LAKE CHAMPLAIN BRIDGE OVER LAKE CHAMPLAIN
BRIDGE REPLACEMENT

SHEETS XX
ESSEX COUNTY, NY
CONTRACT NO. D261458
ADDISON COUNTY, VT

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

LAKE CHAMPLAIN BRIDGE REPLACEMENT

PROJECT LOCATION
THE PROJECT CONSISTS OF LAKE CHAMPLAIN BRIDGE REPLACEMENT AND APPROACH ROADWAY IMPROVEMENTS

APPROVED BY
RECOMMENDED BY
RECOMMENDED BY
RECOMMENDED BY
RECOMMENDED BY

REGIONAL DESIGN ENGINEER: DATE
REGIONAL CONSTRUCTION ENGINEER: DATE
REGIONAL TRANSPORTATION MAINTENANCE ENGINEER: DATE
REGIONAL TRAFFIC ENGINEER: DATE
REGIONAL DIRECTOR: DATE

LAKE CHAMPLAIN BRIDGE

LAKE ONTARIO
LONG ISLAND SOUND
LAKE CHAMPLAIN
LAKE ERIE
LAKE CHAMPLAIN BRIDGE REPLACEMENT

SHEETS 2 TO 5

THE LATEST REVISIONS OF THE STANDARD SHEETS MAINTAINED BY THE DEPARTMENT, WHICH ARE CURRENT ON THE DATE OF ADVERTISEMENT FOR BIDS, SHALL BE CONSIDERED TO BE IN EFFECT. ALL PAY ITEMS AND WORK CONTAINED IN THE CONTRACT AND ANY ADDITIONAL PAY ITEMS AND WORK ENCOUNTERED DURING THE COURSE OF THE CONTRACT SHALL BE SUBJECT TO THE APPLICABLE STANDARD SHEETS UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

ALL WORK CONTEMPLATED UNDER THIS CONTRACT IS TO BE DONE IN ACCORDANCE WITH THE STANDARDS SPECIFICATION SHEETS DATED OF MAY 1, 2008, EXCEPT AS MODIFIED ON THESE PLANS AND IN THE PROPOSED PROPOSAL.

THE PROJECT CONSISTS OF LAKE CHAMPLAIN BRIDGE REPLACEMENT AND APPROACH ROADWAY IMPROVEMENTS

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER ANY DOCUMENT ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.
NYS ROUTE 185, SH 9527
ESSEX COUNTY, NY / ADDISON COUNTY, VT
LAKE CHAMPLAIN BRIDGE REPLACEMENT
COUNTY EDGE COUNTY, NY / ADDISON COUNTY, VT

PROGRESS PRINT
DATED FEB. 1, 2010

NOTE: IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.
NEW YORK ROUTE 185/VERMONT ROUTE 17

MATCH LINE STA 99+50, SEE DWG GPR-1

MATCH LINE STA 104+50, SEE DWG GPR-3

ORIGINAL GROUND

-0.30%

L = 140.00 FT.

G1 = -1.47%

G2 = -0.30%

STA 100+00.00

ELEV = 130.60

END RESURFACING

BEGIN RECONSTRUCTION

APPROXIMATE PRE-1928

ORIGINAL GROUND

PVC STA 99+60.00

ELEV = 131.12

PVI STA 100+30.00

ELEV = 130.09

PVT STA 101+00.00

ELEV = 129.88

PVC STA 103+80.00

ELEV = 129.04

LOW 104+00.38

ELEV 129.01

PROPOSED GRADE

-0.30%

-1.47%

HSD = > 350 FT.

E = 0.20 FT.
NEW YORK ROUTE 185/VERMONT ROUTE 17

PROFILE
STA 126+50.00 TO STA 132+00.00

STA 127+00.00
ELEV = 138.50

PROPOSED GRADE

c BRIDGE, NORTH ABUTMENT
APPROXIMATE PRE-1928 ORIGINAL GROUND
L = 330.00 FT.
G1 = -5.00%
G2 = 0.30%
PVC STA 128+55.00
ELEV = 130.75

PVI STA 130+20.00
ELEV = 122.50

LOW 131+66.56
ELEV 122.96
PVT STA 131+85.00
ELEV = 122.99

ORIGINAL GROUND
-5.00%

SSD = 301 FT.
E = 2.18 FT.

