
PUBLIC NOTICE



**US Army Corps
of Engineers**®
New England District
Vermont Project Office
8 Carmichael Street, Suite 205
Essex Junction, Vermont 05452

Comment Period Begins: March 24, 2015
Comment Period Ends: April 24, 2015
File Number: NAE-2006-3923
In Reply Refer To: Marty Abair
Phone: (802) 872-2893
E-mail: Martha.a.abair@usace.army.mil

The District Engineer has received a permit application to conduct work in waters of the United States as described below.

APPLICANT: Vermont Agency of Transportation, ATTN: Kenneth Upmal, One National Life Drive, Montpelier, Vermont 05633

ACTIVITY: Place fill in a total of 6.74 acres of waters of the U.S. in conjunction with the reconstruction of about 1.49 miles of U.S. Route 2 in Cabot, Vermont. A detailed description and plans of the activity are attached.

WATERWAY AND LOCATION OF THE PROPOSED WORK:

This work is proposed in Molly's Brook, Hooker Brook, several unnamed tributaries, and wetlands adjacent to these waterways off U.S. Route 2 in Cabot, Vermont (west end of project - Latitude 44.37036° N; Longitude 72.27178° W; east end of project - Latitude 44.38623° N; Longitude 72.25640° W).

AUTHORITY

Permits are required pursuant to:

Section 10 of the Rivers and Harbors Act of 1899

Section 404 of the Clean Water Act

Section 103 of the Marine Protection, Research and Sanctuaries Act).

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which may reasonably accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are: conservation, economics, aesthetics, general environmental concerns, wetlands, cultural value, fish and wildlife values, flood hazards, flood plain value, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of

Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Where the activity involves the discharge of dredged or fill material into waters of the United States or the transportation of dredged material for the purpose of disposing it in ocean waters, the evaluation of the impact of the activity in the public interest will also include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act, and/or Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 as amended.

NATIONAL HISTORIC PRESERVATION ACT

Based on his initial review, the District Engineer has determined that the proposed work may impact properties listed in, or eligible for listing in, the National Register of Historic Places. Additional review and consultation to fulfil requirements under Section 106 of the National Historic Preservation Act of 1966, as amended, will be ongoing as part of the permit review process.

ENDANGERED SPECIES CONSULTATION

The New England District, Army Corps of Engineers has reviewed the list of species protected under the Endangered Species Act of 1973, as amended, which might occur at the project site. It is our preliminary determination that the proposed activity for which authorization is being sought is designed, situated or will be operated/used in such a manner that it is not likely to adversely affect any Federally listed endangered or threatened species or their designated critical habitat. By this Public Notice, we are requesting that the appropriate Federal Agency concur with our determination.

The following authorizations have been applied for, or have been, or will be obtained:

- Permit, License or Assent from State.
- Permit from Local Wetland Agency or Conservation Commission.
- Water Quality Certification in accordance with Section 401 of the Clean Water Act.

In order to properly evaluate the proposal, we are seeking public comment. Anyone wishing to comment is encouraged to do so. **Comments should be submitted in writing by the above date.** If you have any questions, please contact Marty Abair at (978) 318-8484 or (802) 872-2893.


Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for a public hearing shall specifically state the reasons for holding a public hearing. The Corps holds public hearings for the purpose of obtaining public comments when that is the best means for understanding a wide variety of concerns from a diverse segment of the public.

CENAE-R
FILE NO. NAE-2006-3923

The initial determinations made herein will be reviewed in light of facts submitted in response to this notice.

All comments will be considered a matter of public record. Copies of letters of objection will be forwarded to the applicant who will normally be requested to contact objectors directly in an effort to reach an understanding.

THIS NOTICE IS NOT AN AUTHORIZATION TO DO ANY WORK.

for 
Frank J. DelGiudice
Chief, Permits and Enforcement Branch
Regulatory Division

If you would prefer not to continue receiving Public Notices by email, please contact Ms. Tina Chaisson at (978) 318-8058 or e-mail her at bettina.m.chaisson@usace.army.mil. You may also check here () and return this portion of the Public Notice to: Bettina Chaisson, Regulatory Division, U.S. Army Corps of Engineers, 696 Virginia Road, Concord, MA 01742-2751.

NAME: _____
ADDRESS: _____
PHONE: _____

PROPOSED WORK AND PURPOSE

The work includes the discharge of dredged or fill material for the reconstruction of about 1.49 miles of U.S. Route 2 in Cabot, Vermont. New bridged crossings of Molly's Brook and Hookers Brook, and new culverted crossings of five unnamed tributaries will impact a total of 0.09 acre of stream bottom below Ordinary High Water (0.086 acre permanent impact/0.009 acre temporary impact). The typical existing roadway cross-section is 22' (0-11-11-0). Widening the road to standard National Highway System width of 40' (8-12-12-8) and minor alignment improvements to improve the geometry and safety of the road will impact a total of 6.64 acres of scrub-shrub, forested and emergent wetlands (6.01 acres permanent impact/0.63 acre temporary impact).

The basic purpose of the project is to reconstruct an existing U.S. highway to comply with current safety and design standards.

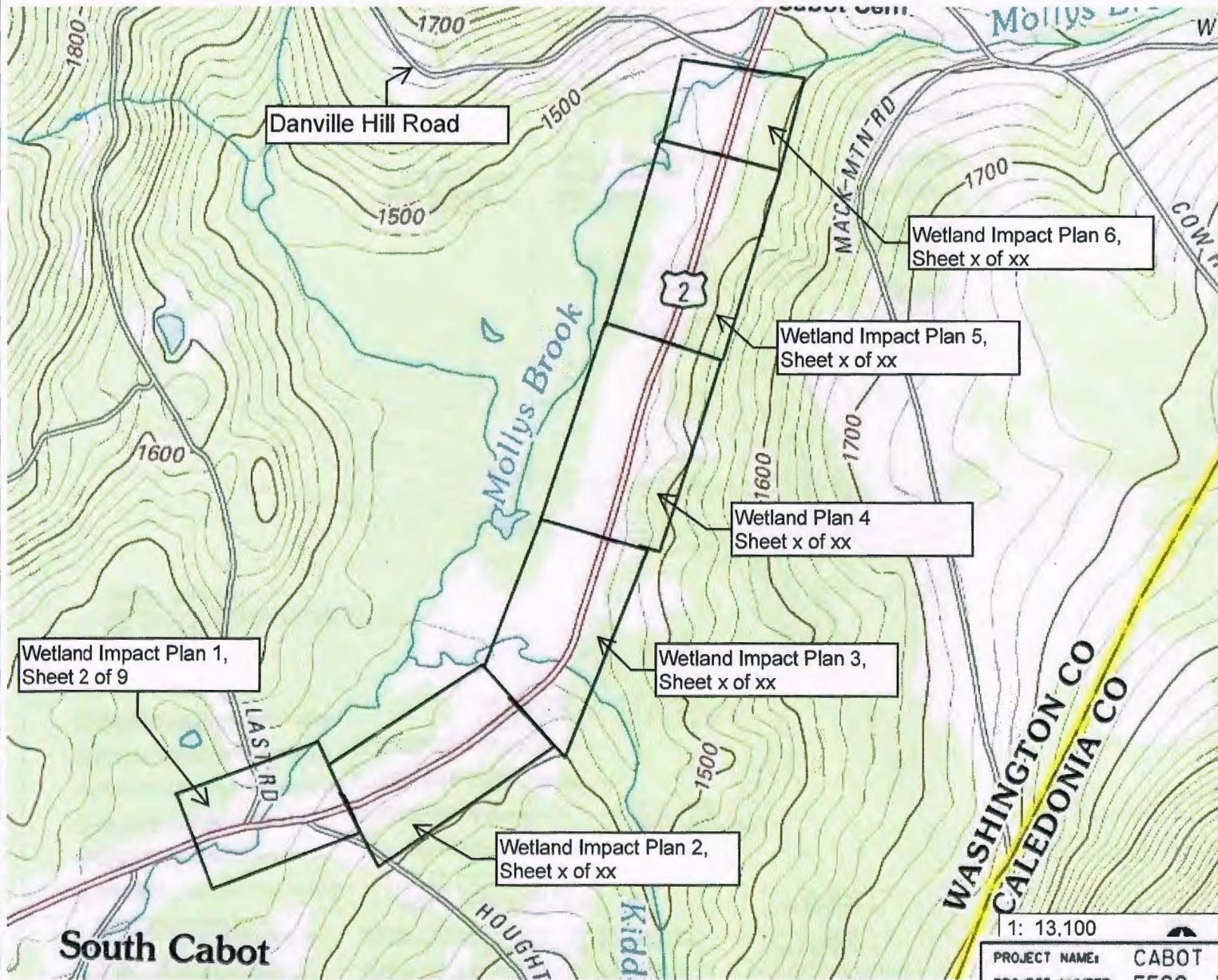
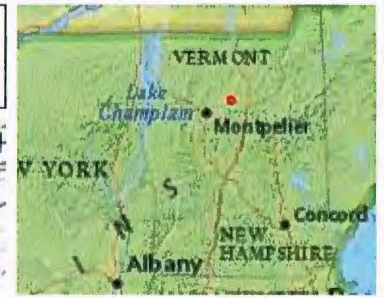
The work is described on the enclosed plans, in nine sheets, entitled "CABOT – DANVILLE FEGC F 028-3(26) C/2", dated "Jan. 13, 2015".

