

Vermont Department of Environmental Conservation

Watershed Management Division
Springfield Regional Office
100 Mineral Street, Suite 303
Springfield, VT 05156
www.watershedmanagement.vt.gov

Agency of Natural Resources

[phone] 802-885-8855
[fax] 802-885-8890
[cell] 802-345-3510

AUTHORIZATION TO CONDUCT STREAM ALTERATION ACTIVITIES

Pursuant to Section C.2.2.4 of the VT Stream Alteration General Permit (Reporting activities not requiring an application)

Project Number: **SA-05-004-2015 Dover Kingsley Bridge**

Applicant Name: Larry Kingsley

Mailing Address: 5 Pine Island Road, Rye, N.Y. 10580

Project Location: Snowmobile Bridge over Cold Brook in Dover

Act 250 LUP # 700002-24 Application

Contact: Larry Kingsley

Phone: (516) 801-9800 W or (847) 224-5189 C

Email: larry_kingsley@pall.com

The Secretary of the Vermont Agency of Natural Resources (VT ANR) has determined that:

1. This project authorizes the removal of two unauthorized snowmobile bridges and a replacement 50' span steel girder snowmobile bridge over Cold Brook to access the land from Handle Road in the Town of Dover.
2. The proposed activity is eligible for coverage under the VT ANR Stream Alteration General Permit.
3. The proposed activity will meet the terms and conditions of the General Permit provided:
 - a) The project will be completed as shown on the attached plans revised 1/30/15, prepared by Harrington Engineering, and approved by the VT ANR as attached herein.
 - b) The project will not adversely affect the public safety by increasing flood hazards.
 - c) The project will not significantly damage fish life or wildlife.
 - d) The project will not significantly damage the rights of riparian owners.
 - e) The project will not obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
 - f) The project is conducted in a manner which minimizes or avoids any discharge of sediment or other pollutants to surface waters in violation of the VT Water Quality Standards.
 - g) The ANR River Management Engineer is notified by phone or email when construction begins and when the project is complete.
 - h) In-stream working dates for all GP activities are from July 1st through October 1st; any in-stream work outside these dates will require an Individual Stream Alteration Permit authorization by the River Management Engineer.
 - i) This authorization has been posted for three days public comment. This authorization constitutes final approval.

If there are any changes in the project plan or deviation in construction from the plan, the Permittee must notify the River Management Engineer immediately.

If the project is constructed as you have described, as shown on the above referenced approved plans and according to the above conditions, there is no reason to expect any violation of Vermont Water Quality Standards.

Signed this 13th day of February, 2015

David K. Mears, Commissioner

Department of Environmental Conservation

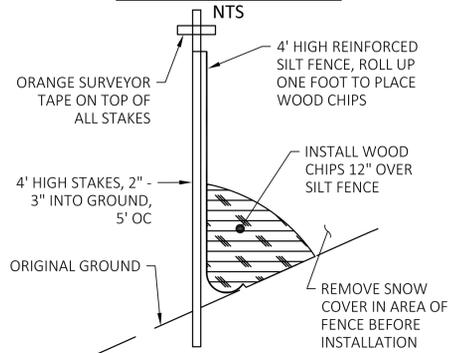


by _____

Todd Menees, P.E., P.H., River Management Engineer

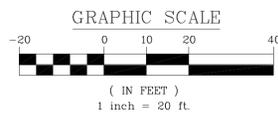
This permit expires October 1, 2015.

