turbidity screens, details and connections. Alternative methods shall match the cover/depth of bury shown on the plans. Contractor is responsible for all permitting requirements for alternative crossing methods including compliance with the project Environmental Review Report. Some of the items that will be required if the crossing is completed by open excavation include, but are not limited to:

- Construction will take place between July 15 and October 1
- Turbidity screens shall be required upstream and downstream of trench area
- Coffer dams are required to provide a dewatered trench area across the stream
- Dewatering shall occur through a silt sock of sediment pond
- Native substrate material shall be side cast and replaced back following pipe installation
- Stream banks shall be restored to pre-construction grades and with native vegetation
- Standard US Army Corp of Engineers requirements for work within a navigable water body
- Standard Natural Resource Protection Act permit requirements for work across the resource

B. HDD Crossing - Furnish all labor, materials and equipment necessary to install and test high-density polyethylene (HDPE) pipes by the horizontal directional drilling (HDD) method. Payment for HDD shall be based on successful installation of the HDPE pipe, no payment will be made for loss or damage to drilling equipment or for unsuccessful attempts to install the pipe(s).

The HDPE pipe to be installed by HDD is shown on the project drawings and is as summarized in the following table:

| Location/Description | Pipe |
|---|---|
| Stream Crossing | 8" minimum inside diameter<br>DR 11 DIPS or IPS HDPE |

The HDPE water main shall be as specified in Section 822.

## 830A.02 REFERENCES

The following publications and/or standards may be referenced in this specification.

| | |
|---|---|
| ASTM F 1962-99 | Standard Guide for Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit Under Obstacles, Including River Crossings |
| DCCA | Directional Drilling Contractors Association Guidelines for a Successful Directional Crossing Bid Package |

## 830A.03 SUBMITTALS

- Any proposed deviations from the alignment or profile shown on the Project Drawings and the reasons for such.
- A description of the equipment to be used on the job site, including equipment used to locate the drilling head during construction.
- Technical data for proposed sleeve and inner pipes (where applicable), including calculations demonstrating suitability for installation and long-term performance.
- Material description and Data Safety Sheets for the proposed drilling slurry.
- An estimate of the volume of drilling slurry that will require off-site disposal and the location of the slurry disposal facility.
- Product Data: pipe materials, pipe fittings, and accessories (per Pipe Specification).
- Manufacturer's Certificate: Certify all pipe and fittings meet or exceed standard specifications to which the material is manufactured.
- Details of proposed pipe joining methods.
- Detailed drilling procedure for each crossing, including drill site layout and proposed schedule.

## 830A.04 DRILLING SLURRY

Bentonite based drilling slurry shall be utilized. The slurry may include polymer extenders. The slurry shall be a mixture that will harden into a stable clay substance around the outside of the pipe, leaving no voids and allowing no settlement of ground after installation. The slurry shall be recycled to minimize material and water requirements.

## 830A.05 HORIZONTAL DIRECTIONAL DRILLING

A.) Preparation – Furnish submittals as specified elsewhere. Comply with project Sitework specifications, including erosion control and traffic control. Coordinate with all affected parties, including utilities. Obtain any subsurface data needed (no additional amounts will be paid for borings or test pits). Apply for and obtain any permits needed.

B.) Drilling Slurry Containment and Disposal – Construct suitable pits and provide all necessary equipment to contain and handle the drilling slurry. Site-generated (original) material (except bituminous concrete) shall be stored on-site and used to backfill pits and

excavations. All stockpiled material shall be stored outside of wetlands buffer zones (see Drawings, where applicable).

C.) Drilling Process – Drilling shall be accomplished by a mechanical means with fluid assist. Fluid cutting will not be permitted.

Drill shall be capable of accepting a variety of cutting bits for varied soil conditions and have the ability to move small rock or ledge material out of the way by drill force.

Contractor will arrange for connection to supply water for mixing drilling fluid. Water for the staging end will be provided by Owner from a hydrant connected to the public water supply.

Owner shall have access at all times to any measuring or gauging devices used for the horizontal drill as well as any drilling logs maintained by the Contractor.

Drill bit shall be equipped with a signal generator providing constant output for continuous path monitoring.

Contractor shall locate the drill head during the drilling process and have the ability to steer the drill string to achieve the alignment indicated on the Drawings.

Drill frame shall be equipped with an electric strike safety system capable of indicating electrical contact through both current and voltage sensing. The strike system shall include warning strobe lights on both the drill frame and the power unit. Grounding mats which are bonded to the drill frame shall be provided for the operator. Appropriate safety precautions shall be observed in accordance with the device manufacturer's recommendations.

In the event that the Contractor must abandon the drill hole before completion of the crossing, the Contractor will seal the borehole and re-drill the crossing at no extra cost to Owner.

D.) Drilling Alignment – The drilling alignment shall conform to the lines and grades indicated on the Drawings. The deflection of the alignment shall not exceed the appropriate permissible pipe deflections as specified by the pipe manufacturer. Contractor shall keep Owner informed as to any deviations from the proposed alignment which may be occurring and the reasons for such. Ground entry and exit angles shall be as listed on the Drawings, plus or minus 2 degrees unless specifically noted. The actual exit point shall be no more than 10 feet left or right of the alignment for the proposed exit point. The actual exit point shall be no more than 10 feet short of or 30 feet beyond the proposed exit point. Variation from the above parameters shall not be permitted without authorization of the Owner.

E.) Pullback – Contractor shall provide adequate support rollers for the pipe line during pullback of the pipe string into the pre-drilled hole. The rollers and cradles shall be of a type that will be of sufficient number to prevent over-stressing due to sag bends during the pullback procedure. Pipe shall be sealed and then attached by means of a swivel pull device to a back reamer of sufficient size for the finished borehole diameter. Do not bend the pipe beyond manufacturer's specifications. The bending radius to be used shall be approved by Owner if less than shown on the Drawings. Contractor shall limit the longitudinal pull on the pipe line so as not to exceed the allowable pipe strength specified by the pipe

manufacturer. Contractor will continuously monitor the longitudinal pulling forces during pipe line pullback.

F.) As-Built Drawings – Contractor will provide as-built drawings of the complete crossing.

G.) Staging Area – Contractor shall coordinate with local authorities and property owners regarding staging for pipe and equipment. Do not block drives or streets without approval of the party having jurisdiction.

## 830A.06 REMOVE EXISTING AC BRIDGE CROSSING

Following placing the new water main and stream crossing in service remove and dispose of the existing insulated bridge crossing as noted on the project drawings. Comply with Section 827A when dealing with any asbestos cement pipe.

## 830A.07 METHOD OF MEASUREMENT

This is a lump sum bid item. Partial payments will be based on the percentage of work satisfactorily completed.

## 830A.08 BASIS OF PAYMENT

This item includes all labor, materials and equipment required to furnish and install the stream crossing pipe across the Mill Stream by horizontal directional drilling or open excavation methods. This includes: site work, drilling and receiving pits, drilling, HDPE pipe, fusing, installation of pipe, bedding, all fittings and adapters, bends, testing, disinfection, backfill, removal of the existing bridge crossing, cleanup and surface restoration. If the crossing is done by alternative methods this item shall also include: design, permits, erosion control, all construction activities, coffer dams, anchors, turbidity curtains and any other items or work required.

Payment will be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 830.103 | Mill Stream Crossing | Lump Sum |

SPECIAL PROVISION
SECTION 830B
MECHANIC STREET RAILROAD CROSSING

## 830B.01 GENERAL

Supply all labor, materials and equipment necessary to install the new water main under the Pan Am Railways railroad crossing on Mechanic Street. This includes the casing pipe, carrier pipe, spacers, excavations, shoring, etc.

Contractor shall coordinate with Pan Am Railways and execute a Railroad Service Agreement with Pan Am Railways and complete the work in accordance with the Railroad Service Agreement. A Sample Railroad Service Agreement is attached.

All costs associated with the crossing, including any fees for the Railroad Service Agreement and any required flagging during the work shall be the responsibility of the Contractor.

## 830B.02 REQUIREMENTS

- The proposed crossing must be installed in conformance with the standards set forth by the American Railway Engineering and Maintenance of Way Association (AREMA) Manual for Railway Engineering and Pan Am Standard Railroad Specifications.
- Any work activities that affect Railroad ROW and/or Operations during this project will require prior Railroad approval and the presence of a Railroad Flagman/ Inspector. All work will be coordinated accordingly with train movements.
- The Contractor will be required to submit a final piping installation plan detailing the materials and construction procedures to be utilized during the portions of this project affecting Railroad property as well as provide certification from the manufacturer that the pipes meet AREMA requirements.
- It should be noted that the Contractor may be required to work continuously during pipe installation activities while the face of the pipes are located within the Railroad loading influence line. Excavation and Backfill processes must be performed in conformance with applicable Railroad Specifications.
- Pan Am is **not** a DIGSAFE member utility, therefore any utility marking services that may be required must be coordinated through the Engineering Department and cleared in the field by our Communication and Signal (C&S) Department.
- The Contractor will be required to execute a Standard Railroad Service Contract and provide an acceptable Railroad-protective insurance policy to the Pan Am Real Estate Department. A sample copy of a Standard Railroad Service Contract is included. There is a $500.00 document preparation fee associated with the Railroad Service Contract.
- The crossing materials shall be as specified on the Project Drawings.

## 830B.03 METHOD OF MEASUREMENT

This is a lump sum bid item.

## 830B.04 BASIS OF PAYMENT

This item includes all labor, materials and equipment required to furnish and install the steel railroad crossing sleeve and 8” diameter Class 52 water main as described in the contract documents. This includes: all site work (site preparation, excavation, backfill, etc.), ledge probes, jacking and receiving pits, jacking of casing, sleeve pipe, water main, restraining gaskets, casing spacers, grouting of ends of sleeve, flowable fill, and installation. This item also includes all railroad costs for flagging, inspection, insurance, railroad agreement, railroad coordination, etc.

Payment will be made under:

| Pay Item | | Pay Unit |
|---|---|---|
| 830.102 | Mechanic Street Railroad Crossing | Lump Sum |

# Sample
# Railroad Service Agreement

# and

# Standard Railroad Specifications

**MAINE CENTRAL RAILROAD COMPANY**
**SPRINGFIELD TERMINAL RAILWAY COMPANY**

**RAILROAD SERVICE AGREEMENT**

**AGREEMENT** made as of this day of , 2011 by and between the "Railroad" as described in paragraph 1.A. below and "Contractor" as described in paragraph 1.B. below.

In consideration of the mutual promises, covenants and undertakings contained herein, and other good and valuable consideration, the receipt and sufficiency of which the parties hereby expressly acknowledge, the parties agree as follows:

1. The following terms shall have the meanings specified whenever used in this Agreement:

**A. RAILROAD:**

Maine Central Railroad Company and
Springfield Terminal Railway Company
c/o Pan Am Railways Incorporated
Iron Horse Park
North Billerica, Massachusetts 01862

**B. CONTRACTOR:** The following described party, together with its agents, servants, employees, subcontractors, suppliers, consultants and engineers:

**C. PROPERTY:**

**D. RAILROAD SERVICES:** The Railroad shall perform such services and provide such equipment and materials which it deems, in its sole discretion, necessary for the safe performance by the Contractor of the Construction Project, including, without limitation, the performance of all preliminary, office and field engineering; internal record keeping and accounting; railroad flagging and signaling; restoration of replacement of the Railroad's track or ballast; and all railroad inspection; and the Railroad shall provide all railroad communication equipment and materials.

**E. INITIAL RAILROAD SERVICE FEE:** To be invoiced by the Engineering Department of the Railroad.

**F. CONSTRUCTION PROJECT:**

**G. TERM:** One (1) year from the date first written above or completion of the construction project whichever occurs first.

**H. EXHIBITS:** The following Exhibits annexed hereto are hereby incorporated in this Agreement by this reference:

Intentionally omitted. [Add plan showing well locations as Exhibit]

2. **ENTRY UPON RAILROAD PROPERTY.** The Railroad hereby agrees to permit the Contractor to enter upon the Railroad Property for the Term for the limited purpose of performing the Construction Project, provided that the Contractor complies with all of the several terms, conditions and covenants contained in this Agreement, the Construction Project hereinabove described, and all work requirements and directions of the Vice President-Engineering of the Railroad, or his authorized representative (the "Vice President-Engineering").

3. **RAILROAD SERVICES**. In connection with the Contractor's performance of the Construction Project, the Railroad shall provide the Railroad Services.

4. **RAILROAD SERVICE FEES**. In consideration of the performance by the Railroad of the Railroad Services, the Contractor shall pay to the Railroad the Initial Railroad Service Fee. The Railroad hereby reserves the right to require additional Railroad Service Fees for Railroad Services necessary to complete the Construction Project. The Contractor further agrees to pay the Railroad a non-refundable fee of five hundred ($500.00) dollars as reimbursement for the costs and expenses incident to the preparation of this Agreement.

5. **NOTICE OF INTENTION TO COMMENCE THE CONSTRUCTION PROJECT**. The Contractor shall provide the Vice President - Engineering of the Railroad with seven (7) days' notice in advance of its intention to commence the Construction Project.

6. **COVENANTS OF THE CONTRACTOR**. The Contractor hereby covenants and agrees that it will observe the following affirmative and negative covenants during the term of this Agreement:

(a) The Contractor shall perform the Construction Project in a safe, good and workmanlike manner and in accordance with the description of the Construction Project herein contained and all work requirements and directions of the Vice President-Engineering.

(b) The Contractor shall permit to enter upon the Railroad Property and perform the Construction Project only those contractors and/or subcontractors having, in the exclusive opinion of the Vice President-Engineering, sufficient engineering, construction expertise and financial ability to accomplish the Construction Project. The Railroad shall have the right to disqualify any contractor or subcontractor employed by the Contractor from performing the Construction Project for the following reasons:

(i) Failure to pay in full Monies owed to the Railroad; or

(ii) Use of, or reputation for use of, construction methods or procedures which, in the exclusive opinion of the Vice President-Engineering, are unsafe, technically deficient, or not in compliance with the Railroad's standards.

Any contractor or subcontractor so disqualified by the Railroad shall immediately vacate the Railroad Property and shall not re-enter the Railroad Property without the prior written approval of the Vice President-Engineering.

(c) The Contractor shall not, at any time, except with the prior approval of the Vice President-Engineering, enter upon the Railroad Property or perform the Construction Project without the presence at the Railroad Property of a foreman, inspector, or flagman as may be assigned or required by the Vice President-Engineering, in his exclusive opinion.

(d) The Contractor shall procure and maintain, at its sole cost and expense, the following insurance coverage's naming the Railroad, exactly as designated in Paragraph 1, as insured, in forms and with companies and coverage limits satisfactory to the Railroad:

(i) Comprehensive General Liability Insurance protecting against liability from bodily injury or property damage arising out of the Construction Project.

(ii) Workers Compensation and Occupational Disease Insurance, as required by law.

(iii) Automobile Liability Insurance covering all motor vehicles used about or in connection with the Construction Project.

(iv) Railroad Protective Liability Insurance.

(e) The Contractor shall procure and maintain, at its sole cost and expense, all permits, licenses and approvals of all governmental authorities and all consents of all third parties necessary for the Contractor to perform the Construction Project. The Contractor shall comply with, and shall cause the Railroad Property to comply with, all applicable local, county, state or federal laws, codes or ordinances of any description, including, but not limited to: zoning, building, engineering, sanitation, health or environmental laws, particularly, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. 9601, et seq., as amended) ("Law"). The Contractor shall promptly remedy any breach of any Law.

7. **INTERRUPTION OF CONSTRUCTION PROJECT**.

(a) Upon demand by the Railroad, the Contractor hereby agrees to immediately:

(i) Cease performance of the Construction Project;

(ii) Clear the Railroad Property of all personnel, materials, equipment or obstructions and render the Railroad Property safe for the passage of trains; and

(iii) Vacate the Railroad Property until such time as the Railroad gives notice of permission to re-enter the Railroad Property.

(b) In the event that the Contractor ceases work on the Construction Project, for any reason whatsoever, the Contractor shall provide notice of the same to the Vice President-Engineering and shall leave the Railroad Property in a safe condition, satisfactory to the Vice President - Engineering.

8. **PRIORITY OF RAILROAD OPERATIONS**. The operations of the Railroad, Pan Am Railway Incorporated ("Pan Am"), the affiliated railroads of Pan Am, (in general, and those running through the Railroad Property in particular) and the operations of the lessees, licensees and other lawful occupants of the Railroad Property shall have absolute priority over the performance of the Construction Project. The Contractor hereby agrees that the Construction Project shall be performed only at such hours and times and under such conditions as specified by the Railroad. Such hours and times shall be subject to change without prior notice to the Contractor. The Contractor hereby acknowledges and agrees that the Contractor may suffer delays and increased costs due to said agreed upon priority of the Railroad's and others' operations. Causes for such delay and increased cost may include: (i) the inability or default of the Railroad in providing adequate personnel to allow work; and/or (ii) passage of trains. The Parties agree that had the Contractor desired to proceed with the work without being subject to the aforementioned delay and increased cost, the terms of this Agreement would have been substantially different, and per diem costs to the Contractor, depending on job location, rail traffic, etc. could have far exceeded the Railroad Service Fee.

9. **INDEMNIFICATION OF RAILROAD.**

(a) The Contractor hereby agrees to defend with counsel acceptable to the Railroad, release, indemnify, protect and hold harmless the Railroad, Pan Am, their affiliates, successors and assigns, their lessees and licensees and all other lawful occupants of the Railroad Property from and against any and all loss, cost, damage, or expense arising in any way out of the Construction Project or Contractor's use or possession of the Railroad Property including, without limitation, (i) all claims or suits for loss or damage to property of any description or natural resources, (ii) personal injury, sickness or death of any person, (iii) delay damages, (iv) consequential damages, (v) all matters relating to the alteration of wetlands, (vi) breach of any Law, particularly any alleged release of oil or hazardous or otherwise harmful materials or substances (including, but not limited to costs for assessment, remedial or response actions), or (vii) other damages arising in any way out of the Construction Project or Contractor's use or possession of Railroad Property, whether such loss, cost, damage, or expense is suffered by the Contractor, the Railroad, Pan Am, their affiliates, successors, assigns, lessees, licensees and all other lawful occupants of the Railroad Property, or the officers, agents employees, or representatives of any of them, or by others.

(b) In addition to the provisions above, the Contractor expressly agrees to assume responsibility for; and to release Railroad, Pan Am and their affiliates from, any and all claims, costs, suits, judgments arising from or related to any actual, alleged or potential violations of any federal, state or local environmental law, regulation, rule, ordinance, or code discovered by Contractor in a manner that relates in any way to the performance of the Construction Project.

(c) In the event that at any time during the performance of the Construction Project, the Contractor discovers any contamination or suspected contamination that triggers notification requirements under any applicable federal, state or local law, rule, regulation or ordinance, the Contractor agrees to promptly notify the Railroad, who will assume responsibility for performing any notification, if necessary, in accordance with good environmental practice, and if any further investigation or remediation is determined necessary the Railroad will perform the investigation and remediation. The Contractor agrees to to indemnify the Railroad of any and all costs associated with the environmental contamination. The Contractor shall be held solely responsible for the cost of any necessary investigation and/or remediation

10. **GENERAL PROVISIONS.**

(a) Any notice or other communication in connection with this Agreement shall be deemed duly served when received (or upon attempted delivery if delivery is not accepted). Such notice shall be in writing and either delivered by hand or mailed (i) by registered or certified mail (return receipt requested) with the United States Postal Service, or (ii) by Federal Express or other overnight mail carrier furnishing evidence of receipt to the sender, at the address for such party set forth in Section 1. Either party may change the address at which it is to receive notices by notice given as hereinabove set forth.

(b) Failure of the Railroad to complain of any act or omission hereunder on the part of the Contractor, no matter how long the same may continue, shall not be deemed a waiver by the Railroad of any of its rights hereunder. No waiver by the Railroad at any time, express or implied, of any breach of any provision of this Agreement shall ever be deemed a waiver of a breach of any other provision of this Agreement, or a consent to any subsequent breach of the same or any other provision. If any action by the Contractor shall require the Railroad's consent or approval, such consent or approval on any particular occasion shall not be deemed a consent or approval of any other action on any subsequent occasion.

(c) If any provision of this Agreement, or the application thereof to any person or circumstance, shall to any extent be invalid or unenforceable, the remainder of the Agreement, or the application of such provision to persons or circumstances other than those as to which it is invalid or unenforceable, shall not be affected. Each provision of this Agreement shall be deemed valid and enforceable to the fullest extent permitted by law.

(d) The Section headings contained in this Agreement are for reference and convenience only and in no way define or limit the scope and contents of this Agreement or in any way affect its provisions.

(e) This Agreement constitutes the entire understanding between the parties relating to the subject matter hereof, supersedes all prior oral and written offers, negotiations, proposals, representations, agreements, courses of dealing and understandings between the parties relating to the subject matter hereof and is subject to no understandings, conditions, or representations other than those expressly stated herein.

(f) This Agreement may only be amended or modified by a writing signed by all of the parties hereto which refers to this Agreement.

(g) This Agreement shall be governed by and construed in accordance with the laws of the state wherein the Railroad Property is located.

(h) Neither party to this Agreement shall be responsible to the other for delays or errors in its performance or other breach of this Agreement occurring solely by reason of circumstances beyond its control, including acts of civil or military authority, national emergencies, fire, labor disputes, flood or catastrophe, acts of God, insurrection, war, riots, delays of suppliers, or failure of transportation, communication or power supply.

(i) The parties agree that neither this Agreement nor any memorandum thereof shall be recorded at any registry of deeds and that any such recording by the Contractor shall constitute a breach of this Agreement.

(j) If the Contractor executes this Agreement through an agent or representative, each such agent or representative hereby warrants and represents to the Railroad that he is authorized to execute, acknowledge, and deliver this Agreement on behalf of the Contractor and to thereby bind the Contractor to the same.

(k) This Agreement: (i) may be executed in any number of counterparts, each of which when executed by all parties to this Agreement shall be deemed to be an original, and all of which counterparts together shall constitute one and the same instrument, (ii) shall take effect as a sealed instrument, (iii) shall bind and inure to the benefit of the parties and their respective legal representatives, successors and assigns, except that the Contractor may not delegate any of its obligations under this Agreement or assign this Agreement without obtaining the Railroad's express written consent, and (iv) is not intended to inure to the benefit of any third party beneficiary.

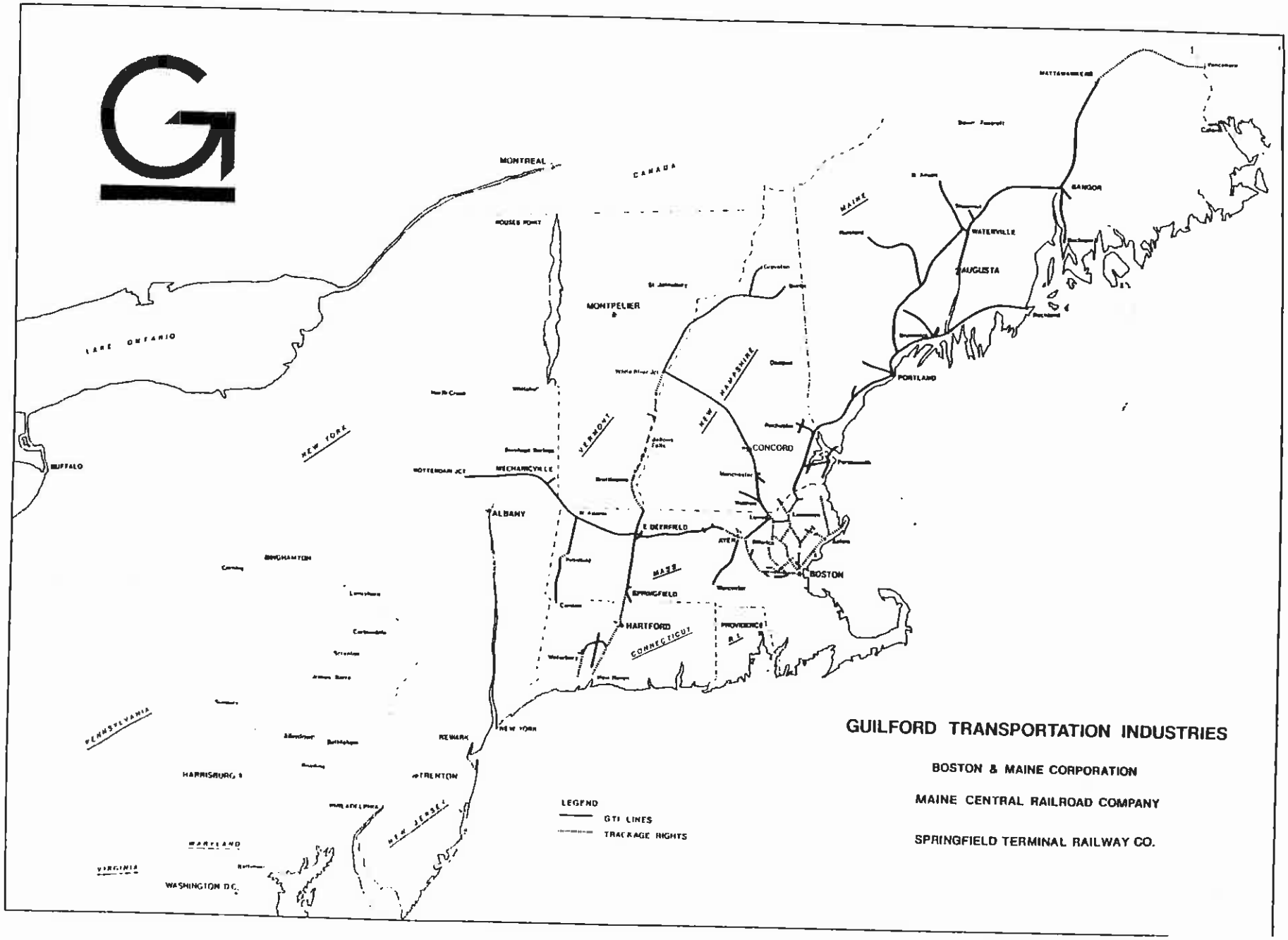
(l) This Agreement shall not be construed as creating or vesting in the Contractor any estate in the Railroad Property, but only the limited right of using the Railroad Property in the manner hereinabove described.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as a sealed instrument as of the date first set forth above by their duly authorized representatives.

**MAINE CENTRAL RAILROAD COMPANY**
**AND**
**SPRINGFIELD TERMINAL RAILWAY COMPANY**

By:_____
George S. Thayer,
Chief Design Engineer
Iron Horse Park
N. Billerica, MA 01862

By:_____
Name:_____
Title:_____
Address:_____


GUILFORD TRANSPORTATION INDUSTRIES
BOSTON & MAINE CORPORATION
MAINE CENTRAL RAILROAD COMPANY
SPRINGFIELD TERMINAL RAILWAY CO.
LEGEND
GTI LINES
TRACKAGE RIGHTS
MONTREAL
CANADA
LAKE ONTARIO
BUFFALO
NEW YORK
ROUSES POINT
MONTPELIER
VERMONT
NEW HAMPSHIRE
CONCORD
MAINE
WATERVILLE
AUGUSTA
BANGOR
PORTLAND
ROTTERDAM JCT
MECHANICVILLE
ALBANY
E DEERFIELD
AYER
BOSTON
MASS
SPRINGFIELD
HARTFORD
CONNECTICUT
PROVIDENCE
R.I.
BINGHAMTON
PENNSYLVANIA
HARRISBURG
REMARK
TRENTON
NEW YORK
NEW JERSEY
MARYLAND
VIRGINIA
WASHINGTON D.C.

# SECTION I

## General Information

GTI - Rail Division
Engineering Department

January 1995

# I. GENERAL INFORMATION

## A. Initial Contact:

Guilford Transportation Industries-Rail Division (Boston and Maine Corp., Maine Central Railroad Company, and the Springfield Terminal Railway Company) owns rail lines in New England and the Northeast. In 1976 a portion of the Boston and Maine was sold to the Massachusetts Bay Transportation Authority, but is still operated over by the B&M. The B&M System and the MBTA sale is shown on the system map entitled "Boston and Maine Corp. - Lines Operated", at the end of this section. The sale consists of lines primarily North and Northwest of Metropolitan Boston, within the Commonwealth of Massachusetts.

Projects contemplated upon lines owned by GTI-Rail Division, the submission of plans and specifications should be made to the attention of the Chief Engineer-Design and Construction, GTI-Rail Division at the operating Railroad's headquarters. Also all legal documents and agreements should be made with the operating Railroad.

If the project contemplated is upon a line owned by the MBTA and operated by the B&M, the submission of plans and specifications should be made to the Chief Engineering Officer - Railroad Operations, MBTA, Ten Park Plaza, Boston, MA 02116 with a copy to the B&M Attention: Chief Engineer-Design and Construction.

## B. Plans and Specifications:

1. SCOPE: It is the intent of the Railroad to eliminate or minimize any risk involved with construction on or affecting Railroad property. Therefore, we require Railroad approval of the plans and specifications for all phases of the proposed construction. The initial submission should contain three (3) sets for review with a later submission of five (5) sets for final approval.

2. PLANS: The plans are to show all the work which involves the Railroad (in some cases a partial set of the construction plans may be acceptable). They should contain a location map, a plan view of the project, with appropriate profiles and cross sections, and sufficient details. The proposed construction is to be located with respect to top of rail and centerline of track. Also to be included on the plan is Railroad stationing, property lines and subsurface soil conditions. The subsurface soils information is to be in the form of boring logs with the borings located on the plan view. (Please familiarize yourself with Railroad policy with regards to obtaining borings on Railroad property in Section II A.)

All pipe laid on Railroad property, adjacent to operating tracks must be capable of withstanding Railroad live loading. If reinforced concrete pipe is used, it must be Class 5 R.C. Pipe.

Pipe sleeves under Railroad tracks and along the right-of-way shall not be less than 5'6" below the base of rail. Under secondary or industry tracks, this distance may be reduced to 4'6", pending Railroad approval. The length of the pipe sleeve shall be the greatest length produced from the Railroad requirements shown on sheet 5, entitled "GTI Rail Division Requirements for Minimum Jacking Sleeve Lengths".

3. SPECIFICATIONS: The Specifications contained in Section III are the Standard Specifications of the Railroad. They apply to all types of construction work on the Railroad, including steel sleeves 30" in diameter and greater. These specifications are to be included in their entirety as a special section on the job specifications.

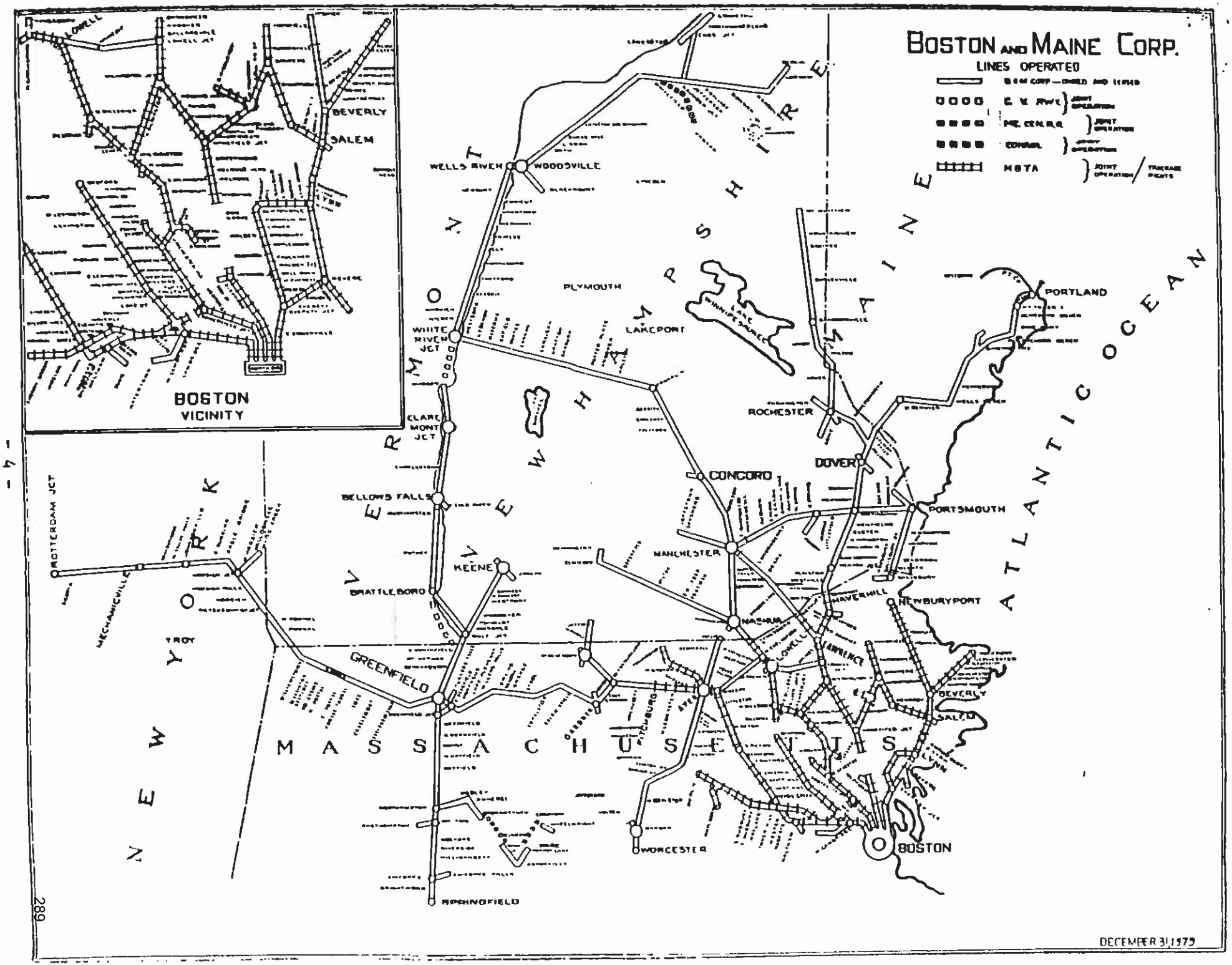
NOTE: Railroad specifications are the minimum requirements. In the event the contract specifications or drawings demand more stringent requirements, then, pending Railroad approval, the more stringent requirements will prevail.

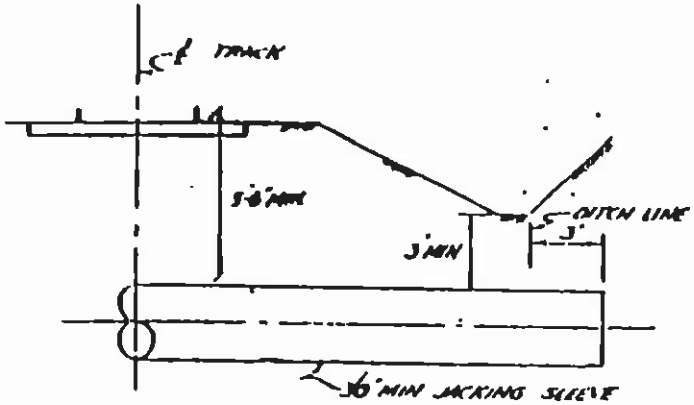
On those projects which occur on MBTA property, the Standard MBTA Specifications are to be used.

C. Review of Plans and Specifications:

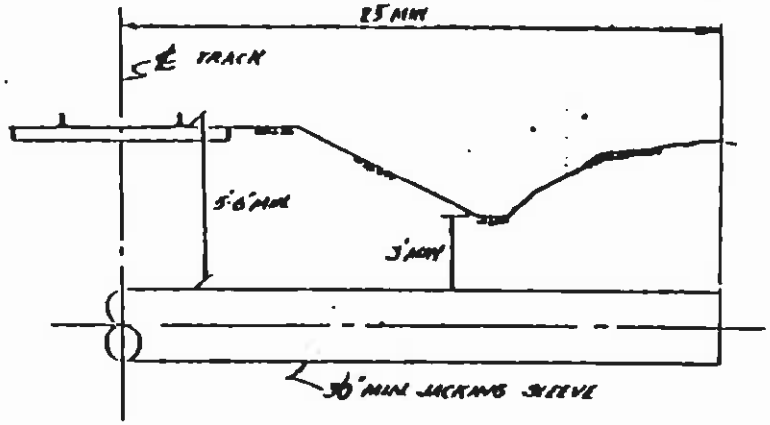
1. Project on lines owned by GTI-Rail Division:

The GTI-Rail Division requires payment for services it renders in the review of plans, specifications and related consultations, to cover crossings, bridges, pipes, conduits, wires, etc. which encroach upon Railroad property. An initial advance lump sum nonrefundable deposit to cover the cost of review is required. The amount of deposit will be determined at the time the initial submission is made. No work will proceed until the advance deposit has been received. Checks are to be made payable to the Operating Railroad.

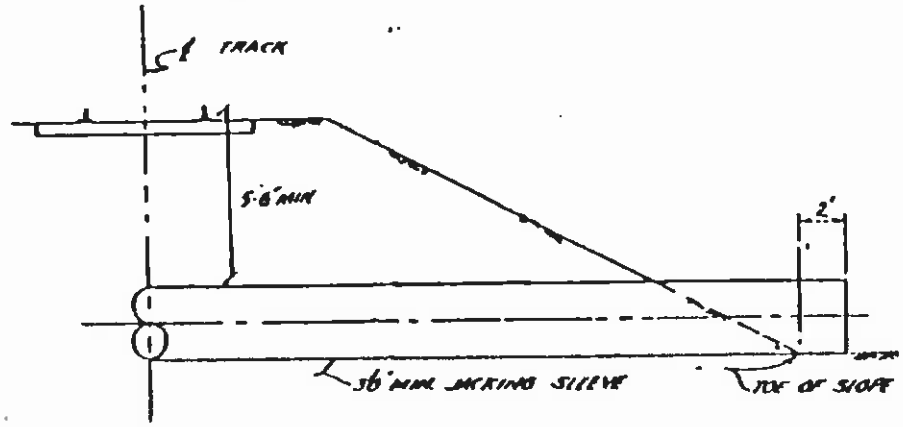

BOSTON AND MAINE CORP.
LINES OPERATED
B&M CORP.—OWNED AND LEASED
C. V. RWY.
ME. CENTRAL R.R.
CONRAIL
MBTA
JOINT OPERATION
TRACKAGE RIGHTS
BOSTON VICINITY
LOWELL
BEVERLY
SALEM
WELLS RIVER
WOODSVILLE
PLYMOUTH
LAKEPORT
LAKE WINNIPESAUKEE
WHITE RIVER JCT
CLAREMONT JCT
BELLOWS FALLS
KEENE
BRATTLEBORO
ROTTERDAM JCT
MECHANICVILLE
TROY
GREENFIELD
SPRINGFIELD
WORCESTER
FITCHBURG
ROCHESTER
DOVER
CONCORD
PORTSMOUTH
MANCHESTER
NASHUA
HAVERHILL
NEWBURYPORT
LOWELL
LAWRENCE
BEVERLY
SALEM
LYNN
BOSTON
PORTLAND
VERMONT
NEW HAMPSHIRE
MAINE
NEW YORK
MASSACHUSETTS
ATLANTIC OCEAN
DECEMBER 31, 1979



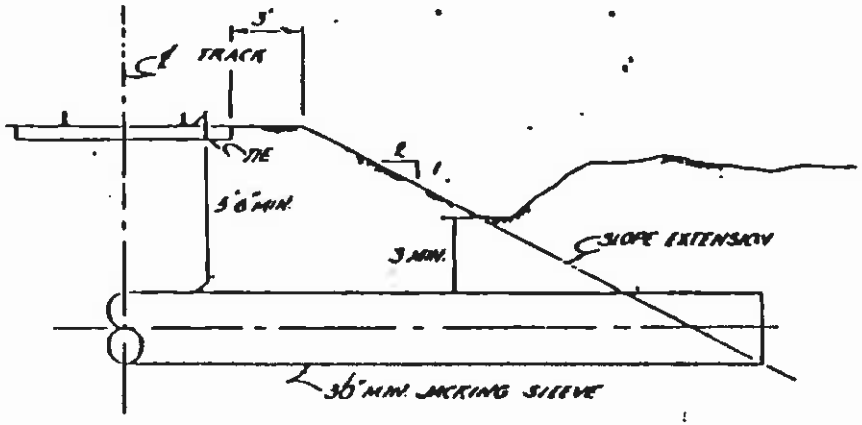

NO 1 GTI RAIL DIVISION REQUIREMENT
FOR MINIMUM JACKING SLEEVE LENGTH




NO 3 GTI RAIL DIVISION REQUIREMENT
FOR MINIMUM JACKING SLEEVE LENGTH




NO 2 GTI RAIL DIVISION REQUIREMENT
FOR MINIMUM JACKING SLEEVE LENGTH




NO 4 GTI RAIL DIVISION REQUIREMENT
FOR MINIMUM JACKING SLEEVE LENGTH

FOUR OF G.T.I RAIL DIVISION REQUIREMENTS FOR MINIMUM JACKING SLEEVE LENGTHS WITH 25 FEET AS THE ABSOLUTE MIN. FROM NEAREST ℄ TRACKS USE WHICH EVER OF THE FOUR (4) REQUIREMENTS GIVES THE GREATEST LENGTH.

SHEET 5

**SECTION II**

Railroad Policies

GTI - Rail Division
Engineering Department

January 1995

## II. GTI-RAIL DIVISION POLICIES

A. Regarding obtaining Surface and Subsurface Information.

In the event that the property either operated or owned by GTI-Rail Division has to be entered upon to obtain surface or subsurface information, the contractor is to obtain Railroad approval for the boring locations, Railroad insurance, and execute the Standard Railroad Service Contract, prior to any work being done. The Assistant Chief Engineer-Design should be contacted for information and initiation of this process.

B. Regarding Underground Utility Crossings.

1. Method of Installation:

(a) In a Public Way: (No work shall be done without engineer approval by the Railroad and a Railroad Inspector present.)

1. In or immediately adjacent to an at-grade crossing which has been rebuilt within the past ten (10) years, no open cuts will be allowed. All sleeves will be installed by the jacking method.

2. In or immediately adjacent to an at-grade crossing not scheduled for rebuilding, the preferred method of installation is by jacking. As an alternate, the sleeve may be installed by open cut within an acceptable depth, with strict adherence to the backfill specifications, and with the Owners paying for the complete rebuilding of the crossing, train schedule permitting.

3. In or immediately adjacent to an at-grade crossing scheduled for rebuilding the preferred method of installation is by jacking. As an alternate, within seven (7) calendar days of the scheduled date of the crossing reconstruction, the sleeve may be installed by open cut within an acceptable depth, train schedule permitting. Strict adherence shall be made to the backfill specifications, which provides the Railroad with written certification from a testing lab or P.E. registered in the State in which the work is performed, that the backfill density requirements of the Railroad specifications have been met or exceeded.

(b) Not within a Public Way:

The accepted method of crossing the Railroad is by jacking of a pipe sleeve under the Railroad. Only upon written request, will an alternate of open cut be given consideration. The engineering decision shall be based upon, but not limited to track usage, depth of excavation, soil conditions, and physical constraints. In the event an open cut is allowed, the contractor or owner must adhere to the following items:

1. The installation is to be a continuous operation and performed to a Railroad approved schedule.

2. No work shall be done without a Railroad inspector present.

3. Strict adherence to the Railroad backfill specifications by the Owner or its Contractor.

4. The Owner or its Contractor is to provide the Railroad with a non-refundable, lump sum payment for after the fact maintenance. The determination of this amount is based on the individual situation. No work will be allowed until this payment is received. This payment is not to be confused with the advance deposit for Railroad protective services (flagging, inspection, etc.) also required from the Owner or its Contractor before he enters upon Railroad property. Checks are to be made payable to the Operating Railroad.

C. Regarding Insurance and Indemnification.

1. Before entering upon the property of the Railroad, the Owner or its Contractor shall:

(a) Provide insurance, as specified in the Railroad specifications. The original policy shall be provided to the Railroad. No work will be done until an acceptable policy has been received and approved. The Railroad shall have the right to increase the limits of liability for both public liability and property damage during the life of the agreement.

(b) The Contractor shall execute the Standard Railroad Service Contract which indemnifies and saves harmless the Railroad.

(c) Provide payment as shall be required by the Railroad's Real Estate Department for preparation of agreement(s) and review of insurance.

D. Regarding Legal Documents for Temporary and Permanent Installations on:

1. Railroad lines:

(a) Outside Public Ways:

The Owner is required to either obtain a License Agreement, which includes an annual rental charge, that may be terminated by either party by giving 30 to 90 days notice, or the Owner may apply for a permanent easement, which may or may not be approved by the Railroad.

(b) Within Public Ways:

The Owner is not required to obtain an easement from the Railroad or obtain a License Agreement from the Railroad to install a facility. However, the Owner is required to conform with the requirements of C-1a and C-1b, and the Standard Railroad Specifications.

2. MBTA lines operated and controlled by the Railroad:

(a) Outside Public Ways:

The legal requirements will be as determined by the MBTA, however, the Railroad will require written notification and copy of the Agreement from the MBTA, indicating that their requirements have been met prior to any work being initiated, and the Contractor to sign a Standard Railroad Service Contract.

(b) Within Public Ways:

The Owner is not required to obtain an easement from the Railroad or to obtain a License Agreement from the Railroad to install a facility. However, the Owner is required to conform with the requirements of C-1a and C-1b, and the Standard Railroad Specifications.

E. Regarding Permanent Clearances.

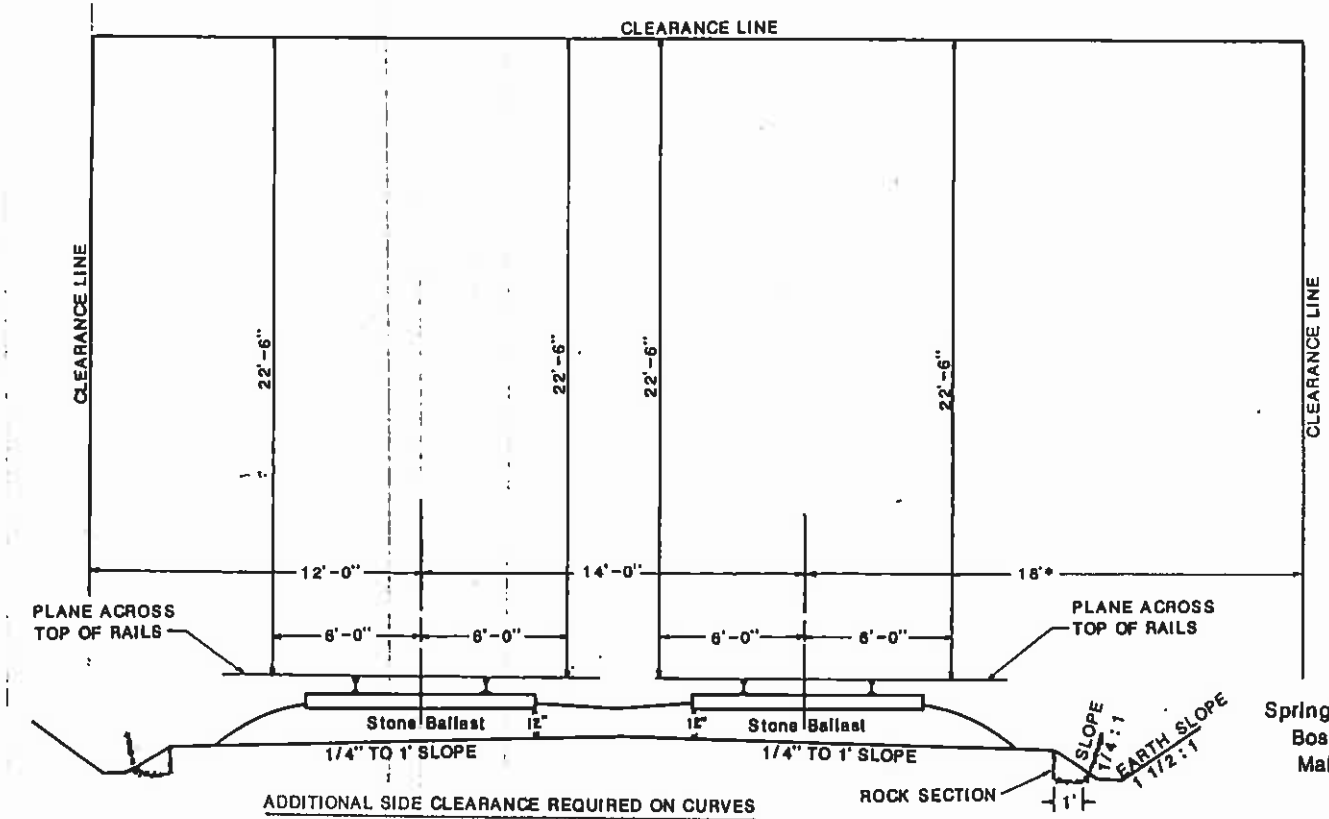
1. Railroad lines: All clearances for new construction shall adhere to those dimensions set forth on Standard Plan N8 entitled "GTI Rail Division Clearance Diagram New Bridge Construction". A copy of this standard plan is located at the end of this section. In the event of existing, severe limitations, the standard dimensions may be revised, at the discretion of the Railroad, but only upon written request.

2. MBTA lines operated and controlled by the Railroad.

(a) Railroad freight operations - The Chief Engineering Officer, GTI Rail Division, shall determine the clearance dimensions required for freight service.

| Drawn MAT | |
|---|---|
| Checked | |
| Issue | Date |
| B | 4/89 |

N8




ADDITIONAL SIDE CLEARANCE REQUIRED ON CURVES

INCREASE SIDE CLEARANCES 1 1/2" ON EACH SIDE AND 3" BETWEEN TRACKS FOR EACH DEGREE OF CURVE

ON SUPERELEVATED TRACK, THE TRACK CENTERLINE IS PERPENDICULAR TO A PLANE ACROSS TOP OF RAILS

* ACCESS ROAD LOCATION DETERMINED BY SITE SPECIFICS

NOTE: OVERHEAD BRIDGE DRAINAGE MUST BE DIRECTED AWAY FROM THE RAILROAD

Guilford Rail System
Springfield Terminal Railway Co.
Boston & Maine Corporation
Maine Central Railroad Co.

Clearance Diagram
for
New Overhead Bridge Construction

George S Thayer
CHIEF ENGINEER-DESIGN & CONSTRUCTION

VICE PRESIDENT-ENGINEERING

# Standard Railroad Specifications

Pan Am Railways/
Springfield Terminal Railway Company
Engineering Department

Office of Vice President Engineering
N. Billerica, Massachusetts
Date: 01/2011

SPECIFICATIONS RELATING TO WORKING WITHIN PREMISES OF
PAN AM RAILWAYS / SPRINGFIELD TERMINAL RAILWAY CO.

No other section of the Project Specifications shall supersede or modify this Section entitled: SPECIFICATIONS RELATING TO WORK WITHIN PREMISES USED AND CONTROLLED BY PAN AM RAILWAYS / SPRINGFIELD TERMINAL RAILWAY COMPANY.

## 1. DEFINITIONS:

1.1 Railroad: The work "Railroad" means Pan Am Railways and the Springfield Terminal Railway Company, their successors or assigns and their officers, agents and servants.

1.2 Owner: The word "Owner" means the individual, utility, government, or corporation who has title to the structure to be constructed upon property owned, controlled, or adjacent to the Railroad.

1.3 Utility: The work "Utility" includes public or private communication, water, sewer, electric, gas and petroleum companies.

1.4 Government: The work "Government" includes State, Town, City, County and other forms of Municipal Government.

1.5 Corporation: The word "Corporation" shall mean any firm duly incorporated under laws of a State Government.

1.6 Individual: The work "Individual" shall mean any party, which is not defined by 1.3, 1.4, or 1.5.

1.7 Contractor: The work "Contractor" means the individual, partnership, firm, corporation or any combination thereof, or joint venture, contracting with either a Utility, Government, Corporation or Individual, for work to be done on Railroad Property.

1.8 Owner or it's Contractor: The term "Owner or its Contractor" as used in these specifications shall not affect the responsibilities of each party as set forth in the Project Specifications.

1.9 Chief Engineering Officer of the Railroad: The Vice President of Engineering or Chief Engineer-Design and Construction or their authorized representatives at the Railroad.

## 2. SCOPE:

These specifications intend to provide for safeguards to the property owned or controlled by the Railroad and to its operations upon that property during construction operations by the Owner or its Contractor.

## 3. GENERAL:

3.1 Before entering upon Railroad premises or property used and controlled by the Railroad:

3.1.1 The Owner or its Contractor shall fully inform himself of all requirements of the Railroad as pertains to the specific project and shall conduct all his work accordingly. Any questions relating to the requirements of the Railroad should be directed to the representative of the Chief Engineer-Design and Construction at the Operating Railroad.

3.1.2 The Owner or its Contractor shall execute the Railroad's Standard Service Contract, and shall provide the Real Estate Department of the Railroad the insurance specified under Section 8.

3.1.3 The Owner or its Contractor shall take note that if an excavation is to be made within a 2 to 1 slope line commencing 3 feet from the end of tie, he shall submit for approval by the Chief Engineering Officer of the Railroad, his proposed method of preventing the soil from running.

3.1.4 The Owner or its Contractor shall furnish detailed plan, for falsework, bracing, sheeting, or other supports adjacent to the tracks for approval by the Chief Engineering Officer of the Railroad, and the work shall be performed in accordance with the approved plans. All plans and calculations shall be stamped by a Professional Engineer registered in the State in which the work is to be performed.

3.1.5 The Owner or its Contractor shall furnish to the Chief Engineering Office of the Railroad for approval complete sequence and plans with sufficient detail for checking, for the installation of, temporary supporting or removal of all members or structures above track. All such work shall be performed in

accordance with the approved plans and specifications. All plans and calculations shall be stamped by a Professional Engineer registered in the State in which the work is to be performed.

3.1.6 The Owner or its Contractor shall give written notice to the representative of the Chief Engineer-Design and Construction of the Railroad at the headquarters of the Operating Railroad at least seven (7) days in advance of starting work or locating equipment at the site. In addition, the Contractor shall give notice on the Wednesday prior to the week he proposed to do work which might cause any hazard, as described under Sections 4.

3.1.7 The Owner or its Contractor shall make all necessary arrangements with the Railroad before entering upon Railroad premises, or Property used and controlled by the Railroad.

3.1.8 The Owner or its Contractor shall at all times be aware that the Railroad may at any time withhold entry due to lack of flagging and/or inspection personnel.

3.2 After entering upon Railroad premises or property used and controlled by the Railroad.

3.2.1 The Owner or its Contractor shall have in his possession on the job site the contract plans and specifications, which bear the stamp of approval of the Railroad's Engineer of Design. The Owner or its Contractor shall conduct all his work according to these plans and specifications.

3.2.2 All work shall be performed and completed in a manner fully satisfactory to the Railroad's Chief Engineering Officer or his authorized representatives. Railroad inspection of the work shall be permitted at all times and the Owner of its Contractor shall cooperate fully with the Railroad representatives.

3.2.3 All equipment used by the Owner or its Contractor on Railroad premises or property used and controlled by the Railroad may be inspected by the Railroad and shall not be used if considered unsatisfactory by the Railroad's representative. Equipment of the Owner or its Contractor to be used adjacent to tracks shall be in first class condition so as to positively prevent

any failure that world cause delay in the operation of trains or damage to Railroad facilities. Equipment shall not be placed or put into operation adjacent to a track without first obtaining the permission of the Railroad.

3.2.4 Operators of such equipment may be examined by the Railroad representative to determine their fitness. If it is determined that they are unfit to work then the owner or its Contractor shall remove them from service.

3.2.5 Cranes used for lifting loads over Railroad property shall be rated at 150% of the load based on the crane manufacturer's load chart.

3.2.6 If the Chief Engineering Officer of the Railroad deems it necessary, the Owner or its Contractor shall furnish and erect in close proximity to the site of the work a suitable, furnished shelter with lights, heat, telephone, etc., exclusively for Railroad personnel mentioned previously.

3.2.7 The Owner or its Contractor's work shall be performed in such manner that the tracks, traffic and appurtenances of the Railroad will be safeguarded. He shall ascertain and comply with the requirements of the Railroad relative to his work on or adjacent to Railroad premises and except as permitted, he shall keep the tracks clear of obstruction.

3.2.8 Open excavations shall be suitable planked over when construction operations are not in progress.

3.2.9 Blasting will be permitted under or adjacent to tracks only after proof that blasting is required and all methods have been submitted to and approved by the Railroad's Chief Engineering Officer.

3.2.10 The Owner or its Contractor shall be fully responsible for all damages arising from his failure to comply with the requirements of these specifications.

3.2.11 If the specifications of the Railroad and the Consulting firm differ, then that which is more stringent shall prevail.

## 4. HAZARDS:

4.1 The Contractor's attention is called to the fact that the work under the Contract shall be performed adjacent to Main Line track, telephone lines, telegraph lines, signal lines and electric supply lines of the Railroad. A maximum speed of about __ miles per hour will be considered as prevailing for the operation of trains of the Railroad at this project.

4.2 An operating track shall be considered fouled and subject to hazard when any object or operation is or can be brought nearer than 15 feet to the centerline of the track. Specific site conditions may increase this dimension at the discretion of the Chief Engineer or his authorized representative.

4.3 A signal line or communication line shall be considered fouled and subject to hazard when any object is brought nearer than 4 feet to any wire or cable.

4.4 An electrical supply line shall be considered fouled and subject to hazard when any object is brought nearer than 10 feet to any wire of the line.

4.5 Cranes, trucks, power shovels, or any other equipment shall be considered as fouling a track, signal line, communication line, or electric supply line when working a position that failure of equipment with or without load could foul the track, signal line, communication line or electric supply line.

4.6 Railroad operations will be considered subject to hazard when explosives are used in the vicinity of Railroad premises, during the driving or pulling of sheeting for footings adjacent to a track, when erecting structural steel across or adjacent to a track, when operations involve swinging booms or chutes that could in any way come nearer than 15 feet to the center line of a track or wire line. None of these or similar operations, therefore, shall be carried on during the approach or passing to a train.

4.7 When, in the opinion of the Chief Engineering Officer of the Railroad or his representative the construction work would cause hazard to the safe operation of trains or to other Railroad facilities including any communication lines on Railroad premises, the Railroad will employ the necessary qualified employees to protect its trains and other facilities.

## 5. CLEARANCES:

Staging, falsework, or forms shall at all times be maintained with a minimum vertical clearance of 22'-6" above top of the rail and a minimum side clearance of 10'-0" from the center line of track, unless otherwise approved by the Railroad.

## 6. PROTECTION/INSPECTION SERVICES:

6.1 If deemed necessary by the Chief Engineering Officer of the Railroad the Railroad will furnish and assign an engineer(s) or inspector(s) for general inspection purposes or for general protection of Railroad property and operations during construction. Prior to start of any work on the Railroad, the Owner or its Contractor shall submit a deposit in the amount required by the Railroad. The Railroad may request additional deposits if projected expenses exceed the initial deposit amount. If the Railroad expenses are less than the amount of deposit, the Railroad will refund the balance to the Owner or its Contractor, after receipt of a written request. The Railroad will provide at its sole discretion such personnel, as it deems necessary or advisable because of the project. The Railroad reserves the right to request additional deposits as project work progresses. All checks are to be made out to the Operating Railroad.

6.2 If the Railroad determines that flagmen are necessary, the number required shall be on duty at the site during the hours of hazard described under Section 4. No work shall be performed if flagmen are required but not on duty.

6.3 It shall be the responsibility of the Owner or its Contractor to keep the Railroad informed at all times, and prior to such times, when the Owner or its Contractor shall be working on, above, or adjacent to

the Railroad creating the hazards described under Section 4. Failure of the Owner or its Contractor to give the Railroad suitable advance notice of hazardous operation shall result in the stoppage of the Owner's or its Contractor's work by the Railroad, until such time as sufficient number of flagmen are on duty at the site.

## 7. EXTRA-CONTRACT SERVICES:

7.1 Temporary and permanent changes of tracks and telephone lines, telegraph lines, signal lines, and electric supply lines made necessary by or to clear the permanent work of the Contractor will be made or caused to be made by the Railroad at the expense of the Owner or its Contractor.

7.2 All other changes made or services furnished by the Railroad, at the request of the Owner or its Contractor will be at the Owner's or its Contractor's expense.

## 8. INSURANCE:

8.1 At his sole expense the Owner or its Prime Contractor shall obtain, prior to working adjacent to Railroad premises and entry upon Railroad premises and keep in force during entire term of the work and for six (6) months subsequent to completion of work the following amounts and kinds of insurance. All policies shall be written for a minimum of one (1) year.

(A) Work on Pan Am Railways Property:

1. Contractors Public Liability - $5,000,000/$10,000,000

2. Contractors Property Damage Liability - $5,000,000/$10,000,000

3. The named insured shall be written exactly as follows: "Maine Central Railroad Co. and The Springfield Terminal Railway Company, their affiliates, successors and assigns,c/o Pan Am Railways, Iron Horse Park, North Billerica, Massachusetts 01862."

(B) Work on MBTA Property or other property where MBTA passenger service is operated:

1. Contractors Public Liability - $5,000,000/$10,000,000

2. Contractors Property Damage Liability - $5,000,000/$10,000,000

3. The named insured shall be written exactly as follows: "Pan Am Railways and The Springfield Terminal Railway Company, their affiliates, successors and assigns, and the Massachusetts Bay Transportation Authority."

The insurance shall be a Railroad Protective Liability Policy in a form acceptable to the Railroad.

The ORIGINAL insurance policy shall be furnished to the Real Estate Department of the Railroad at least ten (10) days prior to commencement of work. The Railroad shall have the right to increase the limits of liability for both public liability and property damage during the life of the agreement.

**9. EXCAVATION:**

9.1 The Owner or its Contractor shall furnish detail plans for falsework, bracing, shoring, sheeting, or other supports for excavation adjacent to the tracks to the Chief Engineering Officer of the Railroad for approval. The work shall be performed in accordance with the approved plans. No approval shall be given until the advance deposit (Item 6.1) has been received.

9.2 Open excavations shall be suitably planked over when construction operations are not in progress.

9.3 As excavation approaches pipes, conduits, or other underground structures on or adjacent to Railroad property, digging by machinery shall be discontinued and the excavation shall continue by means of hand tools.

9.4 All existing pipes, poles, wires, fences, property line markers, and other structures, which the Railroad's Chief Engineering Officer decides must be preserved in place without being temporarily or permanently relocated shall be carefully protected for damage by the Owner or its Contractor. Should such items be damaged, they shall be restored by the Railroad, at the Owner's or its Contractor's sole

expense, to at least as good condition as that in which they were found immediately before the work was begun.

9.5 If any excavation is taken beyond the work limit indicated on the approved plans or prescribed herein, the Owner or its Contractor shall backfill and compact as prescribed herein at his own expense.

9.6 The Railroad IS NOT a Dig Safe member utility. The Owner or its Contractor must contact the Railroad to have sub surface Railroad utility lines marked out prior to any excavation on Railroad property. The Owner or its Contractor will conduct all work so as to carefully protect Railroad utilities and will be responsible for all costs incurred to repair or replace Railroad utilities that are damaged.

## 10. BACKFILL:

10.1 Material

The material shall consist of stones, rock fragments and fine, hard durable particles resulting from the natural disintegration of rock. The material shall be free from injurious amounts of organic matter. The wear shall be not more than 60 percent. The material shall consist of a mixture of stones or rock fragments and particles with 95 to 100 percent passing the 3 inch sieve and 25 to 70 percent passing the No. 4 sieve. Not more than 15 percent of the material passing the No. 4 sieve shall pass the No. 200 sieve.

10.2 Backfilling

10.2.1 All backfill material adjacent to a pipe shall be approved soil. Backfill material shall be free from hard lumps and clods larger than 3-inch diameter, and free from large rocks or stumps. Uniformly fine material shall be placed next to any pipe liable to dent or break.

10.2.2 All backfill material shall be compacted at near optimum moisture content, in layers not exceeding 6 inches in compacted thickness by pneumatic tampers, vibrator compactors, or other approved means to the base of the Railroad subgrade. Care shall be

exercised to thoroughly compact the backfill under the haunches of the pipe to insure that the backfill soil is in intimate contact with the side of the pipe. Fill at the sides of the pipe may be compacted by rolling or operating heavy equipment parallel with the culvert, provided care is taken to avoid displacement or injury of the pipe. Material in the vicinity of pipes shall be compacted to not less than 95 percent of AASHO T 99, Method C. The Contractor will be required to supply, to the job site, ballast stone as prescribed herein to be installed by the Railroad.

10.3 The Owner or its Contractor shall provide testing, if requested by the Railroad, through the use of a testing lab or Professional Engineer registered in the State in which the work is performed, to insure that the in place density of the backfill meets or exceeds the requirements of Section 10.2.2. Written certification of the tests shall be given to the Railroad immediately upon completion of the test.

All Items Not addressed by the Pan Am Railways/ Springfield Terminal Railway Company's Standard Railroad Specifications shall conform to the latest specifications set forth in the American Railway Engineering and Maintainence of Way Association's Manual for Railway Engineering.

SPECIAL PROVISION
SECTION 832
WATER MAIN TESTING

## 832.01 GENERAL

Furnish all labor, materials and equipment required to test all water mains as specified in the contract documents. All water mains and hydrant branch mains shall be tested prior to acceptance. The cost of testing is incidental to pipe installation.

## 832.02 QUALIFICATIONS AND NOTIFICATIONS

The Testing Contractor and personnel shall be approved by the Water Utility and Engineer. All flushing and testing shall be done in the presence of the Engineer. The Contractor shall notify the Engineer at least 48 hours in advance of any testing.

## 832.03 WATER PRESSURE TESTING

The testing methods described in this section are specific for water-pressure testing. These procedures should not be applied for air-pressure testing because of the serious safety hazards involved. Air-pressure testing is not allowed.

## 832.04 TAPS AND APPARATUS

All taps and apparatus required for testing and disinfection shall be the responsibility of the Contractor per Sections 832 and 833. Provide taps at each high spot for expelling air. Provide taps as close to the beginning and end of the tested section as possible for injecting chlorine solution, flushing and sampling for chlorine residual.

Water for test pressure and flow shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Water Utility and Engineer. The pump, piping, connections and all necessary apparatus for conducting the test shall be furnished by the Contractor. The Water Utility may supply the gauges for the test. The Contractor shall furnish and install all necessary caps, plugs, taps, blowoffs, piping and valves needed to flush and test the pipe. The Contractor shall remove all tubing and piping from the main once all necessary testing has been completed.

## 832.05 MAINTENANCE OF SYSTEM PRESSURE AND QUALITY

Coordinate with Water Utility regarding water system flow and pressure. Utilize approved methods to prevent backflow and cross connections. Pressure gauges shall be installed on existing pipes that are used to feed flushing water to the new main to allow for pressure monitoring. System pressure shall be maintained at a minimum of 20 psi, or as required by Water Utility.

All valves separating the new main from the existing system shall be kept closed at all times until the main is accepted. Valve operation for flushing, testing, etc. shall require approval of the Water Utility.

## 832.06 PROCEDURE

After the pipe has been laid and completely backfilled the Contractor shall perform the water main test. The test shall be in accordance with AWWA C600 except as herein specified. The test shall have a minimum duration of 2 hours. The test pressure at all points in the pipe shall be at least 1.5 times the maximum working pressure in the pipe. The minimum test pressure at any point in the pipe shall be 150 psi. Test pressure shall not vary by more than 5 +/- psi for the duration of the test.

Each valved section of pipe shall be slowly filled with water and all air shall be expelled from the pipe. If permanent air vents are not located at all high points, the Contractor shall install corporations at such points (per 832.04) so the air can be expelled as the pipe is filled with water.

Flush all water mains and hydrants prior to testing. Flushing shall be accomplished by removing the main hydrant valves and bonnets and flushing water through the full open hydrant barrels. Water mains 6” and larger that do not utilize fire hydrants shall be flushed through an unrestricted 6” (min.) pipe. Water mains smaller than 6” shall be flushed through an unrestricted pipe no smaller than the main being flushed.

After expelling all air from the main and properly flushing it, the specified test pressure shall be applied. The test pressure shall be applied, based on the lowest point of the line under test and corrected to the elevation of the test gauge.

All exposed pipe, fittings, valves, hydrants, and joints shall be examined carefully during the test. Any damaged or defective pipe, fittings, valves, hydrants, or joints that are discovered during the pressure test shall be repaired or replaced with sound material, and the test shall be repeated.

## 832.07 FINAL CONNECTIONS

Any pipe section or connection that is longer than 18 feet shall be capped or plugged and tested per Section 832.

Final connections shall be made, secured and restrained. Final connections shall be as short as possible but shall not exceed 18 feet in length. Leave final connections exposed until pipe has been pressurized for at least 10 minutes and examine carefully for any signs of leakage.

## 832.08 ACCEPTANCE

Leakage shall be defined as the quantity of water that must be supplied into the new pipe or any valved section thereof to maintain pressure within 5 psi of the specified test pressure for the duration of the test.

Acceptance shall be determined on the basis of allowable leakage. If any test of pipe discloses leakage greater than that specified in the following table, the Contractor shall, at his own expense, locate, make approved repairs and retest as necessary until the leakage is within the specified allowance. Visible leakage from connections shall not be allowed.

The allowable leakage from the water main shall be as specified in the following table:

| Pipe Diameter (inches) | Allowable Leakage (gph / 1000 ft) |
|---|---|
| 4 | 0.37 |
| 6 | 0.55 |
| 8 | 0.74 |
| 10 | 0.92 |
| 12 | 1.10 |
| 16 | 1.47 |

## 832.09 BASIS OF PAYMENT

Water Main Testing is incidental to pipe installation as specified in Section 822.

SPECIAL PROVISION
SECTION 833
WATER MAIN DISINFECTION

## 833.01 GENERAL

Furnish all labor, materials and equipment required to disinfect all water mains as specified in the contract documents. All water mains shall be disinfected prior to acceptance. All work under this Section shall comply with AWWA C-651 except as herein specified. The cost of disinfection is incidental to pipe installation.

## 833.02 QUALIFICATIONS AND NOTIFICATIONS

The Testing Contractor and personnel shall be approved by the Water Utility and Engineer. All disinfection shall be done in the presence of the Engineer. The Contractor shall notify the Engineer at least 48 hours in advance of any disinfection.

## 833.03 TAPS AND APPARATUS

All taps and apparatus required for testing and disinfection shall be the responsibility of the Contractor per Sections 832 and 833. Provide taps at each high spot for expelling air. Provide taps as close to the beginning and end of the tested section as possible for injecting chlorine solution, flushing and sampling for chlorine residual.

Chlorine solution for disinfection shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Water Utility and Engineer. The pump, piping, connections and all necessary apparatus for conducting the test shall be furnished by the Contractor. The Contractor shall furnish and install all necessary caps, plugs, taps, blow-offs, piping and valves needed to flush, test and disinfect the pipe. The Contractor shall remove all tubing and piping from the main once all necessary testing and disinfection has been completed.

## 833.04 MAINTENANCE OF SYSTEM PRESSURE AND QUALITY

Coordinate with Water Utility regarding water system flow and pressure. Utilize approved methods to prevent backflow and cross connections. Pressure Gauges shall be installed on existing pipes that are used to feed water to the new main to allow for pressure monitoring. System pressure shall be maintained at a minimum of 20 psi, or as required by Water Utility.

All valves separating the new main from the existing system shall be kept closed at all times until the main is accepted. Valve operation for flushing, testing, disinfection etc. shall require approval of the Water Utility.

833.05 PREVENTATIVE MEASURES

Prevent contaminating materials from entering the pipe during installation. Plugs shall be used where necessary during installation of the pipe to prevent the pipe from being contaminated with mud and silt. All gaskets and lubricants shall conform to AWWA standards. In no case shall petroleum based lubricants be used.

833.06 FLUSHING AND TESTING

The water main shall be flushed and tested prior to disinfection as outlined in Section 832 WATER MAIN TESTING.

833.07 APPLICATION OF CHLORINE

The required method of disinfecting the water main is by uniform continuous injection of a hypochlorite solution into the main while flowing one source. The chlorine shall be fed into the main at a measured rate so that the entire main is chlorinated to a concentration of 50 mg/l. The chlorine shall be retained in the main for at least 24 hours. At the end of 24 hours the chlorine concentration in the main shall be at least 25 mg/l.

The Slug Method and the Tablet Method of disinfection shall not be allowed. Hypochlorite solutions shall utilize sodium hypochlorite (liquid), solutions shall not be mixed from tablets or powdered hypochlorite.

833.08 FINAL FLUSHING OF MAINS

After the required retention period, the heavily chlorinated water shall be flushed from the main until the chlorine concentration in the main is no higher than water in the system or is acceptable for domestic use. **Pressure Gauges shall be installed on existing pipes that are used to feed flushing water to the new main to allow for pressure monitoring. System pressure shall be maintained at a minimum of 20 psi, or as required by Water Utility**. The Contractor shall be responsible for the proper disposal/dechlorination of the highly chlorinated water, per Department of Human Services and DEP regulations.

833.09 BACTERIOLOGICAL TESTING

After final flushing and before the water main is placed in service, initial samples shall be collected from the water main for bacteriological testing per State of Maine regulations and AWWA specifications. Twenty-four (24) hours after collecting the initial samples, confirmation samples shall be collected. The tests shall be done in accordance with Standard Methods and shall be done by a State Certified Laboratory. If both the initial and confirmation tests show that the samples meet State coliform and bacteria standards then the main shall be placed in service.

If the initial tests fail, the main shall be reflushed and resampled. If these tests fail, the main shall be rechlorinated and the process repeated at the Contractor's expense until satisfactory results are obtained.

The Utility District or Engineer will collect the bacteriological samples and provide the testing. Samples are required at 1200 ft. maximum spacing.

## 833.10 FINAL CONNECTIONS

Any pipe section or connection longer than 18 feet shall be capped or plugged and then tested and disinfected per Sections 832 and 833.

Final connections shall be as short as possible, but shall not exceed 18 feet in length. Final connections shall be disinfected by spraying or swabbing per AWWA C651-05, 4.6.

## 833.11 BASIS OF PAYMENT

Water Main Disinfection is incidental to pipe installation as specified in Section 822.

SPECIAL PROVISION
SECTION 835
PIPE LOCATING SYSTEM

## 835.01 GENERAL

Furnish all labor, materials, and equipment necessary to install electrically continous conductive trace wire with access points and non-detectable warning tape as described in the contract documents. Electrically continous conductive trace wire shall to be used for locating pipe with an electronic pipe locator after installation.

## 835.02 MATERIALS

A.) Conductive trace for direct burial applications - Wire shall be fourteen (14) gauge minimum solid copper wire with thermoplastic insulation. Wire connectors to be 3M DBR or approved equal, and shall be watertight to provide electrical continuity.

B.) Trace wire for Horizontal Directional Drilling (HDD) applications – Wire shall be 316 SS Alloy, 49 strands, annealed by Performance Wire & Cable, Inc. or approved equal. Wire shall be 0.125" overall diameter, rated for 30 volts and 1700 lbs. yield. Insulating jacket shall be high molecular weight, high density polyethylene, 0.045" min. thickness and yellow.

C.) Trace wire access points - Trace wire access points shall be Snakepit Magnetized Trace Boxes by Copperhead Industries, LLC or approved equal.

D.) Non-detectable warning tape - Non-detectable warning tape shall be 3" minimum width, 4 mil thickness pigmented polyolefin film with a printed messgage on one side. Tape shall have a tensile strength of 3200 psi (ASTM D-882). Tape and message shall be chemically inert. Tape color and markings to match utility type (blue for water). Non-detectable warning tape shall be Terra Tape or approved equal.

## 835.03 INSTALLATION

Trace wire shall be installed on all mains and services. The wire shall be installed in such a manner as to be able to properly trace all pipes without loss or deterioration of signal or without the transmitted signal migrating off the trace wire. Trace wire shall be installed in the same trench and inside bored holes and casings with pipe during pipe installation. It shall be secured to the pipe as required to insure that the wire remains adjacent to the pipe. The trace wire shall be securely bonded together at all wire joints with an approved watertight connector to provide electrical continuity, and it shall be accessible at all trace points.

Trace wire shall be laid flat and securely affixed to the pipe at ten (10) foot intervals. The wire shall be protected from damage during the execution of the work. No breaks or cuts in the trace wire or trace wire insulation shall be permitted. At service saddles, the trace wire shall not be allowed to be placed between the saddle and the main. Except for approved spliced-in connections, trace wire shall be continous and without splices from each trace wire access point. Where any approved spliced-in connections occur, 3M DBR water tight connectors, or approved equal, shall be used to provide electrical continuity.

Trace wire access points shall be spaced in no more than five-hundred (500) feet apart. Concentrations of multiple proposed valves near pipe intersections, i.e. tees or crosses may require more than one access point. Trace wire access points shall be within public right-of way or public utility easements. Provide service tie forms and as-built location records.

At all main ends, a minimum of six (6) feet of trace wire shall be extended beyond the end of the pipe, coiled and secured for future connections. The end of the trace wire shall be spliced to the wire of a six pound zinc anode and is to be buried at the same elevation as the main.

For directional drilling, auguring or boring installations, four #14 trace wires shall be installed with the pipe and connected to the trace wire at both ends, or cad welded to iron pipes at both ends.

Spliced connections between the main line trace wire and branch or service connection trace wire shall only be allowed at tees, crosses or at copper water services where a portion of the branch connection main or service is replaced with a non iron or copper material. The branch connection trace wire shall be a single trace wire properly spliced to the main line trace wire. Where the existing branch connection is neither iron or copper, then the new branch connection trace wire shall be properly spliced to the existing trace wire on the branch connection.

At all repair locations where there is existing trace wire, the trace wire shall be properly reconnected as outlined above.

Install non-detectable warning tape two feet below finish grade and centered over new utility. Non-detectable warning tape shall be continuous with overlap at all splices and utility intersections.

## 835.04 TESTING

Contractor shall perform a continuity test on all trace wire in the presence of the Engineer or the Engineers' representative. If the trace wire is found to be not continous after testing the contractor shall repair or replace the failed segment of the wire.

## 835.05 BASIS OF PAYMENT

Pipe locating system is incidental to water main and services pipe installation as specified in Sections 822 and 825. No specific payment will be made for this item.

SPECIAL PROVISION
SECTION 836
PROJECT SIGN

## 836.01 GENERAL

Furnish and install a USDA approved project sign for the water utility portion of the work as described herein. The location of the sign shall be as directed by the Engineer. Project sign shall be installed prior to the start of any work.

## 836.02 MATERIAL

The sign shall conform with the attached sample drawing. No other contractor, subcontractor or material signs will be permitted on the sign. Sign shall be constructed of 3/4" (4' x 8') exterior grade, AB plywood.

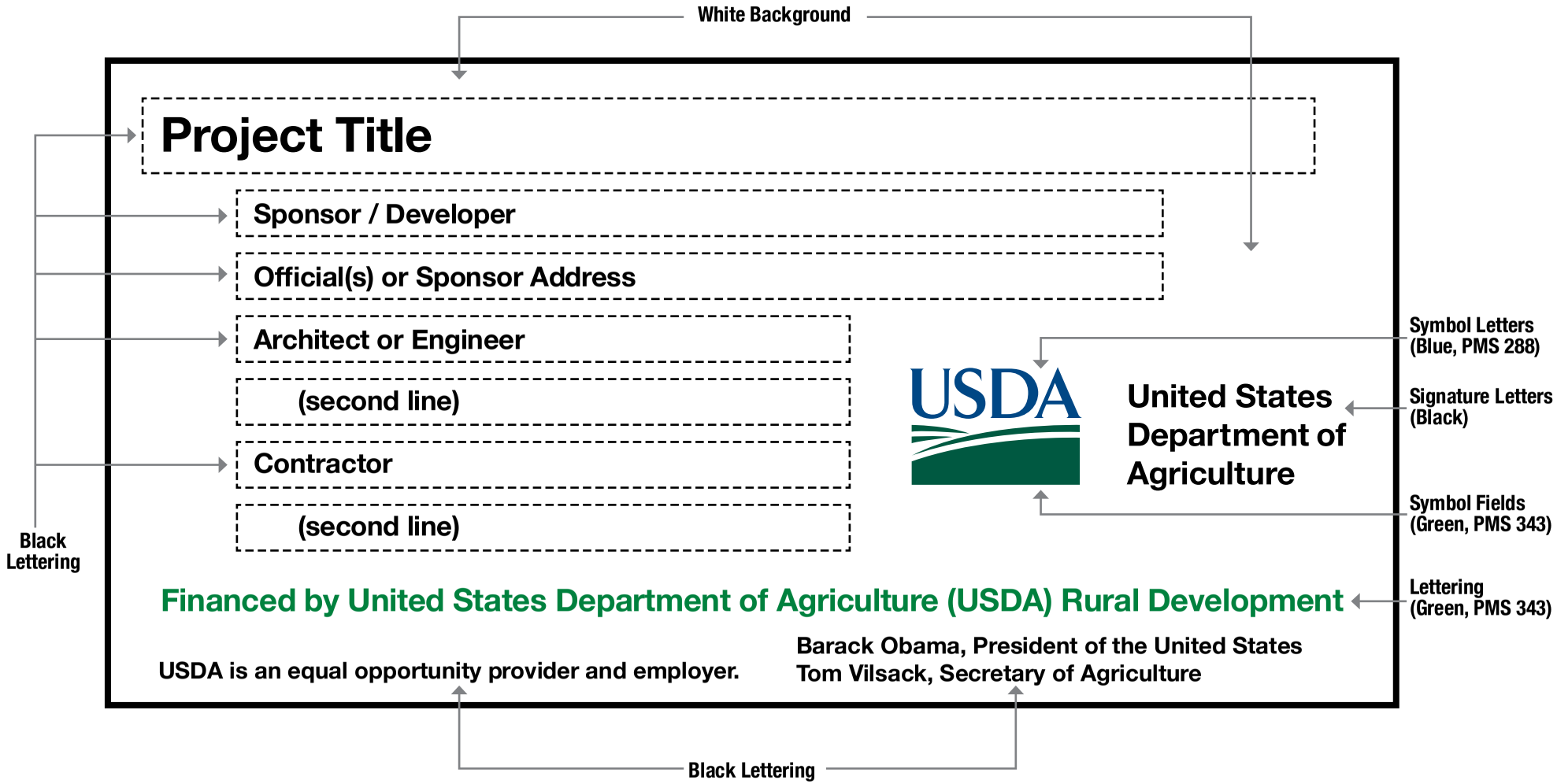
Sign posts shall be 4 x 4 (x 12'h) wood and shall extend 48" into the ground. Top of sign shall be 8' above grade. Sign shall be braced with a 2 x 4 frame as shown on the attached sample drawing.

The Contractor shall maintain and keep the project sign in good condition until the work is completed when the sign will be removed. All other signs to be erected on the site shall be approved by the Engineer.

