

**96 Inch Diameter
Steel Reinforced HDPE
DuroMaxx Pipe Installation**

WIN 18538.00

US Route 1, Warren, Maine

October 2014

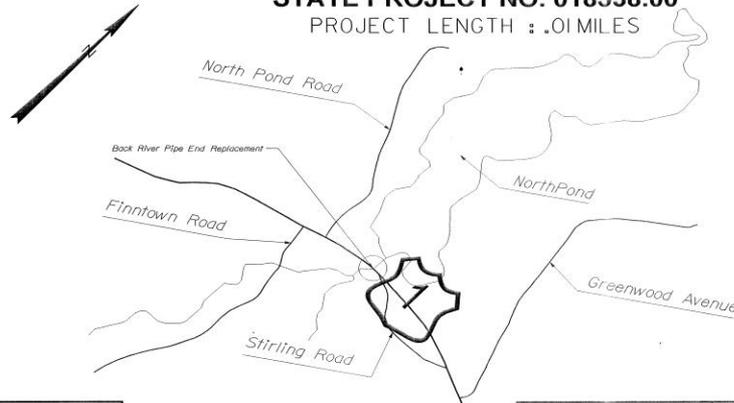
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



WARREN

KNOX COUNTY
US ROUTE 1

STATE PROJECT NO. 018538.00
PROJECT LENGTH : .01 MILES



TRAFFIC DATA

Current (2013) AADT	10,920
Future (2025) AADT	12,230
DHV - % of AADT	10%
Design Hour Volume	1,223
% Heavy Trucks (AADT)	9%
% Heavy Trucks (DHV)	8%
Directional Distribution (DHV)	52%
18 kip Equivalent P 2.0	631
18 kip Equivalent P 2.5	602
Design Speed (mph)	55
Functional Class	Principal Arterial

PROJECT LOCATION:	WARREN, US ROUTE 1 - APPROXIMATELY 0.31 MILES NORTHERLY OF THE INTERSECTION OF ROUTE 1 AND THE NORTH POND RD.
PROGRAM AREA:	HIGHWAY PROGRAM
SCOPE OF WORK:	LARGE CULVERT REHABILITATION: PIPE END REPLACEMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED: *[Signature]* DATE: 7/21/14
COMMISSIONER: *[Signature]*
CHIEF ENGINEER: *[Signature]*



Project of Construction

STATE PROJECT NO. 018538.00
P.A. NUMBER: 7-3-14
DATE: 7-21-14

PROJ. NO.	018538.00
ROUTE	US ROUTE 1
SECTION	01
DATE	7-21-14

WIN 18538.00 018538.00

WARREN
US ROUTE 1
TITLE SHEET

SHEET NUMBER
1

OF 3

DuroMaxx Pipe

- Eighty (80) ksi steel reinforcing (SR) provides the strength; pressure rated polyethylene (PE) resin provides the durability.
- The combination of materials results in an extraordinarily strong and durable pipe that sets a new industry standard (Contech).