REINFORCED SILT FENCE & ORANGE TAPE (LOD) DETAIL



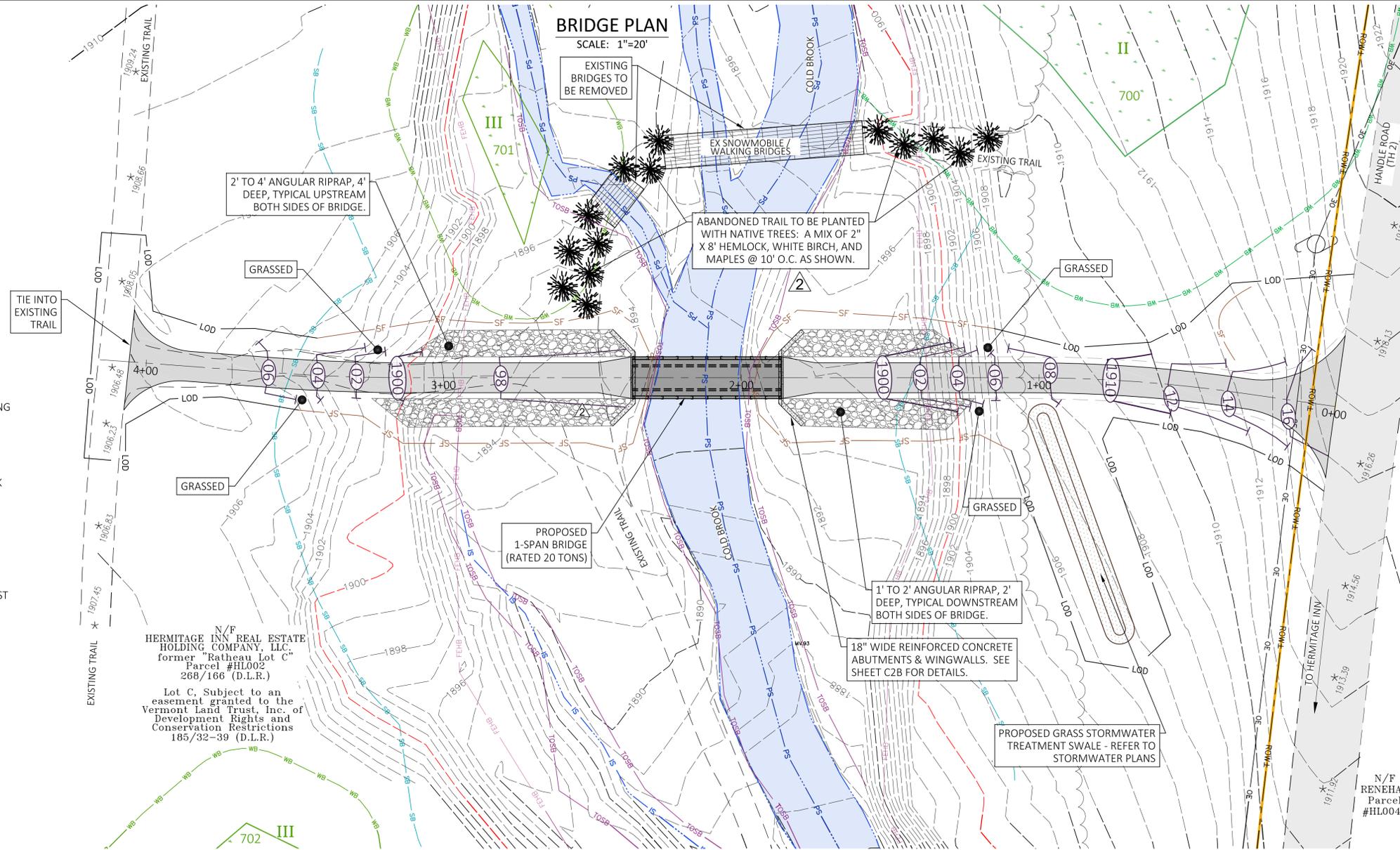
CONSTRUCTION NOTES:

1. PLANT 2"Ø X 8' HIGH HEMLOCK TREES @ 10' O.C. ON ALL EXISTING TRAIL AREAS BEING DISCONTINUED.
2. PLANT SIDE SLOPES (1:2.0) WITH WILD TURKEY GRASS MIX. PROVIDE FERTILIZER, LIME AND HEAVY MULCH.
3. PERFORM ALL WORK ABOVE OHW LEVEL. NO IN-STREAM WORK TO OCCUR AT ANY TIME.
4. INSTALL SILT FENCE AS SHOWN AFTER CLEARING AND BEFORE GRUBBING OR ANY EARTH DISTURBANCE.
5. INSTALL ORANGE LOD TAPE IN SAME LOCATION AS SILT FENCE AND AS SHOWN ON LOD.
6. CONSTRUCTION SHALL OCCUR BETWEEN THE DATES OF JUNE 1ST AND OCTOBER 1ST.