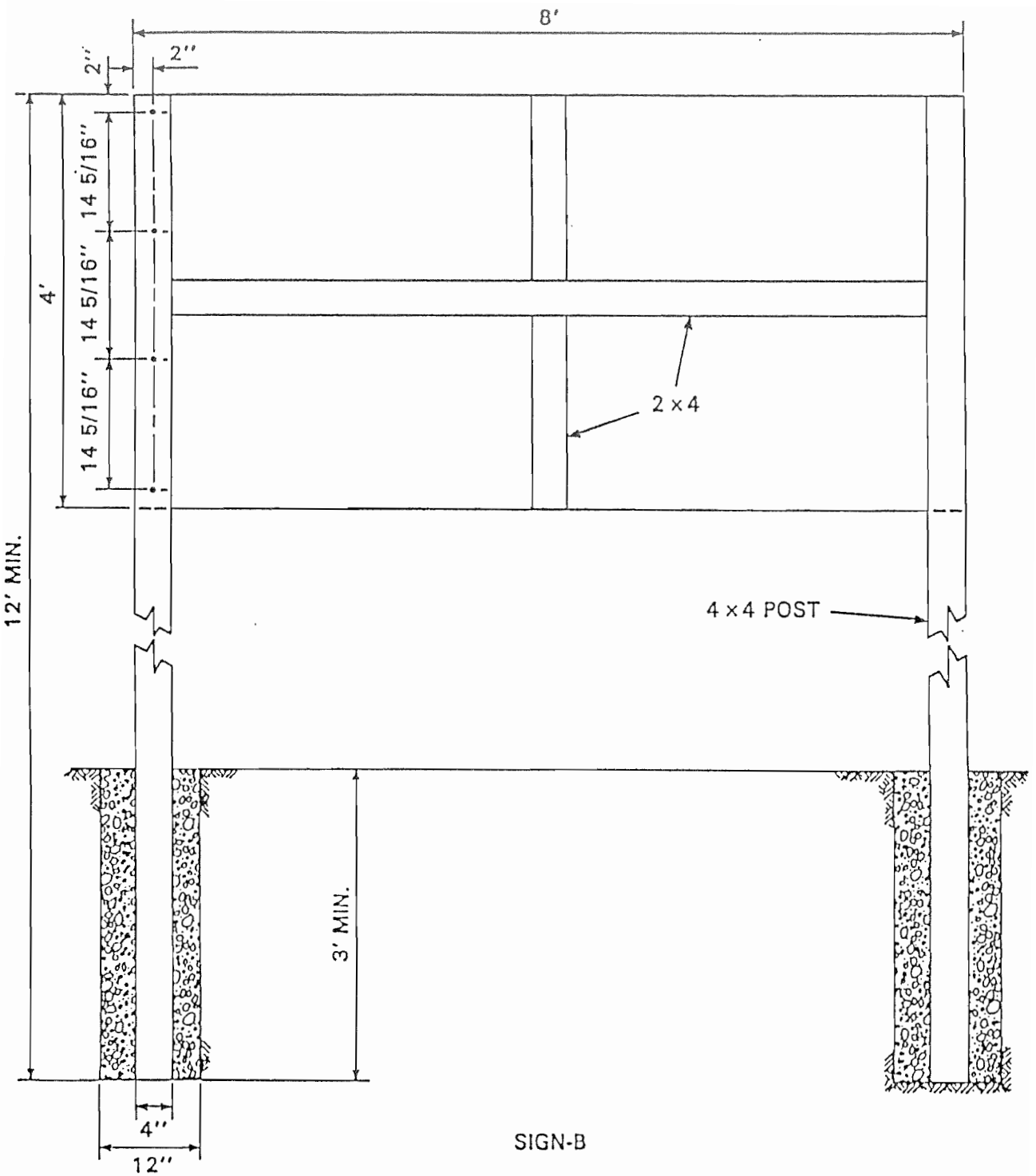
## 836.03 BASIS OF PAYMENT

USDA Project Sign is incidental to the overall project scope. No specific payment will be made for this item.

# TEMPORARY CONSTRUCTION SIGN FOR RURAL DEVELOPMENT PROJECTS




**SIGN DIMENSIONS**: 1200 mm x 2400 mm x 19 mm (approx. 4’ x 8’ x ¾”)
PLYWOOD PANEL (APA RATED A-B GRADE–EXTERIOR)




SIGN-B

ASSEMBLY OF PLYWOOD SIGN

Exhibit B

# Environmental Summary Sheet

**Pin: 12776.00** **Date Submitted: 5/22/13**
**Town: Smithfield-Norridgewock**
**CPD Team Leader: Laurie Rowe**
**ENV Field Contact: Mike Clark**

**NEPA Complete: Individual CE issued 4/3/13**

☒ **Section 106**

SHPO Concurrence- No Adverse Effect 1.31.13

Section 106 Resources: Norridgewock Village Historic District, Main Street, Mercer Road and Perkins Street. Project area only includes a portion of the Historic District along Perkins Street to the road to the school. One property. 13 Perkins St, within the historic district will temporary construction rights. The other two historic properties are located at 1350 Village Road Stations 196+14- 199+49 left and 1477 Village Road Stations 206+00- 224+25 right and 204+60-224+25 left.

No Archaeological Resources.

☒ **Section 4(f) and 6(f)**

Section 4(f)

Review Complete- de minimis

Section 6(f)

Not Applicable

☒ **Maine Department of Inland Fisheries and Wildlife Essential Habitat**

**Not Applicable** **Timing Window: Not Applicable**

☒ **Section 7**

**Informal Consultation**
**Species of Concern: Atlantic Salmon DPS**
**Atlantic Salmon-Critical Habitat**
**Comments/References:**
**See ACOE permit and SP 105 for Special conditions**

☒ **Maine Department of Conservation/Public Lands, Submerged Land Lease**

Not Applicable

☒ **Maine Department of Environmental Protection**

Permit by Rule (PBR)

**Applicable Standards and Permits are included with the contract*

☒ **Army Corps of Engineers, Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.**

**Category 2**
**See ACOE permit and SP 105 for Special conditions**

**Applicable Standards and Permits are included with the contract*

☒ **Stormwater Review**

**N/A**

☒ **Special Provisions Required**

| | | |
|---|---|---|
| **Special Provision 105-Timing of Work Restriction** | N/A☐ | Applicable☒ |
| Instream work window Open | | |
| **Special Provision 656-Erosion Control Plan** | N/A☐ | Applicable☒ |
| **Special Provision 203-Dredge Spec** | N/A☐ | Applicable☒ |
| **General Note for Hazardous Waste** | N/A☒ | Applicable☐ |
| **Special Provision 203-Hazardous Waste** | N/A☐ | Applicable☒ |
| **Special Provision 105.9** | N/A☒ | Applicable☐ |

**All permits and approvals based on plans/scope as of: 1/22/13*

12/01//2008

DEPARTMENT OF ENVIRONMENTAL PROTECTION

# PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Chapter 305)

PLEASE TYPE OR PRINT IN *BLACK INK ONLY*

| | | | |
|---|---|---|---|
| Name of Applicant: (owner) | Maine Department of Transportation | Name of Agent: | Laurie Rowe |
| Applicant Mailing Address: | 16 State House Station | Agent Phone # (include area code): | (207) 215-5072 |
| Town/City: | Augusta | PROJECT Information Name of Town/City: | Smithfield-Norridgewock |
| | | MDOT WIN: | 12776.00 |
| State and Zip code: | ME 04344 | Name of Wetland or Waterbody: | Unnamed streams/Wetlands |
| Daytime Phone # (include area code): | (207) 624-3100 | Map #: | Lot #: |
| Detailed Directions to Site: | Route 8, beginning 1.84 miles north of Route 225 and extending north 7.33 miles to the intersection of Route 2. Section 2) Perkins Street (C411L), beginning at the intersection of Route 8 and extending north 0.54 of a mile to Route 2. | | |
| | | UTM Northing: (if known) | UTM Easting: (if known) |
| Description of Project: | Highway rehabilitation including safety and drainage updates. Project includes fill in wetlands adjacent to the road and work in stream crossings. This project will have less then 15,000 sq ft of wetland impacts per mile. | | |
| Part of a larger project? (check one)➔ | ☐ Yes ☑ No | After the Fact? (check one)➔ | ☐ Yes ☑No |
| Check one➔ | This project☑ does (or) ☐does not involve work below mean low water (average low water). | | |

PERMIT BY RULE (PBR) SECTIONS: (Check at least one)

I am filing notice of my intent to carry out work which meets the requirements for Permit By Rule (PBR) under DEP Rules, Chapter 305. I and my agents, if any, **have read** and will comply with all of the standards in the Sections checked below.

- ☐ Sec. (2) Act. Adj. to Protected Natural Res.
- ☐ Sec. (3) Intake Pipes
- ☐ Sec. (4) Replacement of Structures
- ☐ Sec. (5) REPEALED
- ☐ Sec. (6) Movement of Rocks or Vegetation
- ☐ Sec. (7) Outfall Pipes
- ☐ Sec. (8) Shoreline stabilization
- ☐ Sec. (9) Utility Crossing
- ☐ Sec.(10) Stream Crossing
- ☑ Sec. (11) State Transportation Facil.
- ☐ Sec. (12) Restoration of Natural Areas
- ☐ Sec. (13) F&W Creation/Enhance/Water Quality Improvement
- ☐ Sec. (14) REPEALED
- ☐ Sec. (15) Public Boat Ramps
- ☐ Sec. (16) Coastal Sand Dune Projects
- ☐ Sec. (17) Transfers/Permit Extension
- ☐ Sec. (18) Maintenance Dredging
- ☐ Sec. (19) Activities in/on/over significant vernal pool habitat
- ☐ Sec. (20) Activities in existing dev. areas located in/on/over high or moderate value inland waterfowl & wading bird habitat or shorebird nesting, feeding & staging areas

I have attached the following required submittals. **NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS:**

- ☐ ***Attach*** **a check for $65 made payable to: "Treasurer, State of Maine".** ***State agency-internally billed.***
- ☑ ***Attach*** **a U.S.G.S. topo map or Maine Atlas & Gazetteer map with the project site clearly marked.**
- ☐ ***Attach Proof of Legal Name.*** If applicant is **not** an individual or municipality, provide a copy of Secretary of State's *registration information* (available at http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x )
- ☐ ***Attach photos of the proposed site where activity will take place as outlined in PBR Sections checked above.***
- ☑ ***Attach*** **all other required submissions as outlined in the PBR Sections checked above.**

I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules. I also understand that ***this permit is not valid until approved by the Department or 14 days after receipt by the Department, whichever is less.***

**By signing this Notification Form, I represent that the project meets all applicability requirements and standards in the rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.**

| | | | |
|---|---|---|---|
| Signature of Agent or Applicant: | Judy C. Gates | Date: | 1/17/13 |

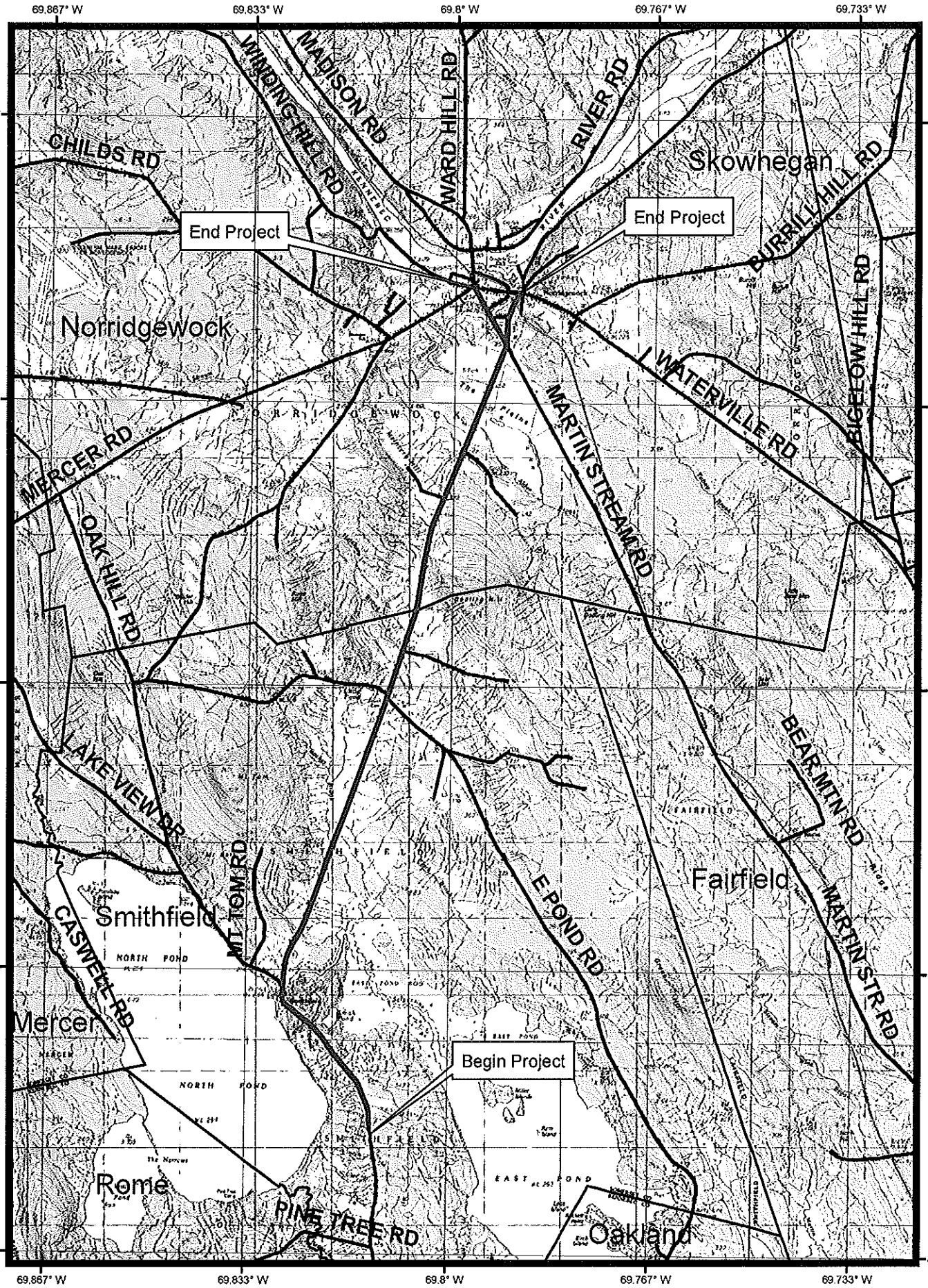
*Keep a copy as a record of permit.* Send the form with attachments via certified mail or hand deliver to the Maine Dept. of Environmental Protection **at the appropriate regional office listed below.** The DEP will send a copy to the Town Office as evidence of the DEP's receipt of notification. No further authorization by DEP will be issued after receipt of notice. Permits are valid for two years. **Work carried out in violation of any standard is subject to enforcement action.**

| AUGUSTA DEP | PORTLAND DEP | BANGOR DEP | PRESQUE ISLE DEP |
|---|---|---|---|
| 17 STATE HOUSE STATION | 312 CANCO ROAD | 106 HOGAN ROAD | 1235 CENTRAL DRIVE |
| AUGUSTA, ME 04333-0017 | PORTLAND, ME 04103 | BANGOR, ME 04401 | PRESQUE ISLE, ME 04769 |
| (207)287-3901 | (207)822-6300 | (207)941-4570 | (207)764-0477 |

| OFFICE USE ONLY | Ck.# | | Staff | Staff | |
|---|---|---|---|---|---|
| PBR # | FP | Date | Acc. Date | Def. Date | After Photos |



DEPLW0309-N2008




0 1,350 2,700 5,400 8,100 10,800 Feet

**Smithfield-Norridgewock**
**12776.00**

Route 8 - Reconstruction

## Chapter 305: PERMIT BY RULE

1. **Introduction.** A "permit by rule" or "PBR", when approved by the Department of Environmental Protection (DEP), is an approval for an activity that requires a permit under the Natural Resources Protection Act (NRPA). Only those activities described in this chapter may proceed under the PBR process. A PBR activity will not significantly affect the environment if carried out in accordance with this chapter, and generally has less of an impact on the environment than an activity requiring an individual permit. A PBR satisfies the Natural Resources Protection Act (NRPA) permit requirement and Water Quality Certification requirement.

   If a proposed activity is not described in this chapter, or will not be conducted in accordance with the standards of this chapter, the applicant must obtain an individual permit prior to beginning the activity.

   A. **Location of activity.** The location of an activity may affect whether an activity qualifies for PBR, and whether review by the Department of Inland Fisheries and Wildlife is required.

      (1) Type of resource. For some types of activities, the availability of a PBR is affected by the type of natural resource in or adjacent to which the activity is proposed. For example, an applicant proposing an activity consisting of "Movement of rocks or vegetation" may receive a PBR only if the activity will take place in a great pond, river, stream or brook. Limitations concerning the location of activities are addressed in the "Applicability" provision in each section of this chapter.

      (2) Essential habitat. Essential habitats include areas critical to the survival of threatened and endangered species such as the bald eagle, least tern, roseate tern, and piping plover. If the activity is located in essential habitat, such as near an eagle nesting site, a PBR is only available if the applicant obtains written approval from the Department of Inland Fisheries and Wildlife (IF&W). This approval from IF&W must be submitted to the DEP with the PBR notification form, and the applicant must follow any conditions stated in the IF&W approval.

   NOTE: Maps showing areas of essential habitat are available from the Department of Inland Fisheries and Wildlife regional headquarters, municipal offices, the Land Use Regulation Commission (for unorganized territories) and DEP regional offices. If the activity is located in essential habitat, IF&W must be contacted to request and obtain a "certification of review and approval".

   B. **Notification.** The applicant must file notice of the activity with the DEP prior to beginning work on the activity. The notification must be on a form provided by the DEP and must include any submissions required in this chapter. The applicant must keep a copy to serve as the permit.

      The notification form must be sent to the DEP by certified mail (return receipt requested), or hand delivered to the DEP and date stamped by the department. By signing the notification form, the applicant is representing that the activity will meet the applicability requirements and standards of the rule. In addition, by signing the notification form the applicant represents that the applicant has sufficient title, right, or interest in the property where the proposed activity is to take place.

**C. Effective period**

(1) Beginning of period. The PBR becomes effective 14 calendar days after the DEP receives the notification form, unless the DEP approves or denies the PBR prior to that date. If the DEP does not speak with or write to the applicant within this 14 day period regarding the PBR notification, the applicant may proceed to carry out the activity.

There are three exceptions regarding the effective date of an approved PBR:

(a) Activities listed in Section 10 (Stream crossings) occurring in association with forest management are exempt from the 14 day waiting period.

(b) Activities listed in Section 10 (Stream crossings) performed or supervised by individuals currently certified in erosion control practices by the DEP are exempt from the 14 day waiting period. To be certified in erosion control practices, an individual must successfully complete all course requirements of the Voluntary Contractor Certification Program administered by the DEP's Nonpoint Source Training and Resource Center.

(c) Activities that are part of a larger project requiring a permit under the Site Location of Development or the Storm Water Management Acts may not proceed until any required permit under those laws is obtained.

NOTE: Activities that are part of a larger project may require other permits from the DEP also. These other laws may prohibit the start of construction of any part of the project unless a permit under that law is obtained. In these cases, while not a violation of this rule, starting work on a PBR approved activity would be a violation of those other applicable laws.

(2) End of period. The PBR is generally effective for 2 years from the date of approval, except that a PBR for "Replacement of structures" under Section 4 is effective for 3 years.

NOTE: Activities that qualify under this chapter may need to meet other local, state and federal requirements. Examples -- (1) If an activity extends below the low water line of a lake, coastal wetland or international boundary water, the applicant should contact the Bureau of Parks and Lands (287-3061) concerning possible lease or easement requirements, or (2) If an activity will involve work below the mean high water line in navigable waters of the United States, the applicant should contact the Army Corps of Engineers (623-8367).

**D. Discretionary authority.** Notwithstanding compliance with the PBR applicability requirements and standards set forth in this chapter, the DEP may require an individual permit application to be filed in any case where credible evidence indicates that the activity:

(1) May violate the standards of this rule or the NRPA (38 M.R.S.A. Section 480-D);

(2) Could lead to significant environmental impacts, including cumulative impacts; or

(3) Could adversely impact a resource of special concern.

If an individual permit is required pursuant to this subsection, the DEP shall notify the applicant in writing within the 14 calendar day waiting period described in sub-section (C) above. When

the DEP notifies an applicant than an individual permit is required, no work may be conducted unless and until the individual permit is obtained.

**E. Violations.** A violation of law occurs when a person, or his or her agent, performs or causes to be performed any activity subject to the NRPA without first obtaining a permit from the DEP, or acts contrary to the provisions of a permit. The person, his or her agent, or both, may be held responsible for the violation. Commonly, the "person" is the landowner, and the "agent" is the contractor carrying out the activity. A violation occurs when:

(1) An activity occurs that is not allowed under PBR, whether or not a PBR notification form has been filed with and/or approved by the DEP;

(2) An activity occurs that is allowed under PBR, but a PBR for the activity has not become effective prior to the beginning of the activity; or

(3) An activity occurs that is allowed under PBR and a PBR for the activity is in effect, but the standards specified in this chapter are not met.

See the "applicability" provision under each activity for rules concerning what activities are allowed under PBR. A PBR is only valid for the person listed on the notification form, or for his or her agent.

Each day that a violation occurs or continues is considered a separate offense. Violations are subject to criminal penalties and civil penalties of not less than $100 nor more than $10,000 for each day of that violation (38 M.R.S.A. Section 349).

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NOTE: A local Code Enforcement Officer (CEO) may take enforcement action for a violation of the Natural Resources Protection Act if he or she is authorized to represent a municipality in District Court, and he or she has been certified as familiar with court procedures, 30-A M.R.S.A. Section 4452(7).

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**2. Activities adjacent to protected natural resources**

**A. Applicability**

(1) This section applies to an activity adjacent to, but not in:

(a) A coastal wetland, great pond, river, stream or brook or significant wildlife habitat contained within a freshwater wetland; or

(b) Freshwater wetlands consisting of or containing:

(i) Under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments; or

(ii) Peatlands dominated by shrubs, sedges and sphagnum moss.

(2) This section does not apply to an activity where sustained slopes are steeper than 3 horizontal feet: 1 vertical foot (approximately 33% slope) between the normal high water line or upland edge of the protected resource and the soil disturbance.

(3) Activities that qualify for permit by rule under another section are not required to comply with this section unless expressly stated in that section.

(4) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of a permit issued under the Site Location of Development Law, 38 M.R.S.A. Sections 481 to 490, the Storm Water Management Law, 38 M.R.S.A. Section 420-D, or the Natural Resources Protection Act, 38 M.R.S.A. Sections 480-A to 480-Z.

(5) This section does not apply to an activity that does not conform to the local shoreland zoning ordinance.

NOTE: Contact the local Code Enforcement Officer for information on local shoreland zoning requirements. In most shoreland areas, a 75 or 100 foot undisturbed buffer strip is required between the disturbed areas and the water or wetland.

**B. Submissions**

(1) The applicant is required to submit photographs of the area which will be affected by the activity proposed.

(2) Photographs showing the completed project and the affected area must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

(3) A brief narrative explaining why there is no practicable alternative to location of the activity within the 75 foot setback, and how the impact on the remaining buffer and the resource will be minimized. This narrative is not required for those activities presumed to have no practicable alternative as listed in paragraph C(1) of this section.

(4) A scaled plan or drawing of the area affected, including information such as:

(a) The entire property on which the activity will take place, including property lines, the 75 foot setback, and the boundaries or location of protected natural resources such as streams and wetlands;

(b) Proposed and existing development on the parcel including buildings, parking areas, roads, fill areas, landscaped areas, etc.; and

(c) Any site constraints limiting development beyond the 75 foot setback, such as steep slopes.

It is not necessary to have the plan professionally prepared. However, it must be legible and drawn to a scale that allows clear representation of distances and measurements on the plan.

**C. Standards**

(1) No activity or portion of an activity may be located within the 75 foot setback if there is a practicable alternative location on the parcel that would cause or result in less impact on the

environment. The following activities are presumed to have no practicable alternative location on the parcel.

(a) The planting of vegetation for the purpose of controlling erosion or for establishing a vegetative buffer.

(b) The removal or replacement of underground storage tanks when performed in accordance with 38 M.R.S.A. Section 566-A.

(c) The replacement of a structure or the placement or replacement of a foundation or supports for a legally existing structure or addition that is not closer to a protected natural resource than the existing structure provided the municipality has approved the location of the replaced or modified structure. However, any fill, other than that required to maintain the integrity of the structure such as foundation backfill, must meet the 75 foot setback standard unless otherwise approved by the DEP pursuant to this section.

NOTE: In most cases when a structure is being replaced or a foundation is being put under an existing structure that does not meet the setback requirements of the Municipal Shoreland Zoning Ordinance, the applicant is required by the municipality to move the structure back from the natural resource to the maximum extent practicable.

(d) The closure of a landfill in conformance with the DEP's solid waste management rules.

(e) Access way consisting of a footpath, stairway, or steps to the resource.

(2) Except for those activities listed in Section 2(C)(1)(a)-(e) above, a 25 foot setback must be maintained between the normal high water line or upland edge of the protected natural resource and the activity. Areas that have slopes of 3 horizontal feet: 1 vertical foot (approximately 33% slope), or steeper, may not be counted when determining the 25 foot setback. Existing vegetation within the setback may not be disturbed except for cutting activity meeting the exemption requirements in 38 M.R.S.A. Section 480-Q(23).

(3) Disturbance within the setback must be minimized.

(4) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas:

(a) Staked hay bales or silt fence must be properly installed at the edge of disturbed areas between the activity and the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

(5) A footpath to the resource is limited to 6 feet in width and stairs or steps are limited to 4 feet in width.

(6) All work is limited to the location and extent depicted on the plan or plans submitted pursuant to subsection B(4) of this section.

NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Fill**. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or adjacent to a water body or wetland.

(2) **Land adjacent to a protected natural resource**. Any land area within 75 feet, measured horizontally, of the normal high water line of a great pond, river, stream or brook or the upland edge of a coastal wetland or freshwater wetland.

(2-A) **Practicable**. Available and feasible considering cost, existing technology and logistics based on the overall purpose of the project.

(3) **Structure**. Anything built for the support, shelter or enclosure of persons, animals, goods or property of any kind, together with anything constructed or erected with a fixed location on or in the ground. Examples of structures include buildings, utility lines and roads.

(4) **Upland edge**. The boundary between upland and wetland.

NOTE:
Section 480-Q(15-A) of the NRPA exempts the installation, removal or repair of a septic system from permitting requirements as of March 1, 1995, as long as the system complies with all requirements of the subsurface wastewater disposal rules adopted by the Department of Human Services pursuant to 22 M.R.S.A. Section 42(3).

## 3. Intake pipes & water monitoring devices

### A. Applicability

(1) This section applies to the installation or maintenance of a permanent water intake pipe which will not significantly affect the water level or flow of waters within a coastal wetland, freshwater wetland, great pond, river, stream or brook. This section also applies to the installation of a well in or adjacent to a freshwater wetland or adjacent to a great pond, coastal wetland, river, stream or brook. Allowed uses of water for the purposes of this section include a water supply for a single family residence and a dry hydrant. Some intake pipes and wells adjacent to a great pond may be exempt by law (see Note 2 at the end of this subsection).

(2) This section also applies to the installation or maintenance of a permanent device used to monitor water elevations, flow or quality including a gauging station, staff gauge, tide gauge,

water recording device, water quality testing and improvement device or other similar scientific equipment within a coastal wetland, freshwater wetland great pond, river, stream or brook.

(3) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of a permit issued under the Site Location of Development Law, 38 M.R.S.A. Sections 481 to 490, the Storm Water Management Law, 38 M.R.S.A. Section 420-D, or the Natural Resources Protection Act, 38 M.R.S.A. Sections 480-A to 480-Z.

(4) This section does not apply to an activity that will not conform to the local shoreland zoning ordinance.

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NOTES:

(1) Contact the local Code Enforcement Officer for information on local shoreland zoning requirements.

(2) In a great pond, the placement of water lines to serve a single-family house or the installation of cables for utilities, such as telephone and power cables, is exempt from permit requirements under 38 M.R.S.A. Section 480-Q provided that the:

(a) Excavated trench for access to the water is backfilled and riprapped to prevent erosion;

(b) Excavated trench on the landward side of the riprapped area is seeded and mulched to prevent erosion; and

(c) Bureau of Parks and Lands has approved the placement of the cable across the bottom of the great pond to the extent that it has jurisdiction.

(3) A permit will be required from the US Army Corps of Engineers for the following types of projects:

(a) Any activity involving open trench excavation in a waterbody or wetland;

(b) Any activity in coastal waterways;

(c) Any activity within a river, stream or brook that takes place between October 2 and July 14.; or

(d) Any activity involving work in waterways designated as Essential Fish Habitat for Atlantic salmon including all aquatic habitats in the watersheds of the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration: St. Croix, Boyden, Dennys, Hobart Stream, Aroostook, East Machias, Machias, Pleasant, Narraguagus, Tunk Stream, Patten Stream, Orland, Penobscot, Passagassawaukeag, Union, Ducktrap, Sheepscot, Kennebec, Androscoggin, Presumpscot, and Saco River.

A copy of the PBR notification and original photographs, not photocopies, should be submitted to the Corps of Engineers for these activities (US Army Corps of Engineers, 675 Western Avenue, Suite #3, Manchester, ME 04351. Tel. (207) 623-8367).

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**B. Submissions**

(1) For an activity occurring in tidal waters, notice of approval of the timing of the activity from the Department of Marine Resources must be submitted to the DEP with the notification form.

(2) The applicant is required to submit photographs of the area which will be affected by the activity proposed.

(3) Photographs showing the completed project and the affected area must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

**C. Standards**

(1) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas into the resource:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the edge of the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

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NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

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(2) Disturbance of wetland vegetation must be avoided if possible. If wetland vegetation must be disturbed during the activity, it must be replaced or reestablished immediately upon completion of the activity and must be maintained.

(3) Non-native wetland plants may not be planted in disturbed areas.

(4) The trench width in any protected natural resource must be no wider than necessary to install the device.

(5) Any trench in or adjacent to the wetland must be refilled with the material that was excavated. The original grading and elevation of the wetland must be restored. Residual fill material must be removed from the wetland or water body and properly stabilized. Pipe bedding material such as crushed stone or sand may be used provided clay dams or synthetic boots are used where appropriate to prevent wetland draining through the bedding material.

(6) The water intake structure may not interfere with any potential boat usage and may not block fish passage.

(7) If the activity occurs within tidal waters, the activity must occur during the time period approved by the Department of Marine Resources.

(8) Excavation of a pool to increase depth is prohibited under this section.

(9) Maintenance clearing of deposited debris and sediments from the intake area is allowed provided the cleared materials are removed from the resource and are disposed of in an upland location at least 75 feet from any open water body and stabilized to prevent erosion unless a closer upland disposal area is approved under Section 2 of this rule. Disposal of any dredged material or debris must be carried out in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Sections 1301 *et seq.* Clearing or removal of sediment from a water body for other purposes is not allowed under this section.

(10) If work is performed in a river, stream or brook that is less than three feet deep at the time of the activity and at the location of the activity, the applicant must provide for temporary diversion of flow to the opposite side of the channel while work is in progress.

(a) Diversion may be accomplished by placing sandbags, timbers, sheet steel, concrete blocks, 6+ mil polyethylene or geotextiles from the bank to midstream on the upstream side of the activity. No more than two-thirds (2/3) or 25 feet of stream width, whichever is less, may be diverted at one time.

(b) Any material used to divert water flow must be completely removed upon completion of the activity, and the stream substrate must be restored to its original condition.

(c) A pump may be operated, where necessary, for a temporary diversion. The pump outlet must be located and operated such that erosion or the discharge of sediment to the water is prevented.

(11) Wheeled or tracked equipment may not be operated in the water. Equipment operating on the shore may reach into the water with a bucket, or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.

(12) Wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms in order to protect wetland vegetation.

(13) Work below the high water line of a great pond, river, stream or brook must be done at low water, except as required for emergency flood control work. Measures such as a silt boom or staked fencing must be employed to reduce and isolate turbidity.

(14) Uncured concrete may not be placed directly into the water. Concrete must be pre-cast and cured at least three weeks before placing in the water, or where necessary, must be placed in forms and cured at least one week before the forms are removed. No washing of tools, forms, etc. may occur in or adjacent to the waterbody or wetland.

(15) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used only if necessary and only if use is allowed under federal law

and not prohibited from sale under 38 M.R.S.A. 1682, provided it is cured on dry land in such a manner to expose all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol may not be used where the wood will come in contact with water.

(16) Blasting in inundated areas is prohibited.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Land adjacent to a protected natural resource**. Any land area within 75 feet, measured horizontally, of the normal high water line of a great pond, river, stream or brook or the upland edge of a coastal wetland or freshwater wetland.

(2) **Non-native wetland plants**. Wetland grasses, forbs, shrubs, or trees not native to the State of Maine, for example, common reed (*Phragmites communis*) and purple loosestrife (*Lythrum salicaria*).

**4. Replacement of structures**

**A. Applicability**

(1) This section applies to the replacement of an existing permanent structure in, on, or over a coastal wetland, freshwater wetland, great pond, fragile mountain area, or river, stream or brook. Some activities involving maintenance and repair of a permanent structure may not require a permit (see note 2 at the end of this section).

(2) In order to be eligible for this section, the structure must have been in place and functioning as intended within 24 months of the DEP's receipt of the notification form. A permit by rule for replacement is valid for three years from the date of approval.

(3) This section does not apply to the replacement of a structure adjacent to a protected natural resource. (See Section 2: Activities adjacent to protected natural resources.)

(4) This section does not apply to structures located within a sand dune system. (See Section 16: Activities in coastal dune systems.)

(5) This section does not apply to the replacement of a dam or a tidal flood gate.

(6) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of permits issued under the Site Location of Development Law, 38 M.R.S.A. Sections 481 to 490, the Storm Water Management Law, 38 M.R.S.A. Section 420-D, or the Natural Resources Protection Act, 38 M.R.S.A. Sections 480-A to 480-Z.

(7) This section does not apply to an activity that will not conform to the local shoreland zoning ordinance.

NOTE: Contact the local Code Enforcement Officer for information on local shoreland zoning requirements

**B. Submissions**

(1) For an activity occurring in tidal waters, notice of approval of timing of the activity from the Department of Marine Resources must be submitted to the DEP with the notification form.

(2) The applicant is required to submit photographs of the area which will be affected by the activity proposed.

(3) Photographs showing the completed project and the affected area must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

(4) A scaled plan or drawing of the structure to be replaced that includes at a minimum the location, width, length and height of the existing structure.

It is not necessary to have the plan professionally prepared. However, it must be legible and drawn to a scale that provides a clear representation of distances and measurements on the plan.

**C. Standards**

(1) A replaced structure that is located in, on, or over a protected natural resource may not exceed the dimensions, including height, of the previously existing structure, and may not extend any further into the water body or wetland, except that retaining walls may be reinforced with a facing material not exceeding 6 inch in width or may be replaced with riprap in accordance with Section 8 "Shoreline stabilization".

NOTE: Vegetation is the preferred method of erosion control near water bodies. Where the use of vegetation is not feasible, riprap is preferred over retaining walls because it dissipates wave action and is a more stable structure over the long term. The DEP encourages the replacement of retaining walls with riprap, unless the presence of large trees or structures makes its use impractical.

(2) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas into the protected resources:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the edge of the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

(3) Disturbance of wetland vegetation must be avoided if possible. If wetland vegetation must be disturbed during the activity, it must be reestablished immediately upon completion of the activity and must be maintained.

(4) Non-native wetland plants may not be planted in disturbed areas.

(5) Work done in a river, stream or brook must allow for fish passage and the maintenance of normal stream flows at all times of year and may not impound water.

(6) No dredging may take place during the activity and no material may be removed from the affected natural resource except that rocks that were part of the original structure may be removed or reused.

(7) Work below the high water line of a great pond, river, stream or brook must be done at low water, except as required for emergency flood control work. Measures, such as a silt boom or staked fencing, must be employed to reduce and isolate turbidity.

(8) If the activity occurs within tidal waters, the activity must occur during the time period approved by the Department of Marine Resources.

(9) If work is performed in a river, stream or brook that is less than three feet deep at the time of the activity and at the location of the activity, the applicant must provide for temporary diversion of flow to the opposite side of the channel while work is in progress.

(a) Diversion may be accomplished by placing sandbags, timbers, sheet steel, concrete blocks, 6+ mil polyethylene or geotextiles from the bank to midstream on the upstream side of the activity. No more than two-thirds (2/3) or 25 feet of stream width, whichever is less, may be diverted at one time.

(b) Any material used to divert water flow must be completely removed upon completion of the activity, and the stream substrate must be restored to its original condition.

(c) A pump may be operated, where necessary, for a temporary diversion. The pump outlet must be located and operated such that erosion or the discharge of sediment to the water is prevented.

(10) Wheeled or tracked equipment may not be operated in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.

(11) All wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms in order to protect wetland vegetation.

(12) All debris or excavated material must be stockpiled either outside the wetland or on mats or platforms. Hay bales, silt fence or mulch must be used, where necessary, to prevent sedimentation. Any debris generated during the activity must be prevented from washing

downstream and must be removed from the wetland or water body. Disposal of debris must be in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Section 1301 *et seq.*

(13) Uncured concrete may not be placed directly into the water. Concrete must be pre-cast and cured at least three weeks before placing in the water, or where necessary, must be placed in forms and cured at least one week before the forms are removed. No washing of tools, forms, etc. may occur in or adjacent to the waterbody or wetland.

(14) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used only if necessary and only if use is allowed under federal law and not prohibited from sale under 38 M.R.S.A. 1682, and provided it is cured on dry land in such a manner as to expose all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol may not be used where the wood will come in contact with water.

(15) The replaced structure may not interfere with, or reduce the opportunity for, existing navigational and recreational uses of the site.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Dam**. Any man-made artificial barrier, including appurtenant works, the site on which it is located and appurtenant rights of flowage and access, that impounds or diverts a river, stream or brook or great pond.

(2) **Dredge**. To move or remove, by digging scooping or suctioning any sand, silt, mud, gravel, rock, or other material from the bottom of a water body or wetland surface.

(3) **Fill**. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or adjacent to a water body or wetland.

(4) **Land adjacent to a protected natural resource**. Any land area within 75 feet, measured horizontally, of the normal high water line of a great pond, river, stream or brook or the upland edge of a coastal wetland or freshwater wetland.

(5) **Public works project**. A federal, state or local government, or state-regulated utility project for public use or service including, but not limited to, highways, dams, bridges, utility lines, water lines, sewerage, and recreational facilities such as boat launch facilities.

(6) **Replacement**. Any activity that results in more than 50% of a structure being restored or reconstructed whether above or below the normal high water line.

(7) **Retaining wall**. A vertical or near vertical structure generally constructed of wood, concrete or rock or a combination of these materials and located at or below the normal high water line.

(8) **Riprap.** Heavy, irregularly-shaped rocks that are fit into place, without mortar, on a slope. Square or rectangular rocks with flat faces, such as quarry stone or manufactured blocks, do not qualify as "irregularly-shaped".

(9) **Structure**. Anything built for the support, shelter or enclosure of persons, animals, goods or property of any kind, together with anything constructed or erected with a fixed location on or in the ground. Examples of structures include buildings, utility lines and roads.

(10) **Non-native wetland plants**. Wetland grasses, forbs, shrubs, or trees not native to the State of Maine, for example, common reed (*Phragmites communis*) and purple loosestrife (*Lythrum salicaria*).

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NOTES:

(1) Section 480-Q(15-A) of the NRPA exempts the installation, removal or repair of a septic system from permitting requirements as of March 1, 1995, as long as the system complies with all requirements of the subsurface wastewater disposal rules adopted by the Department of Human Services under 22 M.R.S.A. Section 42, subsection 3.

(2) Section 480-Q(2) of the NRPA exempts from permitting the maintenance and minor repair of structures in, on, over or adjacent to a protected natural resource and maintenance and minor repair of private crossings of a river, stream or brook provided:

(a) Erosion control measures are taken to prevent sedimentation of the water;

(b) The crossing does not block fish passage in the water course;

(c) There is not additional intrusion into the protected natural resources; and

(d) The dimensions of the repaired structure do not exceed the dimensions of the structure as it existed 24 months prior to the repair.

Section 480-Q(2) does not apply to the repair of more than 50% of a structure located in a coastal sand dune system; the repair of more than 50% of a dam, unless that repair has been approved by a representative of the United States Natural Resources Conservation Service; or the repair of more than 50% of any other structure, unless the municipality in which the proposed activity is located requires a permit for the activity through an ordinance adopted pursuant to the mandatory shoreland zoning laws and the application for a permit is approved by the municipality.

(3) Section 480-Q(2-B) of the NRPA exempts from permitting the replacement of a floating dock with another floating dock if the dimensions of the replacement dock do not exceed those of the dock being replaced and the configuration of the replacement dock is the same as the dock being replaced.

(4) Section 480-Q(9) of the NRPA exempts from permitting emergency repair or normal maintenance and repair of existing public works which affect any protected natural resource. An activity which is exempt under this subsection shall employ erosion control measures to prevent sedimentation of any surface water, shall not block fish passage in any water course and shall not result in any additional intrusion of the public works into the protected natural resource. This exemption does to apply to any activity on an outstanding river segment as listed in section 480-P.

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**5.** *[REPEALED]*

## 6. Movement of rocks or vegetation

### A. Applicability

(1) This section applies to the limited movement of rocks or hand removal of vegetation from below the normal high water line of a great pond or river, stream or brook in order to provide access for swimming or navigation.

(2) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of permits issued under the Site Location of Development Law, 38 M.R.S.A. Sections 481 to 490, the Storm Water Management Law, 38 M.R.S.A. Section 420-D, the Natural Resources Protection Act, 38 M.R.S.A. Sections 480-A to 480-Z.

(3) This section does not apply to an activity that will not conform to the local shoreland zoning ordinance.

NOTE: Contact the local Code Enforcement Officer for information on local shoreland zoning requirements.

### B. Submissions

(1) The applicant is required to submit photographs of the area which will be affected by the activity proposed.

(2) Photographs showing the completed project and the affected area must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

### C. Standards

(1) The width of the area to be cleared may not exceed 10 feet, as measured parallel to the shore. Only one area may be cleared per lot with shore frontage or area under common ownership with shore frontage.

(2) If the area has been cleared in the past, subsequent clearing must be limited to the same area.

(3) Rocks moved from the cleared area must remain in the water and must be distributed randomly in such a way that a structure such as a jetty or boat ramp will not be formed. Rocks may not be removed from the water.

(4) Wheeled or tracked equipment may not be operated in the water. For large rock movement, equipment operating on the shore may reach into the water with a bucket or similar extension provided no bottom sediments are removed or displaced. Areas that are disturbed as part of equipment access and operation must be restored to their original grade and vegetation or as near thereto as practicable.

(5) Rocks that are holding the shoreline may not be moved.

(6) Cut or uprooted vegetation must be removed from the water.

(7) Work must be done during periods of low water level or flow.

**7. Outfall pipes**

**A. Applicability**

(1) This section applies to the installation and maintenance of a permanent outfall pipe, an outlet from a ditch or drain tile for storm water, ground water or other discharges licensed by the DEP in or on land adjacent to a coastal wetland, freshwater wetland, great pond, river, stream or brook.

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NOTES:

(1) A wastewater discharge license from the DEP is required for any discharge from an the outlet other than stormwater from residential development; small commercial or industrial facilities; or uncontaminated groundwater.

(2) A permit will be required from the US Army Corps of Engineers for the following types of projects:

(a) Any activity involving open trench excavation in a waterbody or wetland;

(b) Any activity in coastal waterways;

(c) Any activity within a river, stream or brook between October 2 and July 14; or

(d) Any activity involving work in waterways designated as Essential Fish Habitat for Atlantic salmon including all aquatic habitats in the watersheds of the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration: St. Croix, Boyden, Dennys, Hobart Stream, Aroostook, East Machias, Machias, Pleasant, Narraguagus, Tunk Stream, Patten Stream, Orland, Penobscot, Passagassawaukeag, Union, Ducktrap, Sheepscot, Kennebec, Androscoggin, Presumpscot, and Saco River.

A copy of the PBR notification and original photographs, not photocopies, should be submitted to the Corps of Engineers for these activities (US Army Corps of Engineers, 675 Western Avenue, Suite #3, Manchester, ME 04351. Tel. (207) 623-8367).

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(2) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of permits issued under the Site Location of Development Law, 38 M.R.S.A. Sections 481 to 490, the Storm Water Management Law, 38 M.R.S.A. Section 420-D, or the Natural Resources Protection Act, 38 M.R.S.A. Sections 480-A to 480-Z.

(3) This section does not apply to an activity that will not conform to the local shoreland zoning ordinance.

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NOTE: Contact the local Code Enforcement Officer for information on local shoreland zoning requirements.

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**B. Submissions**

(1) For an activity occurring in tidal waters, notice of approval of the timing of the activity from the Department of Marine Resources must be submitted to the DEP with the notification form.

(2) The applicant is required to submit photographs of the area which will be affected by the activity proposed.

(3) Photographs showing the completed project and the affected area must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

**C. Standards**

(1) The following measures must be taken to prevent erosion of soil or fill material from the disturbed areas into the resource:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the edge of the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

NOTE: For guidance on erosion and sedimentation control consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

(2) Stormwater outfalls, whether a pipe or trench, must utilize velocity reducing structures and/or rock aprons to prevent erosion. A vegetative filter strip of at least 25 feet long must be established and maintained between the outfall structure and the resource unless a different standard is required pursuant to the Site Location of Development Law, 38 M.R.S.A. Sections 481 to 490, or the Storm Water Management Law, 38 M.R.S.A. Section 420-D. The DEP may approve a reduction in width of the vegetated buffer if:

(a) The applicant demonstrates in writing that the full buffer width is not practicable;

(b) Any recommendations from the DEP are incorporated into the activity; and

(c) Approval of the reduction is from the DEP in writing.

(3) Foundation drains and licensed discharges may extend to, and outfall in, the resource. If necessary, a rock apron must be constructed to prevent erosion.

(4) Disturbance of wetland vegetation must be avoided if possible. If wetland vegetation must be disturbed during the activity, it must be reestablished immediately upon completion of the activity and must be maintained.

(5) Non-native wetland plants may not be planted in disturbed areas.

(6) The trench width in any protected natural resource must be no wider than necessary to install the device.

(7) The trench in and adjacent to the protected natural resource must be refilled with the material that was excavated. The original grading and elevation of the wetland must be restored. Residual fill material must be removed from the wetland or water body and properly stabilized. Pipe bedding material such as crushed stone or sand may be used provided clay dams or synthetic boots are used where appropriate to prevent wetland draining through the bedding material.

(8) Blasting in inundated areas is prohibited.

(9) The outfall structure may not interfere with any potential boat usage of the project site.

(10) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.

(11) All wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms in order to protect wetland vegetation.

(12) Work below the high water line of a great pond, river, stream or brook must be done at low water except as required for emergency flood control work. Measures, such as a silt boom or staked fencing, must be employed to reduce and isolate turbidity.

(13) Maintenance clearing of deposited debris and sediments from the outfall area is allowed provided the cleared materials are removed from the resource. Any debris generated during the activity must be prevented from washing downstream and must be removed from the wetland or water body. Disposal of debris must be in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Section 1301 *et seq.*

(14) Uncured concrete may not be placed directly into the water. Concrete must be pre-cast and cured at least three weeks before placing in the water, or where necessary, must be placed in forms and cured at least one week before the forms are removed. No washing of tools, forms, etc. may occur in or adjacent to the waterbody or wetland.

(15) If work is performed in a river, stream or brook that is less than three feet deep at the time of the activity and at the location of the activity, the applicant must provide for temporary diversion of flow to the opposite side of the channel while work is in progress.

(a) Diversion may be accomplished by placing sandbags, timbers, sheet steel, concrete blocks, 6+ mil polyethylene or geotextiles from the bank to midstream on the upstream

side of the activity. No more than two-thirds (2/3) or 25 feet of stream width, whichever is less, may be diverted at one time.

(b) Any material used to divert water flow must be completely removed upon completion of the activity, and the stream substrate must be restored to its original condition.

(c) A pump may be operated, where necessary, for a temporary diversion. The pump outlet must be located and operated such that erosion or the discharge of sediment to the water is prevented.

(16) If the activity occurs within tidal waters, the activity must occur during the time period approved by the Department of Marine Resources.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Diversion**. A rerouting of a river, stream or brook to a location outside of its established channel.

(2) **Dredge**. To move or remove, by digging, scooping, or suctioning any sand, silt, mud, gravel, rock, or other material from the bottom of a water body or wetland surface.

(3) **Fill**. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or adjacent to a water body or wetland.

(4) **Land adjacent to a protected natural resource**. Any land area within 75 feet, measured horizontally, of the normal high water line of a great pond, river, stream or brook or the upland edge of a coastal wetland or freshwater wetland.

(5) **Non-native wetland plants**. Wetland grasses, forbs, shrubs, or trees not native to the State of Maine, for example, common reed (*Phragmites communis*) and purple loosestrife (*Lythrum salicaria*).

**8. Shoreline stabilization**

**A. Applicability**

(1) This section applies to the establishment of vegetation adjacent to any protected natural resource and the installation of riprap along the shoreline of a great pond, freshwater wetland with over 20,000 square feet of open water, stream or brook.

(2) This section applies only to areas where erosion exists and vegetation is not present, as demonstrated by photographs submitted with the notification form.

(3) This section does not apply to riprap on any river as defined by 38 M.R.S.A. Section 436-A(11), the Mandatory Shoreland Zoning Act (information is available at the Town Office).

(4) This section does not apply to a riprap project that affects more than 100 feet of shoreline.

(5) This section does not apply to areas within any portion of a coastal sand dune system even if portions of these systems extend into the coastal wetland.

(6) This section does not apply to an activity that will not conform to the local shoreland zoning ordinance.

NOTES:

(1) Contact the local Code Enforcement Officer for information on local shoreland zoning requirements.

(2) A permit will be required from the US Army Corps of Engineers for riprap projects that include fill below the ordinary high water line of fresh waters or below the spring high tide line of tidal waters.

A copy of the PBR notification form and original photographs, not photocopies, should be submitted to the Corps of Engineers for these activities (US Army Corps of Engineers, 675 Western Avenue, Suite #3, Manchester, ME 04351. Tel. (207) 623-8367).

**B. Submissions**

(1) The applicant is required to submit photographs of the entire shoreline area where this activity is proposed.

(2) Photographs showing the finished activity must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

(3) A scaled drawing, including a cross section, of the proposed riprap installation. The drawing must clearly depict the extent of riprap proposed to be installed, such as the length along shore and height above the normal high water line.

It is not necessary to have the plan professionally prepared. However, it must be legible and drawn to a scale that provides a clear representation of distances and measurements on the plan.

(4) Professional design plans for riprap on streams and brooks when required pursuant to paragraph C(12) of this section.

**C. Standards**

(1) Riprap may be utilized only where eroded slopes exceed 3 horizontal feet to 1 vertical foot (approximately 33% slope), or where riprap is used to stabilize an existing stormwater outfall. Where eroded slopes are shallower than 3 horizontal to 1 vertical, vegetation must be used to control erosion.

(2) Riprap installed on the shoreline of a great pond or open water wetland may not extend higher than 2 feet above the normal high water line. Riprap installed on a river, stream or brook may not extend higher than 2 feet above the normal high water line, or to the elevation of the 100-year flood where mapped by the Federal Emergency Management Agency, whichever is higher.

(3) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas into the resource:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

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NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

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(4) New soil may be brought to the site and soil amendments, such as fertilizer or lime, may be used to increase soil fertility provided:

(a) Slopes do not exceed 3 horizontal to 1 vertical;

(b) Existing vegetation is not permanently removed;

(c) Water bars or diversions are used to divert stormwater runoff away from the loam;

(d) Depth of new soil is less than 2 inches;

(e) The amendment is worked into the underlying soils;

(f) Disturbed areas are immediately mulched and seeded; and

(g) Final vegetation consists of native trees and shrubs, or matches existing vegetation immediately adjacent to the treated area.

(5) Rocks used for riprap may not be obtained from the shoreline (because they help prevent erosion) or below the normal high water line (because they provide habitat for aquatic life).

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NOTE: On many slopes, slumping is caused by wave or water motion undercutting the bank. If riprap is placed only at the bottom of the slope, and the upper portions of the bank are graded and revegetated, the cost of the shoreline stabilization project can be reduced.

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(6) The slope of the riprap may not be steeper than 1 horizontal to 1 vertical, nor shallower than 3 horizontal to 1 vertical.

(7) Riprap must be anchored at the base of the existing bank by placing the bottom row of rock in a trench excavated at least to a depth equal to the height of the largest rock, or the riprap must be pinned to underlying ledge.

(8) A layer of filter fabric and crushed stone must be placed under the riprap to prevent the washing of soil particles into the water.

(9) No fill material other than the riprap and crushed stone may be placed below the normal high water line.

(10) Riprap may not be placed in front of a retaining wall such that it extends further into the water.

(11) A buffer strip of undisturbed vegetation at least 25 feet wide must be established and maintained along the upland edge of any riprap placed for the protection of agricultural land.

(12) Design of riprap on stream or brook banks must be approved by either a Maine Registered Professional Engineer, the United States Natural Resources Conservation Service, or the local Soil and Water Conservation District. Evidence of this approval or plans stamped by a professional engineer must be submitted along with the Notification Form. With prior written agreement, the DEP may waive this standard for minor riprap activities on small streams.

(13) When riprap is necessary along a river, stream or brook, it must be combined with tree and shrub plantings to provide bank stabilization, shading of the water and cover for wildlife.

(14) If work is performed in a river, stream or brook that is less than three feet deep at the time of the activity and at the location of the activity, the applicant must provide for temporary diversion of flow to the opposite side of the channel while work is in progress.

(a) Diversion may be accomplished by placing sandbags, timbers, sheet steel, concrete blocks, 6+ mil polyethylene or geotextiles from the bank to midstream on the upstream side of the activity. No more than two-thirds (2/3) or 25 feet of stream width, whichever is less, may be diverted at one time.

(b) Any material used to divert water flow must be completely removed upon completion of the activity, and the stream substrate must be restored to its original condition.

(c) A pump may be operated, where necessary, for a temporary diversion. The pump outlet shall be located and operated such that erosion or the discharge of sediment to the water is prevented.

(15) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.

(16) Work below the high water line of a great pond, river, stream or brook must be done at low water except as required for emergency flood control work.

(17) All excavated material must be stockpiled either outside the protected natural resource or on mats or platforms. Hay bales or silt fence must be used, where necessary, to prevent sedimentation. All excavated material must be removed to a location more than 75 feet from

the protected natural resource, unless otherwise approved by the DEP, and properly stabilized with vegetation upon project completion.

(18) Disturbance of vegetation must be avoided if possible. If vegetation must be disturbed during the activity, similar types and amounts of vegetation must be re-established immediately upon completion of the activity and must be maintained.

(19) Non-native species may not be planted in disturbed areas.

(20)Riprap projects must be constructed in accordance with the plans or drawings submitted pursuant to subsections B(3) and (4) of this section, as applicable.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Fill**. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or adjacent to a water body or wetland.

(2) **Riprap.** Heavy, irregularly-shaped rocks that are fit into place, without mortar, on a slope. Square or rectangular rocks with flat faces, such as quarry stone or manufactured blocks, do not qualify as "irregularly-shaped".

(3) **Structure**. Anything built for the support, shelter or enclosure of persons, animals, goods or property of any kind, together with anything constructed or erected with a fixed location on or in the ground. Examples of structures include buildings, utility lines and roads.

**9. Crossings (utility lines, pipes and cables)**

**A. Applicability**

(1) This section applies to the installation, maintenance and replacement of an overhead utility line across a river, stream or brook excluding outstanding river segments identified in 38 M.R.S.A. Section 480-P.

(2) This section applies to the installation, maintenance and replacement of a submerged utility line across a coastal wetland, freshwater wetland, great pond, river, stream, or brook excluding outstanding river segments identified in 38 M.R.S.A. Section 480-P.

(3) This section applies to the installation, maintenance and replacement of an overhead utility line across or adjacent to a coastal wetland, freshwater wetland or great pond provided the line is within the right-of-way of, or adjacent to the path of, an existing traveled way.

(4) This section does not apply to a submerged utility crossing that is part of a larger project involving multiple crossings of a natural resource or more than one natural resource. Projects consisting of multiple natural resource crossings must obtain an individual permit under the Natural Resources Protection Act.

(5) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of permits issued under the Site Location of Development Law, 38

M.R.S.A. Sections 481 to 490, the Storm Water Management Law, 38 M.R.S.A. Section 420-D, or the Natural Resources Protection Act, 38 M.R.S.A. Sections 480-A to 480-Z.

(6) This section does not apply to an activity that will not conform to the local shoreland zoning ordinance.

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NOTES:

(1) Contact the local Code Enforcement Officer for information on local shoreland zoning requirements.

(2) In a great pond, the placement of water lines to serve a single-family house or the installation of cables for utilities, such as telephone and power cables, is exempt from NRPA permit requirements under 38 M.R.S.A. Section 480-Q (1) provided that the:

(a) Excavated trench for access to the water is backfilled and riprapped to prevent erosion;

(b) Excavated trench on the landward side of the riprapped area is seeded and mulched to prevent erosion; and

(c) Bureau of Parks and Lands has approved the placement of the cable across the bottom of the great pond to the extent that it has jurisdiction.

(3) Approval for crossing any state-owned (submerged) land must be obtained from the Department of Conservation, Bureau of Parks and Lands, State House Station 22, Augusta, ME 04333.

(4) A permit will be required from the US Army Corps of Engineers for the following types of projects:

(a) Any activity involving open trench excavation in a waterbody or where the impact (direct and indirect) to wetlands exceeds 4,300 square feet;

(b) Any activity in coastal waterways;

(c) Any activity within a river, stream or brook between October 2 and July 14 ;or

(d) Any activity involving work in waterways designated as Essential Fish Habitat for Atlantic salmon including all aquatic habitats in the watersheds of the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration: St. Croix, Boyden, Dennys, Hobart Stream, Aroostook, East Machias, Machias, Pleasant, Narraguagus, Tunk Stream, Patten Stream, Orland, Penobscot, Passagassawaukeag, Union, Ducktrap, Sheepscot, Kennebec, Androscoggin, Presumpscot, and Saco River.

A copy of the PBR notification and original photographs, not photocopies, should be submitted to the Corps of Engineers for these activities (US Army Corps of Engineers, 675 Western Avenue, Suite #3, Manchester, ME 04351. Tel. (207) 623-8367).

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**B. Submissions**

(1) The applicant is required to submit photographs of the area which will be affected by the activity proposed.

(2) Photographs showing the completed project and the affected area must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

(3) For any work involving trenching or disturbance of substrate in a coastal wetland, great pond, river, stream or brook that occurs between October 2 and July 14, notice of approval of the timing of the activity from the Department of Inland Fisheries and Wildlife, the Atlantic Salmon Authority and the Department of Marine Resources must be submitted to the DEP with the notification form, unless otherwise approved by the DEP based upon the location of the project. In addition, for a utility crossing of marine or estuarine waters at any time of year, notice of approval of the timing from the Department of Marine Resources must be submitted to the DEP with the notification form.

**C. Standards**

(1) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas into the resource:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

(2) Disturbance of wetland vegetation must be avoided if possible. If wetland vegetation must be disturbed during the activity, it must be reestablished immediately upon completion of the activity and must be maintained.

(3) Non-native wetland plants may not be planted in disturbed areas.

(4) If the activity occurs in a coastal wetland, great pond, river, stream or brook between October 2 and July 14, the activity must occur during the time period approved by the Department of Inland Fisheries and Wildlife, the Atlantic Salmon Authority and the Department of Marine Resources.

(5) The trench in and adjacent to the wetland must be refilled with the material that was excavated. The original grading and elevation of the wetland must be restored. Residual fill material must be removed from the wetland or water body and properly stabilized. Pipe bedding material such as crushed stone or sand may be used provided clay dams or synthetic boots are used where appropriate to prevent wetland draining through the bedding material.

(6) Any trench excavation that occurs within a river, stream or brook must be performed either during a period when no water is flowing, or utilize a dry crossing method such as diverting water flow by coffer dam and pumping around the area of excavation. The trench width in any natural resource must be no wider than necessary to install the device.

(7) The crossing may not obstruct any recreational usage of the water body.

(8) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.

(9) All wheeled or tracked equipment that must travel or work in a vegetated wetland must travel and work on mats or platforms in order to protect wetland vegetation.

(10) Any debris or excavated material must be stockpiled either outside the wetland or on mats or platforms. Hay bales or silt fence must be used, where necessary, to prevent sedimentation.

(11) Any debris generated during the activity must be prevented from washing downstream and must be removed from the wetland or water body. Disposal of debris must be in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Section 1301 *et seq.*

(12) Temporary roads constructed of fill are not allowed in the resource except that fill may be used on top of mats or platforms for equipment access.

(13) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used only if necessary and only if use is allowed under federal law and not prohibited from sale under 38 M.R.S.A. 1682, and provided it is cured on dry land in such a manner to expose all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol must not be used where the wood will come in contact with water.

(14) Blasting in inundated areas is prohibited.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Crossing**. Any activity extending from one side to the opposite side of a protected natural resource, or to an island or upland within a protected natural resource whether under, through or over that resource. Such activities include, but are not limited to roads, fords, bridges, culverts, utility lines, water lines, sewer lines and cables, and the clearing and removal of vegetation necessary to install and maintain these crossings.

(2) **Fill**. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or adjacent to a water body or wetland.

(3) **Land adjacent to a protected natural resource**. Any land area within 75 feet, measured horizontally, of the normal high water line of a great pond, river, stream or brook or the upland edge of a coastal wetland or freshwater wetland.

(4) **Riprap.** Heavy, irregularly-shaped rocks that are fit into place, without mortar, on a slope. Square or rectangular rocks with flat faces, such as quarry stone or manufactured blocks, do not qualify as "irregularly-shaped".

(5) **Structure**. Anything built for the support, shelter or enclosure of persons, animals, goods or property of any kind, together with anything constructed or erected with a fixed location on or in the ground. Examples of structures include buildings, utility lines and roads.

(6) **Utility lines, pipes and cables**. Wires and pipes providing utility services. The term includes telephone and electric wires, gas, oil, water and sewer pipelines, and their support structures, whether public or private.

(7) **Non-native wetland plants**. Wetland grasses, forbs, shrubs, or trees not native to the State of Maine, for example, common reed (*Phragmites communis*) and purple loosestrife (*Lythrum salicaria*).

**10. Stream crossings (bridges, culverts and fords)**

**A. Applicability**

(1) This section applies to the construction of a bridge span or culvert crossing of a river, stream or brook, and associated accessway construction within 25 feet of the river, stream or brook crossing excluding the following:

(a) Crossings of outstanding river segments identified in 38 M.R.S.A. Section 480-P;

(b) Crossings of any river as defined by 38 M.R.S.A. Section 436-A(11), the Mandatory Shoreland Zoning Act (information is available at the Town Office); or

(c) Crossings of any portion of a river, stream or brook that experiences tidal action.

NOTE: Temporary structures do not require a permit from the department under the Natural Resources Protection Act (NRPA) provided no filling and minimal soil disturbance occurs. All crossings involving filling in and adjacent to a river, stream or brook, such as culvert crossings, are subject to the NRPA and must first receive a permit before construction.

(2) This section also applies to the establishment of a permanent stream ford for purposes of timber harvesting, livestock, agriculture and construction and maintenance of a utility line.

(3) A stream crossing constructed between July 15 and October 1 that is associated with forest management activities is exempt from the 14 day waiting period required in Section 1(C)(1).

(4) A stream crossing constructed between July 15 and October 1 that is performed or supervised by individuals currently certified in erosion control practices by the DEP is exempt from the 14 day waiting period required in Section 1(C)(1).

(5) Multiple stream crossings may be submitted on one PBR notification form as long as all of the crossing activities are located within one town.

(6) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of permits issued under the Site Location of Development Law, 38 M.R.S.A. Sections 481 to 490, the Storm Water Management Law, 38 M.R.S.A. Section 420-D, or the Natural Resources Protection Act, 38 M.R.S.A. Sections 480-A to 480-Z.

(7) This section does not apply to an activity that will not conform to the local shoreland zoning ordinance.

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NOTES:

(1) Contact the local Code Enforcement Officer for information on local shoreland zoning requirements.

(2) Maintenance and repair of a public or private crossing of a river, stream or brook is exempt from the NRPA provided that:

(a) Erosion control measures are taken to prevent sedimentation of the water;

(b) The crossing does not block fish passage in the water course; and

(c) Any replaced culvert is not more than 25% longer than the culvert being replaced and is not longer than 75 feet.

(3) A permit will be required from the US Army Corps of Engineers for the following types of projects:

(a) Any activity involving impacts (direct and secondary) to freshwater wetlands; or

(b) An activity within a river, stream or brook between October 2 and July 14.

A copy of the PBR notification form and original photographs, not photocopies, should be submitted to the Corps of Engineers for these activities (US Army Corps of Engineers, 675 Western Avenue, Suite #3, Manchester, ME 04351. Tel. (207) 623-8367).

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**B. Submissions**

(1) For any crossing involving trenching or disturbance of substrate in a river, stream or brook that occurs between October 2 and July 14, the proposed dates for construction of the crossing must be clearly identified on the notification form under “Description of Project”.

(2) Except for crossings associated with forest management activities, the applicant is required to submit photographs of the area that will be affected by the activity proposed.

(3) Photographs showing the completed project and the affected area must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

**C. Standards**

(1) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas into the resource:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

(2) If a perennial watercourse to be crossed is used for navigation, the crossing must consist of a bridge span or pipe arch with at least 4 feet of clearance during normal high water for boat traffic.

(3) If the stream to be crossed is a perennial watercourse and has a slope of more than 2%, a bridge or a pipe arch must be used to maintain the natural streambed.

(4) Fill sideslopes in a stream or floodplain wetland must be maintained at a slope no shallower than 3 horizontal to 1 vertical and no steeper than 1.5 horizontal to 1 vertical. Fill sideslopes must be stabilized at the completion of the activity.

NOTE: Uncompacted soils or sandy soils that are saturated at the toe of a slope will be unstable at a 1.5 to 1 slope.

(5) A bridge or culvert must provide an opening with a cross-sectional area at least equal to 3 times the cross-sectional area of the stream channel or sufficient in size to accommodate 25-year frequency water flows.

NOTE: Stream crossings allowable under this section but located in flood hazard areas (i.e. A zones) as identified on a community's Flood Insurance Rate Maps (FIRM) or Flood Hazard Boundary Maps (FHBM) must be designed and constructed under the stricter standards contained in that community's National Flood Insurance Program (NFIP). For example, a crossing may be required to pass a 100-year flood event.

(6) Road surfaces must be constructed in a manner to prevent erosion of material into the river, stream or brook.

(7) Surface water on or adjacent to crossing approaches must be diverted through vegetative filter areas at least 25 feet long to avoid sedimentation of the watercourse. Roadside ditches may not extend to the resource being crossed.

NOTE: Surface water on or adjacent to crossing approaches should be diverted through vegetative filter areas to avoid sedimentation of the watercourse. Because roadside ditches may not extend to the resource being crossed, filter areas should be established in accordance with the following tables:

| Average slope of land between exposed mineral soil and normal high water mark (percent) | Width of strip between ditch terminus and normal high water mark (feet along surface of the ground) |
|---|---|
| 0 | 25 |
| 10 | 45 |
| 20 | 65 |
| 30 | 85 |
| 40 | 105 |
| 50 | 125 |
| 60 | 145 |
| 70 | 165 |

(8) A stream ford must be lined with crushed stone, blasted ledge, washed stone, gabion blankets or geotextile material for erosion control when the natural stream bed does not consist of ledge or rock.

(9) A stream ford must allow for fish passage at all times of the year and may not impound water. The fords must also allow for maintenance of normal stream flows.

(10) Culvert crossings must:

(a) Be limited to 75 feet in length. This limit may not be exceeded within a half-mile length of the stream or within the length of stream controlled by the applicant, if less;

(b) Follow the alignment and grade of the existing stream channel where possible. On perennial streams the culvert's gradient may not exceed 1%;

(c) Have the bottom of the entire culvert installed at or below stream bed elevation, except for additional culverts at the same crossing;

(d) Where two or more culverts are installed, be offset in order to concentrate low flows into the culvert within the natural channel;

(e) Be seated on firm ground, or on geotextiles, logs or other materials used to stabilize the ground;

(f) Be covered by soil to a minimum depth of 1 foot or according to the culvert manufacturer's specifications, whichever is greater;

(g) Have the soil compacted at least halfway up the side of the culvert; and

(h) Have the inlet and outlet ends stabilized by riprap in accordance with Section 8 Shoreline stabilization standards to avoid erosion of material around the culvert.

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NOTE: For guidance on riprap installation, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

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(11) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may, where necessary, reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.

(12) Work below the normal high water line must be done during periods of low water level or flow.

(13) If the crossing involves trenching or disturbance of substrate in a river, stream or brook between October 2 and July 14, the activity must occur during the time period approved by the DEP. The approved time period may be the time period proposed by the applicant or an alternative time period approved by the DEP. An alternative time period will be required where it appears an unreasonable impact on water quality or fisheries may result at the point of crossing or immediately downstream of the crossing. The applicant will be notified by the DEP within 14 days if an alternative time period, other than the one proposed by the applicant, is required for constructing the crossing.

(14) If work is performed in a river, stream or brook that is less than three feet deep at the time of the activity and at the location of the activity, the applicant must provide for temporary diversion of flow to the opposite side of the channel while work is in progress.

(a) Diversion may be accomplished by placing sandbags, timbers, sheet steel, concrete blocks, 6+ mil polyethylene or geotextiles from the bank to midstream on the upstream side of the activity. No more than two-thirds (2/3) or 25 feet of stream width, whichever is less, may be diverted at one time.

(b) Any material used to divert water flow must be completely removed upon completion of the activity, and the stream substrate must be restored to its original condition.

(c) A pump may be operated, where necessary, for a temporary diversion. The pump outlet must be located and operated such that erosion or the discharge of sediment to the water is prevented.

(15) All wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms in order to protect wetland vegetation.

(16) All excavated material must be stockpiled either outside the wetland or on mats or platforms. Hay bales or silt fence must be used, where necessary, to prevent sedimentation.

(17) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used only if necessary and only if use is allowed under federal law and not prohibited from sale under 38 M.R.S.A. 1682, and provided it is cured on dry land in a way that exposes all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol may not be used where it will contact water.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Cross-sectional area**. The cross-sectional area of a stream channel is determined by multiplying the stream channel width by the average stream channel depth. The stream channel width is the straight line distance from the normal high water line on one side of the channel to the normal high water line on the opposite side of the channel. The average stream channel depth is the average of the vertical distances from a straight line between the normal high water marks of the stream channel to the bottom of the channel.

(2) **Crossing**. Any activity extending from one side to the opposite side of a protected natural resource, or to an island or upland within a protected natural resource whether under, through or over that resource. Such activities include, but are not limited to roads, fords, bridges, culverts, utility lines, water lines, sewer lines and cables, and the clearing and removal of vegetation necessary to install and maintain these crossings.

(3) **Fill**. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or adjacent to a water body or wetland.

(4) **Ford**. A permanent crossing of a stream utilizing an area of existing, non-erodible substrate of the stream, such as ledge or cobble, or by placing non-erodible material such as stone or geotextile on the stream bottom.

(5) **Perennial watercourse**. A river, stream or brook depicted as a solid line on the most recent edition of a United States Geological Survey 7.5 minute series topographic map, or if not available, a 15 minute series topographic map.

(6) **Riprap.** Heavy, irregularly-shaped rocks that are fit into place, without mortar, on a slope. Square or rectangular rocks with flat faces, such as quarry stone or manufactured blocks, do not qualify as “irregularly-shaped”.

(7) **Used for navigation**. Those rivers, streams or brooks used by motorized watercraft.

**11. State transportation facilities**

**A. Applicability**

(1) This section applies to the maintenance, repair, reconstruction, rehabilitation, replacement or minor construction of a State Transportation Facility carried out by, or under the authority of, the Maine Department of Transportation (MaineDOT) or the Maine Turnpike Authority, including any testing or preconstruction engineering, and associated technical support services.

(2) This section does not apply to an activity within a coastal sand dune system.

NOTE: The construction of a transportation facility other than roads and associated facilities may be subject to the Storm Water Management Law, 38 M.R.S.A. Section 420-D.

**B. Standards**

(1) Photographs of the area to be altered by the activity must be taken before work on the site begins. The photographs must be kept on file and be made available at the request of the DEP.

(2) The activity must be reviewed by the Department of Inland Fisheries and Wildlife and the Department of Marine Resources, as applicable. The applicant must coordinate with the reviewing agencies and incorporate any recommendations from those agencies into the performance of the activity.

(3) All construction activities undertaken must be detailed in a site-specific Soil Erosion and Water Pollution Control Plan and conducted in accordance with MaineDOT's Best Management Practices for Erosion and Sediment Control, dated January 2000, and Standard Specifications, dated December 2002.

(4) Alignment changes may not exceed a distance of 200 feet between the old and new center lines in any natural resource.

(5) The activity may not alter more than 300 feet of shoreline (both shores added together) within a mile stretch of any river, stream or brook, including any bridge width or length of culvert.

(6) The activity may not alter more than 150 feet of shoreline (both shores added together) within a mile stretch of any outstanding river segment identified in 38 M.R.S.A. 480-P, including any bridge width or length of culvert.

(7) The activity must minimize wetland intrusion. The activity is exempt from the provisions of Chapter 310, the Wetland and Waterbodies Protection Rules, if the activity alters less than 15,000 square feet of natural resources per mile of roadway (centerline measurement) provided that the following impacts are not exceeded within the 15,000 square foot area:

(a) 1,000 square feet of coastal wetland consisting of salt tolerant vegetation or shellfish habitat; or

(b) 5,000 square feet of coastal wetland not containing salt tolerant vegetation or shellfish habitat; or

(c) 1,000 square feet of a great pond.

All other activities must be performed in compliance with all sections of Chapter 310, the Wetland Protection Rules, except 310.2(C), 5(A), 9(A), 9(B) and 9(C).

(8) The activity may not permanently block any fish passage in any watercourse containing fish. The applicant must coordinate with the reviewing agencies listed in paragraph 2 above to

improve fish passage and incorporate any recommendations from those agencies into the performance of the activity.

NOTE: For guidance on meeting the design objectives for fish passage, including peak flow, maximum velocity, mining depth and gradient, see the MaineDOT Waterbody and Wildlife Crossing Policy and Design Guide (July 2008), developed in conjunction with state and federal resource and regulatory agencies.

(9) Rocks may not be removed from below the normal high water line of any coastal wetland, freshwater wetland, great pond, river, stream or brook except to the minimum extent necessary for completion of work within the limits of construction.

(10) If work is performed in a river, stream or brook that is less than three feet deep at the time and location of the activity, the applicant must isolate the work area from the resource and divert stream flows around the work area, maintaining downstream flows while work is in progress.

(11) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom. If avoiding the operation of wheeled or tracked equipment in the water is not possible, the applicant must explain the need to operate in the water. Approval from the DEP to operate in the water must be in writing, and any recommendations from the DEP must be incorporated into the performance of the activity.

(12) All wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms.

(13) Any debris or excavated material must be stockpiled either outside the wetland or on mats or platforms. Erosion and sediment control best management practices must be used, where necessary, to prevent sedimentation. Any debris generated during the activity must be prevented from washing downstream and must be removed from the wetland or water body. Disposal of debris must be in conformance with the Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Section 1301 *et seq.*

(14) Work below the normal high water line of a great pond, river, stream or brook must be done at low water except for emergency work or work agreed to by the resource agencies listed in paragraph 2 above.

(15) Perimeter controls must be installed before the work starts. Disturbance of natural resources beyond the construction limits shown on the plans is not allowed under this rule.

NOTE: Guidance on the location of construction limits can be obtained from the on site Construction Manager.

(16) The use of untreated lumber is preferred. Lumber pressure treated with chromated copper arsenate (CCA) may be used only if necessary and only if use is allowed under federal law and not prohibited from sale under 38 M.R.S.A. 1682, and provided it is cured on dry land in a manner that exposes all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol may not be used where it will contact water.

(17) A temporary road for equipment access must be constructed of crushed stone, blasted ledge, or similar materials that will not cause sedimentation or restrict fish passage. Such roads must be completely removed at the completion of the activity. In addition, any such temporary roads which are in rivers, streams or brooks, must allow for a passage of stormwater flows associated with a 10-year storm.

(18) Non-native species may not be planted in restored areas.

(19) Disposal of debris must be in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Sections 1301 *et seq.*

(20) Disturbance of vegetation must be avoided, if possible. Where vegetation is disturbed outside of the area covered by any road or structure construction, it must be reestablished immediately upon completion of the activity and must be maintained.

(21) A vegetated area at least 25 feet wide must be established and maintained between any new stormwater outfall structure and the high water line of any open water body. A velocity reducing structure must be constructed at the outlet of the stormwater outfall that will create sheet flow of stormwater, and prevent erosion of soil within the vegetated buffer. If the 25 foot vegetated buffer is not practicable, the applicant must explain the reason for a lesser setback in writing. Approval from the DEP must be in writing and any recommendations must be incorporated into the activity.

**C. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Diversion**. The rerouting of a river, stream or brook around a construction site and then back to the downstream channel.

(2) **Fill**. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or immediately adjacent to a wetland or water body.

(3) **Floodplain wetlands**. Freshwater wetlands that are inundated with flood water during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Agency or other site specific information.

(4) **Riprap**. Heavy, irregularly shaped rocks that are fit into place, without mortar, on a slope as defined in the MaineDOT Standard Specifications, dated December 2002.

## 12. Restoration of natural areas

### A. Applicability

(1) This section applies to the restoration of an altered portion of a coastal wetland, freshwater wetland, great pond, river, stream or brook to its pre-existing natural condition through the removal of fill, structures or debris which is located in, on over, or adjacent to the natural resource.

(2) This section applies to the removal of non-native species and the planting of natural vegetation in any protected resource.

(3) This section applies to the retrieval of sand from below the normal high water line for redistribution on an existing adjacent sand beach on a great pond.

(4) This section applies to the restoration of the natural grade within a dredged area of a freshwater or coastal wetland.

(5) This section does not apply to:

(a) Restoration or replacement of a structure or unnatural condition such as the installation of a dam structure;

(b) Conversion of existing natural wetlands to wetland of a different type through flooding, inundation or other means;

(c) Dredging of silt, sand or soil materials which have been naturally deposited from a great pond, river, stream or brook, coastal wetland or freshwater wetland except that eroded sand may be retrieved from a great pond for redistribution on an existing adjacent sand beach;

(d) Mining of gravel or other mineral materials from a river, stream, or brook;

(e) Replacement of eroded soil material in areas above, below and adjacent to the normal high water mark of a great pond, river, stream or brook, freshwater wetland, or coastal wetland, except that sand may be regraded on an existing sand beach;

(f) Removal of a man-made dam structure;

(g) Draining of a freshwater wetland to convert an area to upland; or

(h) An activity occurring within a coastal sand dune system.

(6) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of permits issued under the Site Location of Development Law, 38°M.R.S.A. Sections 481 to 490, the Storm Water Management Law, 38 M.R.S.A. Section 420-D, or the Natural Resources Protection Act, 38 M.R.S.A. Sections 480-A to 480-Z.

(7) This section does not apply to an activity that will not conform to the local shoreland zoning ordinance.

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NOTE:

(1) Contact the local Code Enforcement Officer for information on local shoreland zoning requirements.

(2) A permit will be required from the US Army Corps of Engineers for the following types of projects:

(a) Any activity involving impacts (direct and secondary) to freshwater wetlands;

(b) Any activity within a coastal wetland;

(c) Any activity within an open water area;

(d) Any activity within a river, stream or brook between October 2 and July 14; or

(e) Any activity involving work in waterways designated as Essential Fish Habitat for Atlantic salmon including all aquatic habitats in the watersheds of the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration: St. Croix, Boyden, Dennys, Hobart Stream, Aroostook, East Machias, Machias, Pleasant, Narraguagus, Tunk Stream, Patten Stream, Orland, Penobscot, Passagassawaukeag, Union, Ducktrap, Sheepscot, Kennebec, Androscoggin, Presumpscot, and Saco River.

A copy of the PBR notification form and original photographs, not photocopies, should be submitted to the Corps of Engineers for these activities (US Army Corps of Engineers, 675 Western Avenue, Suite #3, Manchester, ME 04351. Tel. (207) 623-8367).

**B. Submissions**

(1) The applicant is required to submit photographs of the area in which this activity is proposed.

(2) Photographs showing the finished activity must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

(3) For an activity occurring in tidal waters, notice of approval of timing from the Department of Marine Resources must be submitted to the DEP with the notification form.

**C. Standards**

(1) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas into the proposed resource:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

(2) Disturbance of wetland vegetation must be avoided if possible. If wetland vegetation must be disturbed during the activity, it must be reestablished immediately upon completion of the activity and must be maintained.

(3) Non-native wetland plants may not be planted in disturbed areas.

(4) Only material that has been placed in a natural resource by persons may be removed from these waterbodies except for debris deposited within the previous 12 calendar months, and sand that will be regraded onto existing adjacent sand beaches.

(5) Sand may be regraded from below the normal high water line, but machinery may not operate in the water. Equipment operating on shore may reach into the water with a bucket or similar extension. Areas covered by vegetation, either aquatic or terrestrial, may not be disturbed during any beach regrading.

(6) Any activity involving the regrading of an existing sand beach must include the installation of permanent erosion control devices, such as water bars and diversion ditches, that prevent future erosion of the sand from upland runoff. The erosion control devices must be installed prior to the regrading of the beach.

(7) Vegetation and soil material used in restoring wetland areas must be similar to the vegetation and soil materials occurring under pre-existing natural conditions.

(8) No fill other than soil material used to restore natural elevations within a dredged area of a coastal or freshwater wetland may be placed in or adjacent to a natural resource. Sand may not be brought in from off-site to replenish an existing beach.

NOTE: Erosion of sand from beaches may be due to wave action or the action of overland water flows. Contact the DEP, the local Soil and Water Conservation District, or the local lake association for assistance with identifying sources of beach erosion.

(9) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.

(10) All wheeled or tracked equipment that must travel or work in a vegetated wetland area must travel and work on mats or platforms in order to protect wetland vegetation.

(11) All excavated material must be stockpiled either outside the wetland or on mats or platforms. Hay bales, silt fence or mulch must be used, where necessary, to prevent sedimentation.

