

TOWN OF MIDDLESEX MIDDLESEX, VERMONT

USDA NRCS EMERGENCY WATERSHED PROGRAM STREAMBANK PROTECTION DEBRIS REMOVAL MULTIPLE SITES

September 2024



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Consulting Engineers

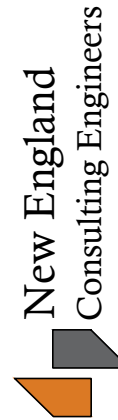
ENGINEERING AND ENVIRONMENTAL SERVICES

120 NORTHGATE PLAZA
MORRISVILLE, VERMONT 05661
(802) 888-5722



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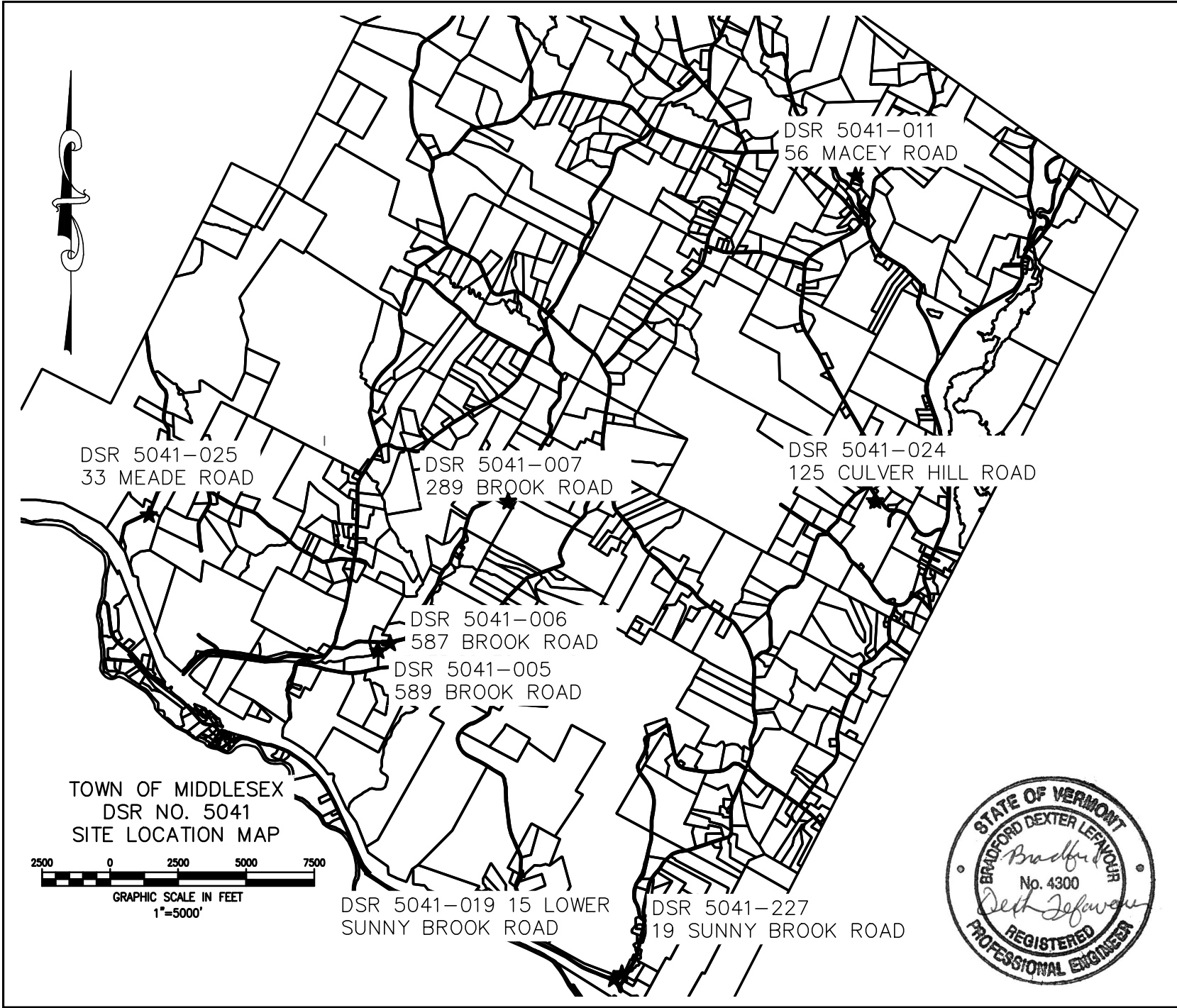


TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-025
33 MEADE ROAD
STREAMBANK PROTECTION - PLAN

PROJECT NO. 1041
DESIGNED BY: BDL
DRAWN BY: BDL
DATE: MAY 2024
SCALE: AS NOTED

1



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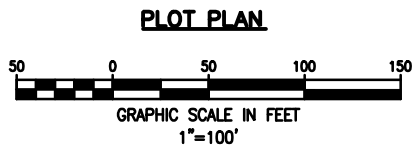
TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 504
DEBRIS REMOVAL AND STREAMBANK PROTECTION
SITES LOCATION MAP

PROJECT NO. 1041
DESIGNED BY: BDL
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DATE: MAY 2024
SCALE: AS NOTED



2

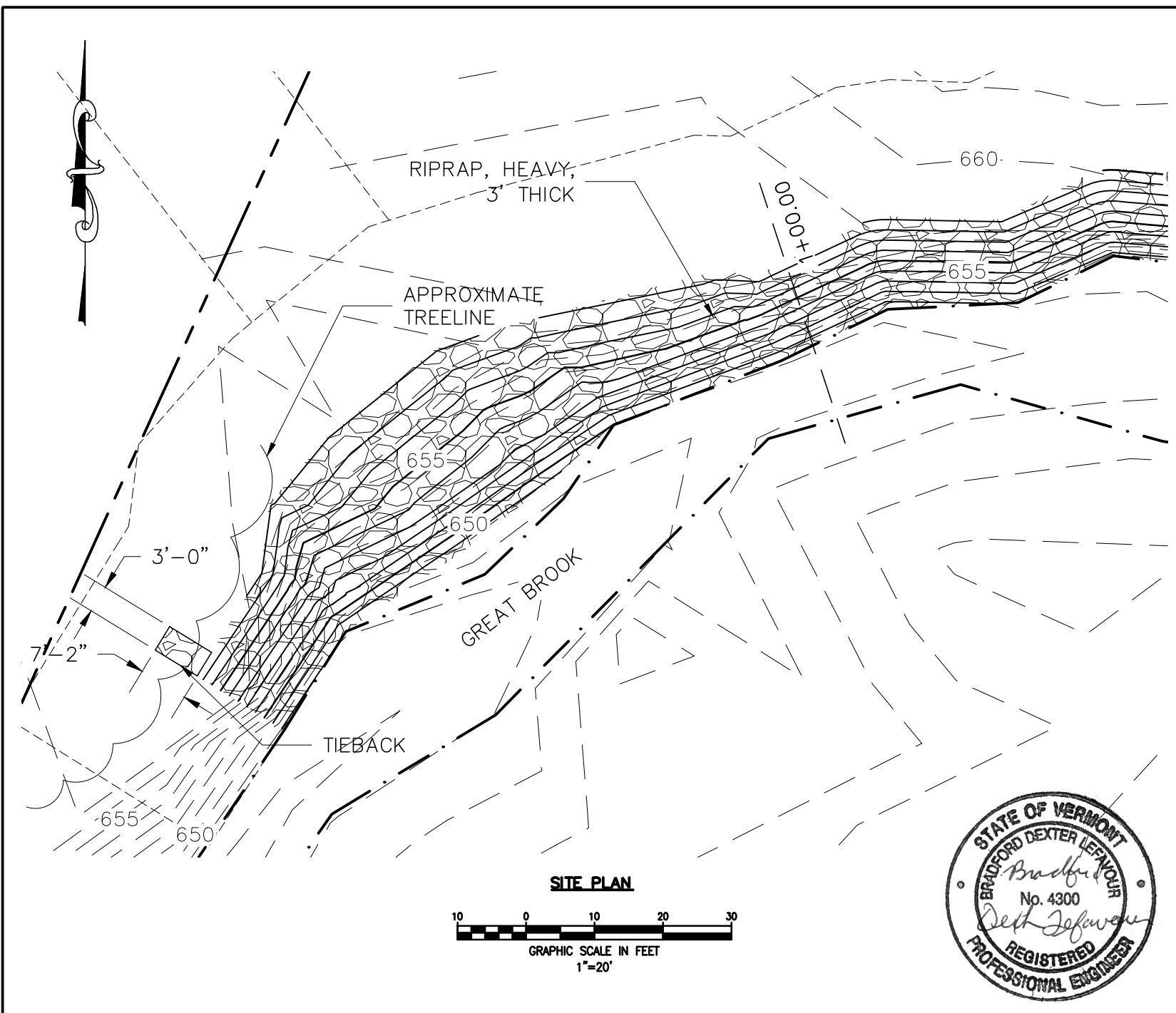


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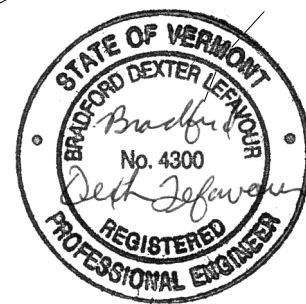
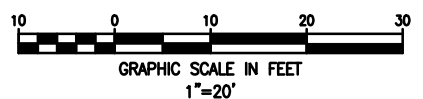
TOWN OF MIDDLESEX
 USDA EWP PROJECT
 MIDDLESEX, VERMONT
 DSR NO. 5041-005 & 5041-006
 589/587 BROOK ROAD
 STREAMBANK PROTECTION - PLAN

PROJECT NO. 1041
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3



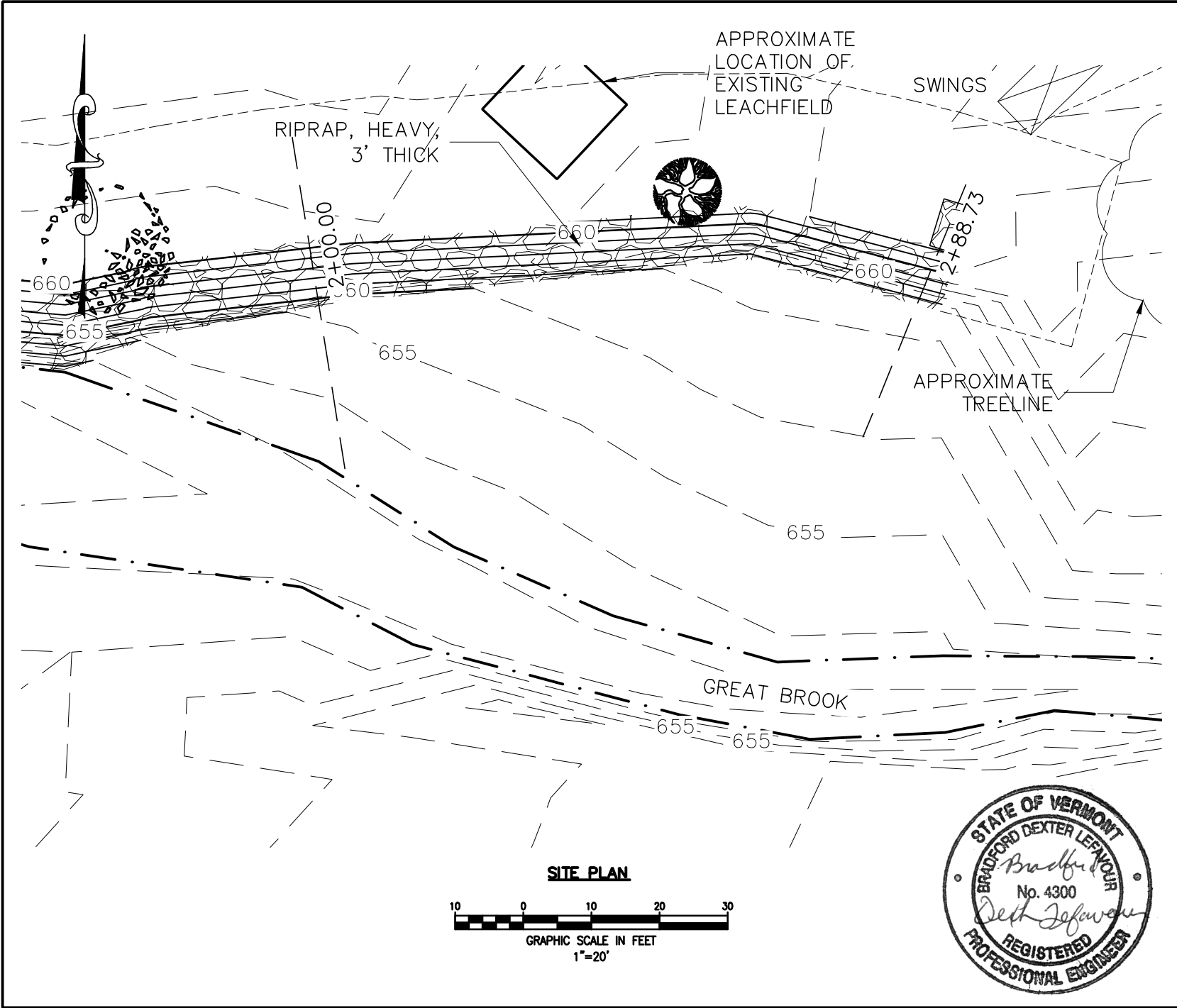
SITE PLAN



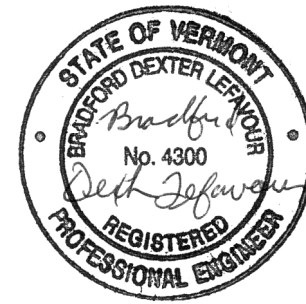
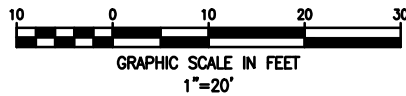
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TOWN OF MIDDLESEX
 USDA EWP PROJECT
 MIDDLESEX, VERMONT
 DSR NO. 5041-005 & 5041-006
 589/587 BROOK ROAD - SITE 1
 STREAMBANK PROTECTION - PLAN 1