BRIDGE PLAN

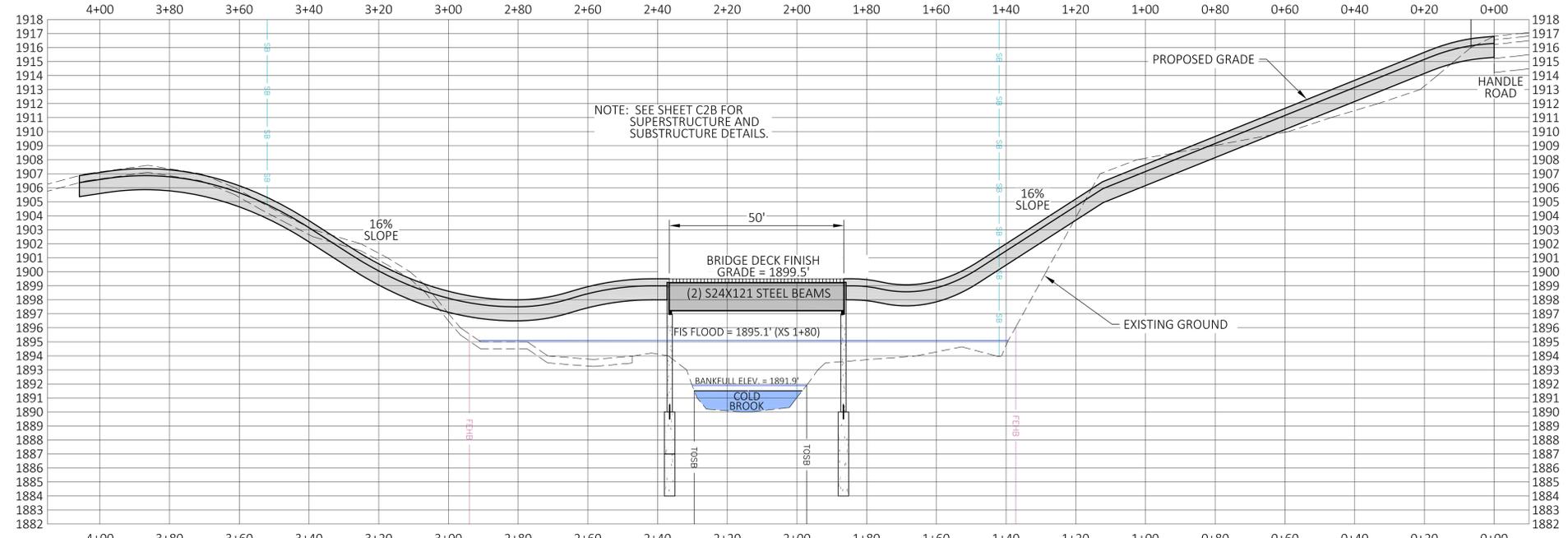
SCALE: 1"=20'



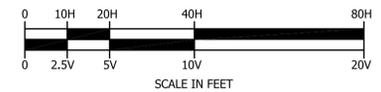
N/P
HERMITAGE INN REAL ESTATE
HOLDING COMPANY, LLC
former "Ratheau Lot C"
Parcel #HL002
268/166 (D.L.R.)
Lot C, Subject to an
easement granted to the
Vermont Land Trust, Inc. of
Development Rights and
Conservation Restrictions
185/32-39 (D.L.R.)

N/P
RENEHAN
Parcel
#HL004E

BRIDGE PROFILE @ 1/2" LOOKING NORTH



NOTE: SEE SHEET C2B FOR SUPERSTRUCTURE AND SUBSTRUCTURE DETAILS.



Hermitage Inn Real Estate Holding Company, LLC
Developer
P.O. Box 2210
West Dover, VT 05356
(860) 466-7606
Harrington Engineering, Inc.
Act 250 and Permit Specialist
Civil and Environmental Engineering
P.O. Box 248
North Pomfret, VT 05053
(802) 457-3151
Joyce Land Surveying Corp.
P.O. Box 115, 3 East Main Street
Wilmington, VT 05363
(802) 464-1244
Conley Associates
Traffic Engineer
349 Lakewood Drive
Killington, VT 05751
(802) 345-2321
Landvest
Growth Impact Analyst
One the Green
Woodstock, VT 05091
Arrowwood Environmental
Ecologist / Botanist, Wetlands Biologist
950 Bert White Road
Huntington, VT 05462
(802) 434-7276

FILE NAME:	Kingsley-1-30-15
DRAWN BY:	PGJ
CHECKED BY:	RSH
DATE:	7/15/2014
SCALE:	1"=20'
APPROVED:	

REVISIONS:
10/15/14 STATE REVIEW COMMENTS
01/12/15 STATE REVIEW COMMENTS
02/13/15 STATE REVIEW COMMENTS

EXISTING LEGEND

- Existing Contours
- Wetland Boundary (Class II & III)
- Wetland Buffer (50' Class II, 25' Class III)
- Stream Buffer (75' unless field located)
- River / Stream / Water Body
- Top of Stream Bank
- Fluvial Erosion Hazard Boundary
- Right-Of-Way
- Property Line
- Hermitage Owned Property Line
- Easement
- Zoning Setback
- Tree Line
- Building
- Road / Drive / Parking / Trail
- Overhead Power w/ Pole & Guy

PROPOSED LEGEND

- Contours
- Road / Drive / Parking / Trail
- Silt Fence
- Limit Of Disturbance
- Natural Boulders / RipRap
- Stream Cross Section at station 0+00 - see separate Hec-Ras Calculations
- Limits of Disturbance