(12) If the activity occurs within tidal waters, the activity must occur during the time period approved by the Department of Marine Resources.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Dam**. Any man-made artificial barrier, including appurtenant works, the site on which it is located and appurtenant rights of flowage and access, that impounds or diverts a river, stream or brook or great pond.

(2) **Dredge**. To move or remove, by digging, scooping, or suctioning any sand, silt, mud, gravel, rock, or other material from the bottom of a water body or wetland surface.

(3) **Fill**. a. (verb) To put into or upon, supply to, or allow to enter a water body or wetland any earth, rock, gravel, sand, silt, clay, peat, or debris; b. (noun) Material, other than structures, placed in or adjacent to a wetland or water body.

(4) **Debris**. Non-mineral materials (including but not limited to wood, brush or flotsam) deposited by wind, wave action, flooding or wild animals within the last 12 months. This term includes beaver dams, but does not include beaver or muskrat houses or nests of wild birds such as wading birds or waterfowl.

(5) **Restoration**. An activity returning a great pond, coastal wetland, freshwater wetland, river, stream or brook from a disturbed or altered condition with lesser acreage or fewer functions to a previous condition with greater acreage or functions.

(6) **Structure**. Anything built for the support, shelter or enclosure of persons, animals, goods or property of any kind, together with anything constructed or erected with a fixed location on or in the ground. Examples of structures include buildings, utility lines and roads.

(7) **Non-native wetland plants**. Wetland grasses, forbs, shrubs, or trees not native to the State of Maine, for example, common reed (*Phragmites communis*) and purple loosestrife (*Lythrum salicaria*).

**13. Habitat creation or enhancement and water quality improvement activities**

**A. Applicability**

(1) This section applies to an alteration in or adjacent to a protected natural resource by a public natural resource agency. This rule also applies to an alteration in the same types of resources by a public utility, the Department of Transportation, owner of a federally licensed hydropower project, a conservation group, or a municipality in conjunction with and under the supervision of a public natural resource agency, exclusively for the purpose of:

(a) Creating or enhancing habitat for fisheries or wildlife; or

(b) A water quality improvement project.

These activities may include but are not limited to: fishway installation; the construction of artificial reefs; removal, maintenance, installation or modification of dam structures; and the construction and maintenance of nutrient retention structures.

(2) This section applies to a landfill closure activity approved by the DEP.

(3) This section does not apply to an activity that will not conform to the local shoreland zoning ordinance.

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NOTES:

(1) Contact the local Code Enforcement Officer for information on local shoreland zoning requirements.

(2) A permit will be required from the US Army Corps of Engineers for the following types of projects:

(a) Any activity involving impacts (direct and secondary) to freshwater wetlands;

(b) Any activity within a coastal wetland;

(c) Any activity within an open water area;

(d) Any activity within a river, stream or brook between October 2 and July 14; or

(e) Any activity involving work in waterways designated as Essential Fish Habitat for Atlantic salmon including all aquatic habitats in the watersheds of the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration: St. Croix, Boyden, Dennys, Hobart Stream, Aroostook, East Machias, Machias, Pleasant, Narraguagus, Tunk Stream, Patten Stream, Orland, Penobscot, Passagassawaukeag, Union, Ducktrap, Sheepscot, Kennebec, Androscoggin, Presumpscot, and Saco River.

A copy of the PBR notification form and original photographs, not photocopies, should be submitted to the Corps of Engineers for these activities (US Army Corps of Engineers, 675 Western Avenue, Suite #3, Manchester, ME 04351. Tel. (207) 623-8367).

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**B. Submissions**

(1) The applicant is required to submit photographs of the area in which this activity is proposed.

(2) Photographs showing the finished activity must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

(3) Excluding landfill closures, if an activity is to be performed by a public utility, conservation group, municipality or the Maine Department of Transportation, certification from a public natural resource agency that the proposed activity will be done in conjunction with, or under the supervision of, the agency must be submitted with the notification form.

**C. Standards**

(1) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas into the resource:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

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NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

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(2) Disturbance of vegetation must be avoided if possible. Where vegetation is disturbed outside of the area covered by any structures or filling associated with this activity, it must be reestablished immediately upon completion of the activity and must be maintained.

(3) Non-native wetland plants may not be planted in disturbed wetland areas.

(4) All debris or excavated material must be stockpiled either outside the wetland or on mats or platforms. Hay bales, silt fence, or mulch must be used where necessary to prevent sedimentation. Any debris generated during the activity must be prevented from washing downstream and must be removed from the wetland or water body. Disposal of debris must be in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Section 1301 *et seq.*

(5) Uncured concrete may not be placed directly into the water. Concrete must be pre-cast and cured at least three weeks before placing in the water, or where necessary, must be placed in forms and cured at least one week before the forms are removed. No washing of tools, forms, etc. may occur in or adjacent to the waterbody or wetland.

(6) The use of untreated lumber is preferred. Lumber pressure-treated with chromated copper arsenate (CCA) may be used only if necessary and only if use is allowed under federal law and not prohibited from sale under 38 M.R.S.A. 1682, and provided it is cured on dry land in such a manner as to expose all surfaces to the air for at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol may not be used where the wood will come in contact with water.

(7) Wheeled or tracked equipment may not operate in the water. Equipment operating on the shore may reach into the water with a bucket or similar extension. Equipment may cross streams on rock, gravel or ledge bottom.

(8) Work below the high water line of a great pond, river, stream or brook shall be done at low water, except as required for emergency flood control work. Measures, such as a silt boom or staked fencing, must be employed to reduce and isolate turbidity.

(9) All wheeled or tracked equipment that must travel or work in a vegetated coastal wetland must travel and work on mats or platforms in order to protect wetland vegetation.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Dam**. Any man made artificial barrier, including appurtenant works, the site on which it is located and appurtenant rights of flowage and access, that impounds or diverts a river, stream or brook or great pond.

(2) **Public natural resources agency**. The Maine Department of Inland Fisheries and Wildlife, the Maine Department of Marine Resources, the Maine DEP, the Maine Department of Conservation, the United States Fish and Wildlife Service, the United States Natural Resources Conservation Service, the United States Environmental Protection Agency, the United States Army Corps of Engineers, the United States Forest Service, National Marine Fisheries Service, National Park Service, National Oceanic and Atmospheric Administration, and County Soil and Water Conservation Districts.

(3) **Water quality improvement project**. An activity designed exclusively to maintain or enhance water quality of a freshwater wetland, great pond or river, stream, brook or a coastal wetland. Examples include but are not limited to: nutrient retention basins, water level manipulation and rerouting of drainage ways.

(4) **Non-native wetland plants**. Wetland grasses, forbs, shrubs, or trees not native to the State of Maine, for example, common reed (Phragmites communis) and purple loosestrife (*Lythrum salicaria*).

**14. Piers, wharves, pilings and haulouts** *[repealed]*

**15. Public boat ramps**

**A. Applicability**

(1) This section applies to the construction of a new, or the replacement of an existing, public boat ramp or carry-in launch area, including associated parking and accessways, in or adjacent to a protected natural resource by a public natural resource agency, Maine Department of Transportation, municipality, or owners of a federally licensed hydropower project within the resource affected by the hydropower project. This section does not apply if a portion of the ramp or related facilities is located in, on or over emergent marsh vegetation or intertidal mudflat.

(2) This section applies to the construction of up to 2 launch lanes at a facility provided no more than 2 lanes exist or will exist at the completion of the activity.

(3) This section does not apply to a new boat ramp on a lake infested with aquatic invasive plants, as defined in 38 M.R.S.A. Section 410-N. The Department of Environmental Protection identifies and maintains a list of these infested lakes.

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NOTE: A permit will be required from the US Army Corps of Engineers for the following types of projects:

(a) Any activity involving open trench excavation in a waterbody;

(b) Any activity in coastal waterways;

(c) Any activity within a river, stream or brook between October 2 and July 14; or

(d) Any activity involving work in waterways designated as Essential Fish Habitat for Atlantic salmon including all aquatic habitats in the watersheds of the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration: St. Croix, Boyden, Dennys, Hobart Stream, Aroostook, East Machias, Machias, Pleasant, Narraguagus, Tunk Stream, Patten Stream, Orland, Penobscot, Passagassawaukeag, Union, Ducktrap, Sheepscot, Kennebec, Androscoggin, Presumpscot, and Saco River.

A copy of the permit by rule notification form and original photographs, not photocopies, should be submitted to the Corps of Engineers for these activities (US Army Corps of Engineers, 675 Western Avenue, Suite #3, Manchester, ME 04351. Tel. (207) 623-8367).

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**B. Submissions**

(1) The applicant is required to submit photographs of the area in which this activity is proposed.

(2) Photographs showing the finished activity must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

(3) If the project results in a new or expanded access drive or parking area, the project design plan, erosion control plan and a request for review for an activity on great ponds classified as GPA under 38 M.R.S.A. Section 465-A must be submitted to the DEP's Division of Watershed Management (DWM) prior to submitting the notification form to the DEP. A certification from DWM must be obtained and must be included with the notification form, along with final project plans and the erosion control plan, when it is submitted to the DEP.

(4) If the proposed activity involves work below the mean low water line of a waterbody, the applicant shall submit a copy of the project design plan along with a copy of the notification form to the Department of Conservation, Bureau of Parks and Lands, Submerged Lands Program (State House Station #22 Augusta, Maine 04333) at the time the notification form is submitted to the DEP. Work on the activity may not begin until a lease or easement is obtained or the Bureau of Parks and Lands has provided notification that one is not necessary.

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NOTE: Processing of a request for a lease or easement may require several weeks of review by the Bureau of Public Lands.

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(5) If the proposed activity is located within a coastal wetland area, the applicant shall submit, along with the notification form, a letter from both the Department of Inland Fisheries and Wildlife and the Department of Marine Resources that describes times of the year in which the construction of the boat ramp may occur.

(6) If the proposed activity is located within a freshwater wetland, great pond, river, stream or brook, the applicant shall submit, along with the notification form, a letter from the

Department of Inland Fisheries and Wildlife that describes times of the year in which the construction of the boat ramp may occur.

**C. Standards**

(1) The erosion control plan must be followed. Erosion of soil or fill material from disturbed areas into the resource must be prevented. The following measures must be taken:

(a) Staked hay bales or silt fence must be properly installed between the area of soil disturbance and the resource before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

(2) A hard-surfaced launch must be used where boats will be launched from trailers, and must meet the following specifications:

(a) The underwater portions of the ramp, at the time of construction, must be constructed of reinforced precast concrete planks, panels or slabs;

(b) The portion of the ramp used by the towing vehicle may not have a slope that exceeds 15%; the portion of the ramp used by the trailer only may not have a slope that exceeds 20%;

(c) The width of the hard surfaced launch lane(s) may not exceed 20 feet as measured parallel to shore;

(d) The upper most 6 inches of the base must consist of crushed rock or crushed or screened gravel having 5% or less passing a 200 mesh sieve; and

(e) Fill slopes at or below the normal high water line must be protected with riprap. Riprap installation must meet the standards for riprap in PBR Section 8, "Shoreline stabilization".

(3) An additional area of up to 8 feet wide as measured parallel to shore may be constructed using bituminous pavement, precast concrete planks, panels or slabs to support docking systems.

(4) A carry-in launch area for small boats must:

(a) Consist of gravel, rock, sand, vegetation, or other erosion resistant materials;

(b) Have a grade not exceeding 18%; and

(c) Be Limited, below the low water line, to constructing a path up to 6 feet wide, measured parallel to shore, consisting of cobble, rock or concrete planks, to access deeper water to float watercraft.

(5) A vegetated buffer zone at least 25 feet in width must be maintained between any new or expanded parking area and the waterbody.

(6) A parking area or access road may not be located in a protected natural resource, except that an access roadway may cross a stream if the requirements of PBR Section 10 "Stream crossings" are met.

(7) Any new or expanded parking area or roadway must divert stormwater runoff away from the ramp to an area where it may infiltrate into the ground before reaching the waterbody.

(8) Machinery may operate below the water line only when necessary to excavate or place material below the existing water level and must travel and operate on temporary mats or portions of the ramp that have been constructed.

(9) Timing of the activity must conform to the recommendations of biologists from the Department of Inland Fisheries and Wildlife or the Department of Marine Resources, as appropriate, as described in letters submitted along with the notification form.

(10) Any debris generated during the work must be prevented from washing downstream and must be removed from the wetland or water body. Disposal of debris must be in conformance with Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A Section 1301 *et seq.*

(11) Uncured concrete may not be placed directly into the water. Concrete must be pre-cast and cured at least three weeks before placing in the water or, where necessary, must be placed in forms and cured at least one week before the forms are removed. No washing of tools, forms, etc. may occur in or adjacent to the waterbody or wetland.

(12) The use of untreated lumber is preferred. Lumber pressure-treated with chromated copper arsenate (CCA) may be used only if necessary and only if use is allowed under federal law and not prohibited from sale under 38 M.R.S.A. 1682, and provided it is cured on dry land in such a manner as to expose all surfaces to the air for a period of at least 21 days prior to construction. Wood treated with creosote or pentachlorophenol shall not be used where it will contact water.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Emergent marsh vegetation**. Plants that are erect, rooted and herbaceous, and that may be temporarily to permanently flooded at the base, but do not tolerate prolonged inundation of the entire plant; (e.g. cattails, saltmarsh cordgrass).

(2) **Public natural resource agency**. The Maine Department of Inland Fisheries and Wildlife, the Maine Department of Marine Resources, the Maine DEP, the Maine Department of Conservation, the United States Fish and Wildlife Service, the United States Forest Service, the United States Natural Resources Conservation Service and County Soil and Water Conservation Districts.

(3) **Project design plan**. A detailed plan of the proposed activity indicating all dimensions (width, height, length) relative to the mean low water mark, and including any appurtenant structures that may be seasonal in nature.

**16. Activities in coastal sand dunes**

**A. Applicability**

(1) This section applies to the following activities in coastal sand dune systems:

(a) Repair or replacement of an existing seawall, patio, deck, driveway, walkway, porch or parking area;

(b) Dune restoration or construction;

(c) Installation or repair of underground utility lines;

(d) Construction of a new structure or new development, other than a building or closed fence, in a back dune area;

(e) New buildings or an addition to an existing building in a back dune when mitigation and enhancement measures are not required as determined by the DEP;

(f) Construction of closed fences in a back dune, non-erosion hazard area;

(g) Construction of open fences in a frontal dune or back dune erosion hazard area;

(h) Construction of cobble-trapping fences with permanent anchors landward of an existing seawall in a developed area;

(i) Construction of a walkway or driveway on existing developed area in a frontal dune; and

(j) Installation of underground propane tanks.

PBR applications are reviewed on a case by case basis to determine the concern for damage due to shoreline change. In an area where concern for damage due to shoreline change is identified or mitigation and enhancement measures are required, the applicant is required to file for an individual Natural Resources Protection Act Permit, and is encouraged to contact the DEP for a pre-application meeting.

(2) This section does not apply to the construction of a new structure or addition to an existing structure in V-Zones.

(3) This section does not apply to an activity that will not conform to the local shoreland zoning ordinance.

NOTE: Contact the local Code Enforcement Officer for information on local shoreland zoning requirements.

**B. Submissions**

(1) The applicant is required to submit photographs of the area in which the activity is proposed.

(2) Photographs showing the finished activity must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

(3) The following information must be submitted with the notification form.

(a) A site plan that includes the following information.

(i) The dimensions and square footage of the lot.

(ii) The dimensions (including height) and square footage of existing and proposed structures and development e.g. houses, sheds, garages, decks, patios, driveways, parking areas, walkways, lawn, fences, etc. and their location on the lot (see definitions of Building, Footprint and Development in Section 16(D)). The existing and the proposed structures must be clearly distinguished.

(iii) The location of property lines and names of abutters.

(iv) The location of buildings on adjacent properties.

For patios, decks, driveways, walkways, porches, and parking areas that are to be repaired or replaced, the site plan must include the length and width of the existing structure, the height of the existing structure if it is elevated and the thickness of the existing structure;

For new buildings or an addition to an existing building in a back dune erosion hazard area, the site plan must include a post foundation designed to meet the requirements of the Department's *Coastal Sand Dune Rules*, 06-096 CMR 355(6)(G);

(b) A copy of the most recent Coastal Sand Dune Geology Map, produced by the Maine Geological Survey, which contains the project site and has the project site clearly identified on the photo;

NOTE: Maps are available for review at the town offices of most coastal communities and at DEP regional offices. The maps are also available for purchase from the Maine Geological Survey, 22 State House Station, Augusta, ME 04333

(c) For seawall repair or replacement only, an accurate plan drawn to scale by a licensed surveyor, coastal geologist or professional engineer showing the location of the existing and proposed wall and the elevation of the wall(s) referenced to a nearby permanent and reproducible elevation point, such as a described point on a building or other structure. The plan must be signed and dated by the person responsible for preparing the drawing;

(d) If moving sand in an area seaward of the frontal dune between April 1 and September 1, a copy of the written approval to proceed from the Department of Inland Fisheries and Wildlife; and

(e) For open or cobble-trapping fences, a detail showing a typical section of the fence and the dimensions of the fence including the size of the openings.

**C. Standards**

(1) No more than 40% of the lot may be covered by development including, but not limited to, buildings, driveways, walkways, parking areas, lawn or landscaped area, and land area previously developed; nor may the total area to be covered by the footprint of buildings exceed 20% of the lot, including existing buildings. Land area within the V-zone may not be included as part of a lot for the purposes of this section.

(2) Where development that is existing or did exist within one year of application exceeds 40% of the total lot area, the percentage of developed area may not be increased.

(3) Where the footprint of buildings that are existing or did exist within one year of application exceeds 20% of the total lot area, the percentage of area covered by buildings may not be increased.

(4) An activity occurring on land adjacent to a coastal wetland, freshwater wetland containing over 20,000 square feet of open water or emergent marsh vegetation, great pond, river, stream or brook must meet the erosion control and setback requirements of Section 2, "Activities adjacent to protected natural resources".

(5) Building or building additions may not result in a total structure greater than 35 feet in height or have a footprint greater than 2500 square feet. For purposes of determining whether the building is 35 feet high, the starting point for measuring the bottom elevation of the building is described in Chapter 355(5)(D). The top of the building is considered to be the highest point of the building excluding ancillary features such as weathervanes or chimneys that are attached to the building's primary roof but including features such as decks or observations towers that extend higher than the building's primary roof.

NOTE: The Department recommends that projects be constructed according to the Coastal Construction Manual published by the Federal Emergency Management Agency, which describes the best practices for residential construction in coastal areas.

(6) A building may not be constructed so that any part of the building extends seaward of a line drawn between the seaward most point of buildings on adjacent properties if the construction would significantly obstruct the view from an adjacent building.

(7) During project construction, disturbance of dune vegetation must be avoided and native vegetation must be retained on the lot to the maximum extent possible. Any areas of dune vegetation that are disturbed must be restored as quickly as possible. Dune vegetation includes American beach grass, rugosa rose, bayberry, beach pea, beach heather and pitch pine.

(8) No fill may be placed on the project site other than that required for an approved dune restoration project or new construction. Foundation backfill and sand dune restoration and construction must utilize sand that has textural and color characteristics consistent with the natural sand's textural and color characteristics.

(9) No sand may be moved seaward of the frontal dune between April 1 and September 1, unless written approval from the Department of Inland Fisheries and Wildlife has been obtained.

(10) An activity involving dune restoration or dune construction must be performed between March 1 and April 1 or October 1 and November 15. Dune grass must be planted immediately after construction. Dune grass must be planted with 3 culms per hole. The holes must be spaced 18 inches apart. The planted dune grass must be protected from pedestrian traffic until the dune grass is well established. The density of the growing stand of dune grass must be at least 40 plants per 100 square feet.

(11) A dune restoration/construction activity must use sand that has textural and color characteristics consistent with the natural sand's textural and color characteristics.

(12) A dune restoration or dune construction activity must minimize damage to existing dune vegetation and must follow the configuration and alignment of adjacent dunes as closely as possible. No sand or other materials may be placed below the normal high tide line.

(13) The replacement of a seawall may not increase the height, length or thickness dimensions of a seawall beyond that which legally existed within 24 months of submission of the notification form. The replaced seawall may not be significantly different in construction from the one that previously existed.

(14) A private walkway must be 4 feet or less in width. A public walkway must be 10 feet or less in width. Walkways must allow for sand movement and may not have a significant impact on vegetation outside of the footprint of the walkway. No portion of the walkway may be located in the V-Zone.

(15) The repair or replacement of a patio, deck, driveway, walkway, porch or parking area may not increase the height, length, width or thickness dimensions of the existing structure. The new or repaired patio, deck, driveway, walkway, porch or parking area may be constructed of a different material provided the dimensions remain the same.

(16) All proposed construction and development activity is limited to the location and extent depicted on the plan or drawing submitted pursuant to subsection B(3) of this section.

(17) An open fence must have openings that allow for the easy movement of water, wind and sand. If a picket board fence is proposed, the opening must be at least 4 inches wide or at least double the width of the picket board, whichever is greater. A continuous footing may not be used to support the fence and support posts may not be larger than 4 inches by 4 inches.

(18) A cobble-trapping fence may only be placed on properties that are adjacent to beaches with gravel and cobble sediment and have developed areas such as lawn between the building and the beach. Such a fence may not be placed on a naturally vegetated frontal dune ridge.

(19) A cobble-trapping fence must be placed landward of an existing seawall in a developed area, must not extend more than two feet beyond the building's foundation on either side, must not consist of more than one row of fencing, must not have openings smaller than 2 inches square or in diameter, and must not be higher than 4 feet above grade, The fence may be supported by permanent, small subsurface pipes or similar emplacements that are left in place all year. A permanent, continuous footing may not be used to support the fence. Cobbles and sediment trapped by the fence may be removed and placed immediately seaward of a frontal dune or seawall on the property.

(20) Underground propane tanks must be placed under an existing structure on the parcel.

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Back dunes**. Back dunes consist of sand dunes and eolian sand flats that lie landward of the frontal dune or a low energy beach. Back dunes include those areas containing artificial fill over back dune sands or over wetlands adjacent to the coastal sand dune system.

(2) **Beach**. The zone of unconsolidated sand or gravel that extends landward from the mean low water line to the seaward toe of a dune. The definition of beach includes the beach face and berm.

(3) **Beach nourishment**. *(Deleted)*

(4) **Berm**. The flat or gently sloping area between the high tide limit and frontal dune. A berm is formed by deposition of sand transported to shore by tides, waves, wind and currents.

(5) **Building.** A structure designed for habitation, shelter, storage, or as a gathering place that has a roof. For the purposes of this rule, the foundation is considered to be a part of the building. A porch with a roof, attached to the exterior walls of a building, is considered part of the building.

(6) **C-zone**. *(Deleted)*

(7) **Closed fence**. A fence that effectively blocks the movement of wind, water, or sand, such as a stockade fence or snow fence.

(8) **Cobble**. A rock that is smaller than a boulder and larger than gravel.

(9) **Cobble-trapping fence**. An open fence with a continuous porosity equal to or greater than 50% that is designed to prevent cobbles from passing through it .

(10) **Development**. The alteration of property for human-related use including, but not limited to, buildings, decks, driveways, parking areas, lawns, landscaped areas, and areas of non-native vegetation, and any other appurtenant facilities, but excluding temporary structures.

(11) **Dune vegetation**. Dune plant species typically adapted to Maine's coastal sand dune systems including, but not limited to, American beach grass, rugosa rose, bayberry, beach pea, beach heather and pitch pine.

(12) **Erosion hazard area**

(a) Any portion of the coastal sand dune system that can reasonably be expected to become part of a coastal wetland in the next 100 years due to cumulative and collective changes in the shoreline from:

(i) Historical long-term erosion;

(ii) Short-term erosion resulting from a 100-year storm; or

(iii) Flooding in a 100-year storm after a two-foot rise in sea level; or

(b) Any portion of the coastal sand dune system that is mapped as an AO flood zone by the effective FEMA Flood Insurance Rate Map, which is presumed to be located in an Erosion Hazard Area unless the applicant demonstrates based on site-specific information, as determined by the DEP, that a coastal wetland will not result from either (i), (ii), or (iii) occurring on an applicant's lot given the expectation that an AO-Zone, particularly if located immediately behind a frontal dune, is likely to become a V-Zone after 2 feet of sea level rise in 100 years.

(13) **Footprint**. The outline that would be created on the ground by extending the exterior walls of the building to the ground surface.

(14) **Foundation**. The portion of a structure that transmits the loads of the structure to the ground, including but not limited to: spread footings, foundation walls, posts, piers, piles, beams, girders, structural slabs, bracings, and associated connectors.

(15) **Frontal dune**. The frontal dune is the area consisting of the most seaward ridge of sand and gravel and includes former frontal dune areas modified by development. Where the dune has been altered from a natural condition, the dune position may be inferred from the present beach profile, dune positions along the shore, and regional trends in dune width. The frontal dune may or may not be vegetated with dune vegetation and may consist in part or in whole of artificial fill. In areas where smaller ridges of sand are forming in front of an established dune ridge, the frontal dune may include more than one ridge.

(16) **Land adjacent to a protected natural resource**. Any land area within 75 feet, measured horizontally, of the normal high water line of a great pond, river, stream or brook or the upland edge of a coastal wetland or freshwater wetland.

(17) **Lot**. Also referred to as a lot of record, all contiguous areas under a single present ownership as indicated by a deed and recorded in the registry of deeds constituting a piece of land measured and marked by metes and bounds descriptions or by some other approved surveying technique.

(18) **Open fence**. A fence through which water, wind and sand can easily move, for example, a split rail fence.

(19) **Permanent structure** (also referred to as a “structure” in this section). Any structure constructed or erected with a fixed location or attached to a structure with a fixed location for a period exceeding 7 months each year. Permanent structures include, but are not limited to:

causeways, piers, docks, concrete slabs, piles, marinas, retaining walls, buildings, swimming pools, fences, seawalls, roads, driveways, parking areas, and walkways. Natural features, such as frontal dunes, are not considered permanent structures. For the purposes of this section, open decks and storage sheds that comply with the criteria outlined below are not considered to be structures.

(a) Open decks that: do not exceed a total of 200 square feet, including any existing decks on the property, are not located in a V-Zone, are supported by posts, and are elevated at least 3 feet above existing grade to allow unobstructed flow of sand, wind and water. One set of outside stairs, attached to the deck, will be considered part of the open deck but not included when determining the 200 square foot area.

(b) One storage shed per lot that does not exceed 100 square feet, provided that it is not located in a V-Zone and that it is not converted to a habitable structure.

(20) **Posts**. Any pilings or column supports that allow water and sand to move freely underneath the structure, and that are adequate to provide a foundation for the structure they supports. The term "post" does not include frost walls or breakaway foundation construction.

(21) **Seawall**. Vertical wall, or other sloped barrier that separates land from water areas, commonly constructed out of rocks, wood, concrete or other similar materials, generally built for the purpose of protecting structures or property from shoreline erosion caused by wave or current action. A seawall is presumed to be a permanent structure.

(22) **V-Zone**. That land area of special flood hazard subject to a one- percent or greater chance of flooding in any given year, and subject to additional hazard from high velocity water due to wave action. Wave heights or wave run-up depths are equal to or greater than 3 feet in V-Zones. V-Zones are as identified on the effective Flood Insurance Rate Maps and any subsequent Letters of Map Changes issued by FEMA.

## 17. Transfers and permit extensions

### A. Applicability

(1) This section allows an individual permit, general permit or tier review approval issued under the Natural Resources Protection Act to be transferred from the permittee to the applicant when the permitted project changes ownership.

(2) This section allows an individual permit, general permit or tier review approval issued under the Natural Resources Protection Act to be extended one time provided the approved activity has not begun and the permit has not expired. This section does not apply to an extension request for a permit previously extended under this chapter.

### B. Submissions

(1) For a transfer, the applicant must submit an affidavit attesting to the fact that he or she has received, read, understand and will comply with the terms of the DEP Order(s) and conditions of approval for the activity.

(2) For a transfer, the applicant must submit a copy of the order(s) to be transferred as well as a copy of documents establishing proof of ownership of the property on which the activity is located or sufficient title, right or interest to complete the activity in accordance with the requirements of the permit and the NRPA.

(3) For a transfer, the original permittee must submit a statement attesting that he or she agrees to the transfer of his or her permit to the applicant.

(4) For a transfer of a project that requires compensation, the applicant must submit documentation that demonstrates sufficient expertise and financial resources to complete the approved compensation work, including subsequent monitoring and corrective actions.

(5) For permit extensions, a copy of the order(s) to be extended shall be submitted to the Department along with a written reason for the extension request.

**C. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Affidavit**. A written declaration made under oath before a notary public.

(2) **Extension**. A DEP approval to extend an unexpired permit. An extension is valid for 2 years.

**18. Maintenance dredging permit renewal**

**A. Applicability**

(1) This section applies to the renewal of an individual permit issued by the DEP for maintenance dredging in a coastal wetland, great pond and river, stream or brook provided that:

(a) The area to be dredged is located in an area that was dredged within the last ten years;

(b) The permit to be renewed was an individual Natural Resources Protection Act permit. If the most recent dredge was permitted under a PBR, this section does not apply;

(c) The area to be dredged is not located in or within 250 feet of an area identified as significant wildlife habitat by the Department of Inland Fisheries and Wildlife;

NOTE: Contact the nearest regional office of the Maine Department of Inland Fisheries and Wildlife for more information

(d) Less than 50,000 cubic yards will be dredged.

(2) This section does not apply to the renewal of a permit issued by the DEP for gravel mining in any protected natural resource.

NOTE:
(1) Displacement or bulldozing of sediment within a lobster pound does not require a Natural Resources Protection Act permit provided that the sediment is not removed from the area inundated as a result of the impoundment, 38 M.R.S.A. Section 480-Q(19).

(2) Any activity involving dredging may require a permit from the US Army Corps of Engineers. A copy of the PBR notification should be submitted to the Corps of Engineers for these activities (US Army Corps of Engineers, RR 2 Box 1855, Manchester, ME 04351).

**B. Submissions**

(1) A copy of the permit issued for the most recent maintenance dredging must be submitted to the DEP with the notification form.

(2) For a dredge activity in tidal waters, notice of approval of the timing of the activity from the Department of Marine Resources must be submitted to the DEP with the notification form.

**C. Standards**

(1) The dimensions of the area proposed to be dredged may not exceed previously approved dimensions and dredging must be conducted in the same location.

(2) All conditions previously attached to the original permit are incorporated into the permit by rule unless otherwise stated by the DEP in writing.

(3) For a dredge activity in tidal waters, the activity must occur during the time period approved by the Department of Marine Resources.

(4) Any debris or dredged material generated during the activity may not be disposed of in any protected natural resource unless otherwise allowed in this chapter and the disposal conforms with the Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. Sections 1301 *et seq.*

**D. Definitions.** The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise:

(1) **Dredge**. To move or remove, by digging scooping or suctioning any sand, silt, mud, gravel, rock, or other material from the bottom of a water body or wetland surface.

(2) **Dredge spoils**. Sand, silt, mud, gravel rock or other sediment or material that is moved from coastal wetlands, great ponds or rivers, streams or brooks.

**19. Activities in, on or over significant vernal pool habitat**

**A. Applicability**

(1) This section applies to activities in, on, or over a significant vernal pool habitat or a potential significant vernal pool habitat. Significant vernal pool habitat consists of a vernal pool depression and the portion of the critical terrestrial habitat within a 250 foot radius of the spring or fall high water mark of the depression.

NOTE: The 250 feet of critical terrestrial habitat protected as significant vernal pool habitat is only a portion of the habitat used by adult wood frogs, ambystomatid salamanders, and threatened and endangered species. Tracking studies of adult pool-breeding amphibians have shown that they can travel over a third-mile away from their breeding pool, and that

a radius of 750 feet around the pool is optimal for protecting viable amphibian populations. The DEP encourages efforts to protect more habitat adjacent to a vernal pool than this regulation has authority over.

(2) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of a permit issued under the Site Location of Development Law, 38 M.R.S.A. Sections 481 to 490, the Stormwater Management Law, 38 M.R.S.A. Section 420-D, or the Natural Resources Protection Act, 38 M.R.S.A. Section 480-A to BB.

NOTE: For additional regulatory provisions applicable to significant vernal pools, see 06-096 CMR 335, Significant Wildlife Habitat.

**B. Submissions.** The following items must be submitted with the notification, unless otherwise provided below.

(1) Photographs of the area that will be affected by the activity proposed.

(2) Photographs showing the completed project and the affected area must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

(3) A scaled plan or drawing of the area affected, including but not limited to the following information:

(a) The entire property on which the activity will take place, including property lines, the vernal pool depression and remaining surrounding significant vernal pool habitat within 250 feet of the spring or fall high water mark of the depression, and the boundaries and location of other protected natural resources such as streams and other wetlands;

(b) Proposed activity and existing development on which the activity will take place, including buildings, parking areas, roads, fill areas, landscaped areas, etc.; and

(c) Any site constraints limiting development beyond the significant vernal pool habitat, such as steep slopes.

It is not necessary to have the plan formally prepared. However, it must be legible and drawn to a scale that allows a clear representation of distances and measurements on the plan.

**C. Standards.** The following measures must be taken during construction and maintenance of the activity.

(1) No disturbance within the vernal pool depression.

(2) Except for activities in existing developed areas, maintain a minimum of 75% of the critical terrestrial habitat as unfragmented forest with at least a partly-closed canopy of overstory trees to provide shade, deep litter and woody debris.

(3) Maintain or restore forest corridors connecting wetlands and significant vernal pools.

(4) Minimize forest floor disturbance.

(5) Maintain native understory vegetation and downed woody debris.

In determining whether the standard in Section 19(C)(2) has been met, the DEP considers only that portion of the critical terrestrial habitat within the significant vernal pool habitat, which is the area within a 250 foot radius of the spring or fall high water mark of the vernal pool depression.

(6) Take the following measures to prevent erosion of soil or fill material from disturbed areas:

(a) Staked hay bales or silt fence must be properly installed at the edge of disturbed areas between the activity and the vernal pool depression before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

(7) An activity of a type that would qualify for a permit by rule under one of the other sections of this chapter listed below, notwithstanding any restriction concerning significant wildlife habitat that may be in that section, must also meet the requirements of that section.

Sec. 4. Replacement of structures
Sec. 9. Crossings (utility lines, pipes, cables)
Sec. 10. Stream crossings (bridges, culverts, fords)
Sec. 11. State transportation facilities
Sec. 12. Restoration of natural areas.
Sec. 13. Habitat creation or enhancement and water quality improvement activities
Sec. 15. Public boat ramps
Sec. 16. Coastal sand dune projects

**D. Definitions**. The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise.

(1) **Critical terrestrial habitat**. Uplands and wetlands associated with significant vernal pools used by pool breeding amphibians for migration, feeding, and hibernation, in particular, forested wetlands and forested uplands that provide deep organic litter, coarse woody debris and canopy shade.

(2) **Existing developed area**. The area of property altered including, but not limited to, buildings, driveways, parking areas, wastewater disposal systems, lawns and other landscaped areas, as of September 1, 2007.

(3) **Significant vernal pool habitat**. A vernal pool depression and the portion of the critical terrestrial habitat within a 250 foot radius of the spring or fall high water mark of the depression. For complete criteria, see Chapter 335(9), Significant vernal pools.

(4) **Vernal pool depression**. This area includes the vernal pool depression up to the spring or fall high water mark, and includes any vegetation growing within the depression.

**20. Activities located in, on or over high or moderate value inland waterfowl and wading bird habitat, or shorebird nesting, feeding, and staging areas**

**A. Applicability**

(1) This section applies to activities in existing developed areas located in, on, or over high or moderate value inland waterfowl and wading bird habitat, or shorebird nesting, feeding, and staging areas.

(2) This section applies to an expansion of up to 10% of an existing development area within a high or moderate value inland waterfowl and wading bird habitat, or a shorebird feeding area, if an individual permit is not otherwise required for activity on the parcel.

(3) This section applies to activities consisting of cutting or removal of vegetation within high or moderate value inland waterfowl and wading bird habitat, or shorebird feeding or roosting buffer.

(4) This section applies to new activities, such as the construction of buildings, roads, and driveways, in an upland area on a lot in moderate value inland waterfowl and wading bird habitat and that contains no Development area.

NOTE: If exterior lighting is anticipated to extend into the habitat within the 150 foot setback, the Department may request a detailed lighting plan.

(5) This section does not apply to an activity that is not or will not be in compliance with the terms and conditions of a permit issued under the *Site Location of Development Law,* 38 M.R.S.A. §§ 481–490, the *Stormwater Management Law,* 38 M.R.S.A. §420-D, or the *Natural Resources Protection Act,* 38 M.R.S.A. §§ 480-A–480-FF.

(6) This section does not apply to an activity that does not conform to the local shoreland zoning ordinance.

NOTE: For additional regulatory provisions applicable to significant wildlife habitats, see *Significant Wildlife Habitat,* 06-096 CMR 335 (last amended June 8, 2006).

**B. Submissions**. The following items must be submitted with the notification, unless otherwise provided below.

(1) Photographs of the area that will be affected by the activity proposed.

(2) Photographs showing the completed project and the affected area must be submitted within 20 days of the activity's completion. The photographs must be sent with a copy of the notification form or labeled with the applicant's name and the town in which the activity took place.

(3) A scaled plan or drawing of the area affected, including information such as the following.

(a) The entire property on which the activity will take place, including property lines, and the boundaries and location of protected natural resources such as streams, and wetlands, as well as significant wildlife habitat (specify type of significant wildlife habitat).

(b) Proposed activity and existing development on which the activity will take place, including buildings, parking areas, roads, fill areas, landscaped areas, etc. If up to a 10% expansion of an existing developed area is proposed within a high or moderate value inland waterfowl and wading bird habitat, or a shorebird feeding area, indicate the existing developed area and proposed expansion.

It is not necessary to have the plan formally prepared. However, it must be legible and drawn to a scale that allows a clear and accurate representation of distances and measurements on the plan.

(4) For cutting or removal of vegetation in a shorebird roosting buffer, notice of approval of the activity from the Department of Inland Fisheries and Wildlife (IF&W) must be submitted to the DEP with the notification form. The IF&W approval may specify the location of the activity or other conditions of approval.

(5) For any work in, on or over a shorebird nesting, feeding, and staging area that would occur between July 15 and September 15, notice of approval of the timing of the activity from the Department of Inland Fisheries and Wildlife must be submitted to the DEP with the notification form.

(6) For new activities in a moderate value inland waterfowl and wading bird habitat that take place between April 15 and July 31 of any year, notice of approval of the timing of the activity from the Department of Inland Fisheries and Wildlife must be submitted to the DEP with the notification form.

**C. Standards**

(1) For activities in, on or over a shorebird nesting, feeding, and staging area between July 15 and September 15, the activity must occur during the time period approved by the Department of Inland Fisheries and Wildlife.

(2) The following measures must be taken to prevent erosion of soil or fill material from disturbed areas into the resource:

(a) Staked hay bales or silt fence must be properly installed at the edge of disturbed areas between the activity and the undeveloped area before the activity begins;

(b) Hay bales or silt fence barriers must be maintained until the disturbed area is permanently stabilized;

(c) Within 7 calendar days following the completion of any soil disturbance, and prior to any storm event, mulch must be spread on any exposed soils;

(d) All disturbed soils must be permanently stabilized; and

(e) Within 30 days of final stabilization of the site, any silt fence must be removed.

NOTE: For guidance on erosion and sedimentation controls, consult the Maine Erosion and Sediment Control BMPs, dated March 2003. This handbook and other references are available from the DEP.

(3) An activity of a type that would qualify for a permit by rule under one of the sections listed below must also meet the requirements of that section.

Sec. 3. Intake pipes
Sec. 4. Replacement of structures
Sec. 6. Movement of rocks or vegetation
Sec. 7. Outfall pipes
Sec. 8. Shoreline stabilization
Sec. 9. Crossings (utility lines, pipes, cables)
Sec. 10. Stream crossing (bridges, culverts, fords)
Sec. 11. State transportation facilities
Sec. 12. Restoration of natural areas
Sec. 13. Habitat creation or enhancement and water quality improvement activities
Sec. 15. Public boat ramps
Sec. 16. Coastal sand dune projects
Sec. 18. Maintenance dredging renewal permit

(4) Except for cutting or removal of vegetation allowed pursuant to paragraph C(6) of this section, cutting or removal of vegetation within a high or moderate value inland waterfowl and wading bird habitat, or shorebird roosting buffer, is limited to:

(a) Removal of a safety hazard; or

(b) Cutting or removal of vegetation to allow for a footpath not to exceed 6 feet in width as measured between tree trunks and shrub stems. The footpath may not result in a cleared line of sight to the water.

Any cutting or removal of vegetation within a shorebird roosting buffer under this paragraph must be done in consultation with and as approved by the Department of Inland Fisheries and Wildlife.

(5) Cutting or removal of vegetation within a shorebird feeding buffer must meet the vegetative screening standards set forth in *Mandatory Shoreland Zoning*, 38 M.R.S.A. §439-A(6). In interpreting and enforcing these standards, the department shall rely upon the department's shoreland zoning rules regarding cutting or removal of vegetation for activities other than

timber harvesting[1] and apply the cutting standards applicable within 75 feet of a coastal wetland to the entire 100-foot feeding buffer.

(6) New activities in an upland area on a lot in a moderate value inland waterfowl and wading bird habitat and that contains no Development area must meet the following standards:

(a) New structures must be located a minimum of 150 feet landward of the upland edge or forested wetland edge of the inland wetland complex within the waterfowl and wading bird habitat;

(b) Beyond 150 feet from the upland edge or forested wetland edge of the inland wetland complex within the waterfowl and wading bird habitat, no more than 20 % of the applicant's land within the habitat may be cleared or developed;

(c) Within 150 feet of the upland edge or forested wetland edge of the inland wetland complex within the waterfowl and wading bird habitat, cutting and removal of vegetation is limited to those activities described in Paragraphs C(4)(a) and (b) of this section.

(d) No construction or clearing activity may take place from April 15 through July 31 of any year unless otherwise approved by the Maine Department of Inland Fisheries and Wildlife.

(7) All work is limited to the location and extent depicted on the plan or plans submitted pursuant to subsection B(3) of this section.

**D. Definitions**. The following terms, as used in this chapter, have the following meanings, unless the context indicates otherwise.

(1) **Development area.** The area of property altered including, but not limited to, buildings, driveways, parking areas, wastewater disposal systems, lawns and other landscaped areas, as of June 8, 2006. "Developed area" has the same meaning as "development area".

(2) **Inland high or moderate value waterfowl and wading bird habitat**. A high to moderate value inland habitat is an inland wetland complex, and a 250 foot wide zone surrounding the wetland complex, that through a combination of dominant wetland type, wetland diversity, wetland size, wetland type interspersion, and the percent of open water meets IF&W guidelines or is an inland wetland complex that has documented outstanding use by waterfowl or wading birds. See Chapter 335(10)(A) for complete criteria.

(3) **Shorebird nesting, feeding, and staging areas**. Shorebird nesting, feeding, and staging areas, and a zone surrounding those areas as described in paragraphs (4) and (5), are significant wildlife habitats. Shorebird species include the members of the families Scolopacidae, Charadriidae, and Haematopodidae, including, but not limited to, sandpipers and plovers. See Chapter 335(11) for complete criteria.

[1] *Guidelines for Municipal Shoreland Zoning Ordinances,* 06-096 CMR 1000(15)(P) (chapter last amended May 1, 2006).

(4) **Shorebird feeding area**. A shorebird feeding or staging area that is not a roosting area. The shorebird feeding area includes a 100-foot-wide surrounding buffer referred to as the feeding buffer.

(5) **Shorebird roosting area**. A shorebird feeding or staging area that is also a roosting area. The shorebird roosting area includes a 250-foot-wide surrounding buffer referred to as the roosting buffer.

(6) **Structure**. Anything built for the support, shelter or enclosure of persons, animals, goods or property of any kind, together with anything constructed or erected with a fixed location on or in the ground. Examples of structures include buildings, utility lines and roads.

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NOTE: The significant wildlife habitats subject to this section are depicted on GIS data layers maintained by IF&W and available from either IF&W or the DEP.

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May 12, 1997 - punctuation, formatting, comparison with May 14, 1995 amendment
October 29, 1998 - APA Office Note added to first Section 5

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October 15, 1999 - language reverted to June 1, 1999 version
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September 1, 2002

NON-SUBSTANTIVE CORRECTIONS:
September 5, 2002 - title of Section 2 only

AMENDED:

May 25, 2005 – filing 2005-174
December 5, 2006 – filing 2006-496
February 25, 2008 – Section 20 only, filing 2008-88
July 15, 2009 – filing 2009-339
July 30, 2011 – Section 16 only, filing 2011-211 *(Final adoption, major substantive)*
June 8, 2012 – filing 2012-146 *(Final adoption, major substantive)*

# DEPARTMENT OF THE ARMY

NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

## MAINE GENERAL PERMIT (GP)
## AUTHORIZATION LETTER AND SCREENING SUMMARY

**OFFICE OF ENVIRONMENTAL SERVICES**
**MAINE DEPT. OF TRANSPORTATION**
**16 STATE HOUSE STATION**
**AUGUSTA, MAINE 04333**

**CORPS PERMIT #** NAE-2013-00212
**CORPS PGP ID#** 13-024
**STATE ID#** PBR

**DESCRIPTION OF WORK:**
**Place permanent and temporary fill below the ordinary high water line of seven unnamed streams and in their adjacent freshwater wetlands between Smithfield and Norridgewock, Maine in order to reconstruct a 7.3 mile section of Route 8 including the replacement and/or stabilization of existing deteriorated culverts. This work will result in approximately permanent 33,138 s.f. of wetland and 1,304 s.f. of stream bed impact, and**

**Project Description Continued on Page 2**

**LAT/LONG COORDINATES :** 44.7128904° N -69.7897387° W **USGS QUAD:** NORRIDGEWOCK, ME

**I. CORPS DETERMINATION:**
Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine General Permit (GP).** Accordingly, we do not plan to take any further action on this project.

You must perform the activity authorized herein in compliance with all the terms and conditions of the GP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed GP carefully, including the GP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the GP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 41 of the GP (page 18) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the GP on October 12, 2015. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by October 12, 2016.

This authorization presumes the work shown on your plans noted above is in waters of the U.S. Should you desire to appeal our jurisdiction, please submit a request for an approved jurisdictional determination in writing to the undersigned.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.**

**II. STATE ACTIONS: PENDING [ X ], ISSUED[ ], DENIED [ ] DATE:**

APPLICATION TYPE: PBR: X, TIER 1: ____, TIER 2: ____, TIER 3: ____, LURC: ____ DMR LEASE: ____ NA: ____

**III. FEDERAL ACTIONS:**

JOINT PROCESSING MEETING: 1/31/13 LEVEL OF REVIEW: CATEGORY 1: ____ CATEGORY 2: X

AUTHORITY (Based on a review of plans and/or State/Federal applications): SEC 10 ____, 404 X 10/404 ____, 103 ____

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

**FEDERAL RESOURCE AGENCY OBJECTIONS:** EPA NO, USF&WS NO, NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office. In order for us to better serve you, we would appreciate your completing our Customer Service Survey located at http://per2.nwp.usace.army.mil/survey.html

Jay L. Clement

**JAY L. CLEMENT**
**SENIOR PROJECT MANAGER**
**MAINE PROJECT OFFICE**

3-9-2013

**FRANK J. DEL GIUDICE** **DATE**
**CHIEF, PERMITS & ENFORCEMENT BRANCH**
**REGULATORY DIVISION**

Project Description Continued from Page 1

**498 s.f. of temporary stream impacts. This work is shown on the attached plans entitled "SMITHFIELD-NORRIDGEWOCK" in 101 sheets undated and "SMITHFIELD-NORRIDGEWOCK, ROUTE 8" in eight sheets dated "09-2012". DOT WIN: 12776.00**

Corps of Engineers Permit No. NAE-2013-00212
Permit Conditions Resulting From
Informal Endangered Species Act Consultation
Between US Fish & Wildlife Service ("USFWS") and the Federal Highway Administration ("FHWA")
(Reference USFWS Biological Opinion ("BO") dated "March 27, 2013" and
the DOT/FHWA Biological Assessment ("BA") dated "January 23, 2013")

1. The permittee and contractor shall comply with all terms and conditions of this permit and with the permittee's construction plan. Modifications to the approved plan may require re- initiation of Endangered Species Consultation between the Corps and Service and therefore, should not be implemented without first contacting the Corps.

2. All projects authorized by this permit shall be designed in accordance with Maine DOT's 2008 Waterway and Wildlife Crossing Policy and Design Guide[1].

3. A fish evacuation plan must be implemented by appropriate Maine DOT staff during construction and dewatering of all cofferdams to carefully remove fish from the work area.

4. All instream work (which includes the installation and removal of cofferdams, as well as other activities) shall be conducted according to the work windows specified in the BA.

5. Any cofferdam constructed as part of the authorized projects shall adhere to the specifications contained in Section 2.0 (Cofferdam Descriptions) of the BA.

6. All culvert installations authorized by this permit must adhere to the specifications contained in Section 2.1 (Culvert Replacement Projects) of the BA.

7. Maine DOT and their contractors shall minimize the potential for impacts to Atlantic salmon habitat by conducting all construction activities for each project in accordance with the Maine DOT approved Soil Erosion and Water Pollution Control Plan.

8. Maine DOT shall use a screen on each pump intake sufficiently large enough that the approach velocity does not exceed 0.20 ft/s. Designing the screen for these approach velocities will minimize screen contact and/or impingement of juvenile fish. Square or round screen face openings not to exceed 2.38 mm (3/32 inch) on a diagonal. Criteria for slotted face opening must not exceed 1.75mm (approximately 1/16$^{th}$ inch) in the narrow direction. Intake hoses shall be regularly monitored while pumping.

9. Maine DOT or their contractor will follow measures designed to avoid effects to rivers and streams from hazardous materials associated with construction activities, including:

a. All vehicles refueling shall occur more than 100 feet from any water course.

b. All vehicles carrying fuel shall have specific equipment and materials needed to contain or clean up any incidental spills at the project site. Equipment and materials would include spill kits appropriately sized for specific quantities of fuel, shovels, absorbent pads, straw bales, containment structures and liners, and/or booms.

c. During use, all pumps and generators shall have appropriate spill containment structures and/or absorbent pads in place.

d. All equipment used for instream work shall be cleaned of external oil, grease, dirt, and mud. Any leaks or accumulations of grease would be corrected before entering streams or areas that drain directly to streams or wetlands.

[1] Maine Department of Transportation (MaineDOT). 2008. Waterway and wildlife crossing policy and design guide for aquatic organism, wildlife habitat, and hydrologic connectivity. 3rd edition. Maine Department of Transportation, Augusta, ME.

10. Noxious Weeds: All off-road equipment and vehicles (operating off of existing open and maintained roads) must be cleaned prior to entering the construction site(s) to remove all soil, seeds, vegetation, or other debris that could contain seeds or reproductive portions of plants. Equipment operators may employ whatever cleaning methods are necessary to ensure that off-road equipment is free of the above material prior to entering the easement portion of the access road. The equipment will be inspected prior to off-loading.

11. All cofferdams shall be removed from the stream immediately following completion of construction, allowing for minor delays due to high stream flows following heavy precipitation, so that fish and other aquatic life passage is not unnecessarily restricted. If a project is not completed but there will be substantial delays in construction, cofferdams will need to be at least partially removed to allow unobstructed fish passage until construction resumes.

12. If any listed Atlantic salmon is encountered in the project areas of this permit, including dewatering of coffer dams, all work must cease and USFWS (Maine Field Office; 207-866-3344) and the Corps (Maine Project Office; 207-623-8367) shall be contacted immediately. Work may not resume until the Corps and the USFWS conclude supplemental endangered species consultation as necessary.

13. All areas of temporary waterway or wetland fill will be restored to their original contour and character upon completion of the projects.

14. Disturbed areas adjacent to streams will be stabilized and re-vegetated with a seed mix and tree/shrub plantings appropriate for riparian areas in Maine. Only native species that reflect the existing natural riparian community in the general area may be used. The permittee shall take all available and practicable steps to ensure that tree/shrub plantings remain viable and are protected from future disturbance.

15. A post-project report, confirming completion of construction and the successful application of all terms and conditions of this permit, shall be submitted within four (4) weeks of project completion. The report shall include, but not be limited to, a narrative and photos documenting project elements outlined in the construction plan and referenced in these conditions e.g. installation of erosion control measures, installation of the work platform, and debris removal. This report may accompany the Compliance Certification Form referenced in Condition 16.

16. This authorization requires you to 1) notify us before beginning work so we may inspect the project, and 2) submit a Compliance Certification Form. You must complete and return the enclosed Work Start Notification Form(s) to this office at least two weeks before the anticipated starting date. You must complete and return the enclosed Compliance Certification Form within one month following the completion of the authorized work and any required mitigation (but not mitigation monitoring, which requires separate submittals).

17. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub- contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.

US Army Corps
of Engineers®
New England District

(Minimum Notice: Permittee must sign and return notification within one month of the completion of work.)

# COMPLIANCE CERTIFICATION FORM

**Permit Number:** NAE-2013-00212

**Project Manager** Clement

**Name of Permittee:** Maine Dept. of Transportation

**Permit Issuance Date:** _____

Please sign this certification and return it to the following address upon completion of the activity and any mitigation required by the permit. You must submit this after the mitigation is complete, but not the mitigation monitoring, which requires separate submittals.

```
*********************************************************************
* MAIL TO: U.S. Army Corps of Engineers, New England District       *
*          Permits and Enforcement Branch C                         *
*          Regulatory Division                                      *
*          696 Virginia Road                                        *
*          Concord, Massachusetts 01742-2751                        *
*********************************************************************
```

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

**I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.**

_____ Signature of Permittee

_____ Date

_____ Printed Name

_____ Date of Work Completion

(_____) _____ Telephone Number

(_____) _____ Telephone Number

US Army Corps of Engineers®
New England District

# GENERAL PERMIT
# WORK-START NOTIFICATION FORM
(Minimum Notice: Two weeks before work begins)

**********
* MAIL TO: U.S. Army Corps of Engineers, New England District *
* Permits and Enforcement Branch *
* Regulatory Division *
* 696 Virginia Road *
* Concord, Massachusetts 01742-2751 *
**********

Corps of Engineers Permit No. NAE-2013-00212 was issued to the Maine Dept. of Transportation on . This work is located in multiple unnamed streams and in adjacent freshwater wetlands between Smithfield and Norridgewock, Maine. The permit authorized the permittee to place permanent fill in order to reconstruct a 7.3 mile section of Route 8 including the replacement and/or stabilization of existing deteriorated culverts.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

**PLEASE PRINT OR TYPE**

**Name of Person/Firm:** _____

**Business Address:** _____

_____

_____

_____

**Telephone Numbers:** (____) _____ (____) _____

**Proposed Work Dates:** **Start:** _____ **Finish:** _____

**Permittee/Agent Signature:** _____ **Date:** _____

**Printed Name:** _____ **Title:** _____

**Date Permit Issued:** _____ **Date Permit Expires:** _____
**********

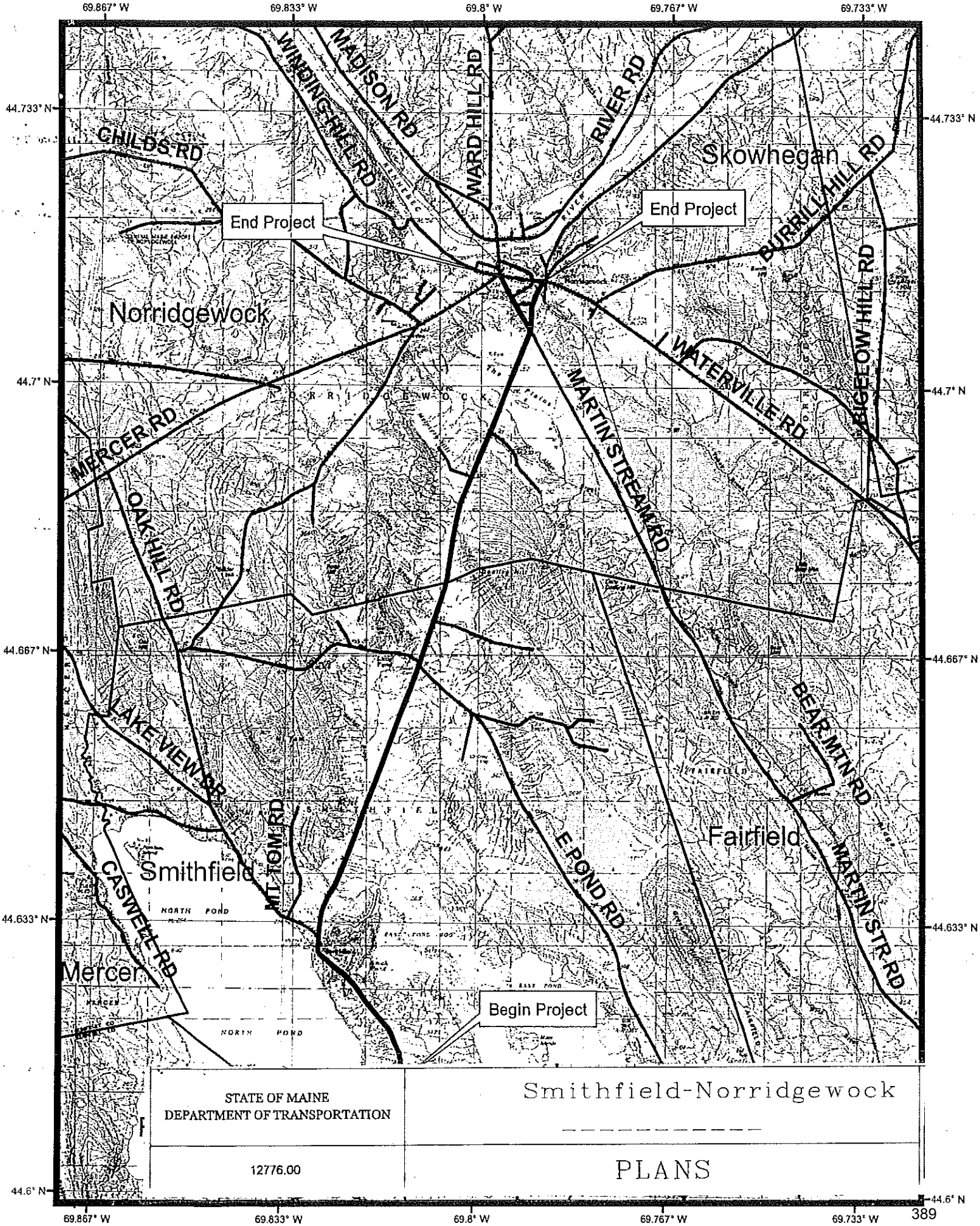
**FOR USE BY THE CORPS OF ENGINEERS**

**PM:** Clement **Submittals Required:** Yes

**Inspection Recommendation:** Inspect as convenient

_____

_____






0 1,350 2,700 5,400 8,100 10,800

**Smithfield-Norridgewock**

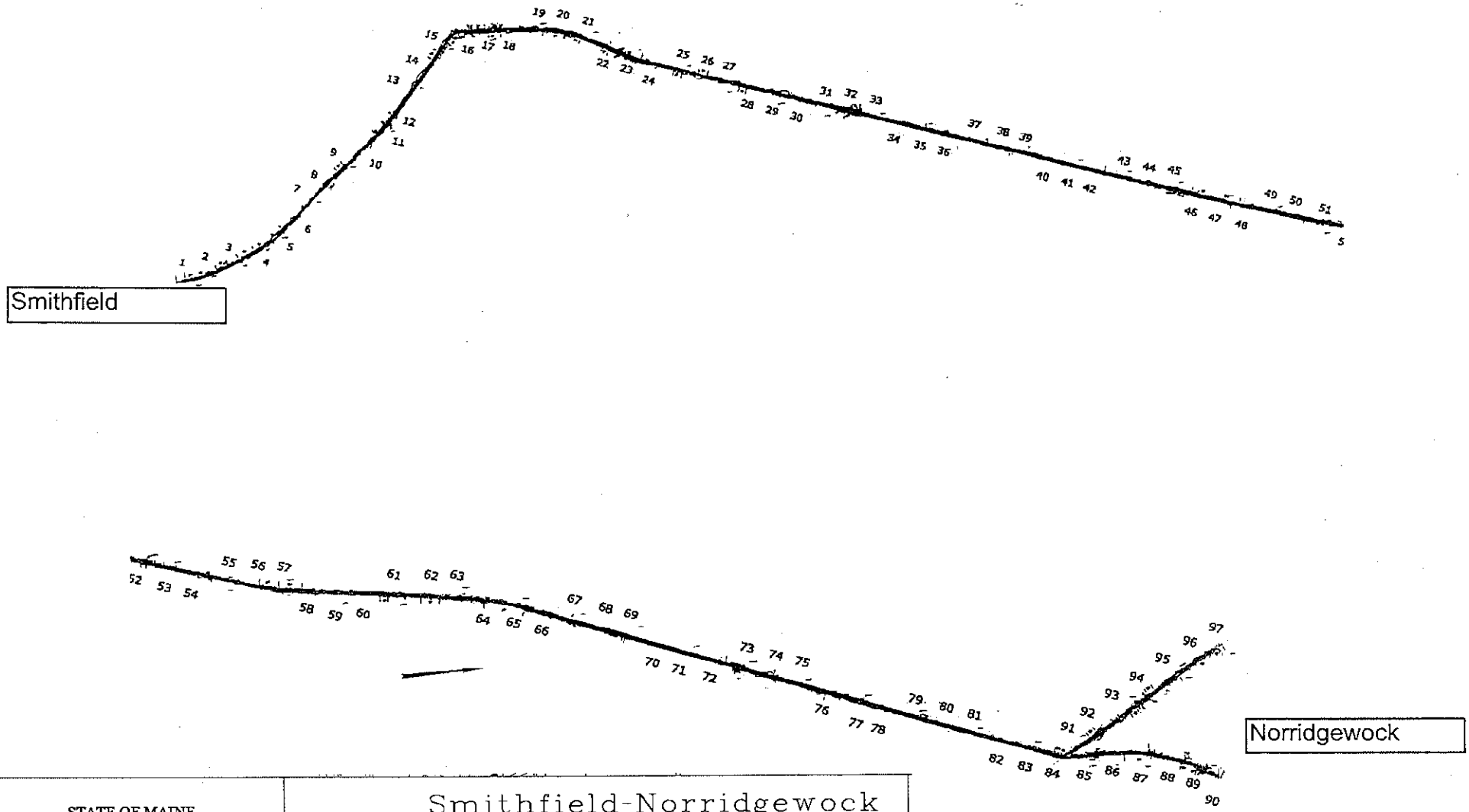
Route 8 - Reconstruction

| Smithfield-Norridgewock 12776.00 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | PSS | SSFP | PEM | EMFP | RUS | | | |
| 85+50R | | | | | 121 | | | |
| 85+50L | | | 455 | | | | | |
| 85+50L | | | | | 81 | | | 155 s.f. Temp. Impact |
| 86+50L | | | | | 59 | | | |
| 86+50L | | | 289 | | | | | |
| 94+75R | | | | | 249 | | | 76 s.f. Temp. Impact |
| 122+50L | | | 720 | | | | | |
| 123+00R | | | 100 | | | | | |
| 125+50L | | | 831 | | | | | |
| 127+00R | | | 216 | | | | | |
| 127+25L | | | 1064 | | | | | |
| 128+00R | | | 96 | | | | | |
| 128+50R | | | 53 | | | | | |
| 129+50R | 117 | | | | | | | |
| 130+00L | | | 189 | | | | | |
| 131+50L | 30 | | | | | | | |
| 132+50L | 522 | | | | | | | |
| 134+75L | | | | 115 | | | | |
| 135+00L | | | | | 261 | No Pipe work | | 0 Temp. Impact |
| 135+75L | | | | 360 | | | | |
| 135+75R | | | | 1289 | | | | |
| 136+50L | | | | 609 | | | | |
| 145+00L | | | 128 | | | | | |
| 146+25L | | | 996 | | | | | |
| 147+00R | | | 2755 | | | | | |
| 149+00L | | | 552 | | | | | |
| 152+75L | | | 14 | | | | | |
| 152+00L | | | 4052 | | | | | |
| 154+75L | | | 585 | | | | | |
| 157+00L | | | 26 | | | | | |
| 162+00L | | | 596 | | | | | |
| 163+25R | | | 5399 | | | | | |
| 163+50L | | | 754 | | | | | |
| 166+50L | | | 52 | | | | | |
| 167+00L | | | 46 | | | | | |
| 168+50L | | | 73 | | | | | |
| 171+25R | | | 3044 | | | | | |
| 207+00L | | | 835 | | | | | |
| 216+50R | | | 666 | | | | | |
| 223+50L | | | | 255 | | | | |
| 223+75L | | | | | 58 | | | 167 s.f. Temp Impact |
| 224+00L | | | 87 | | | | | |
| 223+75R | 133 | | | | | | | |
| 233+00L | | | 291 | | | | | |
| 233+50R | | | 79 | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 249+00R | | | 9 | | | | | |
| 252+00R | | | 61 | | | | | |
| 242+00R | | | 170 | | | | | |
| 266+00L | | | 59 | | | | | |
| 274+50L | | | 336 | | | | | |
| 284+00L | | | 119 | | | | | |
| 284+00R | | | 137 | | | | | |
| 312+50L | | | | 306 | | | | |
| 313+00L | | | | | 19 | | | |
| 313+00L | | | | 51 | | | | |
| 313+00R | | | | | 223 | | | 100 s.f. Temp. Impact |
| 367+50L | | | 724 | | | | | |
| 384+00R | | | | | 73 | | | 0 s.f. Temp. Impact |
| 384+00L | | | | | 23 | | | |
| 506+50R | | | 236 | | | | | |
| 506+50L | | | 388 | | | | | |
| 506+50L | | | 47 | | | | | |
| 513+50L | | 66 | | | | | | |
| 514+50R | | | | | 119 | | | 0 s.f. Temp. Impact |
| 514+50L | | | | | 18 | | | |
| 515+00 | | 31 | | | | | | |
| 519+00L | 252 | | | | | | | |
| 521+00L | 1673 | | | | | | | |
| | | | | | | | | |
| | 2727 | 97 | 27329 | 2985 | 1304 | | | |

~498 Total Temp. Impact

# Smithfield Norridgewock 12776.00

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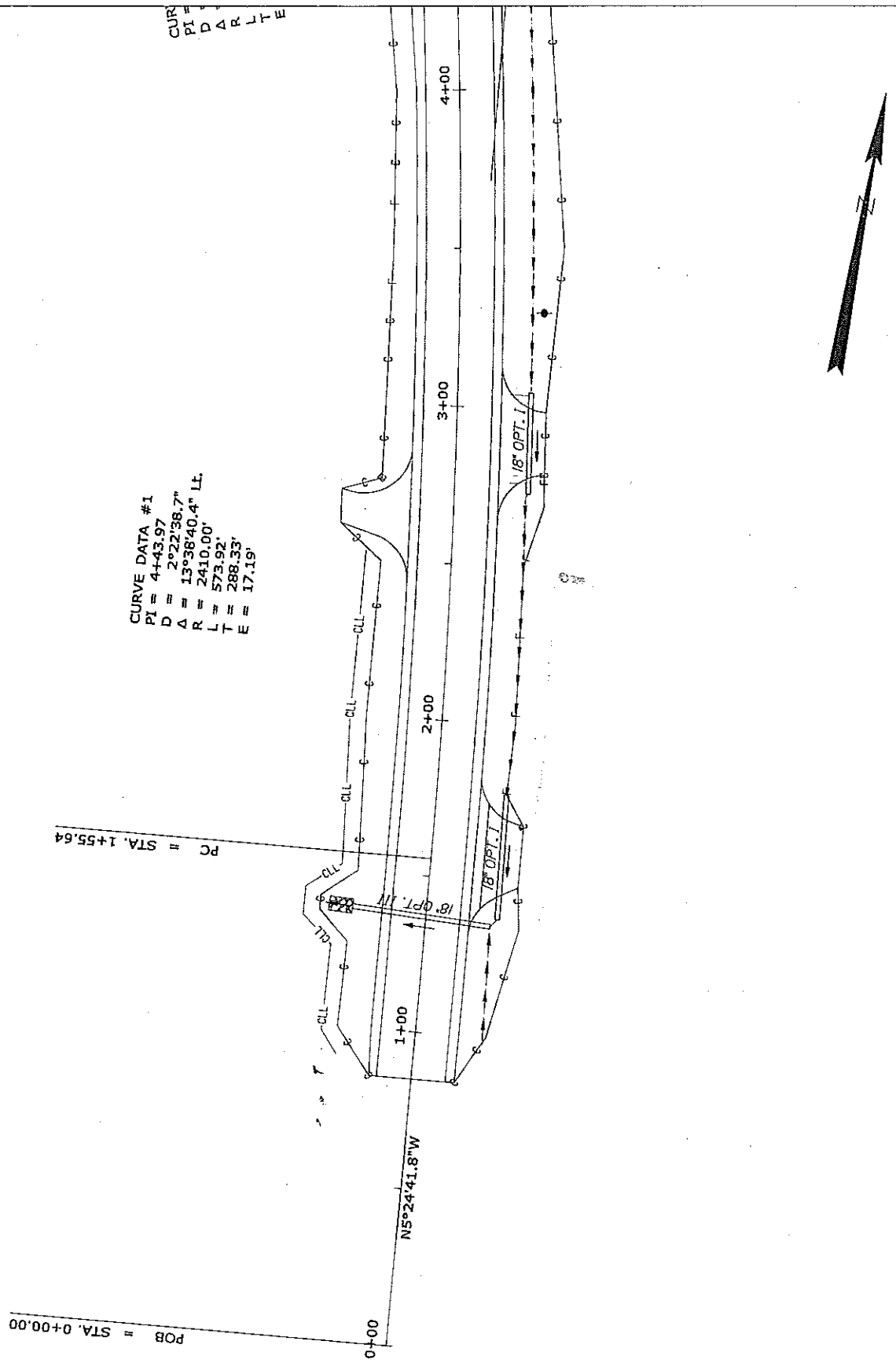


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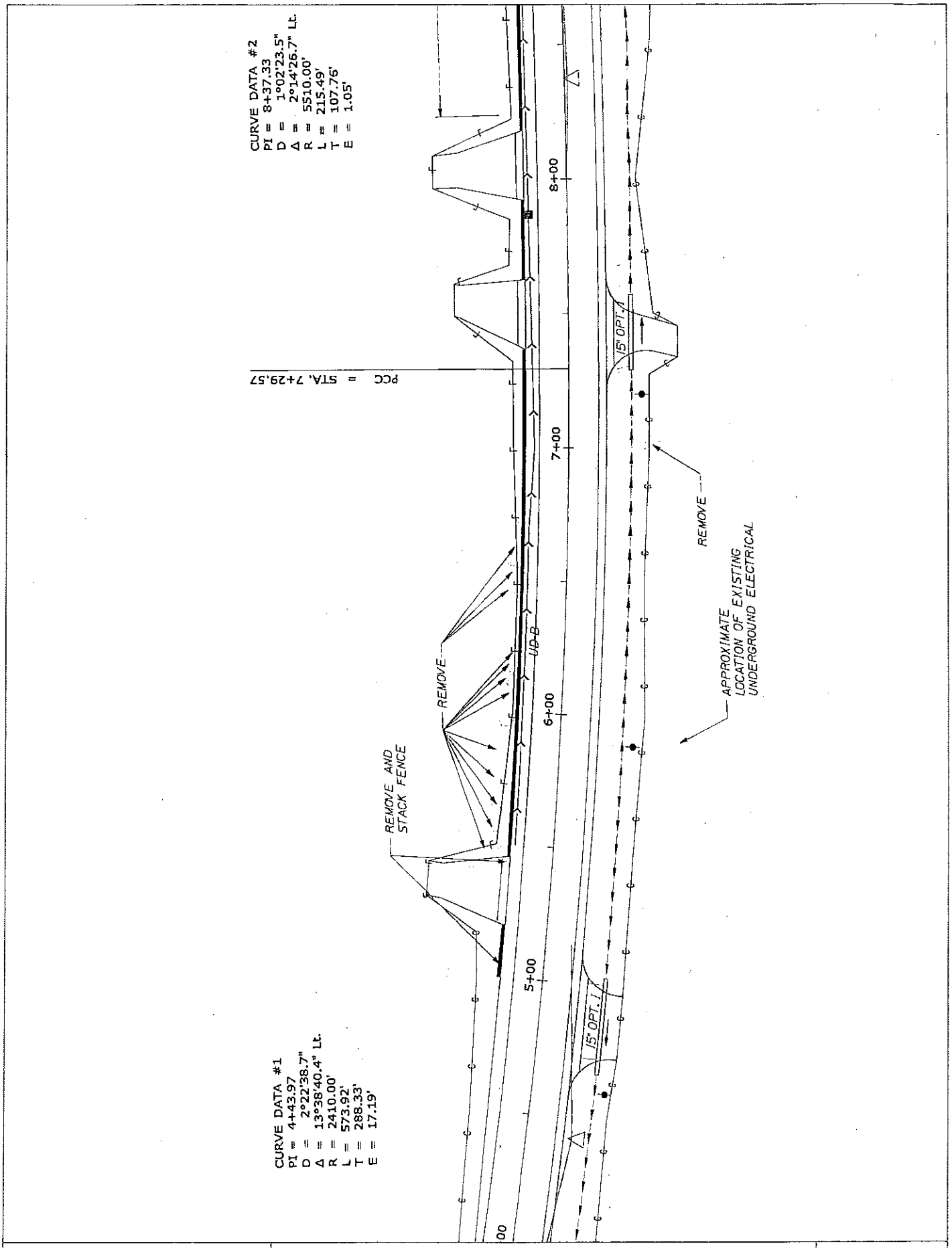


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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

Smithfield-Norridgewock

PLANS

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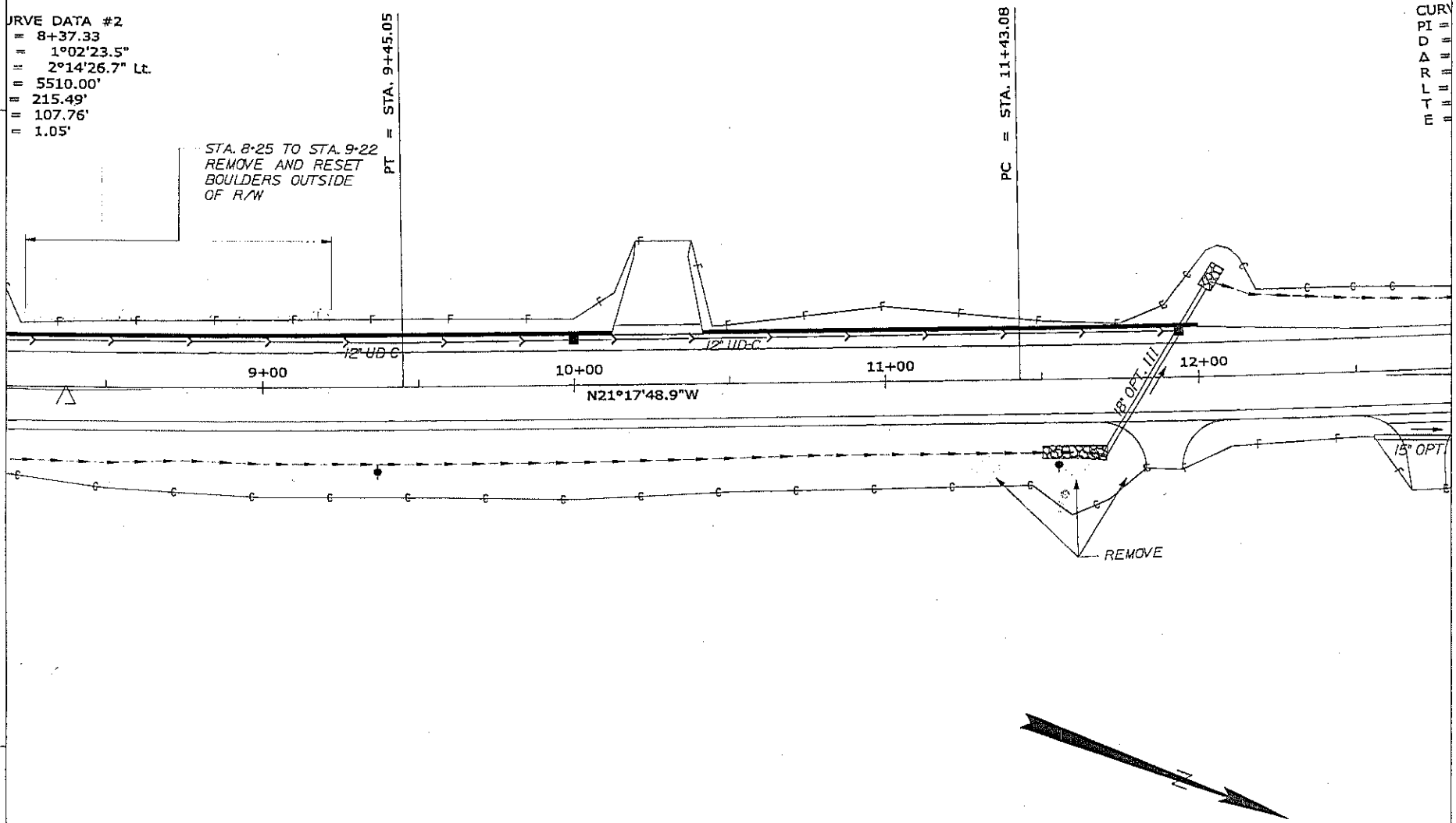

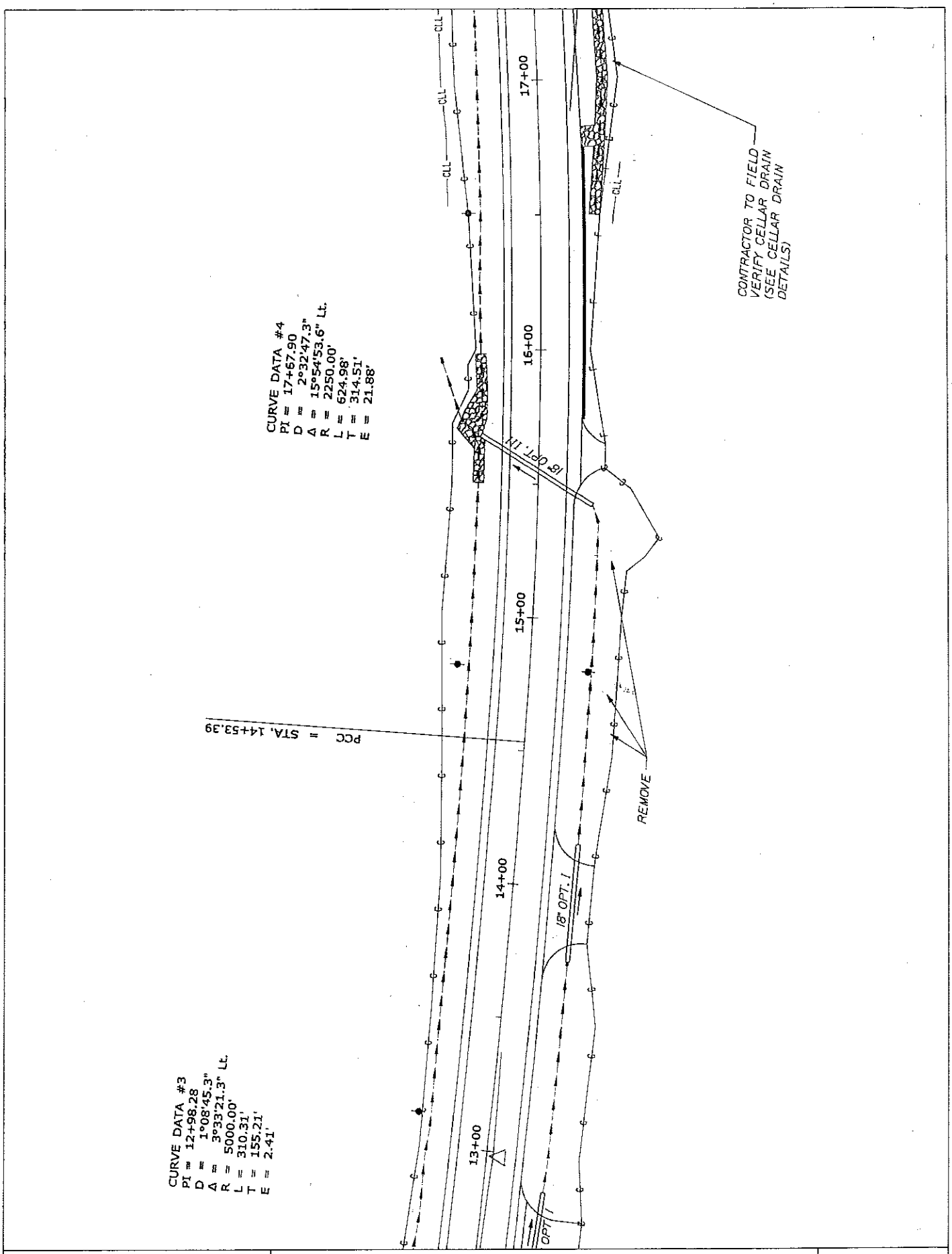


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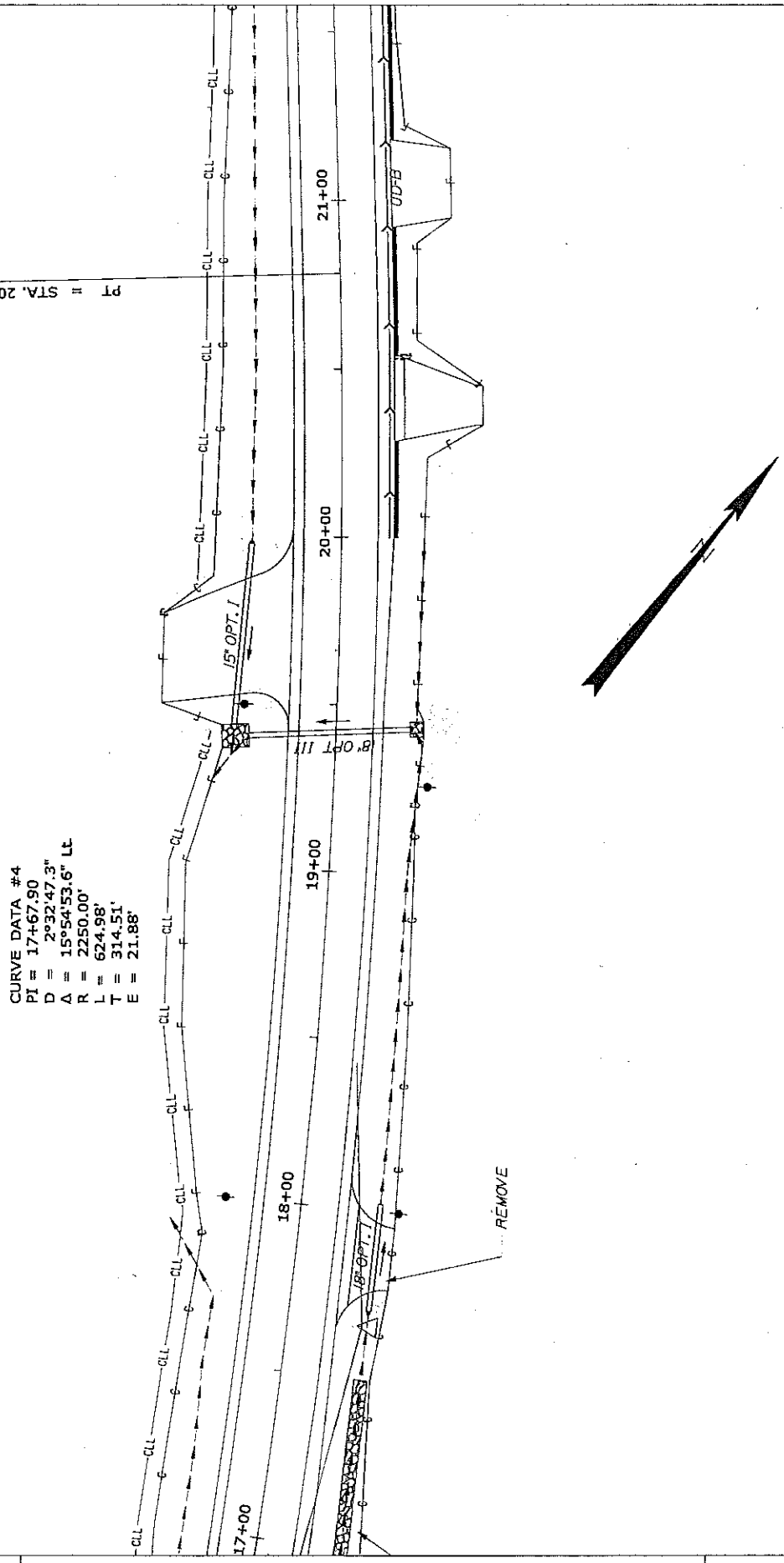