ALTERNATIVES

The project involves the reconstruction of an existing U.S. highway, essentially on existing alignment. Off-site alternatives would involve constructing a new highway on new alignment, which would likely be more environmentally damaging and is not practicable. There is no less environmentally damaging practicable alternative alignment that would accomplish the basic project purpose. The only alternative to the project would be the "no build" alternative, which would not allow the applicants to achieve their stated project purpose.

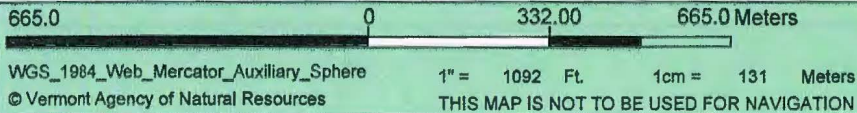
MITIGATION

To compensate for unavoidable impacts to waters of the U.S. of the proposed project the applicant proposes to make a payment to the Ducks Unlimited – Vermont In-Lieu Fee Program.



LEGEND

Town Boundary



DISCLAIMER: This map is for general reference only. The State of Vermont make no representation or warranty, limited or otherwise, as to the accuracy or completeness of the information on this map. The State of Vermont make no representation or warranty, limited or otherwise, as to the accuracy or completeness of the information on this map. The State of Vermont make no representation or warranty, limited or otherwise, as to the accuracy or completeness of the information on this map.

1: 13,100

PROJECT NAME: CABOT - DANVILLE
PROJECT NUMBER: FECC F 028-3(26) C/2

Vermont Agency of Transportation
Project Location and Sheet Index
Sheet X of XX **Jan. 13, 2015**

- ① STA. 18+43.42' RT - STA. 19+38.45' RT
INSTALL NEW 24" x 96" CULVERT - OPTION CC
W/ END SECTION - OPTION II @ INLET
- ② T.H. 49 STA. 30+93.22' RT - T.H. 49 STA. 31+45.21' RT
NEW 18" x 58" CULVERT - OPTION BB
W/ END SECTION - OPTION GG @ INLET
- U1 STA. 14+00 RT - STA. 14+65 RT
INSTALL NEW 8" x 400" UNDERDRAIN W/FB @ STA. 11+00
- U2 STA. 14+00 RT - STA. 14+65 RT
INSTALL NEW 8" x 85" UNDERDRAIN CARRIER PIPE
- U3 STA. 15+30 LT - STA. 16+00 LT
INSTALL NEW 8" x 76" UNDERDRAIN CARRIER PIPE
- U4 STA. 16+00 LT - STA. 20+00 LT
INSTALL NEW 8" x 400" UNDERDRAIN W/FB @ STA. 20+00
- U5 STA. 19+50 RT - STA. 20+00 RT
INSTALL NEW 8" x 50" UNDERDRAIN CARRIER PIPE
- U6 STA. 20+00 RT - STA. 24+00 RT
INSTALL NEW 8" x 400" UNDERDRAIN W/FB @ STA. 24+00

STONE FILL TYPE II
CHANNEL 50+75.00 RT. ~ CHANNEL 52+07.38 RT. (LEFT BANK)
CHANNEL 50+75.00 RT. ~ CHANNEL 52+24.98 RT. (RIGHT BANK)

STONE FILL TYPE III
CHANNEL 50+75.00 RT. ~ CHANNEL 52+07.38 RT. (LEFT BANK)
CHANNEL 50+75.00 RT. ~ CHANNEL 52+24.98 RT. (RIGHT BANK)

STONE FILL DITCH TYPE I, 4' WIDE
T.H. 49 STA. 30+20 RT. ~ STA. 30+93 RT.
T.H. 49 STA. 31+45 RT. ~ STA. 32+00 RT.
T.H. 49 STA. 30+75 LT. ~ STA. 32+00 LT.

STONE FILL DITCH TYPE I, 8' WIDE
STA. 16+00 RT. ~ STA. 18+45 RT.

- R1 STA. 18+37.20' LT - STA. 18+60.20' LT
REMOVE EXISTING 15" CPEP
- R2 T.H. 49 STA. 30+36.37' RT - T.H. 49 STA. 30+69.24' RT
REMOVE EXISTING 15" CPEP
- R3 STA. 19+44.20' LT - STA. 19+48.30' RT
REMOVE EXISTING 18" CPEP

CONSTRUCT DRIVES (GRAVEL)
STA. 10+26 LT. (14'W)
T.H. 49 STA. 31+20 RT. (14'W)

CONSTRUCT T.H. 45 APPROACH
P.O.C. STA. 13+90.35 LT.

CONSTRUCT T.H. 49 APPROACH
P.O.C. STA. 18+65.00 RT.

GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM
STA. 14+28.0 RT. ~ STA. 14+60.1 RT.
STA. 14+39.2 LT. ~ STA. 14+71.2 LT.
STA. 15+09.1 RT. ~ STA. 15+41.1 RT.
STA. 15+20.2 LT. ~ STA. 15+52.2 LT.

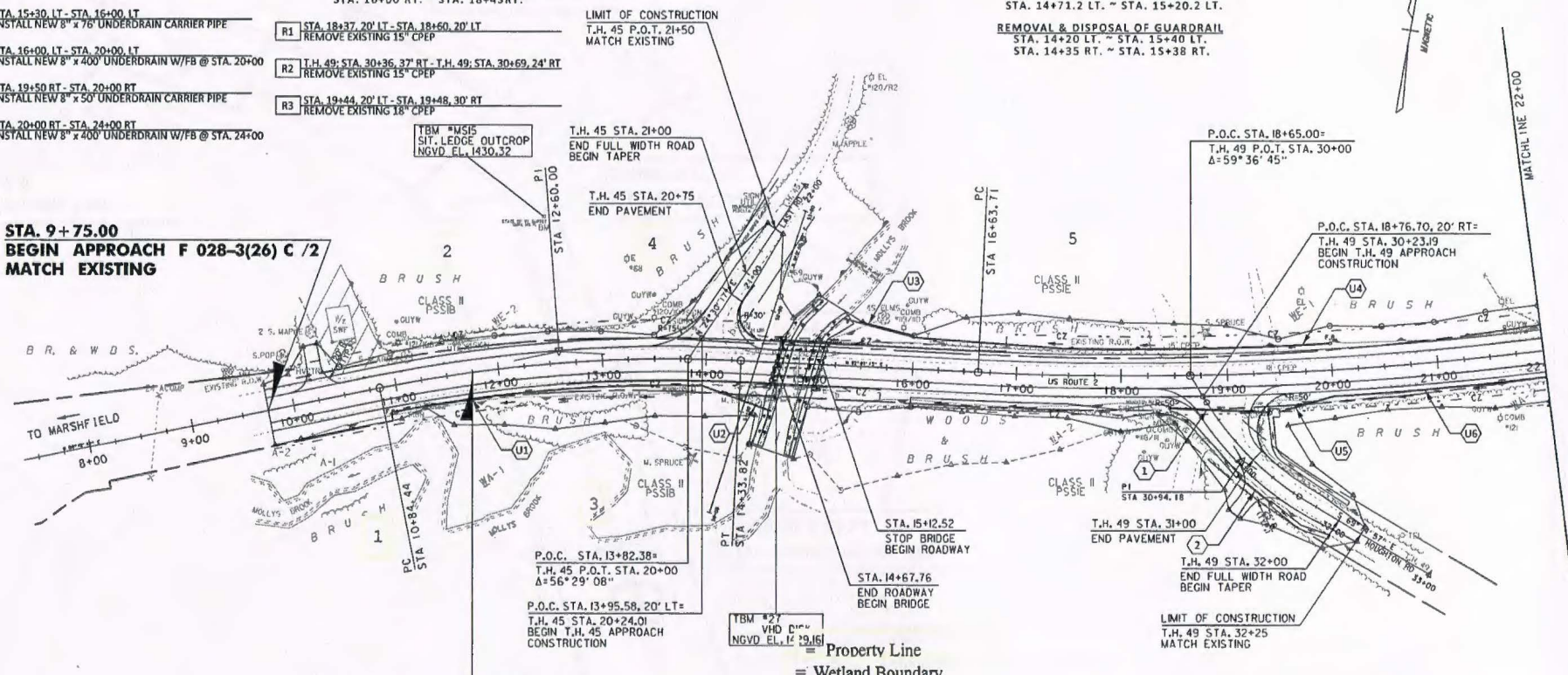
MANUFACTURED TERMINAL SECTION, TANGENT
STA. 12+64.7 RT. ~ STA. 12+78.9 RT.
STA. 14+35.1 LT. ~ STA. 14+43.1 LT.
STA. 15+56.0 RT. ~ STA. 15+70.1 RT.
STA. 16+75.3 LT. ~ STA. 16+89.4 LT.

BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM
STA. 14+60.1 RT. ~ STA. 15+09.1 RT.
STA. 14+71.2 LT. ~ STA. 15+20.2 LT.

REMOVAL & DISPOSAL OF GUARDRAIL
STA. 14+20 LT. ~ STA. 15+40 LT.
STA. 14+35 RT. ~ STA. 15+38 RT.

BOX BEAM GUARDRAIL
STA. 12+78.9 RT. ~ STA. 14+28.0 RT.
STA. 14+35.1 LT. ~ STA. 14+39.2 LT.
STA. 15+41.1 RT. ~ STA. 15+56.0 RT.
STA. 15+52.2 LT. ~ STA. 16+75.3 LT.

**STA. 9+75.00
BEGIN APPROACH F 028-3(26) C /2
MATCH EXISTING**



**STA. 165+00
END PROJECT
F 028-3(10) 1980**

**STA. 11+75
END APPROACH
BEGIN PROJECT
FEGC F 028-3(26)C2**

CURVE DATA #1

DELTA = 13°58'31" RT
O = 4°00'00"
R = 1432.39'
T = 175.56'
L = 349.38'
E = 10.72'
B = 0.064%

- = Property Line
- = Wetland Boundary
- = Permanent Wetland Impacts
- = Temporary Wetland Impacts
- x = Impact Area Tabulation sections

JURISDICTIONAL GRASSED LINED DITCHES

4'-0" - DITCH BOTTOM
STA. 12+00 - 14+50, RT
STA. 19+50 - 23+00, RT
8'-0" - DITCH BOTTOM
STA. 17+00 - 19+00, LT

T.H. 49 CURVE DATA

DELTA = 26°31'55" LT
D = 20°59'59"
R = 272.840'
T = 64.33'
L = 126.34'
E = 7.48'

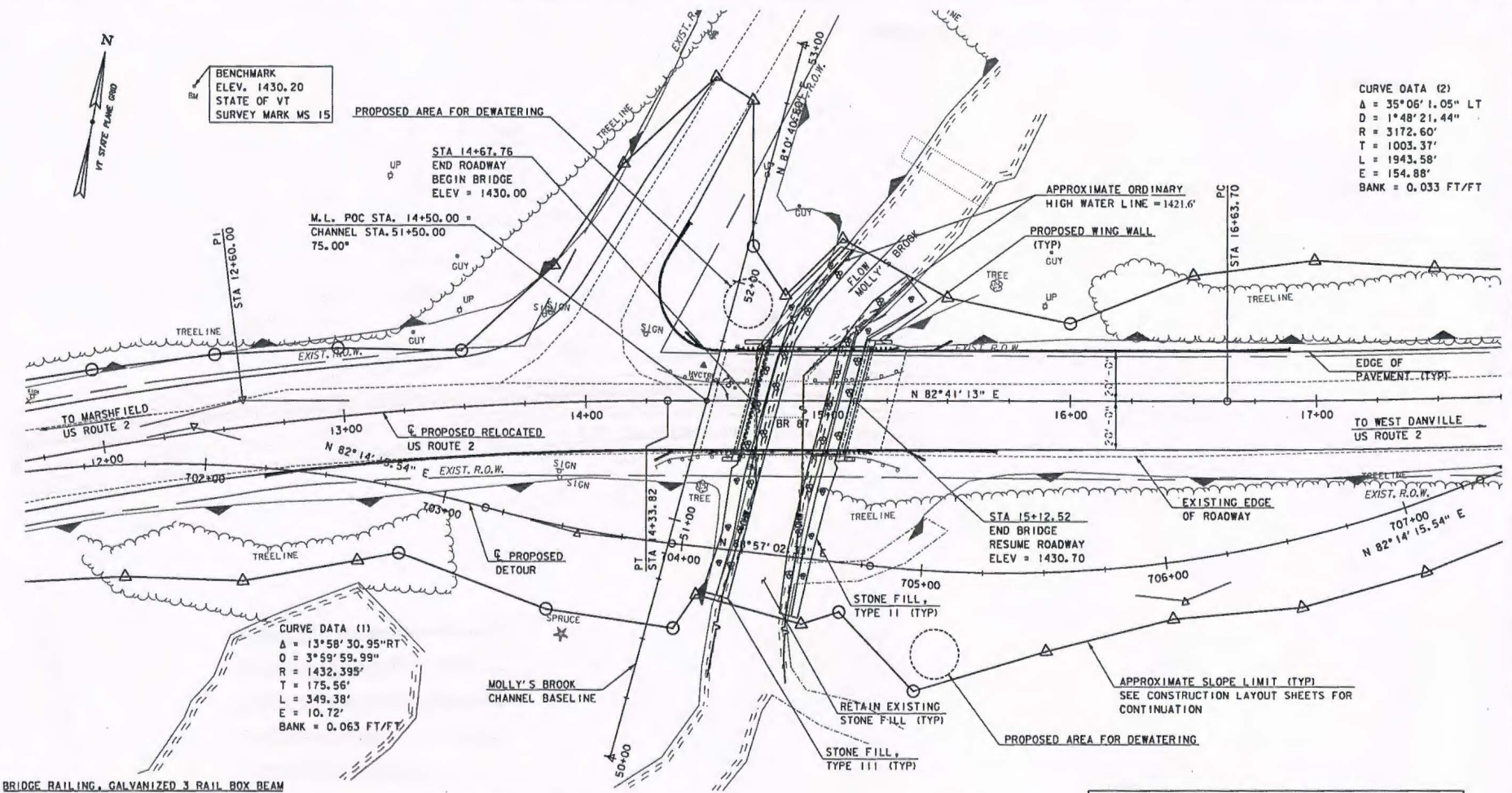


PROJECT NAME: CABOT - DANVILLE	PLOT DATE: 28-OCT-2014
PROJECT NUMBER: FEGC F 028-3(26) C/2	DRAWN BY: L SHEA
FILE NAME: d178d347bdr.dgn	CHECKED BY: HSD
PROJECT LEADER: K. UPMAL	SHEET 18 OF 162
DESIGNED BY: L SHEA	
LAYOUT SHEET 1	



BENCHMARK
ELEV. 1430.20
STATE OF VT
SURVEY MARK MS 15

CURVE DATA (2)
 $\Delta = 35^{\circ}06'1.05''$ LT
 $D = 1^{\circ}48'21.44''$
 $R = 3172.60'$
 $T = 1003.37'$
 $L = 1943.58'$
 $E = 154.88'$
 $BANK = 0.033$ FT/FT



CURVE DATA (1)
 $\Delta = 13^{\circ}58'30.95''$ RT
 $O = 3^{\circ}59'59.99''$
 $R = 1432.395'$
 $T = 175.56'$
 $L = 349.38'$
 $E = 10.72'$
 $BANK = 0.063$ FT/FT

BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM
 STA. 14+60.1 RT - STA. 15+09.1 RT
 STA. 14+71.2 LT - STA. 15+20.2 LT

STONE FILL, TYPE I
 STA. 50+75.00 RT - STA. 52+07.38 RT (LEFT BANK)
 STA. 50+75.00 RT - STA. 52+24.98 RT (RIGHT BANK)

STONE FILL, TYPE III
 STA. 50+75.00 RT - STA. 52+07.38 RT (LEFT BANK)
 STA. 50+75.00 RT - STA. 52+24.98 RT (RIGHT BANK)

BOX BEAM GUARDRAIL
 STA. 12+78.9 RT - STA. 14+28.0 RT
 STA. 14+35.1 LT - STA. 14+39.2 LT
 STA. 15+41.1 RT - STA. 15+56.0 RT
 STA. 15+52.2 LT - STA. 16+75.3 LT

MANUFACTURED TERMINAL SECTION, TANGENT
 STA. 12+64.7 RT - STA. 12+78.9 RT
 STA. 14+35.1 LT - STA. 14+43.1 LT
 STA. 15+56.0 RT - STA. 15+70.1 RT
 STA. 16+75.3 LT - STA. 16+89.4 LT

GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM
 STA. 14+28.0 RT - STA. 14+60.1 RT
 STA. 14+39.2 LT - STA. 14+71.2 LT
 STA. 15+09.1 RT - STA. 15+41.1 RT
 STA. 15+52.2 LT - STA. 15+52.2 LT

NOTE: REFER TO CONSTRUCTION LAYOUT SHEET
 16 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

= PERMANENT WETLAND IMPACTS
 = TEMPORARY WETLAND IMPACTS

WORK BELOW ORDINARY HIGH WATER LINE
 APPROXIMATE AREA OF DISTURBANCE = 985± SF (110± SY)
 APPROXIMATE VOLUME OF CUT = 9617± CF (356± CY)
 APPROXIMATE VOLUME OF FILL = 8636± CF (320± CY)
 APPROXIMATE TOTAL CUT = 981± CF (36± CY)

R. 11/24/14

0 20 40
 SCALE IN FEET

GREEN INTERNATIONAL AFFILIATES, INC.
 CIVIL AND STRUCTURAL ENGINEERS

PROJECT NAME: CABOT - DANVILLE
 PROJECT NUMBER: FECC F 028-3(26) C/2
 FILE NAME: z78d347ba2.dgn
 PROJECT LEADER: M. CRUZ
 DESIGNED BY: A. ACHARYA
 LAYOUT SHEET (BR 87)

PLOT DATE: 6/24/2014
 DRAWN BY: D. VERTIYEV
 CHECKED BY: E. ATKINS
 SHEET 79 OF 88

3 STA. 23+54.42' LT - STA. 23+68.32' RT
 INSTALL NEW 30" x 76" CULVERT - OPTION DD
 W/ END SECTION - OPTION II @ INLET
 STONE FILL TYPE II OVER END SECTION @ INLET
 STONE FILL PAD, 4'W X 10'L, TYPE II @ OUTLET
 REMOVE EXISTING 18" C.G.M.P.