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SITE PLAN

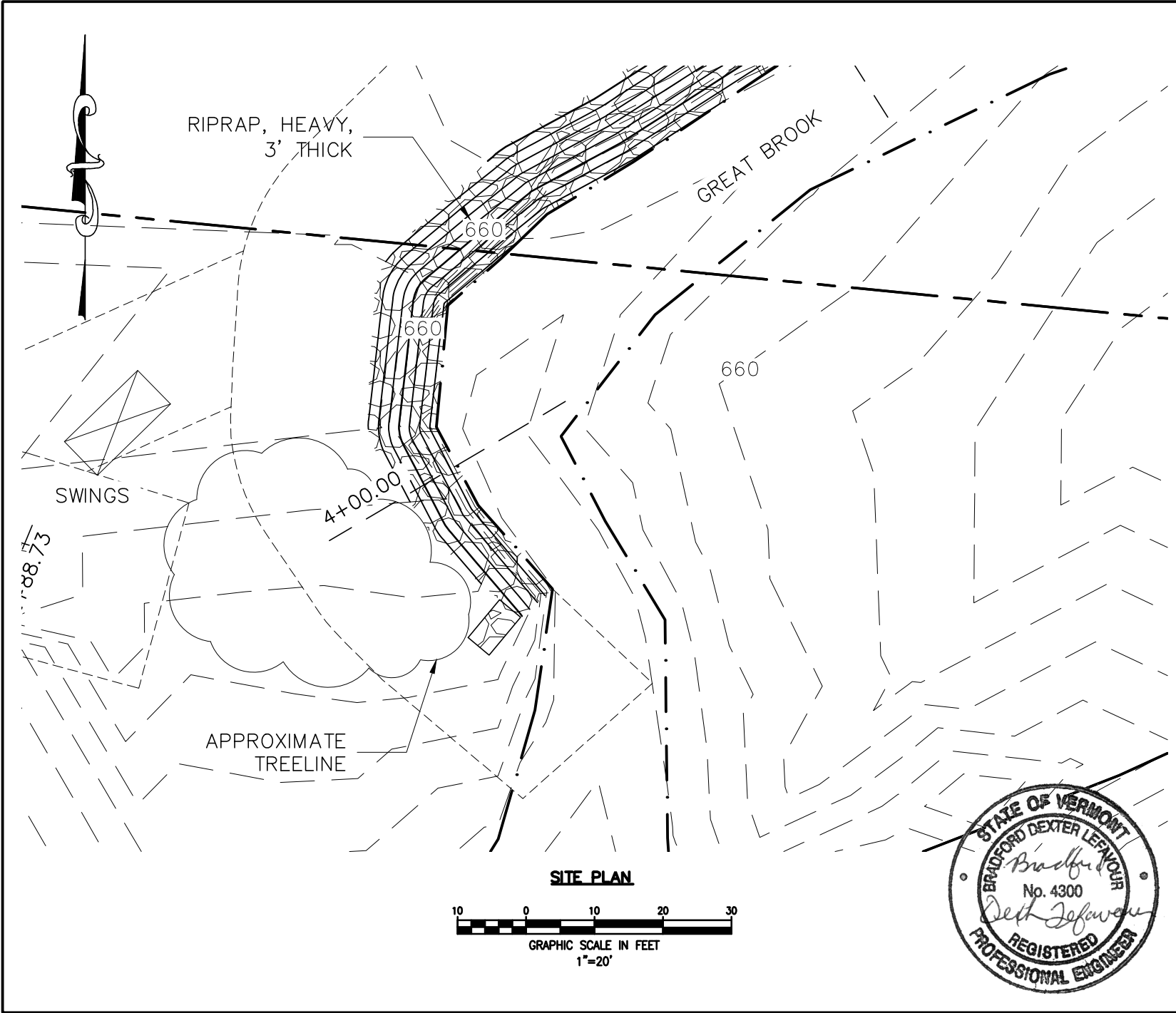


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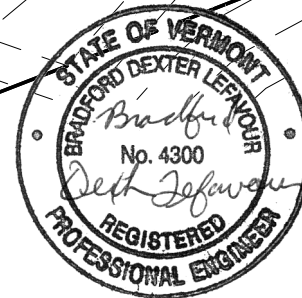
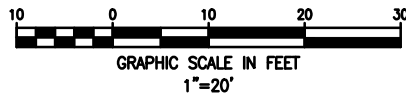
TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-005 & 5041-006
589/587 BROOK ROAD - SITE 1
STREAMBANK PROTECTION - PLAN 2

PROJECT NO. 1041
DESIGNED BY: BDL
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DATE: MAY 2024
SCALE: AS NOTED



SITE PLAN



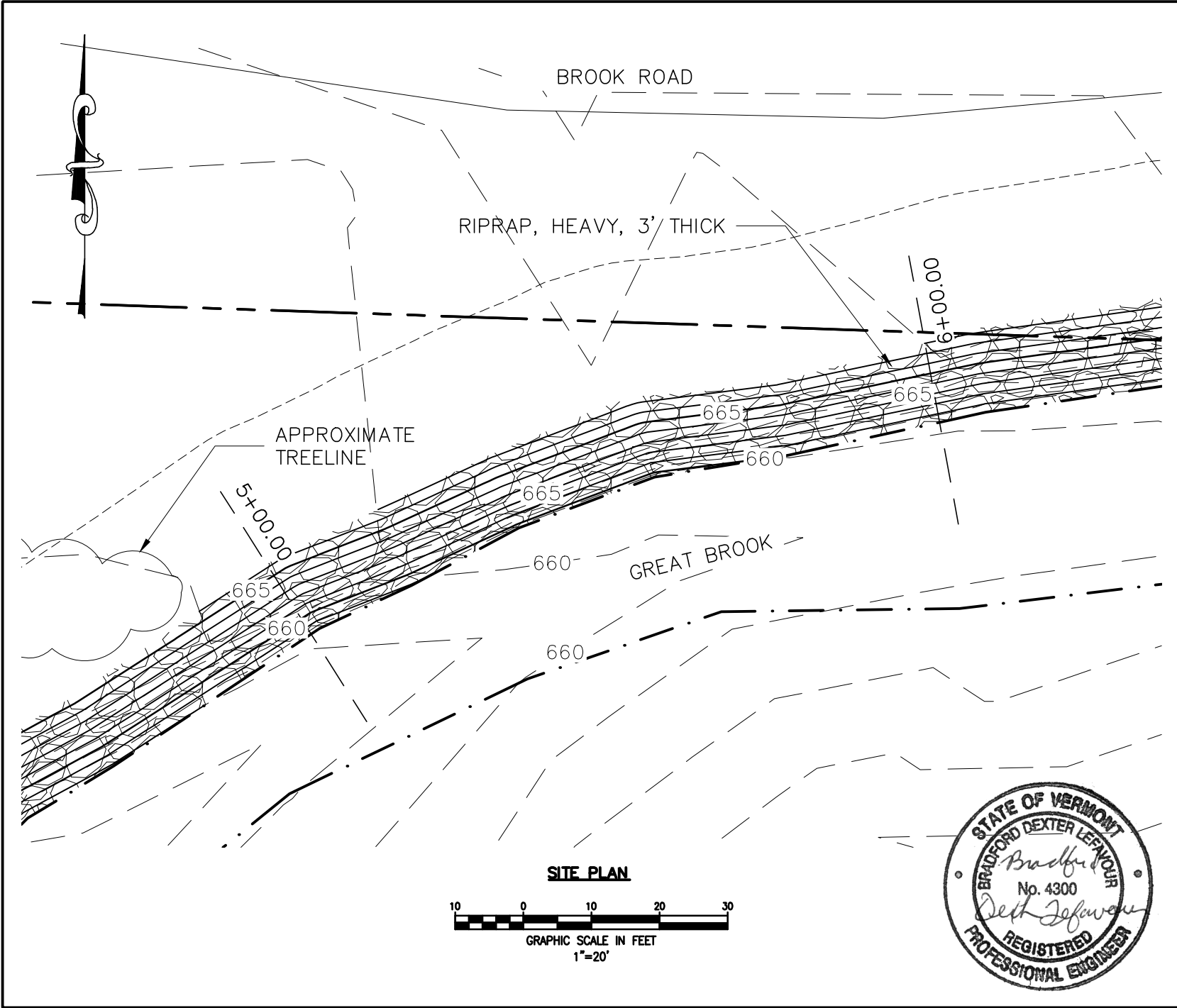
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USDA EWP PROJECT
MIDDLESEX, VERMONT

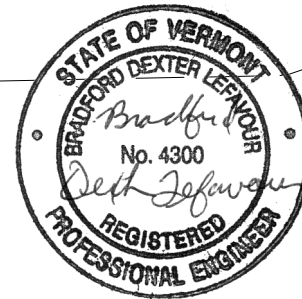
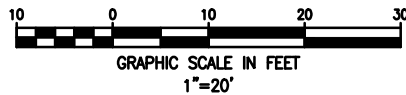
DSR NO. 5041-005 & 5041-006
589/587 BROOK ROAD - SITE 1
STREAMBANK PROTECTION - PLAN 3

PROJECT NO. 1041
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SCALE: AS NOTED

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SITE PLAN



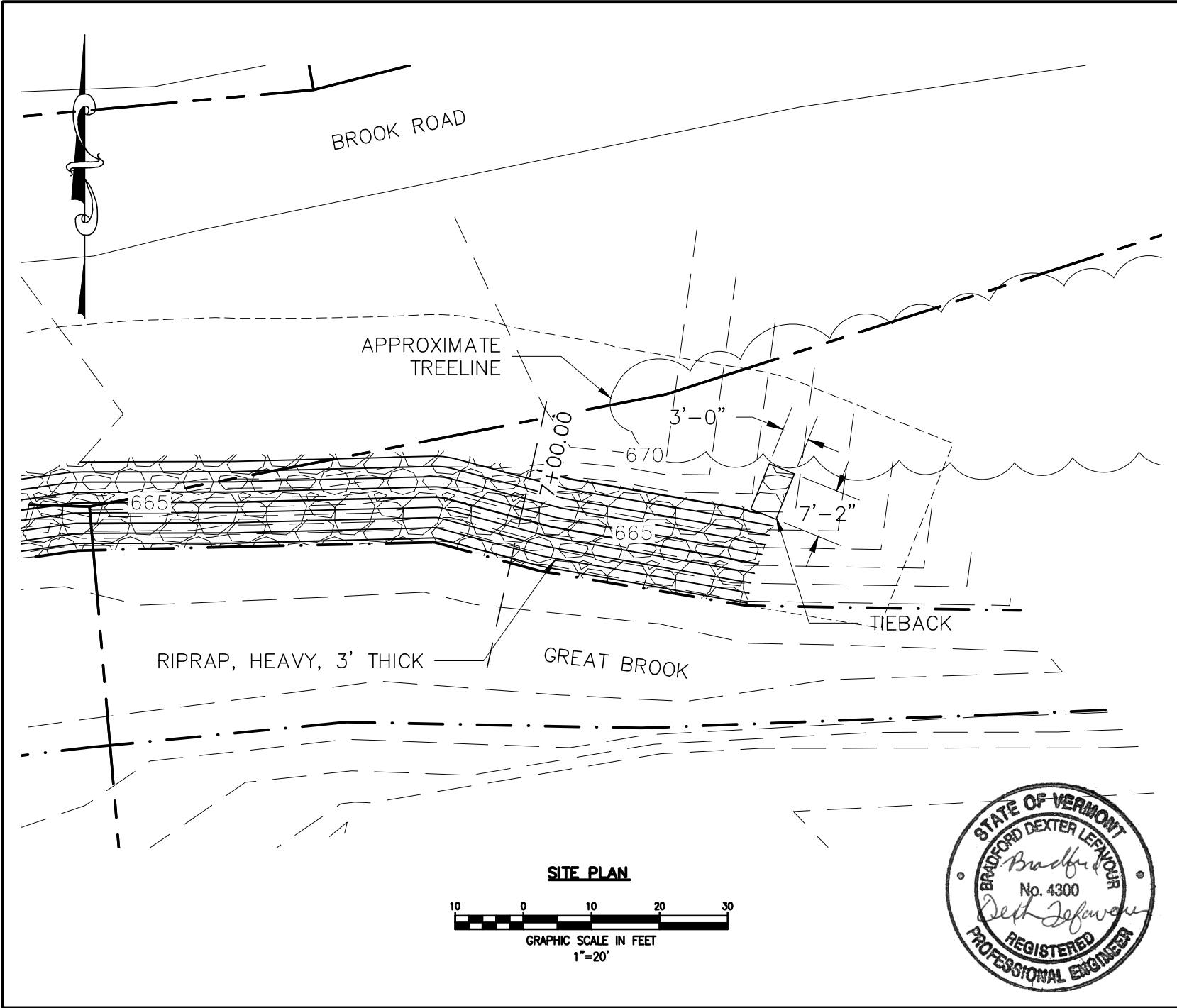
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TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-005 & 5041-006
589/587 BROOK ROAD - SITE 1
STREAMBANK PROTECTION - PLAN 4

PROJECT NO. 1041
DESIGNED BY: BDL
DRAWN BY: BDL
DATE: MAY 2024
SCALE: AS NOTED

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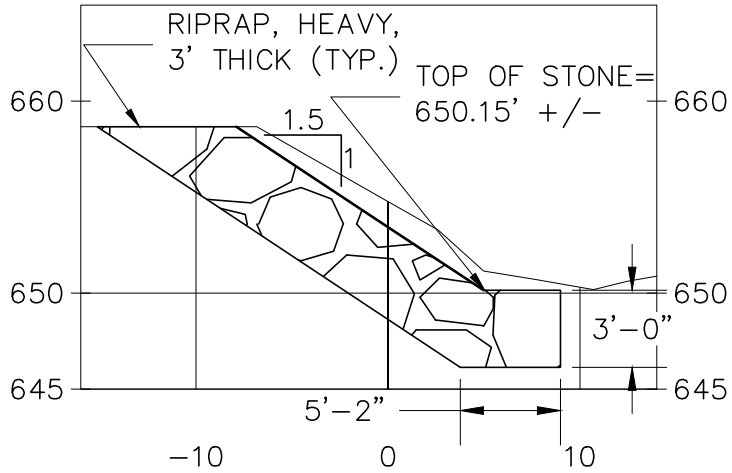
TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-005 & 5041-006
589/587 BROOK ROAD - SITE 1
STREAMBANK PROTECTION - PLAN 5

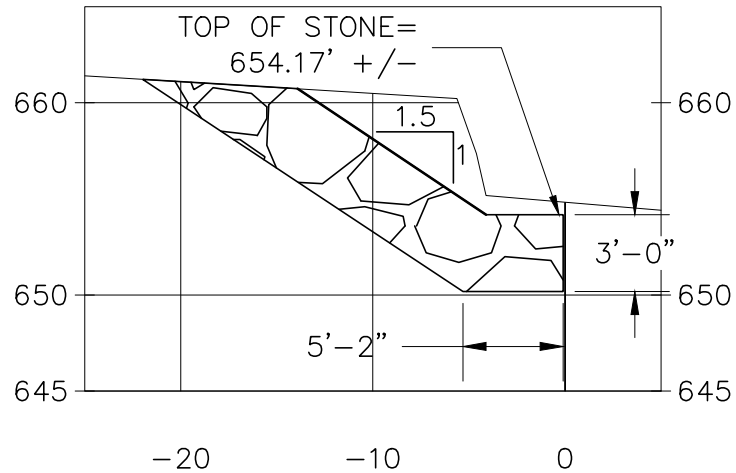
PROJECT NO. 1041
DESIGNED BY: BDL
DRAWN BY: BDL
DATE: MAY 2024
SCALE: AS NOTED

8

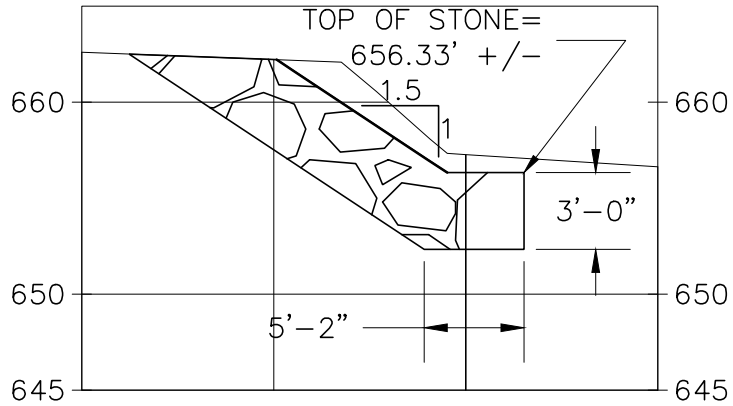
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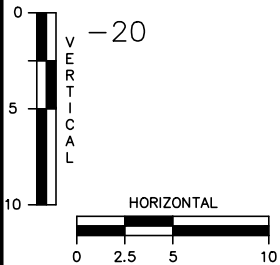
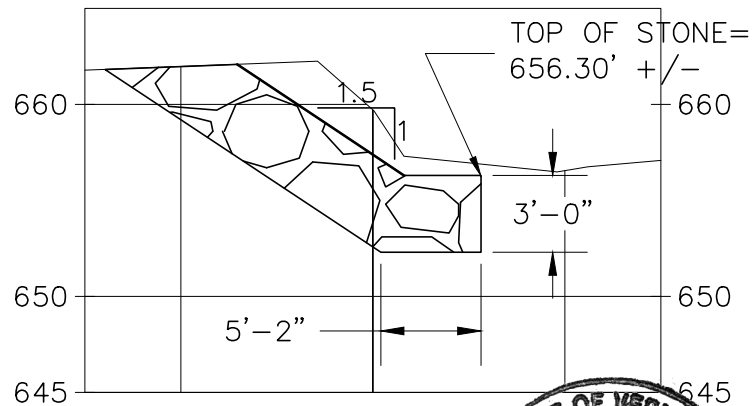
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2+88.73