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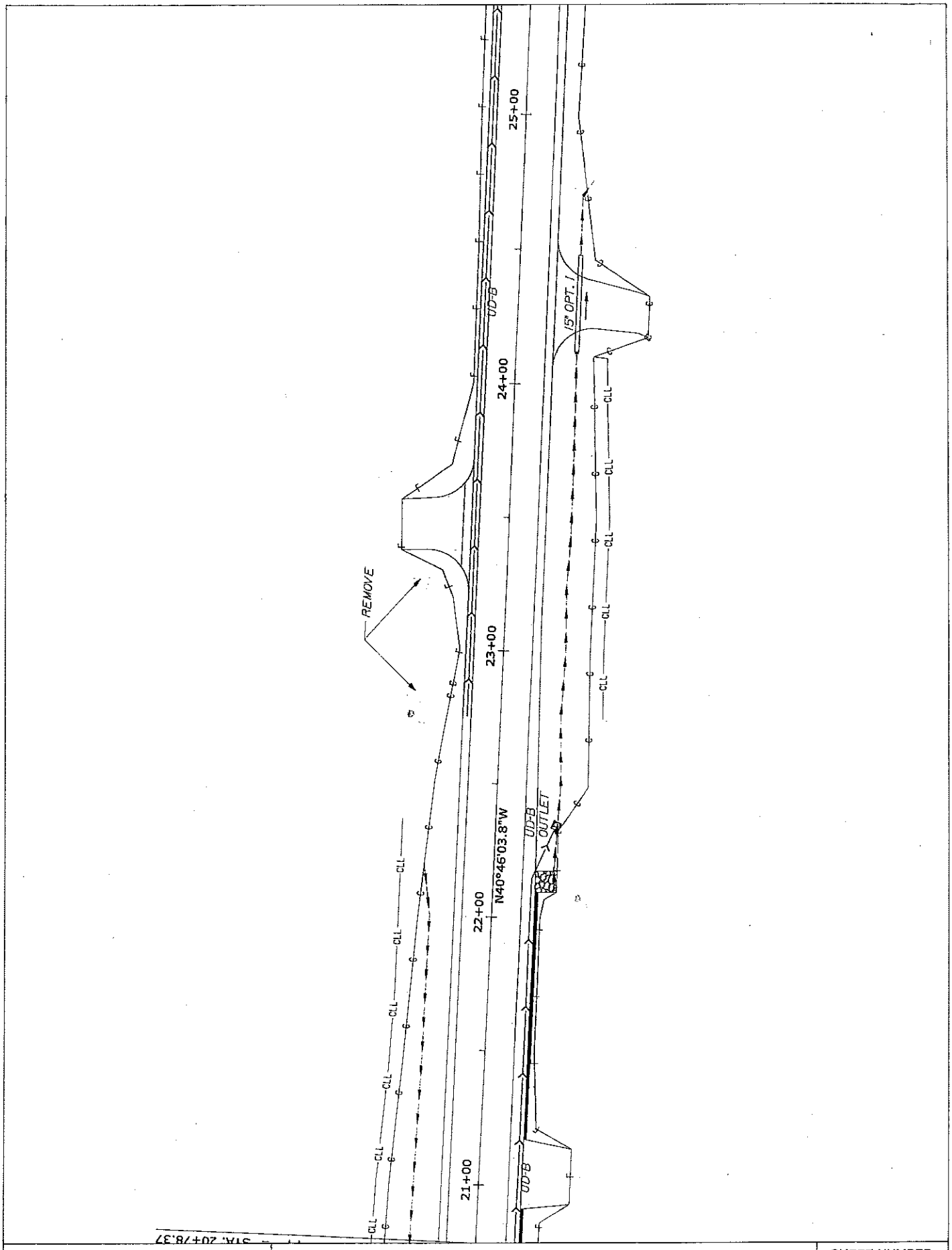


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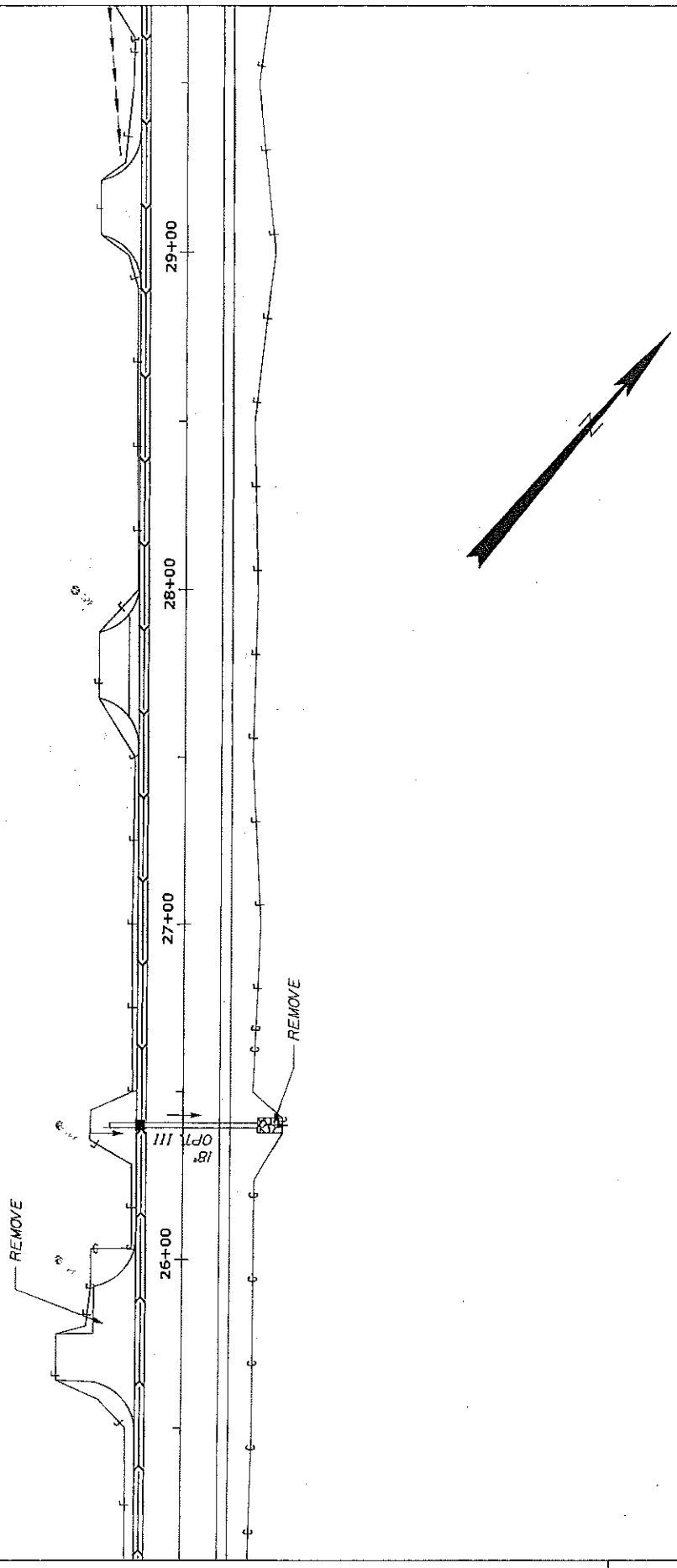


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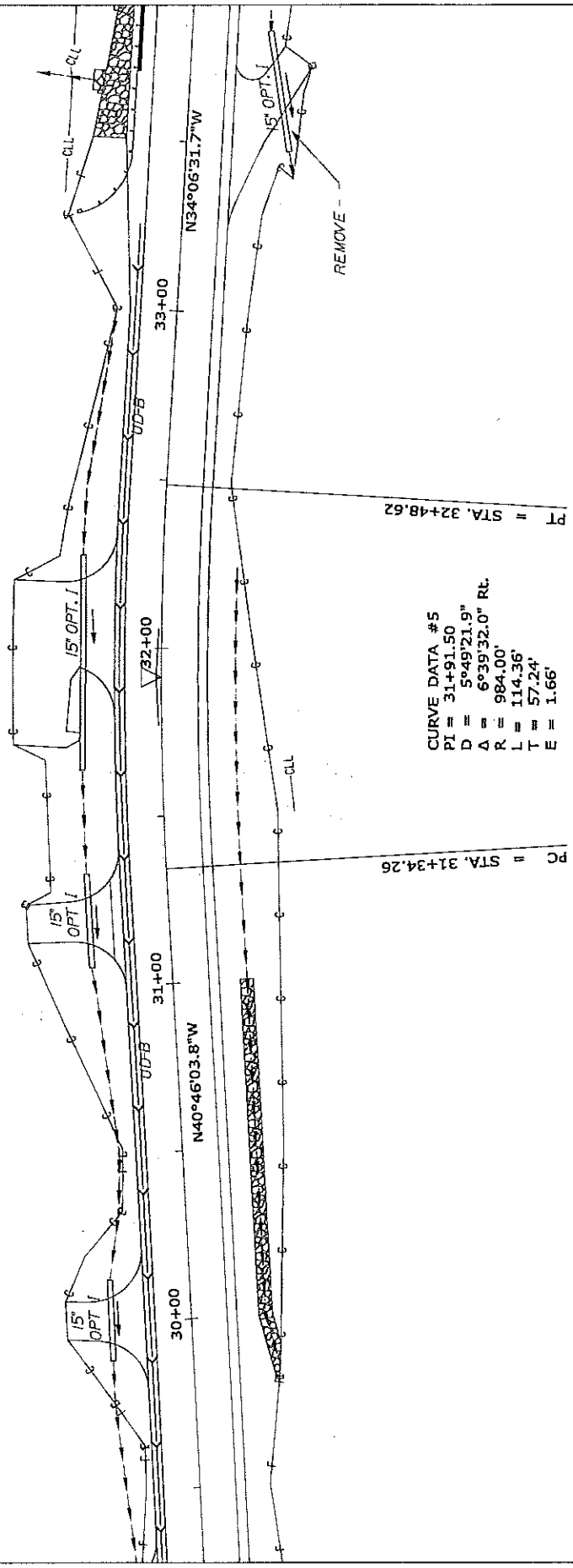


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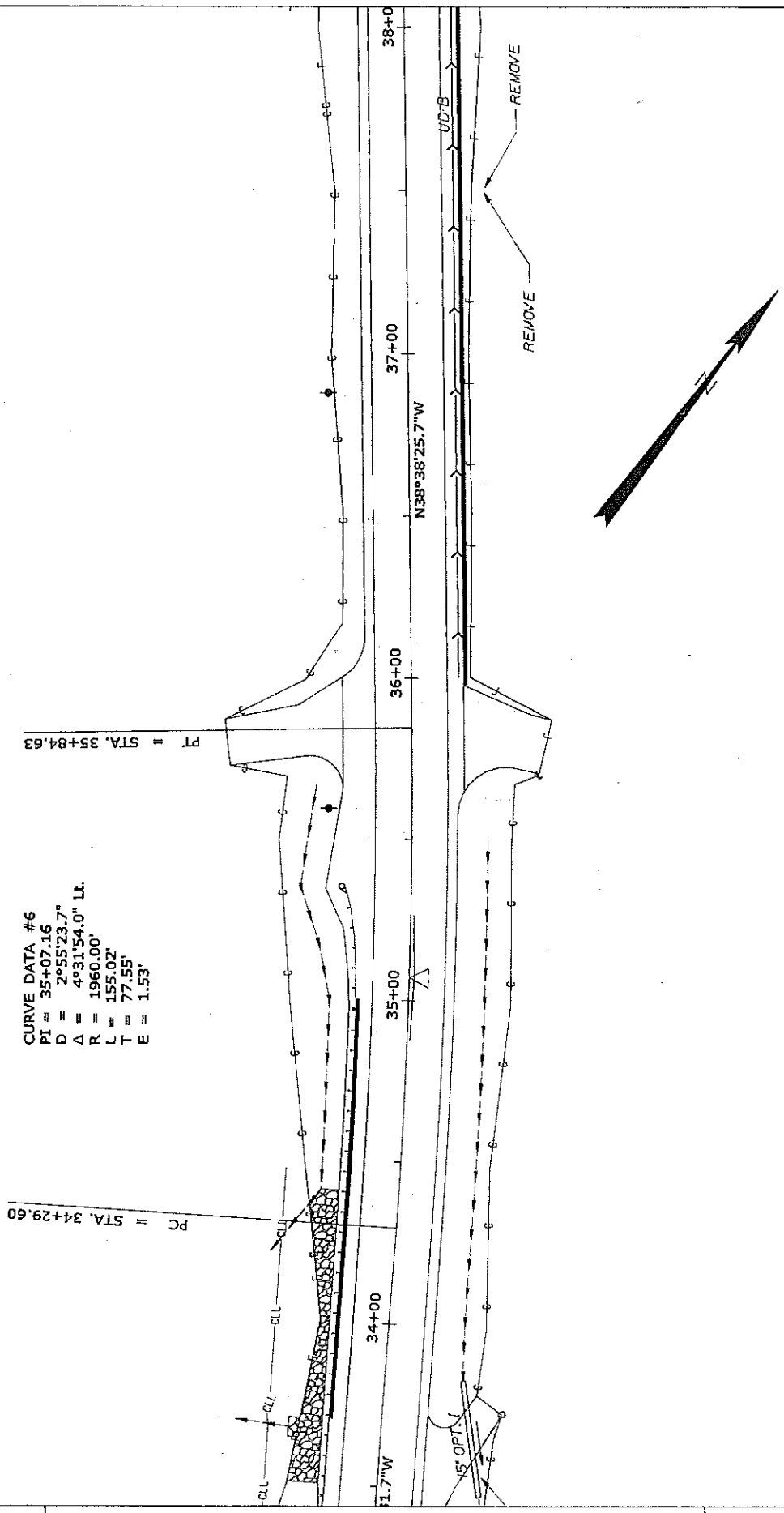


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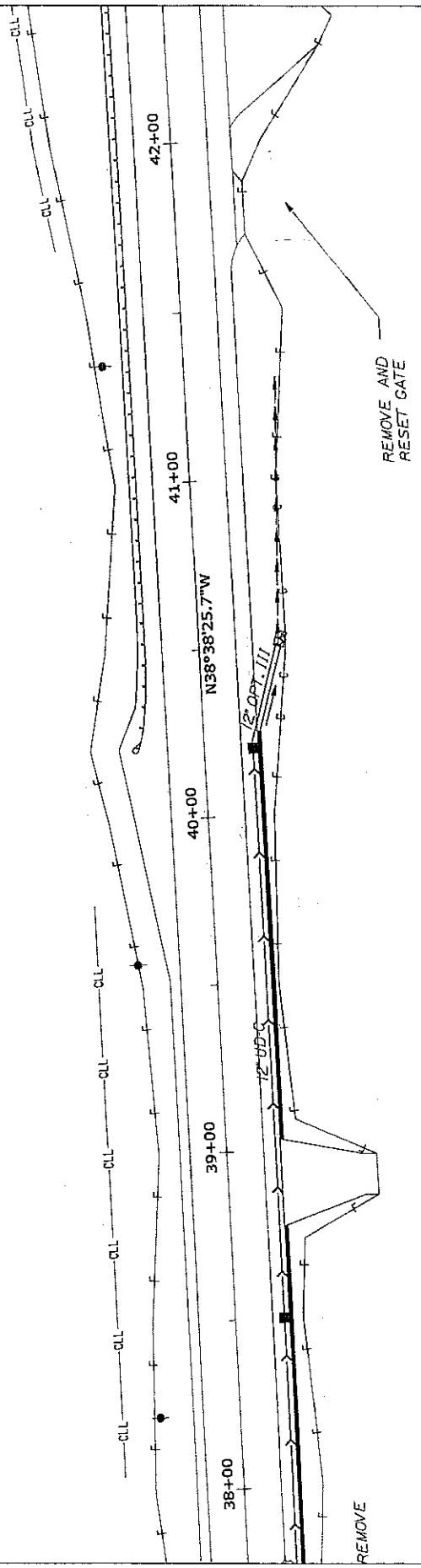


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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

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Smithfield-Norridgewock

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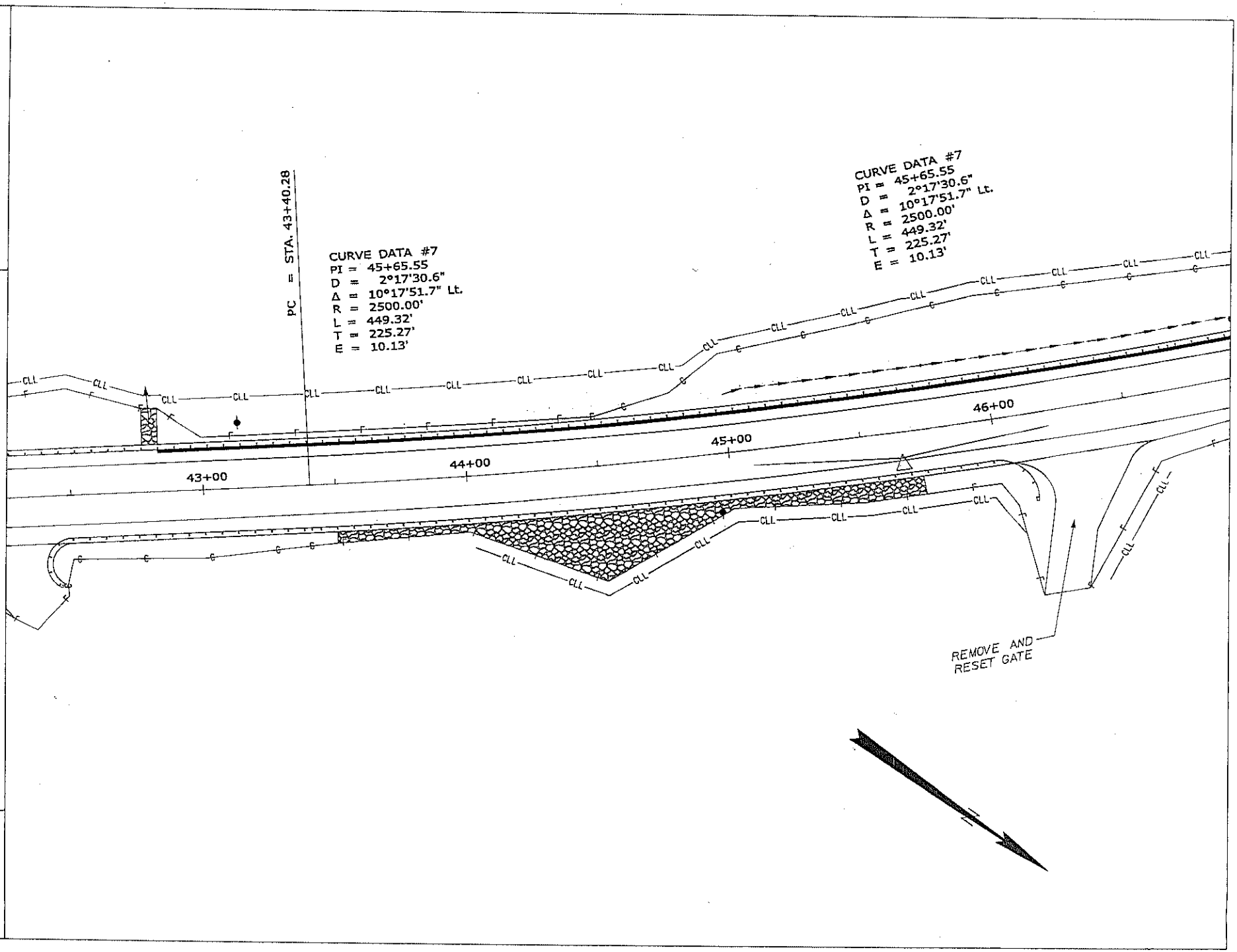

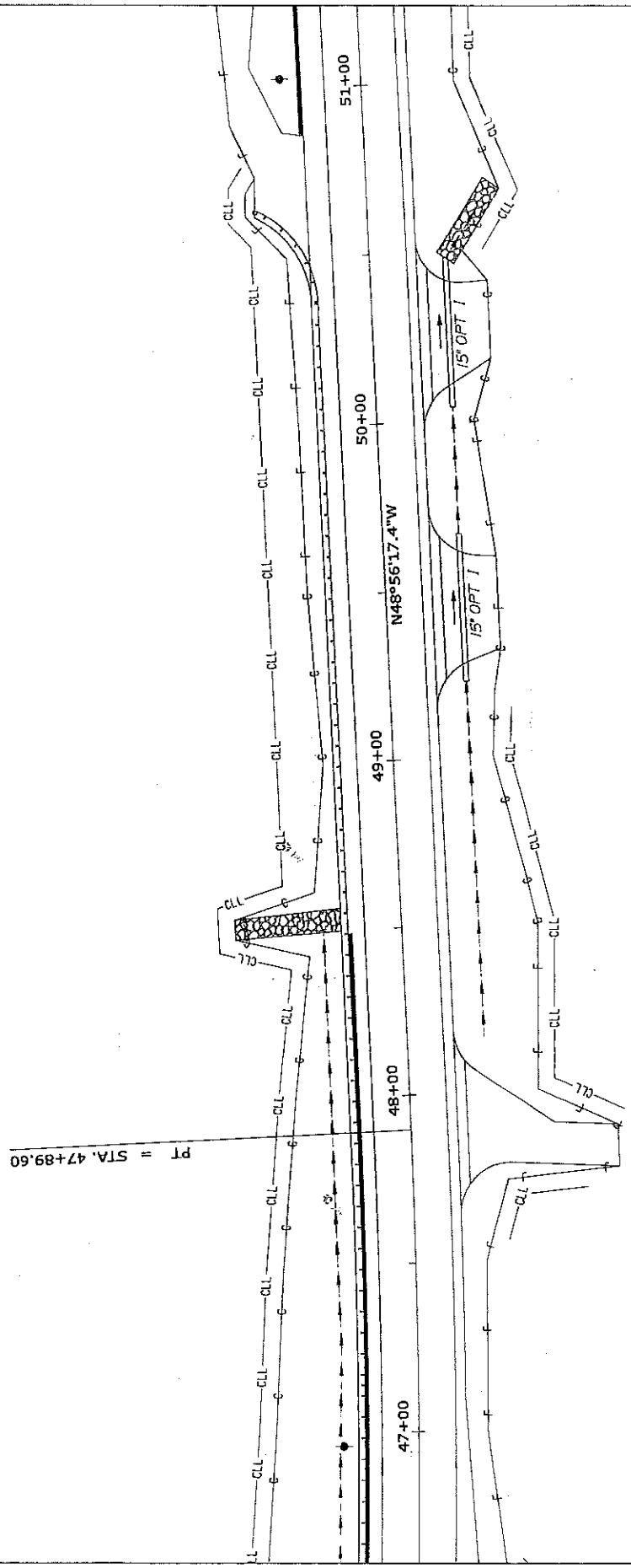


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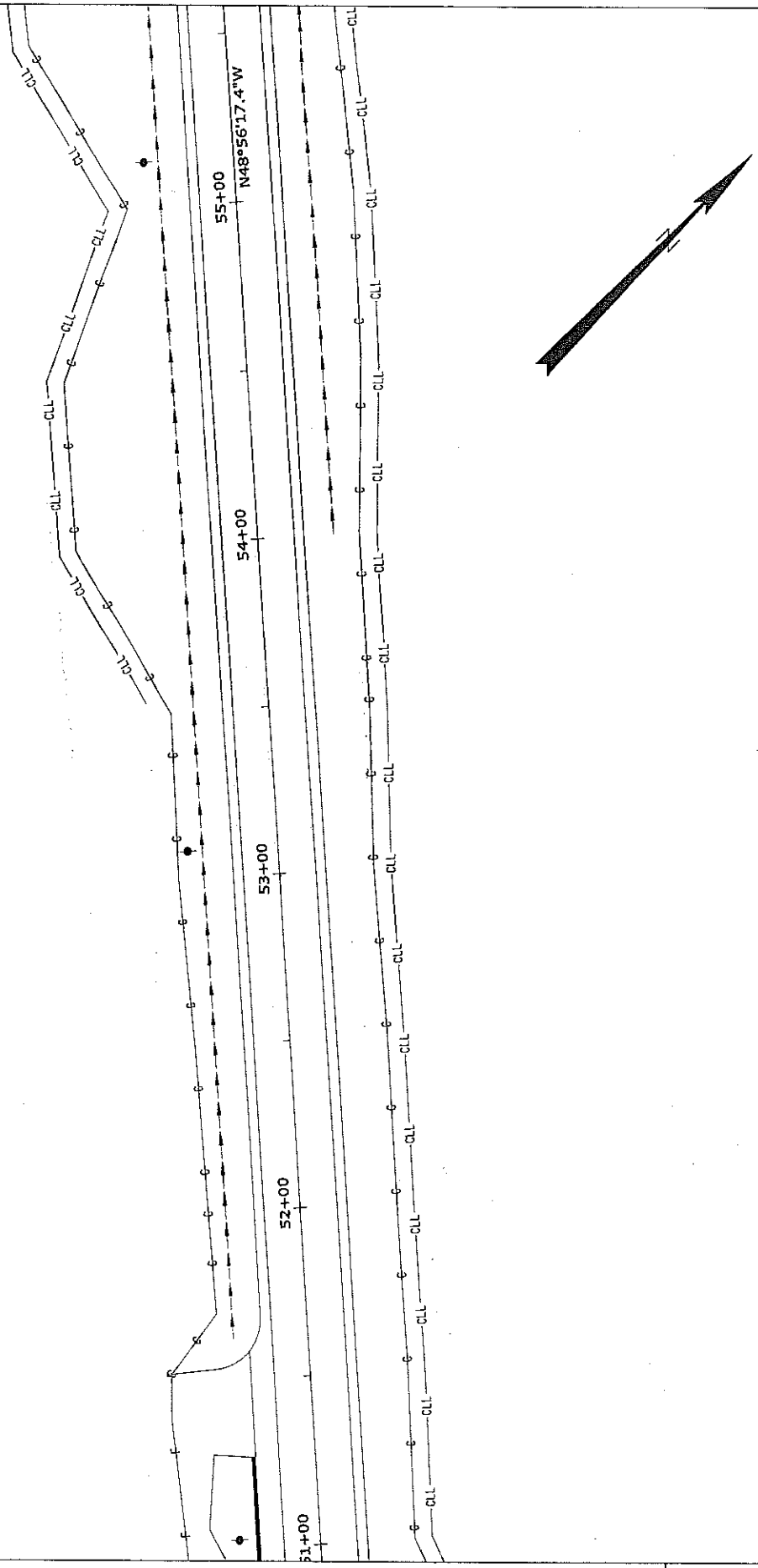


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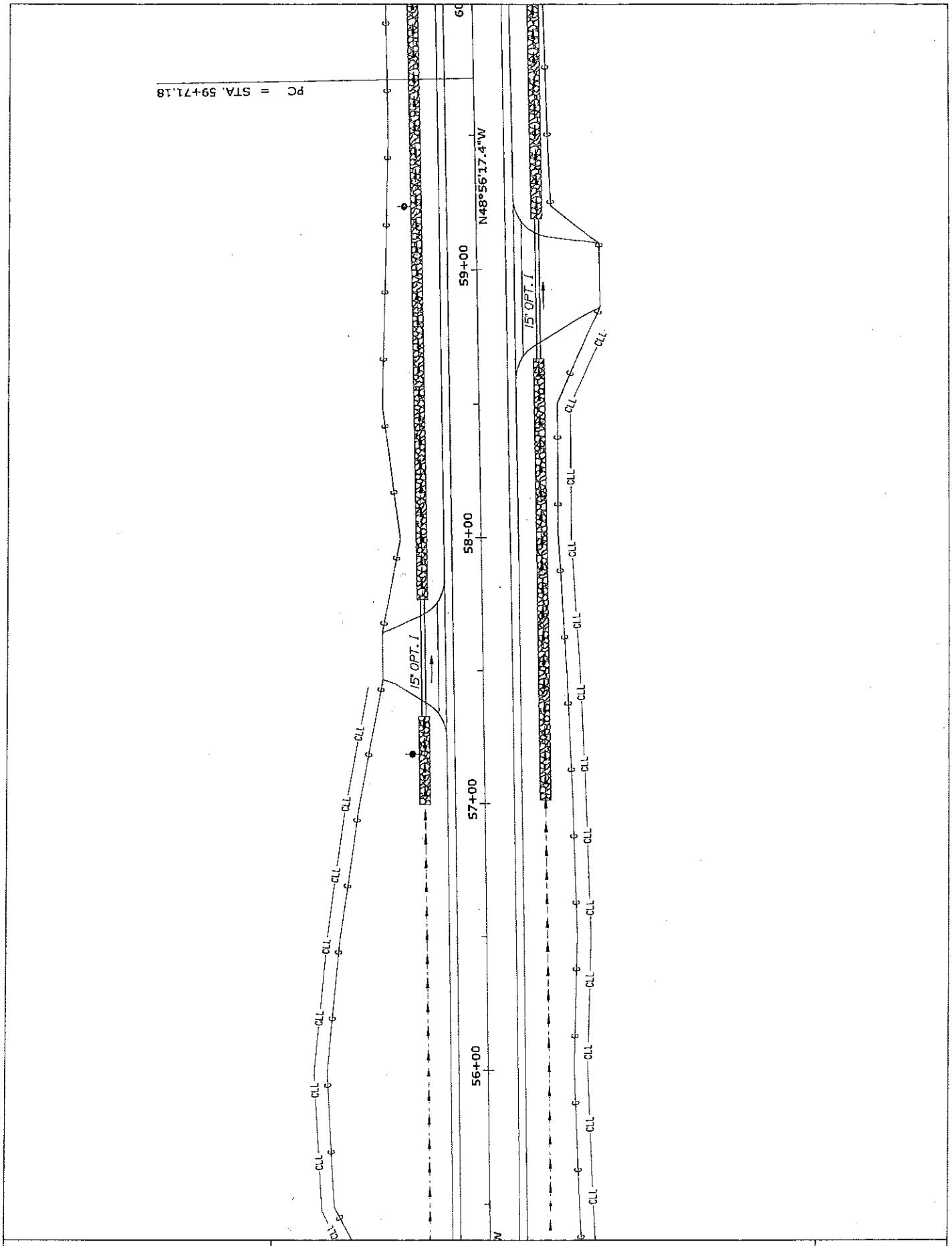


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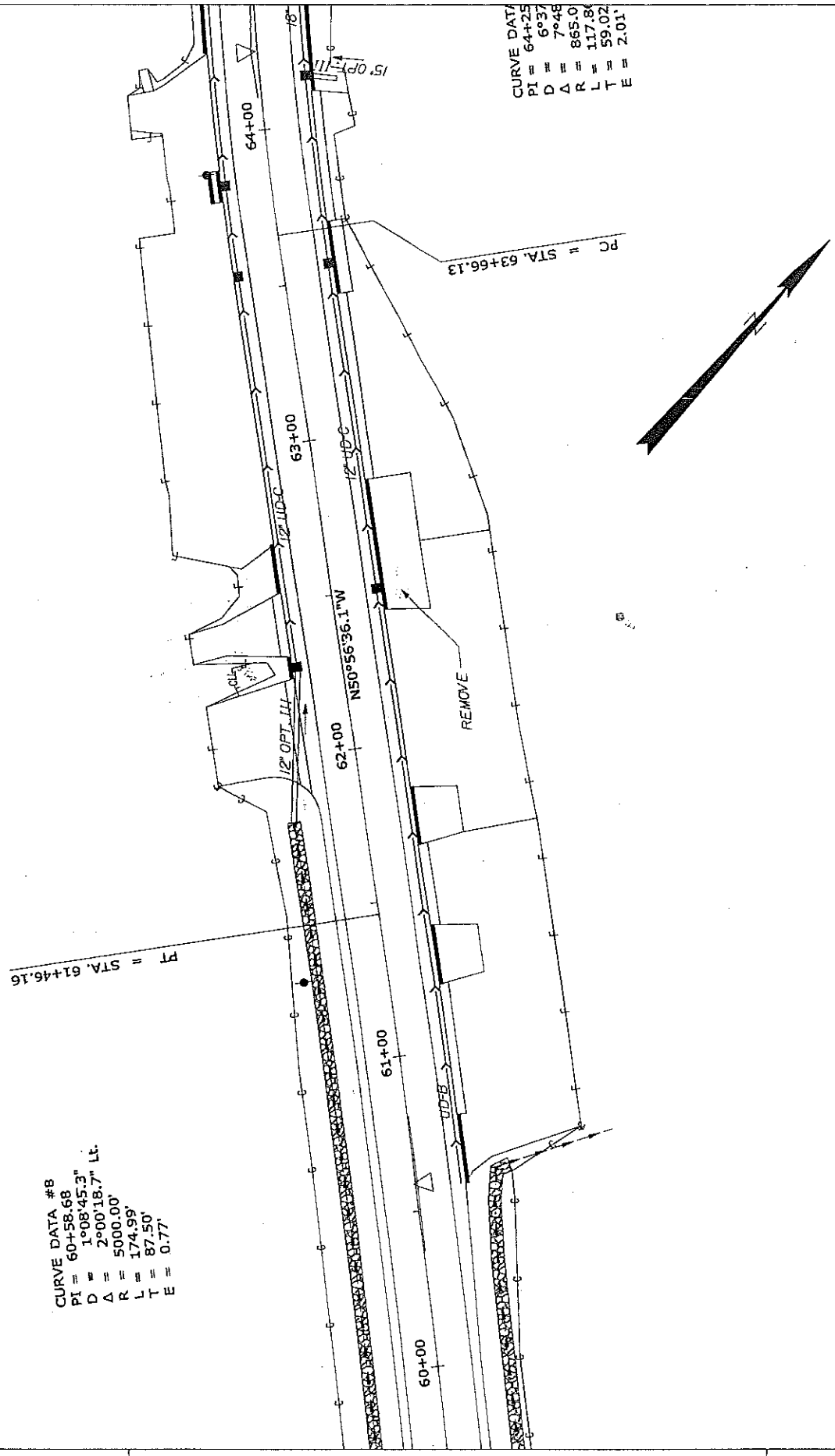


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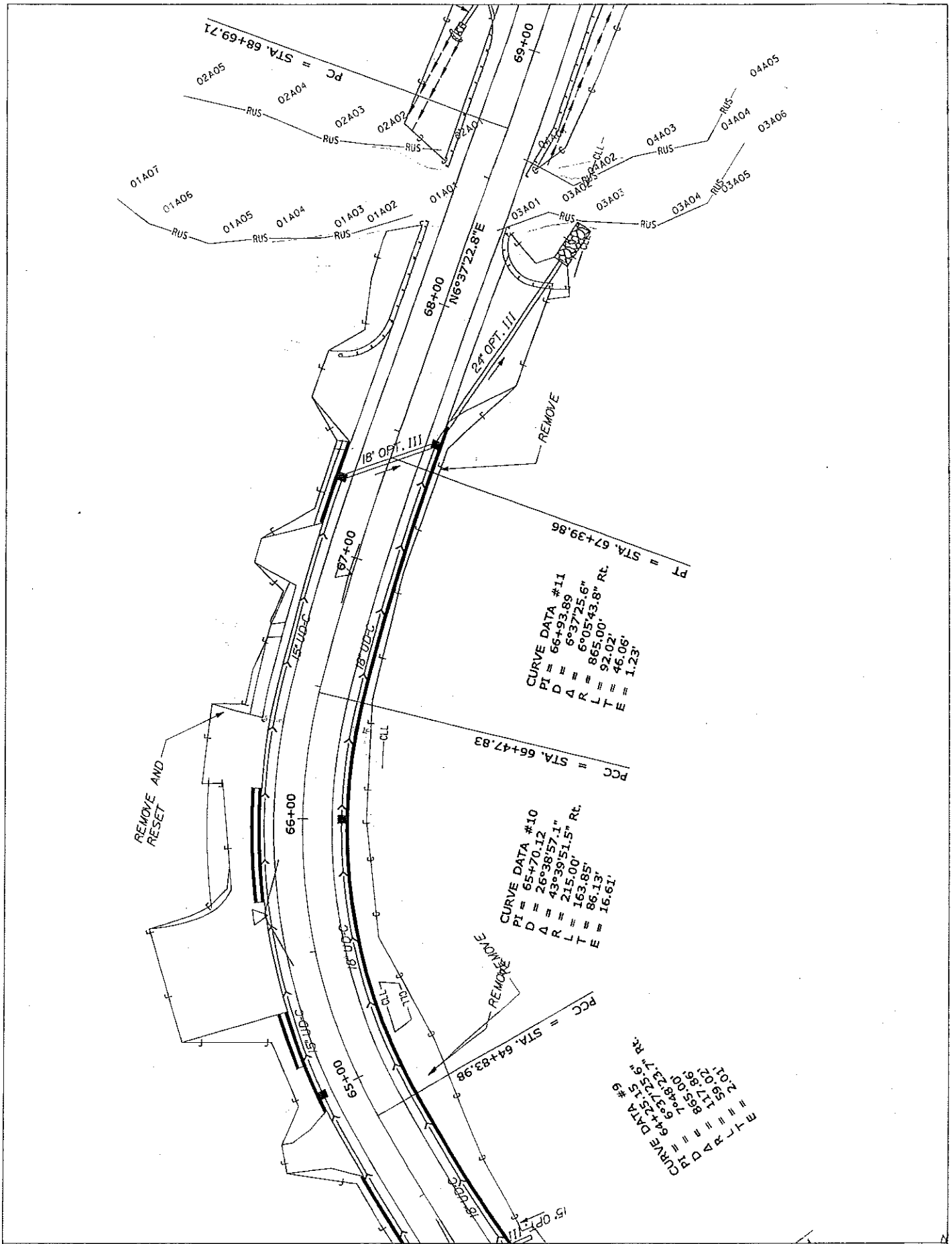
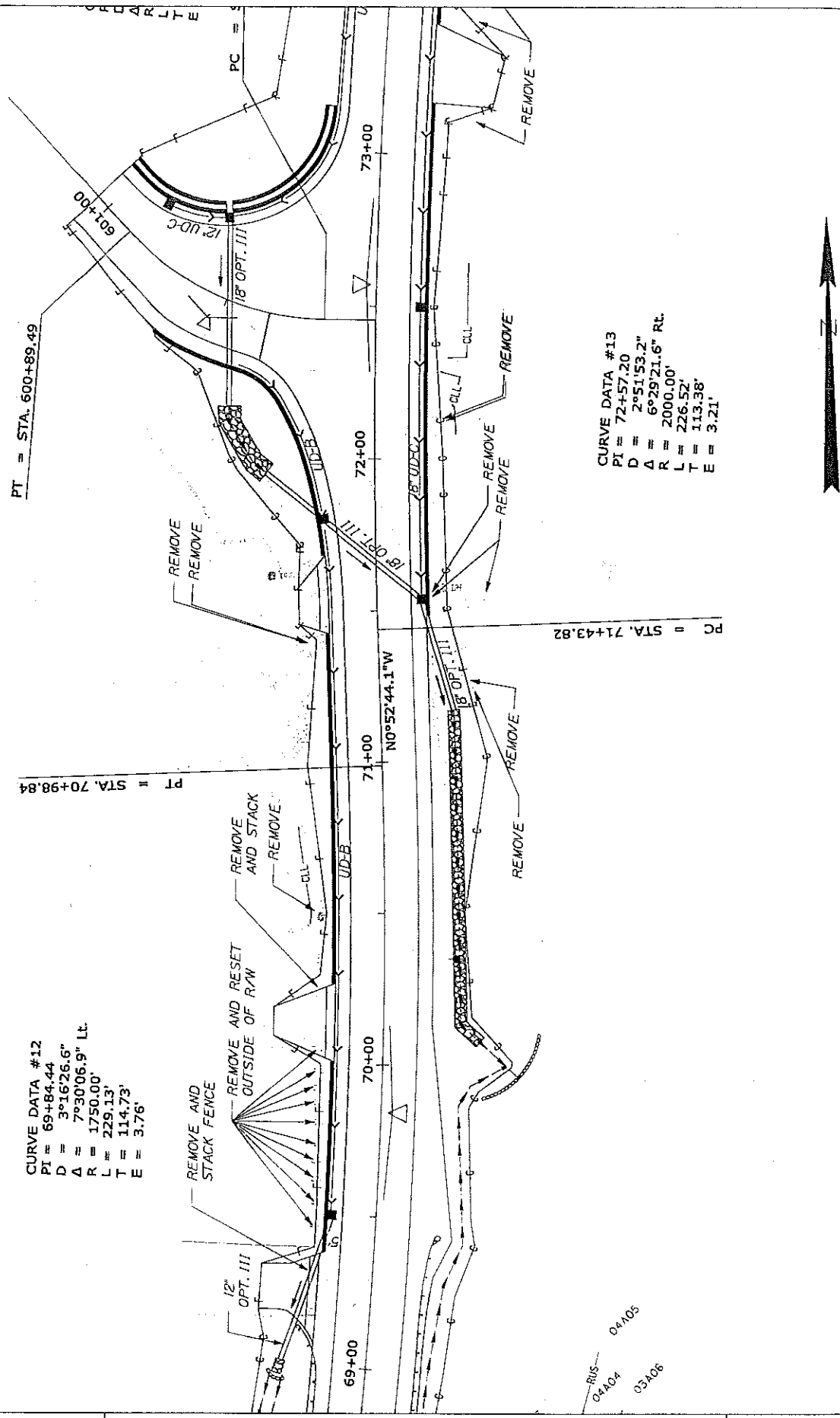
|---|---|---|
| 12776.00 | PLANS | |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER |
|---|---|---|
| 12776.00 | PLANS | 16 408 OF97 |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 409 |
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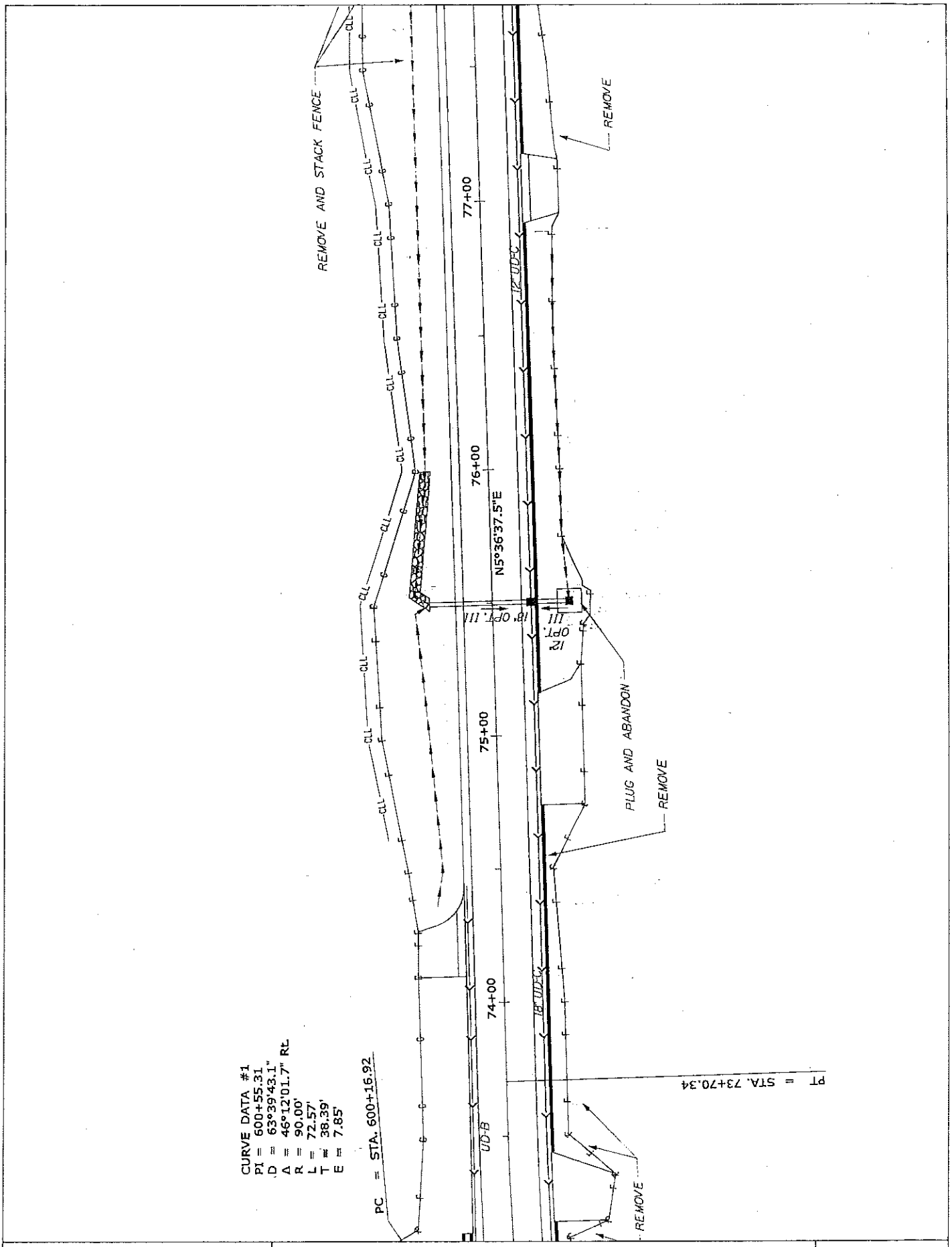
| 12776.00 | PLANS | 17 |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 18 |
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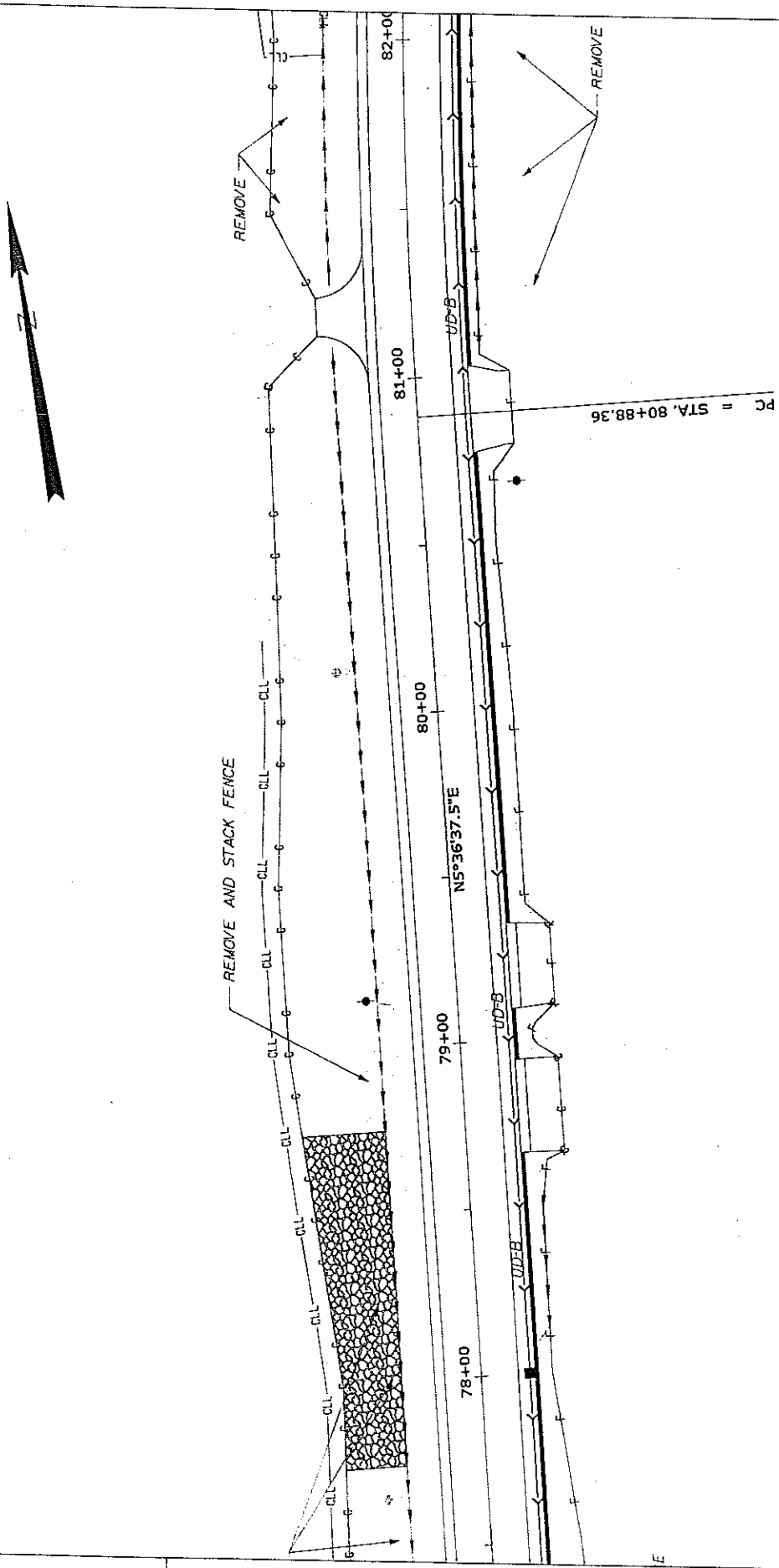
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>19 |
|---|---|---|

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

12776.00

Smithfield-Norridgewock

PLANS

SHEET NUMBER 20 OF97

EARL BRADFORD
AVIS BRADFORD
ITEM NO. (54)
TEMP. CONST. RIGHTS = 994± S.F. (1)
TOTAL AREA = 1.5± AC. (PER TOWN)

WANDA M. GALLANT
ITEM NO. (55)
TEMP. CONST. RIGHTS
TOTAL AREA = 1.7±

GRADE TO SAVE

REMOVE AND STACK FENCE

REMOVE

TEMP. CONST. LIMITS

994± S.F.

PEM Impact = 455± S.F.
RUS Impact = 81± S.F.

TEMP. CONST. LIMITS 408± S.F.

82+00
83+00
84+00
85+00
86+00

678.54'

843'±
517'±
146'±
663.63'±

TEMP. CONST. 54± S.F. LIMITS

DRAINAGE EASE. = 121± S.F.

ROS DRAINAGE LIMITS

Temp Stream Impacts = 74± S.F.

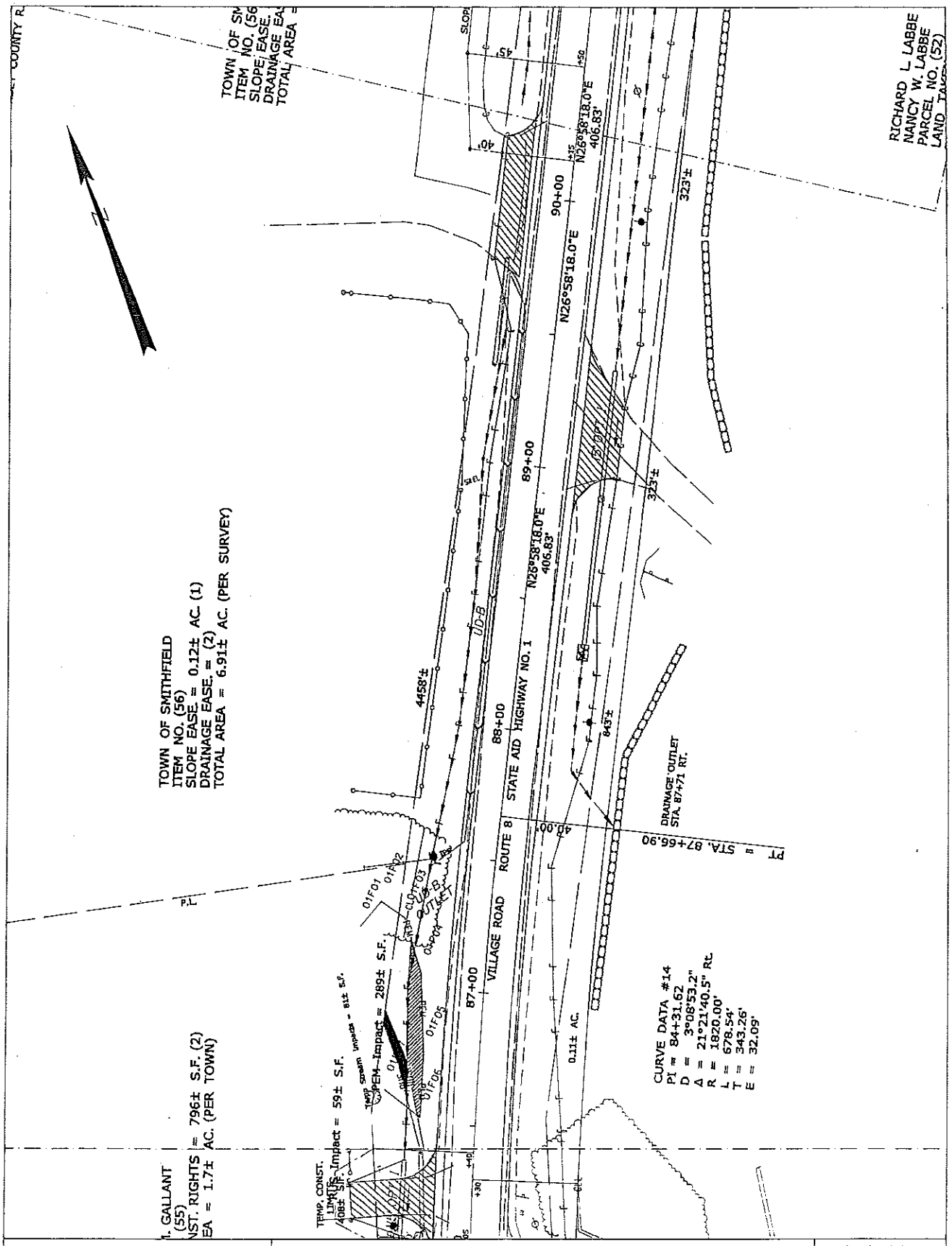
1,158± S.F. TEMP. CONST. LIMITS

OUTLET DRAINAGE STRUCTURE
STA. 85+25 RT. TO STA. 85+55 RT.

CURVE DATA #14
PI = 84+31.62
D = 3°08'53.2"
Δ = 21°21'40.5" Rt.
R = 1820.00'
L = 678.54'
T = 343.26'
E = 32.09'

RICHARD L. LABBE
NANCY W. LABBE
PARCEL NO. (52)
LAND TAKEN = 0.12± AC. (2)
DRAINAGE EASE. = 1,147± S.F. (3)
TEMP. CONST. RIGHTS = 1,212± S.F. (2)
TOTAL AREA = 38.94± AC. (PER TOWN)
REM. AREA = 38.82± AC.

CURVE DATA #14
PI = 84+31.62
D = 3°08'53.2"
Δ = 21°21'40.5" Rt.
R = 1820.00'
L = 678.54'
T = 343.26'




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>21 |
|---|---|---|
| 12776.00 | PLANS | OF97 |

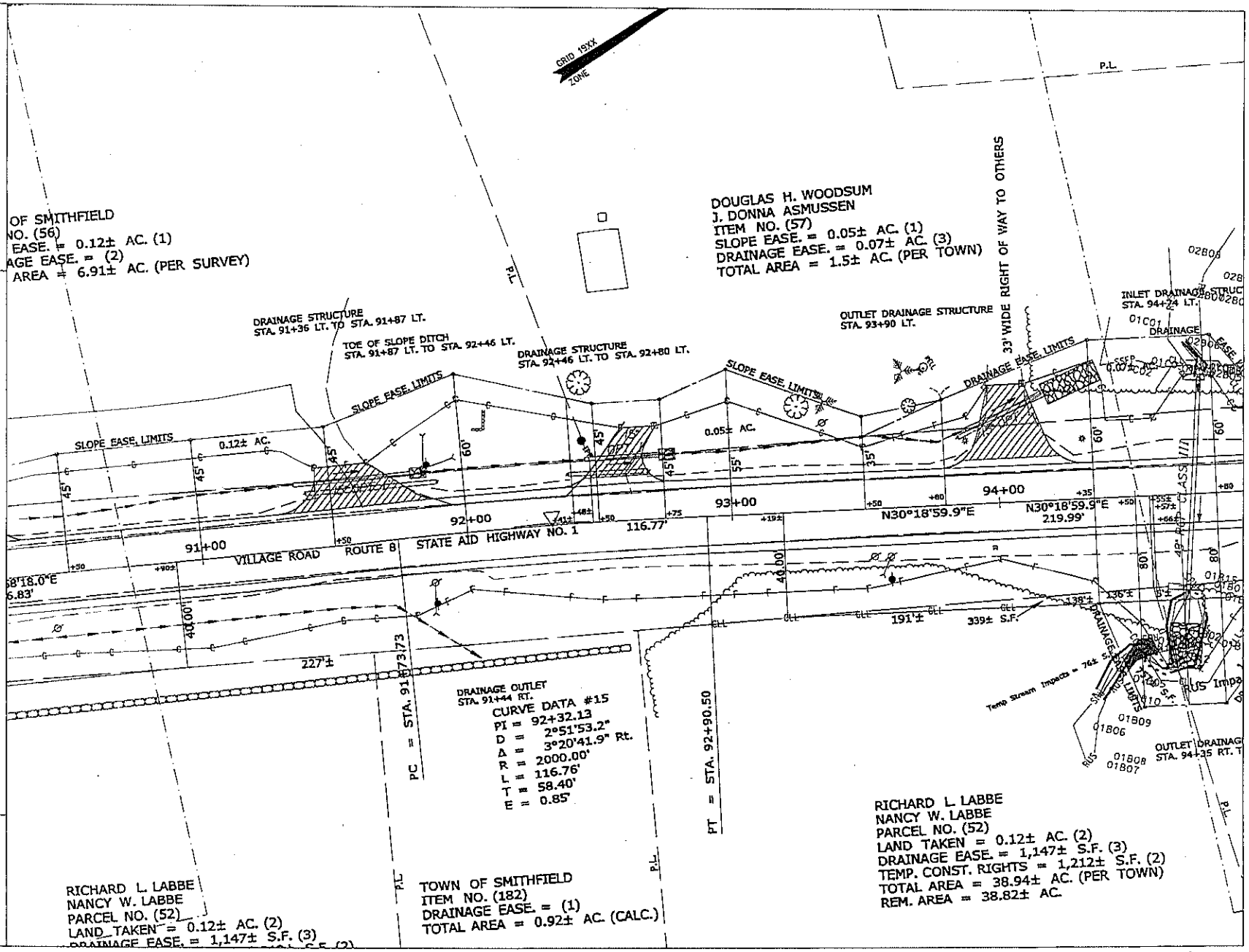
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

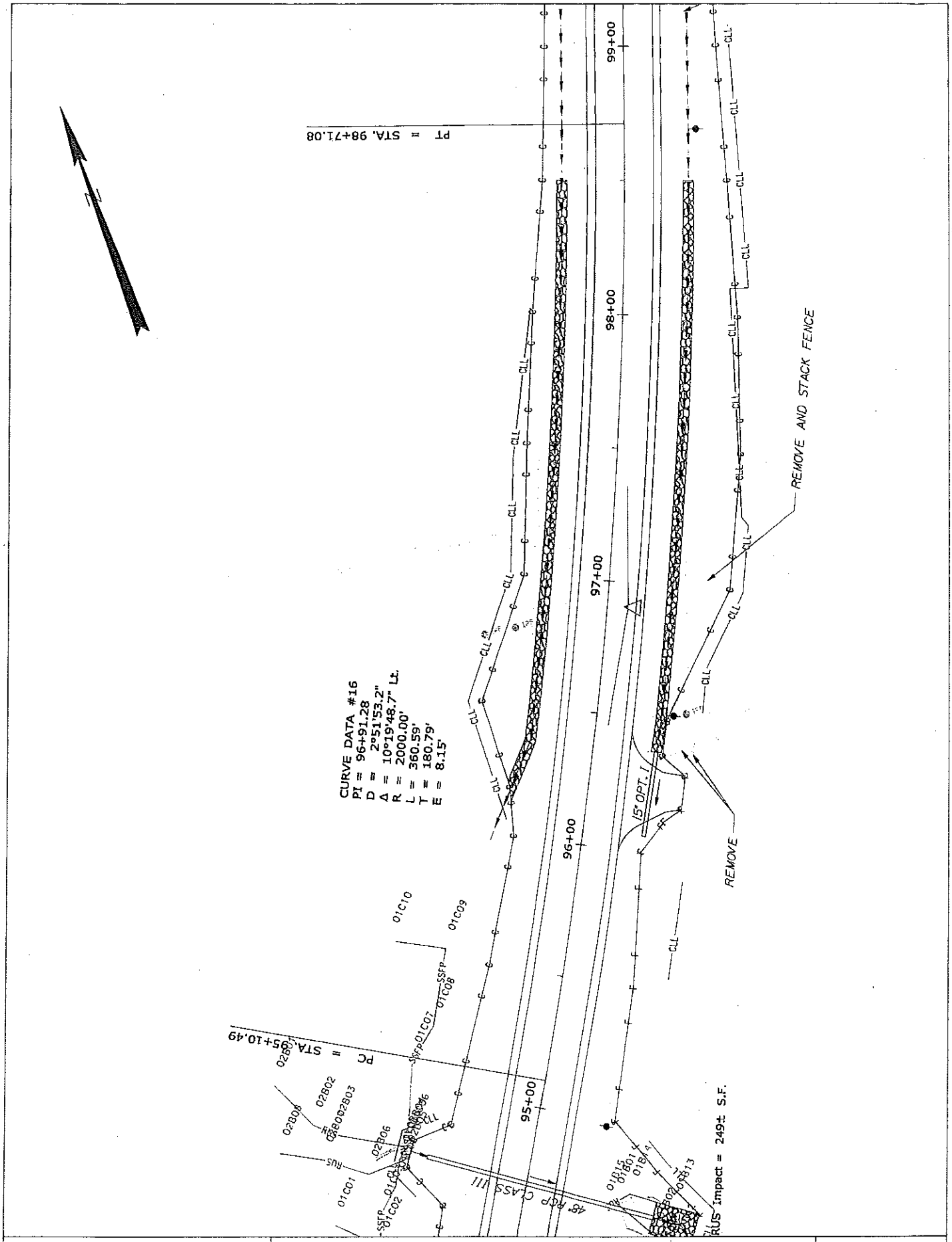
12776.00

PLANS

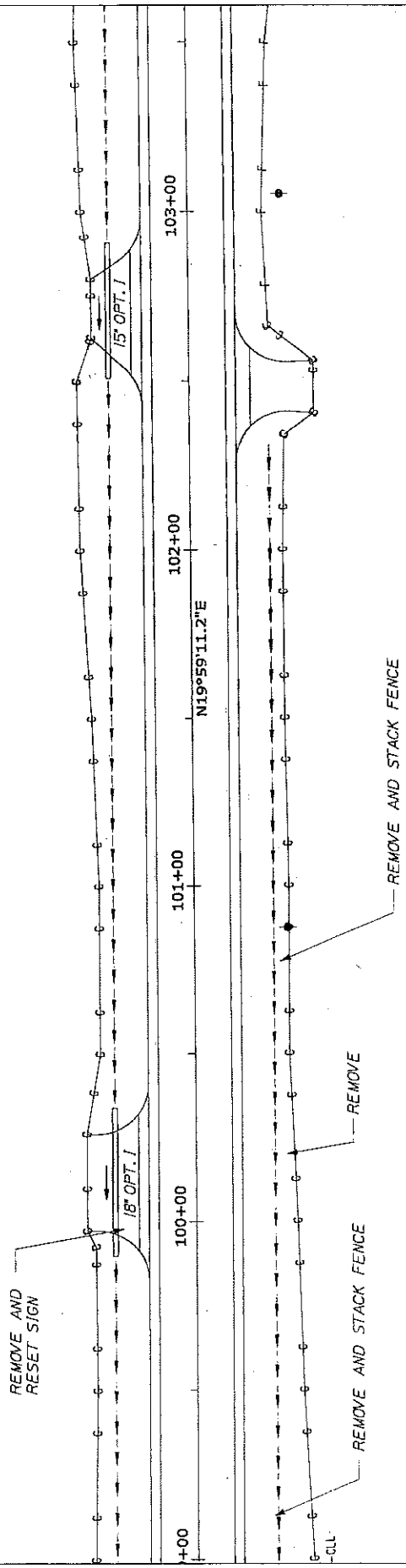
Smithfield-Norridgewock

SHEET NUMBER
22
OF97






| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>415<br>23 |
|---|---|---|
| 12776.00 | PLANS | |

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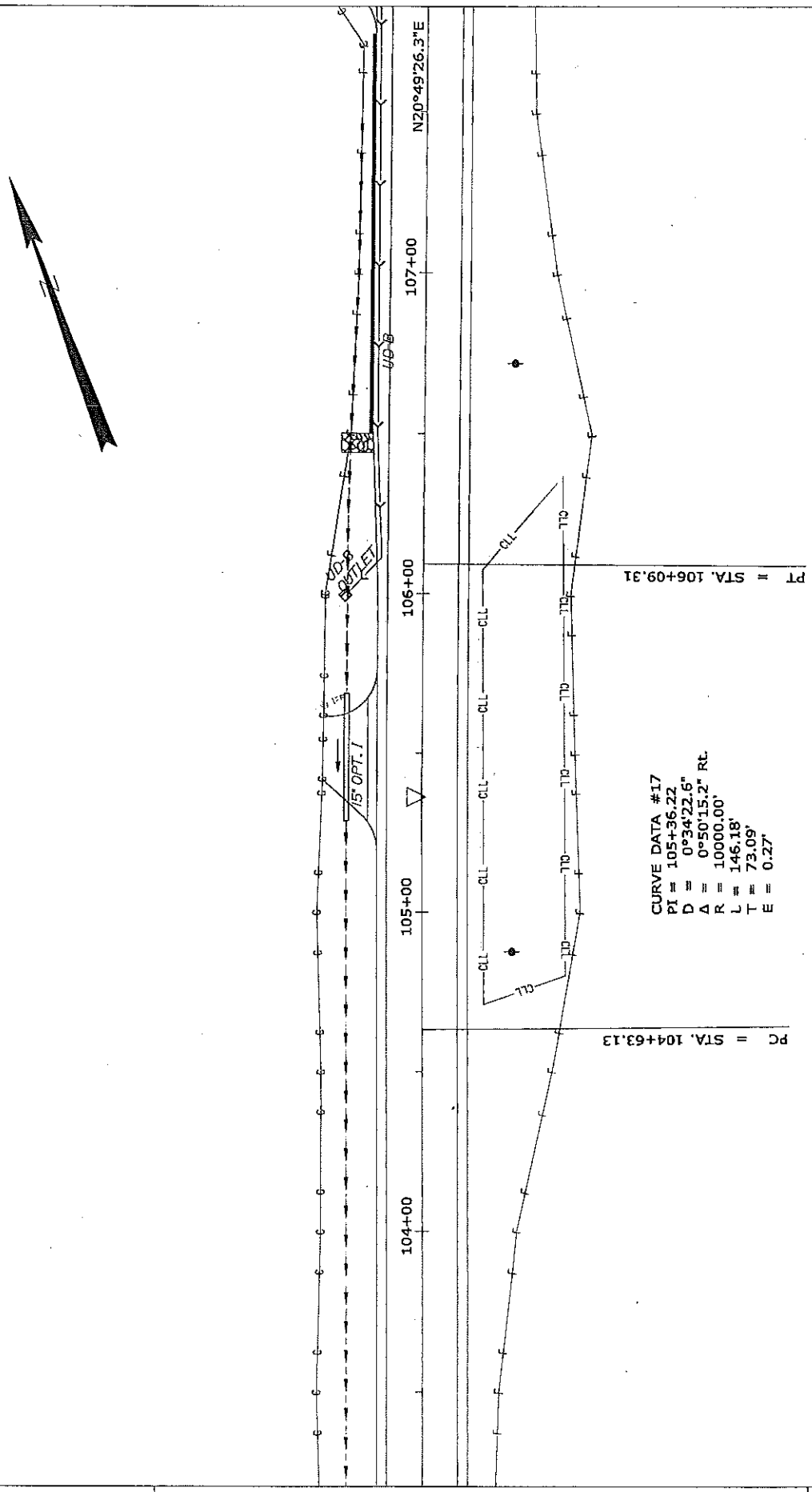
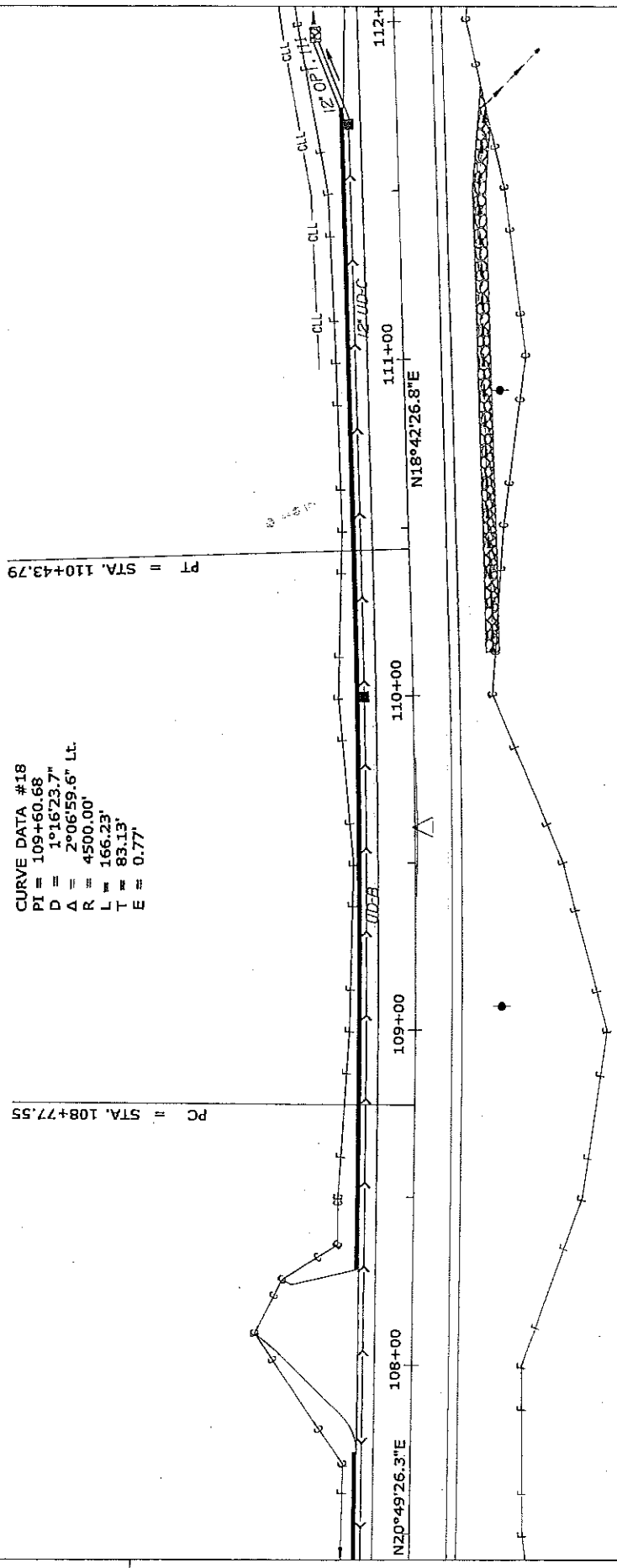
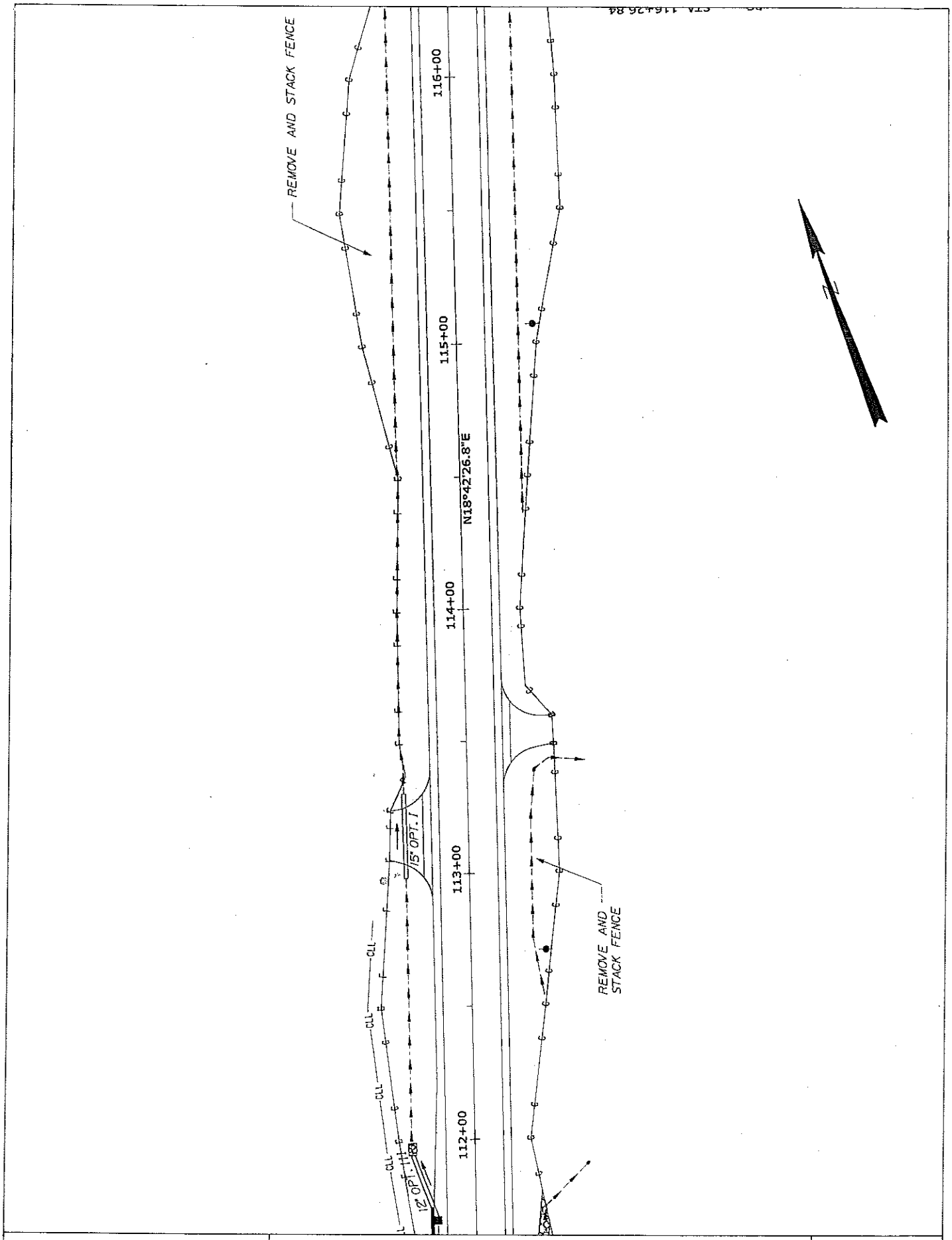
|---|---|---|
| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>24 4/16 |
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>417 |
|---|---|---|
| | PLANS | 25 |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>26 418 |
|---|---|---|
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 419 |
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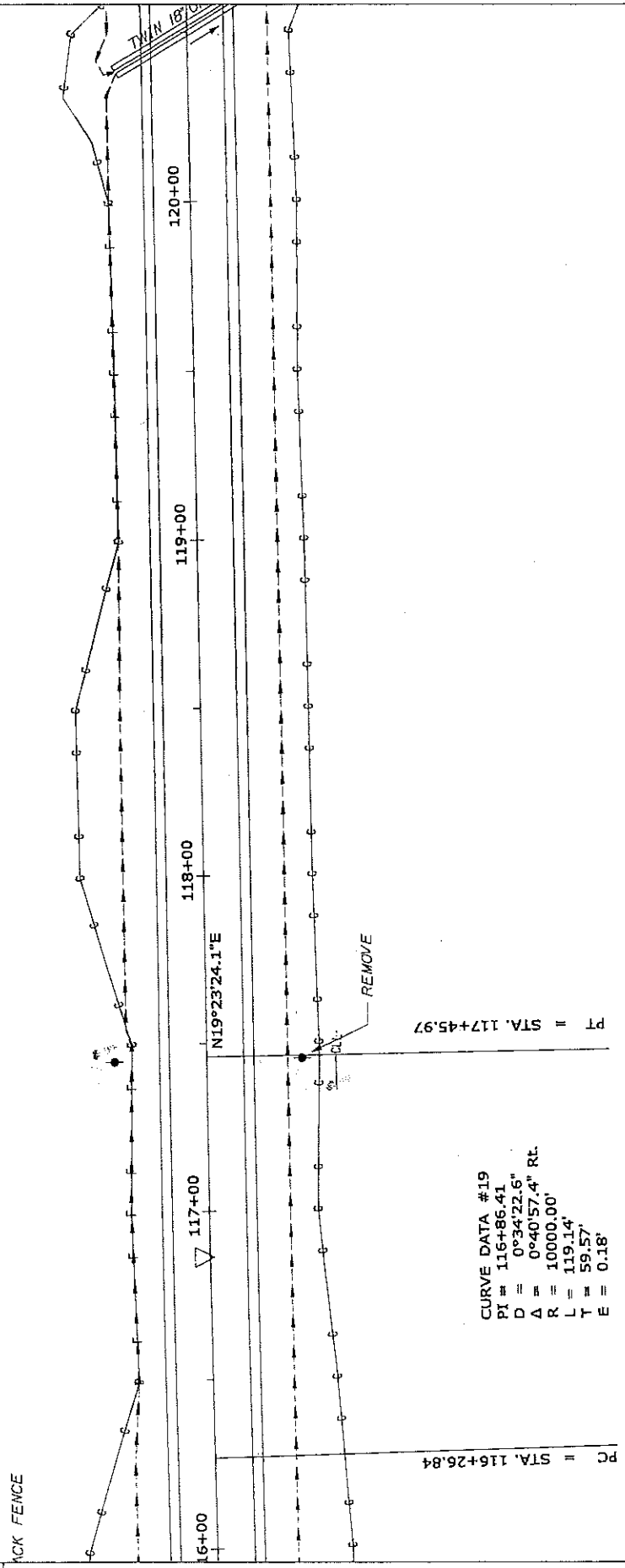
| 12776.00 | PLANS | 27 |