STONE FILL DITCH, TYPE I, 8' WIDE
 STA. 23+00 RT. ~ STA. 24+00 RT.
 STA. 33+50 RT. ~ STA. 34+00 RT.

SCARIFYING PAVEMENT
 STA. 25+25 ~ 29+25

4 STA. 33+91.36' RT - STA. 34+13.43' LT
 INSTALL NEW 30" x 82" CULVERT - OPTION DD
 W/ END SECTION - OPTION II @ INLET
 STONE FILL TYPE II OVER END SECTION @ INLET
 STONE FILL PAD, 4'W X 10'L, TYPE II @ OUTLET
 REMOVE EXISTING 12" CPEP

R4 STA. 25+33.47' LT - STA. 25+39.4' RT
 REMOVE EXISTING 18" C.G.M.P.

R5 STA. 27+94.1' RT - STA. 27+94.47' LT
 REMOVE EXISTING 18" C.G.M.P.

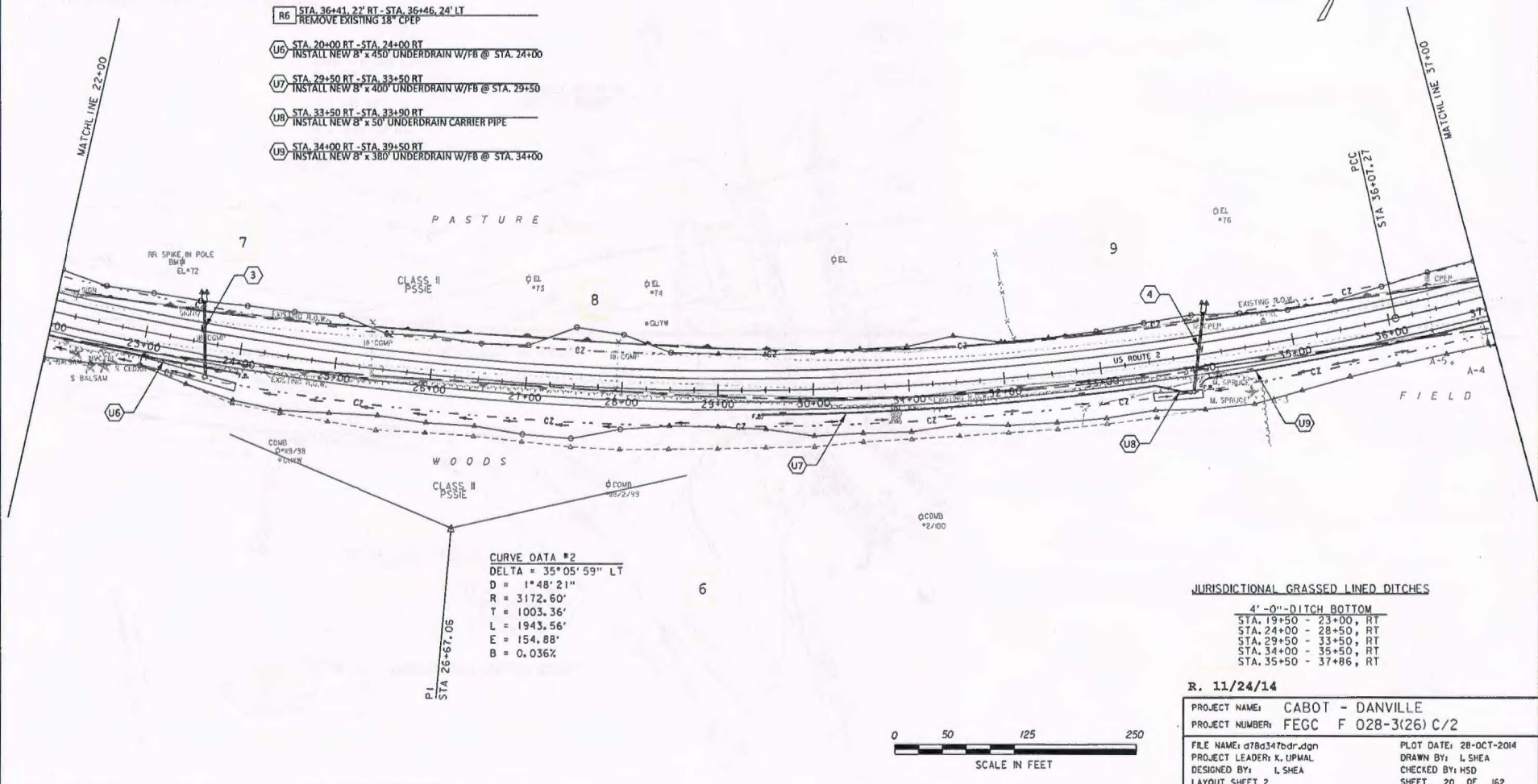
R6 STA. 36+41.22' RT - STA. 36+46.24' LT
 REMOVE EXISTING 18" CPEP

U6 STA. 20+00 RT - STA. 24+00 RT
 INSTALL NEW 8" x 450' UNDERDRAIN W/FB @ STA. 24+00

U7 STA. 29+50 RT - STA. 33+50 RT
 INSTALL NEW 8" x 400' UNDERDRAIN W/FB @ STA. 29+50

U8 STA. 33+50 RT - STA. 33+90 RT
 INSTALL NEW 8" x 50' UNDERDRAIN CARRIER PIPE

U9 STA. 34+00 RT - STA. 39+50 RT
 INSTALL NEW 8" x 380' UNDERDRAIN W/FB @ STA. 34+00



CURVE DATA #2
 DELTA = 35° 05' 59" LT
 D = 1° 48' 21"
 R = 3172.60'
 T = 1003.36'
 L = 1943.56'
 E = 154.88'
 B = 0.036%

JURISDICTION GRASSED LINED DITCHES
 4' - 0" - DITCH BOTTOM
 STA. 19+50 - 23+00, RT
 STA. 24+00 - 28+50, RT
 STA. 29+50 - 33+50, RT
 STA. 34+00 - 35+50, RT
 STA. 35+50 - 37+86, RT

R. 11/24/14

PROJECT NAME:	CABOT - DANVILLE
PROJECT NUMBER:	FEGC F 02B-3(26) C/2
FILE NAME:	d78d347bdr.dgn
PROJECT LEADER:	K. UPMAL
DESIGNED BY:	L. SHEA
LAYOUT SHEET 2	
PLOT DATE:	28-OCT-2014
DRAWN BY:	L. SHEA
CHECKED BY:	HSD
SHEET	20 OF 162



RELOCATE MAILBOX, SINGLE SUPPORT
STA. 47+62 RT.

SCARIFYING PAVEMENT
STA. 49+25 ~ 50+75

REMOVAL & DISPOSAL OF GUARDRAIL
STA. 41+18 RT. ~ STA. 41+88 RT.
STA. 41+36 RT. ~ STA. 41+92 RT.

GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM
STA. 40+77.1 LT. ~ STA. 41+09.4 LT.
STA. 41+02.3 RT. ~ STA. 41+34.0 RT.
STA. 41+62.0 LT. ~ STA. 41+94.3 LT.
STA. 41+85.7 RT. ~ STA. 42+17.4 RT.

MANUFACTURED TERMINAL SECTION, TANGENT
STA. 39+72.5 RT. ~ STA. 39+86.6 RT.
STA. 40+47.9 LT. ~ STA. 40+61.9 LT.
STA. 42+65.4 RT. ~ STA. 42+57.6 RT.
STA. 43+12.3 LT. ~ STA. 43+26.4 LT.

BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM
STA. 41+09.4 LT. ~ STA. 41+62.0 LT.
STA. 41+34.0 RT. ~ STA. 41+85.7 RT.

BOX BEAM GUARDRAIL
STA. 39+86.4 RT. ~ STA. 41+02.3 RT.
STA. 40+61.9 LT. ~ STA. 40+77.1 LT.
STA. 41+94.3 LT. ~ STA. 43+12.3 LT.
STA. 42+17.4 RT. ~ STA. 42+65.4 RT.

STONE FILL DITCH, TYPE I, 8' WIDE
STA. 40+00 RT. ~ STA. 41+00 RT.