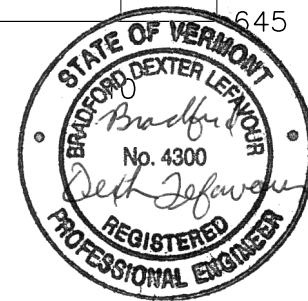


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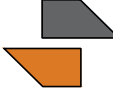


STREAM PROFILE STA 0+00 TO 7+00

SCALE: H 1"=10'
V 1"=10'



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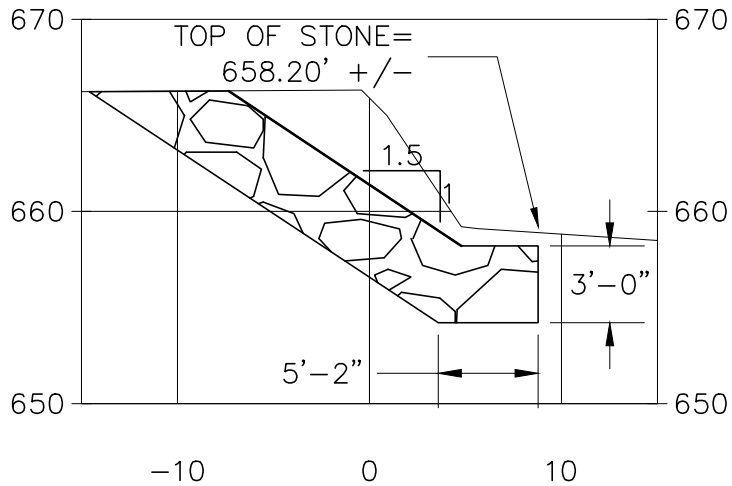
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USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-005 & 5041-006
589/587 BROOK ROAD - SITE 1
STREAMBANK PROTECTION - SECTIONS

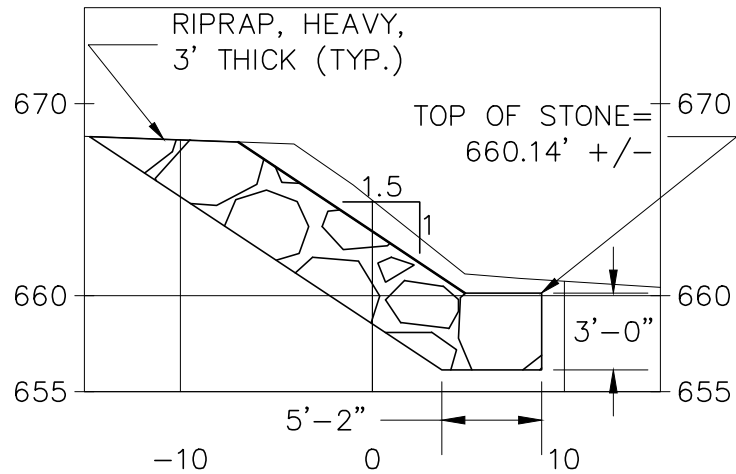
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DATE: MAY 2024
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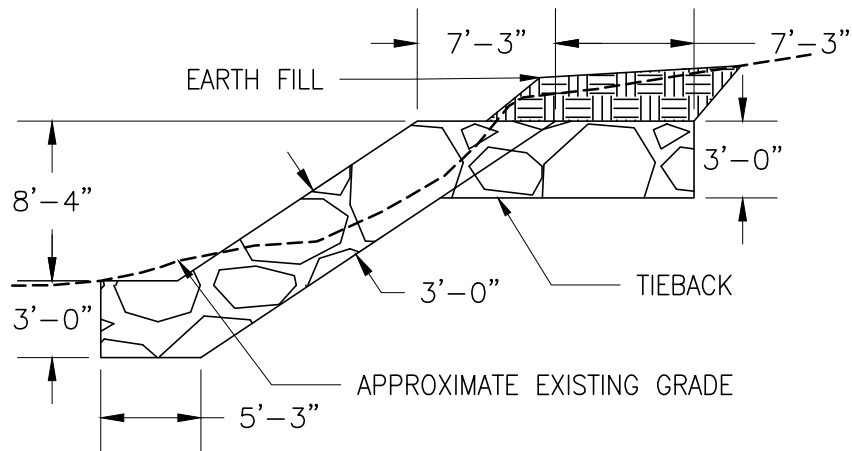
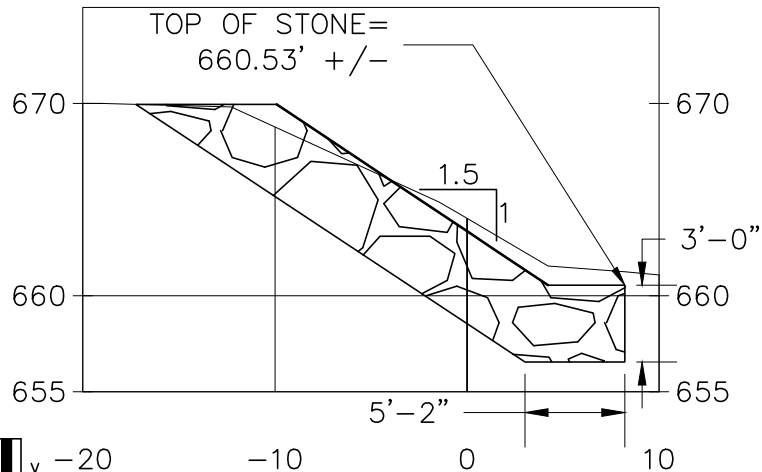
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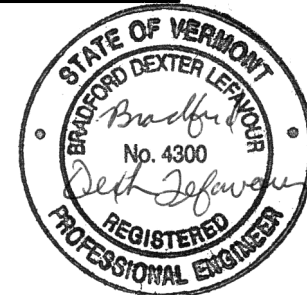
6+00.00



7+00.00

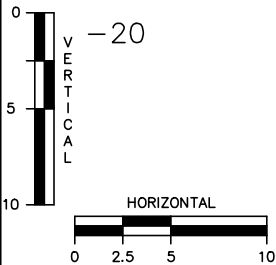


STANDARD RIPRAP SECTION WITH TIEBACK DETAIL
SCALE: 1"=10'

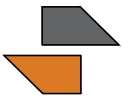


STREAM PROFILE STA 0+00 TO 7+00

SCALE: H 1"=10'
V 1"=10'



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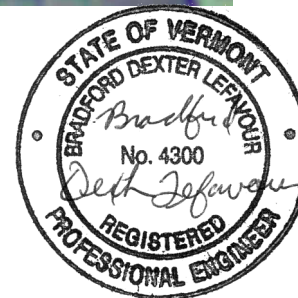
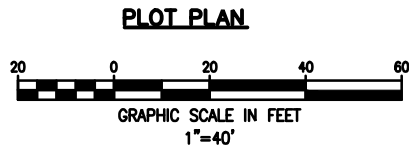
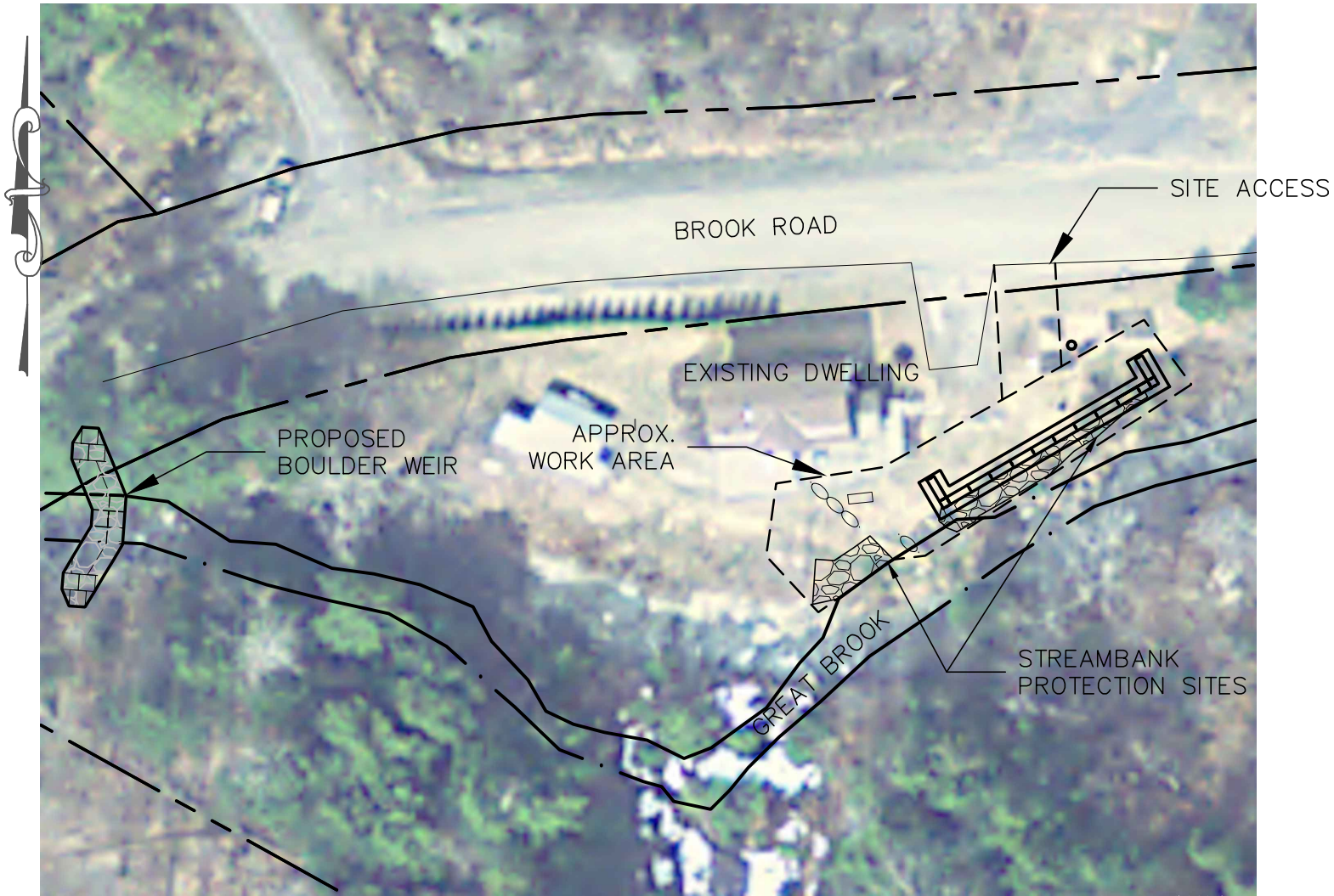
TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-005 & 5041-006
589/587 BROOK ROAD - SITE 1
STREAMBANK PROTECTION - SECTIONS

PROJECT NO. 1041
DESIGNED BY: BDL
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SCALE: AS NOTED

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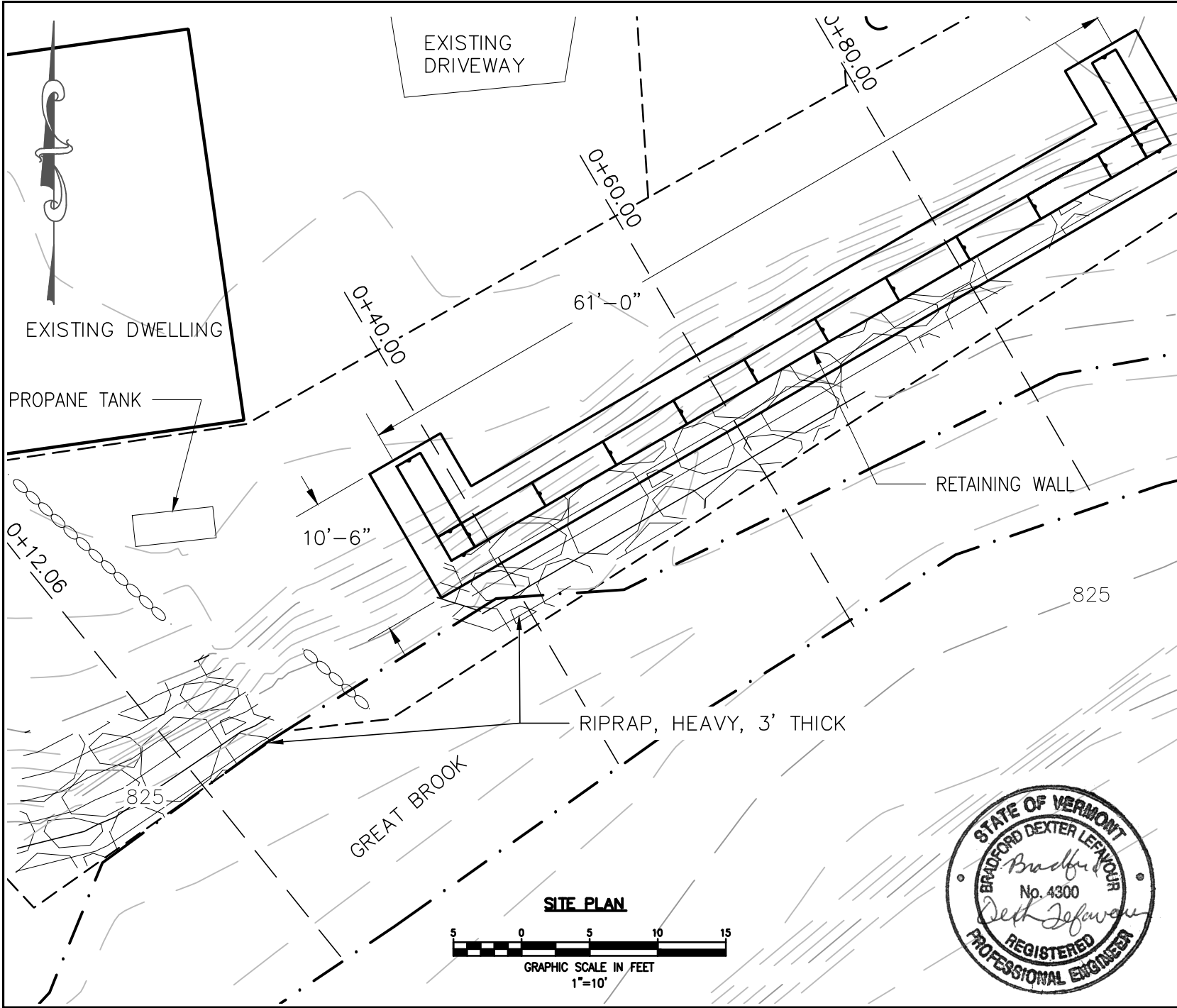
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TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