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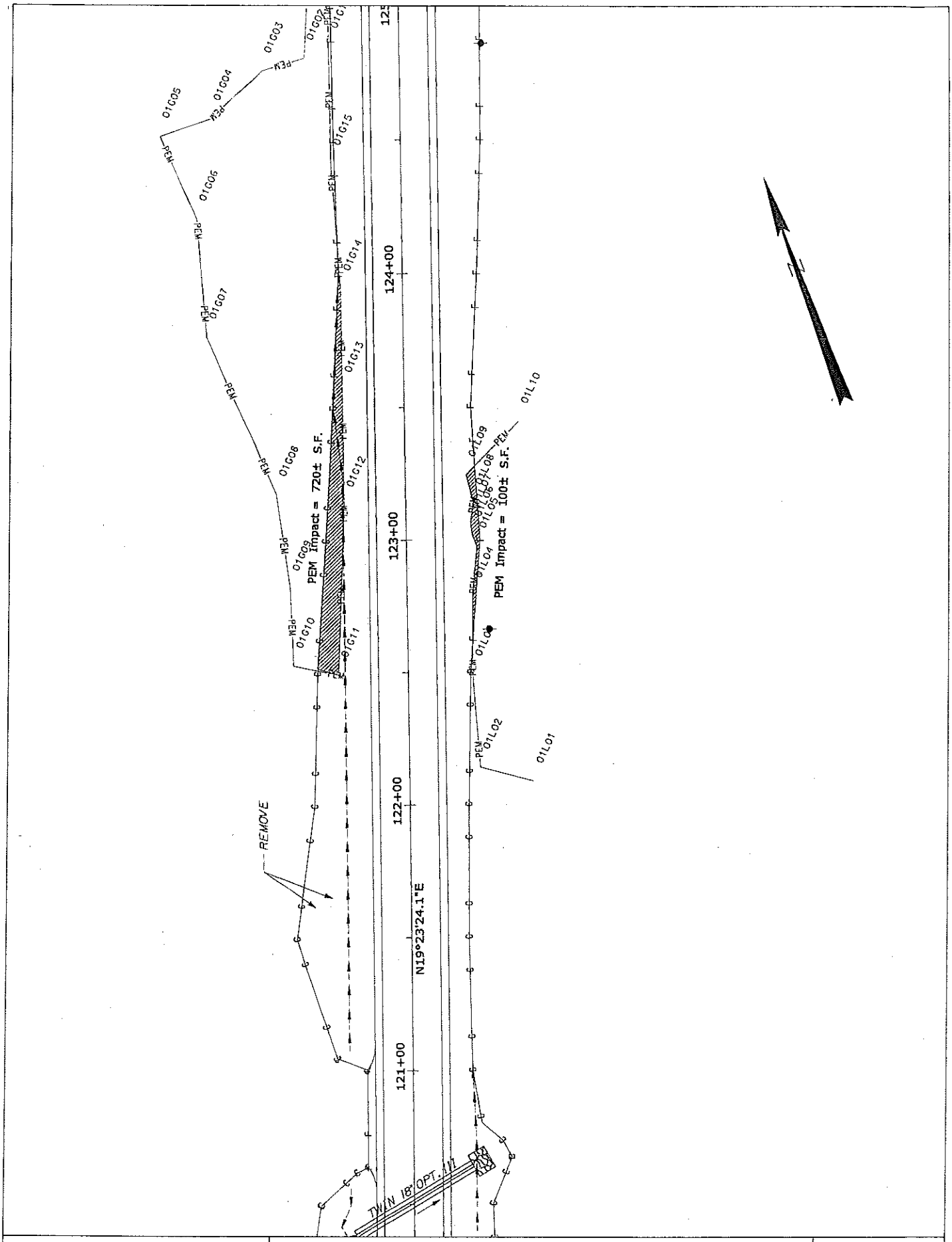
|---|---|---|
| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>28 |
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>421<br>29 |
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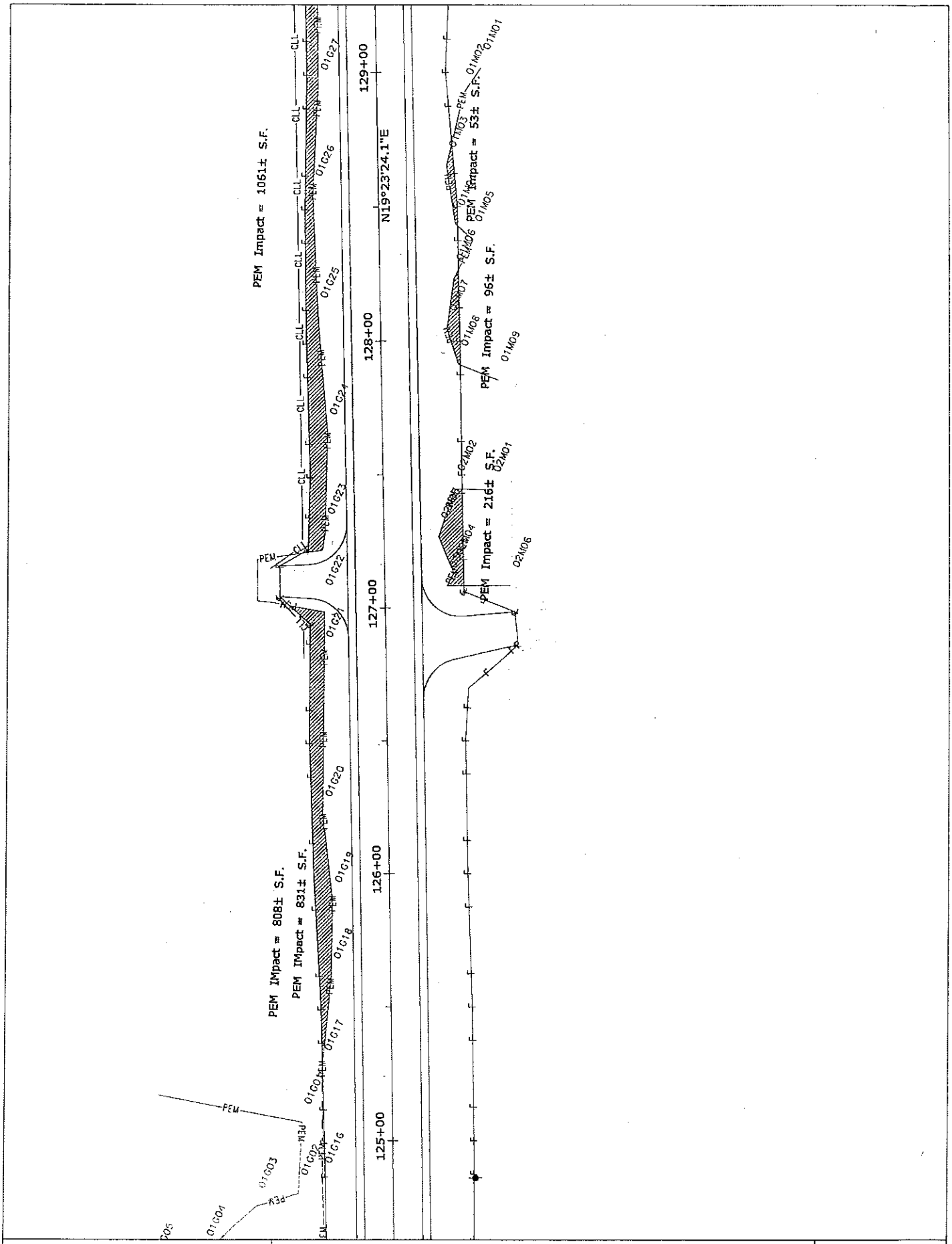
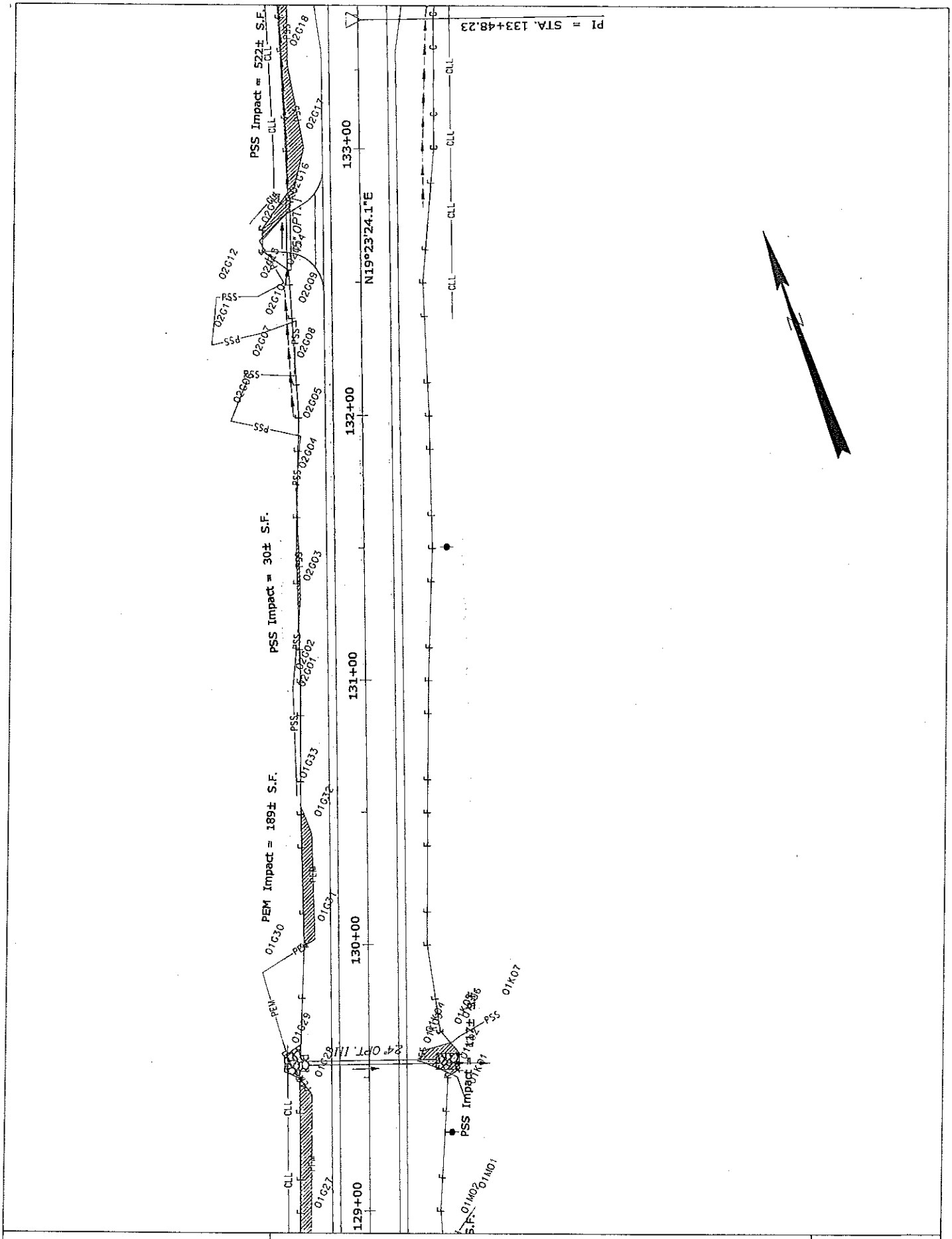
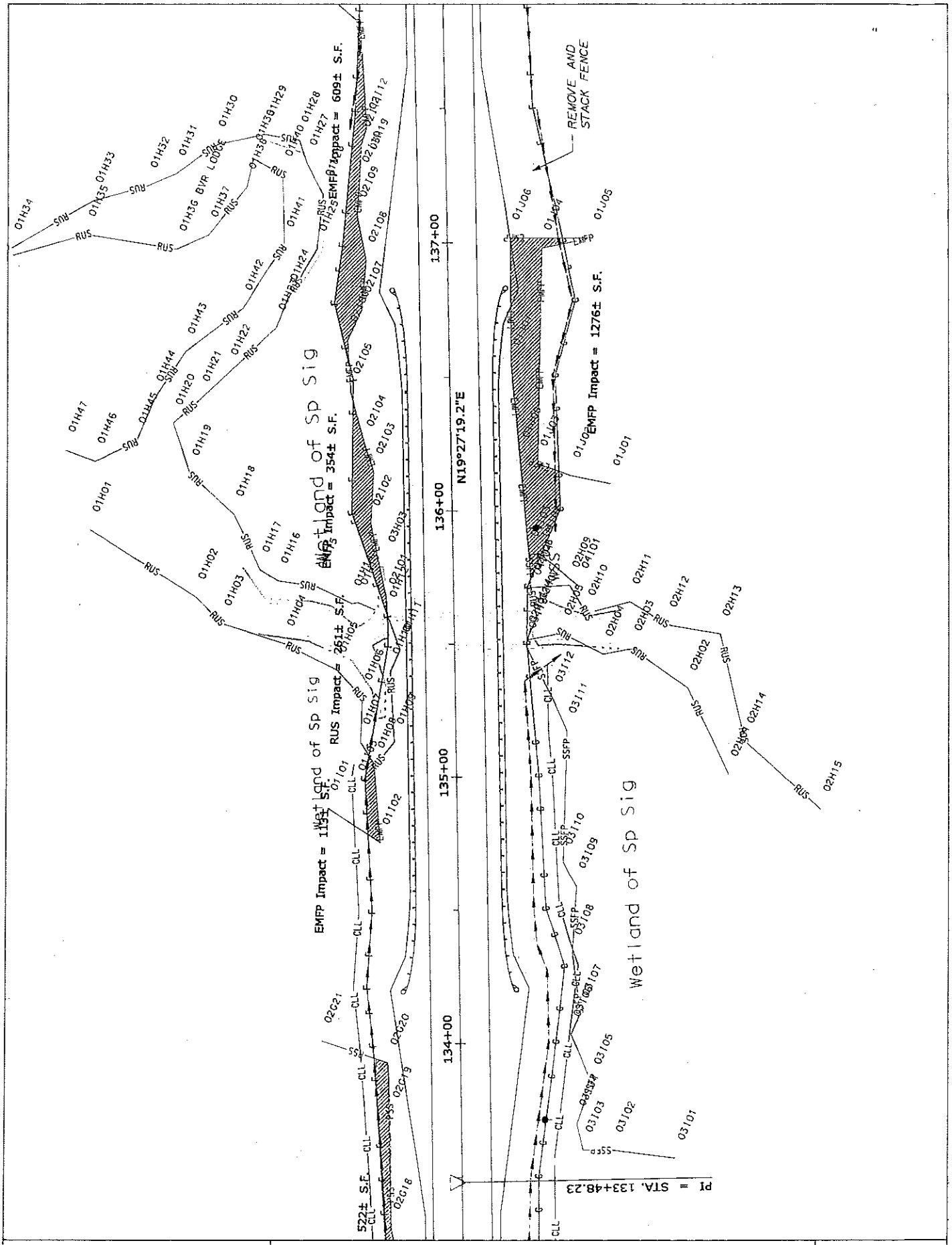
| 12776.00 | PLANS | |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 30 422 |
|---|---|---|
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 423 |
|---|---|---|
| 12776.00 | PLANS | 31 |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 32 |
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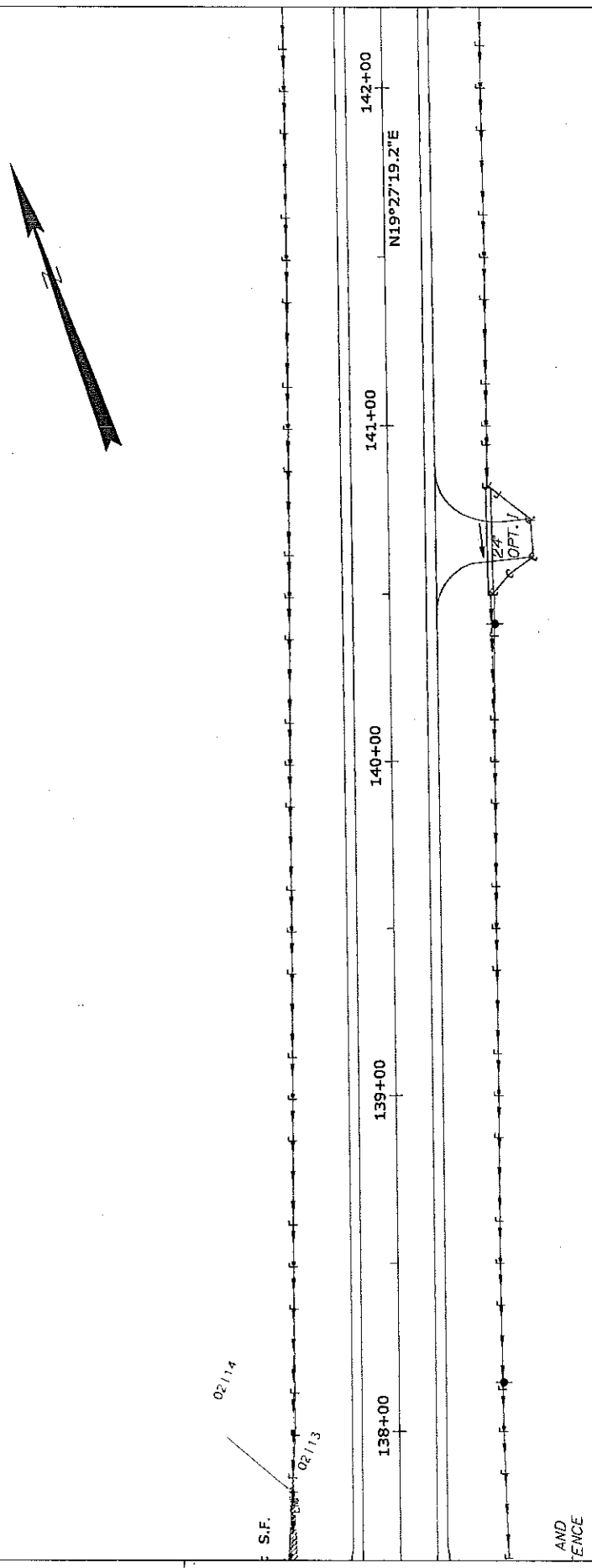
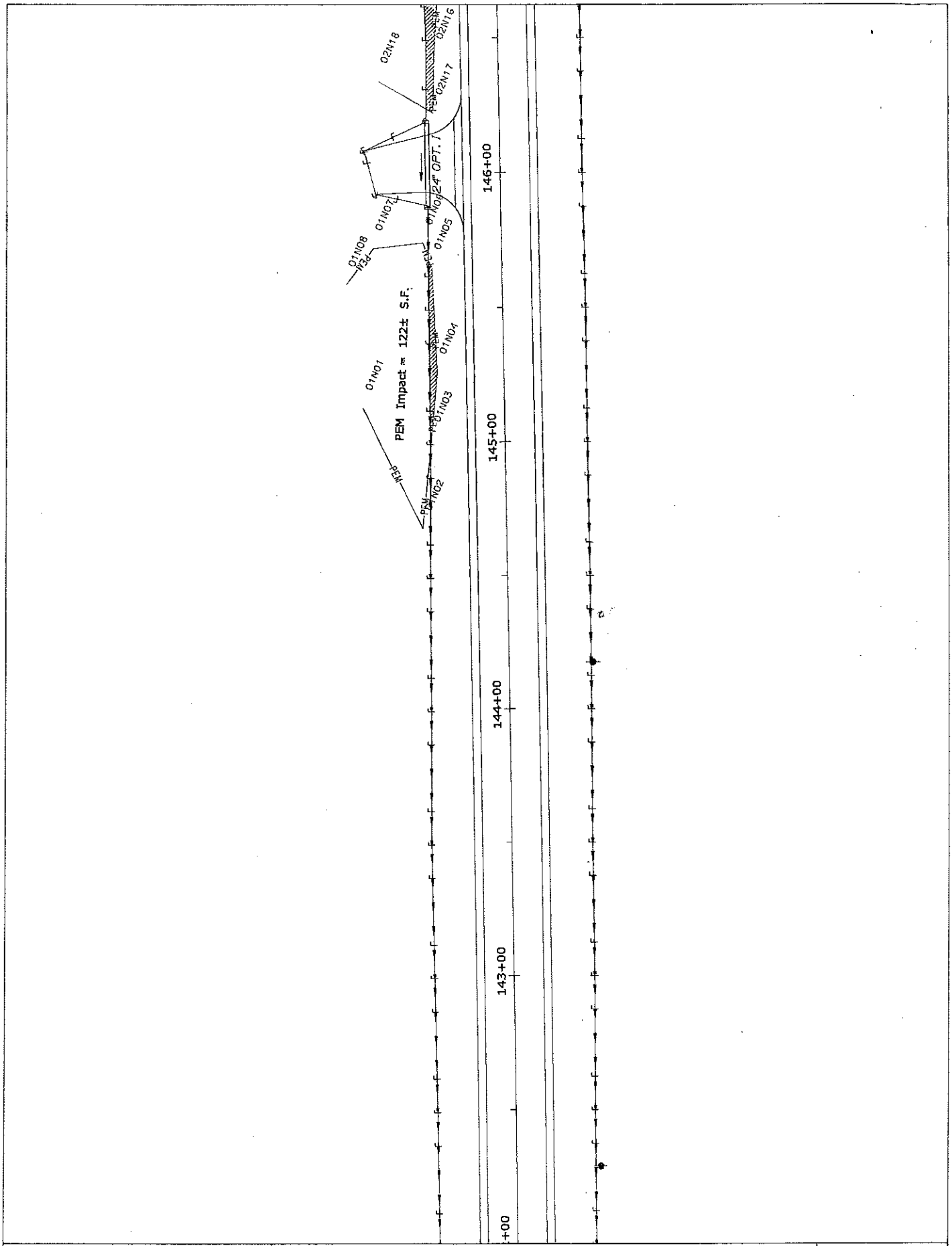
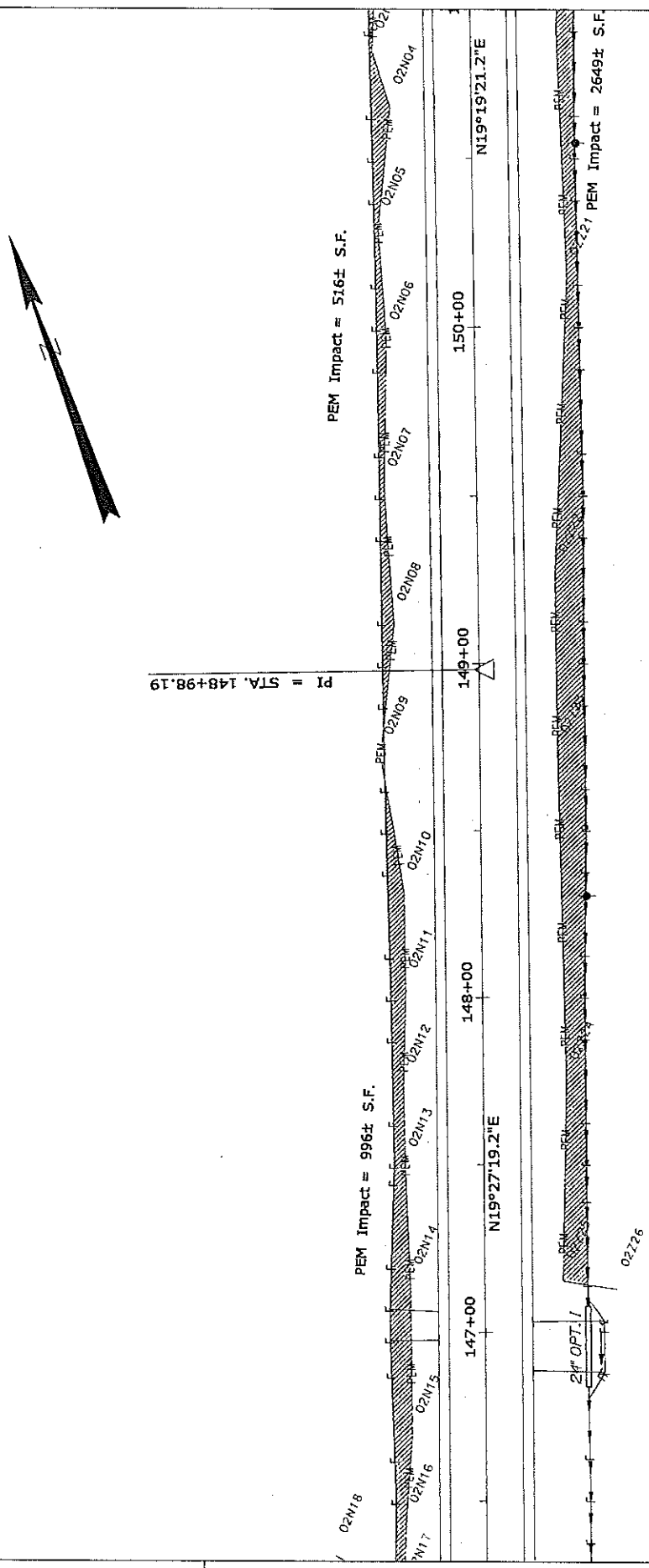
| 12776.00 | PLANS | 424 OF97 |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>425<br>33 |
|---|---|---|
| 12776.00 | PLANS | |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>34 426 |
|---|---|---|
| 12776.00 | PLANS | OF97 |

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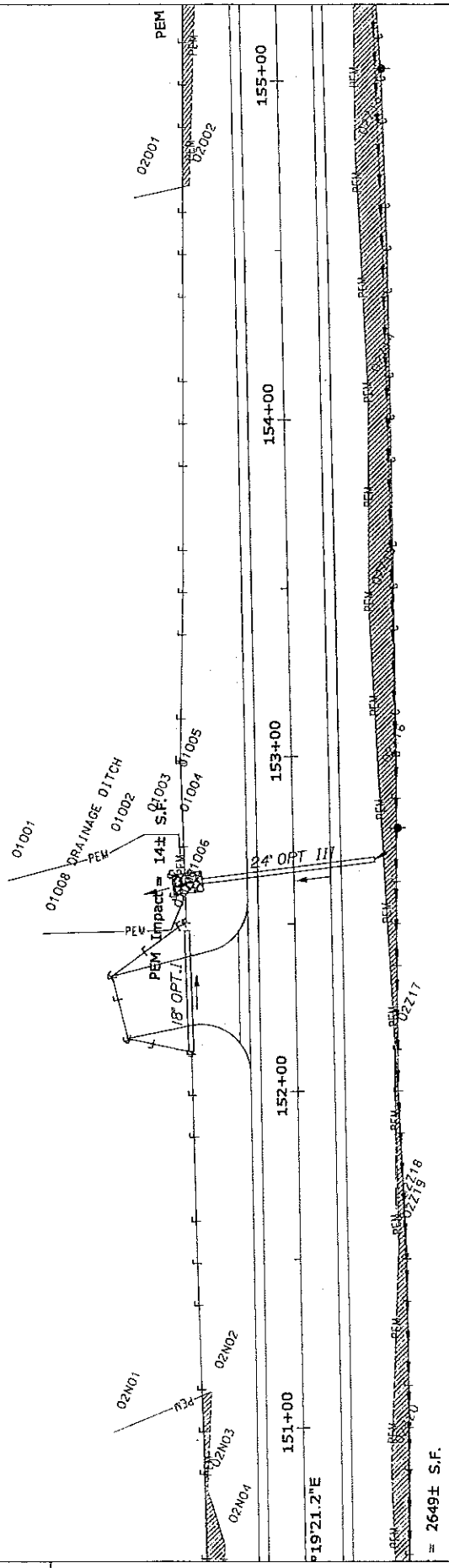
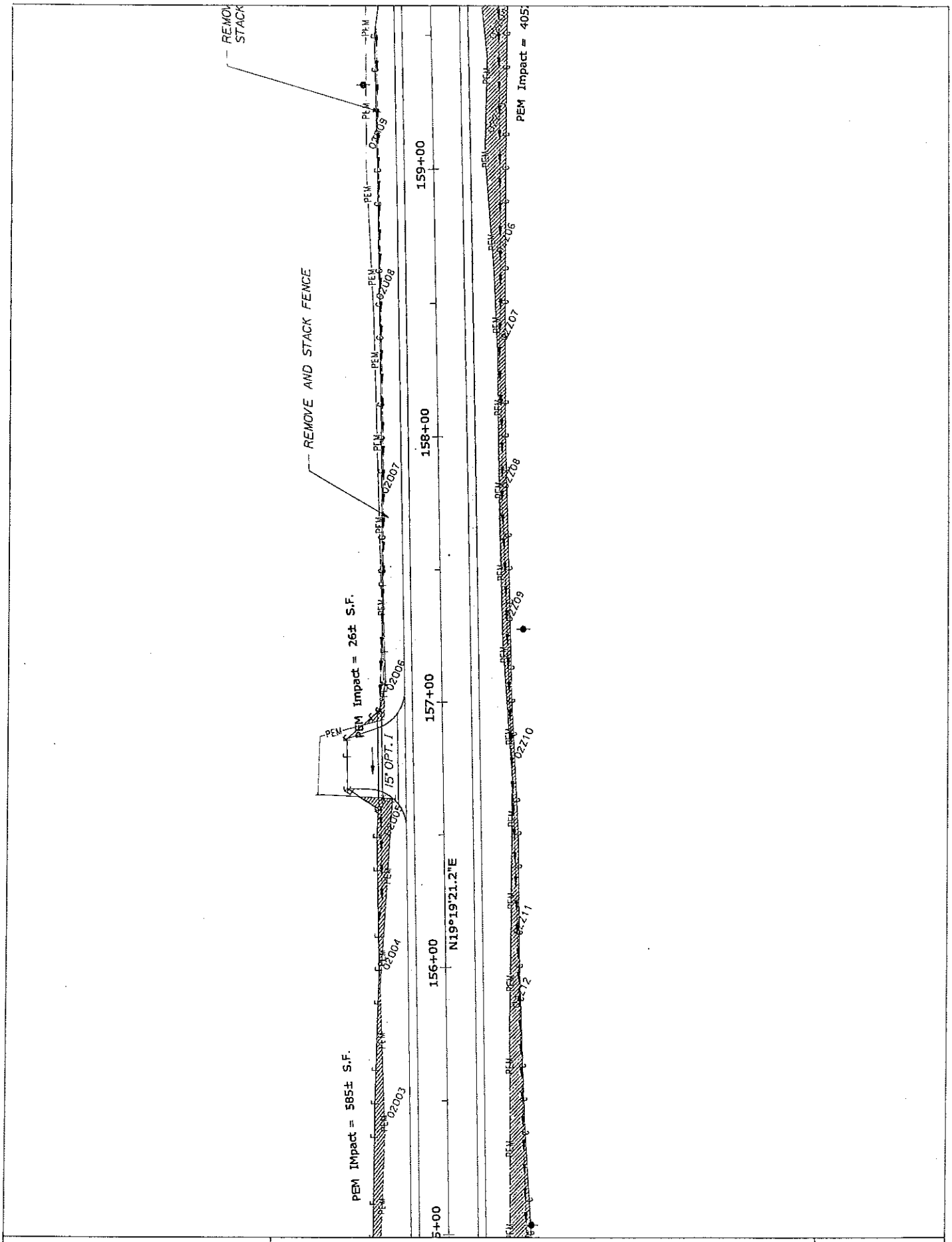
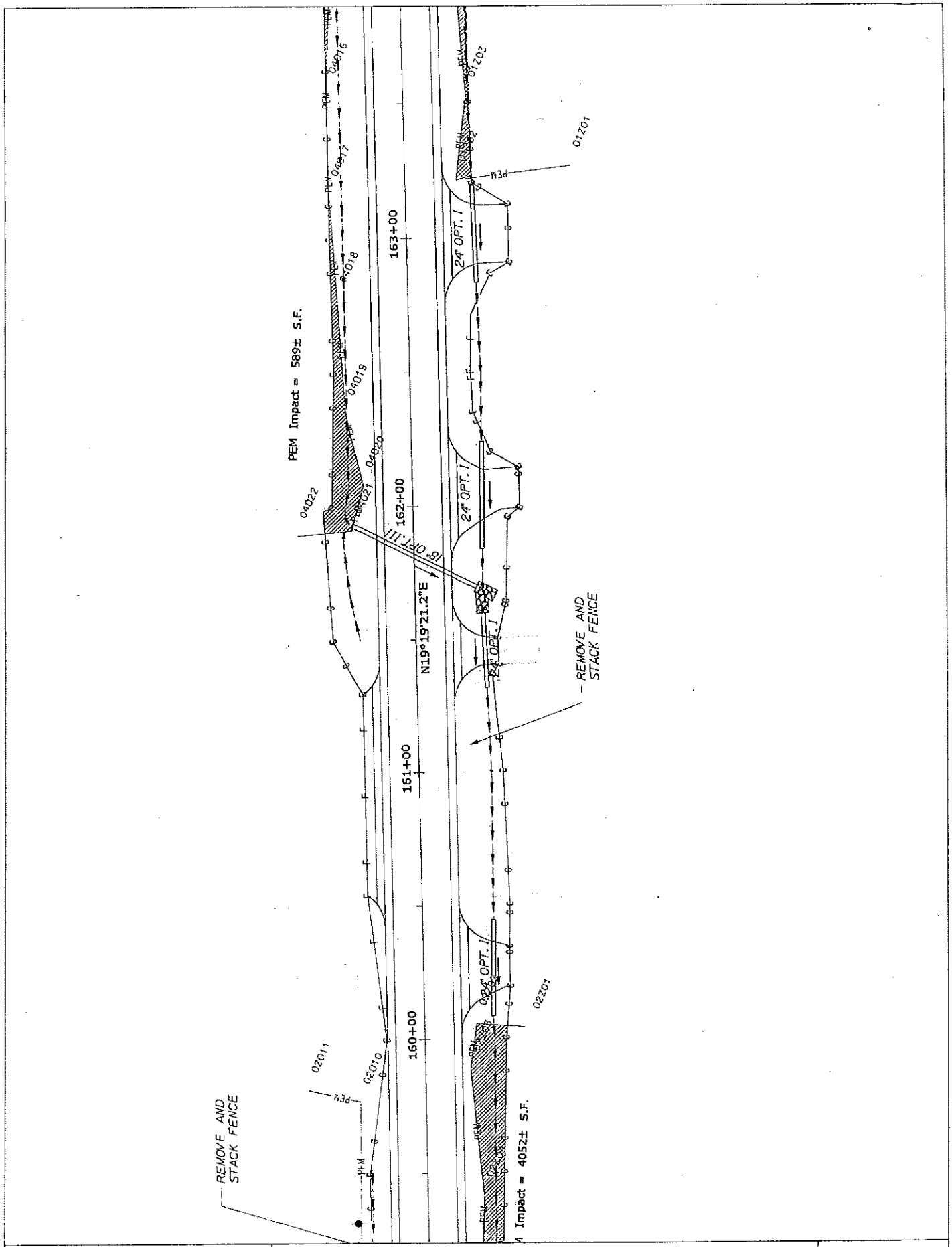
|---|---|---|
| | PLANS | |



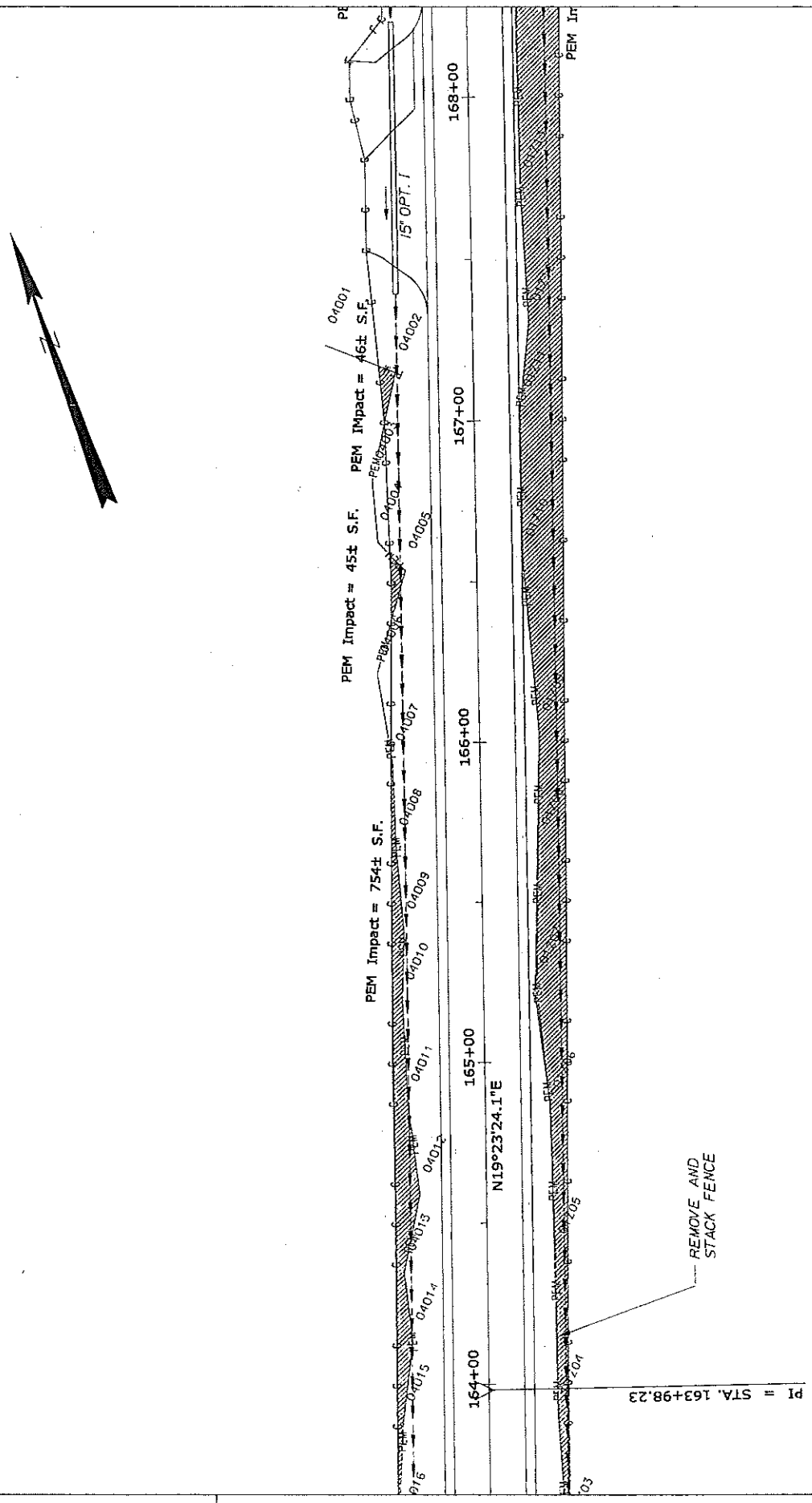

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER |
|---|---|---|
| 12776.00 | PLANS | 36 428<br>OF97 |



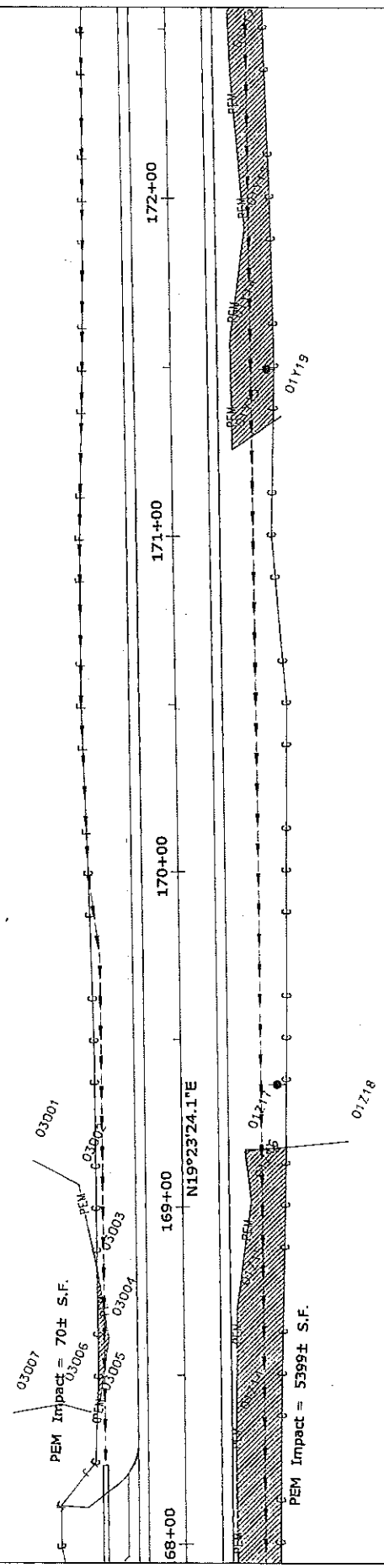

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>429<br>37 |
|---|---|---|
| | PLANS | |



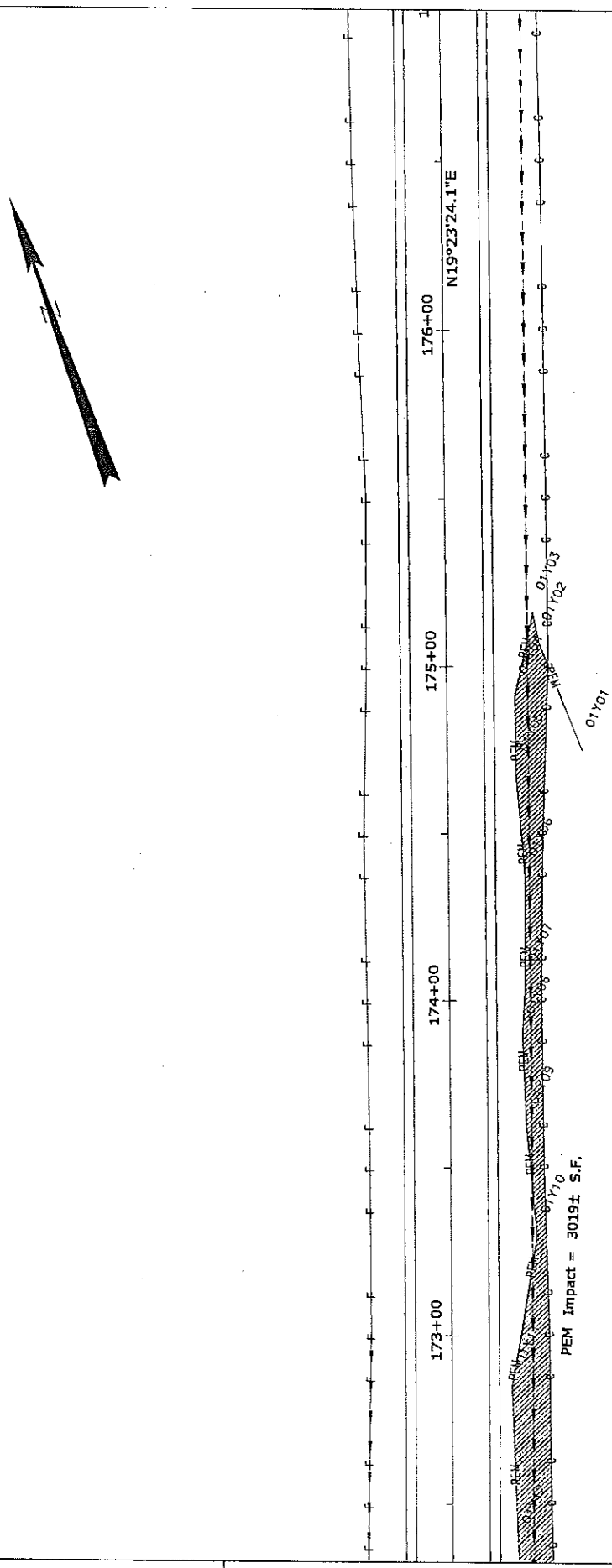

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 38 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



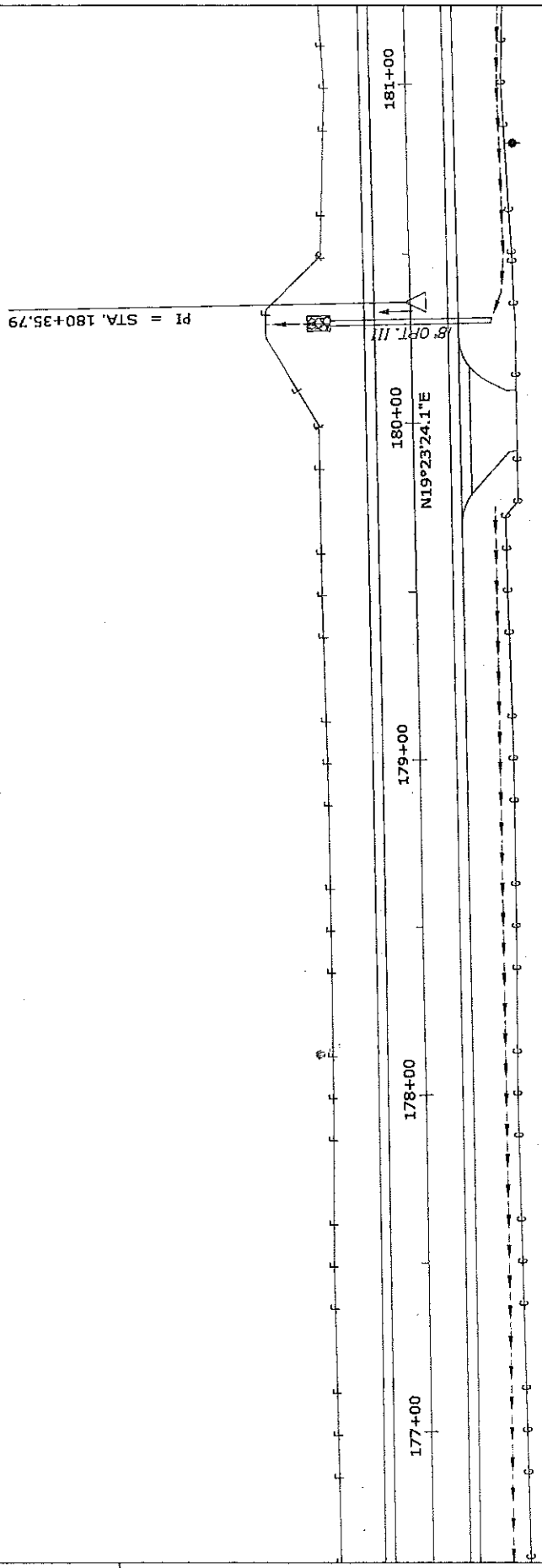

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 431 |
|---|---|---|
| | PLANS | 39 |



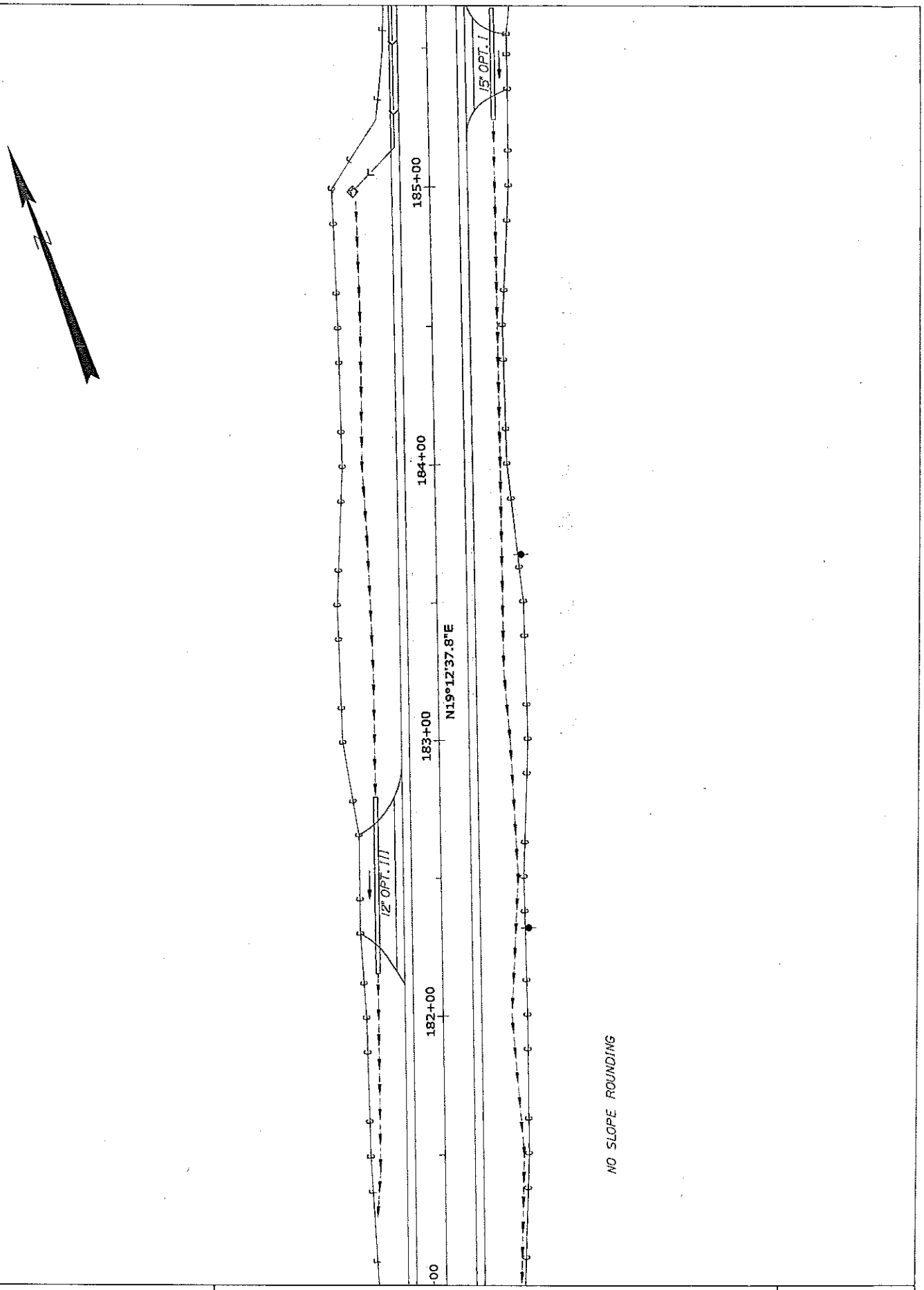

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>40 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



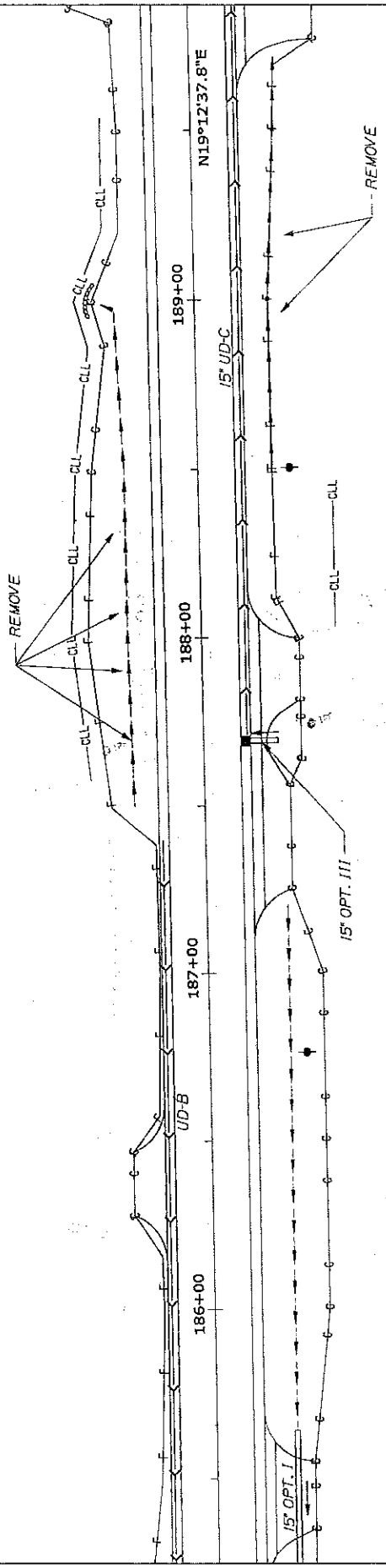

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>433 |
|---|---|---|
| 12776.00 | PLANS | 41 |



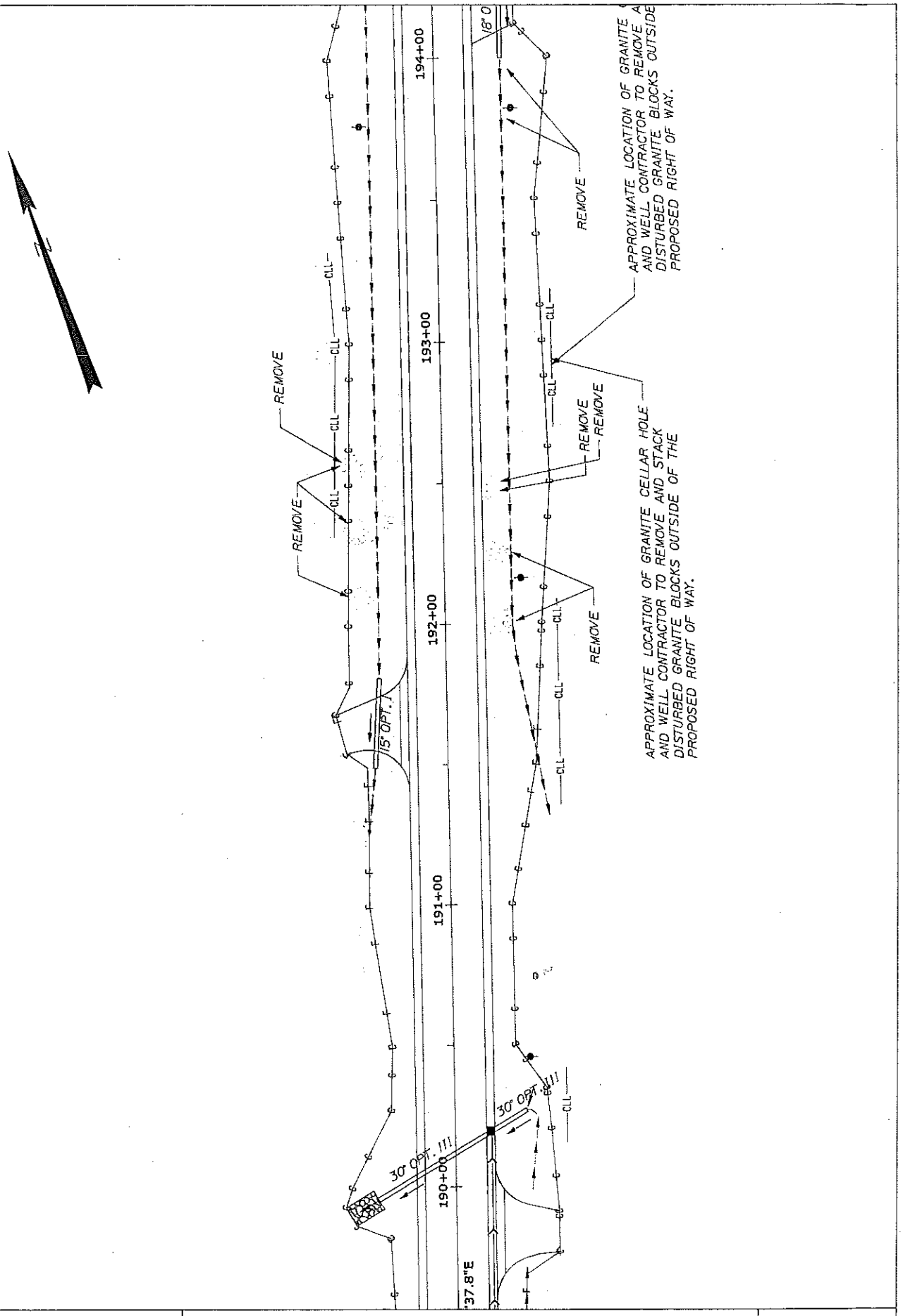

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER |
|---|---|---|
| 12776.00 | PLANS | 42 434<br>OF97 |



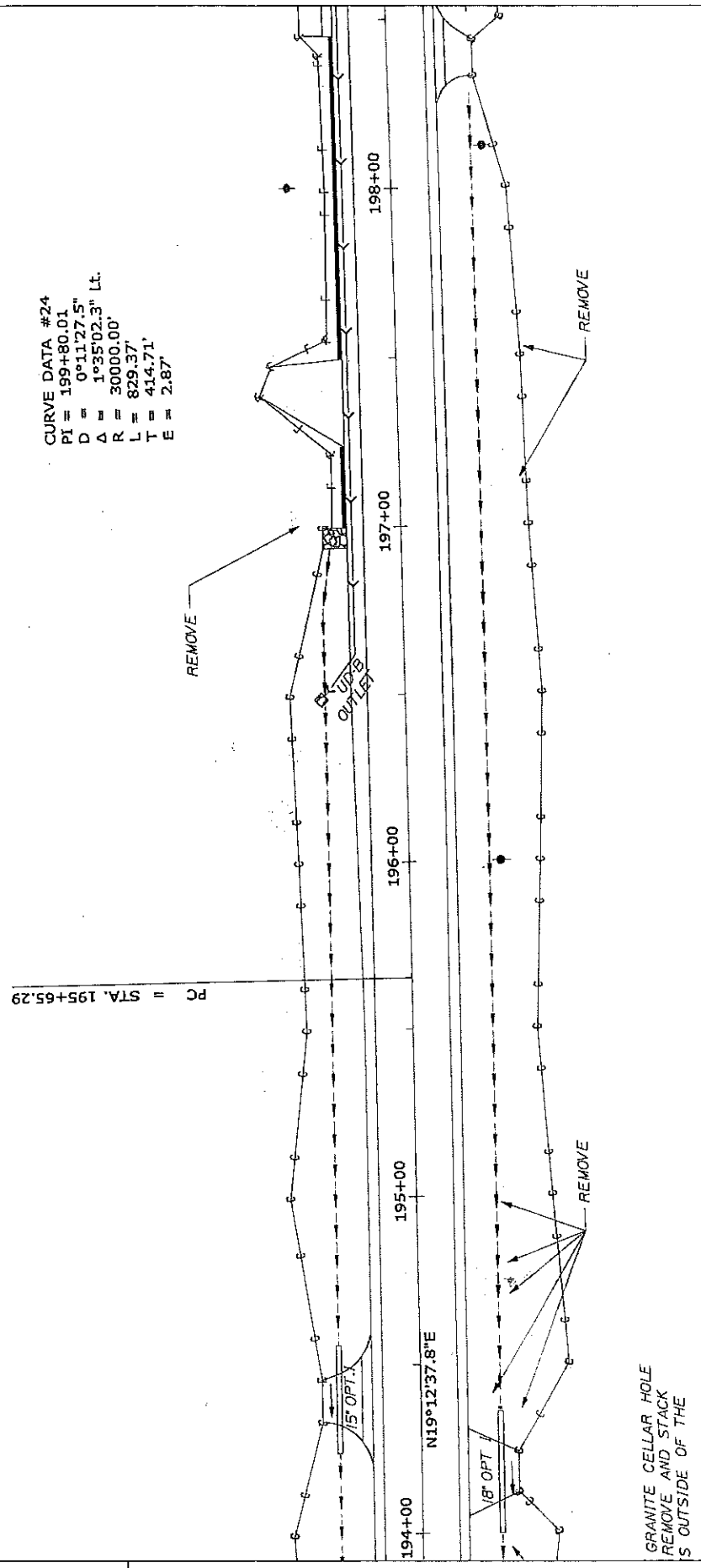

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>435<br>43 |
|---|---|---|
| | PLANS | |



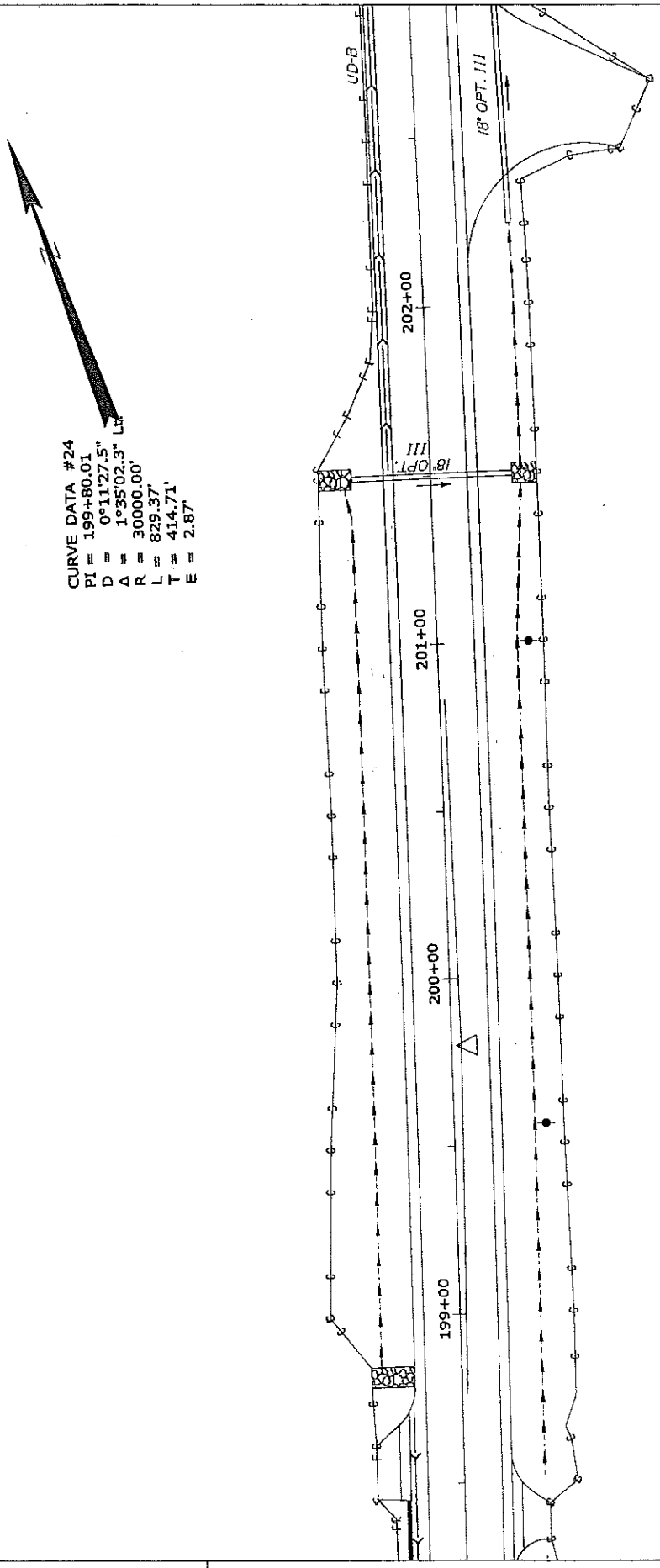

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>44<br>436 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



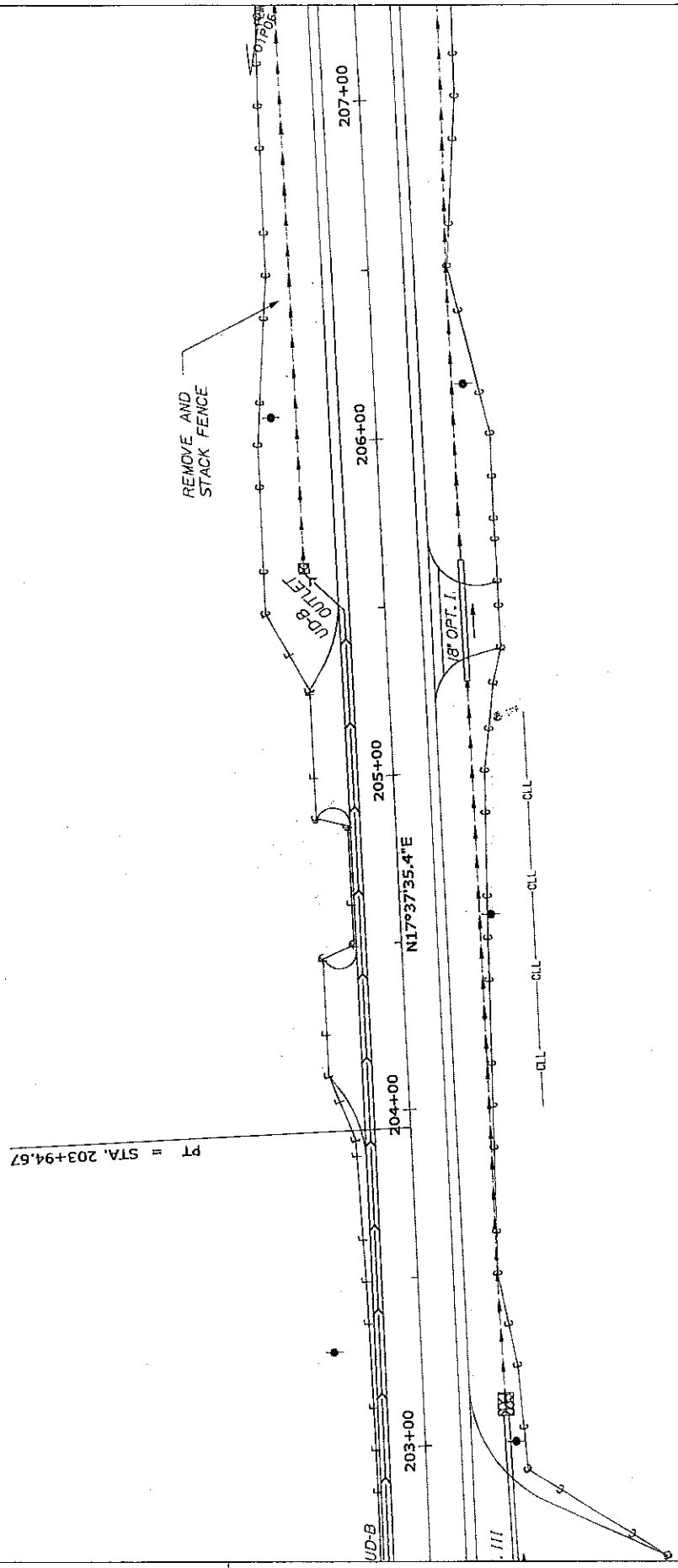

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>437<br>45 |
|---|---|---|
| 13776.00 | PLANS | |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 46 |
|---|---|---|
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>439<br>47 |
|---|---|---|
| 13770.00 | PLANS | |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 48 |
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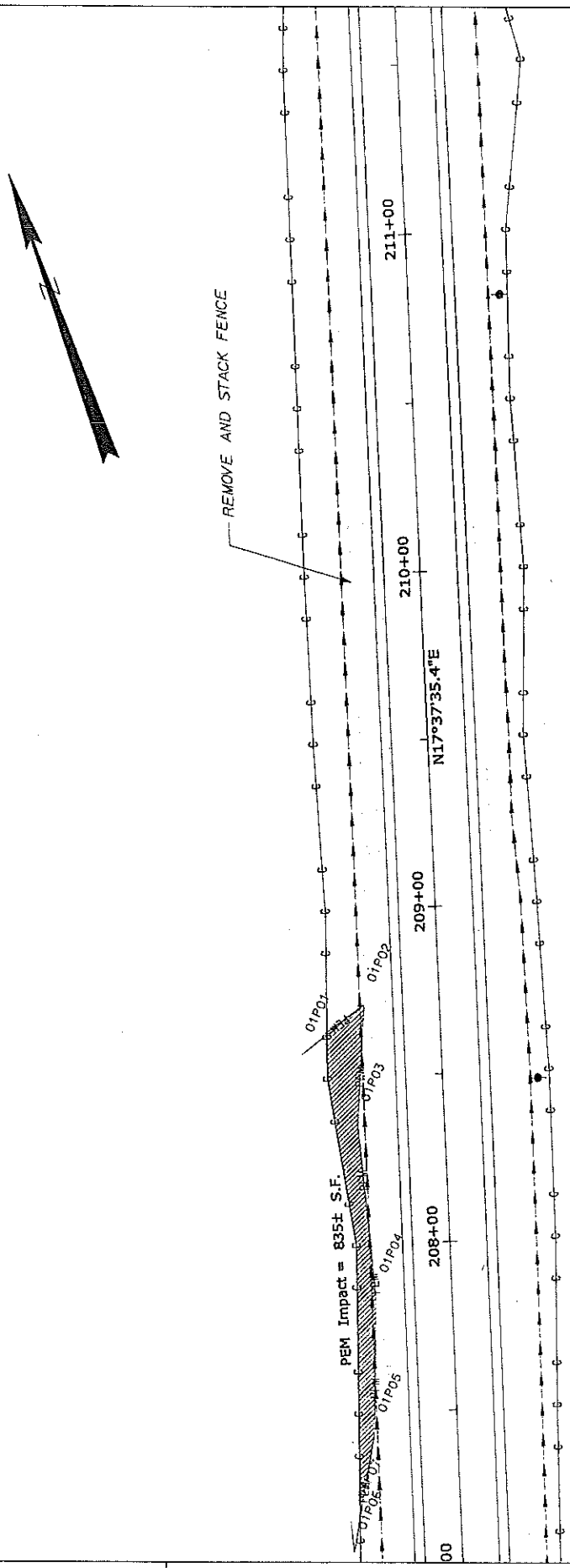
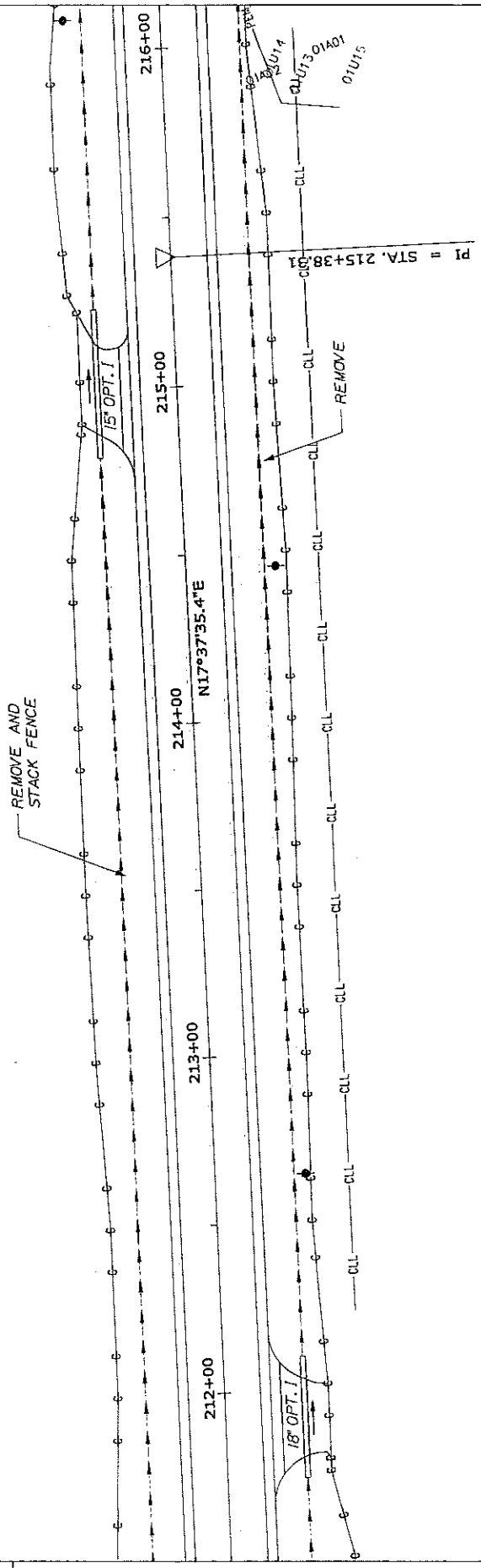
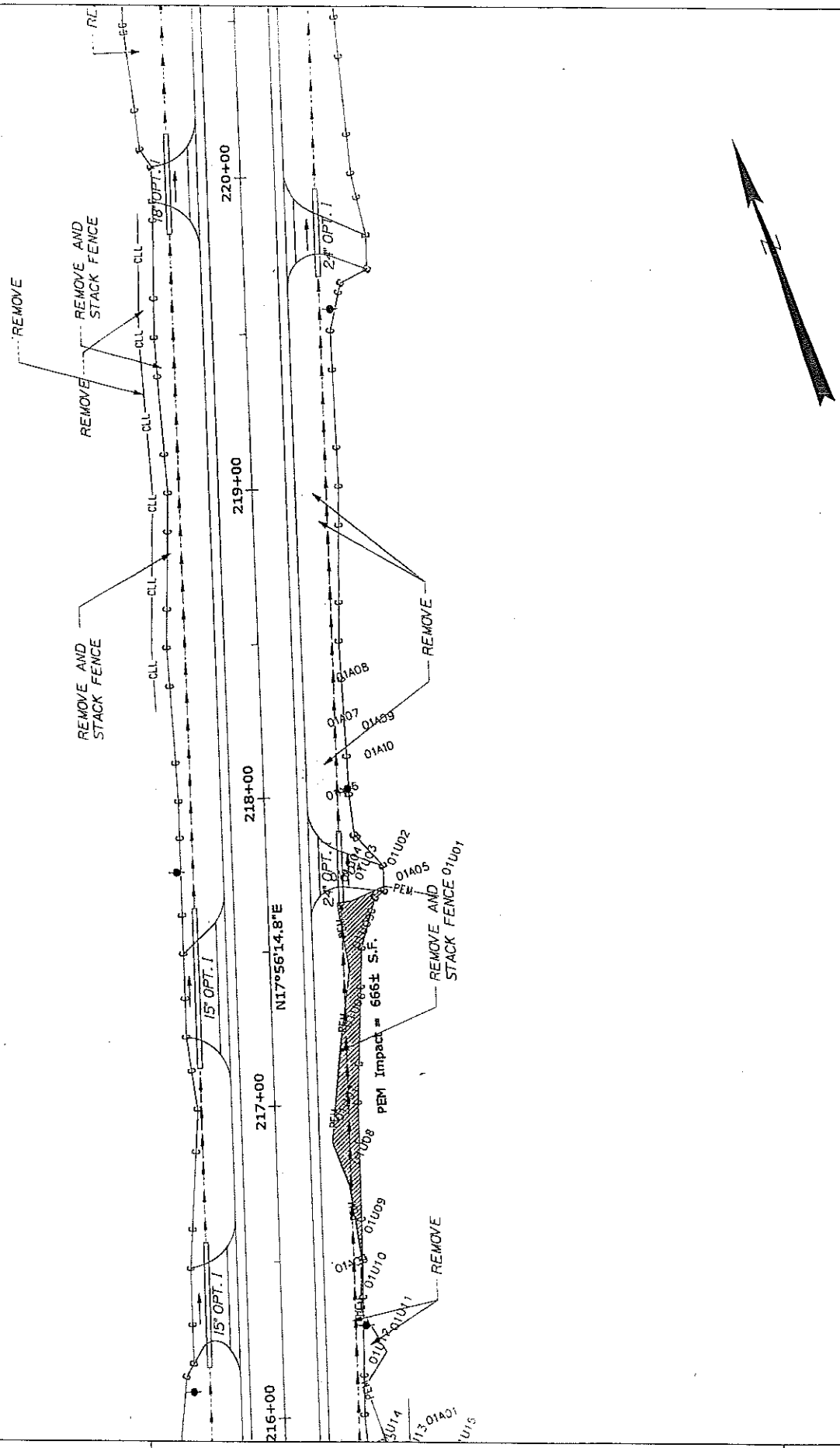
| 12776.00 | PLANS | OF97 |



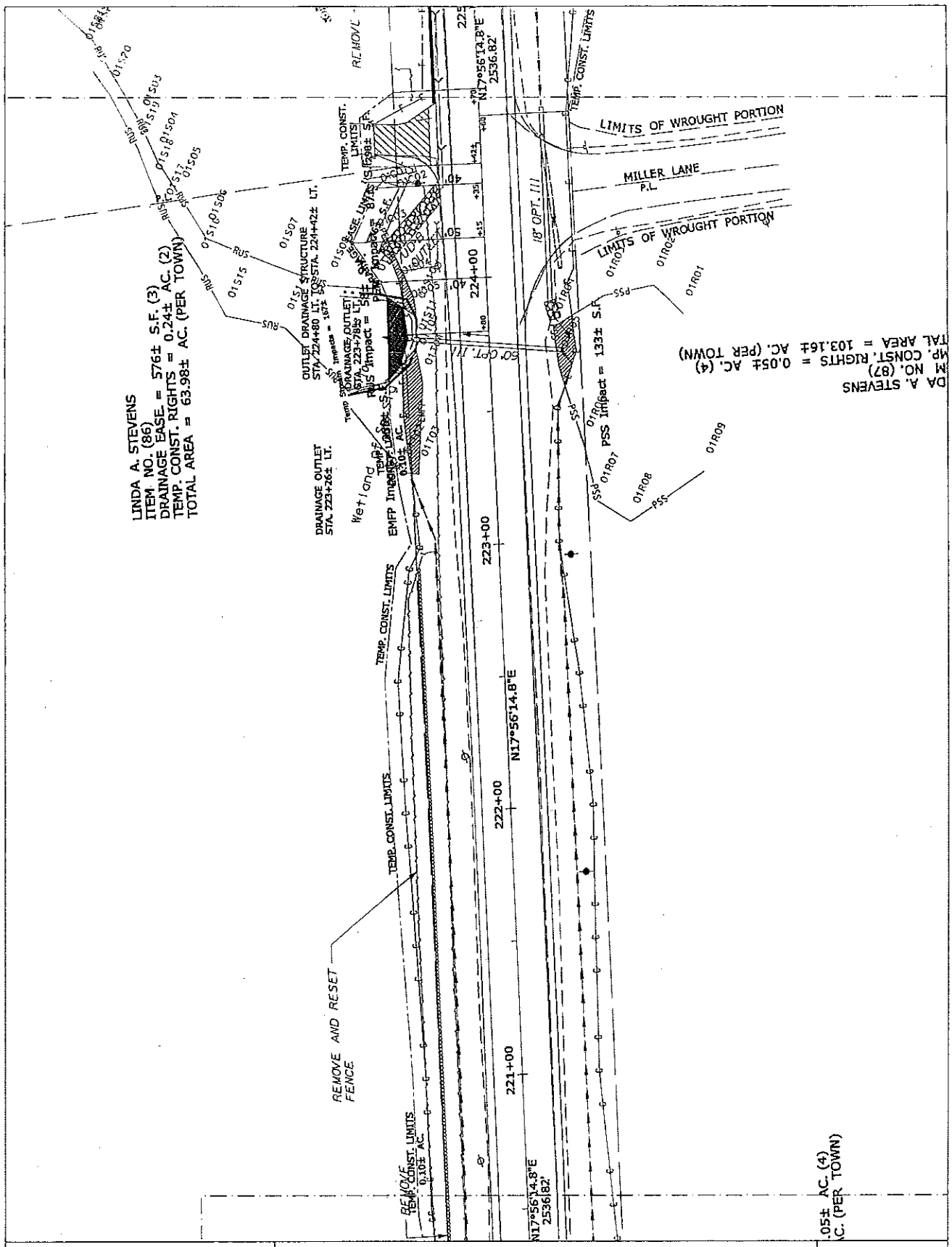

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>441<br>49 |
|---|---|---|
| | PLANS | |