STONE FILL, TYPE II
CHANNEL 10+92.1 RT ~ CHANNEL 11+48.7 RT (LEFT BANK)
CHANNEL 10+76.5 RT ~ CHANNEL 11+35.9 RT (RIGHT BANK)

CONSTRUCT CATTLE CROSSING
STA. 40+49, 170' LT. ~ STA. 40+73, 194' LT.
(SEE SHEET #7)

CONSTRUCT DRIVES (GRAVEL)

LT. STA. 44+75 (24'W)

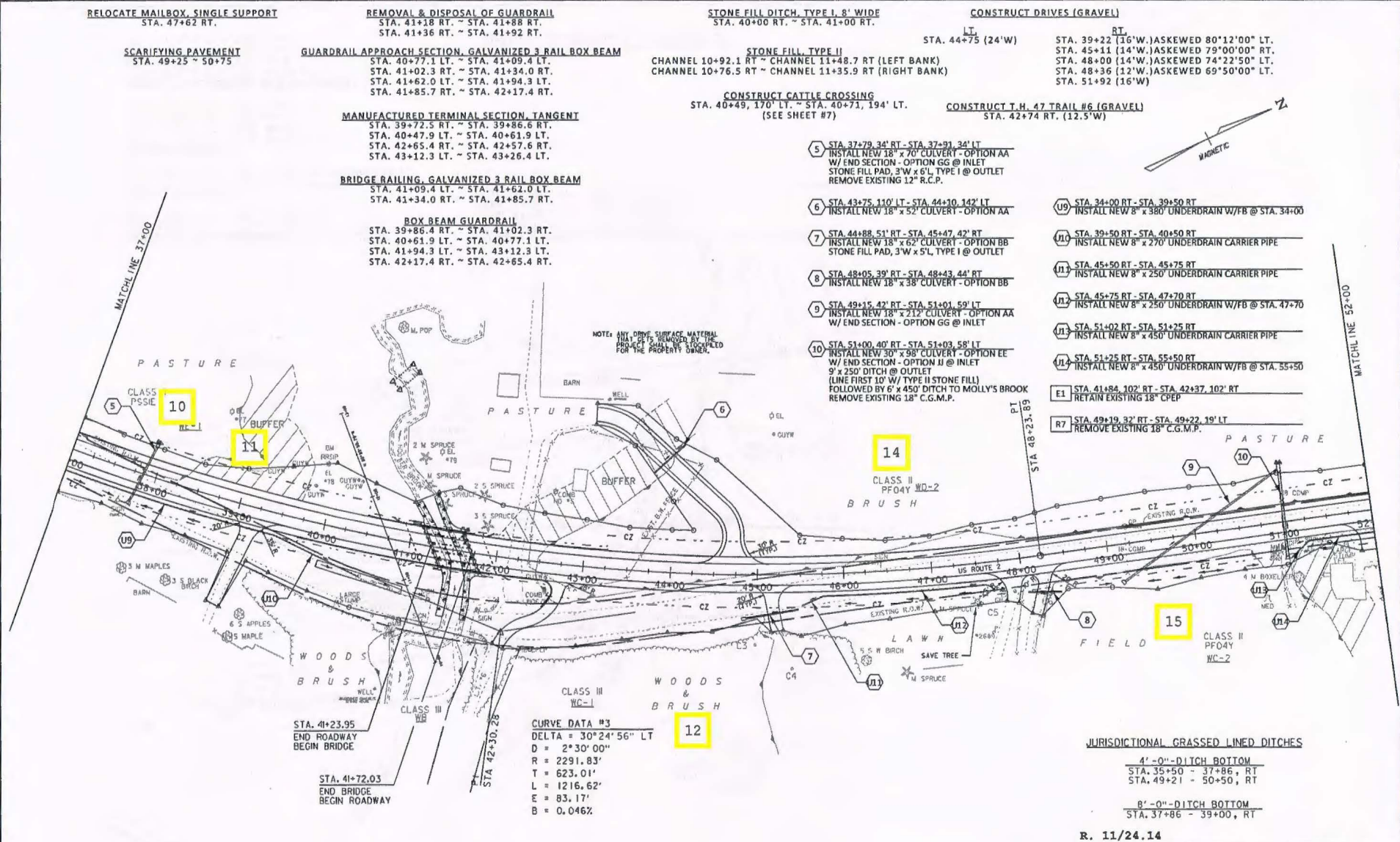
RT. STA. 39+22 (16'W), JASKWEDED 80°12'00" LT.
STA. 45+11 (14'W), JASKWEDED 79°00'00" RT.
STA. 48+00 (14'W), JASKWEDED 74°22'50" LT.
STA. 48+36 (12'W), JASKWEDED 69°50'00" LT.
STA. 51+92 (16'W)

CONSTRUCT T.H. 47 TRAIL #6 (GRAVEL)
STA. 42+74 RT. (12.5'W)

- 5 STA. 37+79, 34' RT - STA. 37+91, 34' LT
INSTALL NEW 18" x 70" CULVERT - OPTION AA
W/ END SECTION - OPTION GG @ INLET
STONE FILL PAD, 3'W x 6'L, TYPE I @ OUTLET
REMOVE EXISTING 12" R.C.P.
- 6 STA. 43+75, 110' LT - STA. 44+10, 142' LT
INSTALL NEW 18" x 52" CULVERT - OPTION AA
- 7 STA. 44+88, 51' RT - STA. 45+47, 42' RT
INSTALL NEW 18" x 62" CULVERT - OPTION BB
STONE FILL PAD, 3'W x 5'L, TYPE I @ OUTLET
- 8 STA. 48+05, 39' RT - STA. 48+43, 44' RT
INSTALL NEW 18" x 38" CULVERT - OPTION BB
- 9 STA. 49+15, 42' RT - STA. 51+01, 59' LT
INSTALL NEW 18" x 212" CULVERT - OPTION AA
W/ END SECTION - OPTION GG @ INLET
- 10 STA. 51+00, 40' RT - STA. 51+03, 58' LT
INSTALL NEW 30" x 98" CULVERT - OPTION EE
W/ END SECTION - OPTION II @ INLET
9' x 250' DITCH @ OUTLET
(LINE FIRST 10' W/ TYPE II STONE FILL)
FOLLOWED BY 6' x 450' DITCH TO MOLLY'S BROOK
REMOVE EXISTING 18" C.G.M.P.

- U9 STA. 34+00 RT - STA. 39+50 RT
INSTALL NEW 8" x 380' UNDERDRAIN W/FB @ STA. 34+00
- U10 STA. 39+50 RT - STA. 40+50 RT
INSTALL NEW 8" x 270' UNDERDRAIN CARRIER PIPE
- U11 STA. 45+50 RT - STA. 45+75 RT
INSTALL NEW 8" x 250' UNDERDRAIN CARRIER PIPE
- U12 STA. 45+75 RT - STA. 47+70 RT
INSTALL NEW 8" x 250' UNDERDRAIN W/FB @ STA. 47+70
- U13 STA. 51+02 RT - STA. 51+25 RT
INSTALL NEW 8" x 450' UNDERDRAIN CARRIER PIPE
- U14 STA. 51+25 RT - STA. 55+50 RT
INSTALL NEW 8" x 450' UNDERDRAIN W/FB @ STA. 55+50
- E1 STA. 41+84, 102' RT - STA. 42+37, 102' RT
RETAIN EXISTING 18" CPEP
- R7 STA. 49+19, 32' RT - STA. 49+22, 19' LT
REMOVE EXISTING 18" C.G.M.P.

NOTE: ANY DRIVE SURFACE MATERIAL THAT IS REMOVED BY THE PROJECT SHALL BE STOCKPILED FOR THE PROPERTY OWNER.