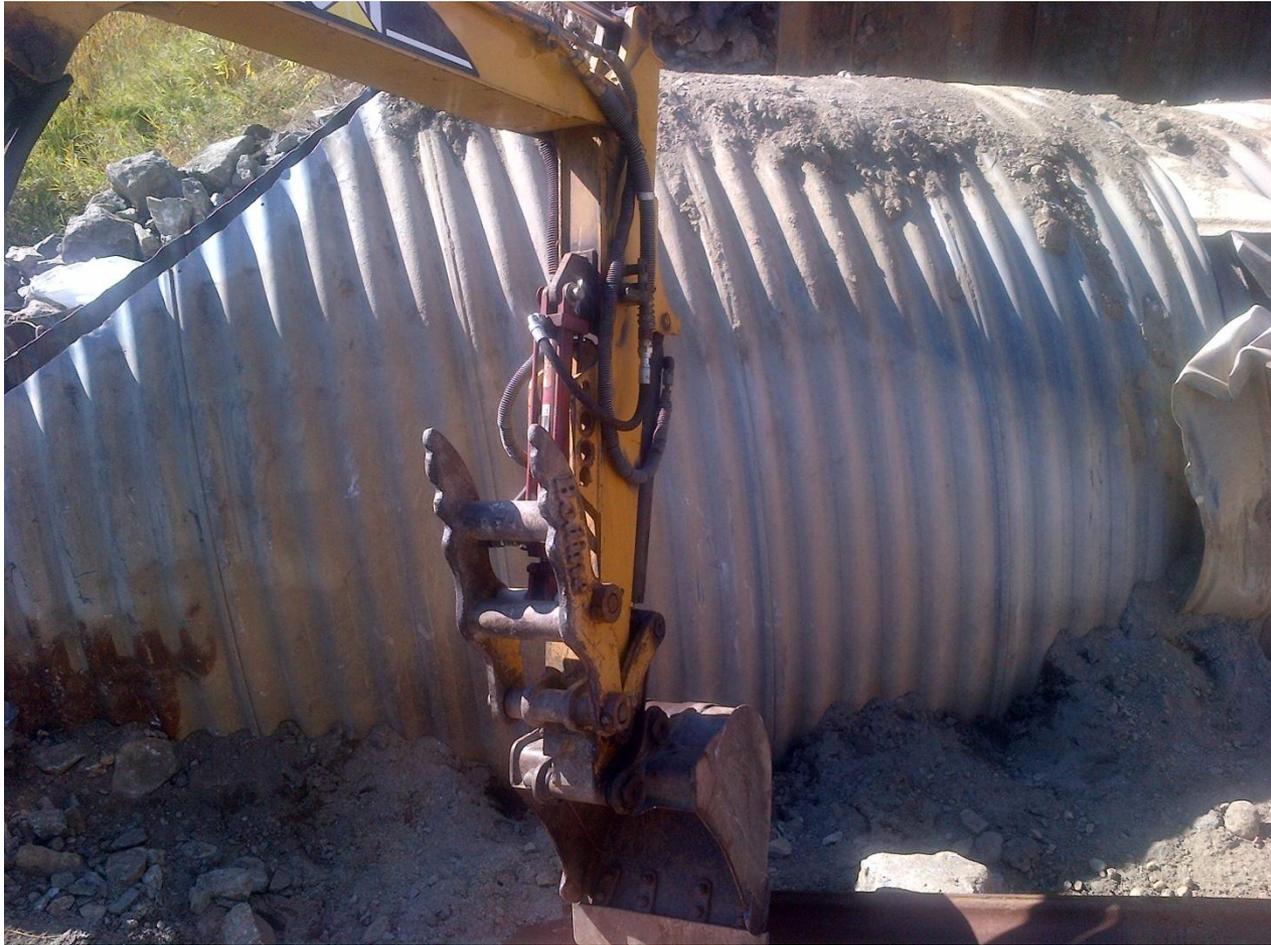
DuroMaxx Pipe

- DuroMaxx is designed with a smooth inner wall for outstanding hydraulic capacity (Contech).
- Available in diameters ranging from 30 to 120 inches and manufactured in standard lengths of 14 or 24 feet with both bell and spigot and welded coupler joints (Contech).

DuroMaxx Pipe

- A 96" x 42' DuroMaxx pipe was specified to replace a rotted multi-plate steel round pipe.
- This is an extension for a concrete box culvert.
- The DuroMaxx pipe was specially fabricated by Contech to the 42' length.
- At 87 pounds per foot, DuroMaxx is approximately $\frac{1}{2}$ the weight of structural plate pipe (Lane).

Excavating old steel multi-plate pipe.



View of existing steel pipe damage.



Inside factory welds of two lengths of DuroMaxx pipe.



Outside factory weld.



DuroMaxx pipe being off-loaded on site.



DuroMaxx lowered into trench.



DuroMaxx fitted to existing box culvert.



DuroMaxx pipe grouted into existing concrete box culvert.



Backfilling DuroMaxx pipe.



After slope restoration.



Special thanks to Dean Rowlands, Resident Inspector
for his help in gathering information and photos.

Additional product information and specifications from:
Contech Engineered Solutions LLC, <http://www.conteches.com>
Lane Enterprises Inc., <http://www.lane-enterprises.com>

By Dale Peabody & Doug Gayne, Transportation Research Division.
December 22, 2014