PROJECT:
KINGSLEY BRIDGE

SHEET TITLE:
PROPOSED LAYOUT
February 2015

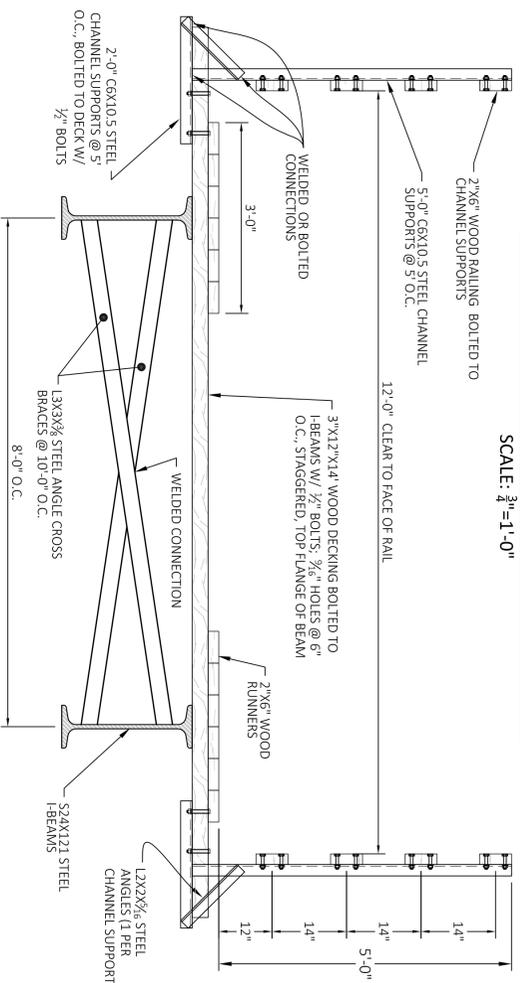
C2A

NORTH
VT STATE PLANE GRID

SHEET

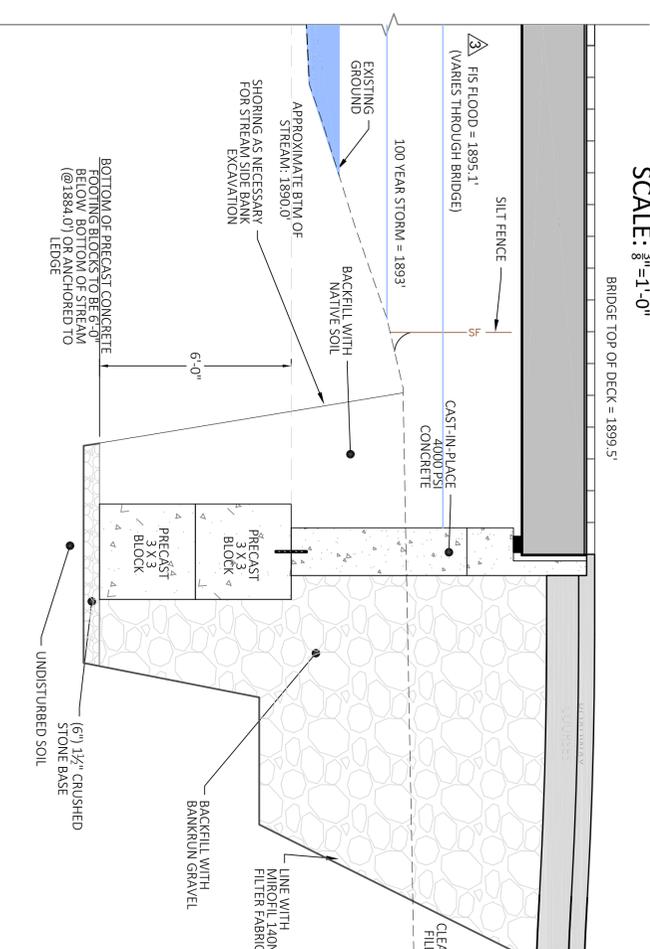
TYPICAL BRIDGE CROSS SECTIONAL DETAIL

SCALE: 3/8"=1'-0"