CURVE DATA #3
DELTA = 30°24'56" LT
D = 2°30'00"
R = 2291.83'
T = 623.01'
L = 1216.62'
E = 83.17'
B = 0.046%

STA. 41+23.95
END ROADWAY
BEGIN BRIDGE

STA. 41+72.03
END BRIDGE
BEGIN ROADWAY

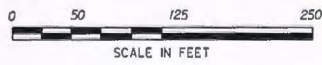
JURISDICTIONAL GRASSED LINED DITCHES

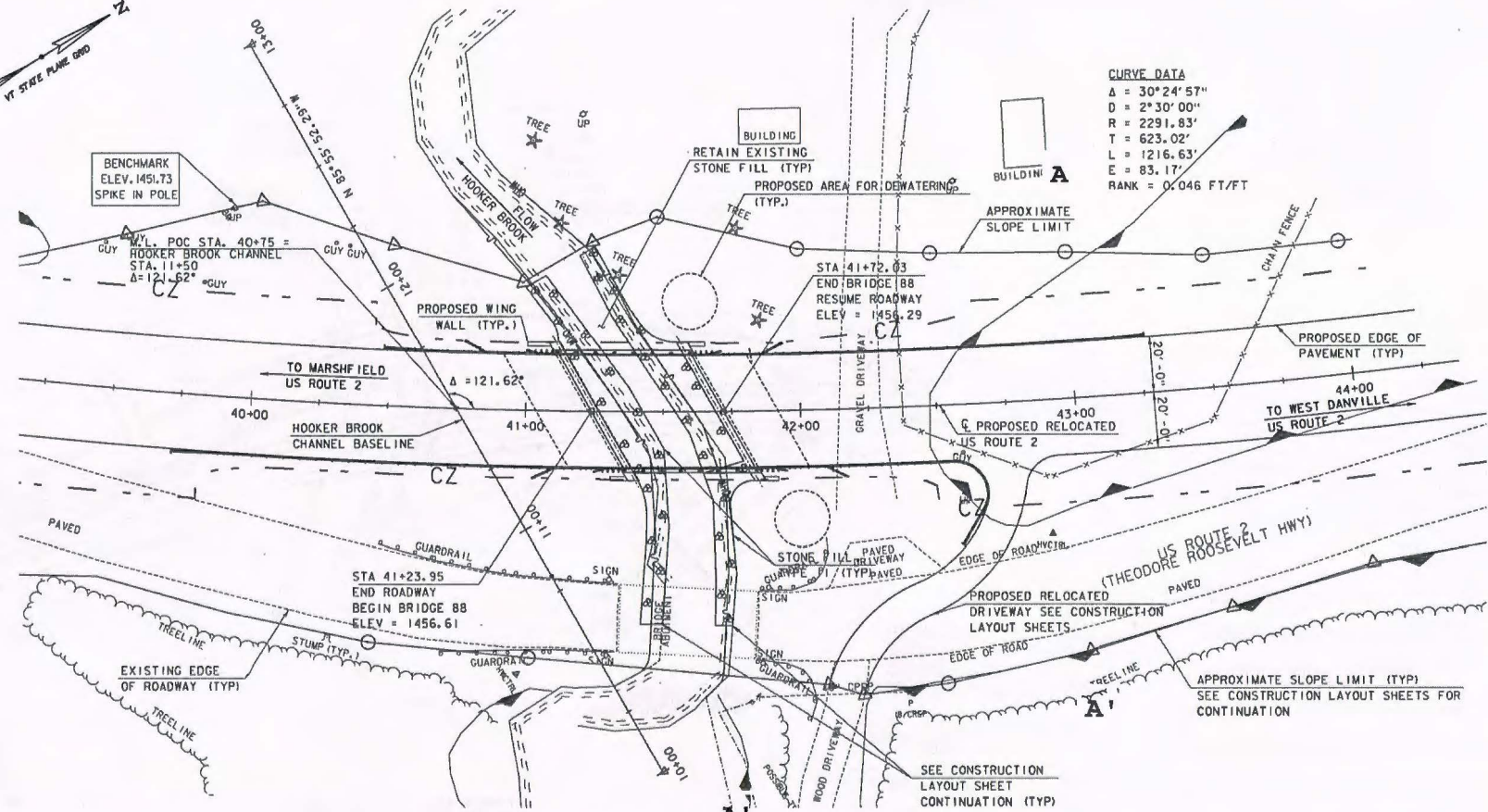
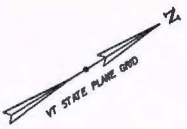
4'-0" - DITCH BOTTOM
STA. 35+50 - 37+86, RT
STA. 49+21 - 50+50, RT

8'-0" - DITCH BOTTOM
STA. 37+86 - 39+00, RT

R. 11/24.14

PROJECT NAME: CABOT - DANVILLE	PLAT DATE: 28-OCT-2014
PROJECT NUMBER: FECC F 028-3(26) C/2	DRAWN BY: L SHEA
FILE NAME: d78d347bdr.dgn	CHECKED BY: MSD
PROJECT LEADER: K. UPMAL	SHEET 22 OF 162
DESIGNED BY: L SHEA	
LAYOUT SHEET 3	





CURVE DATA
 $\Delta = 30^{\circ}24'57''$
 $D = 2^{\circ}30'00''$
 $R = 2291.83'$
 $T = 623.02'$
 $L = 1216.63'$
 $E = 83.17'$
 $\text{RANK} = 0.046 \text{ FT/FT}$

BENCHMARK
 ELEV. 1451.73
 SPIKE IN POLE

W/L POC STA. 40+75 =
 HOOKER BROOK CHANNEL
 STA. 11+50
 $\Delta = 121.62^{\circ}$

STA 41+72.03
 END BRIDGE 88
 RESUME ROADWAY
 ELEV = 1456.29

TO MARSHFIELD
 US ROUTE 2

40+00
 HOOKER BROOK
 CHANNEL BASELINE

$\Delta = 121.62^{\circ}$

43+00
 PROPOSED RELOCATED
 US ROUTE 2

44+00
 TO WEST DANVILLE
 US ROUTE 2

STA 41+23.95
 END ROADWAY
 BEGIN BRIDGE 88
 ELEV = 1456.61

STONE FILL
 PAVED DRIVEWAY
 CURVE 11 (TYP) PAVED

PROPOSED RELOCATED
 DRIVEWAY SEE CONSTRUCTION
 LAYOUT SHEETS

APPROXIMATE SLOPE LIMIT (TYP)
 SEE CONSTRUCTION LAYOUT SHEETS FOR
 CONTINUATION

SEE CONSTRUCTION
 LAYOUT SHEET
 CONTINUATION (TYP)

A

BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM
 STA. 41+09.4 LT - STA. 41+62.0 LT
 STA. 41+34.0 RT - STA. 41+85.7 RT

STONE FILL, TYPE 1
 STA. 10+92.1 RT - STA. 11+48.7 RT (LEFT BANK)
 STA. 10+76.5 RT - STA. 11+35.9 RT (RIGHT BANK)

BOX BEAM GUARDRAIL
 STA. 39+86.4 RT - STA. 41+02.3 RT
 STA. 40+61.9 LT - STA. 40+77.1 LT
 STA. 41+94.3 LT - STA. 43+12.3 LT
 STA. 42+17.4 RT - STA. 42+65.4 RT

MANUFACTURED TERMINAL SECTION, TANGENT
 STA. 39+72.5 RT - STA. 39+86.6 RT
 STA. 40+47.9 LT - STA. 40+61.9 LT
 STA. 42+65.4 RT - STA. 42+57.6 RT
 STA. 43+12.3 LT - STA. 43+26.4 LT

GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM
 STA. 40+77.1 LT - STA. 41+09.4 LT
 STA. 41+02.3 RT - STA. 41+34.0 RT
 STA. 41+62.0 LT - STA. 41+94.3 LT
 STA. 41+85.7 RT - STA. 42+17.4 RT

- PERMANENT WETLAND IMPACT

WORK BELOW ORDINARY HIGH WATER LINE
 APPROXIMATE AREA OF DISTURBANCE = 1525± SF (170± SY)
 APPROXIMATE VOLUME OF CUT = 3956± CF (147± CY)
 APPROXIMATE VOLUME OF FILL = 3824± CF (142± CY)
 APPROXIMATE TOTAL CUT = 132± CF (5± CY)

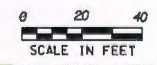
NOTE:
 REFER TO CONSTRUCTION LAYOUT SHEET 20 FOR
 ADDITIONAL INFORMATION AND REQUIREMENTS.

R. 11/24/14

PROJECT NAME: CABOT - DANVILLE
 PROJECT NUMBER: FECC F 028-3(26) C/2

FILE NAME: z78d347bort.dgn
 PROJECT LEADER: M. CRUZ
 DESIGNED BY: D. VERTYEV
 LAYOUT SHEET (BR 88)

PLOT DATE: 6/24/2014
 DRAWN BY: D. VERTYEV
 CHECKED BY: E. ATKINS
 SHEET 101 OF 158



SCALE IN FEET
 GREEN INTERNATIONAL AFFILIATES, INC.
 CIVIL AND STRUCTURAL ENGINEERS

- 11 STA. 56+06.50' RT - STA. 56+69.54' RT
INSTALL NEW 18" x 84" CULVERT - OPTION BB
REMOVE EXISTING 18" CPEP
- 12 STA. 57+31.49' LT - STA. 57+40.46' RT
INSTALL NEW 30" x 90" CULVERT - OPTION DD
W/ END SECTION - OPTION II @ INLET
STONE FILL PAD, 4'W x 10'L TYPE II @ OUTLET
REMOVE EXISTING 18" C.G.M.P.
- 12A STA. 58+00.47' RT - STA. 58+00.131' RT
INSTALL NEW 12" x 84" CULVERT - CPEP
W/ END SECTION @ INLET
STONE FILL PAD, 4'W x 10'L TYPE I @ OUTLET
- 12B STA. 58+18.136' RT - STA. 58+85.137' RT
INSTALL NEW 12" x 88" CULVERT - CPEP
- 13 STA. 62+24.35' RT - STA. 62+27.58' LT
INSTALL NEW 30" x 94" CULVERT - OPTION DD
W/ P.R.C.B. TYPE B GRATES @ INLET
STONE FILL PAD, 4'W x 10'L TYPE II @ OUTLET
REMOVE EXISTING 18" C.G.M.P.
- 14 STA. 66+73.39' RT - STA. 67+20.45' RT
INSTALL NEW 18" x 54" CULVERT - OPTION BB
REMOVE EXISTING 18" CPEP
- 11A STA. 51+25 RT - STA. 55+50 RT
INSTALL NEW 8" x 425' UNDERDRAIN W/FB @ STA. 55+50
- 11B STA. 57+50 RT - STA. 58+00 RT
INSTALL NEW 8" x 54' UNDERDRAIN CARRIER PIPE
- 11C STA. 58+00 RT - STA. 62+00 RT
INSTALL NEW 8" x 400' UNDERDRAIN W/FB @ STA. 62+00
- 11D STA. 62+25 RT - STA. 62+50 RT
INSTALL NEW 8" x 26' UNDERDRAIN CARRIER PIPE
- 11E STA. 62+50 RT - STA. 66+00 RT
INSTALL NEW 8" x 400' UNDERDRAIN W/FB @ STA. 66+00

(TYPE II) STONE FILL (SLOPE STABILIZATION)
STA. 63+50 RT. ~ 66+50 RT.