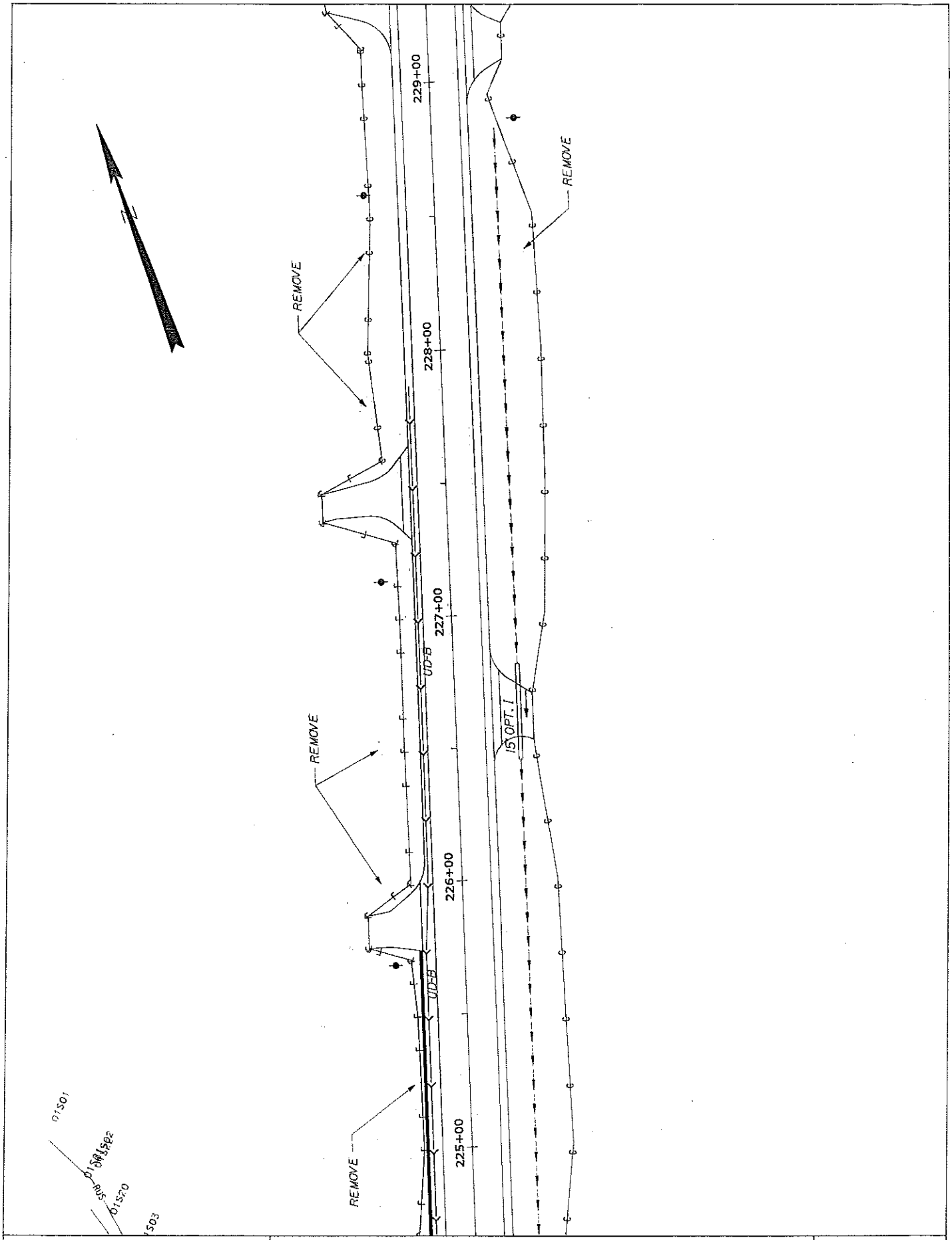

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 50 |
|---|---|---|
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 443 51 |
|---|---|---|
| 12776.00 | PLANS | |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>52 |
|---|---|---|
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>445<br>53 |
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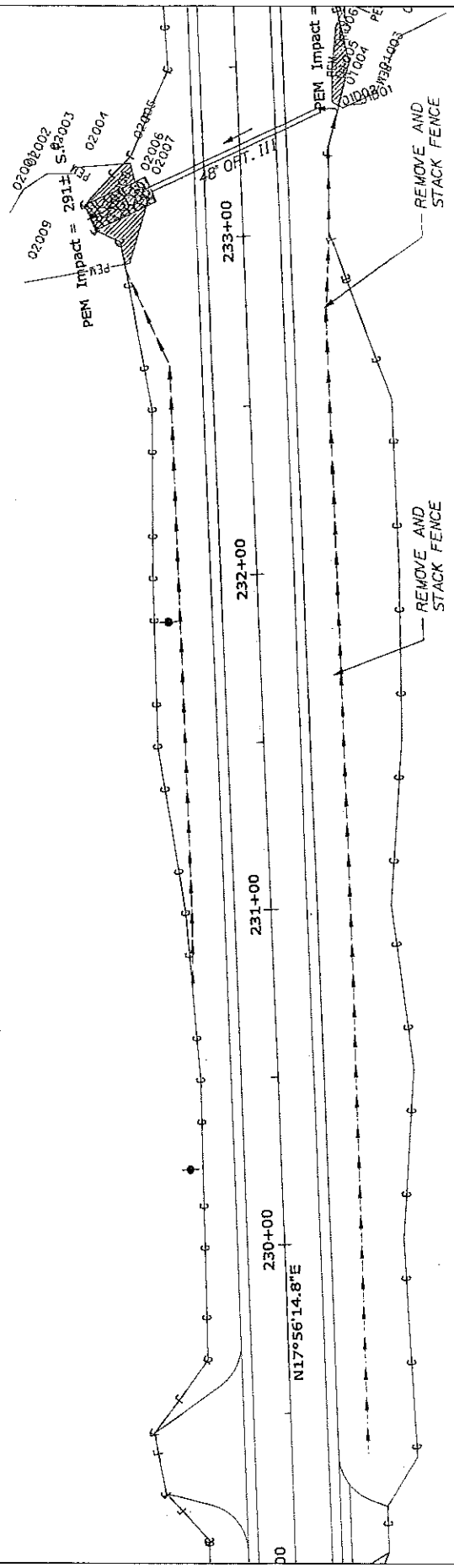


| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 54 |
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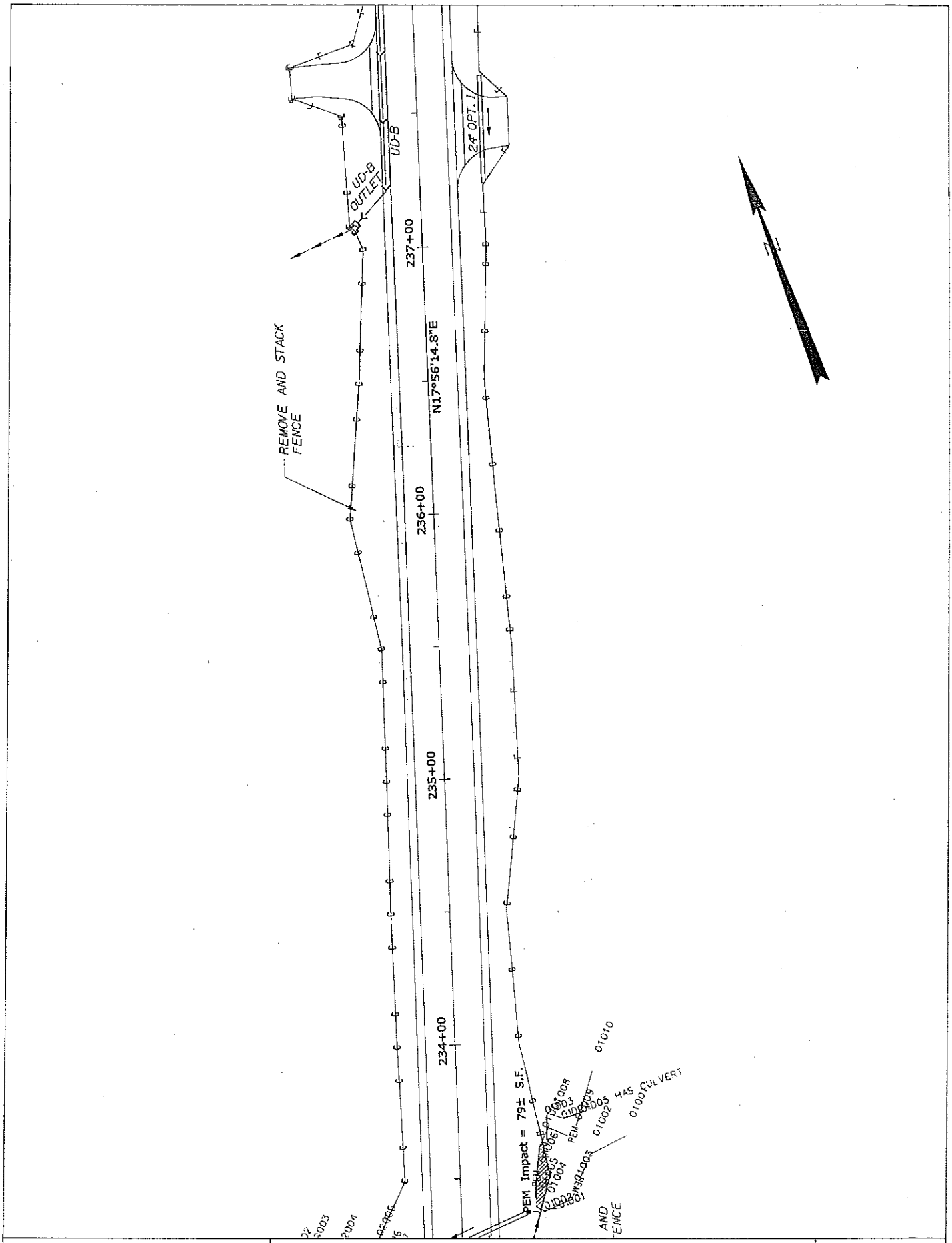
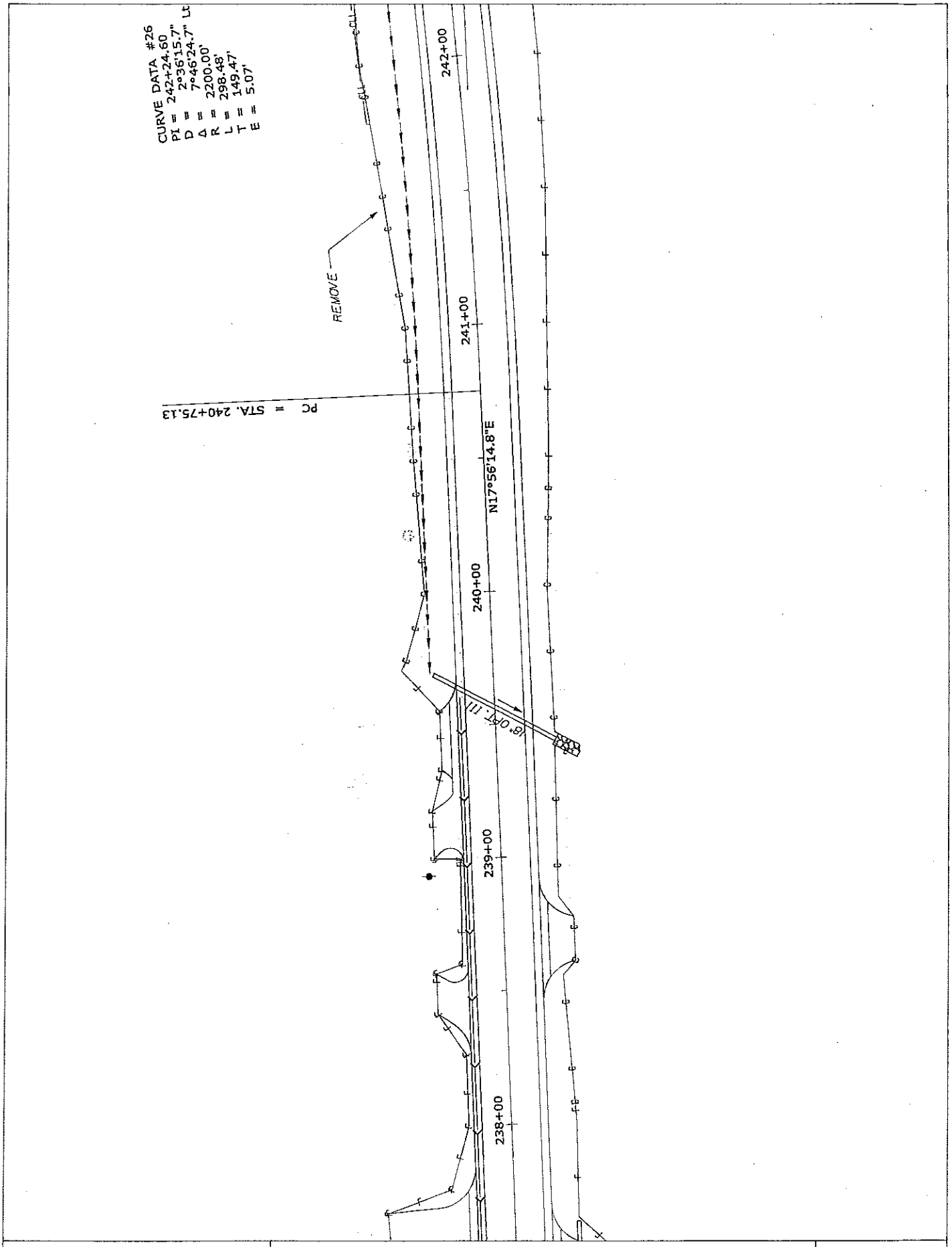
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 447 |
|---|---|---|
| | | 55 |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 56 |
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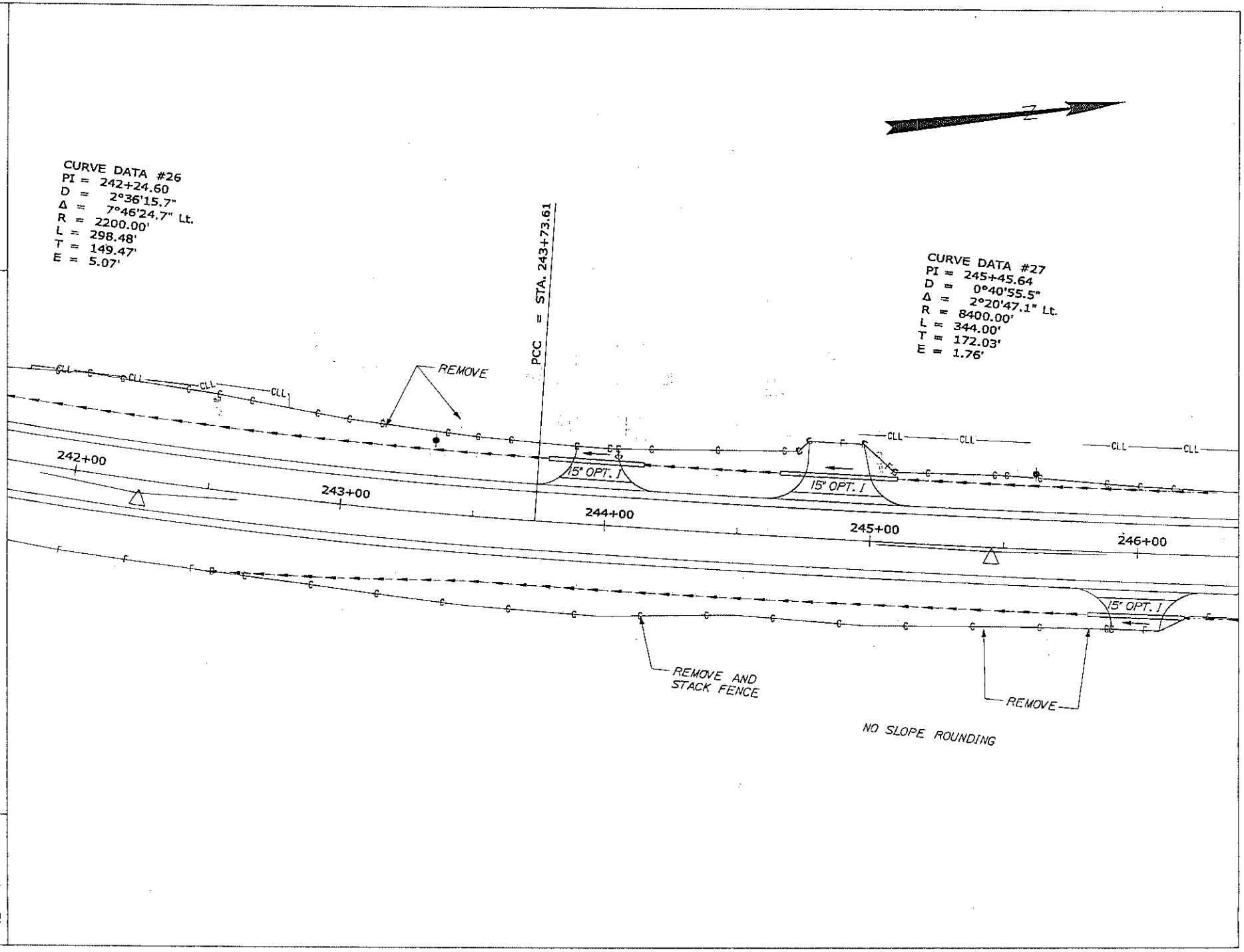
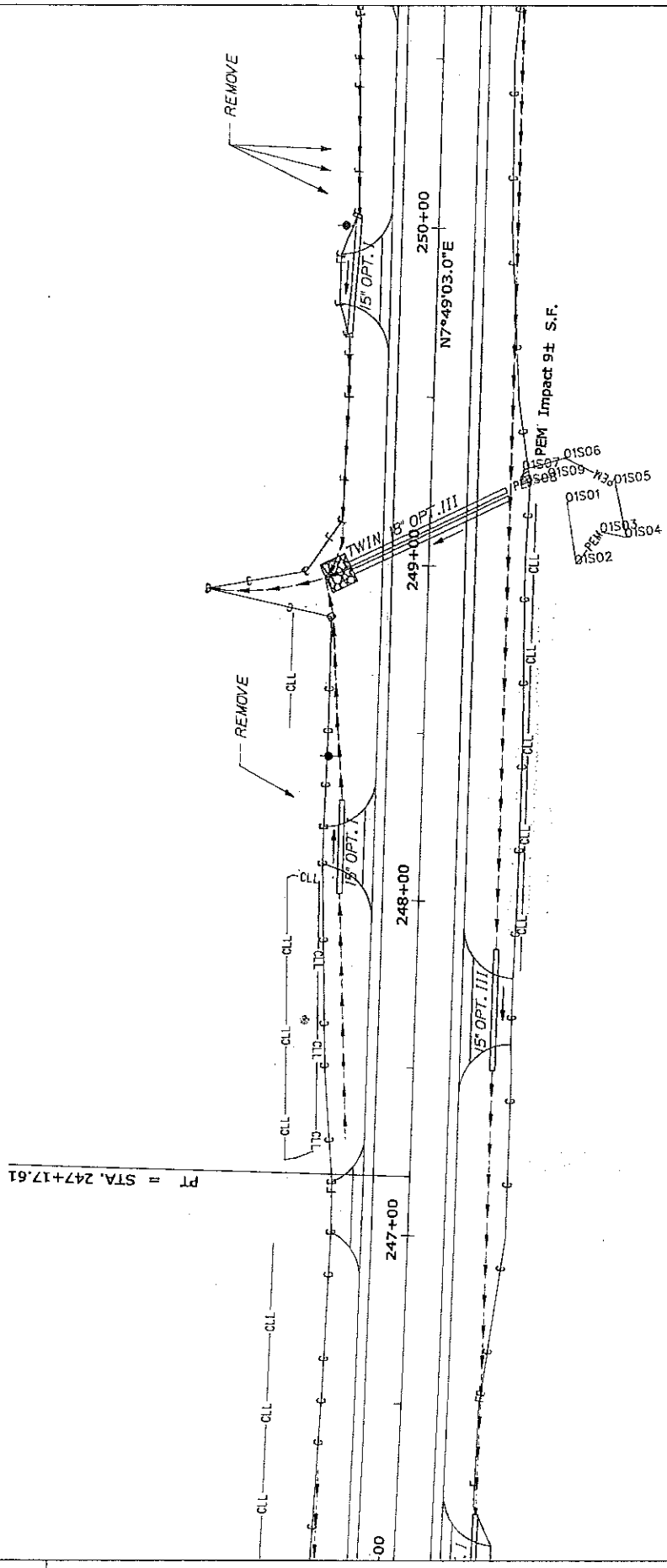
| 12776.00 | PLANS | 448 |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

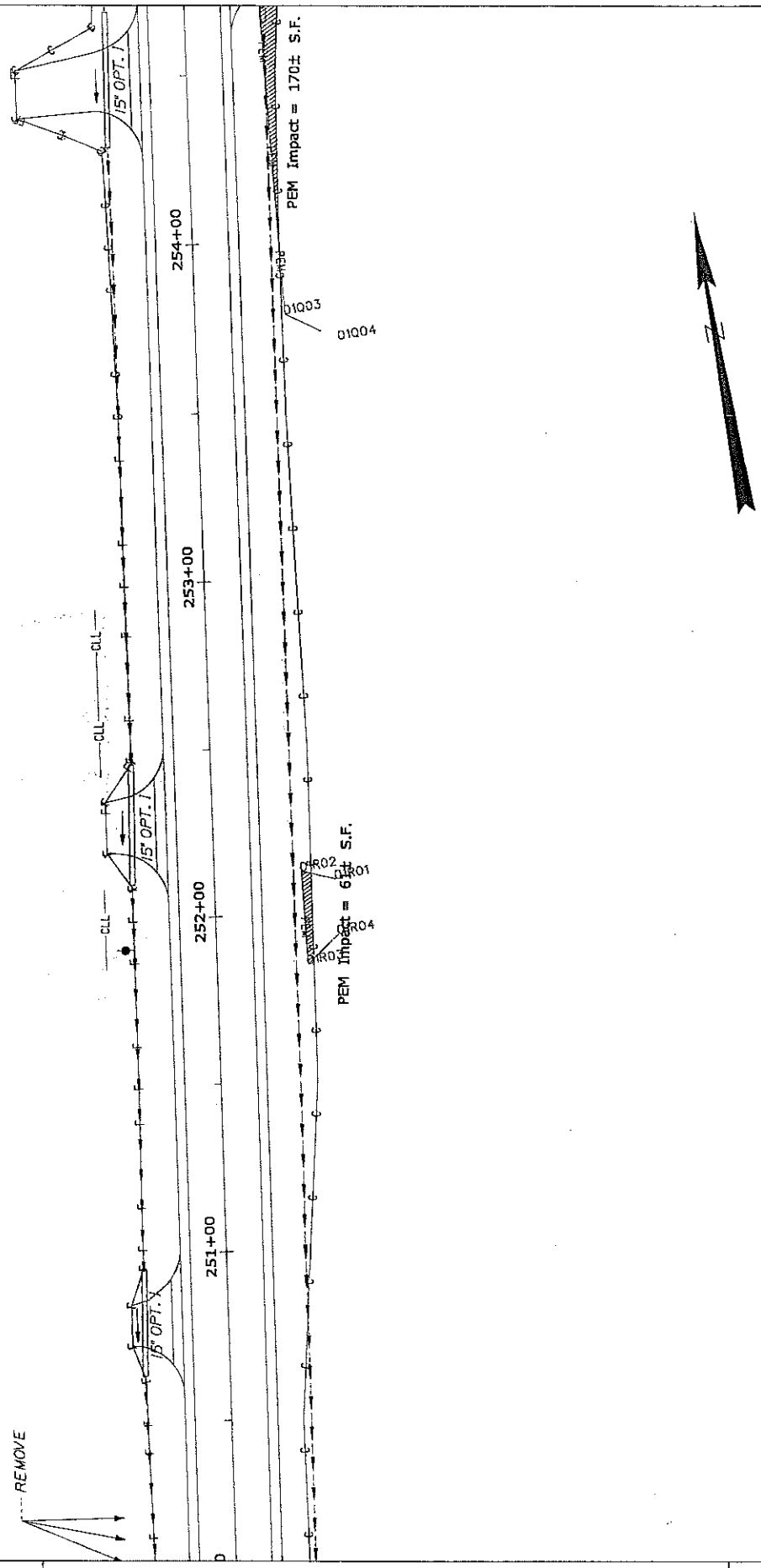
Smithfield-Norridgewock

SHEET NUMBER 57

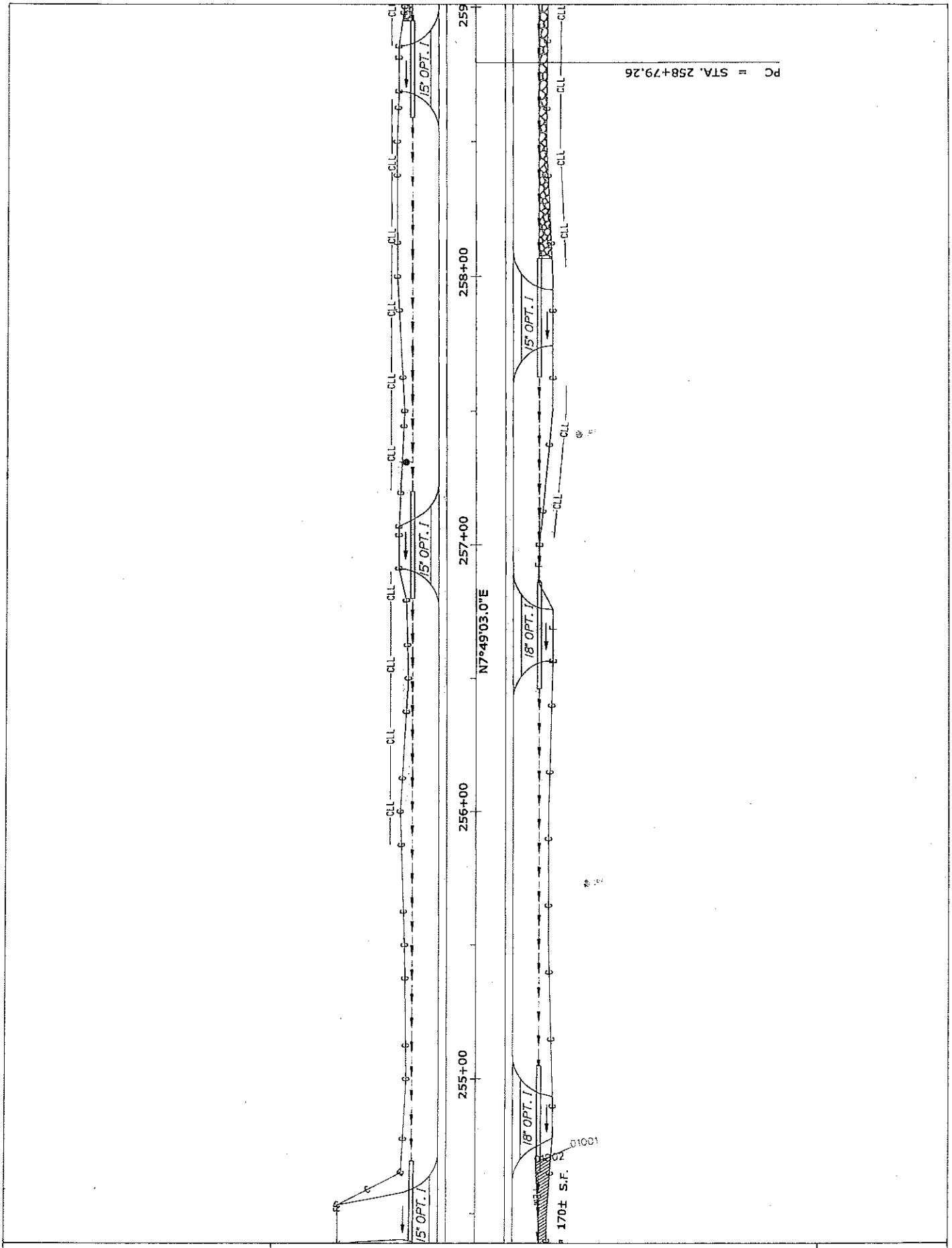




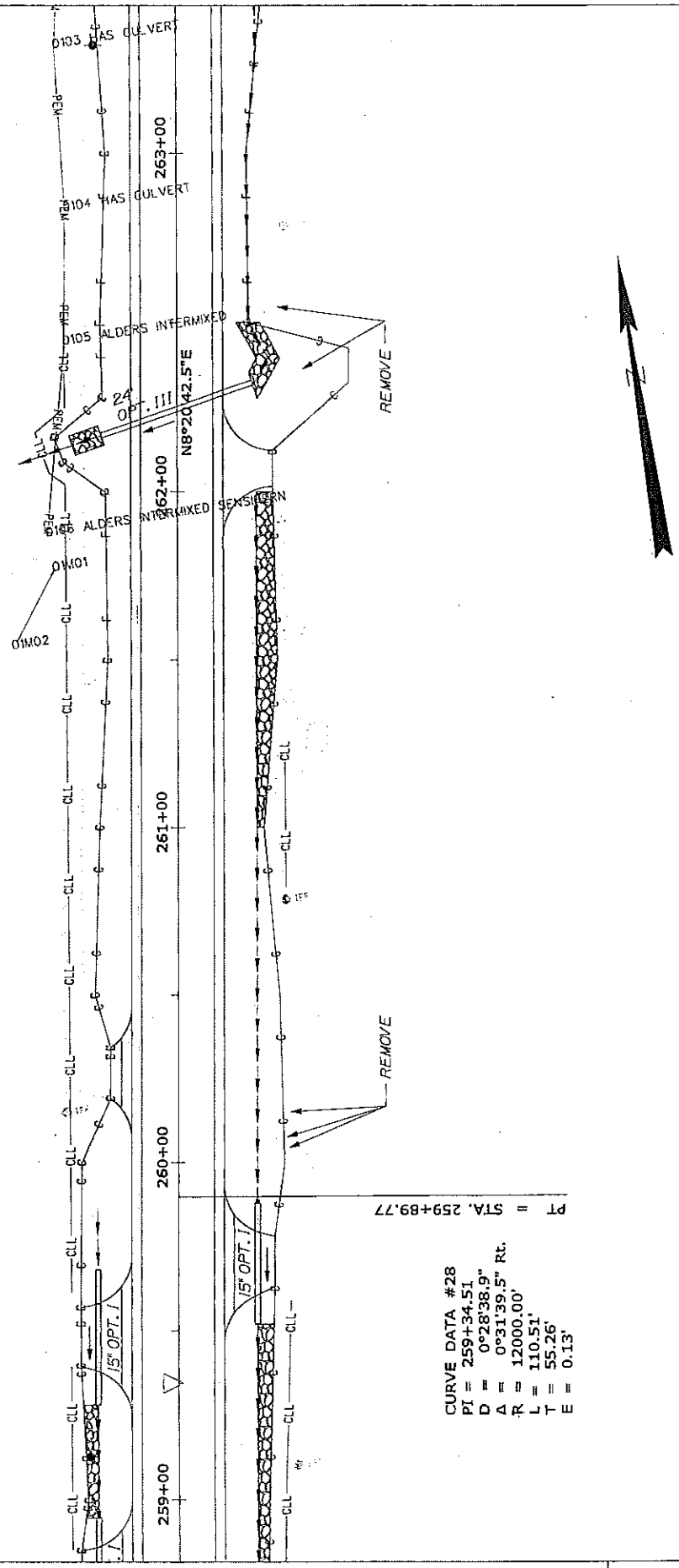

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>450<br>58 |
|---|---|---|
| 12776.00 | PLANS | |



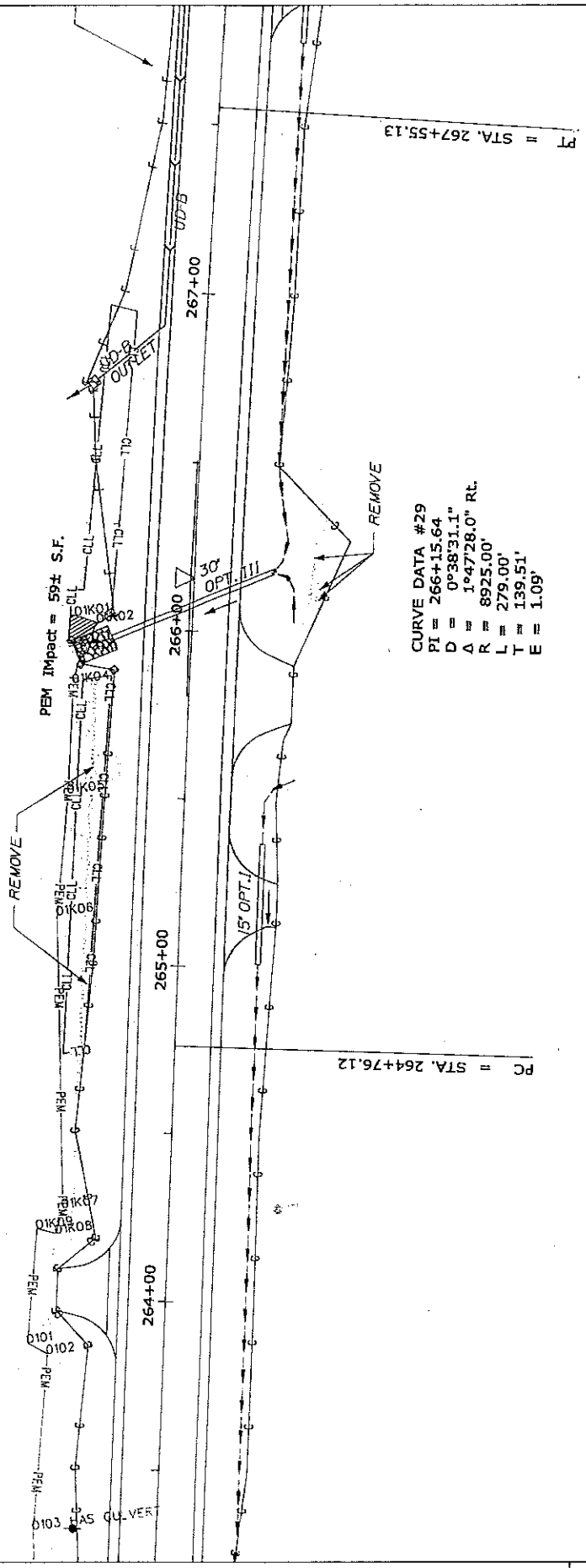

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>451 |
|---|---|---|



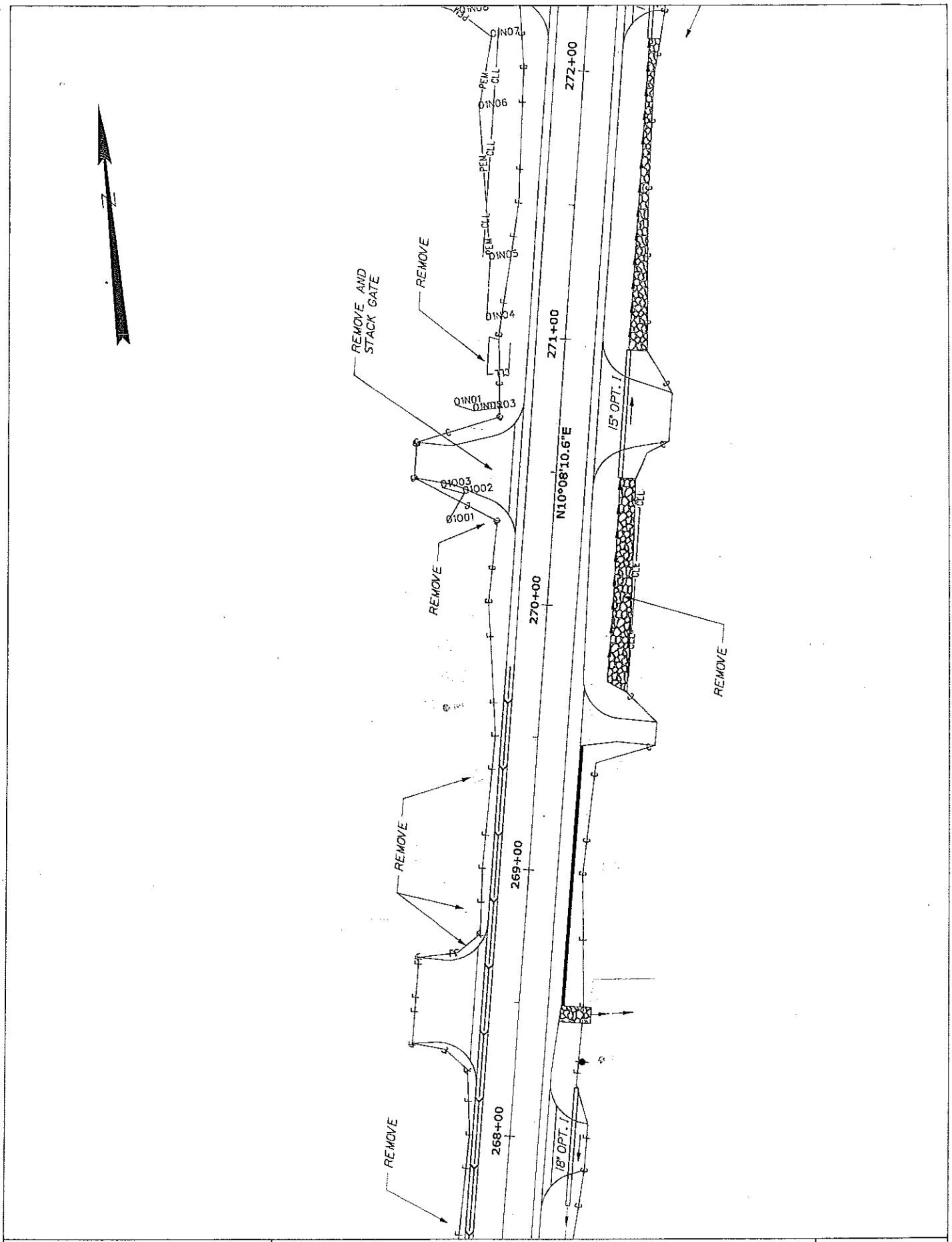

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>60 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



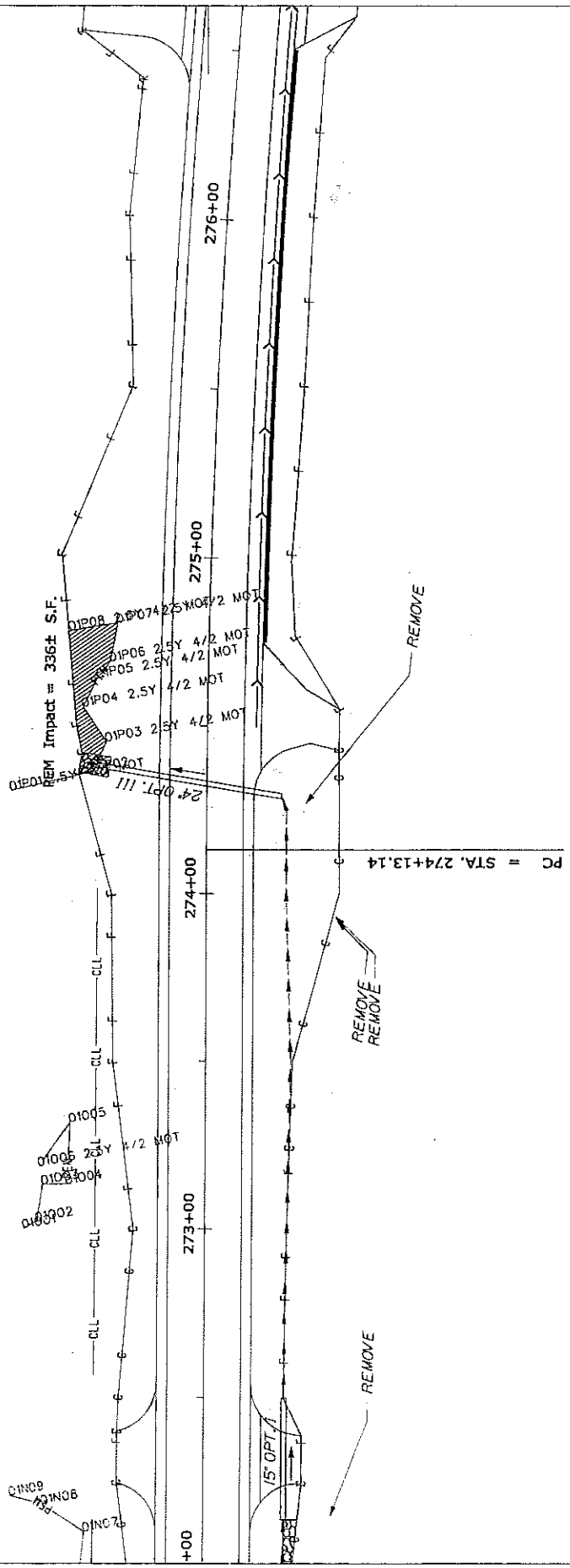

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>453<br>61 |
|---|---|---|



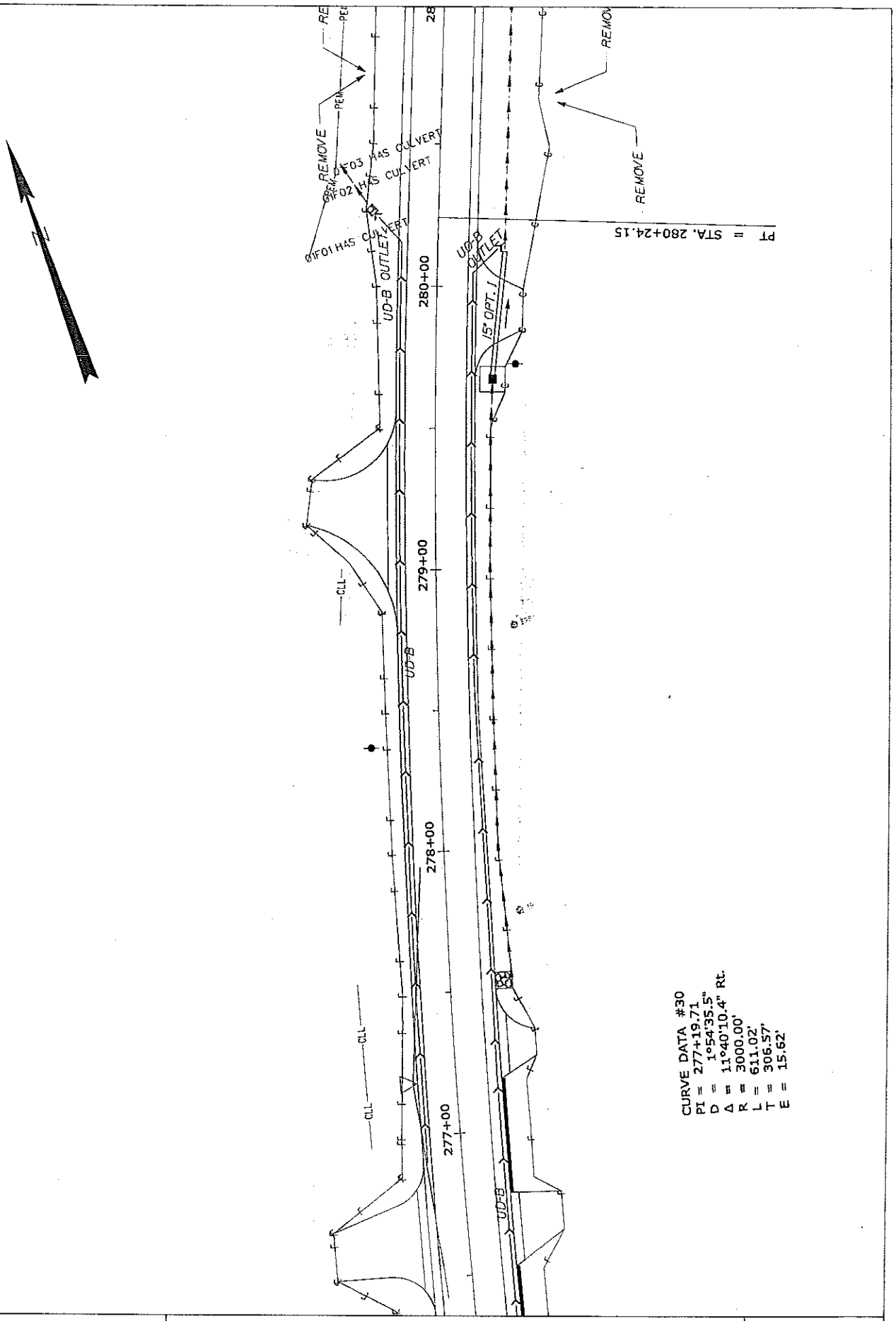

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 62 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



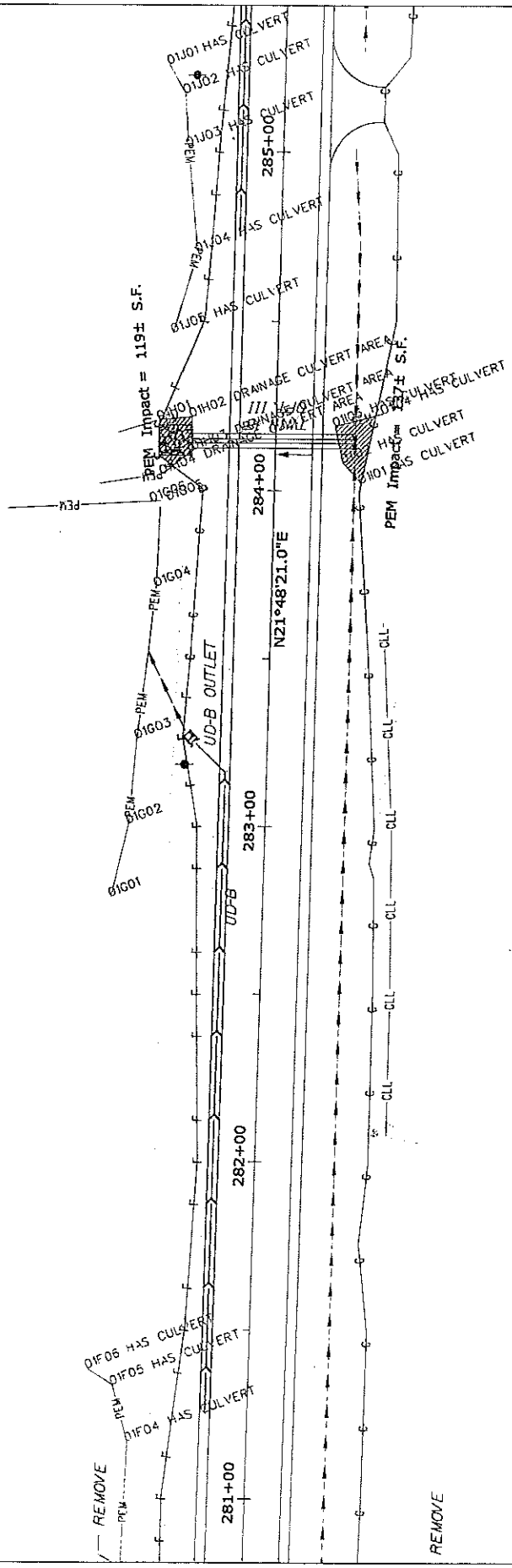

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 455 |
|---|---|---|
| | PLANS | 63 |



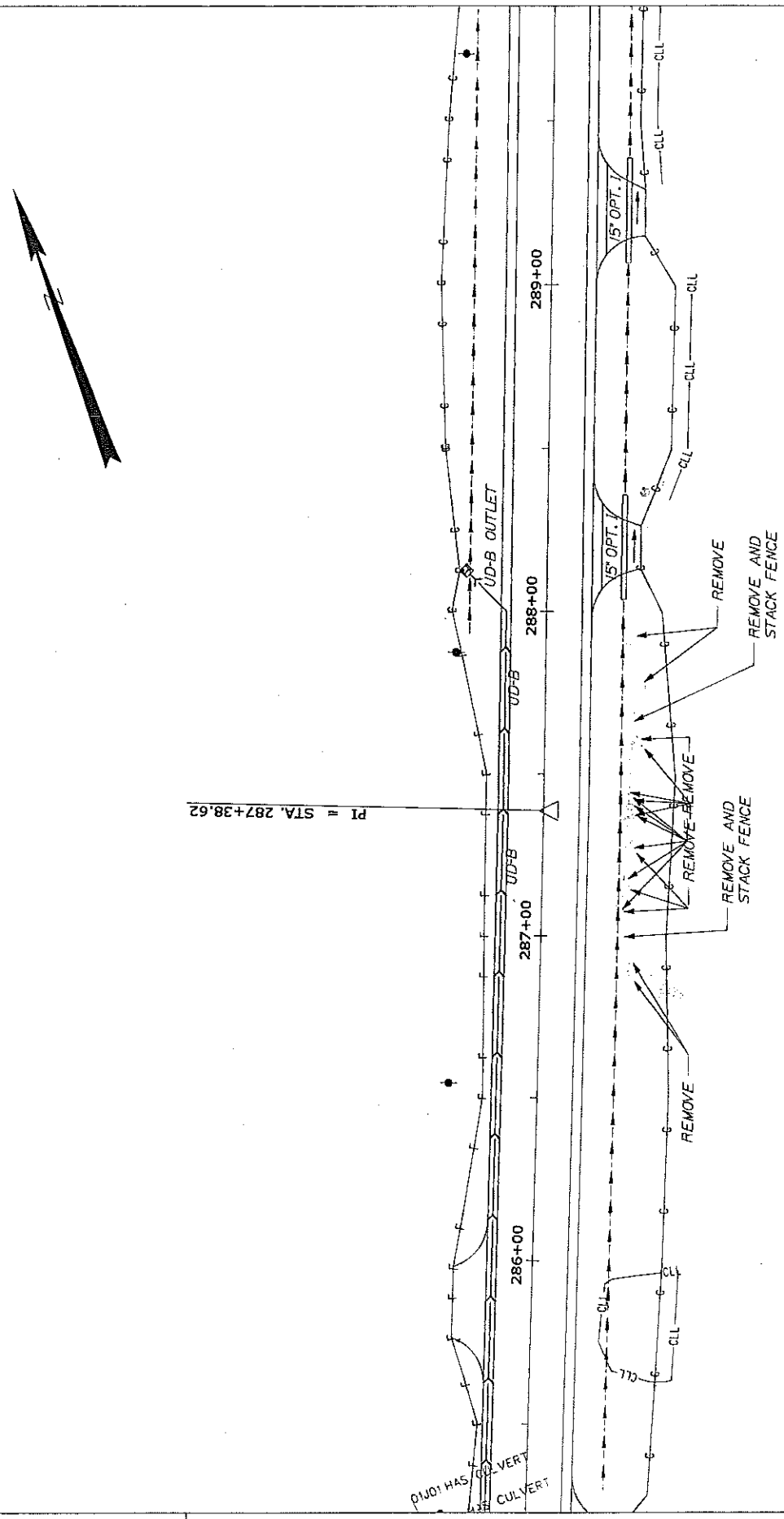

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>64 456 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



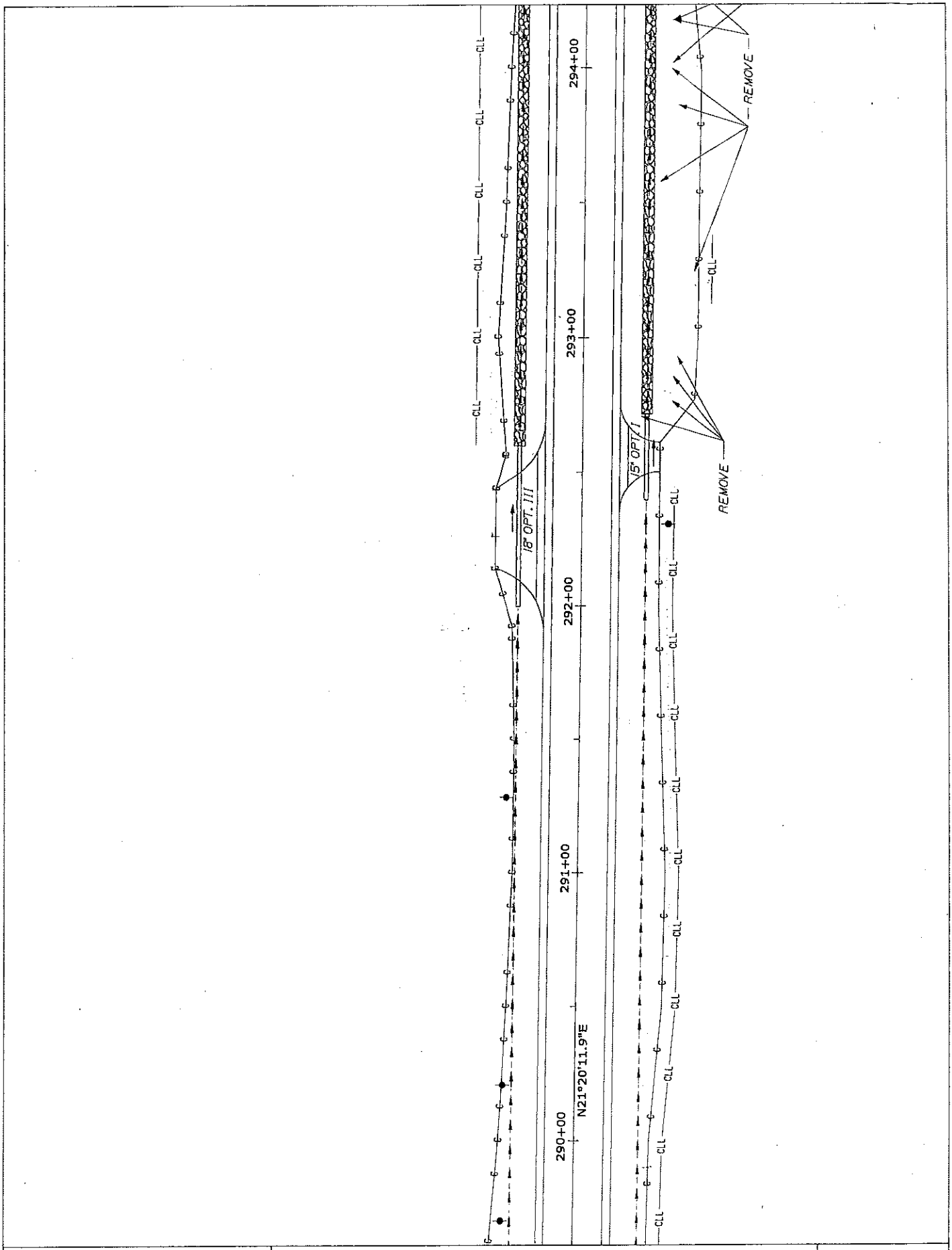

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>457<br>65 |
|---|---|---|
| | PLANS | |



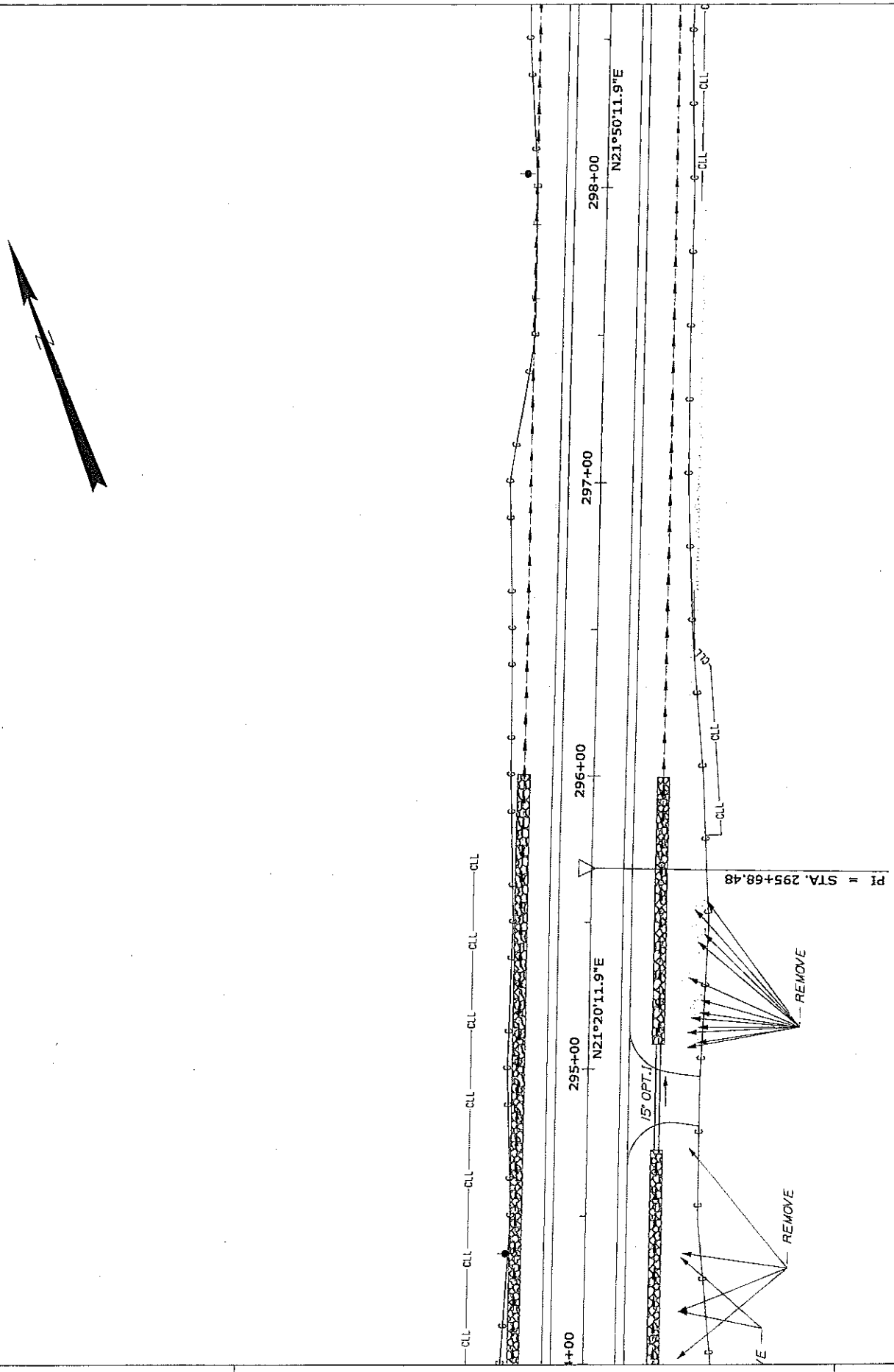

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>66 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



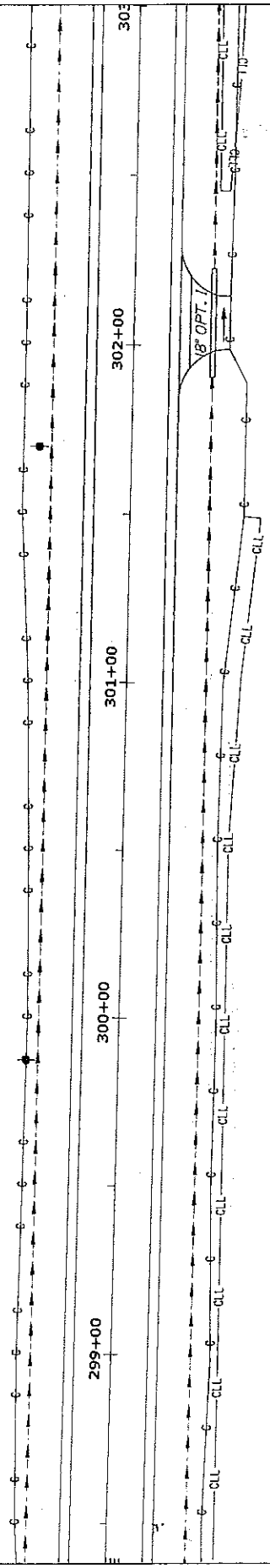

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 459 |
|---|---|---|
| 16779.00 | PLANS | 67 |



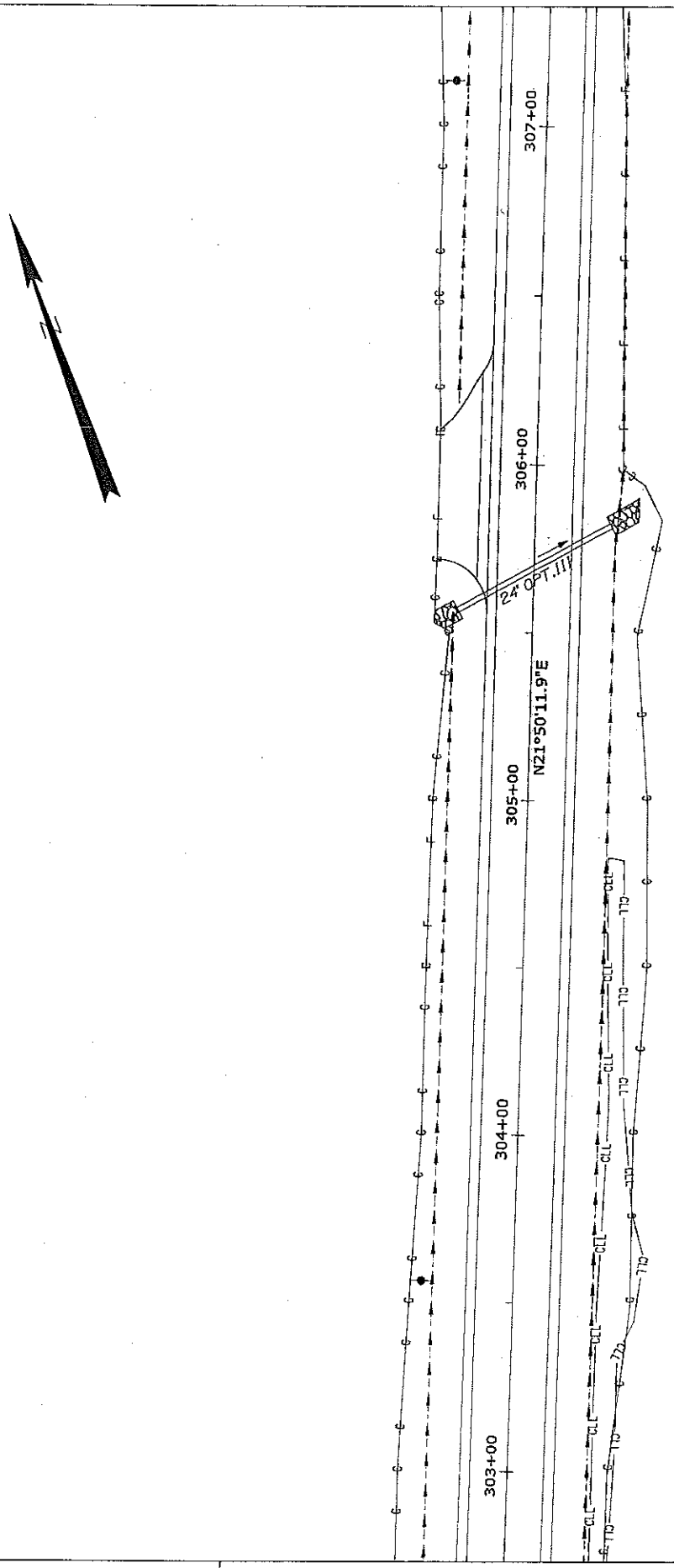

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>68 460 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



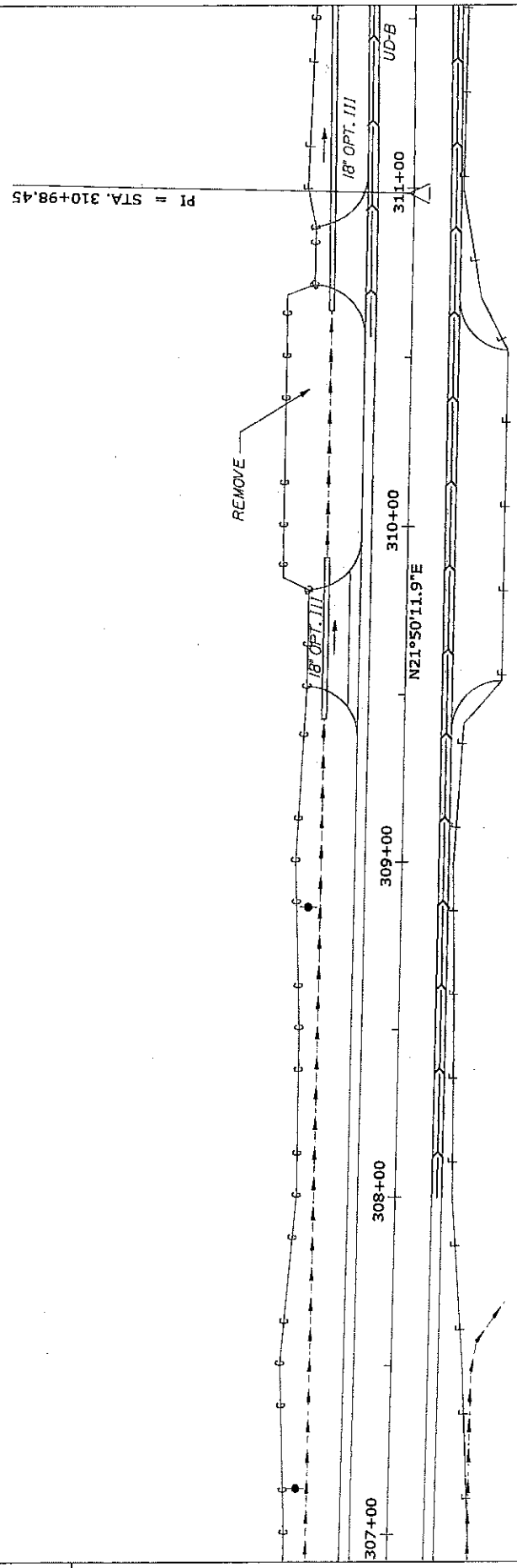

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>461<br>69 |
|---|---|---|
| 12776.00 | PLANS | |



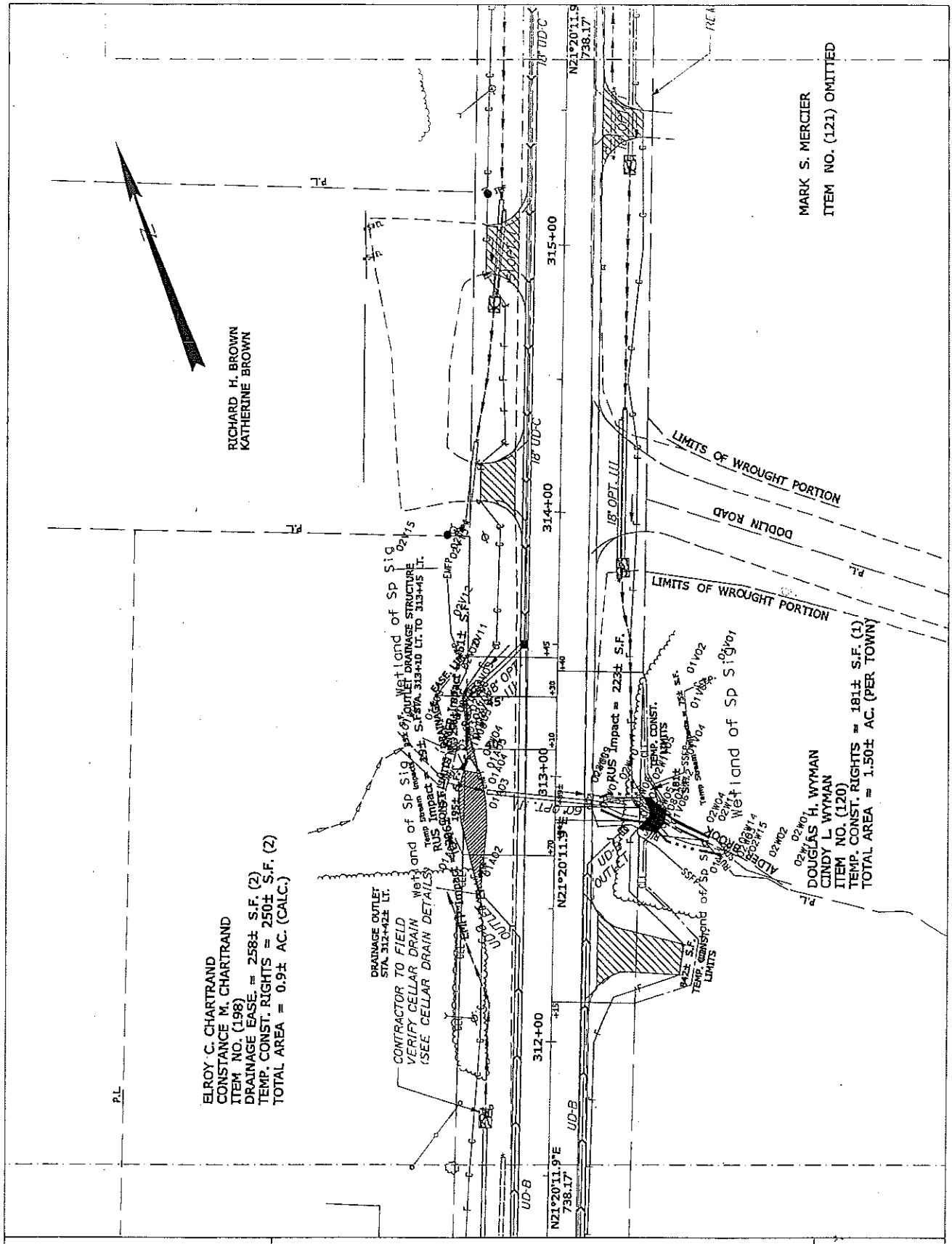

| | | |
|---|---|---|
| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>70 462 |
| 12776.00 | PLANS | OF97 |



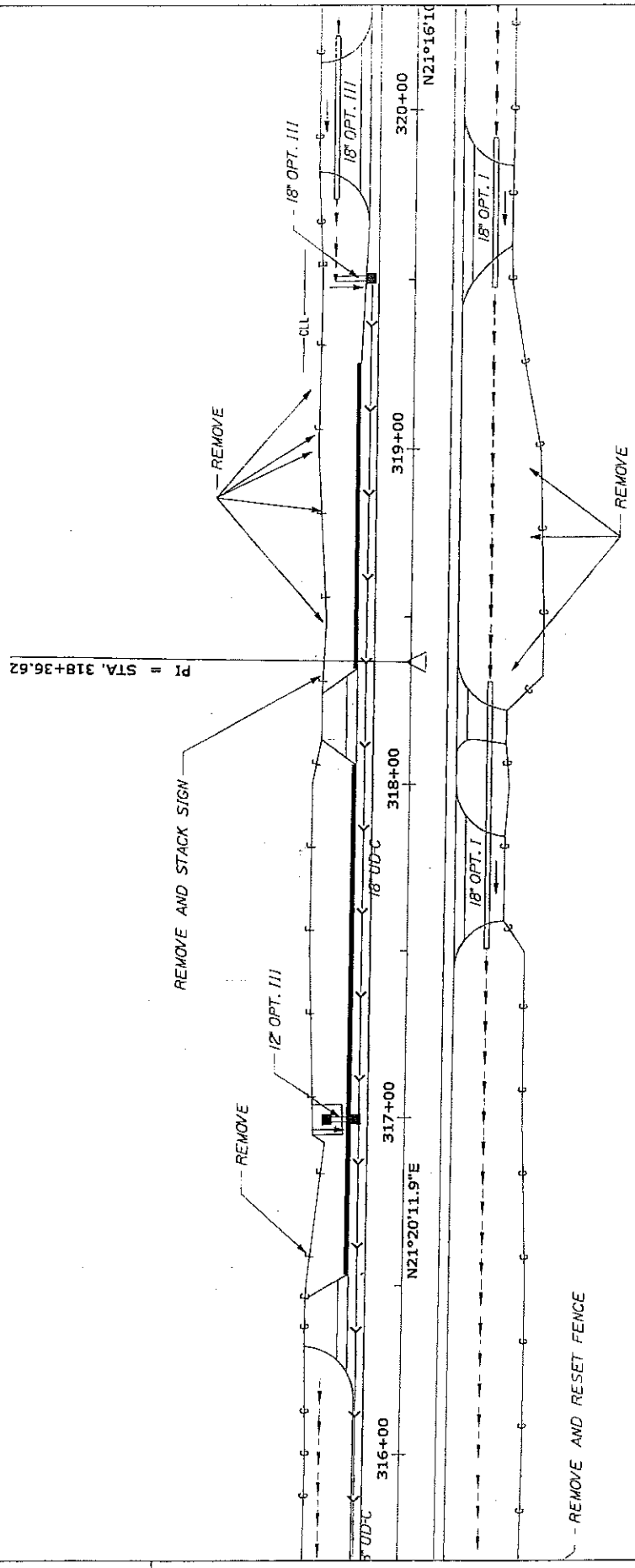

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>463<br>71 |
|---|---|---|
| | PLANS | |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>72 ~~464~~ |
|---|---|---|
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 73 |
|---|---|---|
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER |
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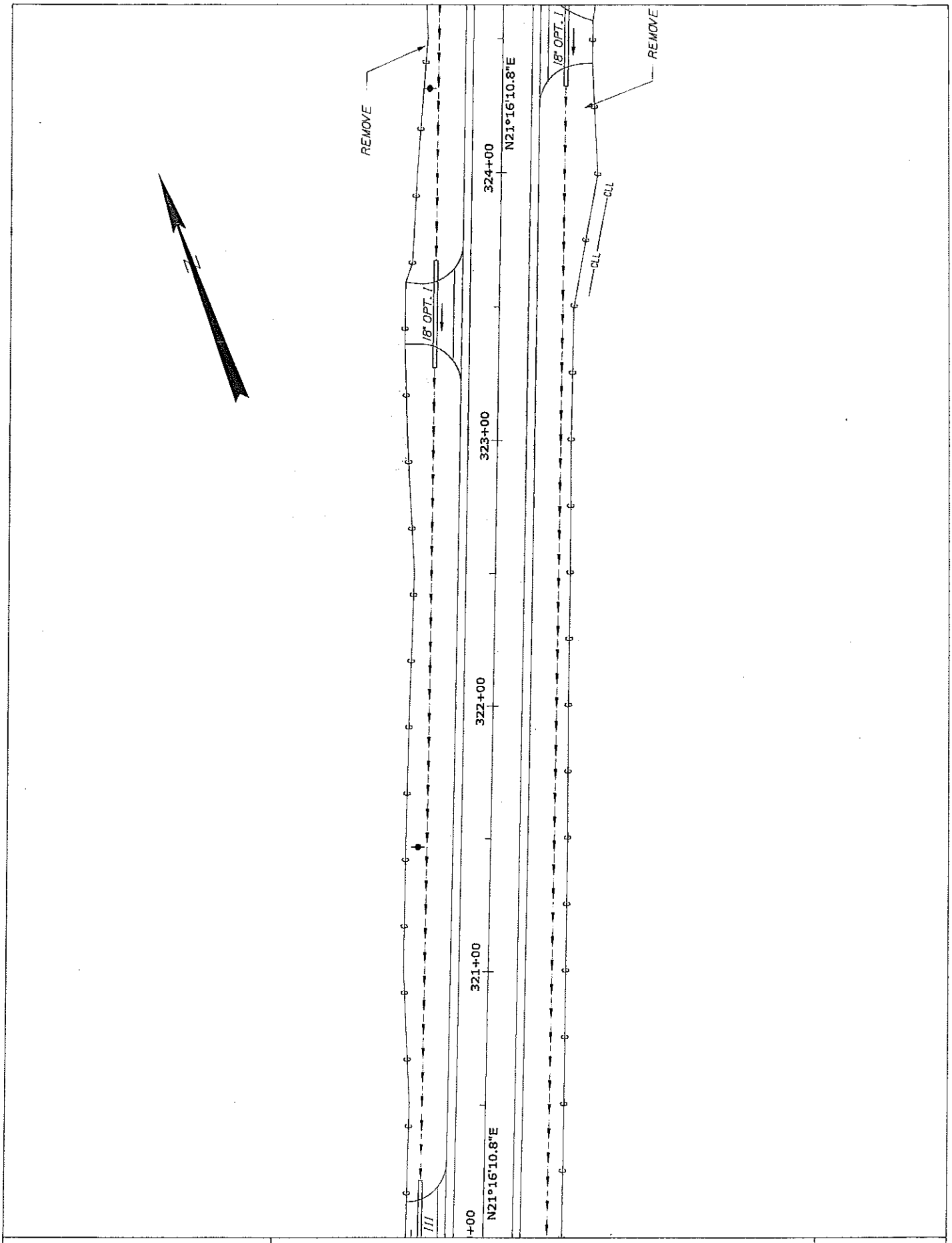
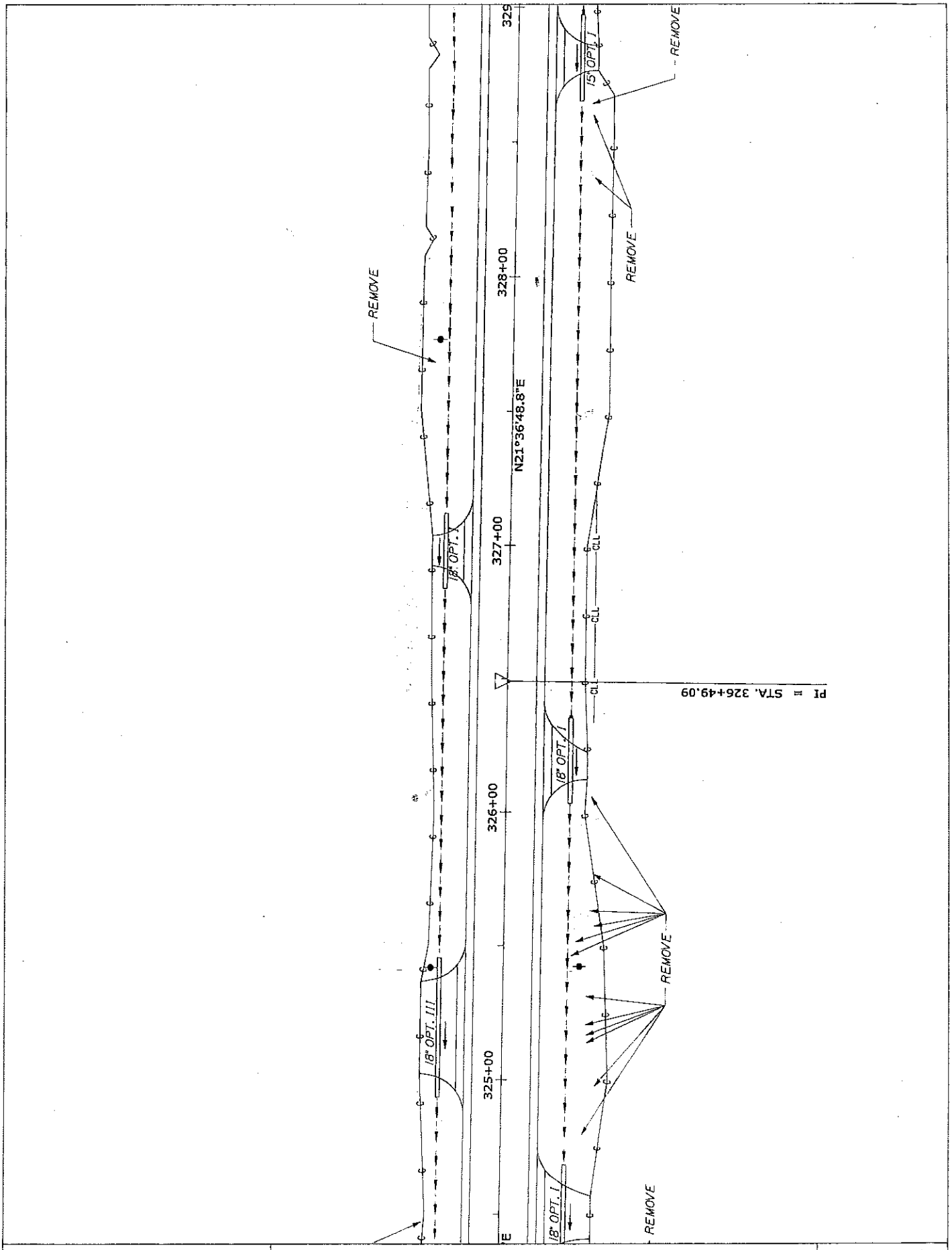
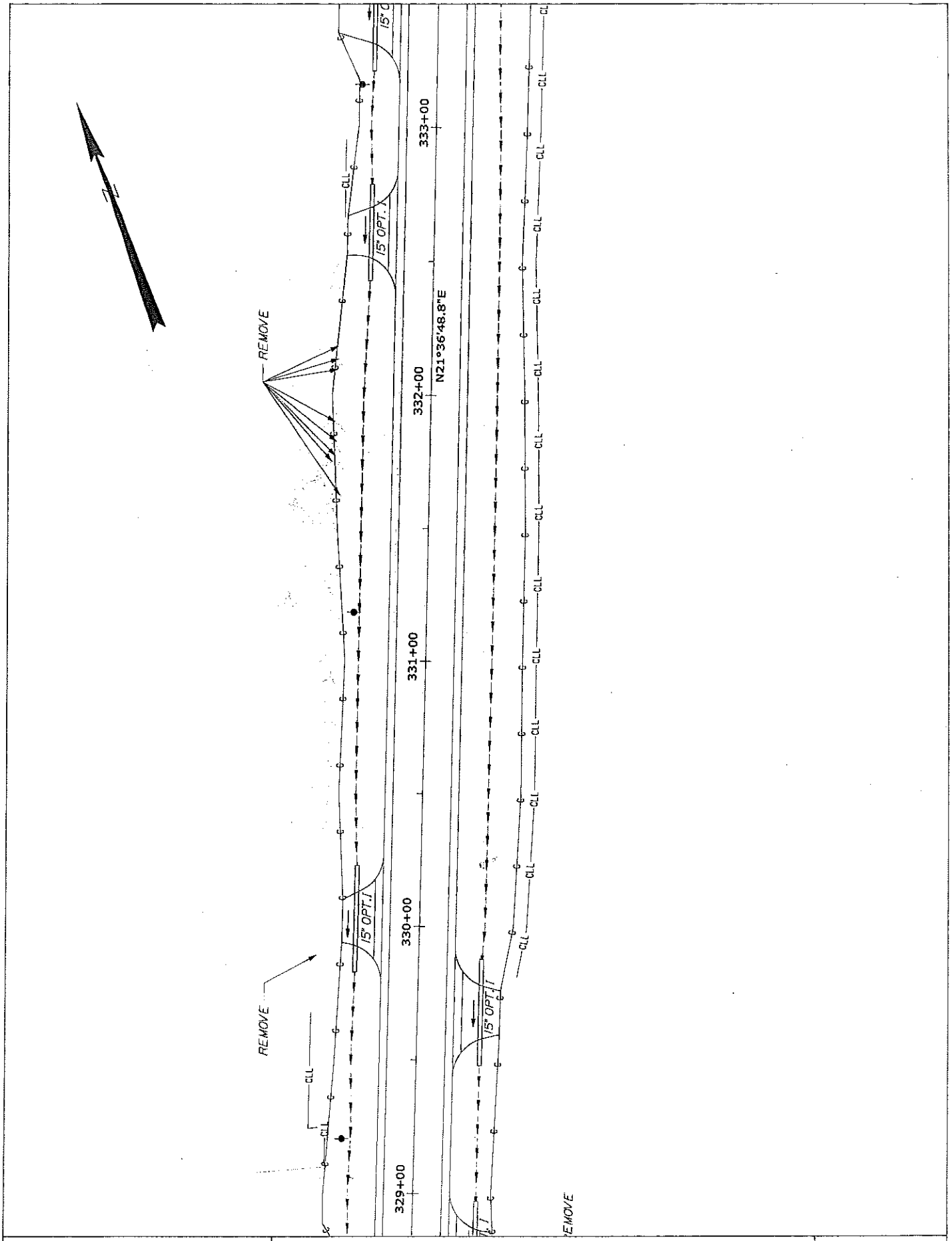
| 12776.00 | PLANS | 74 466 OF97 |



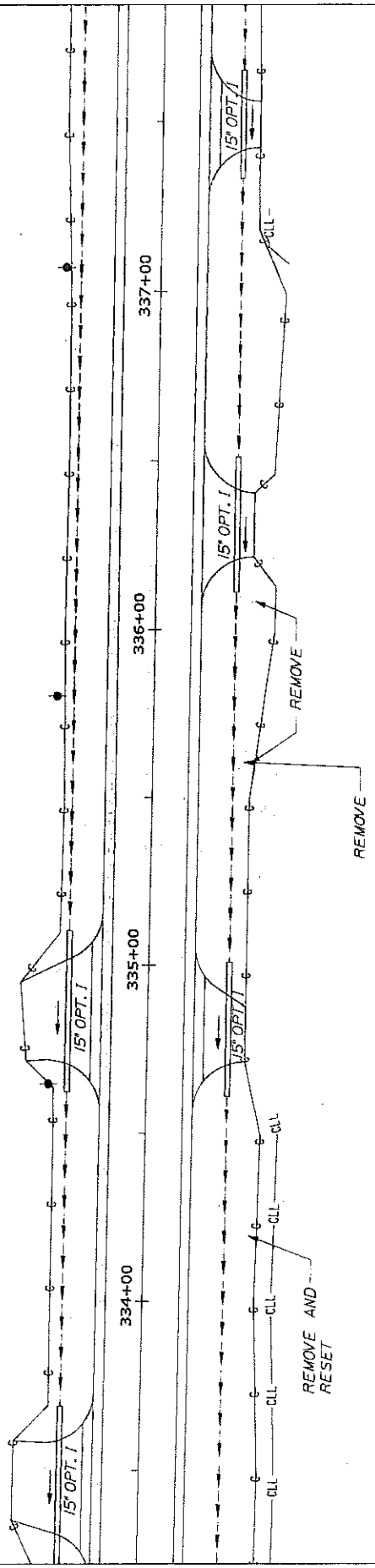

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>467<br>75 |
|---|---|---|
| 16779.00 | PLANS | |



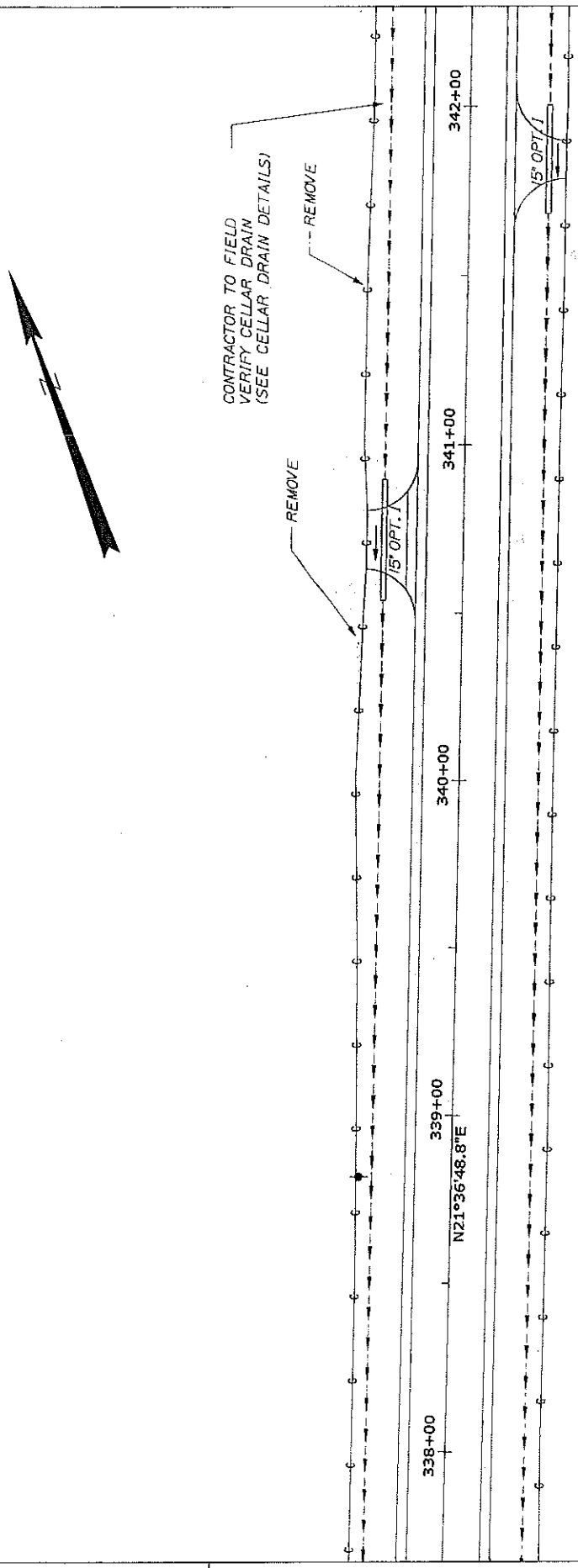

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER |
|---|---|---|
| 12776.00 | PLANS | 76 468<br>OF97 |