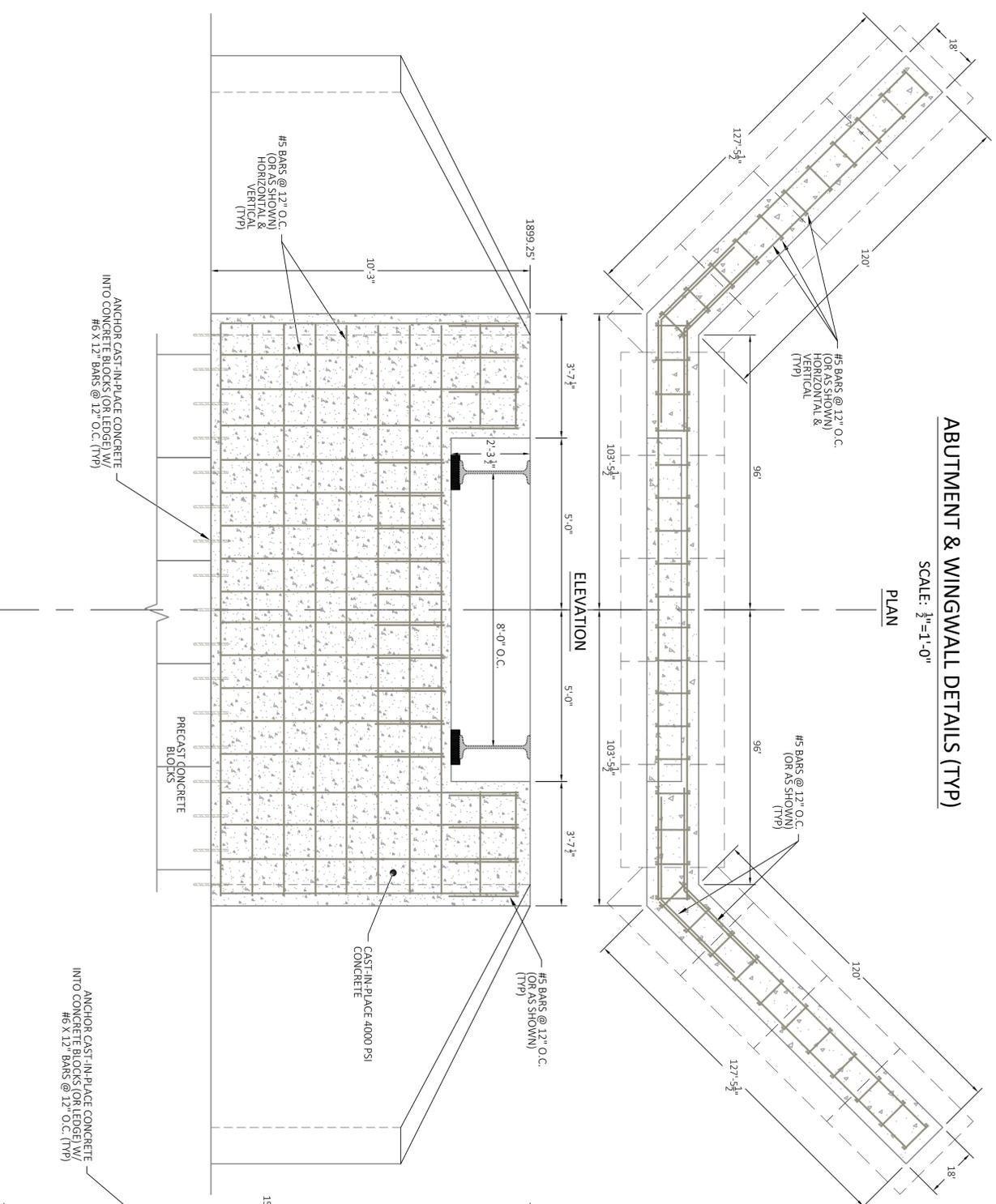
CONCRETE BLOCK ABUTMENT & PIER DETAIL

SCALE: 3/8"=1'-0"

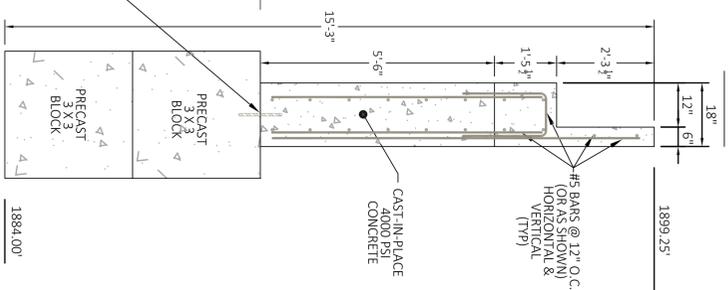


ABUTMENT & WINGWALL DETAILS (TYP)

SCALE: 3/4"=1'-0"