FORMER BRIDGE DECK

JOB MANAGER
DESIGNED BY

DESIGN SUPERVISOR
CHECKED BY

ESTIMATED BY
DRAFTED BY
CHECKED BY

PREPARED BY:
ON:

ALTERED BY:
ON:

CONTRACT NUMBER
DOCUMENT NAME:
BRIDGES
CULVERTS
AS BUILT REVISIONS
DESCRIPTION OF WORK:

COUNTY:

NYS ROUTE 185
VT ROUTE 17

ESSEX COUNTY, NY / ADDISON COUNTY, VT

NYS ROUTE 185, SH 9527
LAKE CHAMPLAIN BRIDGE REPLACEMENT

FILE NAME =
u:\20330\d0128323\180581_cph_pro_07.dgn

1/31/2010
3006

USER =
DATE/TIME =

D261458

I I I Winners Circle, PO Box 5269    Albany, NY 12205-0269
www.chacompanies.com

NYS ROUTE 185

VT ROUTE 17

127+00
128+00
129+00
130+00
131+00
132+00
123.43
138.31
135.54
133.23
130.60
128.08
126.53
125.65
124.66
123.60
123.24
123.46
141.00
138.50
136.00
133.50
131.00
128.66
126.72
125.19
124.05
123.32
122.98
123.03
155x190
290x286
TGL
LT & RT EOP NORMAL CROWN
(e = -2.0%)

344x190
434x190
524x190
614x190
704x190
794x190
884x190
974x190
1064x190
1154x190
123.46
123.24
123.43
141.00
138.50
136.00
133.50
131.00
128.66
126.72
125.19
124.05
123.32
122.98
123.03

+02.0
+38.5
+80.5
+65.0
+75.0
LET EOP (e = +7.8%)

TGL
PARTIAL FOUNDATION PLAN

EXIST. PIER 5
STA. 117+30
PIER 5
STA. 119+70

EXIST. PIER 6
STA. 122+20
PIER 6
STA. 124+00

EXIST. PIER 7
STA. 124+60
PIER 7
STA. 126+00

EXIST. NORTH ABUT.
STA. 127+00
PIECE-OF-PIECE SIDEWALK IN ROCK

PARTIAL FOUNDATION PLAN
NOTES:
1. BEARING PAD ELEVATIONS MAY HAVE TO BE ADJUSTED TO ACCOMMODATE THE ACTUAL BEARINGS FURNISHED. IT IS RESPONSIBILITY OF CONTRACTOR TO COORDINATE ANY CHANGES IN THE BEARINGS WHICH MAY AFFECT THE PEDESTAL ELEVATIONS OR DIMENSIONS.
2. FOR PILE LAYOUT AND SECTIONS A-A AND B-B, SEE SHEET NO. XX.
### Micropile Schedule

<table>
<thead>
<tr>
<th>Pile No.</th>
<th>Vertical or Battered</th>
<th>B.O.F. El.</th>
<th>Estimated Tip El.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NY Abutment</td>
<td>XXX</td>
<td>XXX.XX</td>
<td>XXX.XX</td>
</tr>
<tr>
<td>VT Abutment</td>
<td>XXX</td>
<td>XXX.XX</td>
<td>XXX.XX</td>
</tr>
</tbody>
</table>

### Notes:

1. Casing shall be API 5L or 5CT Grade N80 or approved equal.
2. Rebar shall be #11 threaded bar in accordance with ASTM A615 Grade 75.
3. Anchors plate shall meet requirements of ASTM A709 Grade 50.
4. Grout shall have minimum 28 day compressive strength of 5000 psi in accordance with ASTM C109.
5. Bond zone length shall be confirmed by test piles as indicated in the special provisions.

