

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-0161
[fax] 802-828-3566
[ttd] 800-253-0191

June 2, 2015

J. P. Sicard, Inc.
PO Box 508
1369 Glover Road
Barton, VT 05822

Project Name: Barton BRO 1449(31)

Structure Identification: TH 2, Bridge 8

The precast fabrication drawings associated with Items 540.10 Precast Concrete Structure (Abutment #1), 540.10 Precast Concrete Structure (Abutment #2), 540.10 Precast Concrete Structure (Approach Slab #1), 540.10 Precast Concrete Structure (Approach Slab #2), and 900.640 Special Provision (Prestressed Concrete NEXT D Beams)(NEXT 32 D) have been reviewed and are being returned herewith.

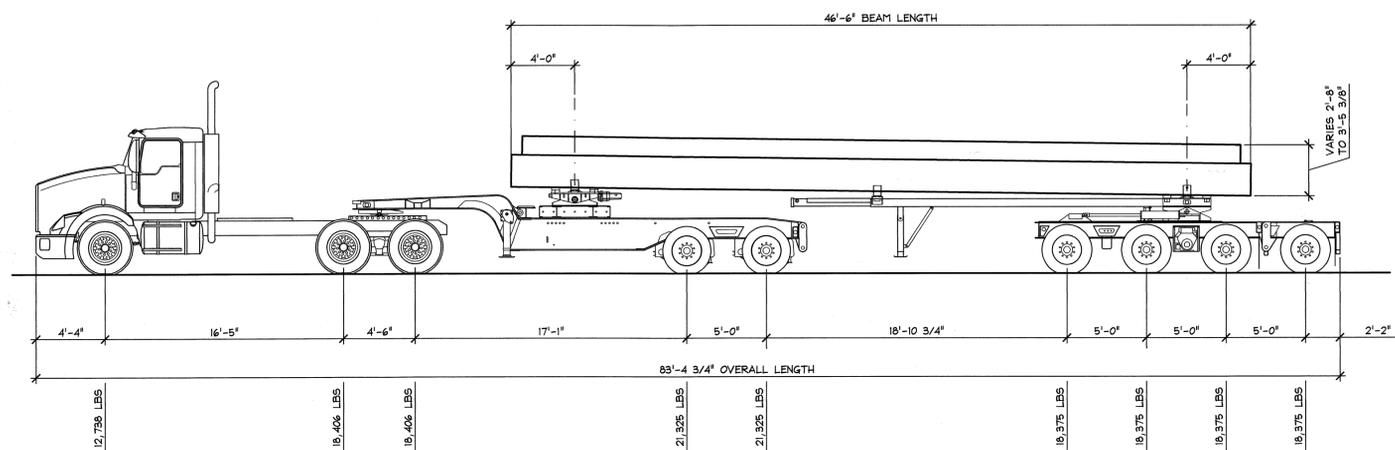
All sheets are approved as noted.

You must provide at least 2 weeks notice to VTrans' fabrication inspector, Jim Wild and the Agency's Engineer, as to the date fabrication represented by these drawings will begin. You may contact Jim by email at jim.wild@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

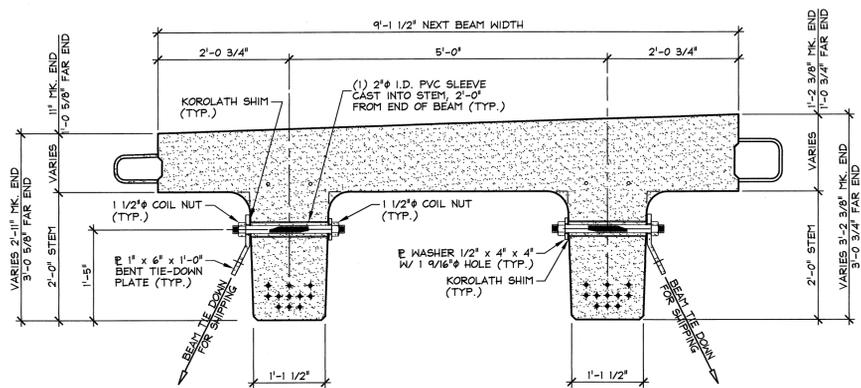
Sincerely,



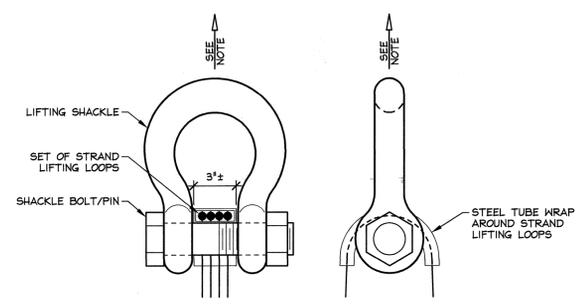
Todd A. Sumner P.E.
Project Manager



SHIPPING ELEVATION
3/16" = 1'-0"



MODIFIED NEXT BEAM 32D HOLD-DOWN
DETAIL FOR SHIPPING
3/4" = 1'-0"



LIFTING SHACKLE DETAILS
N.T.S.