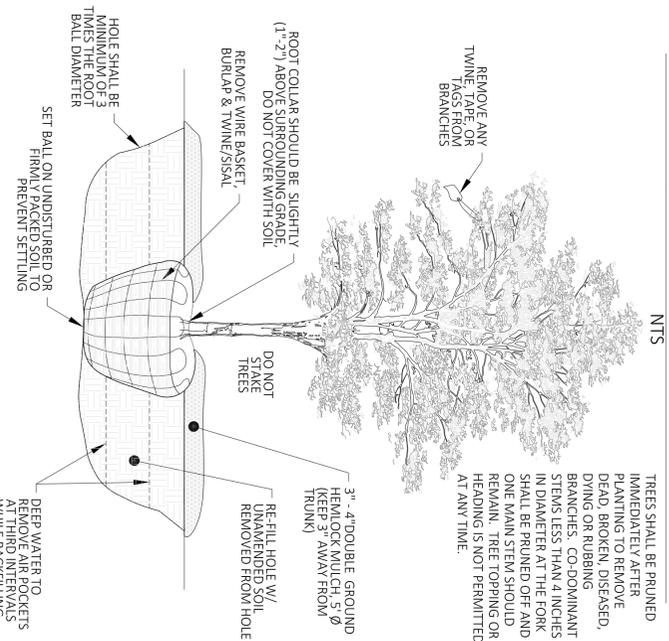
ABUTMENT SECTION



- NOTES:
1. I-BEAMS SHALL BE S24X121 (221 LB/FT, DEPTH 24.5" WIDTH 8", LENGTH 50', A36 STEEL, F_y 36 ksi, CAPABLE OF 80 KIPS UNIFORM LOAD PER BEAM, Laterally Supported).
 2. ALL CROSS BRACING TO BE WELDED TO BEAMS ON BOTH SIDES AND IN THE MIDDLE.
 3. THE TWO BRIDGE SPANS SHALL HAVE FIXED BEARINGS AT THE PIER AND EXPANSION BEARINGS AT THE ABUTMENTS.
 4. CRUSHED STONE TO BE 2" - 4" AS PRODUCED ON SITE AT HAYSTACK MOUNTAIN.
 5. DO NOT ENTER STREAM. ALL CONSTRUCTION FROM EACH END ONLY.
 6. USE CRANE IF NECESSARY.
 7. CONTACT STREAM ENGINEER (TODD WENERS) AND BOB HARRINGTON FOR FULL TIME ON SITE OBSERVATION DURING CONSTRUCTION.
 8. ALL WOOD SHALL BE TREATED.

DECIDUOUS / CONIFEROUS TREE PLANTING DETAIL

NTS



THE HERMITAGE Club
AT HAYSTACK MOUNTAIN

Herritage Inn Real Estate Holding Company, LLC
Herridge@210.com
West Dover, VT 05356
(860) 466-7606
Harrington Engineering, Inc.
c/o 250 Endicott Street
P.O. Box 248
North Ferrisburgh, VT 05053
(802) 537-5252
1001 North Ferrisburgh Street
P.O. Box 115
Wilmington, VT 05363
(802) 464-1244
Conley Associates
349 Lakewood Drive
Killington, VT 05751
(802) 345-2321
Earlner
One the Green
Woodsstock, VT 05091
Arrowood Environmental
500 West Main Street
Huntington, VT 05462
(802) 434-7276

FILE NAME:	Kingsley-1-30-15	REVISIONS:	
DRAWN BY:	FGJ	10/15/14 STATE	
CHECKED BY:	RSJ	01/12/15 STATE	
DATE:	07/15/2014	01/20/15 STATE	
SCALE:	VARIES	REVIEW COMMENTS	
APPROVED			

PROJECT:
KINGSLEY BRIDGE

SHEET TITLE:
DETAILS

January 2015
C2B

SHEET

BRIDGE CONSTRUCTION NOTES

1. CONSTRUCT BRIDGE ABUTMENTS DURING LOW FLOW PERIOD IN STREAM WITH NO ANTICIPATED RAIN EVENTS DURING WORK DURATION. PROVISIONS SHALL BE MADE TO ENSURE CONSTRUCTION OF THE BRIDGE ABUTMENTS IS AS EXPEDITIOUS AS POSSIBLE.

EROSION CONTROL NOTES:

- REFER TO EROSION CONTROL PLANS FOR ALL EROSION CONTROL MEASURES. TOP OF STREAM BANK (TOSB) LINE ON PLAN SHALL BE PROTECTED WITH ORANGE SNOW FENCE TO MARK THE LIMITS OF DISTURBANCE AND SILT FENCE. DO NOT DISTURB WITHIN STREAM BANK LIMITS.
- DEWATERING NECESSARY FOR CONSTRUCTION SHALL BE PUMPED INTO A DEWATERING FILTER BAG OR TEMPORARY SEDIMENT POND SUFFICIENT TO FILTER WATER AND ENSURE THAT TURBID WATER IS NOT DISCHARGED INTO THE STREAM.
- ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY THROUGHOUT THE DURATION OF CONSTRUCTION.

CALCULATED 100 YEAR BASE FLOODED ELEVATIONS - NOTES

1. BASE FLOOD ELEVATIONS WERE CALCULATED AS FOLLOWS:
- DRAINAGE AREA AND FLOW INFORMATION:
 - FROM THE USGS STREAMSTATS WEBSITE:
 - DA = 2.2 SQUARE MILES
 - 100 YEAR FLOW = 458 CFS (44% PREDICTION ERROR)
 - FROM THE FIS STUDY DOWNSTREAM AND USING A DRAINAGE AREA TO FLOW RATIO AS PROVIDED BY THE STATE, USE 1455 CFS

2. 100 YEAR BASE FLOOD AND FIS FLOOD ELEVATIONS WERE CALCULATED USING THE US ARMY CORPS OF ENGINEERS HEC RAS 4.0 COMPUTER HYDRAULIC MODELING PROGRAM. SEE SEPARATE HEC RAS SECTIONS.