STEEL BEAM GUARDRAIL
STA. 64+55.5 LT. ~ 69+80.5 LT.

CONSTRUCT DRIVES (GRAVEL)
STA. 52+00 ~ 52+50 RT. (14'W)
STA. 52+64 RT. (28'W)
STA. 56+18 RT. (20'W) ASKEWED 70°33'11" RT.
STA. 60+25 RT. (24'W)
STA. 66+96 RT. (14'W)

STONE FILL DITCH, TYPE I, 8' WIDE
STA. 57+00 RT. ~ STA. 58+00 RT.

MANUFACTURED TERMINAL SECTION, FIARED
STA. 64+18 LT. ~ 64+55.5 LT.

RELOCATE MAILBOX, SINGLE SUPPORT
STA. 56+20 RT.
STA. 60+07 RT.

SCARIFYING PAVEMENT
STA. 66+75 ~ 70+25

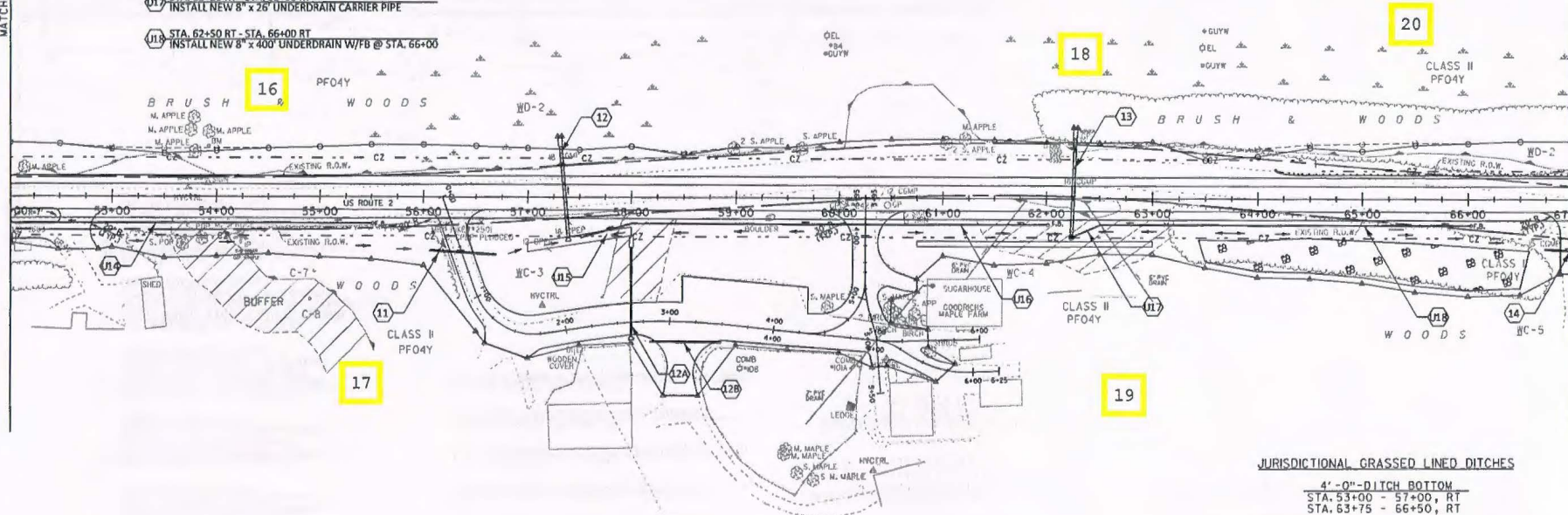
R8 STA. 60+00.3' RT - STA. 60+51.03' RT
REMOVE EXISTING 12" C.G.M.P.

SPECIAL PROVISION (RELOCATE PAINTED BOULDER)
STA. 59+35 RT. (MOVE BACK ABOVE CUT LIMITS)



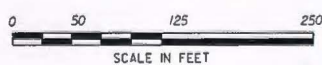
MATCHLINE 52+00

MATCHLINE 67+00



JURISDICTIONAL GRASSED LINED DITCHES
4'-0" DITCH BOTTOM
STA. 53+00 - 57+00, RT
STA. 63+75 - 66+50, RT

R. 11/24/14	
PROJECT NAME:	CABOT - DANVILLE
PROJECT NUMBER:	FECC F 028-3(26) C/2
FILE NAME:	d78d347bdr.dgn
PROJECT LEADER:	K. UPMAIL
DESIGNED BY:	I. SHEA
LAYOUT SHEET 4	CHECKED BY: HSD
	SHEET 24 OF 162



- 15 STA. 67+24.45' RT - STA. 67+28.55' LT
INSTALL NEW 30" x 102' CULVERT - OPTION EE
W/ END SECTION - OPTION JJ @ INLET
STONE FILL PAD, 10'W x 8'L, TYPE II @ INLET
STONE FILL PAD, 4'W x 10'L, TYPE II @ OUTLET
REMOVE EXISTING 18" R.C.P.
- 16 STA. 69+39.55' RT - STA. 69+44.55' LT
INSTALL NEW 30" x 104' CULVERT - OPTION EE
W/ END SECTION - OPTION JJ @ INLET
STONE FILL PAD, 10'W x 8'L, TYPE II @ INLET
STONE FILL PAD, 4'W x 10'L, TYPE II @ OUTLET
REMOVE EXISTING 18" CPEP
- 17 STA. 71+87.46' LT - STA. 71+88.32' RT
INSTALL NEW 18" x 80' CULVERT - OPTION AA
W/ P.R.C.C.B., TYPE A GRATE @ INLET
STONE FILL PAD, 3'W x 6'L, TYPE I @ OUTLET
REMOVE EXISTING 18" CPEP
- 18 STA. 74+47.35' RT - STA. 74+52.48' LT
INSTALL NEW 24" x 84' CULVERT - OPTION CC
W/ END SECTION - OPTION HH @ INLET
STONE FILL PAD, 4'W x 8'L, TYPE I @ OUTLET
REMOVE EXISTING 18" C.G.M.P.
- 19 STA. 78+07.43' RT - STA. 78+31.39' LT
INSTALL NEW 57" x 38' x 86' CULVERT - OPTION FF
W/ C.H. & STONE FILL PAD, 20'W x 15'L, TYPE II @ INLET
STONE FILL PAD, 8'W x 20'L, TYPE II @ OUTLET
REMOVE EXISTING 24" C.G.M.P.
- 20 STA. 79+89.38' LT - STA. 79+92.36' RT
INSTALL NEW 30" x 78' CULVERT - OPTION DD
W/ END SECTION - OPTION II @ INLET
STONE FILL PAD, 10'W x 8'L, TYPE II @ INLET
STONE FILL PAD, 5'W x 19'L, TYPE II @ OUTLET
REMOVE EXISTING 18" C.G.M.P.

- R9 STA. 69+80.48' RT - STA. 69+93.48' RT
REMOVE EXISTING 15" C.G.M.P.
- 119 STA. 71+00 RT - STA. 71+80 RT
INSTALL NEW 8" x 80' UNDERDRAIN W/FB @ STA. 71+80
- 120 STA. 71+80 RT - STA. 71+88 RT
INSTALL NEW 8" x 8' UNDERDRAIN CARRIER PIPE
- 121 STA. 71+88 RT - STA. 71+95 RT
INSTALL NEW 8" x 8' UNDERDRAIN CARRIER PIPE
- 122 STA. 71+95 RT - STA. 73+00 RT
INSTALL NEW 8" x 112' UNDERDRAIN W/FB @ STA. 73+00
- 123 STA. 79+95 RT - STA. 80+25 RT
INSTALL NEW 8" x 30' UNDERDRAIN CARRIER PIPE
- 124 STA. 80+25 RT - STA. 82+00 RT
INSTALL NEW 8" x 175' UNDERDRAIN W/FB @ STA. 82+00

STONE FILL DITCH, TYPE I, 8' WIDE
 STA. 67+19 RT. ~ STA. 71+00 RT.
 STA. 74+00 RT. ~ STA. 74+50 RT.
 STA. 78+00 RT. ~ STA. 80+50 RT.