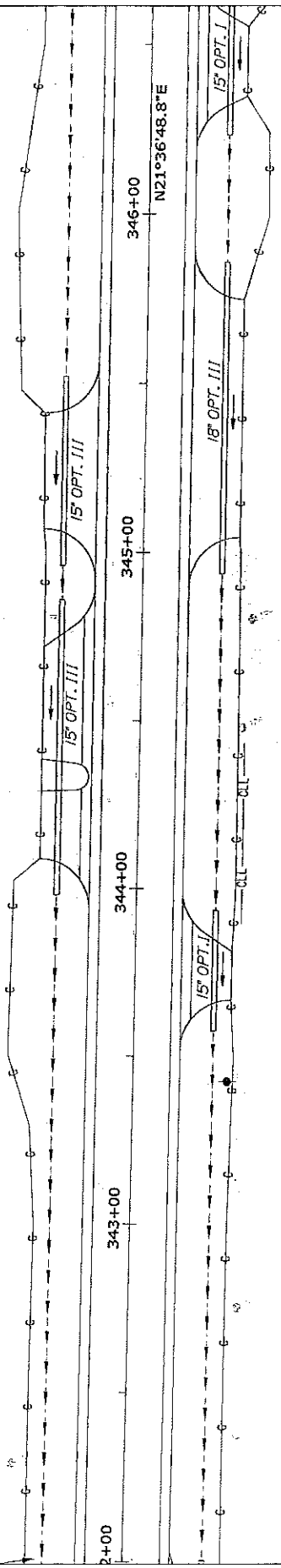

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>469<br>77 |
|---|---|---|
| 12776.00 | PLANS | |




| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 78 470 |
|---|---|---|
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>471<br>79 |
|---|---|---|
| 16773.00 | PLANS | |

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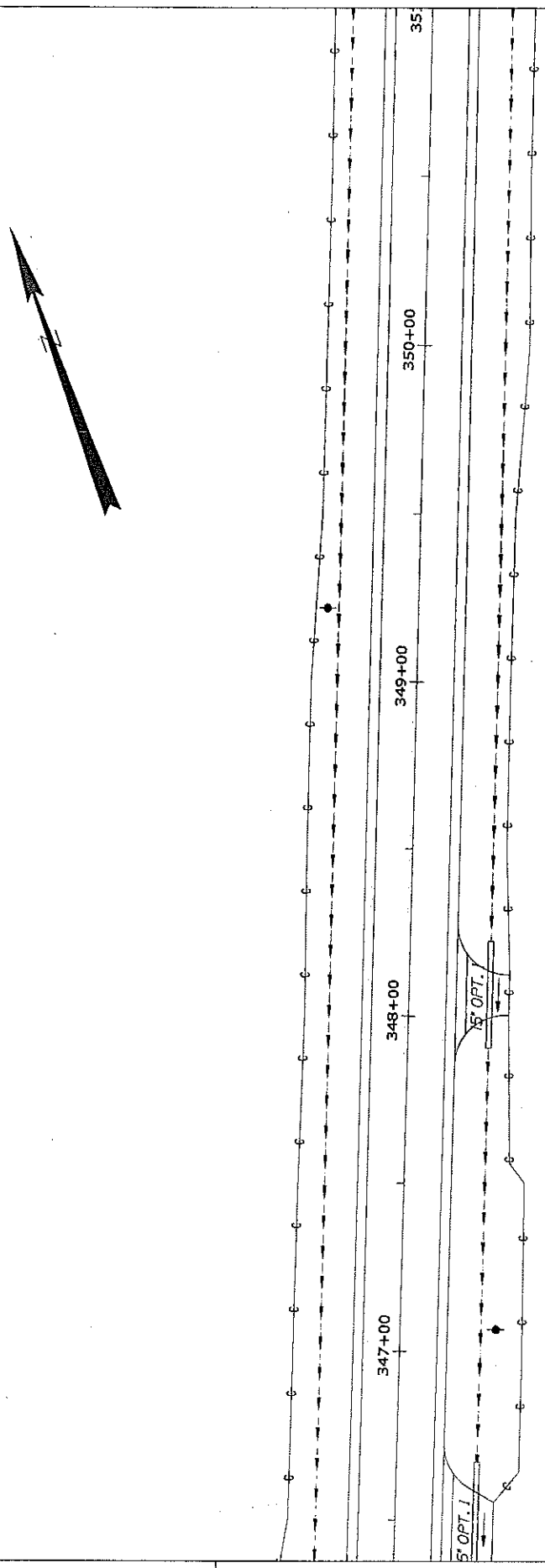
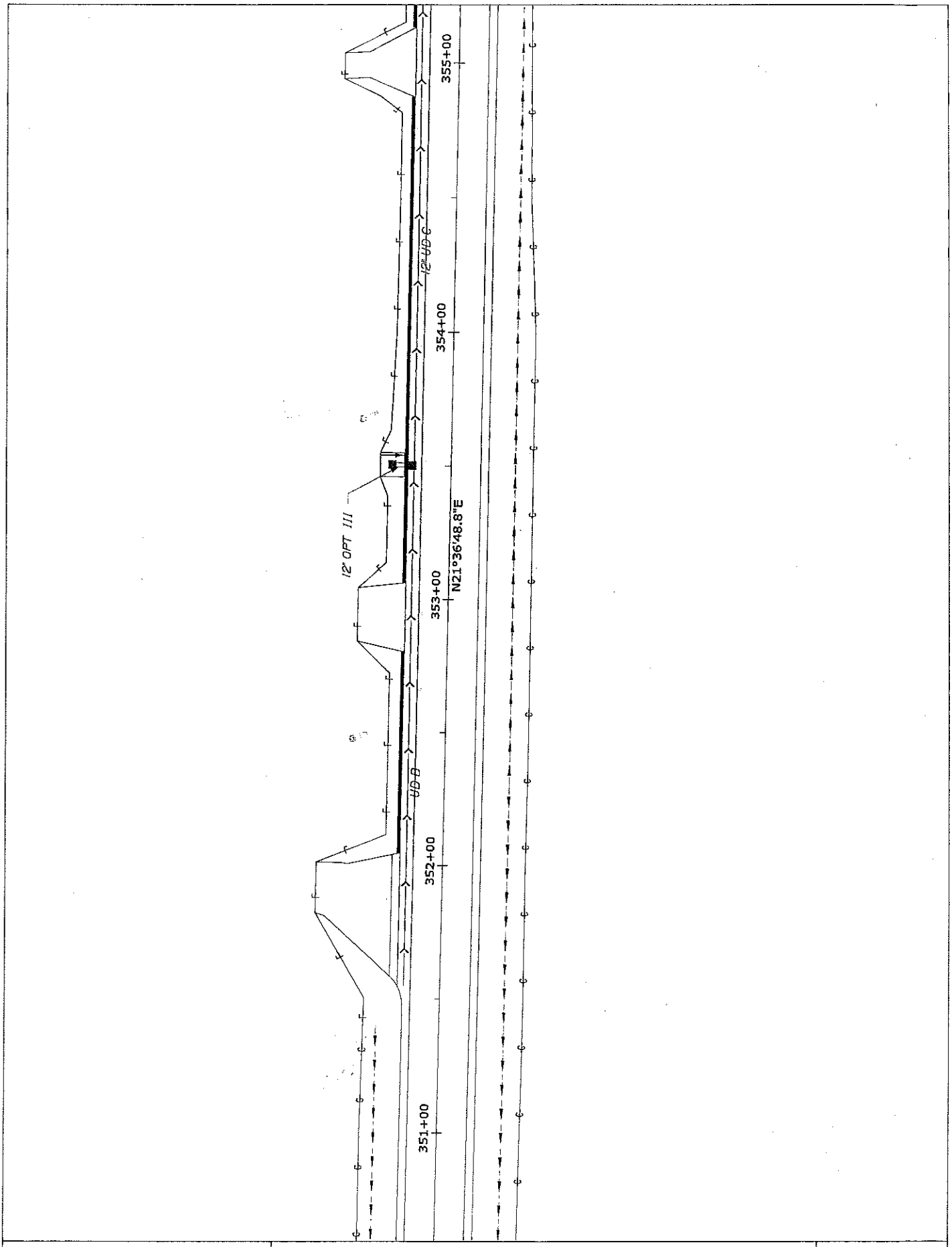
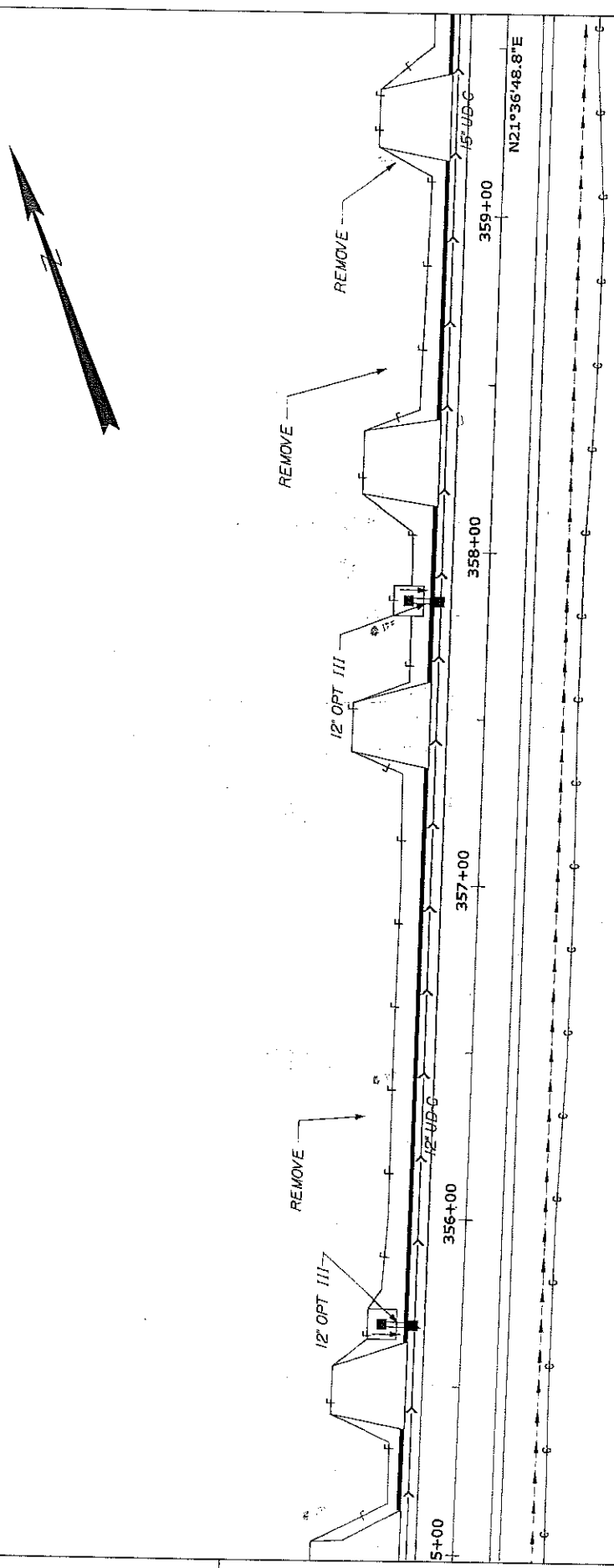
|---|---|---|
| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>80 (472) |
| 12776.00 | PLANS | OF97 |



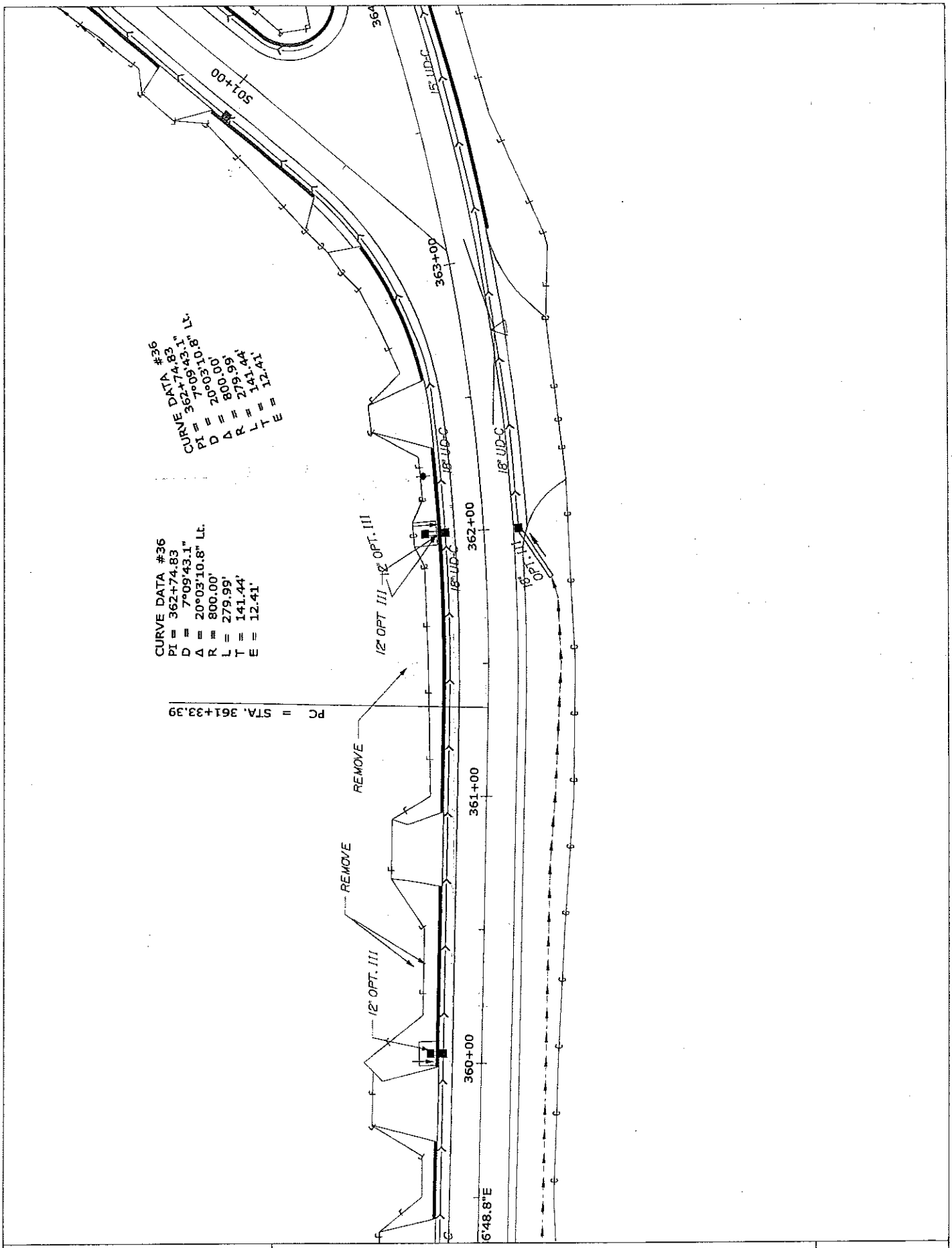

| | | |
|---|---|---|
| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>473<br>81 |
| 12776.00 | PLANS | |



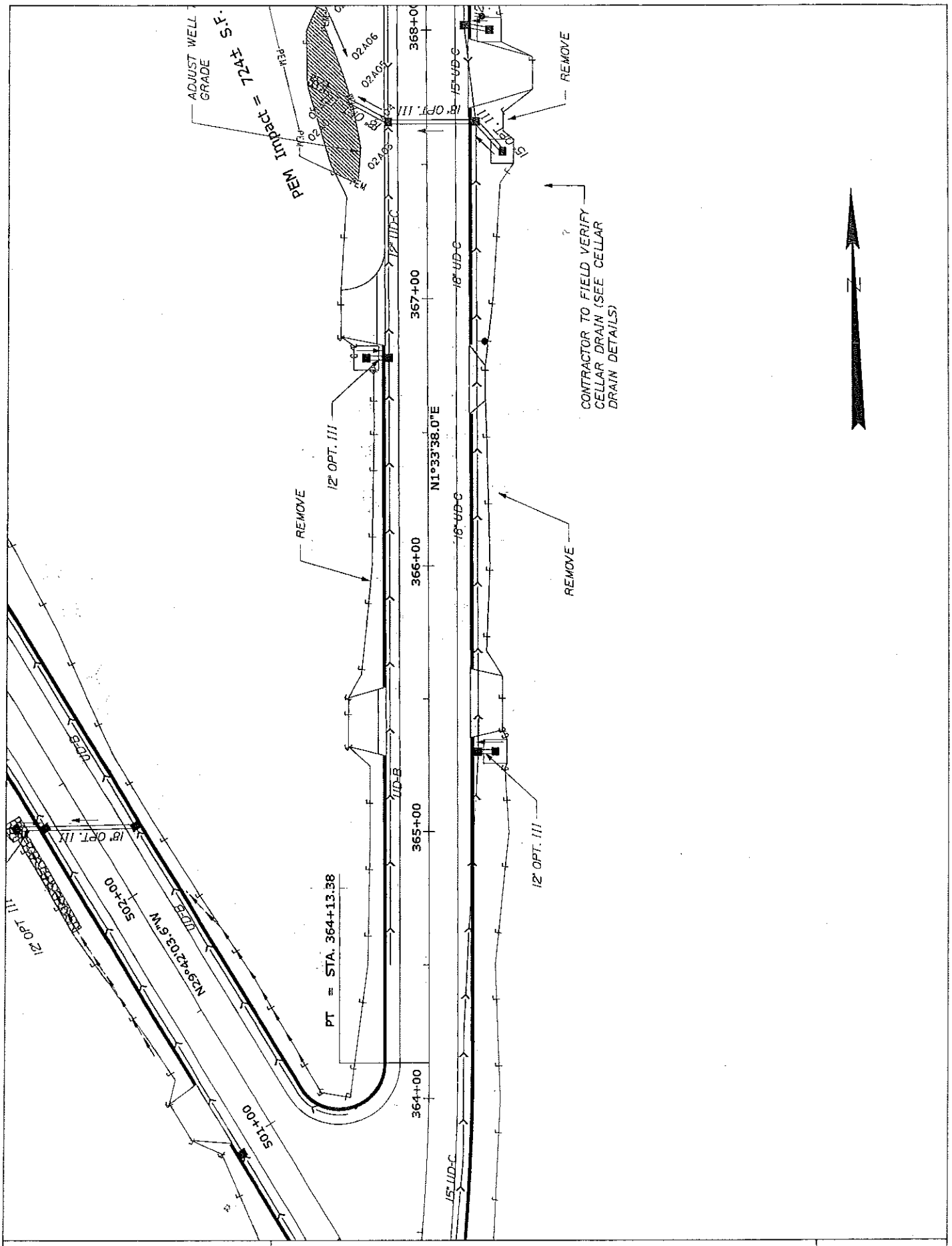

| | | |
|---|---|---|
| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>82 474 |
| 12776.00 | PLANS | OF97 |



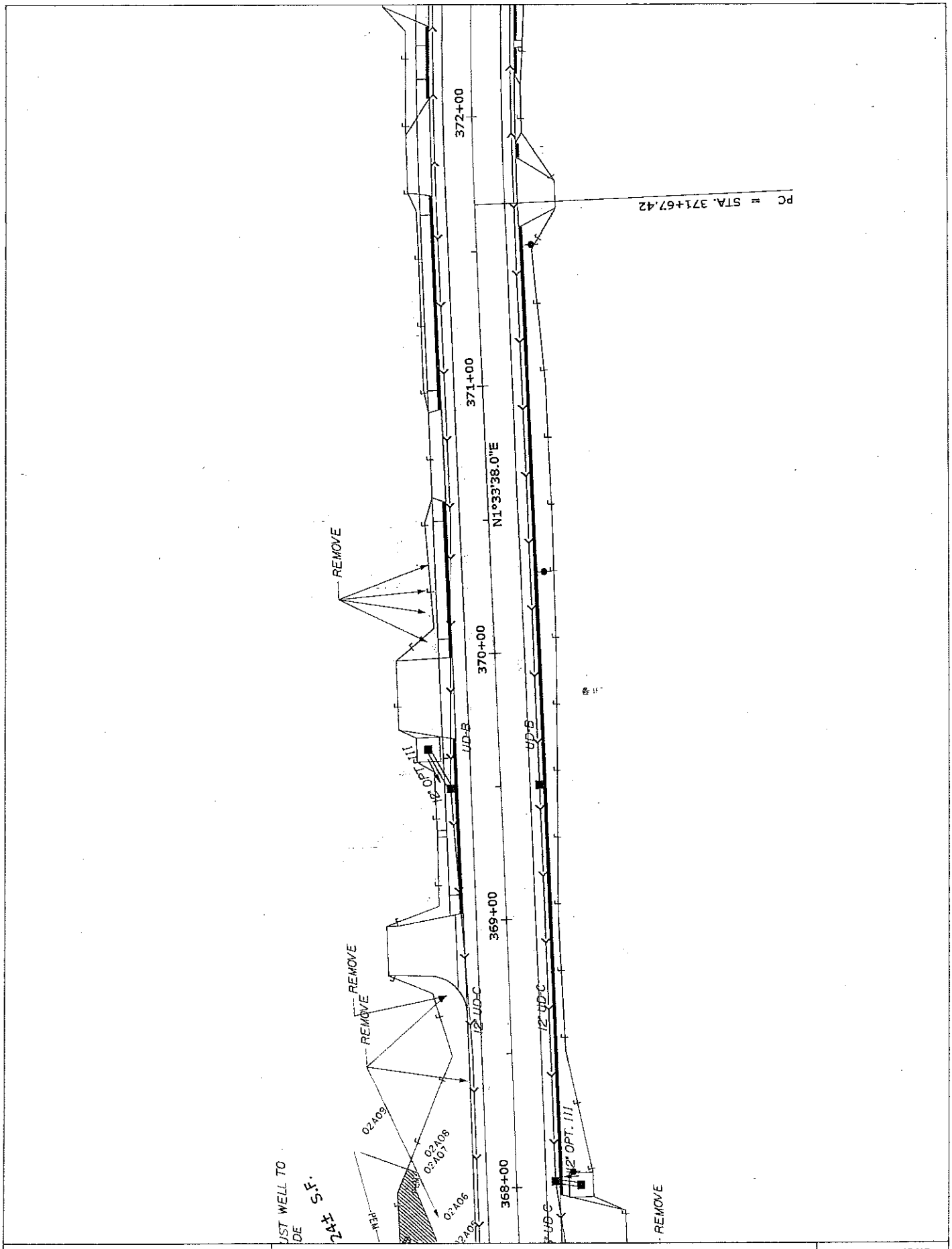

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>475<br>83 |
|---|---|---|
| 13776.00 | PLANS | |



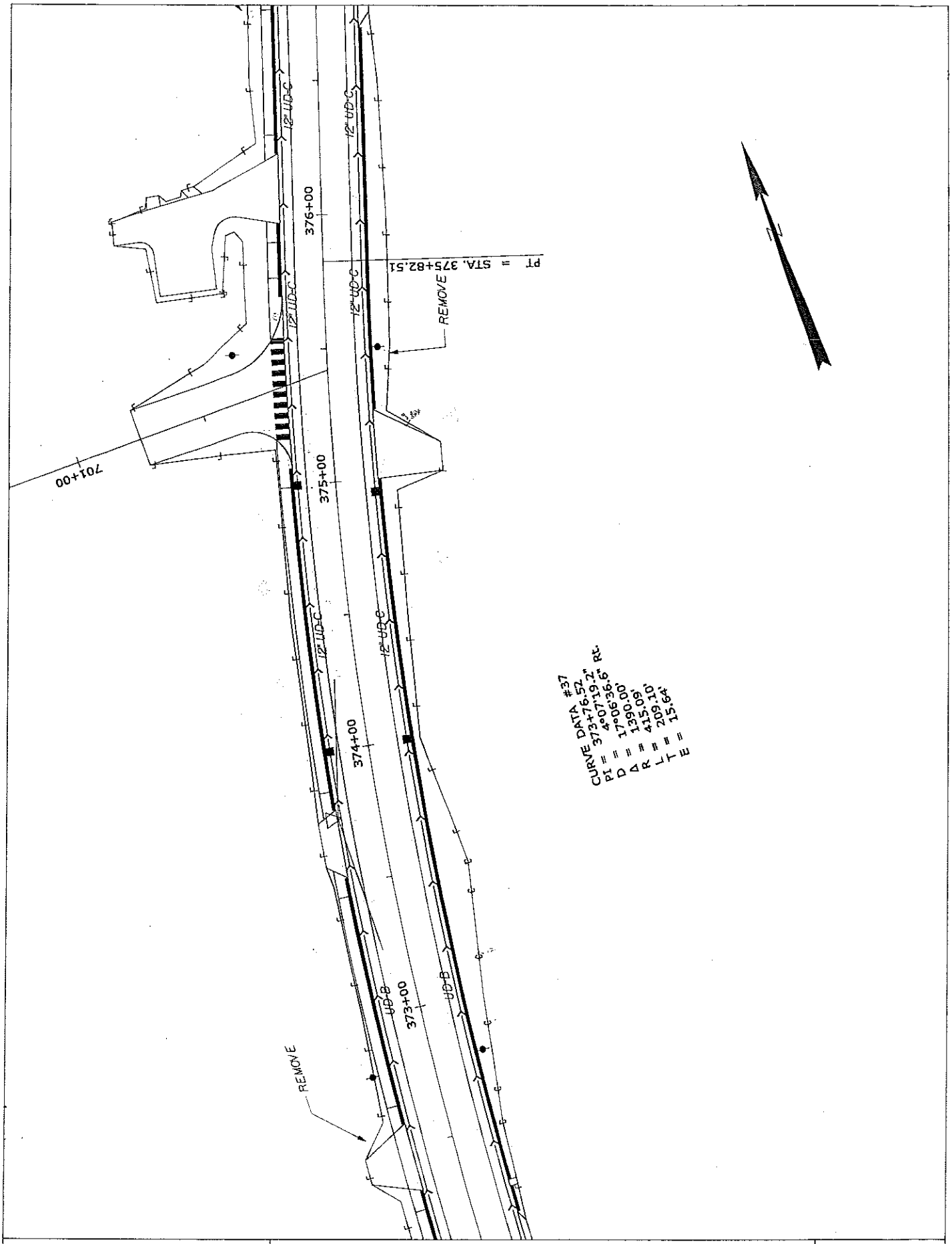

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 84 / 476 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



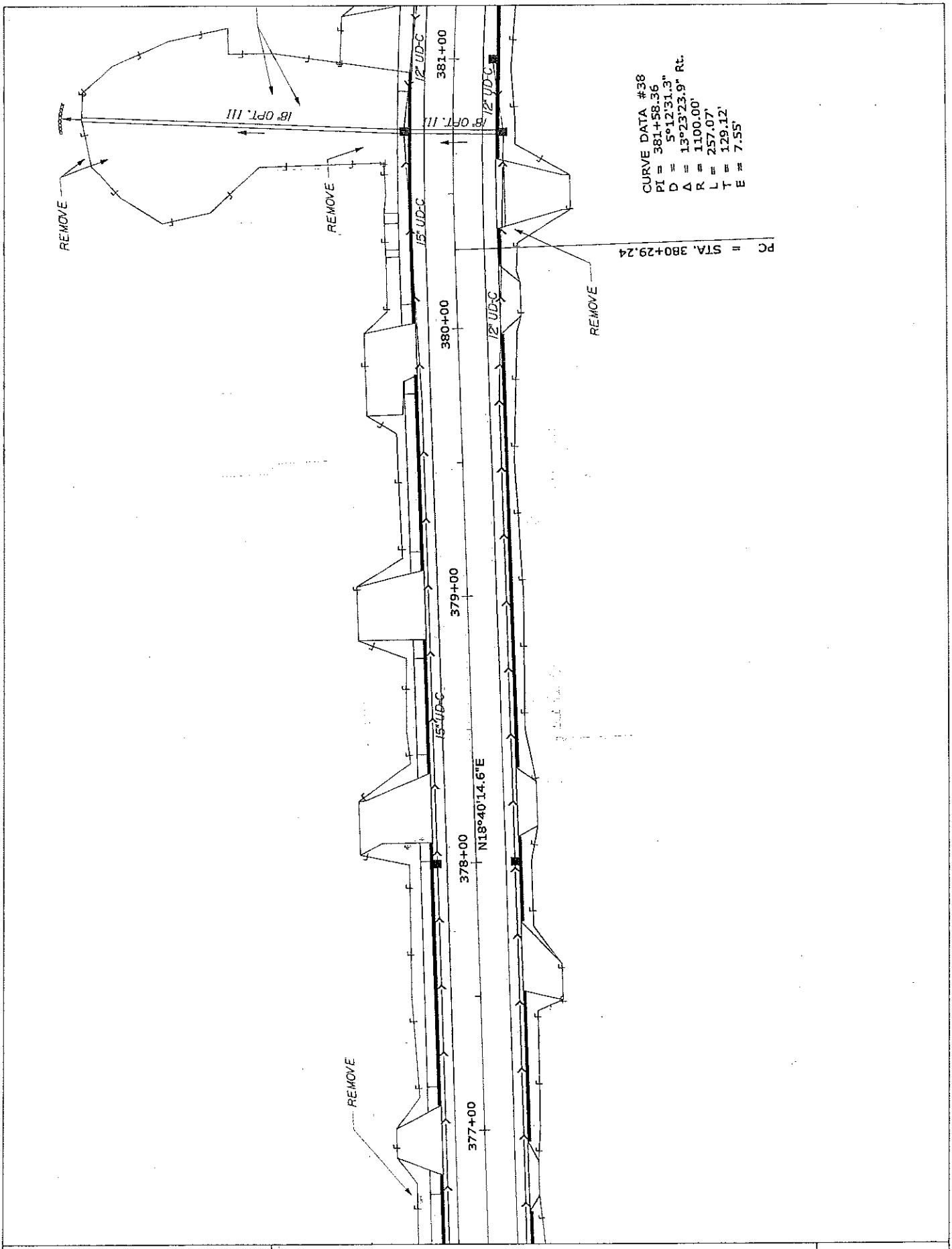

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 477 |
|---|---|---|
| | PLANS | 85 |



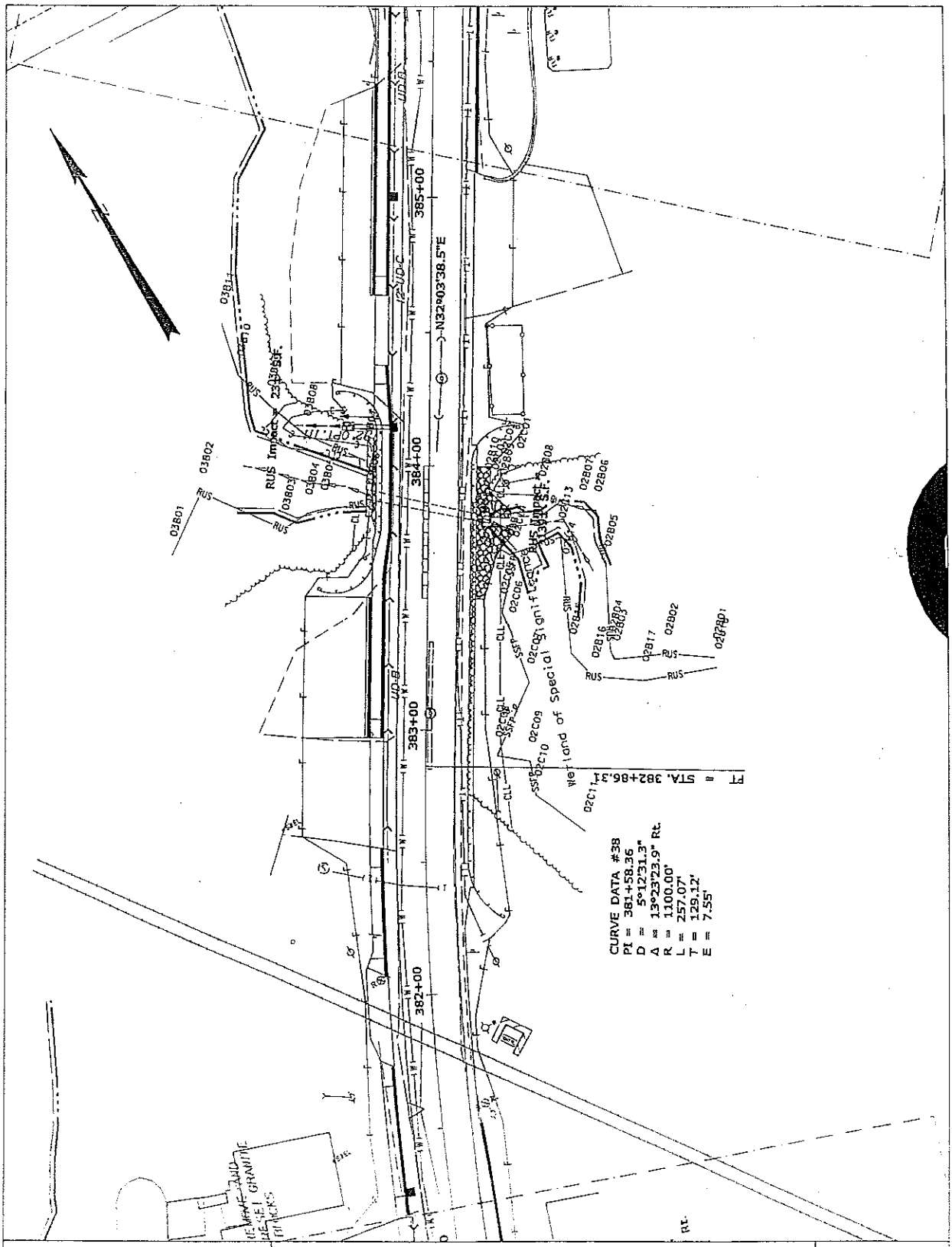

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>86 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



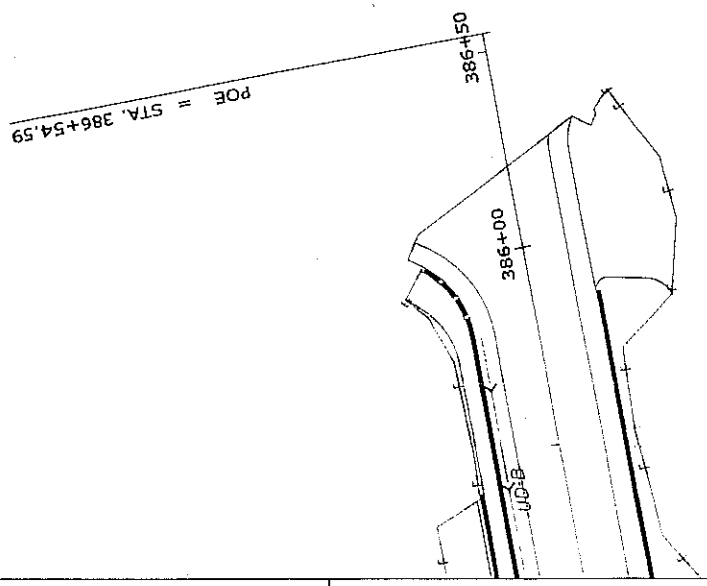

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>479 |
|---|---|---|
| | PLANS | 87 |



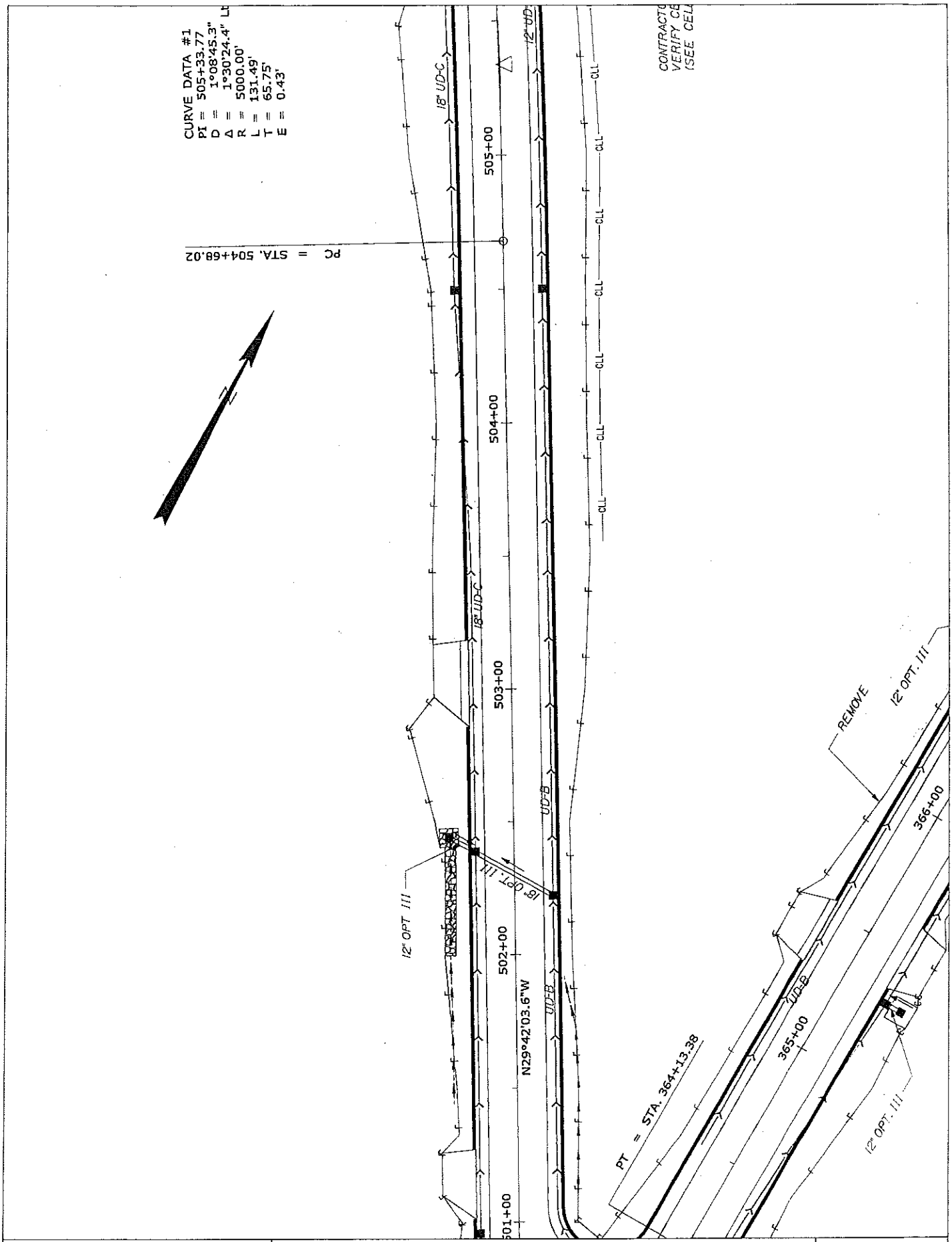

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 88 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



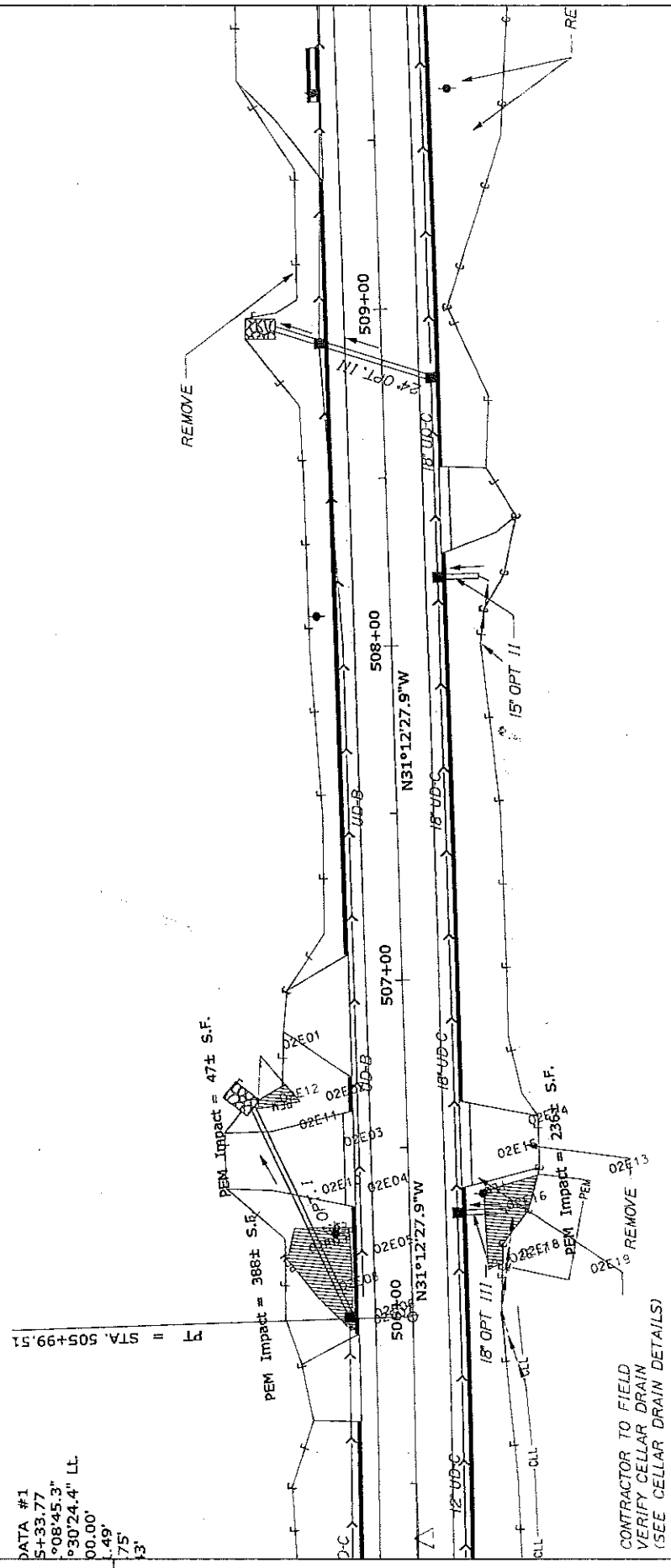

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>89 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



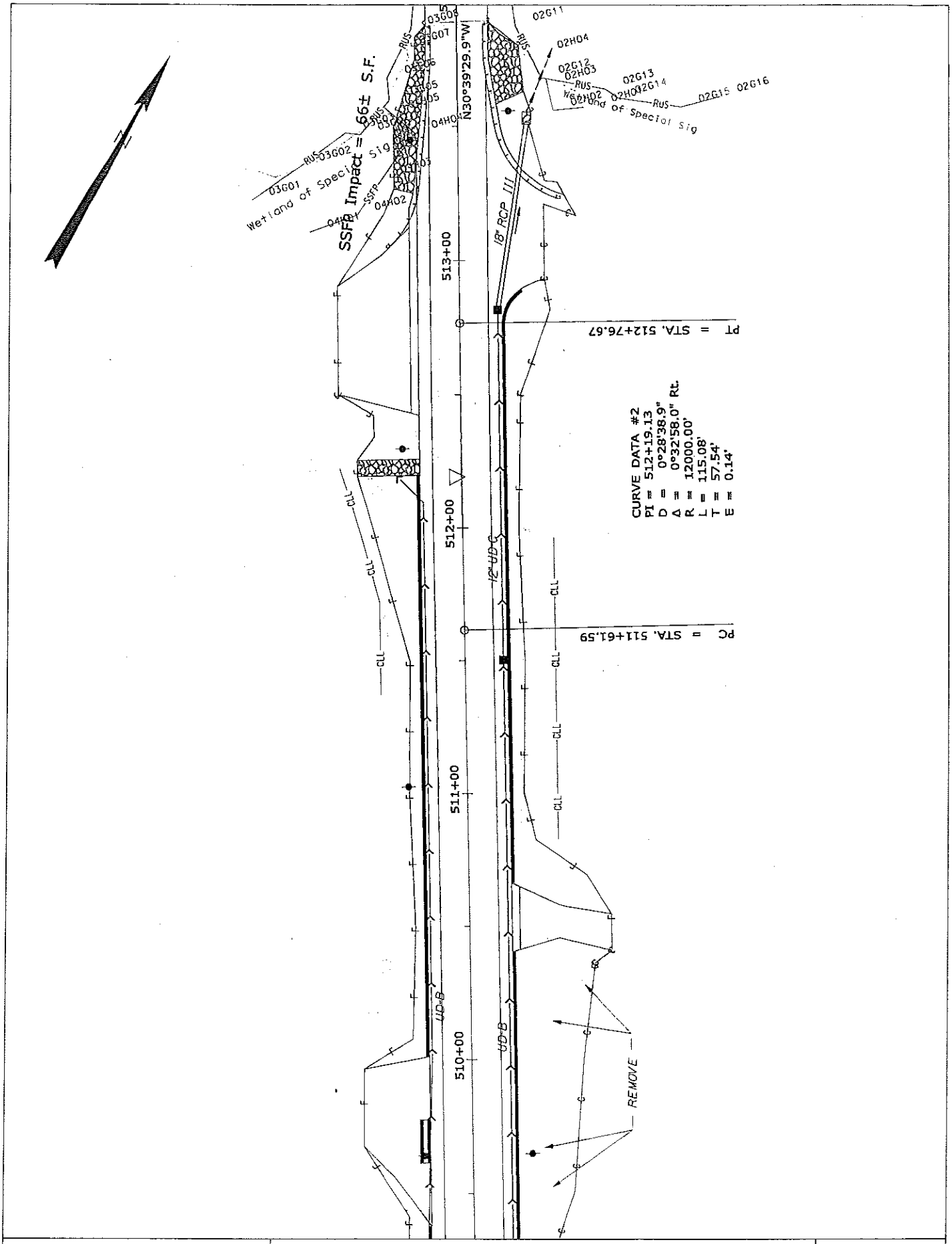

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>482<br>90 |
|---|---|---|
| 12776.00 | PLANS | |



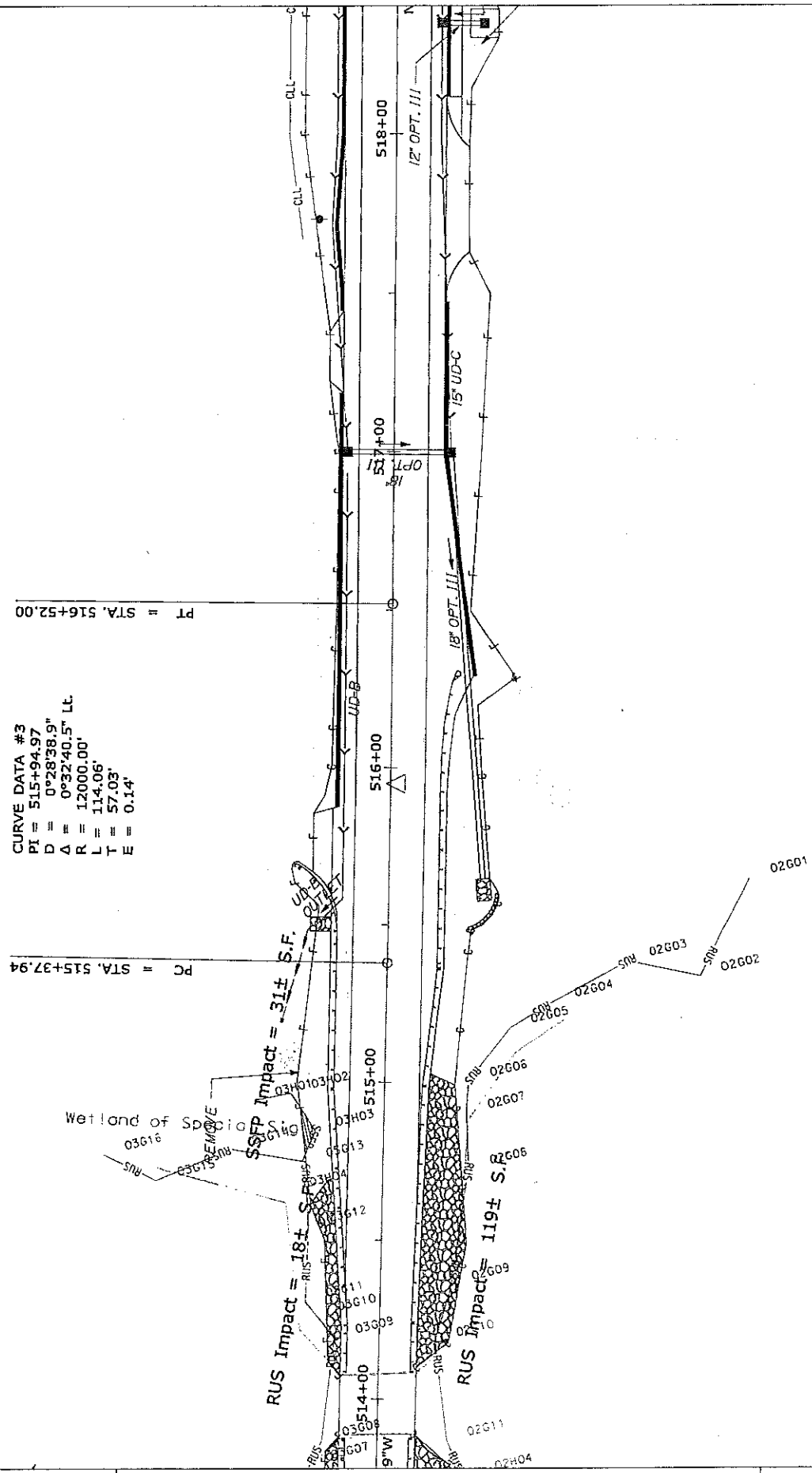

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>483 |
|---|---|---|
| | PLANS | 91 |



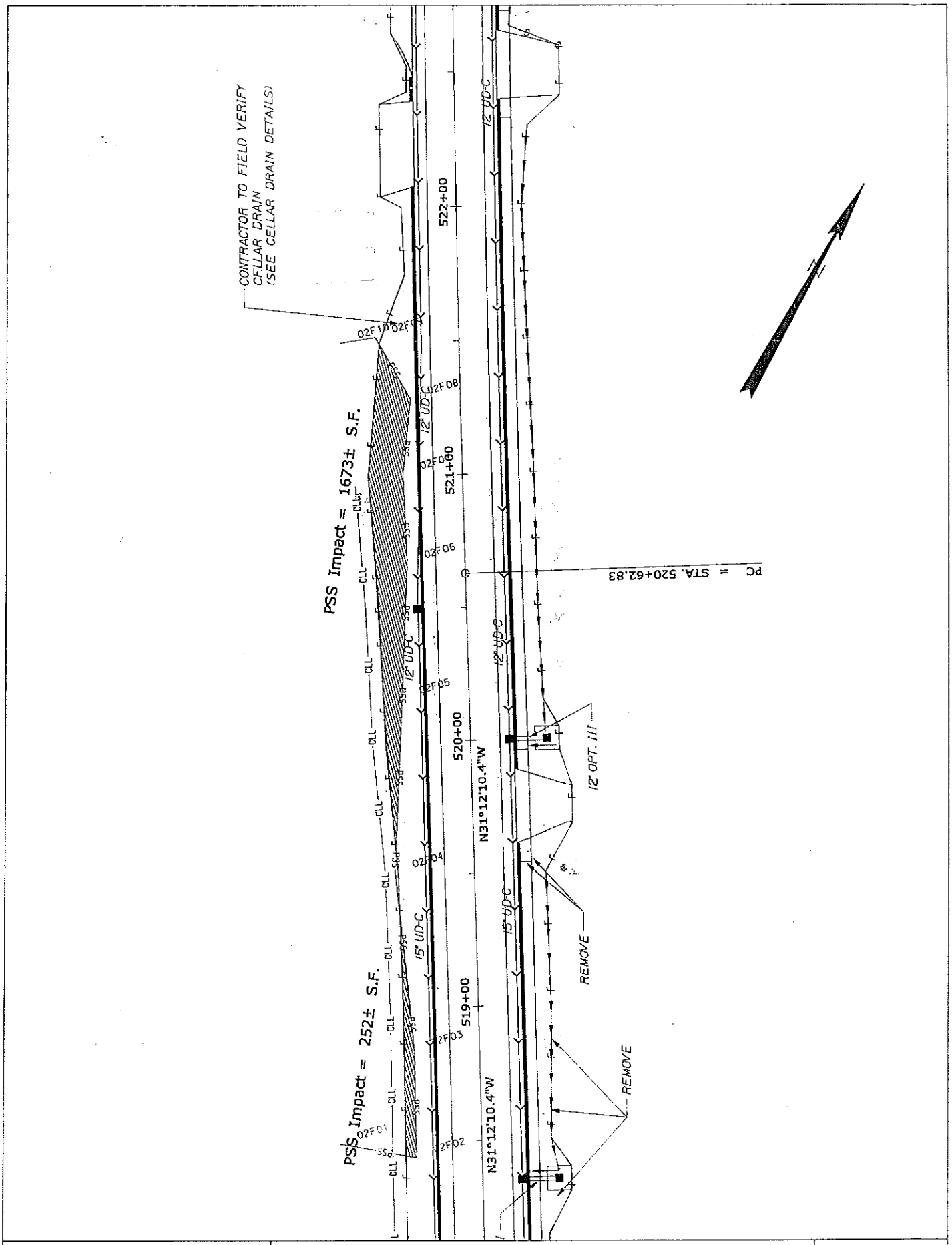

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>92<br>484 |
|---|---|---|
| 12776.00 | PLANS | OF97 |



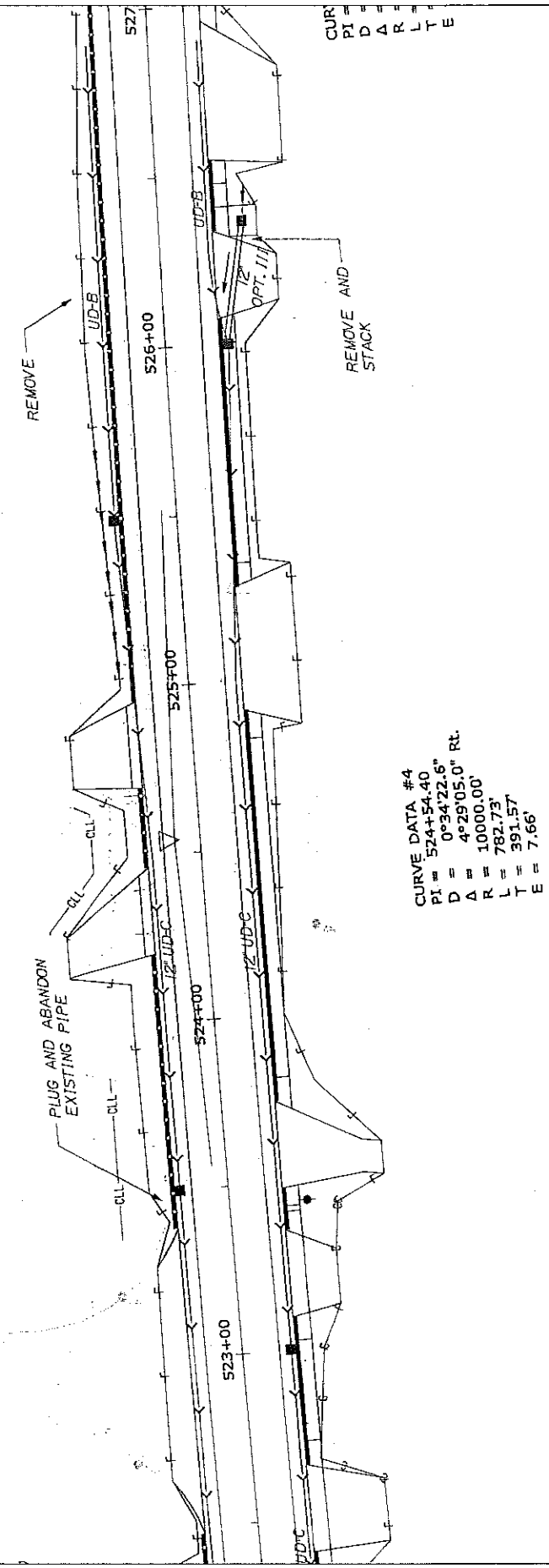

| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>485<br>93 |
|---|---|---|



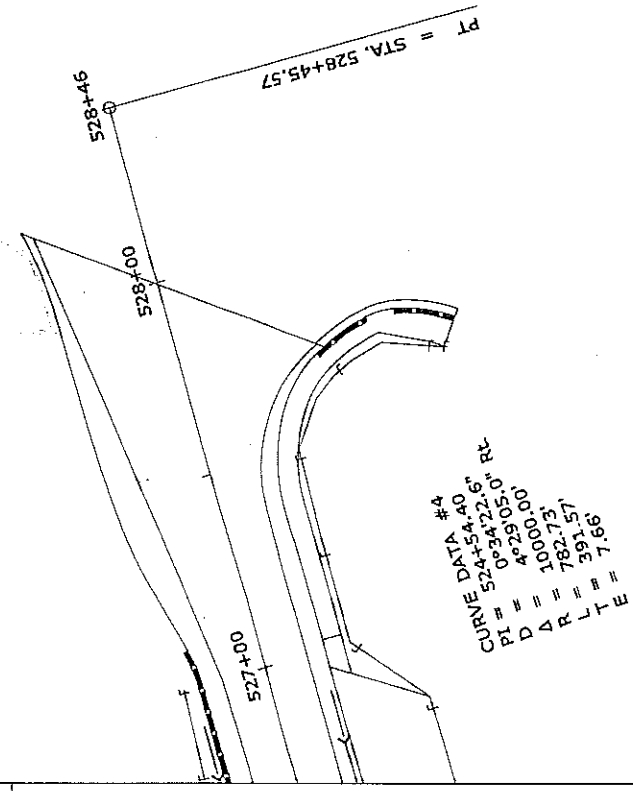

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 94 |
|---|---|---|
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>487<br>95 |
|---|---|---|
| | PLANS | |

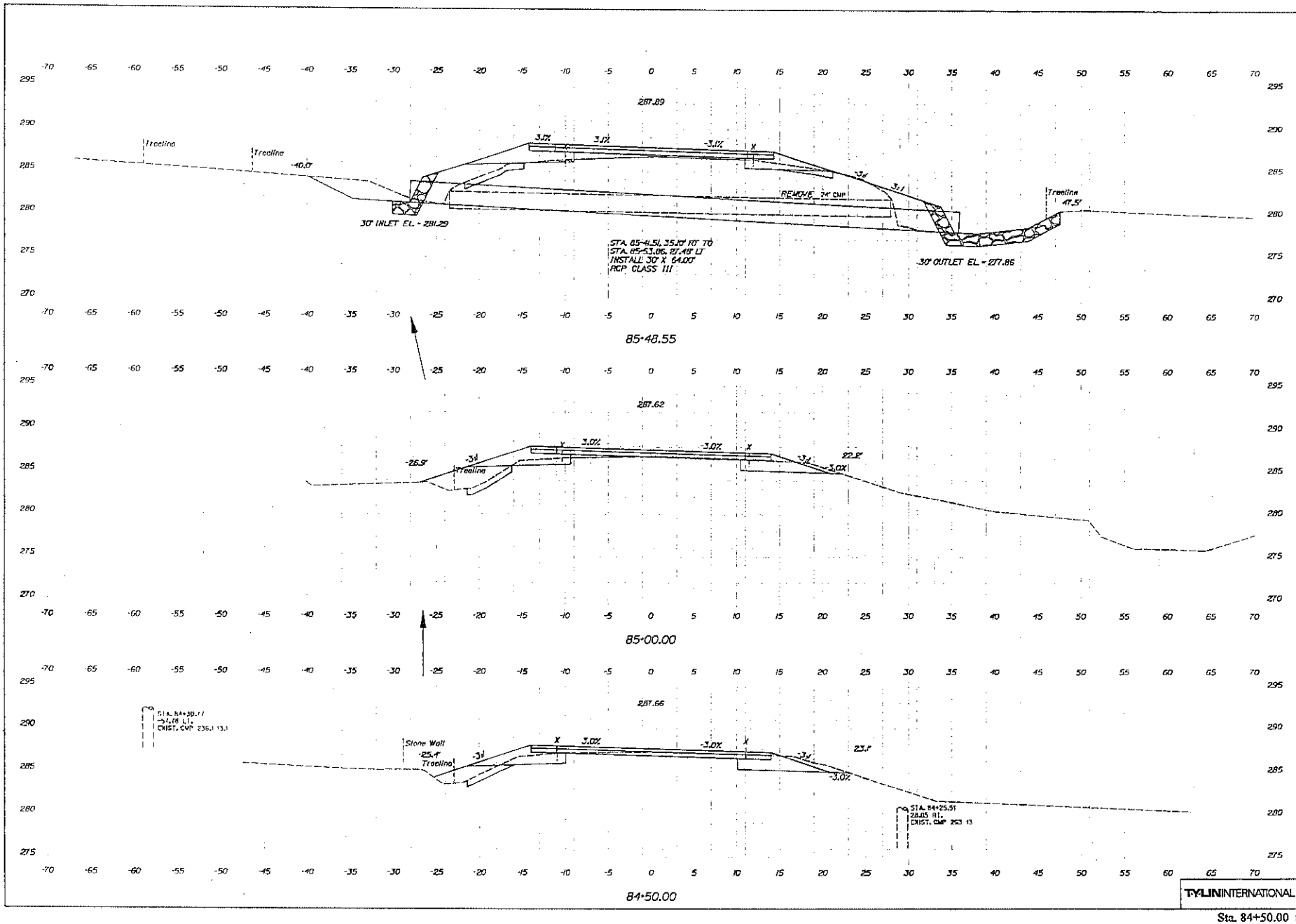



| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER 96 |
|---|---|---|
| 12776.00 | PLANS | OF97 |




| STATE OF MAINE<br>DEPARTMENT OF TRANSPORTATION | Smithfield-Norridgewock | SHEET NUMBER<br>97 |
|---|---|---|

## Section 7: Cross Sections (actual/typical at wetland and stream impacted areas)




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1277(600)X

WIN 12775.00

HIGHWAY PLANS

| PROJ. NUMBER | # Rev | BY | DATE |
|---|---|---|---|
| 85+25-54+00 | 361 | TEV | 09-2012 |
| 04+00-84+50 | 361 | KG | 09-2012 |
| 85+53-90+00 | Rev per RFI | Rev per RFI | Revised |
| 85+53-90+00 | Rev per RFI | Rev per RFI | Revised |
| REVISION 1 | ..... | | Revised |
| REVISION 2 | ..... | | Revised |
| REVISION 3 | ..... | | Revised |
| REVISION 4 | ..... | | Revised |
| FINAL CHANGES | | | Revised |

SIGNATURES

P.E. NUMBER

DATE

SMITHFIELD - NORRIDGEWOCK
ROUTE 8

CROSS SECTIONS

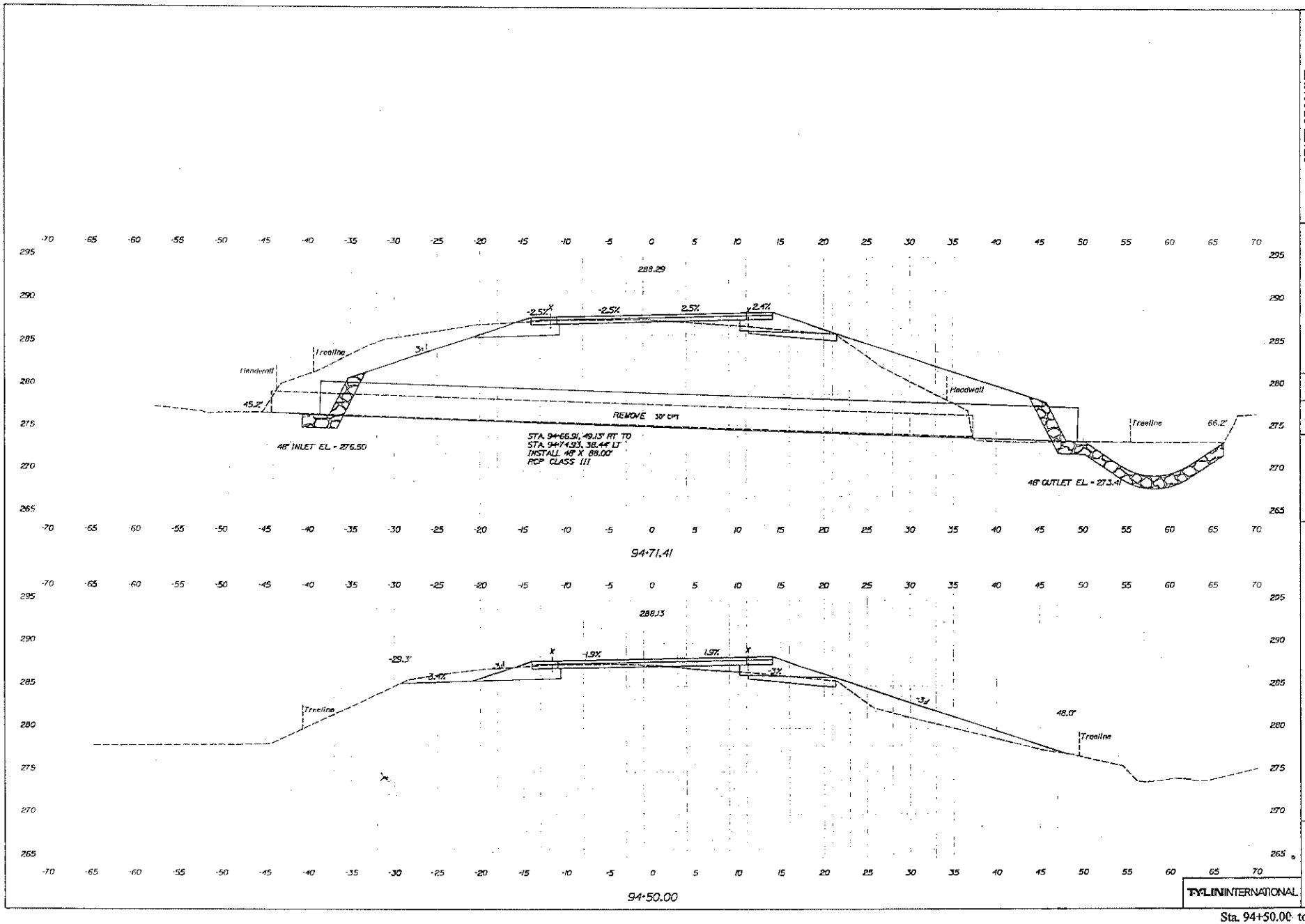
TYLIN INTERNATIONAL

SHEET NUMBER

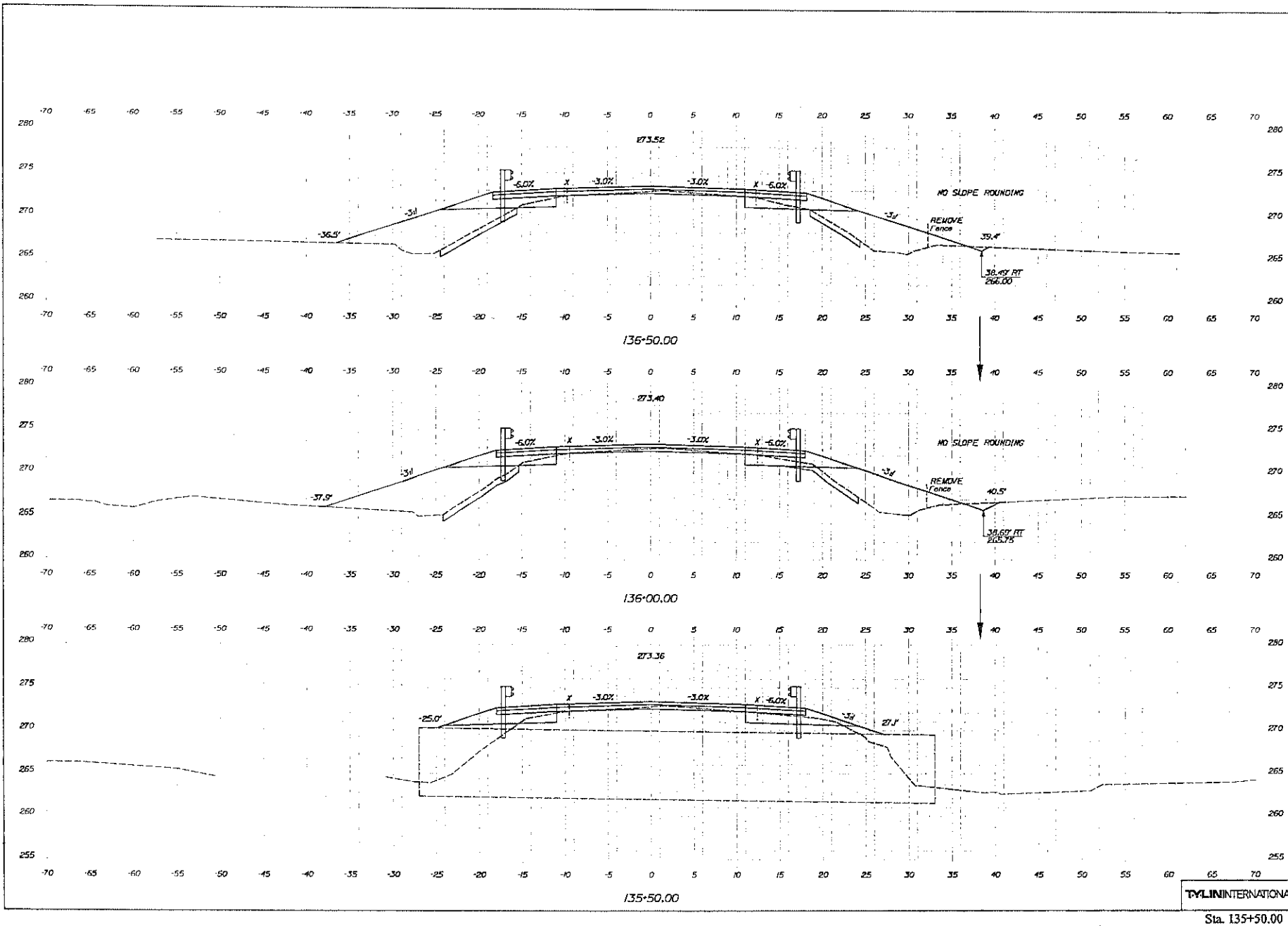
154

OF 444

Sta. 84+50.00 to Sta. 85+48.55




Sta. 94+50.00 to Sta. 94+71.41




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1277(600)X

WIN 12776.00

HIGHWAY PLANS

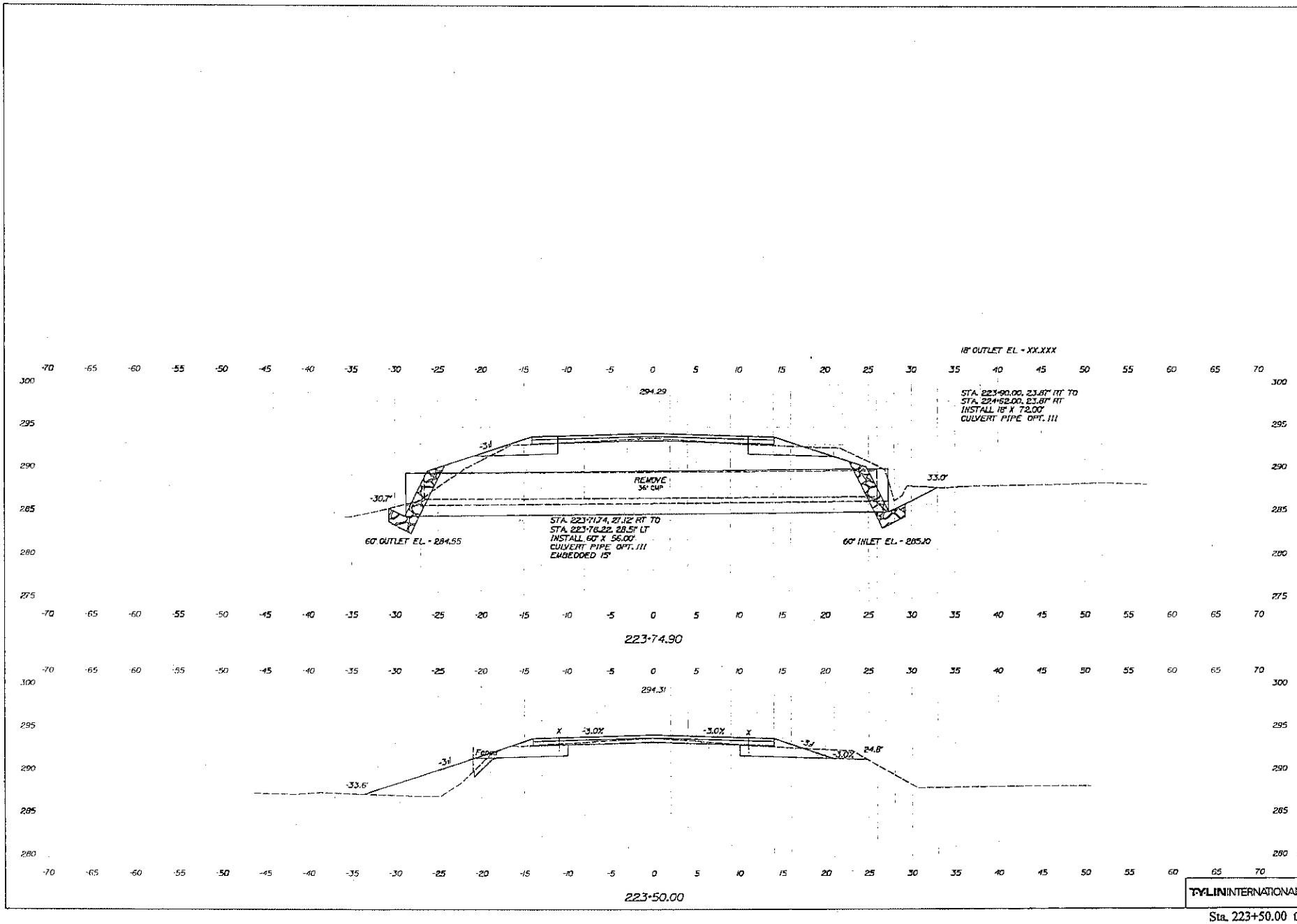
SMITHFIELD - NORRIDGEWOCK
ROUTE 8

CROSS SECTIONS

SHEET NUMBER
199
OF 444

TYLIN INTERNATIONAL

Sta. 135+50.00 to Sta. 136+50.00




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1277(600)X

WIN 12776.00

HIGHWAY PLANS

| PROJ. NUMBER | R.E. | BY | DATE |
|---|---|---|---|
| 2N5E-0N-NFO | JN | PCN | 05-2011 |
| 2N5E-0N-NFO | JN | PCN | 05-2011 |
| 2N5E-0N-NFO | Shawn H | Heather H | 07-2011 |
| 2N5E-0N-NFO | Shawn H | Heather H | 07-2011 |
| 2N5E-0N-NFO | Shawn H | Heather H | 07-2011 |
| 2N5E-0N-NFO | Shawn H | Heather H | 07-2011 |
| 2N5E-0N-NFO | Shawn H | Heather H | 07-2011 |
| 2N5E-0N-NFO | Shawn H | Heather H | 07-2011 |
| 2N5E-0N-NFO | Shawn H | Heather H | 07-2011 |
| 2N5E-0N-NFO | Shawn H | Heather H | 07-2011 |

SIGNATURE

P.E. NUMBER

DATE

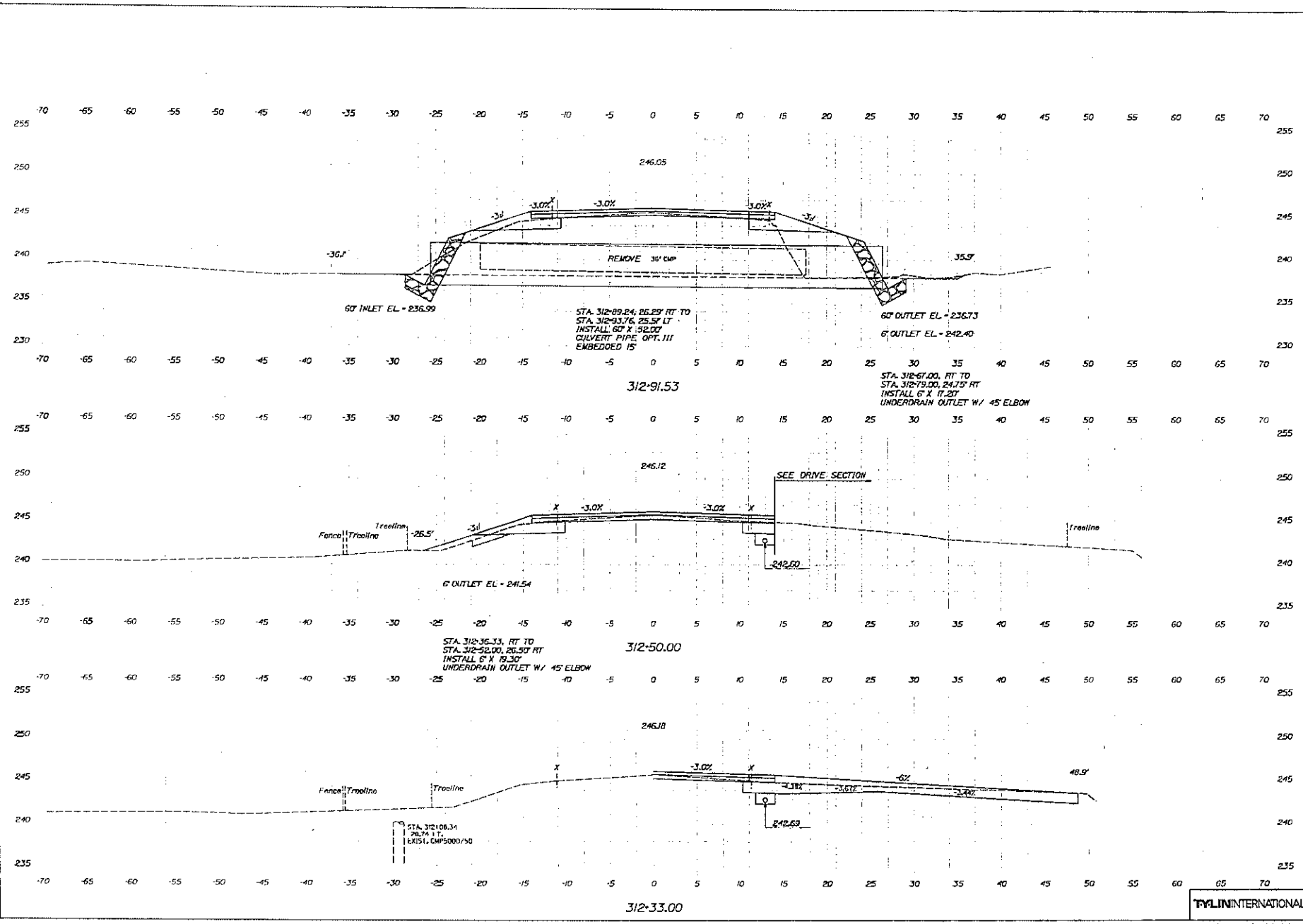
SMITHFIELD - NORRIDGEWOCK
ROUTE 8

CROSS SECTIONS

TYLIN INTERNATIONAL

SHEET NUMBER
267
OF 444

Sta. 223+50.00 to Sta. 223+99.99

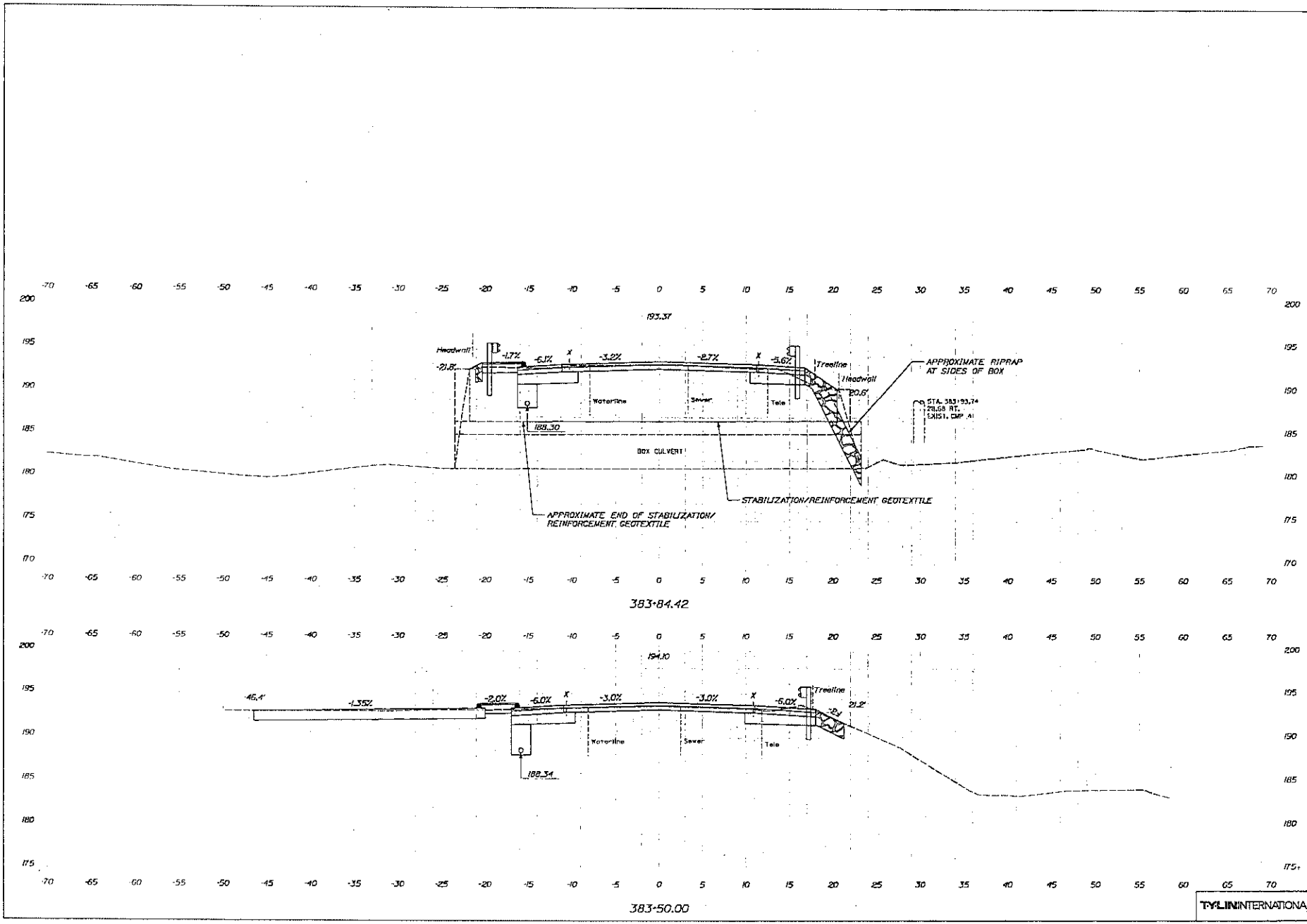



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1277(800)X

WIN 12776.00 HIGHWAY PLANS

| PILLS SHAPES | K.A.W. | JT | DATE |
|---|---|---|---|
| 2-2000-50 FIELD | BFI | PEN | 07-25-02 |
| 2-2000-50 CLASS | BFI | CCS | 07-25-02 |
| 3-2000-36" L-123 | | | |
| 3-2000-36" L-123 | | | |
| 4"X 6"X 6' | | | |
| 4"X 6"X 6' | | | |
| 4"X 6"X 6'




STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1277(600)X

WIN 12776.00

HIGHWAY PLANS

| | | | | |
|---|---|---|---|---|
| FIELD NOTES | | | | |
| 2005-STRED | JR | TV | 08/2/2 | |
| 2005-CULVERT | JR | TV | 08/2/2 | |
| 2005-CULVERT | JR | KK | 09/2/2 | |
| 2005-CULVERT | | | | |
| REVISION 1 | | | | |
| REVISION 2 | | | | |
| REVISION 3 | | | | |
| REVISION 4 | | | | |
| FIELD CHECKED | | | | |

SIGNATURES

P.E. NUMBER

DATE

SMITHFIELD - NORRIDGEWOCK
ROUTE 8

CROSS SECTIONS

SHEET NUMBER

410

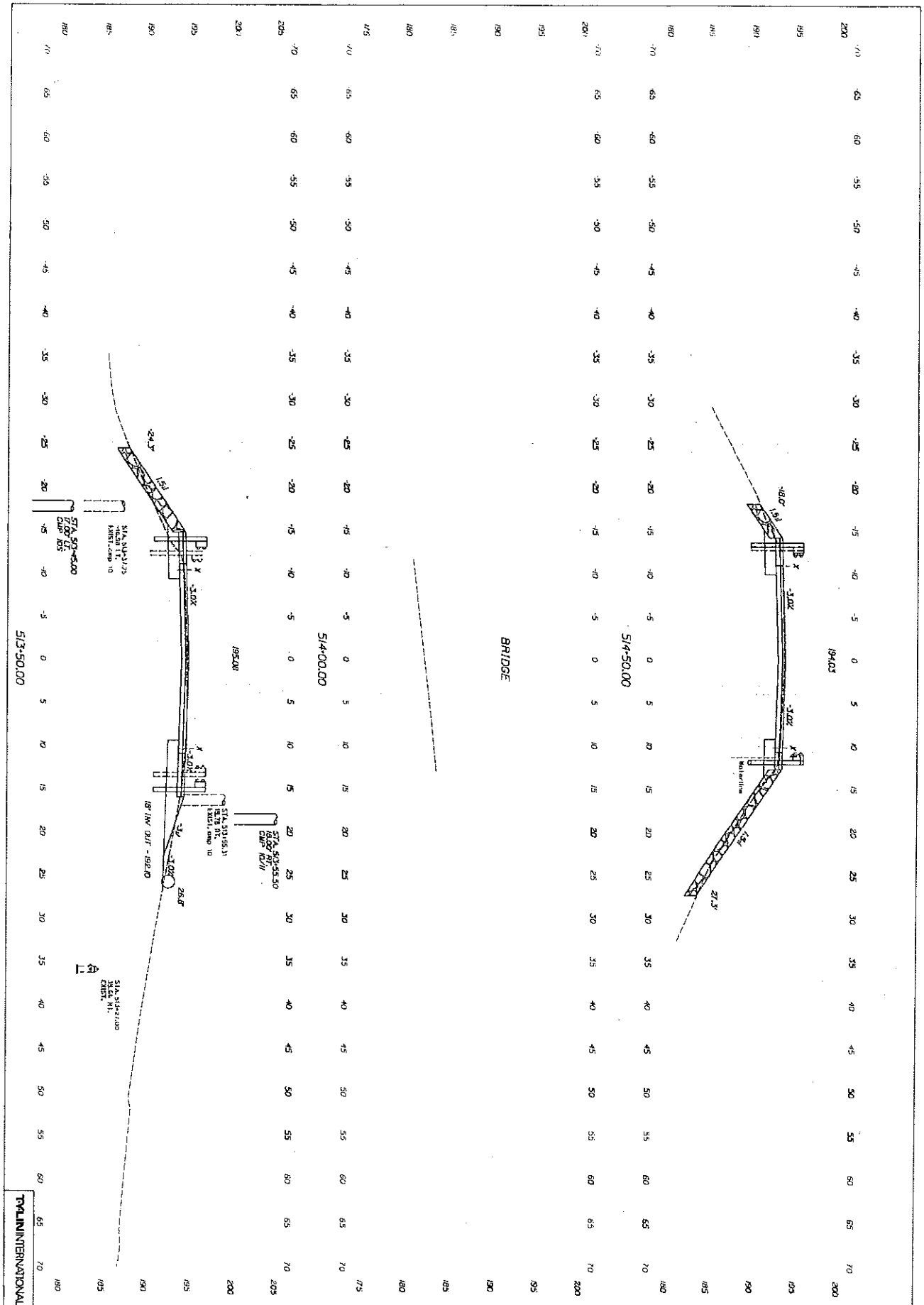
OF 444

TYLIN INTERNATIONAL

Sta. 383+50.00 to Sta. 383+84.42

Filename: ...\HIGHWAY\MAINTAN\Sections_004.dgn Division: ENVIRON Username: lourkerove Date: V24/2013

Filename ...\ASCHWA\MSTA\XSections_005.dgn Division ENVIRON Username curlerowe Date 1-24-2013




Sta. 513+50.00 to Sta. 514+50.00

TYLIN INTERNATIONAL

SHEET NUMBER 428 OF 444

SMITHFIELD - NORRIDGEWOCK
ROUTE 8

CROSS SECTIONS

| PROJ. NUMBER | NAME | BY | DATE |
|---|---|---|---|
| CSSCO-SS1-M-(01) | JA | REV | 10-2010 |
| CSSCO-SS1-M-(01) | JA | KEK | 1-24-2013 |
| CSSCO-SS1-M-(01) | Designer 2B | Designer 2B | Date Date |
| CSSCO-SS1-M-(01) | Designer 3B | Designer 3B | Date Date |
| REVISION 1 | | | Revision 1B |
| REVISION 2 | | | Revision 2B |
| REVISION 3 | Reviewer 1B | | Revision 3B |
| REVISION 4 | Reviewer 2B | | Revision 4B |
| FILE CHANGES | Electronic | | Revision |

SIGNATURE

P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1277(600)X

WIN 12776.00

HIGHWAY PLANS

Applicant: General Public, State of Maine

Effective Date: October 12, 2010
Expiration Date: October 12, 2015

**DEPARTMENT OF THE ARMY**
**GENERAL PERMIT**
**STATE OF MAINE**

The New England District of the U.S. Army Corps of Engineers (Corps) hereby issues this General Permit (GP) for activities in waters of the United States (U.S.) that have no more than minimal individual, secondary, and cumulative adverse effects on the aquatic environment in waters of the U.S. within the boundaries of and off the coast of the State of Maine.