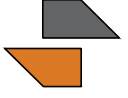
DSR NO. 5041-007
289 BROOK ROAD
STREAMBANK PROTECTION - PLOT PLAN

PROJECT NO. 1041
DESIGNED BY: BDL
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DATE: MAY 2024
SCALE: AS NOTED

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TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

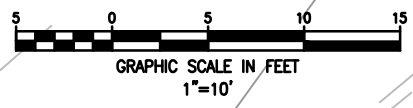
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289 BROOK ROAD
STREAMBANK PROTECTION - PLAN

PROJECT NO. 1041
DESIGNED BY: BDL
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DATE: MAY 2024
SCALE: AS NOTED

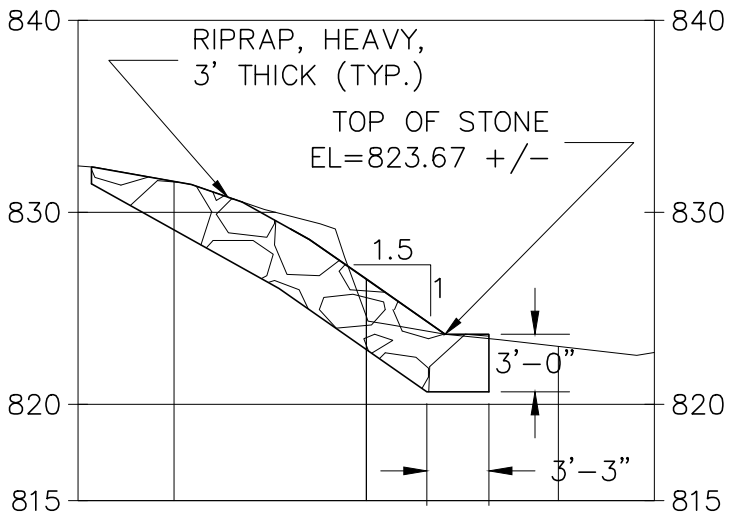
12

12 OF 29

SITE PLAN

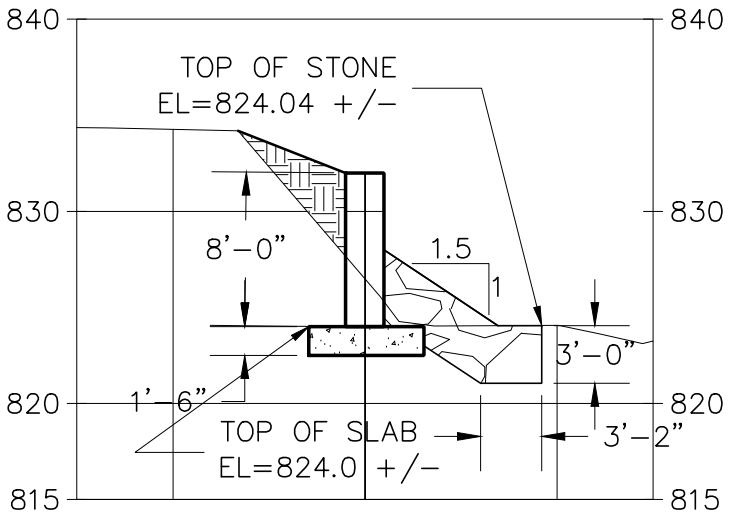


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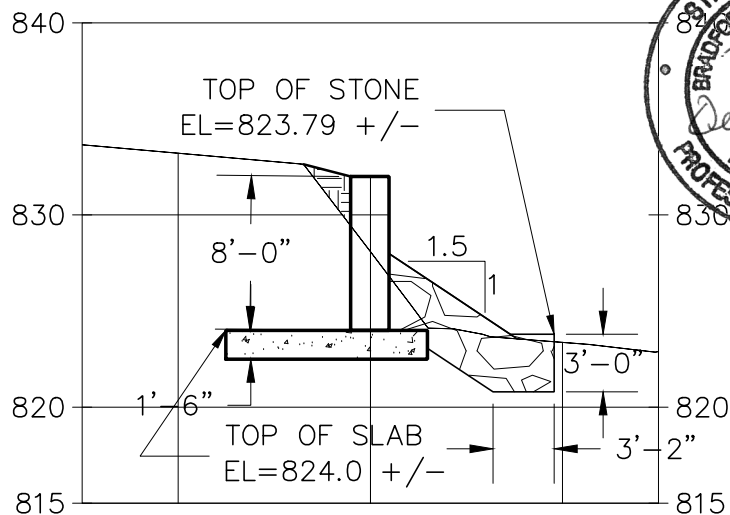
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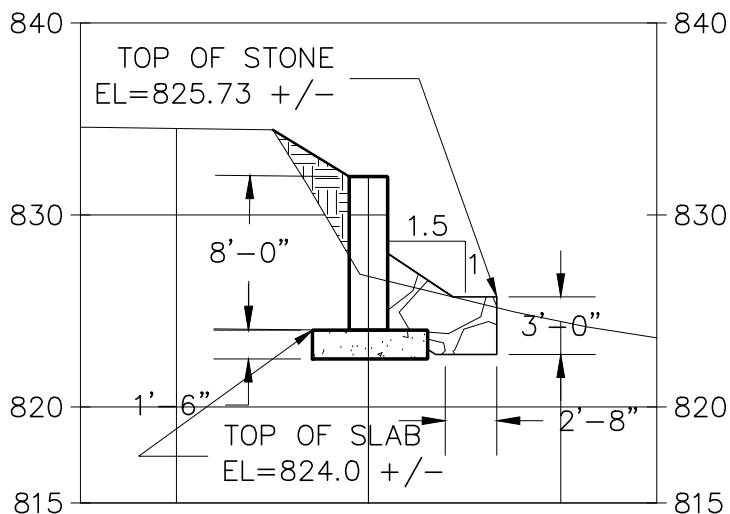
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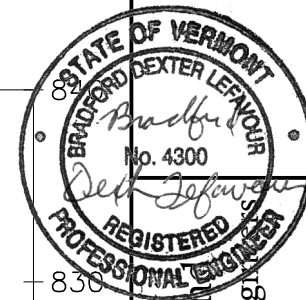


-10 0 10

0+80.00



-10 0 10



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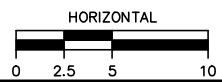
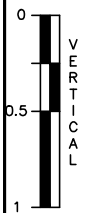
TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-007
289 BROOK ROAD
STREAMBANK PROTECTION - SECTIONS

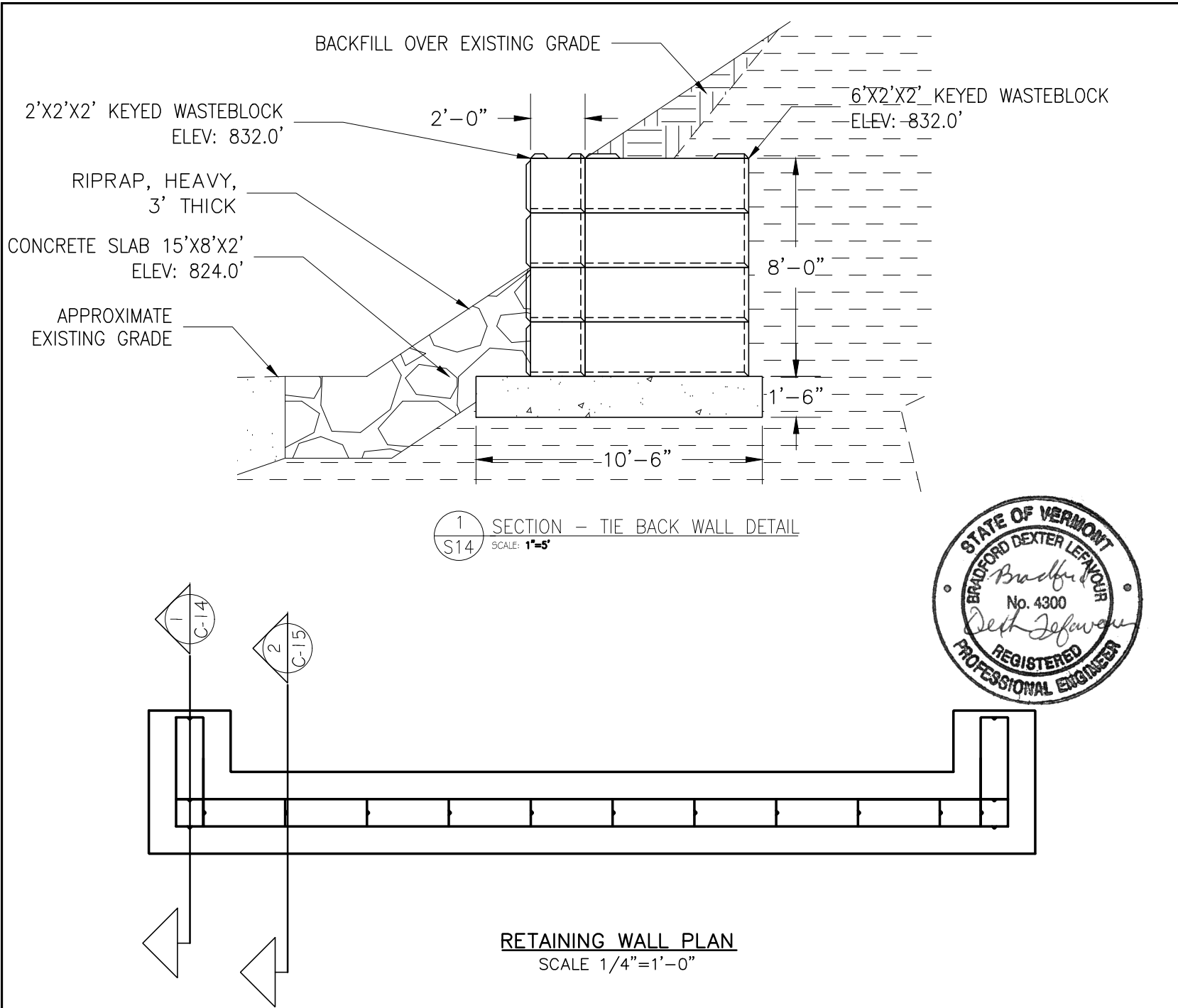
PROJECT NO. 1041
DESIGNED BY: BDL
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DATE: MAY 2024
SCALE: AS NOTED

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STREAM PROFILE STA 0+00 TO 0+96
SCALE: H 1'=10' V 1=10'

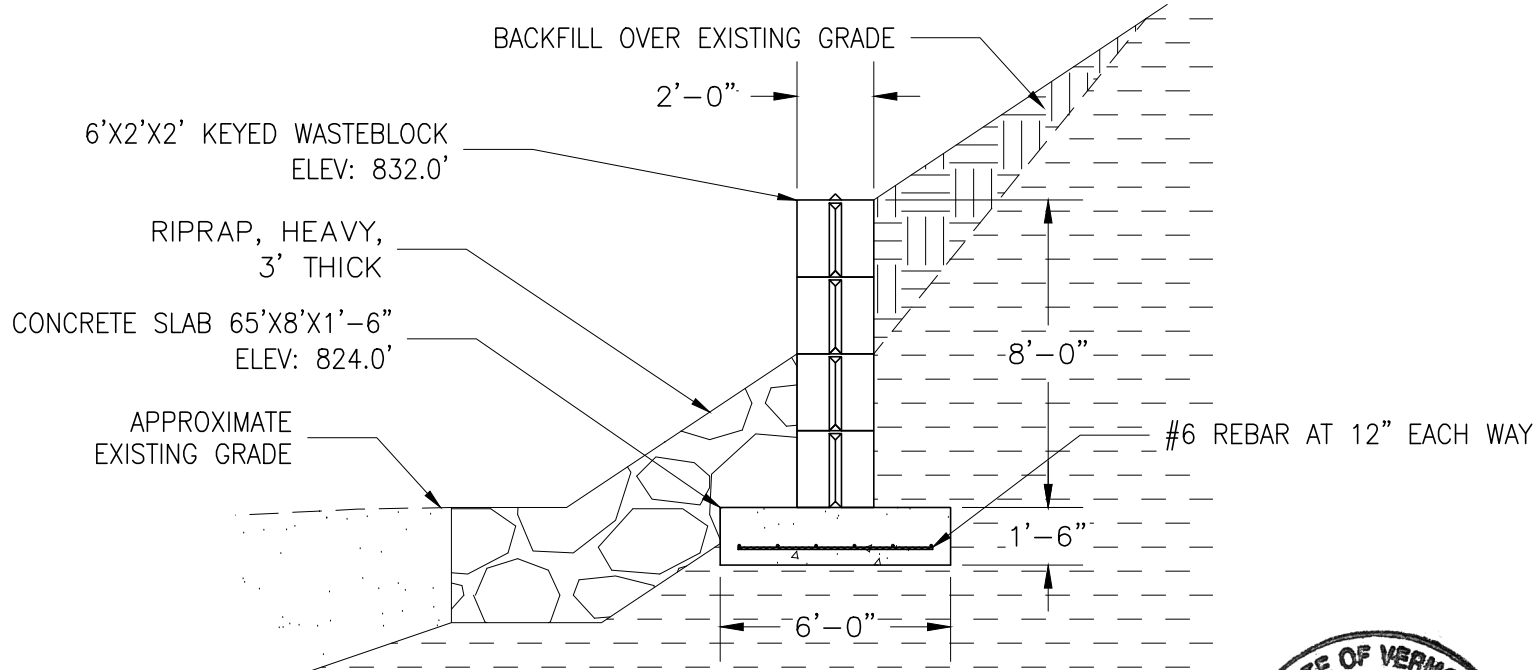


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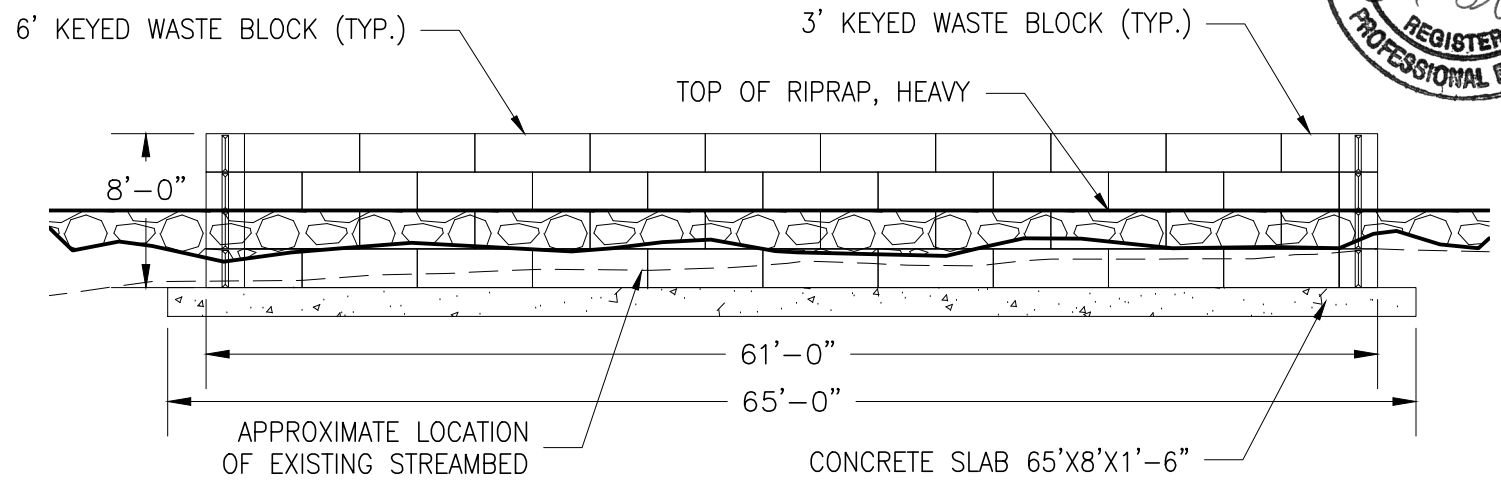
TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-007
289 BROOK ROAD
STREAMBANK PROTECTION - DETAILS