### Typical Micropile Elevation

![Typical Micropile Elevation Diagram](image-url)
SECTION A-A 6'-0" DRILLED SHAFT

SECTION B-B 5'-6" ROCK SOCKET

NOTES:
1. 6'-0" DRILLED SHAFT
2. STEEL CASING SHALL MEET THE REQUIREMENTS OF ASTM A252 GRADE 2.
3. SEE PILE TABLE FOR DETERMINING EXACT TIP ELEVATION.
PIER 3 FOOTING PLAN AND REINFORCEMENT DETAILS
DATED FEB. 1, 2010

PROGRESS PRINT

SCALE 1/4" = 1'-0"

#6 TIES @ 6"
#11 @ 6" (TYP.)
#9 @ 6"
#10 @ 6" (TOP)
#11 @ 6" (BOTTOM)

SECTION E-E
SCALE 1/4" = 1'-0"

SECTION F-F
SCALE 1/4" = 1'-0"

HNTB NY ENGINEERING & ARCHITECTURE, P.C.

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.
## PROGRESS PRINT

**DATED JAN. 25, 2010**

---

### SECTION E-E

Scale 1/4" = 1'-0"

---

### SECTION F-F

Scale 1/4" = 1'-0"

---

### PLAN

Scale 1/4" = 1'-0"

---

### SCALE "=1'-0"

---

### FEET

---

### #6 TIES @ 6"

---

### #11 @ 6" (TYP.)

---

### PIER 4 ELEVATION

---

### PIN

---

### S.H. 9527

---

### LAKE CHAMPLAIN BRIDGE REPLACEMENT OVER LAKE CHAMPLAIN

---

### DESCRIPTION OF WORK:

---

### COUNTY:

---

### CONTRACT NUMBER:

---

### DRAWING NO.:

---

### SHEET NO.:

---

### AS BUILT REVISIONS

---

### FOOTING PLAN AND REINFORCEMENT DETAILS

---

### NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION

---

### HNTB NY ENGINEERING & ARCHITECTURE, P.C.

---

### THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.
PROGRESS PRINT
DATED FEB. 1, 2010
### Bearing Details

<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>ID</th>
<th>Material</th>
<th>Clearance</th>
<th>H</th>
<th>T1</th>
<th>T2</th>
<th>W2</th>
<th>Stud Diameter</th>
<th>WASHER PLATE</th>
<th>SHEET NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0111</td>
</tr>
</tbody>
</table>

### Notes:
- The contractor shall supply multipurpose, structural bearing devices conforming to the requirements of Standard Specifications Section 556 and subject to the following conditions:
  1. The bearing devices shall be capable of transmitting the loads and moment shown on these plans.
  2. The dimension "H" in the bearing table represents the assumed total height of bearing mechanism between the sole plate and masonry plate used by the designer to establish the vertical clearance of the bearing system. It shall not be changed without written approval of the deputy chief engineer.
  3. All steel shall conform to A572, Grade 30, or Grade 50.
  4. All steel fabrication shall comply with the provisions of the latest edition of the New York State Steel Construction Manual.
  5. All metal components of the bearing system which are liable to come into contact during translation shall be made of stainless steel or a better quality material.
  6. All expansion bearings shall have a minimum friction coefficient of 0.15.
  7. The bearing devices, masonry plate, sole plate, anchor bolts, nuts, washer plates, and bearing pad shall be included in the unit price for the bearing system.
  8. Anchor bolts, masonry plate, and anchor bolts shall meet the requirements of subsection 728-02. They shall be galvanized in accordance with the requirements of material subsection 719-01, "GALVANIZED COATINGS AND REPAIR METHODS."
  9. The actual configuration of the components is shown as a representative example only.
  10. Dimensions, tolerances, and clearances shall be provided by submittal.