# I. GENERAL CRITERIA

In order for activities to qualify for this GP, they must meet the GP's terms and eligibility criteria (Pages 1 – 4), general conditions (GC) (Pages 5 – 18), and Appendix A - Definition of Categories.

Under this GP, projects may qualify for the following:

- Category 1: Category 1 Notification Form required.
  (Submittal of the Category 1 Notification Form at Appendix B to the Corps is required.
- Category 2: Application required.
  (Submittal of an application to the Corps is required and written approval from the Corps must be received.

If your project is ineligible for Category 1, it may qualify for Category 2 or an Individual Permit and you must submit an application (see Page 3). The thresholds for Categories 1 and 2 are defined in Appendix A. This GP does not affect the Corps Individual Permit review process or activities exempt from Corps regulation.

# II. ACTIVITIES COVERED:

- Work and structures that are located in, under or over any navigable water of the U.S.[1] that affect the course, location, condition, or capacity of such waters; or the excavating from or depositing of material in such waters. The Corps regulates this under Section 10 of the Rivers and Harbors Act of 1899);
- The discharge of dredged or fill material into waters of the U.S[2]. The Corps regulates this under Section 404 of the Clean Water Act (CWA).[3]
- The transportation of dredged material for the purpose of disposal in the ocean. The Corps regulates this under Section 103 of the Marine Protection, Research and Sanctuaries Act.

[1] Defined at 33 CFR 329 and Appendix A, Page 4.
[2] Defined at 33 CFR 328
[3] When there is a regulated discharge of dredged or fill material into waters of the U.S., the Corps will also consider secondary impacts, which are defined at Appendix A, Endnote/Definition 2.

# III. PROCEDURES:

## 1. State Approvals

Applicants are responsible for applying for and obtaining any of the required state or local approvals (see GC 1, Page 5). Federal and state jurisdictions may differ in some instances. State permits may be required for specific projects regardless of the general permit category.

In order for authorizations under this GP to be valid, when any of the following state approvals or statutorily-required reviews is also required, the approvals must be obtained prior to the commencement of work in Corps jurisdiction.

- Maine Department of Environmental Protection (DEP): Natural Resources Protection Act (NRPA) permit, including permit-by-rule and general permit authorizations; Site Location of Development Act permit; and Maine Waterway Development and Conservation Act permit.
- Maine Department of Conservation: Land Use Regulation Commission (LURC) permit.
- Maine Department of Marine Resources: Aquaculture Leases.
- Maine Department of Conservation, Bureau of Parks and Lands, Submerged Lands: Lease

NOTE: This GP may authorize projects that are not regulated by the State of Maine (e.g., seasonal floats or moorings).

## 2. Corps Authorizations

### a. <u>Category 1 (Submission of Category 1 Notification Form required)</u>

**Eligibility Criteria**

Activities in Maine that:

- Are subject to Corps jurisdiction (see GC 2, Page 5),
- Meet the terms and eligibility criteria of this GP (Pages 1 - 4),
- Meet all GCs of this GP (Pages 5 – 18), and
- Meet the definition of Category 1 in Appendix A - Definition of Categories,

**may proceed without application to the Corps provided:**

- The Category 1 Notification Form (Appendix B) is submitted to the Corps before starting the work authorized by this GP.

Consultation with the Corps and/or outside experts may be necessary to ensure compliance with this GP's general conditions (starting on Page 5) and related federal laws such as the National Historic Preservation Act, the Endangered Species Act (ESA), and the Wild and Scenic Rivers Act. For example, experts on historic resources may include the agencies and tribes referenced in GC 8, while experts on endangered species include the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). Project proponents are encouraged to contact the Corps with Category 1 eligibility questions.

Work that is not regulated by the State of Maine, but is subject to Corps jurisdiction, is eligible for Category 1 authorization under this GP. The Maine DEP and LURC have waived WQC for projects authorized under Categories 1 and 2 of this GP. The state has concurred with the determination that projects authorized under Categories 1 and 2 of this GP are consistent with the enforceable policies of the Maine CZM Program.

**b. Category 2 (Application to and written approval from the Corps required)**

**Eligibility Criteria**
Activities in Maine that:

- Are subject to Corps jurisdiction (see GC 2, Page 5),
- Meet the terms of this GP (Pages 1 - 4),
- Meet all GCs of this GP (Pages 5 - 18),
- Meet the definition of Category 2 in Appendix A - Definition of Categories,

**require an application to and written approval from the Corps.** The Corps will coordinate review of Category 2 activities with federal and state agencies, as appropriate. To be eligible and subsequently authorized, an activity must result in no more than minimal impacts to the aquatic environment as determined by the Corps based on comments from the review team and the criteria listed above. This may require project modifications involving avoidance, minimization or compensatory mitigation for unavoidable impacts to ensure the net effects of a project are minimal. Compensatory mitigation for waterway/wetland impacts may take the form of wetland preservation, restoration, enhancement, creation, and/or "in-lieu fee" for inclusion into the Natural Resources Mitigation Fund. See www.nae.usace.army.mil/reg, "Mitigation" and then "Maine" for more information.

Work that is not regulated by the State of Maine, but is subject to Corps jurisdiction, is eligible for Category 2 authorization under this GP. The Maine DEP and LURC have waived WQC for projects authorized under Categories 1 and 2 of this GP. The state has concurred with the determination that projects authorized under Categories 1 and 2 of this GP are consistent with the enforceable policies of the Maine CZM Program.

## 3. Applying for a Permit

All applicants for Category 2 projects must:

**a.** Apply directly to the Corps using the state application form or the Corps application form (ENG Form 4345[1]), and apply directly to the state (DEP, LURC, BPL or DMR) as applicable using the appropriate state form, if the work is regulated by the Corps and the state.

**b.** Apply directly to the Corps using the Corps application form (ENG Form 4345[1]) if the work is regulated by the Corps but not the state (DEP, LURC, BPL or DMR).

**c.** Provide application information (see "Information Typically Required" in Appendix C) to help ensure the application is complete and to speed project review.

**d.** Submit a copy of their application materials to the Maine Historic Preservation Commission (MHPC) and the five Indian tribes listed at Appendix D, at the same time, or before, they apply to the state (DEP or LURC) or the Corps, to be reviewed for the presence of historic, archaeological or tribal resources in the permit area that the proposed work may affect. Submittals to the DEP or Corps shall include information to indicate that this has been done (a copy of the applicant's cover letter to MHPC and tribes or a copy of the MHPC and tribal response letters is acceptable).

[1] Located at www.nae.usace.army.mil/reg under "Forms."

## 4. Review Procedures

The Corps will coordinate review of all Category 2 activities with federal and state agencies, as appropriate, to ensure that the work will result in no more than a minimal impact to the aquatic environment. Applicants are responsible for applying for the appropriate state and local approvals listed on Page 2.

**Emergency Procedures**: 33 CFR 325.2(e)4 states that an "emergency" is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures." The Corps will work with all applicable agencies to expedite authorization according to established procedures in emergency situations.

**Individual Permit Procedures**: Proponents of work that does not meet the terms and general conditions of this GP must submit the Corps application form and the appropriate application materials to the Corps at the earliest possible date in order to expedite the Individual Permit review process. General information and application forms can be obtained at our website or by calling us (see Appendix D). Individual WQC and CZM consistency concurrence are required when applicable from the State of Maine before Corps permit issuance. The Corps encourages applicants to concurrently apply for a Corps Individual Permit and state permits.

## 5. Approval Process

Applicants for Category 2 activities may not proceed with work in Corps jurisdiction until written authorization is received from the Corps. If the Corps determines that the Category 2 activity is eligible for the GP, the Corps will send an authorization letter directly to the applicant. The Corps will attempt to issue a written eligibility determination within the state's review period. If the Corps determines that the activity is not eligible under the GP or that additional information is required, the Corps will notify the applicant in writing and send a copy to the DEP or LURC. Applicants are responsible for obtaining all applicable approvals listed on Page 2 from the appropriate state and local agencies before commencing work in Corps jurisdiction.

## V. GENERAL PERMIT CONDITIONS:

The following conditions apply to activities authorized under this Maine GP, unless otherwise specified, including all Category 1 (notification required) and Category 2 (application required) activities:

**1. Other Permits.** Authorization under this GP does not obviate the need to obtain other federal, state, or local authorizations required by law. This includes, but is not limited to, the project proponent obtaining a Flood Hazard Development Permit issued by the town, if necessary. Inquiries may be directed to the municipality or to the Maine Floodplain Management Coordinator at (207) 287-8063. See www.maine.gov/spo/flood.

**2. Federal Jurisdictional Boundaries**.
**(a)** Applicability of this GP shall be evaluated with reference to federal jurisdictional boundaries. Applicants are responsible for ensuring that the boundaries used satisfy the federal criteria defined at 33 CFR 328 "Waters of the U.S." and 33 CFR 329 "Navigable Waters of the U.S."
Note: Waters of the U.S. include the subcategories "navigable waters of the U.S." and "wetlands."
**(b)** For Category 1 projects, proponents are not required to delineate the waters of the U.S. that they plan to impact, but must approximate the square footage of impacts in order to determine the review category (1 or 2 or Individual Permit). For projects filling <15,000 SF of waters of the U.S. that do not qualify for Category 1 (e.g., vernal pool, secondary or endangered species impacts, etc.) and therefore require an application to the Corps, and for those filling ≥15,000 SF, applicants shall delineate all waters of the U.S. that will be filled (direct impacts) in accordance with the Corps of Engineers Wetlands Delineation Manual and the most recent regional supplements (see Appendix E). In addition, applicants shall approximately identify all waters of the U.S. on the property and known waters adjacent to the property in order for the Corps to evaluate secondary impacts. The waters of the U.S. shall be clearly shown on the project plans submitted with the application. This includes all waters of the U.S. in areas under DEP or LURC jurisdiction regardless of whether they're shown on LURC zoning maps.
**(c)** On a case-by-case basis, the Corps may modify/refine the above delineation and identification requirements for waters of the U.S.

**3. Minimal Direct, Secondary and Cumulative Impacts.**
**(a)** Projects authorized by this GP shall have no more than minimal direct, secondary and cumulative adverse environmental impacts. Category 2 applicants should provide information on secondary and cumulative impacts as stated in Appendix C. Compensatory mitigation may be required to offset unavoidable impacts (see GC 16) and to ensure that they are no more than minimal. Compensatory mitigation requirements will be determined on a case-by-case basis.
**(b)** Secondary impacts to waterway and/or wetland areas, (e.g., areas drained, flooded, cleared, excavated or fragmented) shall be added to the total fill area when determining whether the project qualifies for Category 1 or 2. Direct, secondary and cumulative impacts are defined at Appendix A, Endnote 2.
**(c)** Site clearing, grading and construction activities in the upland habitat surrounding vernal pools ("Vernal Pool Management Areas") are secondary impacts. See GC 28 for avoidance and minimization requirements and recommendations.

**4. Discretionary Authority.** Notwithstanding compliance with the terms and conditions of this permit, the Corps retains discretionary authority to require Category 2 or Individual Permit review based on concerns for the aquatic environment or for any other factor of the public interest [33 CFR

320.4(a)]. This authority is invoked on a case-by-case basis whenever the Corps determines that the potential consequences of the proposal warrant a higher level of review based on the concerns stated above. This authority may be invoked for projects that may contribute to cumulative environmental impacts that are more than minimal or if there is a special resource or concern associated with a particular project that is not already covered by the remaining conditions of the GP and that warrants greater review. Whenever the Corps notifies an applicant that an Individual Permit may be required, the project is not authorized under this GP and no work may be conducted until an Individual Permit is obtained or until the Corps notifies the applicant that further review has demonstrated that the work may proceed under this GP.

**5. Single and Complete Projects.**
**(a)** This GP shall not be used to piecemeal work and shall be applied to single and complete projects[1]. When determining the review category in Appendix A (Category 1 or 2) for a single and complete project, proponents must include any permanent historic fill placed since October 1995 that is associated with that project and all currently proposed temporary and permanent impact areas.
**(b)** A single and complete project must have independent utility[1].
**(c)** Unless the Corps determines the activity has independent utility[1]:
**i.** This GP shall not be used for any activity that is part of an overall project for which an Individual Permit is required,
**ii.** All components of a single project and/or all planned phases of a multi-phased project (e.g., subdivisions should include all work such as roads, utilities, and lot development) shall be treated together as constituting one single and complete project[1].
**(d)** For linear projects, such as power lines or pipelines with multiple crossings, the single and complete project[1] is all crossings of a single water of the U.S. (i.e., single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly-shaped wetland or lake, etc., are not separate waterbodies and crossings of such features cannot be considered separately. If any crossing requires a Category 2 activity, then the entire linear project shall be reviewed as one project under Category 2.

**6. Permit On-Site.** For Category 2 projects, the permittee shall ensure that a copy of this GP and the accompanying authorization letter are at the work site (and the project office) authorized by this GP whenever work is being performed, and that all personnel with operation control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. The entire permit authorization shall be made a part of any and all contracts and sub-contracts for work that affects areas of Corps jurisdiction at the site of the work authorized by this GP. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means this GP and the authorization letter (including its drawings, plans, appendices and other attachments) and also includes permit modifications. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or sub-contract. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire GP authorization, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps jurisdiction.

[1] Single and Complete Project and Independent Utility are defined at Appendix E.

**7. St. John/St. Croix Rivers.** Work within the Saint John and Saint Croix River basins that requires approval of the International Joint Commission is not eligible for Category 1 and an application to the Corps is required if any temporary or permanent use, obstruction or diversion of international boundary waters could affect the natural flow or levels of waters on the Canadian side of the line; or if any construction or maintenance of remedial works, protective works, dams, or other obstructions in waters downstream from boundary waters could raise the natural level of water on the Canadian side of the boundary.

**8. Historic Properties**. No activity otherwise authorized by this GP shall result in effects (as that term is defined at 36 C.F.R. § 800.16(i)) on properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties, unless and until the Corps or another federal agency has satisfied the consultation requirements of Section 106 of the National Historic Preservation Act. Work is not eligible for Category 1 and an application to the Corps is required if the activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. Work is eligible for Category 1 if a no effect or no adverse effect determination has been made for that work by another federal action agency in its Section 106 consultation with the Maine Historic Preservation Commission (MHCP) and the five federally recognized Indian tribes listed at Appendix D. Information on the location and existence of known historic resources can be obtained from the MHPC, the National Register of Historic Places, and the five tribes listed in Appendix D. Historic properties include those that are eligible for inclusion, but not necessarily listed on the National Register. If the permittee, either prior to construction or during construction of the work authorized herein, encounters a previously unidentified archaeological or other cultural resource within the area subject to Corps jurisdiction that might be eligible for listing in the National Register of Historic Places, he/she shall stop work and immediately notify the Corps and the MHPC and/or applicable tribe(s).

**9. National Lands**. None of the following work is eligible as a Category 1 project**:**
**(a)** Activities that impinge upon the value of any National Wildlife Refuge, National Forest, National Marine Sanctuary, National Park or any other area administered by the National Park Service, U.S. Fish and Wildlife Service (USFWS) or U.S. Forest Service.
**(b)** Work on Corps properties and Corps-controlled easements. Contact the Corps, Real Estate Division (978) 318-8585 to initiate reviews about both Corps holdings and permit requirements.
**(c)** Any proposed temporary or permanent modification or use of a federal project (including but not limited to a levee, dike, floodwall, channel, sea wall, bulkhead, jetty, wharf, pier, or other work built but not necessarily owned by the United States), which would obstruct or impair the usefulness of the federal project in any manner, and/or would involve changes to the authorized federal project's scope, purpose, and/or functioning that go beyond minor modifications required for normal operation and maintenance (requires review and approval by the Corps pursuant to 33 USC 408). Federal projects in Maine as of October 2010 are shown at Appendix F. This map may not be inclusive of all projects.

**10. Endangered Species**.
**(a)** No activity may be authorized under Category 1 of this GP which:
**i.** "May affect" a threatened or endangered species, a species proposed for listing as threatened or endangered, or designated or proposed critical habitat (all herein referred to as "listed species or habitat") as identified under the federal Endangered Species Act (ESA) (unless specified in a programmatic agreement with NMFS or USFWS),

**ii.** Results in a "take" of any federally-listed threatened or endangered species of fish or wildlife, or

**iii.** Results in any other violation of Section 9 of the ESA protecting threatened or endangered species of plants.

**(b)** Work in Inland Waters and Wetlands[1] and the non-tidal portions of Navigable Waters[2] (e.g., the Penobscot River, Kennebec River) is not eligible for Category 1 if:

**i.** The project action area occurs within a watershed occupied by listed Atlantic salmon or shortnose sturgeon. Project proponents must check the site in Footnote 3 below.

**ii.** In areas outside these watersheds contact the USFWS (see Appendix D, Page 1 for contact information) to check for the presence of other listed species.

**(c)** Work in the tidal portions of Navigable Waters may be eligible for Category 1. Reference Appendix A, II. Navigable Waters, Pages 4 – 9, and the other terms and general conditions (GC 11 is particularly relevant) of this GP to determine Category 1 eligibility. Project proponents must contact the USFWS (see Appendix D, Page 1 for contact information) to ensure that work in all tidal portions of Navigable Waters[2] is not in critical habitat or areas occupied by listed species other than Atlantic salmon or shortnose sturgeon.

**(d)** Although some work is excluded from Category 1 as stated in (b) and (c) above, work may qualify for Category 1 if a no effect determination has been made for that work by a federal action agency such as the Corps.

**(e)** Proponents must submit an application to the Corps if any of the activities in 10(a)-10(c) that do not qualify for Category 1 may occur and provide information on federally-listed species or habitat to allow the Corps to conduct any required consultation under Section 7 of the ESA.

**(f)** The Corps review may consider species listed as endangered and threatened pursuant to Maine state law.

**11. Essential Fish Habitat**. Any work in the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration, shall not be authorized under Category 1 of the GP and must be screened for potential impacts to EFH (see Appendix E for more information).

| | | | |
|---|---|---|---|
| Androscoggin River | Aroostook River | Boyden River | Dennys River |
| Ducktrap River | East Machias River | Hobart Stream | Kennebec River |
| Machias River | Narraguagus River | Orland River | Passagassawaukeag River |
| Patten Stream | Penobscot River | Pleasant River | Presumpscot River |
| Saco River | Sheepscot River | St. Croix River | Tunk Stream |
| | | | Union River |

The above does not apply to the following activities which may qualify for Category 1 work:

- Exploratory drilling and borings for bridges.
- Moorings (see Appendix A, Page 6 for Category 1 thresholds and requirements)
- Structures and floats (see Appendix A, Page 7 for Category 1 thresholds and requirements)
- Other activities specified in a programmatic agreement with NMFS.

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[1] See Appendix A, Page 1 for definition.

[2] See Appendix A, Page 4 for definition.

[3] For areas considered occupied by listed Atlantic salmon and/or shortnose sturgeon in Inland Waters and Wetlands, and in Navigable Waters, see: www.nero.noaa.gov/prot_res/altsalmon/dpsmaps.html. Tidal portions of navigable waters occupied by listed Atlantic salmon are more specifically described as those waters from the Kennebec River to its mouth at Merrymeeting Bay, northeast to the Dennys River, including the Androscoggin River upstream to the Brunswick Dam, and other streams northeast of this line to the limit of their tidal reaches.

**12. Wild and Scenic Rivers**. Any activity that occurs in the designated main stem of, within 0.25 mile up or downstream of the designated main stem of, or in tributaries within .25 miles of the designated main stem of a National Wild and Scenic River, or in "bordering and contiguous wetlands" (see Appendix A, Endnote 1) that are adjacent to the designated main stem of a National Wild and Scenic River, or that has the potential to alter flows within a river within the National Wild and Scenic River System, is not eligible for Category 1 regardless of size of the impacts. This condition applies to both designated Wild and Scenic Rivers and rivers officially designated by Congress as study rivers for possible inclusion while such rivers are in an official study status. National Wild and Scenic Rivers System segments for Maine as of October 2010 include: Allagash River beginning at Telos Dam continuing to Allagash checkpoint at Eliza Hole Rapids, approximately 3 miles upstream of the confluence with the St. John River (length = 92 miles).

**13. Federal Navigation Project.** Any structure or work that extends closer to the horizontal limits of any Corps Federal Navigation Project (see Appendix F) than a distance of three times the project's authorized depth shall be subject to removal at the owner's expense prior to any future Corps dredging or the performance of periodic hydrographic surveys. This is applicable to Category 1 and 2. Reference Appendix A, Page 6 (Moorings) and Page 7 (Structure and Floats).

**14. Navigation.**
**(a)** There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein.
**(b)** The permittee understands and agrees that, if future U.S. operations require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

**15. Federal Liability.** In issuing this permit, the Federal Government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the U.S. in the public interest; (c) damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit; (d) design or construction deficiencies associated with the permitted work; (e) damage claims associated with any future modification, suspension, or revocation of this permit.

**16. Avoidance, Minimization and Compensatory Mitigation.**
Discharges of dredged or fill material into waters of the U.S., including wetlands, shall be avoided and minimized to the maximum extent practicable through consideration of alternatives. The Corps may require compensatory mitigation of unavoidable direct and secondary impacts associated with Category 2 projects on a case-by-case basis (see Appendix E).

**17. Heavy Equipment in Wetlands.** Operating heavy equipment other than fixed equipment (drill rigs, fixed cranes, etc.) within wetlands shall be minimized, and such equipment shall not be stored, maintained or repaired in wetlands, to the maximum extent practicable. Where construction requires heavy equipment operation in wetlands, the equipment shall either have low ground pressure

(typically <3 psi), or it shall be placed on swamp/construction/timber mats (herein referred to as "construction mats" and defined at Appendix A, Endnote 4) that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation. Construction mats are to be placed in the wetland from the upland or from equipment positioned on swamp mats if working within a wetland. Dragging construction mats into position is prohibited. Other support structures that are capable of safely supporting equipment may be used with written Corps authorization (Category 2 authorization or Individual Permit). Similarly, the permittee may request written authorization from the Corps to waive use of mats during frozen, dry or other conditions. An adequate supply of spill containment equipment shall be maintained on site.

**18. Temporary Fill.**
Temporary fill that qualifies for Category 1 (e.g., <15,000 SF of combined temporary and permanent fill associated with the single and complete project) or is authorized in writing under Category 2, shall adhere to the following:
**(a)** All temporary fill shall be stabilized to prevent its eroding into portions of waters of the U.S., including wetlands, where it is not authorized.
**(b)** Unconfined temporary fill authorized for discharge into waters of the U.S., including wetlands, shall consist of material that minimizes impacts to water quality (e.g. sandbags, clean gravel, stone, aggregate, etc.).
**(c)** Temporary fill authorized for discharge into wetlands should be placed on geotextile fabric or other material (e.g., straw) laid on the pre-construction wetland grade where practicable to minimize impacts.
**(d)** Temporary fill shall be removed as soon as it is no longer needed, disposed of at an upland site, and suitably contained to prevent subsequent erosion into waters of the U.S, including wetlands.
To qualify for Category 1, temporary fill placed during the:

**i.** Growing season must be removed before the beginning of the next growing season.

**ii.** Non-growing season may remain throughout the following growing season, but must be removed before the beginning of the next growing season.

**(e)** Waters of the U.S., including wetlands, where temporary fill was discharged shall be restored (see GC 19).
**(f)** Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must be placed in a manner that will not be eroded by expected high flows (see GC 21).
**(g)** Construction mats and corduroy roads (see GC 17 above) are considered as temporary fill when they are removed immediately upon work completion. The area must be restored (see GC 19).

**19. Work Site Restoration.**
**(a)** Wetland areas where permanent disturbance is not authorized shall be restored to their original condition and elevation, which under no circumstances shall be higher than the pre-construction elevation. Original condition means careful protection and/or removal of existing soil and vegetation, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized.
**(b)** Upon completion of construction, all disturbed wetland areas (the disturbance of these areas must be authorized) shall be properly stabilized. Any seed mix shall contain only plant species native to New England and shall not contain any species listed in the "Invasive and Other Unacceptable Plant Species" Appendix in the "New England District Compensatory Mitigation Guidance" (see Appendix E, Paragraph 6). This list may be updated periodically.
**(c)** In areas of authorized temporary disturbance, if trees are cut they shall be cut at ground level and

not uprooted in order to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.

**20. Bank Stabilization.**
**(a)** Projects involving construction or reconstruction/maintenance of bank stabilization structures within Corps jurisdiction shall be designed to minimize environmental effects, effects to neighboring properties, scour, etc. to the maximum extent practicable.
**(b)** Project proponents must design and construct bank stabilization projects using this sequential minimization process: avoidance of aquatic resource impacts, diversion of overland flow, vegetative stabilization, stone-sloped surfaces, and walls/bulkheads. Vertical walls/bulkheads shall only be used in situations where reflected wave energy can be tolerated. Refer to Appendix E for design guidance.
**(c)** Inland Water bank stabilization activities necessary for erosion prevention must meet all of the following criteria: **(i)** No material is placed in excess of the minimum needed for erosion protection; **(ii)** The activity is no more than 500 feet in length along the bank; **(iii)** The activity will not exceed an average of one cubic yard per running foot placed along the bank below the plane of the ordinary high water mark; **(iv)** Structures angled steeper than 1H:1V and any material other than angular or subangular stone or fiber roll revetments require at least a Category 2 review. **(v)** The activity does not involve discharges of dredged or fill material into special aquatic sites; **(vi)** No material is of the type, or is placed in any location, or in any manner, to impair surface water flow into or out of any water of the U.S.; **(vii)** No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored trees and treetops may be used in low energy areas); and, **(viii)** The activity is not a stream channelization activity.
(d) Navigable Water bank stabilization activites are provided at Appendix A, Page 4.

**21. Sedimentation and Erosion Control.**
**(a)** Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, installation of sediment control barriers (i.e. silt fence, vegetated filter strips, geotextile silt fences, erosion control mixes, hay bales or other devices) downhill of all exposed areas, retention of existing vegetated buffers, application of temporary mulching during construction, and permanent seeding and stabilization shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. They shall be capable of preventing erosion, of collecting sediment, suspended and floating materials, and of filtering fine sediment.
**(b)** Temporary sediment control barriers shall be removed upon completion of work, but not until all disturbed areas are permanently stabilized. The sediment collected by these sediment barriers shall be removed and placed at an upland location and stabilized to prevent its later erosion into a waterway or wetland.
**(c)** All exposed soil and other fills shall be permanently stabilized at the earliest practicable date (see GC 19).

**22. Stream Work and Crossings[1].**

Notes:

**(a)** GC 22(a) and (b) apply to Inland Waters and Wetlands (see Appendix A, Page 1 for definition) and Navigable Waters (see Appendix A, Page 4 for definition). GC 22(c)-(l) only apply to Inland Waters and Wetlands that are streams. All new and replacement crossings in Navigable Waters require an application to the Corps and at least a Category 2 review.

**(b)** In-stream work in a watershed occupied by listed Atlantic salmon or shortnose sturgeon [see GC 10(b)] and some stream work such as crossings on EFH waters (see GC 11) is not eligible for Category 1.

**(c)** "High-Quality Stream Segments" are shown at www.maine.gov/dep/gis/datamaps and may be useful in evaluating impacts to fisheries. GIS shape files are under "Other Google Earth Interactive Maps" and PDFs by county are under "DEP GIS Maps." See Appendix E, 8(b) for more information.

Conditions:

**(a)** All permanent crossings of rivers, streams, brooks, etc. (hereon referred to as "streams") shall be suitably culverted, bridged, or otherwise designed to **i)** withstand and to prevent the restriction of high flows to qualify for Category 1, and **ii)** not obstruct the movement of or not substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, beyond the actual duration of construction unless the activity's primary purpose is to impound water to qualify for Category 1 or 2. (NOTE: Areas of fill and/or cofferdams must be included in total waterway/wetlands impacts to determine applicability of this GP).

**(b)** Any work that temporarily or permanently impacts upstream or downstream flood conditions, or permanently impacts wetlands in excess of Category 1 thresholds, must be reviewed at least under Category 2. See the documents referenced in Appendix E, 8(c) and (d) for guidance.

**(c)** New Stream Crossings. For new stream crossings to qualify for Category 1:

**i.** Must ensure compliance with GC 22(a) and GC 22(b) above.

**ii.** Shall be designed and constructed in accordance with the Corps General Stream Crossing Standards provided on Page 14 and the stream simulation document listed at Appendix E, 8(a).

**(d)** Replacement Stream Crossings. For replacement stream crossings to qualify for Category 1:

**i.** Must ensure compliance with GC 22(a) and GC 22(b) above.

**ii.** Shall be designed and constructed in accordance with the Corps General Stream Crossing Standards provided on Page 14 and the stream simulation document listed at Appendix E, 8(a).

**(e)** Culvert Extensions. Culvert extensions on culverts that do not meet the Corps General Stream Crossing Standards do not qualify for Category 1 and require an application to the Corps at least as a Category 2 project.

**(f)** Temporary Stream Crossings.

Note: The General Stream Crossing Standards don't apply to temporary stream crossings.

**i.** Temporary stream crossings or cofferdams shall be used for equipment access across streams [see Appendix E, 8(e)]. Note: Areas of fill and/or cofferdams must be included in total waterway/wetlands impacts to determine the review category in Appendix A.

**ii.** Temporary stream crossings shall be removed within 180 days to qualify for Category 1.

**iii.** Temporary stream crossings that are not spans[2] (typically culverts) must be designed in accordance with 1-6 below to qualify for Category 1. Category 2 applications should include information demonstrating 2-6 below:

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[1] This condition does not apply to non-tidal drainage systems and irrigation ditches excavated on dry land.

[2] For the purposes of this GP, spans are bridges, three-sided box culverts, open-bottom culverts or arches that span the stream with footings landward of bankfull width.

**1.** Installed and removed during the low flow period specified in GC 22(l) below.

**2.** Placed on geotextile fabric or other material where practicable to ensure restoration to the original grade. Soil may not be used to construct or stabilize these structures and rock must be large enough to allow for easy removal without disrupting the streambed.

**3.** Designed and maintained to withstand and pass high flows. Water height should be no higher than the top of the culvert's inlet. A minimum culvert diameter of two feet is required to pass debris. Culverts must be aligned to prevent bank erosion or streambed scour.

**4.** Equipped with energy dissipating devices installed downstream if necessary to prevent scour.

**5.** Designed and maintained to prevent soil from entering the waterbody.

**6.** Removed upon the completion of work. Impacts to the streambed or banks requires restoration to their original condition using stream simulation methods[1].

**(g)** Slip Lining. Work using slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe), invert lining, or resulting in decreased diameter, do not qualify for Category 1, either as new work or maintenance activities.

**(h)** Work in Flowing Waters. To qualify for Category 1, no unconfined fill [see GC 18(b)] or excavation in flowing waters is allowed. To accomplish this:

**i.** Bank stabilization work below ordinary high water (OHW) shall utilize erosion controls such as inflatable cofferdams, jersey barrier, silt screen, turbidity curtain, etc. where practicable to prevent sediment input to the stream and to minimize turbidity and sedimentation impacts for sensitive life stages. Bank stabilization above OHW must utilize erosion controls.

**ii.** Management techniques such as temporary flume pipes, culverts, cofferdams, etc. must be used to maintain normal flows within the stream boundary's confines, or water diversions may be used immediately up and downstream of the work footprint (see Appendix A, Endnote 6) or work must be performed in the dry under no flow conditions, or under very low flow conditions following the practices in GC 22(a).

**(i)** Minimization. In order to make the Category 2 review process more efficient and result in a faster decision, new and replacement stream crossings should be designed using the least intrusive and environmentally damaging method following this sequential minimization process: 1) spans with no stream impacts, 2) spans with stream impacts, and 3) embedded culverts with stream simulation or low-slope design.

**(j)** Maintenance Requirements. The permittee shall maintain the work authorized herein in good condition and in conformance with the terms and general conditions of this permit to facilitate aquatic life passage as stated in GC 22(a). Culverts that develop "hanging" inlets or outlets, result in bed washout, or a stream that doesn't match the characteristics of the substrate in the natural stream channel such as mobility, slope, stability confinement will require maintenance or repair to comply with this GC. This does not apply to GC 22(f) above.

**(k)** Maintenance and Replacement Information. An existing stream crossing must be authorized and in compliance with all conditions of its authorization(s) to qualify for maintenance not subject to regulation. See Appendix A, Endnote 7. A non-serviceable crossing is not eligible for maintenance and is therefore considered as a replacement crossing [see 22(d)].

**(l)** Work Window. For projects that otherwise meet the terms of Category 1, in-stream construction work shall be conducted during the low flow period July 15 - October 1 in any year. Projects that are not to be conducted during that time period are ineligible for Category 1 and shall be screened pursuant to Category 2, regardless of the waterway and wetland fill and/or impact area.

*(See next page for Corps General Stream Crossing Standards.)*

[1] Design and construction shall be in accordance with the stream simulation document listed at Appendix E, 8(a).

Corps General Stream Crossing Standards (required for Category 1, recommended for Category 2):
**(a)** Culverts must be embedded:

- ≥ 2 feet for box culverts and other culverts with smooth internal walls,
- ≥ 1 foot for corrugated pipe arches
- ≥ 1 foot and at least 25 percent for corrugated round pipe culverts

**(b)** For new crossings, spans[1] are required to avoid or cause minimal disruption to the streambed and to meet the requirements of General Condition 22(a) and 22(b). Footings and abutments must be landward of 1.2 times bankfull width. To the greatest extent practicable, work in the stream shall be minimized, and design and construction shall allow the streambed's natural structure and integrity to remain intact. Any fill or excavation of the streambed below bankfull width other than footings, support pilings, or work specified in 22(h)ii requires Category 2 review and, unless demonstrated otherwise, stream simulation[2] to establish substrate and banks in the span structure and work area as specified in (d) and (e) below.
**(c)** For replacement crossings, spans[1] are required to meet the requirements of General Condition 22(a) and 22(b). Footings and abutments shall be landward of 1.2 times bankfull width. Unless demonstrated otherwise, stream simulation[2] is required to establish substrate and banks in the span structure and work area as specified in (d) and (e) below.
**(d)** Crossings must have a natural bottom substrate within the structure matching the characteristics of the substrate in the natural stream channel and the banks (mobility, slope, stability, confinement, grain and rock size)[2] at the time of construction and over time as the structure has had the opportunity to pass significant flood events. To allow terrestrial passage for wildlife and prevent undermining the footings, crossings shall have a bank on both sides of the stream matching the horizontal profile of the existing stream and banks[2].
**(e)** Crossings must be designed and constructed[2] with appropriate bed forms and streambed characteristics so that water depths and velocities are comparable to those found in the natural channel at a variety of flows. In order to provide appropriate water depths and velocities at a variety of flows and especially low flows, it is usually necessary to reconstruct the streambed or preserve the natural channel within the structure. Otherwise, the width of the structure needed to accommodate higher flows will create conditions that are too shallow at low flows. The grain and rock size, and arrangement of streambed materials within the structure should be in accordance with (d) above. Flows could go subsurface within the structure if only large material is used without smaller material filling the voids.

**23. Wetland Crossings.**
**(a)** All temporary and permanent crossings of wetlands shall be suitably culverted, bridged, or otherwise designed to: **i)** Withstand and prevent the restriction of high flows, **ii)** Not obstruct the movement of or not substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the wetland, including those species that normally migrate through the area, beyond the actual duration of construction unless the activity's primary purpose is to impound water. See Appendix E for the Maine DEP's crossing standards.
**(b)** To qualify for Category 1, new and replacement wetland crossings that are permanent shall be culverted, spanned or bridged in such a manner as to preserve hydraulic and ecological connectivity, at its present level, between the wetlands on either side of the road. To meet this requirement, we

[1] For the purposes of this GP, spans are bridges, three-sided box culverts, open-bottom culverts or arches that span the stream with footings landward of bankfull width.
[2] Design and construction shall be in accordance with the stream simulation document listed at Appendix E, 8(a).

recommend that culverts, spans or bridges be placed at least every 50 feet with an opening at least 2 feet high and 3 feet wide at ground level where practicable. Closed bottom culverts shall be embedded at least 6 inches with a natural bottom.
**(c)** In the case of non-compliance, the permittee shall take necessary measures to correct wetland damage due to lack of hydraulic and ecological connectivity.
**(d)** Any work that results in flooding, results in impacts to wetlands on either side of the wetland crossing in excess of Category 1 thresholds, or impacts wetland drainage from the upgradient side of the wetland crossing does not qualify for Category 1.

**24. Discharge of Pollutants.**
**(a)** All activities involving any discharge of pollutants into waters of the U.S., including wetlands, authorized under this GP shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the Clean Water Act (CWA) (33 USC 1251), and applicable state and local laws. If applicable water quality standards, limitations, etc., are revised or modified during the term of this GP, the authorized work shall be modified to conform with these standards within six months of the effective date of such revision or modification, or within a longer period of time deemed reasonable by the Corps in consultation with the EPA. Issuance of a LURC or DEP NRPA permit confirms that state water quality standards are met.
**(b)** All projects authorized by this GP shall be designed, constructed and operated to minimize or eliminate the discharge of pollutants.
**(c)** All activities involving any discharge of pollutants into waters of the U.S., including wetlands, authorized under this GP must comply with Section 402 [33 U.S.C. 1342] of the CWA and the requirements of the National Pollutant Discharge Elimination System (40 CFR 122).

**25. Spawning, Breeding and Migratory Areas.** Activities and impacts such as excavations, discharges of dredged or fill material, and/or suspended sediment producing activities, in fish migratory areas, fish and shellfish spawning or nursery areas, or amphibian and migratory bird breeding areas, during spawning or breeding seasons shall be avoided and minimized to the maximum extent practicable.

**26. Storage of Seasonal Structures.** Coastal structures, such as pier sections and floats, that are removed from the waterway for a portion of the year (often referred to as seasonal structures) shall be stored in an upland location located above mean high water (MHW) and not in tidal wetlands or mudflats. These seasonal structures may be stored on the fixed, pile-supported portion of the structure that is seaward of MHW. This is intended to prevent structures from being stored on the marsh substrate, mudflats, or the substrate seaward of MHW. Seasonal storage of structures in navigable waters, e.g., in a protected cove on a mooring, requires Corps and local harbormaster approval.

**27. Environmental Functions and Values.** The permittee shall make every reasonable effort to carry out the construction or operation of the work authorized herein in a manner that maintains as much as is practicable, and minimize any adverse impacts on existing fish, wildlife, and natural environmental functions and values.

**28. Protection of Vernal Pools (VPs).**
**(a)** Impacts to VP Management Areas[1] for all VPs on, and known VPs surrounding, the project site shall be minimized to the maximum extent practicable.
**(b)** The following management practices must be followed for all work within the VP Management Area (750' of a VP's edge) of all VPs in order to qualify for Category 1 when there is fill placed in a water of the U.S., including wetlands:

- **i.** Similar to the DEP's Significant Wildlife Habitat regulations[2]:
  1. No disturbance within the VP Depression or VP Envelope (area within 100 feet of the VP Depression's edge)[3];
  2. Maintain a minimum of 75% of the Critical Terrestrial Habitat (area within 100-750 feet of the VP Depression's edge) as unfragmented forest with at least a partly-closed canopy of overstory trees to provide shade, deep litter and woody debris[3];
  3. Maintain or restore forest corridors connecting wetlands and significant vernal pools;
  4. Minimize forest floor disturbance; and
  5. Maintain native understory vegetation and downed woody debris.
- **ii.** Cape Cod style-curbing or no curbing options shall be used on new roads to facilitate amphibian passage[2].

**(c)** For work not complying with the requirements in (b) above, applicants shall submit an application to the Corps for at least Category 2 review with information on directional buffers in accordance with the VP Directional Buffer Guidance document[2]. Conservation of the unimpacted area within the VP Management Area will often be required.
**(d)** GC 2 requires applicants to delineate or approximately identify on the project plans all waters of the U.S., which include vernal pools. Appendix A, Page 1 lists VP Category 1 thresholds.

**29. Invasive Species.**
**(a)** The introduction, spread, or the increased risk of invasion of invasive plant or animal species on the project site, into new or disturbed areas, or areas adjacent to the project site caused by the site work is prohibited (see Appendix E, Paragraph 6).
**(b)** Unless otherwise directed by the Corps, all applications for Category 2 inland projects and Category 2 coastal fill projects proposing fill in Corps jurisdiction shall include an Invasive Species Control Plan (ISCP) (see Appendix E, Paragraph 6).

**30. Cranberry Development Projects.** For cranberry development projects authorized under the GP, the following conditions apply:
**(a)** If a cranberry bog is abandoned for any reason, the area must be allowed to revert to natural wetlands unless an Individual Permit is obtained from the Corps allowing the discharge of fill for an alternate use.

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[1] The Corps VP Management Area, which includes the VP and a750' radius from the VP's edge, is defined at Appendix A, Endnote 5.
[2] Appendix E, 10(a)-(d) provides links to the state's Significant Wildlife Habitat regulations and references that provide impact minimization measures to reference when designing projects.
[3] The no disturbance requirement in the VP envelope [see (b)(i)(1)], and (b)(i)(2), do not apply to temporary impacts associated with construction mats in previously disturbed areas of existing utility project (e.g., transmission lines, gas pipelines) or linear transportation project (e.g., roads, highways, railways, trails, airport runways and taxiways) right-of-ways provided there is a Vegetation Management Plan that avoids, minimizes and mitigates impacts to aquatic resources.

**(b)** No stream diversion shall be allowed under Category 1 of this GP.
**(c)** No impoundments of intermittent or perennial streams shall be allowed under Category 1 and an application to the Corps is required for at least Category 2 review.
**(d)** The project shall be designed and constructed to not cause flood damage on adjacent properties.

**31. Inspections.** The permittee shall allow the Corps to make periodic inspections at any time deemed necessary in order to ensure that the work is being or has been performed in accordance with the terms and conditions of this GP. The Corps may also require post-construction engineering drawings for completed work or post-dredging survey drawings for any dredging work.
To facilitate these inspections, the permittee shall complete and return to the Corps:

- For Category 1 projects, the Category 1 Notification Form (Appendix B).
- For Category 2 projects, the 1) Work-Start Notification Form and 2) Compliance Certification Form whenever either is provided with a Category 2 authorization letter.

**32. Maintenance.**
**(a)** The permittee shall maintain the work authorized herein in good condition and in conformance with the terms and general conditions of this permit.
**(b)** This does not include maintenance of dredging projects. Each maintenance dredging event exceeding the Category 1 thresholds (see Appendix A, Page 6) requires a new written Corps authorization unless an unexpired, written Corps authorization specifies that the permittee may "dredge and maintain" an area for a particular time period. Category 1 or 2 maintenance dredging includes only those areas and depths previously authorized and dredged.
**(c)** Some maintenance activities may not be subject to regulation under Section 404 in accordance with 33 CFR 323.4(a)(2) (see Appendix A, Endnote 7).

**33. Property Rights.** This PGP does not convey any property rights, either in real estate or material, or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations.

**34. Transfer of GP Verifications**. When the structures or work authorized by this GP are still in existence at the time the property is transferred, the terms and conditions of this GP, including any special conditions, will continue to be binding on the entity or individual who received the GP verification, as well as the new owner(s) of the property. The permittee may transfer responsibilities and obligations under the GP verification to the new owner by submitting a letter to the Corps (see Appendix D for address) to validate the transfer. A copy of the GP verification must be attached to the letter and the letter must contain the following statement and signature: "When the structures or work authorized by this GP are still in existence at the time the property is transferred, the terms and conditions of this GP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this GP and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

**35. Modification, Suspension, and Revocation.** This GP or any work authorized under Category 1 or 2 may be either modified, suspended, or revoked, in whole or in part, pursuant to the policies and procedures of 33 CFR 325.7. Any such action shall not be the basis for any claim for damages against the United States.

**36. Restoration Directive.** The permittee, upon receipt of a notice of revocation of authorization under this GP, shall restore the wetland or waterway to its former condition without expense to the United States and as directed by the Secretary of the Army or his authorized representative. If the permittee fails

to comply with such a directive, the Secretary or his designee may restore the wetland or waterway to its former condition, by contract or otherwise, and recover the cost from the permittee.

**37. Special Conditions.** The Corps may independently, or at the request of the Federal resource agencies, impose other special conditions on a project authorized pursuant to this GP that are determined necessary to minimize adverse navigational and/or environmental effects or based on any other factor of the public interest. Failure to comply with all conditions of the authorization, including special conditions, constitutes a permit violation and may subject the permittee to criminal, civil, or administrative penalties and/or an ordered restoration.

**38. False or Incomplete Information.** If the Corps makes a determination regarding the eligibility of a project under this GP and subsequently discovers that it has relied on false, incomplete, or inaccurate information provided by the permittee, the GP authorization shall not be valid and the U.S. government may institute appropriate legal proceedings.

**39. Abandonment.** If the permittee decides to abandon the activity authorized under this GP, unless such abandonment is merely the transfer of property to a third party, he/she may be required to restore the area to the satisfaction of the Corps.

**40. Enforcement Cases.** This GP does not apply to any existing or proposed activity in Corps jurisdiction associated with an on-going Corps or EPA enforcement action, until such time as the enforcement action is resolved or the Corps and/or EPA as appropriate determines that the activity may proceed independently without compromising the enforcement action.

**41. Duration of Authorization.** This GP expires on October 11, 2015. Activities authorized under this GP that have commenced (i.e., are under construction) or are under contract to commence before this GP expires will have until October 11, 2016 to complete the activity under the terms and conditions of the current GP.

**42. Previously Authorized Activities.**
**(a)** Projects that have received authorization (Category 1 or 2) from the Corps and that were completed under the previous PGPs, nationwide permits, regional general permits or letters of permission, shall remain authorized.
**(b)** Activities authorized pursuant to 33 CFR Part 330.3 ("Activities occurring before certain dates") are not affected by this GP.
**(c)** Any work not commenced nor completed that was authorized in a written letter from the Corps under the PGP in effect between October 11, 2005 and October 11, 2010 remains authorized subject to the terms and general conditions of this GP along with any special conditions in the authorizing written letter.

**43. NEPA Compliance.** The Maine PGP was authorized in full compliance with Council for Environmental Quality ("CEQ") NEPA regulations. The Corps has determined that individual permit actions taken under the terms and conditions of the PGP are not a major federal action significantly affecting the quality of the human environment.

10/12/10

District Engineer Date

# APPENDIX A: DEFINITION OF CATEGORIES

| | | |
|---|---|---|
| **A. INLAND WATERS AND WETLANDS** | **Inland Waters and Wetlands:** Waters that are regulated under Section 404 of the Clean Water Act, including rivers, streams, lakes, ponds and wetlands, and excluding Section 10 Navigable Waters of the U.S. The jurisdictional limits are the ordinary high water (OHW) mark in the absence of adjacent wetlands, beyond the OHW mark to the limit of adjacent wetlands when adjacent wetlands are present, and the wetland limit when only wetlands are present. For the purposes of this GP, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands[1] to tidal waters are reviewed in the Navigable Waters section. (See II. Navigable Waters on page 4 below.) | |
| | Projects not meeting Category 1 require an application for review as a Category 2 or Individual Permit project.<br>All Category 1 and 2 projects must comply with all of this GP's applicable terms (Pages 1 – 4) and general conditions (Pages 5–18). | |
| **ACTIVITY** | **CATEGORY 1** | **CATEGORY 2** |
| **(a) NEW FILL/ EXCAVATION DISCHARGES**<br><br>(You must reference (b) – (e) below for other thresholds that may be relevant to your project.) | **1.** <15,000 square feet (SF) (in LURC or DEP territories) of inland waterway and/or wetland fill and associated secondary impacts[2] (e.g., areas drained, flooded, fragmented, mechanically cleared or excavated). Fill area includes all temporary and permanent fill, and regulated discharges associated with excavation. Construction mats are considered as fill. [See General Condition (GC) 18(g).]<br><u>Provided:</u><br>• Historic fill + proposed impact area <15,000 SF and subdivision fill complies with GC 5, Single and Complete Projects.<br>• No work in special aquatic sites (SAS)[4] other than wetlands.<br><br>**2.** Construction mats[4] of any area necessary to conduct activities that were previously authorized, authorized under Category 1, or not subject to regulation (see Endnote 7). Authorized construction mats must be in place for <3 months, removed immediately upon work completion, and the wetlands must be restored (see GC 19).<br><br>**3.** For work in Vernal Pool (VP) Management Areas (includes VPs)[5]:<br>• See GC 2 and Appendix C for VP delineation requirements.<br>• See GC 28 to determine if work qualifies for Category 1 or 2.<br>• See Appendix E, Page 3 for VP documents providing mitigation guidance. | **1.** ≥15,000 square feet (SF) (in LURC or DEP territories) to <3 acres of inland waterway and/or wetland fill and associated secondary impacts (e.g., areas drained, flooded, fragmented, or excavated). Fill area includes all temporary and permanent fill, and regulated discharges associated with excavation. Mechanical clearing without grubbing or other soil disturbance >3 acres as a secondary impact may still be eligible for Category 2 at the discretion of the Corps.<br><br>**2.** Specific activities with impacts of any area ≥15,000 SF required to affect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Wetlands must be restored in place.<br><br>**3.** Temporary structures, work, and discharges (including construction mats[4]) ≥15,000 SF necessary for construction activities or access fills or dewatering of construction sites, provided that the associated primary activity is authorized by the Corps, authorized under Category 1, or not subject to Corps regulation.<br>GCs 16 -19 are particularly relevant.<br><br>See GC 2 and Appendix C for wetland delineation requirements. |

| ACTIVITY | CATEGORY 1 | CATEGORY 2 |
|---|---|---|
| **(b) BANK STABILIZATION PROJECTS** | **1.** Inland bank stabilization <500 FT long and <1 CY of fill per linear foot below OHW, provided:<br>• ≤1 cubic yard of fill per linear foot placed along the bank waterward of ordinary high water.<br>• Work complies with the GCs (GC 20 in particular), including:<br>o No structures angled steeper than 1H:1V allowed. Only rough-faced stone or fiber roll revetments allowed.<br>o No in-stream work involving fill or excavation in flowing waters (see GC 22(h)).<br>• In-stream work limited to Jul 15 - Oct 1 [see GC 22 (l)].<br>• No work in vernal pools[5] or SAS[3].<br>• GC 10 Endangered Species and GC 11 Essential Fish Habitat are particularly relevant. | **1.** Inland bank stabilization ≥500 FT long and/or ≥1 CY of fill per linear foot, or any amount with fill in wetlands. |
| **(c) RIVER/ STREAM/ BROOK WORK & CROSSINGS *and* WETLAND CROSSINGS** | **1.** River, stream and brook work and crossings:<br>• Must comply with GC 22 in particular, including:<br>o No slip lining [see GC 22 (g)].<br>o No in-stream work involving fill or excavation in flowing waters [see GC 22(h)].<br>o In-stream work limited to Jul 15 - Oct 1 [see GC 22 (l)].<br>• No work in riffles and pools[3].<br>• No stream relocations.<br>• No dams or dikes[6].<br>• Work in areas designated as Atlantic salmon critical habitat or occupied by listed Atlantic salmon, or any other area occupied by a listed species is not eligible for Category 1 (see GC 10).<br>• No work in EFH streams except for the activities stated in GC 11.<br><br>**2.** Wetland crossings must comply with the particularly relevant GC 23. | **1.** Work not qualifying for Category 1. |

| ACTIVITY | CATEGORY 1 | CATEGORY 2 |
|---|---|---|
| **(d) REPAIR, REPLACEMENT, & MAINTENANCE OF AUTHORIZED FILLS** | **1.** Repair or maintenance of existing, currently serviceable, authorized fills with no expansion or change in use:<br>• Conditions of the original authorization apply<br>• Minor deviations in fill design allowed.[7]<br>• The repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events is authorized, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. | **2.** Replacement of non-serviceable fills, or repair/maintenance of serviceable fill, with expansion <3 acres, or with a change in use. |
| **(e) MISCELL-ANEOUS** | **1.** Activities required for the containment and cleanup of oil and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) provided that the work is done in accordance with the Spill Control and Countermeasure Plan required by 40 CFR 112.3 and any existing state contingency plan and provided that the Regional Response Team (if one exists in the area) concurs with the proposed containment and cleanup action. SAS[3] must typically be restored in place at the same elevation.<br><br>**2.** Scientific measurement devices whose purpose is to measure and record scientific data, such as staff gages, water recording devices, water quality testing and improvement devices, and similar structures. This excludes any biological sampling devices. Structures may not restrict movement of aquatic organisms.<br><br>**3.** Survey activities, such as core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, and historic resources surveys (but not recovery). Exploratory trenches must be restored in accordance with GC 19. The construction of temporary pads is authorized provided the discharge doesn't exceed 25 CY. This doesn't authorize permanent structures or the drilling and the discharge of excavated material from test wells for oil and gas exploration (the plugging of such wells is authorized).<br><br>**4.** Any work not commenced nor completed that was authorized in a written letter from the Corps under the PGP in effect between October 11, 2005 and October 11, 2010. The terms and general conditions of this GP apply along with any special conditions in the written authorization. | **1.** Aquatic habitat restoration, establishment, and enhancement of wetlands and riparian areas and the restoration and enhancement of streams and other open waters with impacts of any area ≥15,000 SF, provided those activities result in net increase in overall aquatic resource functions and services.[8]<br><br>**2.** Projects where an EIS is required by the Corps are not eligible for Category 2. |

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| **II. NAVIGABLE WATERS** | **Navigable Waters of the United States**: Waters that are subject to the ebb and flow of the tide and/or the tidal and non-tidal portions of the Federally designated navigable waters (the Penobscot River, Kennebec River, and Lake Umbagog) (Section 10 Rivers and Harbors Act of 1899). The jurisdictional limits are the mean high water (MHW) line in tidal waters and the ordinary high water (OHW) mark in non-tidal portions of the federally designated navigable rivers. For the purposes of this GP, fill placed in the area between the mean high water (MHW) and the high tide line (HTL), and in the bordering and contiguous wetlands[1] to tidal waters are also reviewed in this Navigable Waters section. | |
| | Projects not meeting Category 1 require an application for review as a Category 2 or Individual Permit project.<br>All Category 1 and 2 projects must comply with all of this GP's applicable terms (Pages 1 - 4) and general conditions (Pages 5 - 18). | |
| **ACTIVITY** | **CATEGORY 1** | **CATEGORY 2** |
| (a) **FILL** | **1.** Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the U.S., including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills provided the U.S. Coast Guard authorizes such discharges as part of the bridge permit or appropriate approval. Causeways and approach fills are not included in this category and require Category 2 or Individual Permit authorization.<br><br>**2.** Bank stabilization projects <200 linear feet:<br>• ≤1 cubic yard of fill per linear foot placed along the bank waterward of high tide line. No fill or equipment will occur in SAS[3].<br>• Work conducted in the intertidal zone must be conducted in-the-dry during low water, or between Nov. 8 – Apr. 9.<br>• No structures angled steeper than 1H:1V and only rough-faced stone or fiber roll revetments allowed.<br>• No driving of piles or sheeting.<br><br>**3.** For 1 and 2 above:<br>• Project proponents must contact the USFWS for work on coastal beaches to ensure no impacts to piping plovers, roseate terns or their habitat [see GC 10(b)ii]. | **1.** <1 acre temporary or permanent fill, excavation and/or secondary impacts (e.g., areas drained, flooded, fragmented or mechanically cleared). Fill area includes all temporary and permanent waterway fills, provided:<br>• Temporary or permanent fill in eelgrass[14] <1000 SF.<br>• Permanent fill in SAS (excluding eelgrass[14]) <4300 SF. |
| **(b) STREAM WORK & CROSSINGS, *and* WETLAND CROSSINGS** | **1.** No new fill for crossings allowed. | **1.** New crossings or replacement crossings that do not fit the (c) Repair and Maintenance activity below. |

| ACTIVITY | CATEGORY 1 | CATEGORY 2 |
|---|---|---|
| **(c) REPAIR AND MAINTENANCE WORK** | **1.** Repair, replacement in-kind, or maintenance[7] of existing, currently serviceable[7], authorized structures or fills:<br>• Conditions of the original authorization apply.<br>• No substantial expansion or change in use.<br>• Must be rebuilt in same footprint, however minor deviations in structure design allowed[7].<br>• The repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events is authorized, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. Minor deviations for work involving piles shall adhere to one of the 4 methods in a - d below:<br>**a.** Piles installed in-the-dry during low water or in-water between Nov. 8th - Apr. 9th, or<br>**b.** Must be drilled and pinned to ledge, or<br>**c.** Vibratory hammers used to install any size and quantity of wood, concrete or steel piles, or<br>**d.** Impact hammers limited to one hammer and <50 piles installed/day with the following: wood piles of any size, concrete piles ≤18-inches diameter, steel piles <12-inches diameter if the hammer is ≤3000 lbs and a wood cushion is used between the hammer and steel pile, and<br>• For b – d above:<br>o In-water noise levels shall not exceed >187dB SEL re 1µPa or 206dB peak re 1µPa at a distance >10m from the pile being installed~~.~~, and<br>o In-water noise levels >155dB peak re 1µPa shall not exceed 12 consecutive hours on any given day and a 12 hour recovery period (i.e., in-water noise below 155dB peak re 1µPa) must be provided between work days.<br>• For a – d above:<br>o Work is not eligible for Category 1 if conducted in tidal portions of the Penobscot river upstream of a line extending from Turner point in Castine to Moose Point (formerly squaw point) on Cape Jellison in Stockton Springs or in tidal portions of the Kennebec or Androscoggin Rivers upstream of a line extending from Doubling point in Arrowsic to Hospital Point in West Bath. | **1.** Replacement of non-serviceable structures and fills or repair/maintenance of serviceable structures or fills, with fill, replacement or expansion <1 acre, or with a change in use. |

| ACTIVITY | CATEGORY 1 | CATEGORY 2 |
|---|---|---|
| **(d) DREDGING AND ASSOCIATED DISPOSAL** | **1.** Maintenance dredging[10] for navigational purposes <1,000 CY with upland disposal. Includes return water from upland contained disposal area, provided:<br>• Proper siltation controls are used.<br>• Dredging & disposal operation limited to Nov. 8 – Apr. 9.<br>• No impact to SAS[3].<br>• No dredging in intertidal areas.<br>• No dredging in areas considered occupied by listed Atlantic salmon [see GC 10(b)(ii)].<br>• For dredging in waters outside of Atlantic salmon critical habitat, applicants must contact NMFS (Appendix D) to ensure no impacts to listed species such as shortnose sturgeon.<br>• Project proponents must contact the USFWS for work on coastal beaches to ensure no impacts to piping plovers, roseate terns or their habitat [see GC 10(c)]. | **1.** Maintenance dredging[10] ≥1,000 CY, new dredging <25,000 CY, or projects not meeting Category 1. Includes return water from upland contained disposal areas. Disposal includes:<br>• Upland.<br>• Beach nourishment (above mean high water) of any area provided dredging's primary purpose is navigation or sand is from an upland source.<br>• Open water & confined aquatic disposal, if Corps finds the material suitable.<br><br>**2.** Beach nourishment associated with dredging when the primary purpose is not navigation requires at least a Category 2 review.<br><br>**3.** Maintenance or new dredging[10] and/or disposal in or affecting a SAS[3] requires an Individual Permit. See II(a) above for dredge disposal in wetlands or waters. |
| **(e) MOORINGS** | **1.** Private, non-commercial, non-rental, single-boat moorings, provided:<br>• Authorized by the local harbormaster/town.<br>• Not associated with any boating facility.[11]<br>• Boat or mooring not located in a Federal Navigation Project[12] other than a Federal Anchorage[12]. Moorings in Federal Anchorage not associated with a boating facility[11] and are not for rent.<br>• No interference with navigation.<br>• No new moorings located in SAS[3]. Prior to installation of moorings, a site-specific eelgrass survey should be conducted to document that eelgrass is not present.<br>• When existing, authorized moorings in SAS[3] are going to be replaced, they shall be replaced with elastic mooring systems that prevent mooring chains from resting or dragging on the bottom substrate at all tides and helical anchors, or equivalent SAS protection systems where practicable.<br><br>**2.** Minor relocation of previously authorized moorings and moored floats, provided:<br>• Authorized by the local harbormaster/town.<br>• Not located in SAS[3]<br>• No interference with navigation.<br>• Cannot be relocated into a Federal Navigation Project[12] other than a Federal Anchorage[12] | **1.** Moorings associated with a boating facility[11]. An eelgrass[14] survey may be required.<br><br>**2.** Moorings that don't meet the terms in Category 1 and don't require an Individual Permit. This includes private moorings with no harbormaster or means of local approval.<br><br>**3.** Moorings located such that they, and/or vessels docked or moored at them, are within the buffer zone of the horizontal limits[13] of a Federal Channel[12]. (See Appendix F.) The buffer zone is equal to 3 times the authorized depth of that channel.<br><br>**4.** An IP is required for moorings within the horizontal limits[11], or with moored vessels that extend, into the horizontal limits of a Federal Navigation Project[12], except those in Federal Anchorages[12].<br><br>For 1-4 above, siting of new individual moorings in SAS[3], including eelgrass[14], should be avoided to the maximum extent practicable. If SAS[3] cannot be avoided, plans should show elastic mooring systems that prevent mooring chains from resting or dragging on the bottom substrate at all tides and helical anchors, or equivalent SAS protection systems, where practicable. |

| ACTIVITY | CATEGORY 1 | CATEGORY 2 |
|---|---|---|
| **(f) STRUCTURES AND FLOATS** | **1.** Reconfiguration of existing, authorized structures or floats.<br><br>Provided:<br>**a**. Piles shall adhere to one of the 4 methods in (i) –(iv) below:<br>**i.** Piles installed in-the-dry during low water or in-water between Nov. 8th - Apr. 9th, or<br>**ii.** Must be drilled and pinned to ledge, or<br>**iii.** Vibratory hammers used to install any size and quantity of wood, concrete or steel piles, or<br>**iv.** Impact hammers limited to one hammer and <50 piles installed/day with the following: wood piles of any size, concrete piles ≤18-inches diameter, steel piles <12-inches diameter if the hammer is ≤3000 lbs and a wood cushion is used between the hammer and steel pile.<br>**b**. For (ii) – (iv) above:<br>**i.** In-water noise levels shall not exceed >187dB SEL re 1µPa or 206dB peak re 1µPa at a distance >10m from the pile being installed., and<br>**ii.** In-water noise levels >155dB peak re 1µPa shall not exceed 12 consecutive hours on any given day and a 12 hour recovery period (i.e., in-water noise below 155dB peak re 1µPa) must be provided between work days.<br>**c.** For (i) –(iv) above:<br>**i.** Work is not eligible for Category 1 if conducted in tidal portions of the Penobscot river upstream of a line extending from Turner point in Castine to Moose Point (formerly squaw point) on Cape Jellison in Stockton Springs or in tidal portions of the Kennebec or Androscoggin Rivers upstream of a line extending from Doubling point in Arrowsic to Hospital Point in West Bath. | **1.** Private structures or floats, including floatways/skidways, built to access waterway (seasonal and permanent)<br><br>**2.** Expansions to existing boating facilities[11].<br><br>For 1 & 2 above, compliance with the following design standards is not required but recommended:<br>• Pile-supported structures <400 SF, with attached floats totaling ≤200 SF.<br>• Bottom anchored floats ≤200 SF.<br>• Structures are ≤4' wide and have at least a 1:1 height:width ratio[11].<br>• Floats supported a minimum of 18" above the substrate during all tides.<br>• Structures & floats not located within 25' of any eelgrass[8].<br>• Moored vessels not positioned over SAS[4].<br>• No structure located within 25' of the riparian property boundary without written approval from the abutter(s).<br>• No structure extends across >25% of the waterway width at mean low water.<br>• Not located within the buffer zone of the horizontal limits[13] of a Corps Federal Navigation Project (FNP) (App. F). The buffer zone is equal to three times the authorized depth of that FNP.<br><br>**3.** An Individual Permit is required for structures or floats, including floatways/skidways, located such that they and/or vessels docked or moored at them are within the horizontal limits[13] of a Corps Federal Navigation Project[12] (see App. F).<br><br>**4.** An Individual Permit is required for structures & floats associated with a new or previously unauthorized boating facility[11]. |

| ACTIVITY | CATEGORY 1 | CATEGORY 2 |
|---|---|---|
| **(g) MISCELL-ANEOUS** | **1.** Temporary buoys, markers, floats, etc. for recreational use during specific events, provided they are removed within 30 days after use is discontinued.<br><br>**2.** The placement of aids to navigation and regulatory markers which are approved by and installed in accordance with the requirements of the U.S. Coast Guard. (See 33 CFR 66, Chapter I, subchapter C)."<br><br>**3.** Activities required for the containment and cleanup of oil and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) provided that the work is done in accordance with the Spill Control and Countermeasure Plan required by 40 CFR 112.3 and any existing state contingency plan and provided that the Regional Response Team (if one exists in the area) concurs with the proposed containment and cleanup action. SAS[3] must typically be restored in place at the same elevation.<br><br>**4.** Fish and wildlife harvesting, enhancement, and attraction devices and activities such as pound nets, crab traps, crab dredging, eel pots, lobster traps, and clam and oyster digging, and small fish attraction devices such as open water fish concentrators (sea kites, etc.). This does not authorize artificial reefs or impoundments and semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster, or the use of covered oyster trays or clam racks. No activity that results in a hazard to navigation. Note: A Category 1 Notification Form is not required for these devices and activities.<br><br>**5.** Scientific measurement devices whose purpose is to measure and record scientific data, such as staff gages, water recording devices, water quality testing and improvement devices, and similar structures. Structures may not restrict movement of aquatic organisms. No activity results in a hazard to navigation.<br><br>**6.** Survey activities such as exploratory drilling, surveying and sampling activities, excluding any biological sampling devices.<br>Does not include oil and gas exploration and fill for roads or construction pads. No activity results in a hazard to navigation.<br>Applicants must contact NMFS to ensure no impacts to listed species. | **1.** Structures or work in or affecting tidal or navigable waters, that are not defined under any of the previous headings listed above. Includes, but is not limited to, utility lines, aerial transmission lines, pipelines, outfalls, boat ramps, floatways/skidways, bridges, tunnels and horizontal directional drilling activities seaward of the mean high water line.<br><br>**2.** Shellfish/finfish (other than Atlantic salmon), or other aquaculture facilities with no more than minimal individual and cumulative impacts to environmental resources or navigation. –Aquaculture guidelines are provided at: www.maine.gov/dmr/aquaculture/index.htm.<br><br>**3.** Specific activities with impacts of any area required to affect the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with established legal or regulatory authority. Wetlands must typically be restored in place at the same elevation to qualify.<br><br>**4.** Aquatic habitat restoration, establishment and enhancement provided those activities are proactive and result in net increases in aquatic resource functions and services.[8]<br><br>**5.** Projects where an EIS is required by the Corps are not eligible for Category 2. |

| ACTIVITY | CATEGORY 1 | CATEGORY 2 |
|---|---|---|
| **(g) MISCELL-ANEOUS (continued)** | **7.** Shellfish seeding (brushing the flats[9]) projects.<br><br>**8.** Marine railway work not eligible for maintenance[7] (i.e. not currently serviceable[7] or in non-compliance) may be replaced "in-kind" with minor deviations[7] provided:<br>• Work is in the intertidal zone<br>• No fill expansion below high tide line.<br>• Work conducted in-the-dry during low water or in-water between Nov. 8 – Apr. 9.<br><br>**9.** Test plots <100 SF for the planting of wetland species native to the area. No grading, no structures, no plant growing devices and no interference with navigation, which require at least Category 2 review.<br><br>**10.** Any work not commenced nor completed that was authorized in a written letter from the Corps under the PGP in effect between October 11, 2005 and October 11, 2010. The terms and general conditions of this GP apply along with any special conditions in the written authorization | |

**Endnotes/Definitions**

[1] **Bordering and Contiguous Wetlands:** A bordering wetland is immediately next to its adjacent waterbody and may lie at, or below, the ordinary high water mark (mean high water in navigable waters) of that waterbody and is directly influenced by its hydrologic regime. Contiguous wetlands extend landward from their adjacent waterbody to a point where a natural or manmade discontinuity exists. Contiguous wetlands include bordering wetlands as well as wetlands that are situated immediately above the ordinary highwater mark and above the normal hydrologic influence of their adjacent waterbody. Note, with respect to the federally designated navigable rivers, the wetlands bordering and contiguous to the tidally influenced portions of those rivers are reviewed under "II. Navigable Waters."

[2] **Direct, Secondary, and Cumulative Impacts/Effects:**

Direct Impacts: The immediate loss of aquatic ecosystem within the footprint of the fill.

Secondary Impacts: These are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material. Information about secondary effects on aquatic ecosystems shall be considered prior to the time final section 404 action is taken by permitting authorities. Some examples of secondary effects on an aquatic ecosystem are a) fluctuating water levels in all impoundment and downstream associated with the operation of a dam, b) septic tank leaching and surface runoff from residential or commercial developments on fill, and c) leachate and runoff from a sanitary landfill located in waters of the U.S. Put another way, secondary effects are those impacts outside the footprint of the fill that arise from and are associated with the discharge of dredged or fill material, including the operation of an activity or facility associated with the discharge. Examples may include habitat fragmentation; interruption of travel corridors for wildlife (for example, for amphibians that migrate to and from seasonal or vernal pools used as breeding habitat); hydrologic regime changes; and impacts from operation and maintenance activities for constructed facilities; such as noise/lighting, storm water runoff, and road kill of wetland dependent wildlife. Using the directions contained in the guidelines, we consider the circumstances of a proposed discharge and the project of which it is a part to evaluate the scope, extent, severity, and permanence of direct, secondary, and cumulative adverse effects upon the aquatic ecosystem.

Cumulative Impacts: The extent of past, present, and foreseeable developments in the area may be an important consideration in evaluating the significance of a particular project's impacts. Although the impacts associated with a particular discharge may be minor, the cumulative effect of numerous similar discharges can result in a large impact. Cumulative impacts should be estimated only to the extent that they are reasonable and practical.

[3] **Special Aquatic Sites:** Includes wetlands and saltmarsh, mudflats, riffles and pools, and vegetated shallows (predominantly comprised of eelgrass in Maine).

[4] **Construction Mats:** Constructions, swamp and timber mats (herein referred to as "construction mats") are generic terms used to describe structures that distribute equipment weight to prevent wetland damage while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes. A timber mat consists of large timbers bolted or cabled together. Corduroy roads, which are not considered to be construction mats, are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another. Corduroy roads are typically installed as permanent structures. Like construction mats, they are considered as fill whether they're installed temporarily or permanently.

[5] **Vernal Pools:** A vernal pool, also referred to as a seasonal forest pool, is a temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet or outlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and fairy shrimp (*Eubranchipus* sp.), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition. For the purposes of this GP, the presence of any of the following species in any life stage in any abundance level/quantity would designate the waterbody as a vernal pool: fairy shrimp, blue spotted salamanders, spotted salamanders or wood frogs. The Corps may determine during a Category 2 review that a waterbody should not be regulated as a VP based on available evidence. For the purposes of this GP*, the VP Management Areas are the: Vernal Pool Depression (includes the vernal pool depression up to the spring or fall high water mark, and includes any vegetation growing within the depression), Vernal Pool Envelope (area within 100 FT of the VP Depression's edge) and Critical Terrestrial Habitat (area within 100-750 FT of the Vernal Pool Depression's edge). [*Note: Critical Terrestrial Habitat is defined as 100 -750 FT on page 243 of the document "Science and Conservation of Vernal Pools in Northeastern North America," Calhoun and deMaynadier, 2008, which is referenced in Appendix E, page 3, Paragraph 10(b).

[6] **Water Diversions:** Water diversions are activities such as bypass pumping or water withdrawals. Temporary flume pipes, culverts or cofferdams where normal flows are maintained within the stream boundary's confines aren't water diversions. "Normal flows" are defined as no change in flow from pre-project conditions.

[7] **Maintenance: a)** In accordance with 33 CFR 323.4(a)(2), any discharge of dredged or fill material that may result from any of the following activities is not prohibited by or otherwise subject to regulation under Section 404 of the CWA: "Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design." Otherwise, the following work is regulated and subject to the Category 1 or 2 thresholds in Appendix A above: The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 – "Activities occurring before certain dates," provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. **b)** Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make repair, rehabilitation, or replacement are authorized. **c)** Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction. **d)** No seaward expansion for bulkheads or any other fill activity is considered Category 1 maintenance. **e)** Only structures or fills that were previously authorized and are in compliance with the terms and condition of the original authorization can be maintained as a non-regulated activity under 33 CFR 323.4(a)(2), or in accordance with the Category 1 or 2 thresholds in Appendix A. **f)** The state's maintenance provisions may differ from the Corps and may require reporting and written authorization from the state. **g)** Contact the Corps to determine whether stream crossing replacements require a written application to the Corps for at least a Category 2 review.

[8] **Aquatic Habitat Restoration, Establishment and Enhancement:** The Corps will decide if a project qualifies and must determine in consultation with federal and state agencies that the net effects are beneficial. The Corps may refer to Nationwide Permit 27 published in the 3/12/07 Federal Register. Activities authorized here may include, but are not limited to: the removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms; the installation of current deflectors; the enhancement, restoration, or establishment of riffle and pool stream structure; the placement

of in-stream habitat structures; modifications of the stream bed and/or banks to restore or establish stream meanders; the backfilling of artificial channels and drainage ditches; the removal of existing drainage structures; the construction of small nesting islands in inland waters**;** the construction of open water areas; the construction of native shellfish species habitat over unvegetated bottom for the purpose of habitat protection or restoration in tidal waters; shellfish seeding; activities needed to reestablish vegetation, including plowing or discing for seed bed preparation and the planting of appropriate wetland species; mechanized land clearing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities. Only native plant species should be planted at the site.

[9] **Brushing the Flats:** The placement of tree boughs, wooden lath structure, or small-mesh fencing on mudflats to enhance recruitment of soft-shell clams (*Mya arenaria*).

[10] **Maintenance Dredging:** This includes only those areas and depths previously authorized by the Corps and dredged.

[11] **Boating Facilities:** Facilities that provide for a fee, rent, or sell mooring space, such as marinas, yacht clubs, boat clubs, boat yards, town facilities, dockominiums, etc.

[12] **Federal Navigation Projects (FNPs):** FNPs are comprised of Federal Channels and Federal Anchorages. See Appendix F for their location and contact the Corps for more information. "Horizontal Limits" is the outer edge of an FNP. "Buffer Zone" is equal to three times the authorized depth of that channel.

[13] **Horizontal Limits:** The outer edge of a Federal Navigation Project (FNP). See Appendix F and contact the Corps for information on FNP's.

[14] **Eelgrass (Zostera marina):** A type of rooted aquatic vegetation that exists in intertidal and shallow subtidal areas known as vegetated shallows. See www.nero.noaa.gov/hcd/ for eelgrass survey guidance.

[15] **Structures:** The height of structures shall at all points be equal to or exceed the width of the deck. For the purpose of this definition, height shall be measured from the marsh substrate to the bottom of the longitudinal support beam.