PROJECT NO. 1041
DESIGNED BY: BDL
DRAWN BY: BDL
DATE: MAY 2024
SCALE: AS NOTED



2 SECTION — RETAINING WALL TYPICAL DETAIL
 S15 SCALE: 1"=5'



DETAIL — RETAINING WALL
 SCALE: 1"=10'

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TOWN OF MIDDLESEX
 USDA EWP PROJECT
 MIDDLESEX, VERMONT

DSR NO. 5041-007
 289 BROOK ROAD
 STREAMBANK PROTECTION — DETAILS

PROJECT NO. 1041
 DESIGNED BY: BDL
 DRAWN BY: BDL
 DATE: MAY 2024
 SCALE: AS NOTED

ELEVATION: 817.27 ELEVATION: 819.77

ELEVATION: 817.77 ELEVATION: 815.77

ELEVATION: 815.27

RIPRAP, HEAVY,
4' THICK

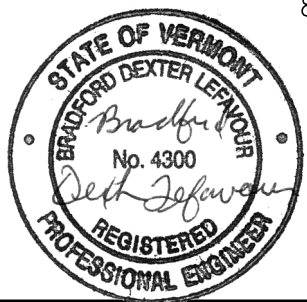
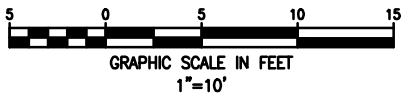
8'-0"

ELEVATION: 817.27

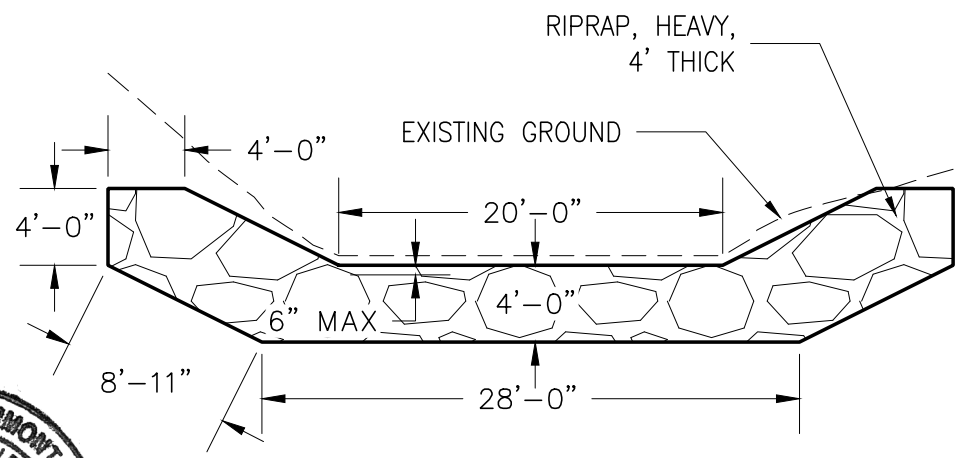
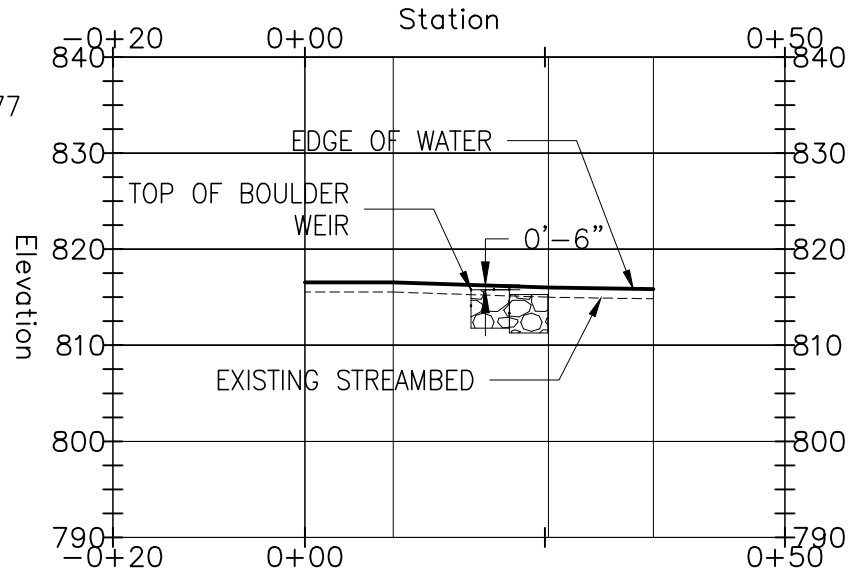
ELEVATION: 817.77

ELEVATION: 819.77

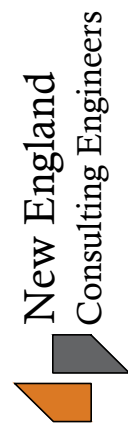
SITE PLAN



WEIR ALIGNMENT PROFILE



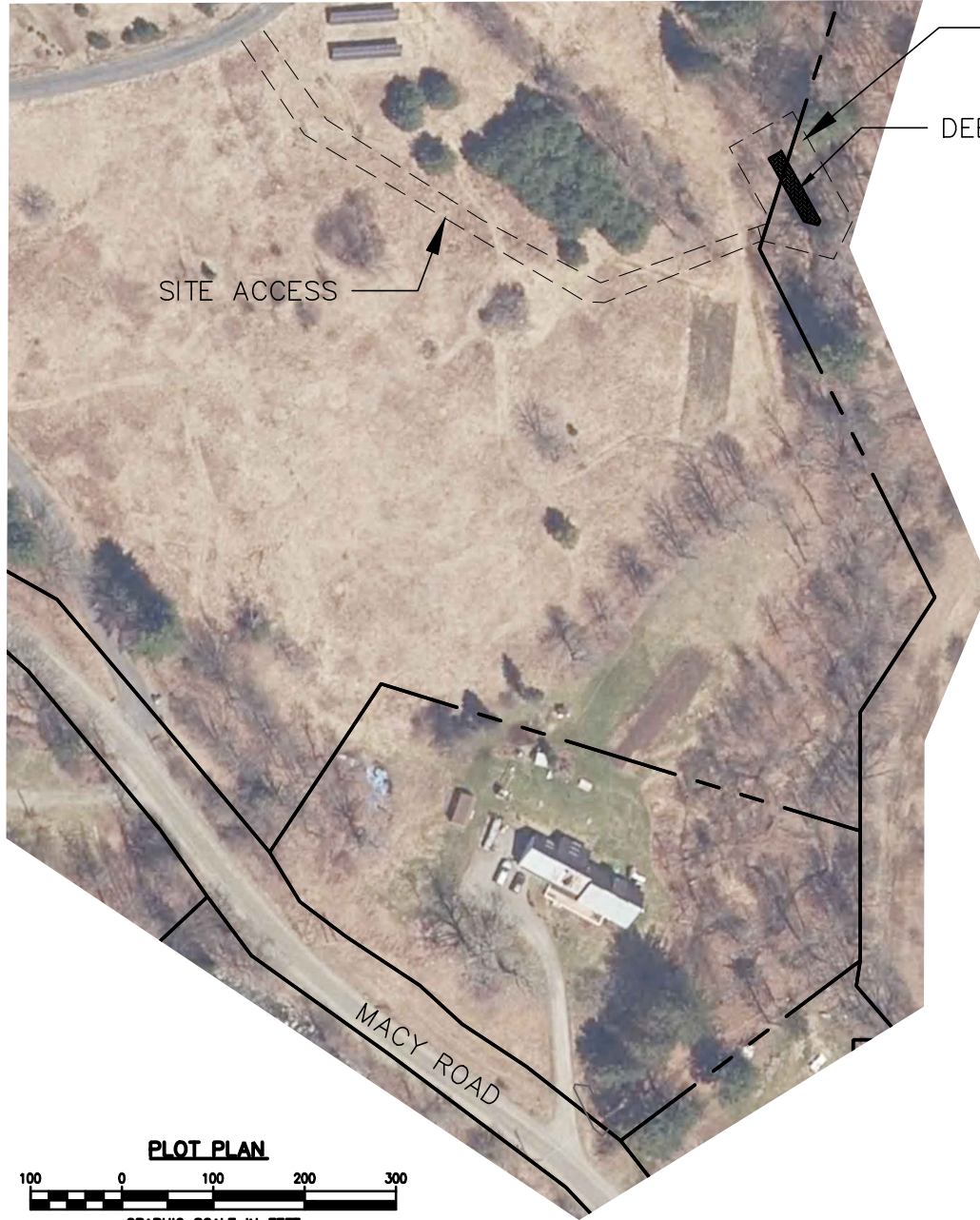
SECTION - BOULDER WEIR
SCALE: 1"=10'



TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT
DSR NO. 5041-007
289 BROOK ROAD
BOULDER WEIR - PLAN AND DETAILS

PROJECT NO.	1041
DESIGNED BY:	BDL
DRAWN BY:	BDL
DATE:	MAY 2024
SCALE:	AS NOTED

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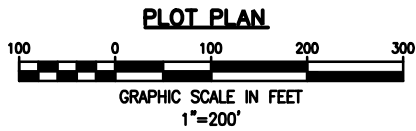


APPROX.
WORK AREA

DEBRIS REMOVAL SITE 3

SITE ACCESS

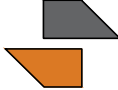
MACY ROAD



PLOT PLAN

GRAPHIC SCALE IN FEET
1"=200'




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TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-011
56 MACY ROAD
DEBRIS REMOVAL - PLOT PLAN

PROJECT NO. 1041

DESIGNED BY: BDL

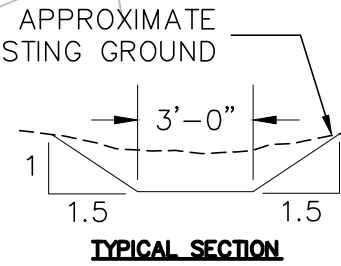
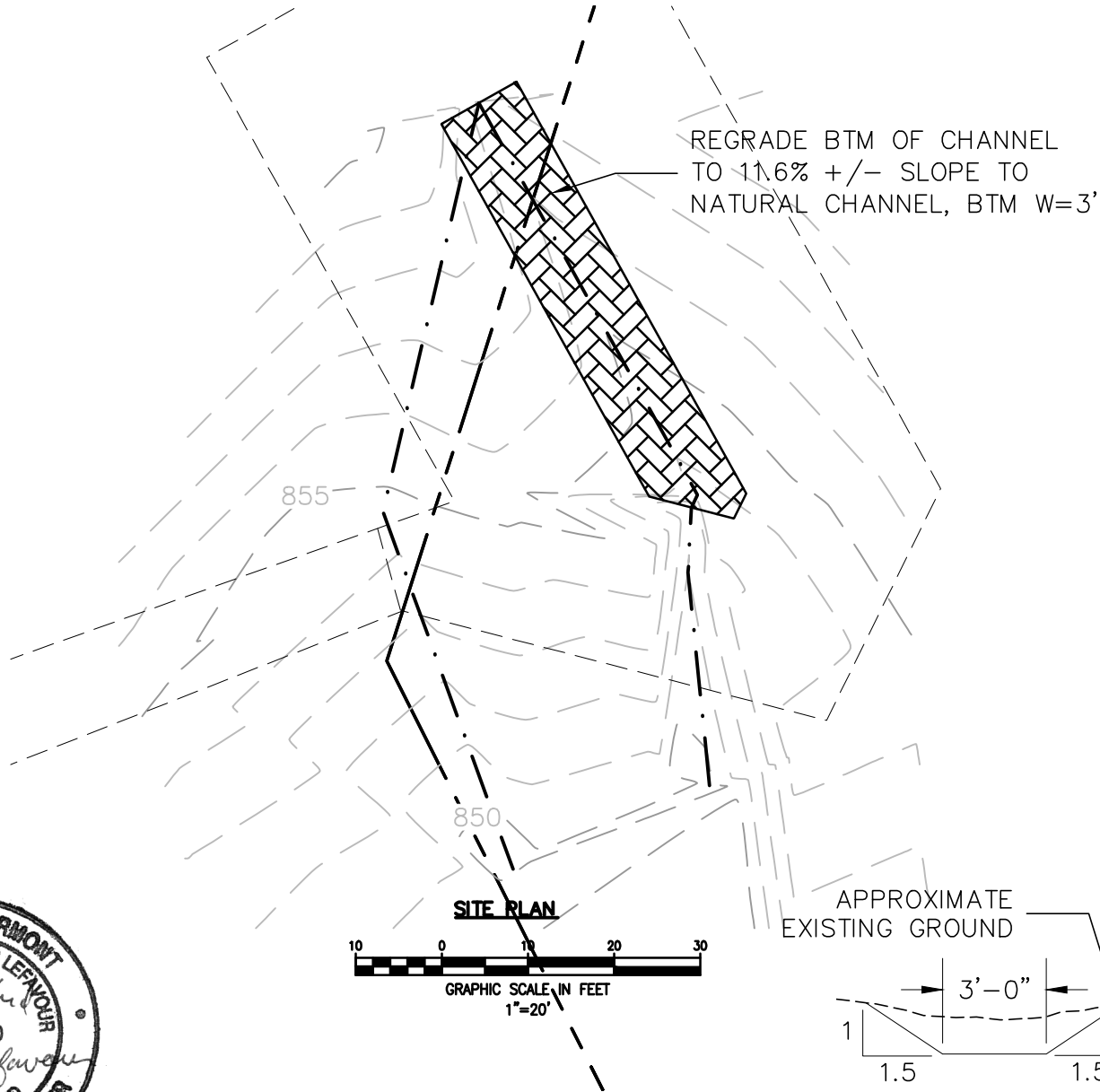
DRAWN BY: BDL

DATE: MAY 2024

SCALE: AS NOTED

17

17 OF 29



New England
Consulting Engineers

TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-011
56. MACEY ROAD -- SITE 3
DEBRIS REMOVAL -- PLAN