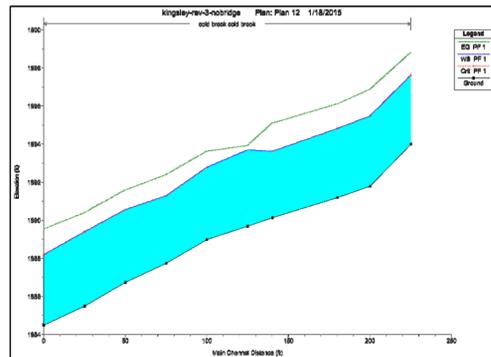
3. BANKFULL ELEVATION SHOWN BELOW CALCULATED USING HEC RAS 4.0 BASED ON 2 YEAR FLOW OF 105 CFS OBTAINED FROM USGS STREAMSTATS WEBSITE.

CALCULATED FIS FLOOD ELEVATIONS - EXISTING AND PROPOSED SURFACE PROFILES

(NTS)
REFER TO PLAN VIEW THIS SHEET FOR SECTION LOCATIONS.
REFER TO SEPARATE HEC RAS CALCULATIONS FOR CROSS SECTIONS

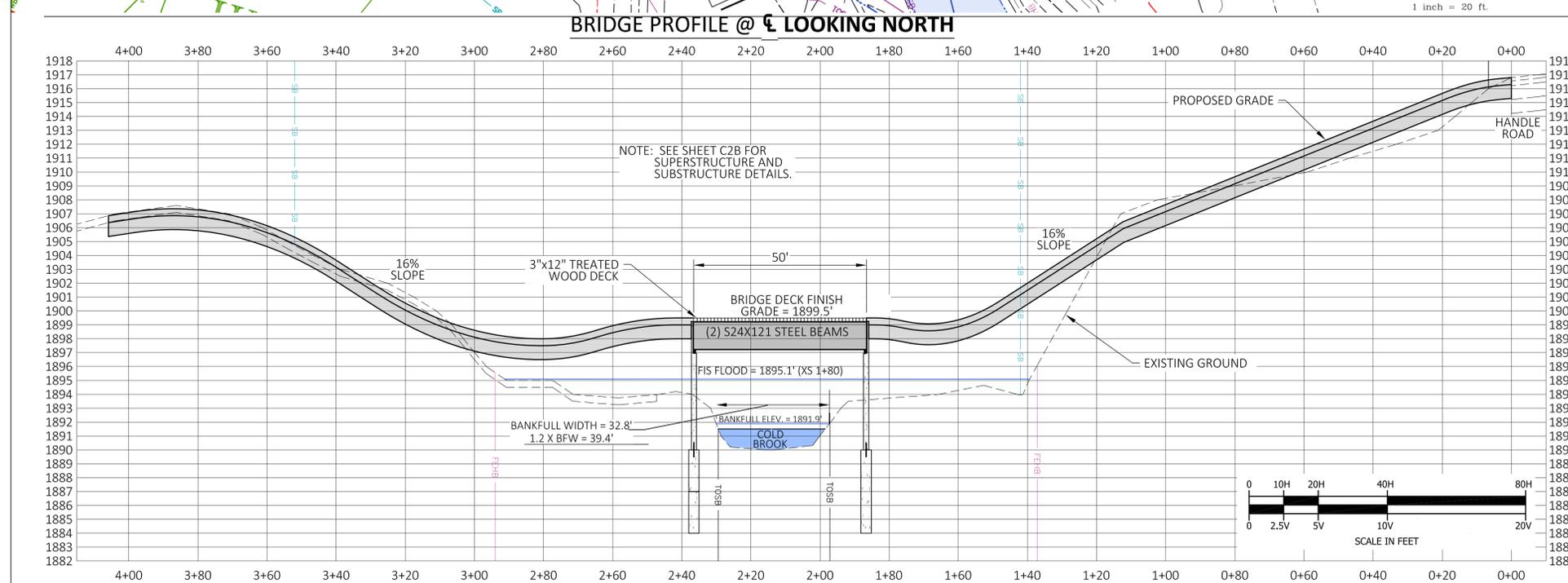
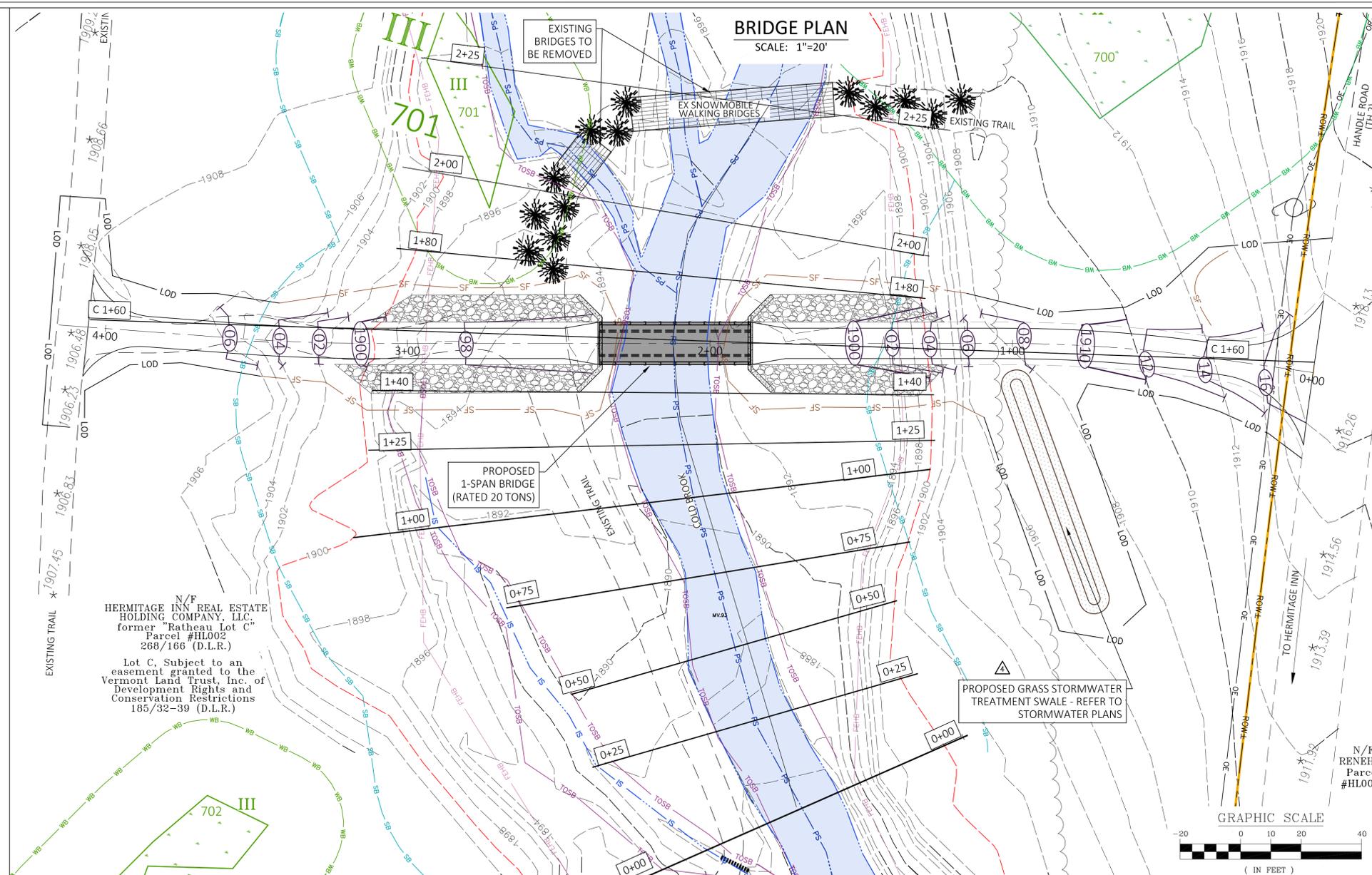
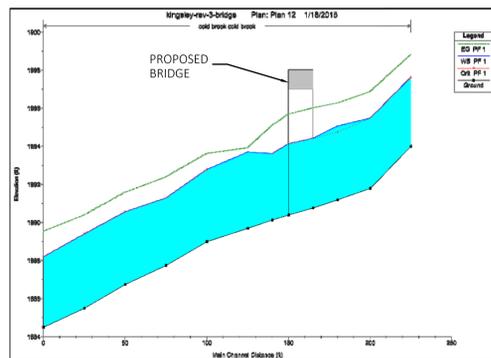
EXISTING CONDITIONS STREAM PROFILE (Q=1455 CFS)

N.T.S



POST CONDITIONS STREAM PROFILE (Q=1455 CFS)

N.T.S



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FILE NAME: Kingsley-1-30-15
DRAWN BY: JH / PGJ

REVISIONS:	DATE:	BY:	REVISIONS:
10/15/14 STATE REVIEW COMMENTS	7/15/2014	RSH	12/03/14 STATE REVIEW COMMENTS
7/09/15 REVISIONS PER STATE COMMENTS			7/30/15 REVISIONS PER STATE COMMENTS

CHECKED BY: RSH
DATE: 7/15/2014
SCALE: 1"=20'
APPROVED:

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PROJECT:
KINGSLEY BRIDGE

SHEET TITLE:
STREAM CROSSING PLAN, CALCULATIONS, & NOTES
January 2015

C2C

NORTH
VT STATE PLANE GRID

SHEET