### Progress Print
Dated: Feb. 1, 2010

**Project:** Lake Champlain Bridge Replacement over Lake Champlain
**Site:** Essex, NY and Addison, VT
**Date:** Feb. 3, 2010

**Acknowledgments:**
- **Design:** NYSAD, Design-Bid-Build
- **Construction:** D255-648
- **Owner:** NYSAD

**Contact Information:**
- **Telephone:** 518-431-3000
- **Fax:** 518-431-3010
- **Website:** www.dot.state.ny.us

**Signature:**
- **Date:**
- **County:** Essex, NY and Addison, VT

**Document Name:**
- **Version:** 3

**Drawing No.:** NS3-0111
**Sheet No.:** 001 of 010

**Contracts:**
- **Contract:** 0255-648

**Specifications:**
- **Title:** New York State Department of Transportation Version 3
NOTES:

1. FOR GENERAL STRUCTURAL NOTES, SEE SHEET NOS.
NOTES:
1. FOR GENERAL STRUCTURAL NOTES, SEE SHEET NO.

PROGRESS PRINT
DATED FEB. 1, 2010

HNTB NY ENGINEERING & ARCHITECTURE, P.C.
NOTES:
1. FOR GENERAL STRUCTURAL NOTES, SEE SHEET NOS.

PROGRESS PRINT
DATED FEB. 1 2010

D261458

HNTB NY ENGINEERING & ARCHITECTURE, P.C.

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.

PREPARED BY:
PREPARED ON:
PREPARED ON:
NOTES OF ENGINEERING & ARCHITECTURE:
NOTES OF ENGINEERING & ARCHITECTURE:
ALTED BY:
ALTED BY:
NOTES OF ENGINEERING & ARCHITECTURE:
NOTES OF ENGINEERING & ARCHITECTURE:

DATE/TIME =
USER =
DESIGN SUPERVISOR =
CHECKED BY =
ESTIMATED BY =
DRAFTED BY =
CHECKED BY =
PREPARED BY:
ON:
ALTERED BY:
ON:
SIGNATURE
DATE
CONTRACT NUMBER
DRAWING NO.
SHEET NO.

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION

DOCUMENT NAME:

CITY/STATE/ZIP:

COUNTY:

DESCRIPTION OF WORK:

ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED

SCALE

PAGE 1 OF 2
NOTES:
1. FOR GENERAL STRUCTURAL NOTES, SEE SHEET NO.

PROGRESS PRINT
DATED FEB. 1, 2010

HNTB NY ENGINEERING & ARCHITECTURE, P.C.

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 3

JOB MANAGER

DESIGNED BY

PREPARED BY:

SIGNATURE

DATE

CONTRACT NUMBER

DRAWING NO.

SHEET NO.

DESCRIPTION OF WORK:

COUNTY:

S.H. 9527
LAKE CHAMPLAIN BRIDGE REPLACEMENT OVER LAKE CHAMPLAIN
COUNTY: ESSEX, NY AND ADDISON, VT

L.R. 50073, 19070
FEB. 3, 2010

FILE NAME =
DATE/TIME =
USER =
DESIGN SUPERVISOR

ALTERED BY:
ON:

PREPARED BY:
ON:

CHECKED BY:

ESTIMATED BY:

DRAFTED BY:

CHECKED BY:

AUTHOR:

PAGE OUTLINE:

- FEET
- SCALE

3/32" = 1'-0"
NOTES:
1. FOR GENERAL STRUCTURAL NOTES, SEE SHEET NO. ___
NOTES:

1. FOR GENERAL STRUCTURAL NOTES, SEE SHEET NO. XX/XX/XX.

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.
NOTES:
1. FOR GENERAL STRUCTURAL NOTES, SEE SHEET NO.

PROGRESS PRINT
DATED FEB. 1, 2010

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.
NOTES:

1. Use at least 3 feet of every 10 feet length, and 1 foot of every less than 10 feet, shall be magnetic particle tested.