PROJECT NO. 1041

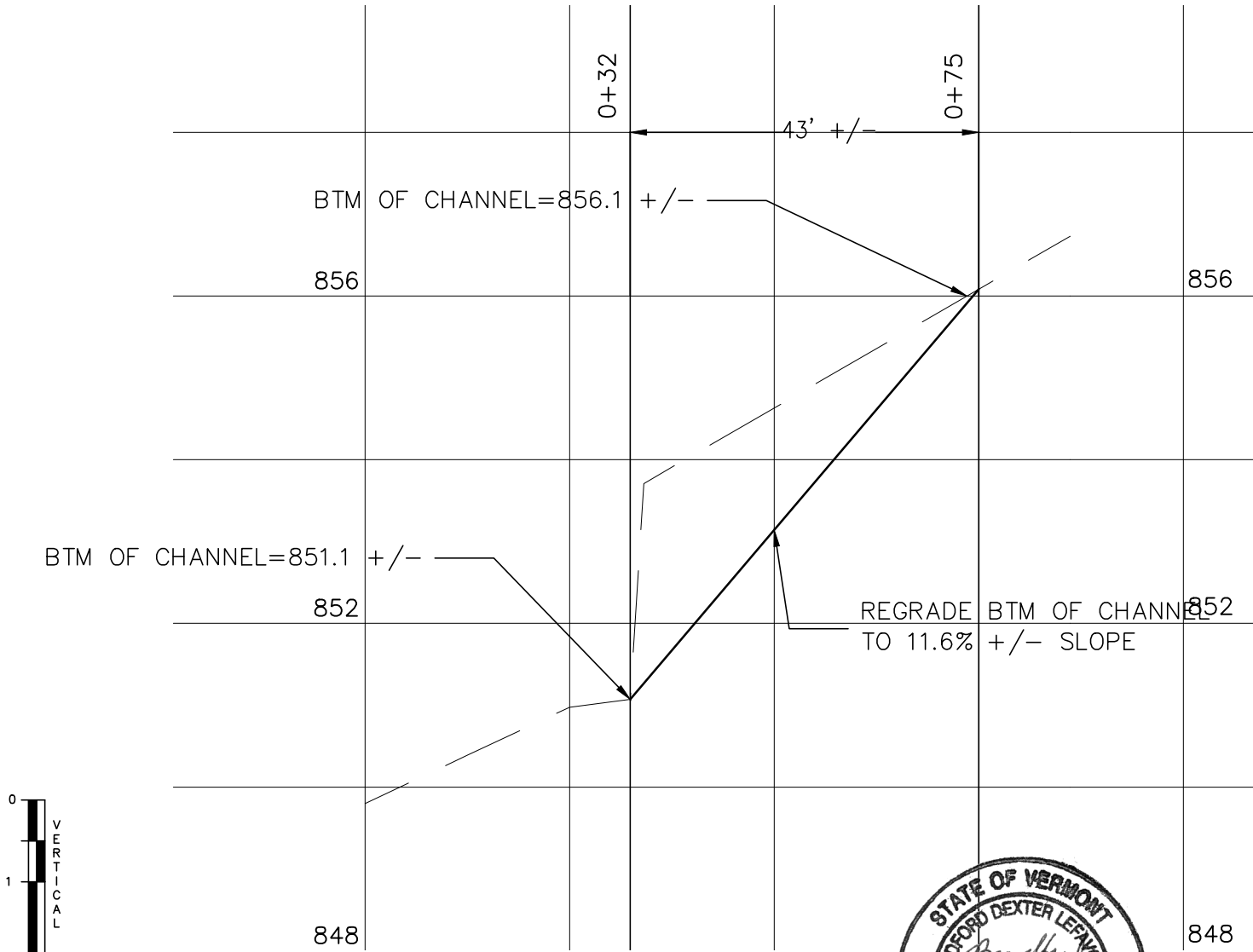
DESIGNED BY: BDL

DRAWN BY: BDL

DATE: MAY 2024

SCALE: AS NOTED

18



STREAM PROFILE STA 0+00 TO 0+90

SCALE: H 1"=20"
V 1"=2'



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TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-011
56 MACEY ROAD - SITE 3
DEBRIS REMOVAL - PROFILE

PROJECT NO. 1041

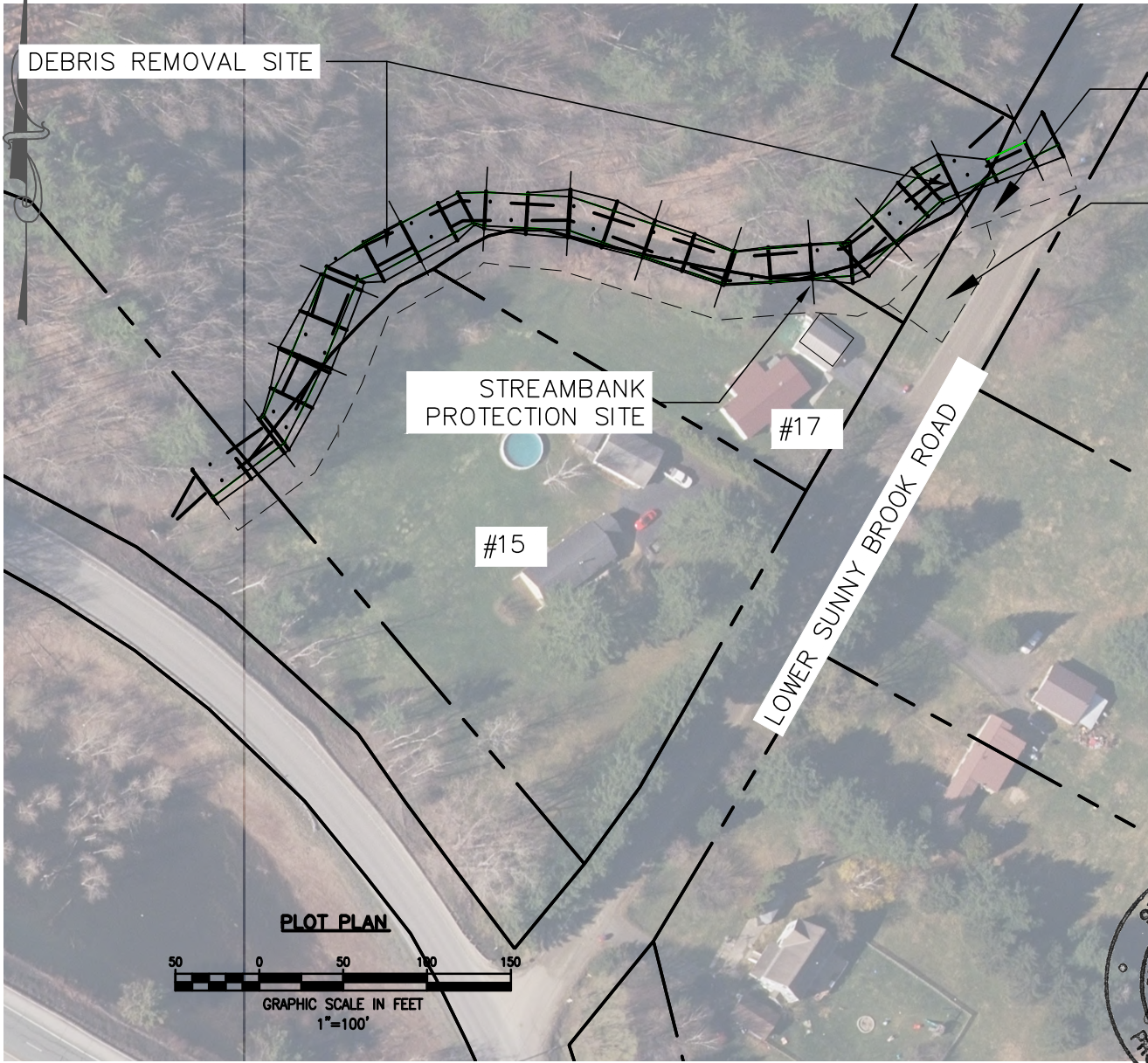
DESIGNED BY: BDL

DRAWN BY: BDL

DATE: MAY 2024

SCALE: AS NOTED

19



DEBRIS REMOVAL SITE

STREAMBANK PROTECTION SITE

#15

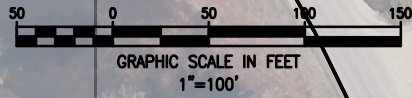
#17

LOWER SUNNY BROOK ROAD

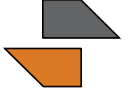
APPROX. WORK AREA

SITE ACCESS

PLOT PLAN



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TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

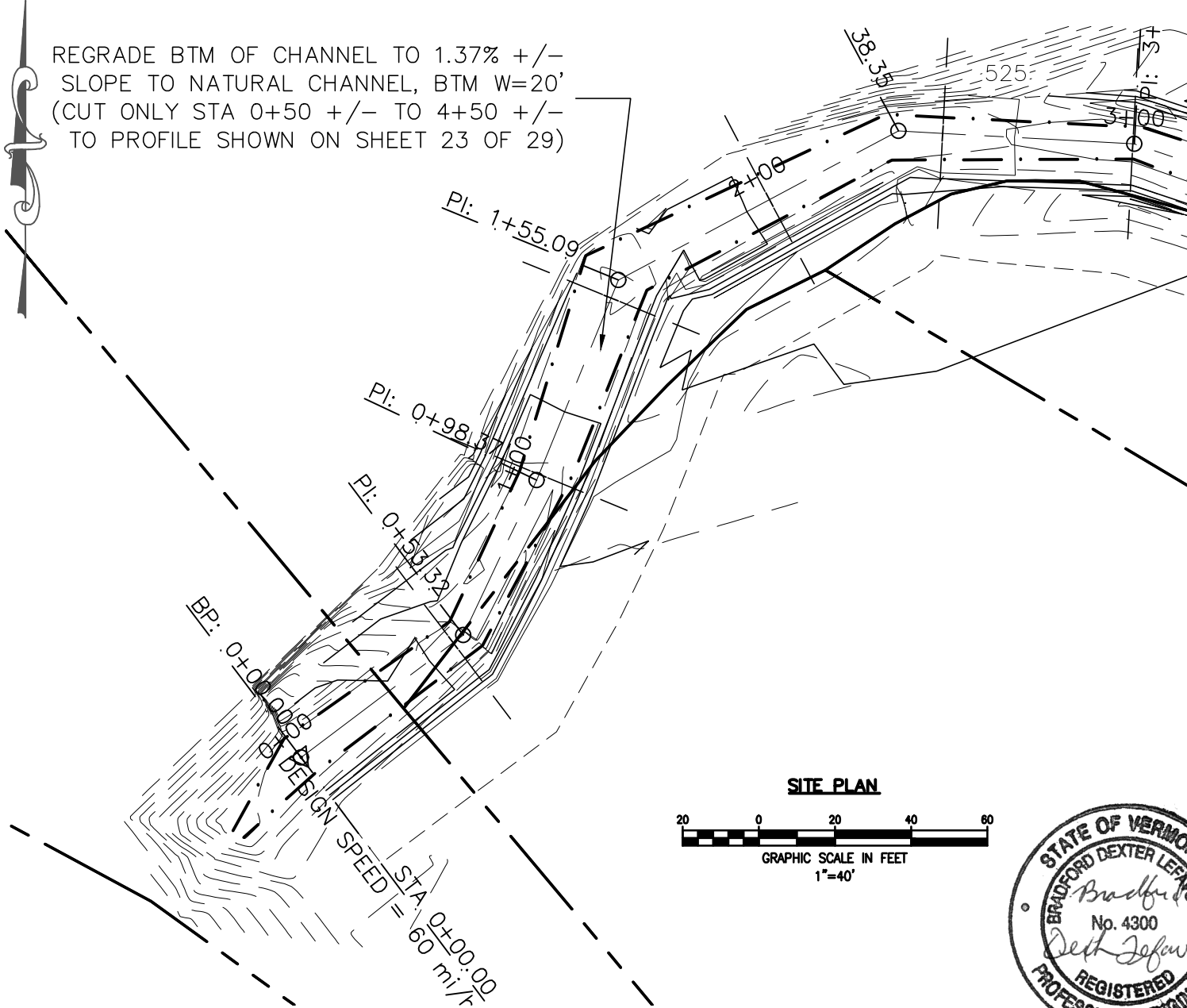
DSR NO. 5041-019 AND 227
15 AND 19 SUNNY BROOK ROAD
DEBRIS REMOVAL - PLOT PLAN

PROJECT NO. 1041
DESIGNED BY: BDL
DRAWN BY: BDL
DATE: MAY 2024
SCALE: AS NOTED

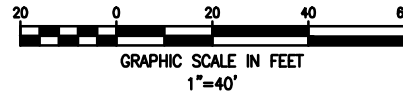
20

20 OF 29

REGRADE BTM OF CHANNEL TO 1.37% +/-
 SLOPE TO NATURAL CHANNEL, BTM W=20'
 (CUT ONLY STA 0+50 +/- TO 4+50 +/-
 TO PROFILE SHOWN ON SHEET 23 OF 29)



SITE PLAN



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TOWN OF MIDDLESEX
 USDA EWP PROJECT
 MIDDLESEX, VERMONT

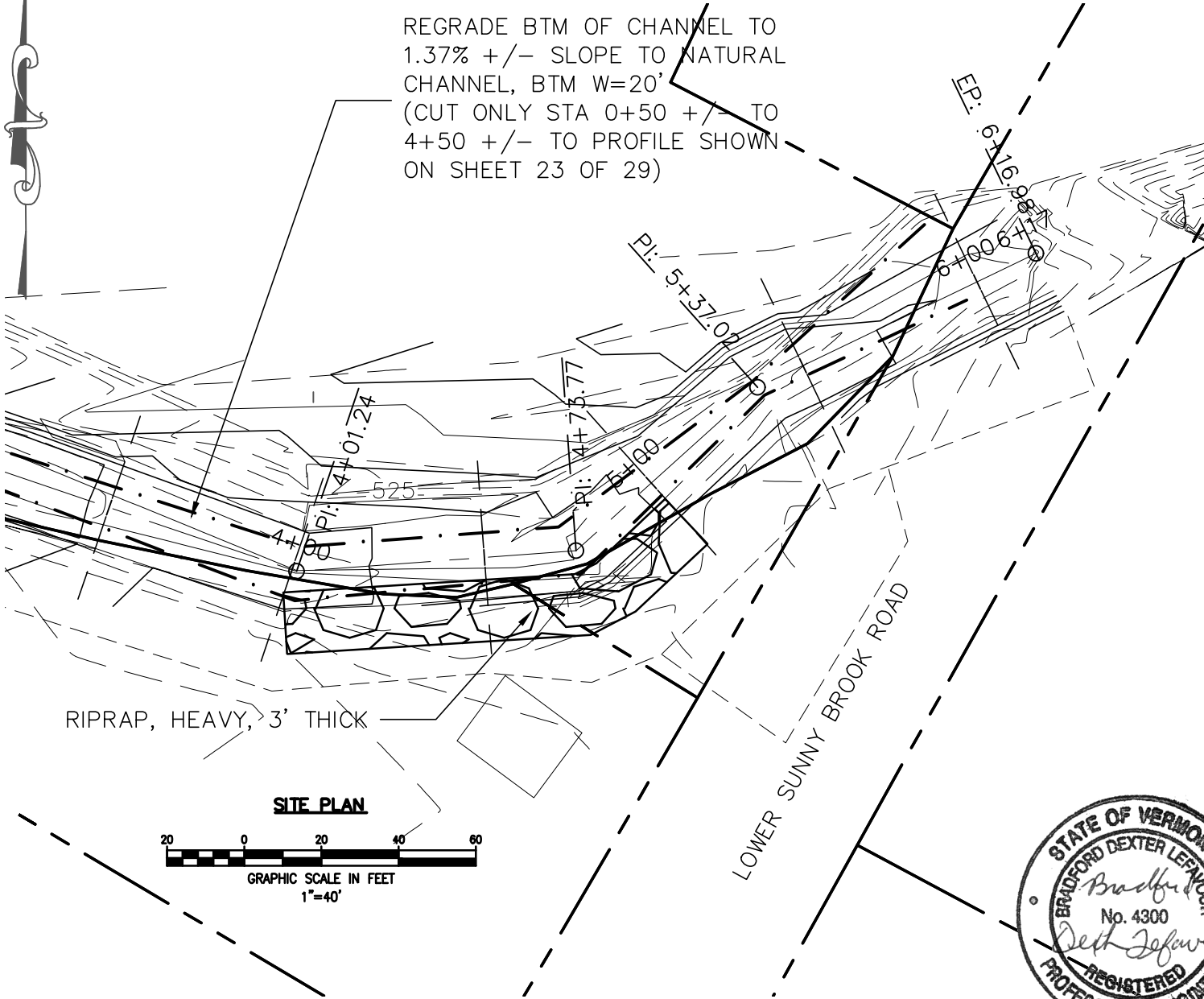
DSR NO. 5041-019 AND 227
 15 AND 19 SUNNY BROOK ROAD
 DEBRIS REMOVAL - PLAN 1