STEEL BEAM GUARDRAIL
 STA. 64+55.5 LT. ~ 69+80.5 LT.
 STA. 71+19.5 LT. ~ 81+57.0 LT.

MANUFACTURE TERMINAL SECTION, FLARED
 STA. 69+80.5 LT. ~ 70+18.0 LT.
 STA. 70+82.0 LT. ~ 71+19.5 LT.
 STA. 81+57.0 LT. ~ 81+94.5 LT.

RELOCATE MAILBOX, SINGLE SUPPORT
 STA. 71+68 RT.
 STA. 72+24 RT.

CONSTRUCT DRIVES (GRAVEL)

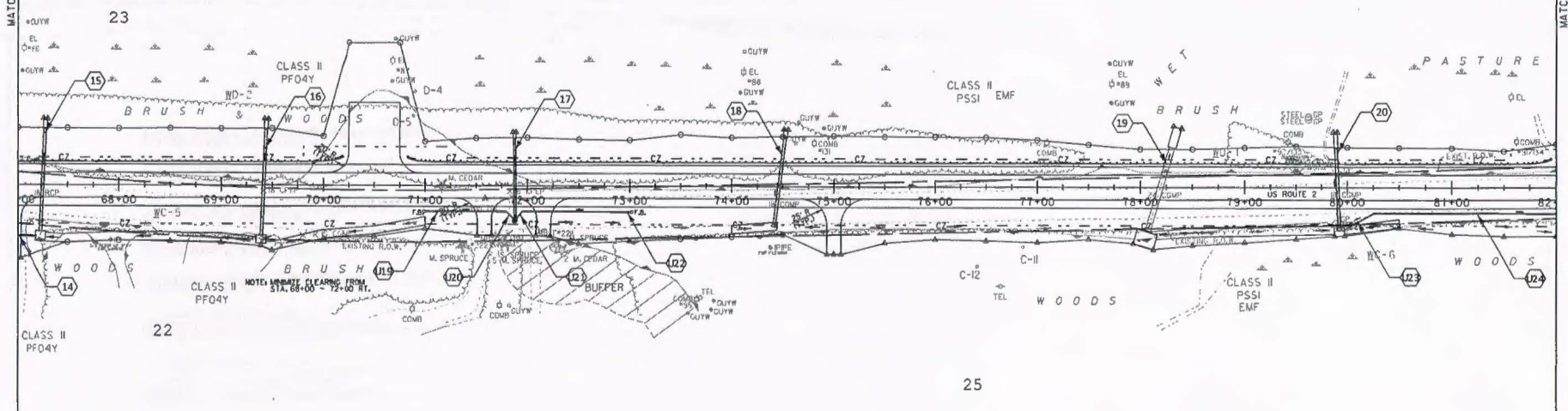
LT.	RT.
STA. 70+50 (14'W)	STA. 66+96 (14'W)
	STA. 71+58 (14'W) PAVED
	STA. 72+18 (14'W) ASKEWED 86°30'00" LT.
	STA. 75+00 (14'W)

SCARIFYING PAVEMENT
 STA. 66+75 ~ 70+25



MATCHLINE 67+00

MATCHLINE 82+00

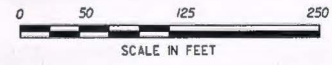


24

25

JURISDICTIONAL GRASSED LINED DITCHES
 4' - 0" - DITCH BOTTOM
 STA. 72+25 - 74+00, RT
 STA. 75+50 - 78+00, RT

R. 11/24/14



PROJECT NAME:	CABOT - DANVILLE		
PROJECT NUMBER:	FEGC F 028-3(26) C/2		
FILE NAME:	d78d347bdr.dgn	PLOT DATE:	28-OCT-2014
PROJECT LEADER:	K. LIPMAN	DRAWN BY:	L. SHEA
DESIGNED BY:	L. SHEA	CHECKED BY:	HSD
LAYOUT SHEET 5		SHEET 26	OF 162

21 STA 82+10.37 RT - STA 82+05.47 LT
 INSTALL NEW 30" x 88' CULVERT - OPTION DD
 W/ END SECTION - OPTION II @ INLET,
 STONE FILL PAD, 4'W x 10'L, TYPE II @ OUTLET
 REMOVE EXISTING 18" C.G.M.P.

E2 STA 88+12.33' RT - STA 88+13.33' LT
 EXISTING 103' x 71' CULVERT - RETAIN

127 STA 82+08 RT - STA 82+25 RT
 INSTALL NEW 8" x 20' UNDERDRAIN CARRIER PIPE

128 STA 82+25 RT - STA 87+00 RT
 INSTALL NEW 8" x 475' UNDERDRAIN W/FB @ STA. 87+00

127 STA 83+00 LT - STA 83+50 LT
 INSTALL NEW 8" x 54' UNDERDRAIN CARRIER PIPE

128 STA 83+50 LT - STA 85+50 LT
 INSTALL NEW 8" x 200' UNDERDRAIN W/FB @ STA. 85+50

R10 STA 82+90.26' LT - STA 82+95.25' RT
 REMOVE EXISTING 18" C.G.M.P.

R11 STA 86+01.22' RT - STA 86+17.25' LT
 REMOVE EXISTING 18" C.G.M.P.

STONE FILL DITCH, TYPE I, 8' WIDE
 STA. 82+00 RT. ~ 82+50 RT.

MANUFACTURED TERMINAL SECTION, FLARED
 STA. 87+97.5 LT. ~ 88+35.0 LT.
 STA. 86+75.0 LT. ~ 87+12.5 RT.
 STA. 88+50.0 LT. ~ 88+87.5 RT.

STEEL BEAM GUARDRAIL
 STA. 88+35.0 LT. ~ 88+55 LT.
 STA. 87+12.5 RT. ~ 88+50 RT.

CONSTRUCT DRIVES (GRAVEL)
 STA. 87+75 LT. (14'W)

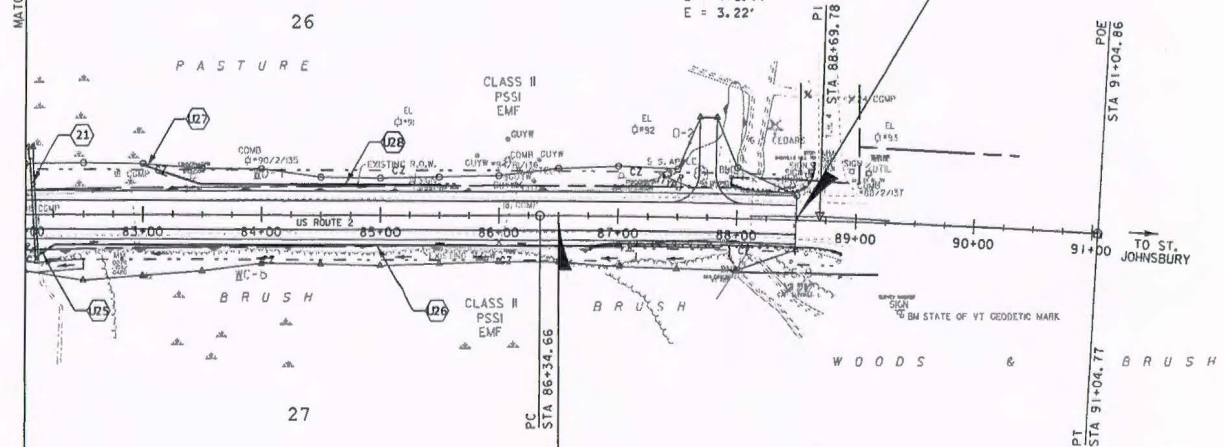
ANCHOR FOR STEEL BEAM RAIL
 STA. 88+47 LT.
 (SEE STANDARD G-1d)



STA. 88 + 50.00
 END APPROACH
 MATCH EXISTING

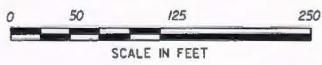
CURVE DATA #4
 DELTA = 3° 08' 03"
 Q = 0° 40' 00"
 R = 8594.37'
 T = 235.11'
 L = 470.11'
 E = 3.22'

MATCHLINE 82+00



STA. 86 + 50.00
 END PROJECT
 FEFC F 028-3(26)C/2
 BEGIN APPROACH

JURISDICTIONAL GRASSED LINED DITCHES
 4' - 0" - DITCH BOTTOM
 STA. 82+50 - 88+00, RT



PROJECT NAME: CABOT - DANVILLE	PLOT DATE: 28-OCT-2014
PROJECT NUMBER: FEFC F 028-3(26)C/2	DRAWN BY: I, SHEA
FILE NAME: d78d347bdr.dgn	CHECKED BY: HSD
PROJECT LEADER: K, UPMAL	SHEET 28 OF 162
DESIGNED BY: I, SHEA	
LAYOUT SHEET 6	