2. No welding to top flange permitted within the top flange tension zone, unless otherwise directed by the engineer.

3. To carry notch toughness test required.

4. Girders dimensions measured along centerline.

5. For camber drawing, see Dwg. No.

6. For typical structural steel details, see Dwg. No.

7. For field splice details, see Dwg. No.

GIRDERS:

- Use at least 3 feet of every 10 feet length, and 1 foot of every less than 10 feet, shall be magnetic particle tested.
- No welding to top flange permitted within the top flange tension zone, unless otherwise directed by the engineer.
- To carry notch toughness test required.
- Girders dimensions measured along centerline.
- For camber drawing, see Dwg. No.
- For typical structural steel details, see Dwg. No.
- For field splice details, see Dwg. No.

HNTB NY ENGINEERING & ARCHITECTURE, P.C.

B145

DATED FEB. 1, 2010
GIRDER ELEVATION - SPAN 2

NOTES:

3. FOR GIRDER GENERAL NOTES, SEE DWG. NO. B145.

DATED FEB. 1, 2010

PROGRESS PRINT

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION
GIRDER ELEVATION - SPAN 3

NOTES:

1. FOR GIRDER GENERAL NOTES, SEE DWG. NO. B145.

2. ALL DIMENSIONS IN FT UNLESS OTHERWISE NOTED.

3. THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION

PREPARED FOR
PLOT AS ENGINEERING &
DATE/TIME =

CHECKED BY
DATE =

DESIGN SUPERVISOR

JOB MANAGER

CONTRACT NUMBER

DRAWING NO.

SHEET NO.

S.H. 9527

LAKE CHAMPLAIN BRIDGE REPLACEMENT OVER LAKE CHAMPLAIN

GENERAL NOTES:

PROGRESS PRINT
DATED FEB. 1, 2010

FILE NAME =

USER =

SIGNATURE

DATE

PAGE 1 OF 1

1805.81, 1807.70

ESSEX, NY AND ADDISON, VT

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.
GIRDER ELEVATION - SPAN 4

GIRDER SCHEDULE

<table>
<thead>
<tr>
<th>MARK</th>
<th>TOP FLANGE LENGTH</th>
<th>BOTTOM FLANGE LENGTH</th>
<th>SHEAR CONNECTORS</th>
<th>FLANGE TENSION ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AT</td>
<td>BT</td>
<td>CT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AB</td>
<td>BC</td>
<td>CD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DE</td>
<td>EF</td>
<td>FG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GH</td>
<td>HI</td>
<td>IJ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KL</td>
<td>LM</td>
<td>MN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OP</td>
<td>PQ</td>
<td>RQ</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:
3. For girder general notes, see DWG. No. B145.
### Girder Schedule

<table>
<thead>
<tr>
<th>Shear Connectors</th>
<th>Flange Tension Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>G</td>
</tr>
<tr>
<td></td>
<td>H</td>
</tr>
<tr>
<td></td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>J</td>
</tr>
<tr>
<td></td>
<td>K</td>
</tr>
<tr>
<td></td>
<td>L</td>
</tr>
<tr>
<td></td>
<td>M</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>P</td>
</tr>
</tbody>
</table>

### Notes:
1. For general notes, see drawing no. 0145.

---

**Girder Elevation - Span 6**

**Top Flange Length**

| MARK | AT | BT | CT | AB | BB | CE | A | B | C | D | E | F | G | H | J | K | L | M | N | O | P | Q |
|------|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G1B  | X  | X  | X  | X  | X  | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| G2B  | X  | X  | X  | X  | X  | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| G3B  | X  | X  | X  | X  | X  | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| G4B  | X  | X  | X  | X  | X  | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| G5B  | X  | X  | X  | X  | X  | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

**Bottom Flange Length**

| MARK | AB | BB | CE | A | B | C | D | E | F | G | H | J | K | L | M | N | O | P | Q |
| C1B  | X  | X  | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| C2B  | X  | X  | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| C3B  | X  | X  | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| C4B  | X  | X  | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| C5B  | X  | X  | X  | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

**Flange Tension Zone**

<table>
<thead>
<tr>
<th>MARK</th>
<th>FS1</th>
<th>FS2</th>
<th>FS3</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1B</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>C2B</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>C3B</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>C4B</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>C5B</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

---

**Design Supervisor:**

**Prepared by:**

**Checked by:**

**Dated:** Feb. 1, 2010

---

**HNTB NY Engineering & Architecture, P.C.**

**SIGNATURE**

**DATE**

**CONTRACT NUMBER**

**DRAWING NO.**

**SHEET NO.**

**DESIGNED BY:**

**CHECKED BY:**

**DRAFTED BY:**

**PREPARED BY:**

**NOTE:**

All dimensions in ft unless otherwise noted.