PROJECT NO. 1041
 DESIGNED BY: BDL
 DRAWN BY: BDL
 DATE: MAY 2024
 SCALE: AS NOTED

21

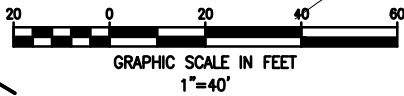


REGRADE BTM OF CHANNEL TO
 1.37% +/- SLOPE TO NATURAL
 CHANNEL, BTM W=20'
 (CUT ONLY STA 0+50 +/- TO
 4+50 +/- TO PROFILE SHOWN
 ON SHEET 23 OF 29)



RIPRAP, HEAVY, 3' THICK

SITE PLAN



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TOWN OF MIDDLESEX
 USDA EWP PROJECT
 MIDDLESEX, VERMONT

DSR NO. 5041-019 AND 227
 15 AND 19 SUNNY BROOK ROAD
 DEBRIS REMOVAL - PLAN 2

PROJECT NO. 1041

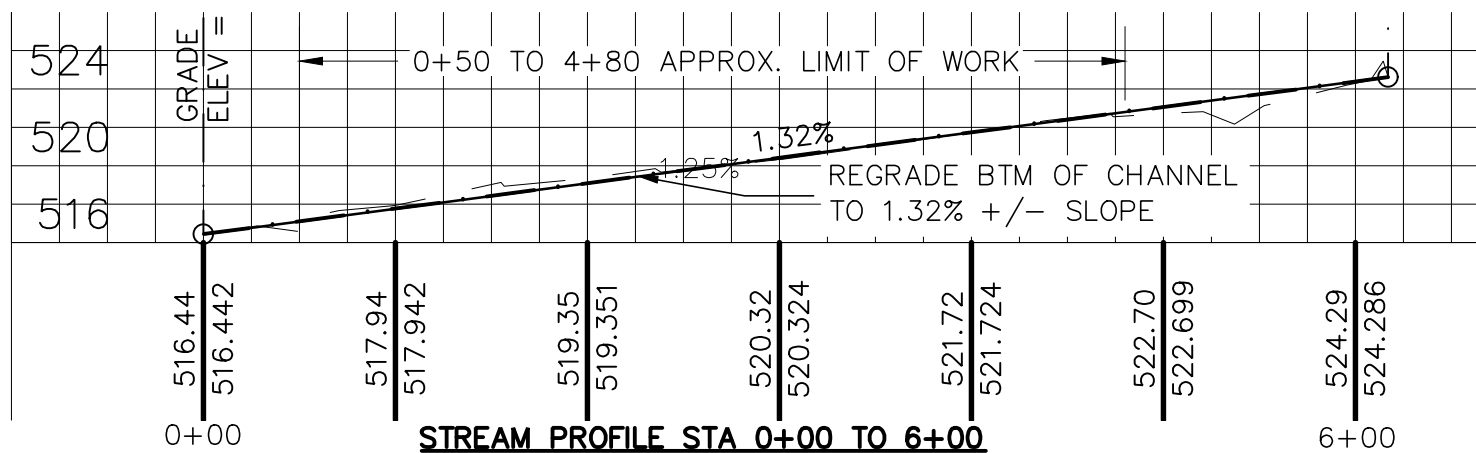
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DRAWN BY: BDL

DATE: MAY 2024

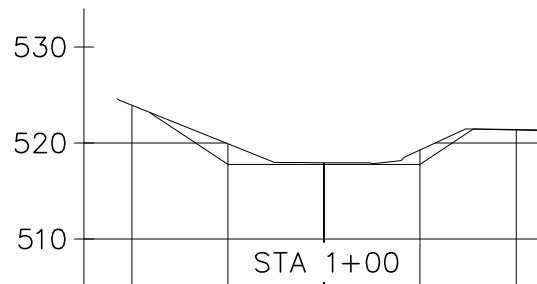
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22

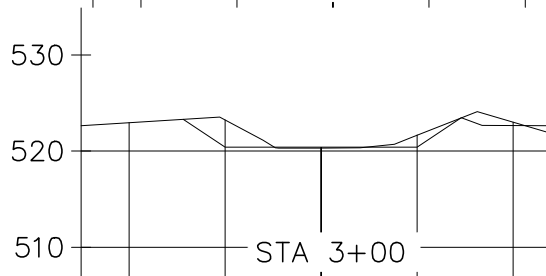


STREAM PROFILE STA 0+00 TO 6+00

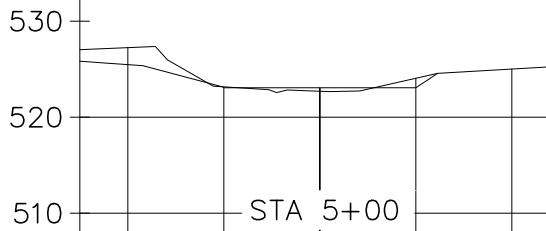
SCALE: H 1'=100'
V 1=10'



STA 1+00



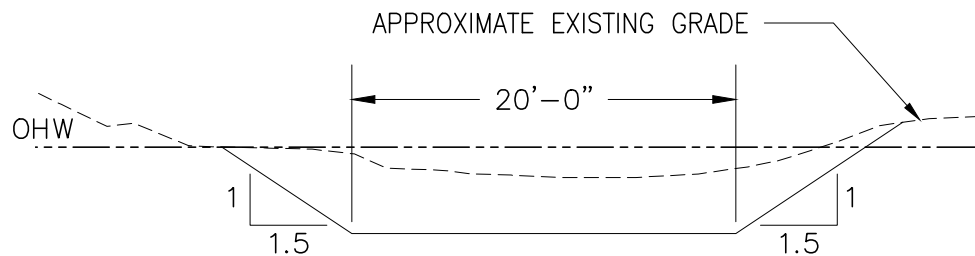
STA 3+00



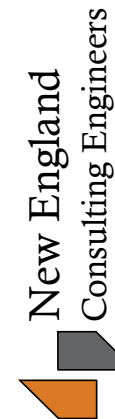
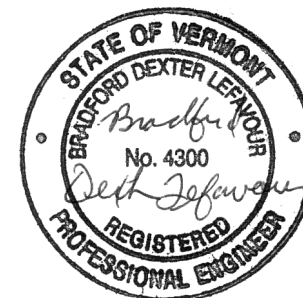
STA 5+00

STREAM PROFILE STA 0+00 TO 6+00

SCALE: H 1'=20'
V 1=20'



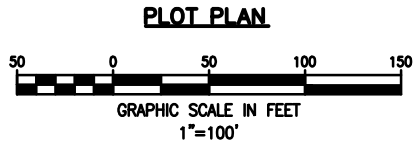
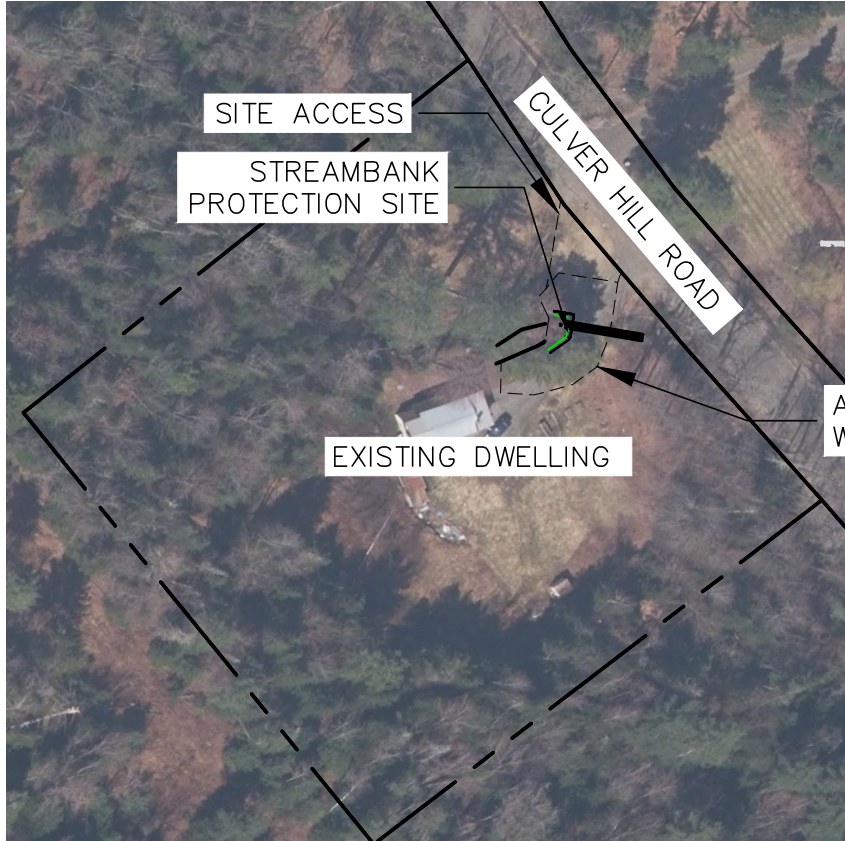
TYPICAL SECTION



TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT
DSR NO. 5041-019 AND 227
15 AND 19 SUNNY BROOK ROAD
DEBRIS REMOVAL - PROFILE & SECTIONS

PROJECT NO. 1041
DESIGNED BY: BDL
DRAWN BY: BDL
DATE: MAY 2024
SCALE: AS NOTED

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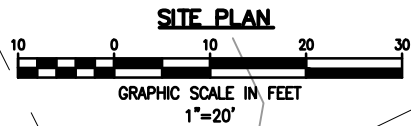
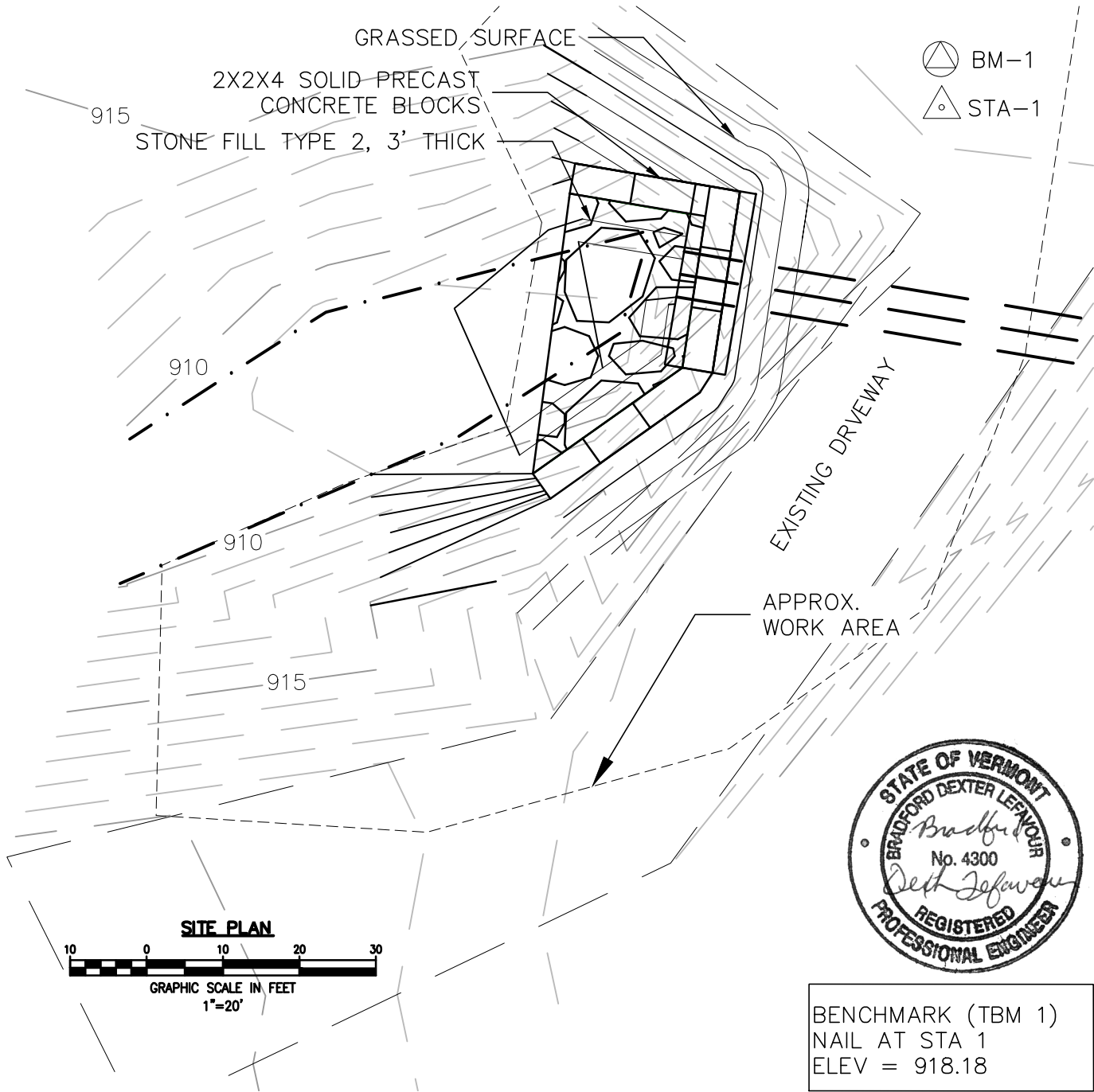
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TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-024
125 CULVER HILL ROAD
STREAMBANK PROTECTION - PLOT PLAN

PROJECT NO. 1041
DESIGNED BY: BDL
DRAWN BY: BDL
DATE: MAY 2024
SCALE: AS NOTED

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BENCHMARK (TBM 1)
NAIL AT STA 1
ELEV = 918.18

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TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-024
125 CULVER HILL ROAD
STREAMBANK PROTECTION - PLAN

PROJECT NO. 1041

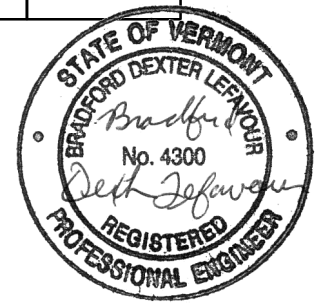
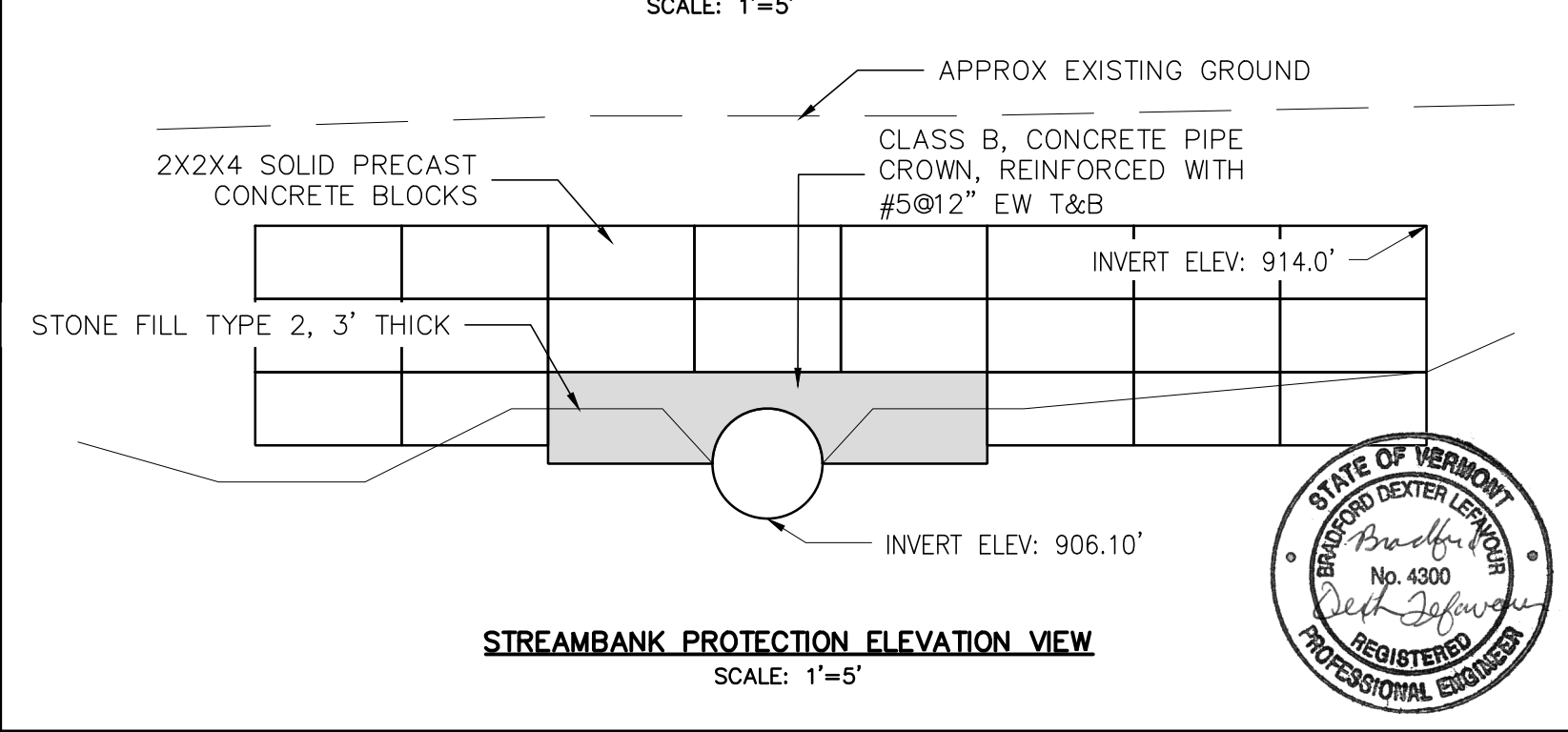
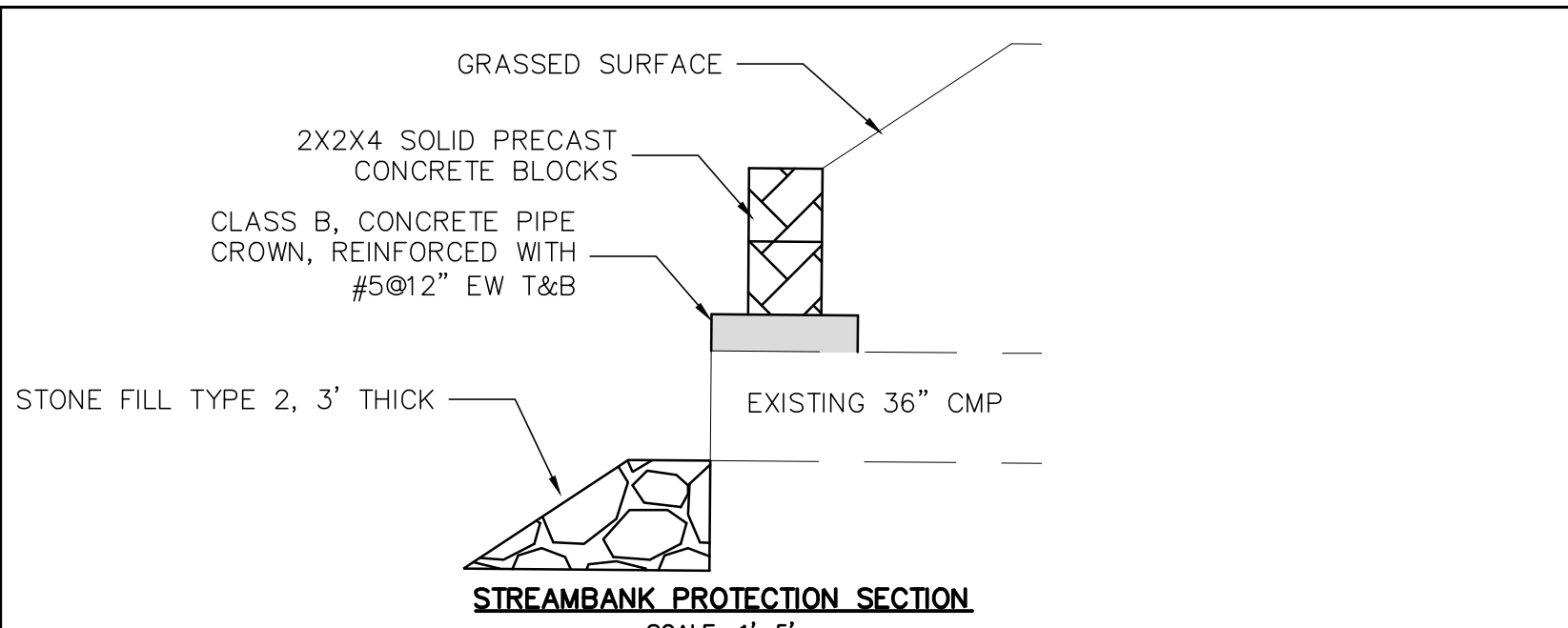
DESIGNED BY: BDL

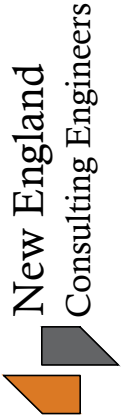
DRAWN BY: BDL

DATE: MAY 2024

SCALE: AS NOTED

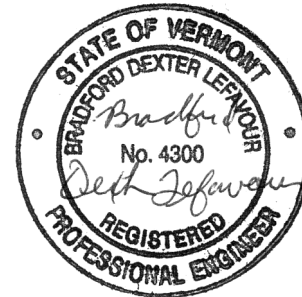
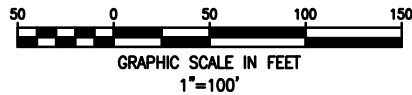
25



 <p>New England Consulting Engineers</p>	
<p>TOWN OF MIDDLESEX USDA EWP PROJECT MIDDLESEX, VERMONT</p>	<p>DSR NO. 5041-024 125 CULVER HILL ROAD STREAMBANK PROTECTION -DETAILS</p>
<p>PROJECT NO. 1041</p>	
<p>DESIGNED BY: BDL</p>	
<p>DRAWN BY: BDL</p>	
<p>DATE: MAY 2024</p>	
<p>SCALE: AS NOTED</p>	
<p>26</p>	
<p>26 OF 29</p>	



PLOT PLAN



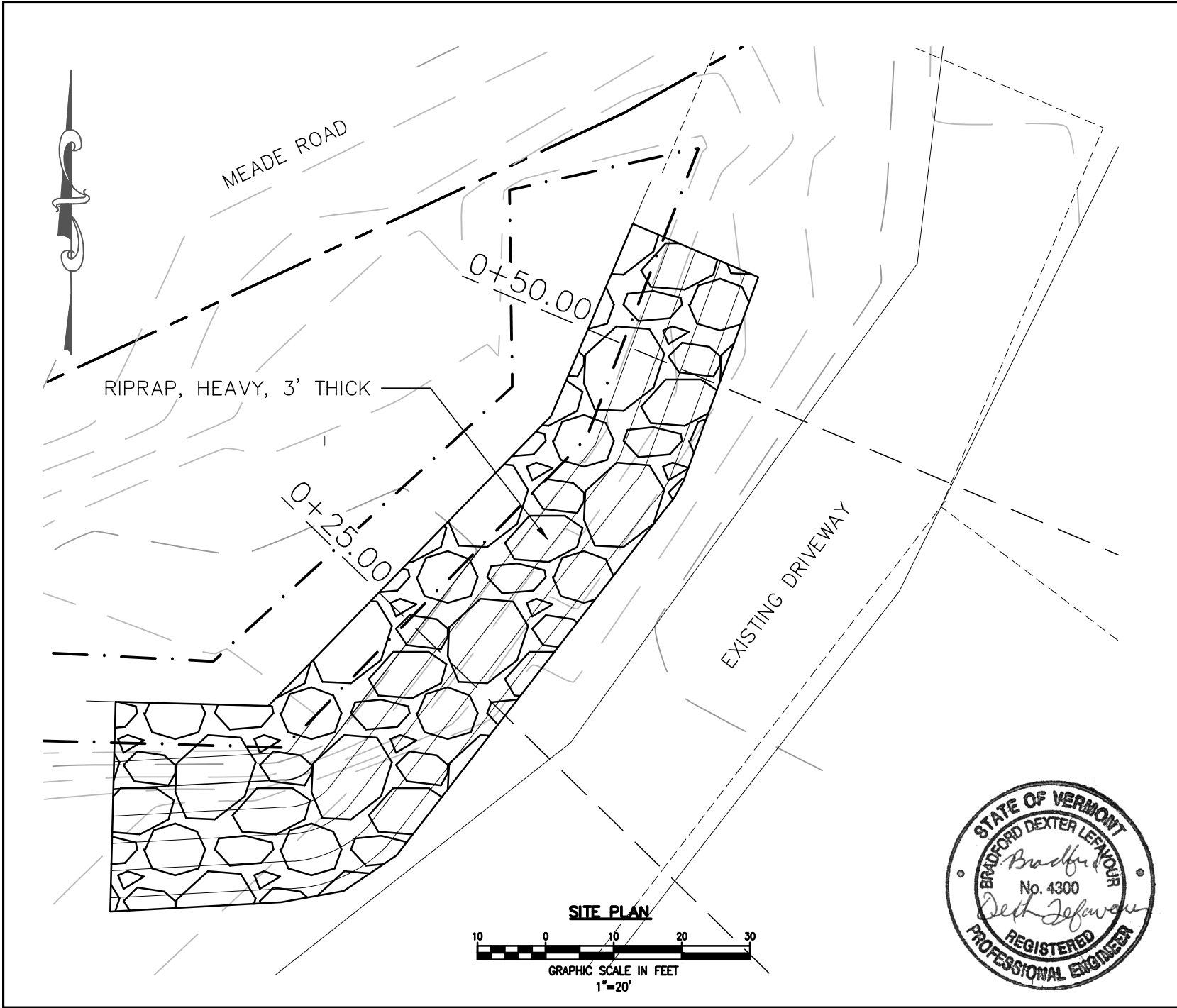
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TOWN OF MIDDLESEX
 USDA EWP PROJECT
 MIDDLESEX, VERMONT

DSR NO. 5041-025
 33 MEADE ROAD
 STREAMBANK PROTECTION - PLAN

PROJECT NO. 1041
 DESIGNED BY: BDL
 DRAWN BY: BDL
 DATE: MAY 2024
 SCALE: AS NOTED

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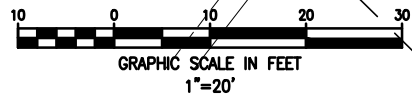
TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT

DSR NO. 5041-025
33 MEADE ROAD
STREAMBANK PROTECTION - PLAN

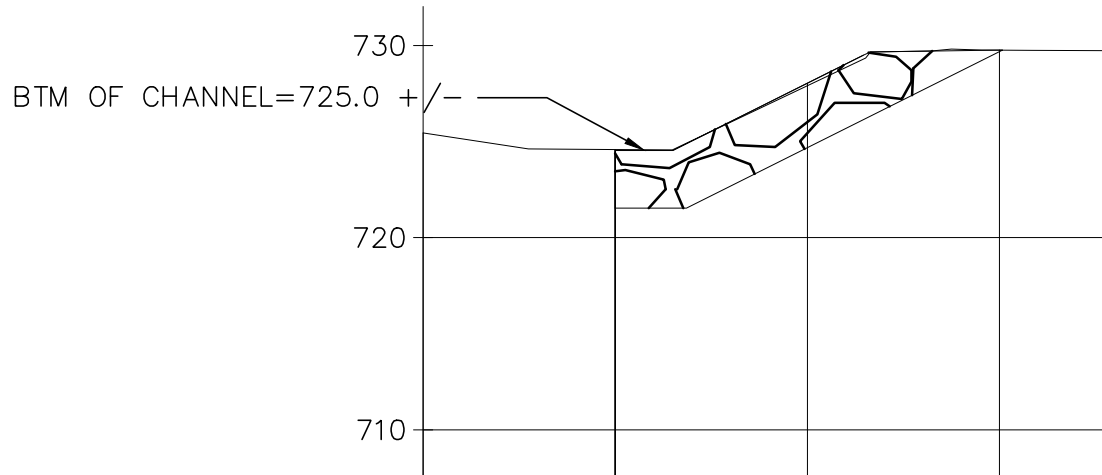
PROJECT NO. 1041
DESIGNED BY: BDL
DRAWN BY: BDL
DATE: MAY 2024
SCALE: AS NOTED



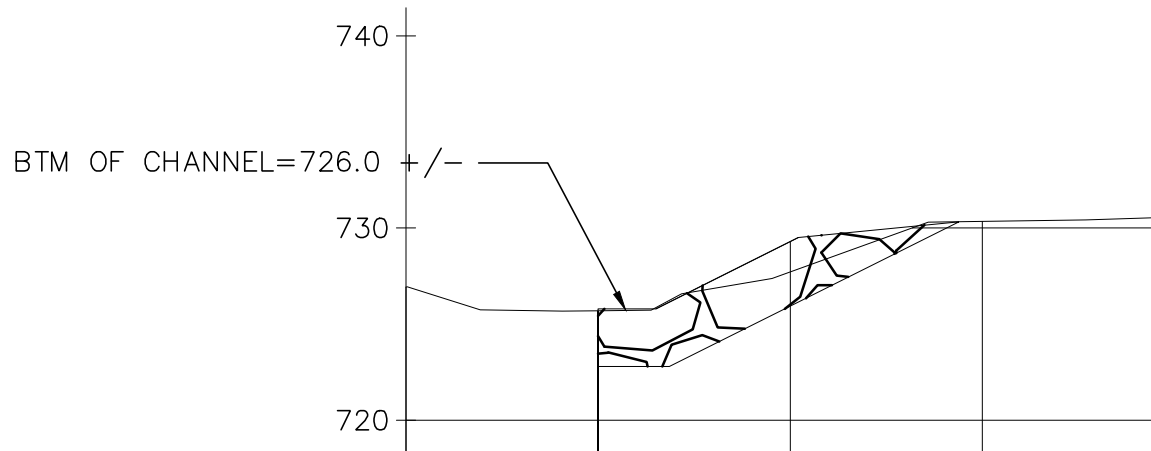
SITE PLAN



28



STREAMBANK SECTION @ 0+25
SCALE: 1'=10'



STREAMBANK SECTION @ 0+50
SCALE: 1'=10'



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TOWN OF MIDDLESEX
USDA EWP PROJECT
MIDDLESEX, VERMONT
DSR NO. 5041-025
33 MEADE ROAD
STREAMBANK PROTECTION - PLAN

PROJECT NO. 1041
DESIGNED BY: BDL
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DATE: MAY 2024
SCALE: AS NOTED

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