**Description of Work:**

Lake Champlain Bridge Replacement Over Lake Champlain

**COUNTY:**

**STATE:**

**LOCATION:**

**DATE:**

**APPROVED by:**

**ENGINEER:**

---

**Legal Statement:**

The alteration of this material in any way, unless done under the direction of a comparable professional, (i.e., architect for an architect, engineer for an engineer or landscape architect for a landscape architect), is a violation of the New York State Education Law and/or regulations and is a Class "A" misdemeanor.

---

**Progress Print**

**Dated:** Feb. 1, 2010

---

**FOR GIRDER GENERAL NOTES, SEE DWG. NO. B145.**

---

**BRIDGES**

**CULVERTS**

**AS BUILT REVISIONS**
NOTES:
1. PIER 6 AND FIX. BRGS.
   2"X24" 2"X24" 1"X24" 2"X24" XXX CONNECTION
   C.P.G.W. (TYP.)
2. PIER 7 AND EXP. BRGS.
   FIELD SPLICE 240'-0" 28'-0" 28'-0" 22'-0" 22'-0" 60'-0" 120'-0"
   21'-0" 21'-0" 1805.81, 1807.70
   2.27'-0" 2.27'-0" 2.27'-0"
   C.P.G.W. C.P.G.W.
   STIFFENER XXX BRG. STIFFENER XXX BRG.
   STIFFENER
   HP SHEAR STUDE SPACING PER ROW
   HP TOP FLANGE TENSION ZONE
   HP BOTTOM FLANGE TENSION ZONE
   FOR GIRDER GENERAL NOTES, SEE DWG. NO. B145.
NOTES:

1. c PIER 7 AND EXP. BRGS. 21'-0" 21'-0" 27'-0" 27'-0" p 2"X24" XXX BRG. STIFFENER p 2"X24" 3"X96" WEB p 1"X24" XXX CONNECTION p 1"X24" (TYP.)

2. c FIELD SPLICE 158'-0" c EXP. BRGS. NORTH ABUT. XXX BRG. STIFFENER p 2"X24"

3. FOR GIRDER GENERAL NOTES, SEE DWG. NO. B145.
TYPICAL DIAPHRAGM CONNECTION DETAILS

END DIAPHRAGM

SECTION A-A

SECTION B-B

PROGRESS PRINT
DATED FEB. 1, 2010
NOTES:

1. Additional bars are to be placed between normal #5 bars over the continuous pier and throughout the middle span. For additional information, see deck slab plan sheets.

2. All bar clearances are 2" unless otherwise noted.

TYPICAL APPROACHES DECK SECTION - SPANS 1, 2, 3, 7 AND 8

1. For additional information, see deck slab plan sheets.

2. All bar clearances are 2" unless otherwise noted.
TYPICAL APPROACHES DECK SECTION - SPANS 4 AND 6

NOTES:
1. Additional bars are to be placed between normal #5 bars across the continuous pier and throughout the middle span. For additional information, see deck slab plan sheets.
2. All bar clearances are 2" unless otherwise noted.
3. For drip groove detail, see sheet No.

ADDITIONAL BARS ARE TO BE PLACED BETWEEN NORMAL #5 BARS OVER THE CONTINUOUS PIER AND THROUGHOUT THE MIDDLE SPAN. FOR ADDITIONAL INFORMATION, SEE DECK SLAB PLAN SHEETS. ALL BAR CLEARANCES ARE 2" UNLESS OTHERWISE NOTED. FOR DRIP GROOVE DETAIL, SEE SHEET NO.
ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 568 OF THE STANDARD SPECIFICATIONS.

PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF \( \frac{1}{8} \)".

BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 LB-FT).

PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.

NOTES:

1. ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 568 OF THE STANDARD SPECIFICATIONS.

2. PRODUCE TYPICAL ASSEMBLIES AND SUBMIT TO THE CONTRACTOR FOR APPROVAL.

3. FOOTAGE OF THE DECK ANCHOR PLATE AND THE RAILING ANCHOR STUDS SHALL BE INCLUDED IN THE BID IF NOT PRODUCED.

4. THE COST OF THE RAILING ANCHOR PLATE AND THE RAILING ANCHOR STUDS SHALL BE INCLUDED IN THE BID IF NOT PRODUCED.

EXPANSION SPLICE TUBE

- ELEVATION
- EXPANSION SPLICE ASSEMBLY

FIXED SPLICE TUBE

- ELEVATION
- FIXED SPLICE ASSEMBLY

STEEL BRIDGE RAILING (TWO RAIL - BRUSH CURB)

SECTION A-A

EXPANSION SPACER TUBE

- ELEVATION
- EXPANSION SPLICE ASSEMBLY

SECTION B-B

EXPANSION SPACER TUBE

- ELEVATION
- EXPANSION SPLICE ASSEMBLY

SECTION C-C

EXPANSION SPACER TUBE

- ELEVATION
- EXPANSION SPLICE ASSEMBLY
NOTES:
3. Cables shall be FREYSSINET H1000 cable system, Unit 7 (or approved equal).
4. Cables shall be composed of 0.6 inch diameter, low relaxation, weldless seven-wire strand conforming to AASHTO M202 (ASTM A-416), Grade 270.
5. Steel strands shall be individiually greased strand with a polyethylene sheath.
6. Cable properties:
   a. Minimum Ultimate Tensile Strength (MUTS), fy = 270 ksi
   b. Minimum Yield Stress, fy = 240 ksi
   c. Apparent Elastic Modulus, E' = 28,500 ksi
7. For general elevation of cable hanger and cable hanger forces, see Sheet AA.
8. For ring plate details, see Sheet XX.
9. Bearing plate guide pipes shall be hot dipped galvanized in accordance with AASHTO M 111M (ASTM A123M) and painted with final coat color of the arch span.
10. The color of the HDPE sheathing shall be according to the project specifications, and shall require the engineer's approval.
11. Cable spacer plates and pipe shall be stainless steel conforming to ASTM F593-02 Grade 304 with stainless steel nuts conforming to ASTM F594-02.
12. Wrap and protect the fork end fitting during shipping and installation to prevent damage to the coating system.

ADJUSTABLE STAY CABLE HANGER

Scale: 1" = 1'-0"

TO BE DEFINED BY THE PROJECT ENGINEER (~5'-0")
TYPICAL ARCH RIB AND CABLE HANGER CONNECTION DETAILS

ARCH RIB SECTION

SECTION A-A

ISOMETRIC VIEW

PROGRESS PRINT
DATED FEB. 1, 2010
FRAMING PLAN - SPAN 5

NOTES:
1. FOR GENERAL STRUCTURAL NOTES, SEE SHEET NO.

DATE: FEB. 1, 2010

HNTB NY ENGINEERING & ARCHITECTURE, P.C.

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 2

JOB MANAGER
DESIGNED BY

31-JAN-2010 15:15

FILE NAME =
DATE/TIME =
USER =

DESIGN SUPERVISOR
slam

CHECKED BY

ESTIMATED BY

DRAFTED BY

ALTERED BY:

PREPARED BY:
ON:

CONTRACT NUMBER
DRAWING NO.
SHEET NO.

AS BUILT DRAWING
DESCRIPTION OF WORK

SIGNATURE DATE

CONTRACT NUMBER
DRAWING NO. DATE SHEET NO. OF XXX

NEW YORK STATE DEPARTMENT OF TRANSPORTATION REGION 2
TYPICAL BLISTER ELEVATION

VIEW A-A

PROGRESS PRINT
DATED FEB. 1, 2010