ABUTMENT & APPROACH SLAB GENERAL NOTES

- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 5,000 PSI.
- MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 3,500 PSI (UNLESS NOTED OTHERWISE).
- REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) LEVEL I (BLACK STEEL) (UNLESS NOTED OTHERWISE).
- THE TOP OF ABUTMENTS SHALL RECEIVE A 1/4" RAKED AMPLITUDE FINISH (UNLESS NOTED OTHERWISE). THE TOP OF ABUTMENT CHEEKWALLS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
- SHEAR KEY SURFACES SHALL HAVE 1/8" COURSE AGGREGATE EXPOSED.
- PRECAST CONCRETE UNITS SHALL BE HANDLED AND ERECTED USING THE LIFTING INSERTS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. NON-PRESTRESSED UNITS SHALL BE STORED & TRANSPORTED WITH TIMBER SUPPORTS AT 5ft POINTS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
- MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P510.02 AND P510.05 RESPECTIVELY.
DESIGN MIX:
APPROACH SL : J.P.C. BRIDGE MIX #445MSCC (APPROVED 4-2-2015)
ABUTMENT : J.P.C. BRIDGE MIX #445M-NO DCI (APPROVED 3-21-2015)
- QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
- CURING METHOD: AS SOON AS THE TOP OF PRECAST CONCRETE UNITS ARE FINISHED, A COVER OF RIGID INSULATION AND POLY WILL BE PLACED OVER THE UNIT. NATURAL CURE WITH NO EXTERNAL HEAT APPLIED.
- ABUTMENT POST-TENSIONING SEQUENCE:
A. ERECT PRECAST ABUTMENTS AND INSTALL TRANSVERSE STRANDS.
B. APPLY EPOXY BONDING COMPOUND TO MATCH CAST FACES OF VERTICAL CONSTRUCTION JOINT.
C. TENSION STRANDS TO 3k TO REMOVE SAG.
D. CHECK ALIGNMENT OF PRECAST ELEMENTS.
E. POST TENSION TENDONS TO 32,000 LBS.

NEXT BEAM GENERAL NOTES

- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 6,000 PSI.
- MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 4,000 PSI.
- REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) LEVEL II (DUAL COATED).
- PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0.60" x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
- PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION OF 44.0 K AFTER ACCOUNTING FOR CHUCK SLIPPAGE. TENSION SHALL BE VERIFIED BY MEASURING STRAND ELONGATION. (SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, THIS SHEET.)
- ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF NEXT BEAM STEPS (UNLESS NOTED OTHERWISE) AND COATED WITH TWO PART EPOXY PAINT SYSTEM.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" (UNLESS NOTED OTHERWISE).
- THE TOP OF BEAMS SHALL RECEIVE A SMOOTH SCREED FINISH (UNLESS NOTED OTHERWISE).
- SHEAR KEY SURFACES SHALL BE SAND BLASTED CLEAN.
- BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL AND VERTICAL FORCES ARE APPLIED TO EACH OF THE TWO LIFTING LOOPS AT EACH END OF THE BEAM. THE PINS OF THE SHACKLES SHALL BE PLACED THROUGH THE LIFTING LOOPS. SEE DETAIL, THIS SHEET. BEAMS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 2'-0" OF THE BEAM ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
- MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P510.02 AND P510.05 RESPECTIVELY.
DESIGN MIX: J.P.C. BRIDGE MIX #430M-NO DCI (SUBMITTED 3-21-2015)
- QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
- CURING METHOD: AS SOON AS THE TOP OF BEAM IS FINISHED, A COVER OF INSULATED POLY. THE DESIRED CURING TEMPERATURE RANGE SHALL NOT DROP BELOW 60°. THE TEMPERATURE SHALL BE RECORDED BY AUTOMATIC SENSOR INSTRUMENTS ON GRAPH CHARTS, SPACED NOT MORE THAN 100' APART AND WILL CONTINUE UNTIL RELEASE STRENGTH IS ACHIEVED. EACH CHART SHALL BE MARKED WITH THE CASTING DATED AND LOCATION OF THE RECORDER. IF NECESSARY TO MAINTAIN CASTING BED TEMPERATURE PRIOR TO CONCRETE PLACEMENT OR TO ACCELERATE EARLY AGE STRENGTH GAIN, EXTERNAL RADIANT HEAT MAY BE EMPLOYED VIA HOT WATER DUCTS BENEATH AND WITHIN THE PERIPHERY OF THE CASTING BED. MAXIMUM CURING TEMPERATURE SHALL NOT EXCEED PCI SPECIFIED LIMITS.
- CONTRACTOR SHALL PROVIDE APPROPRIATE WATERPROOFING TO GROUTED AND/OR EPOXIED SHEAR KEYS. J.P. CARRARA & SONS, INC. SHALL NOT BE HELD LIABLE FOR PROBLEMS ASSOCIATED WITH MOISTURE INFILTRATING GROUTED AND/OR EPOXIED SHEAR KEYS.
- MANUFACTURING TOLERANCES SHALL COMPLY WITH PCI MNL-116. SINCE PRESTRESSED PRODUCT CAMBER IS A RESULT OF REQUIRED DESIGN LOADS AND SPAN LENGTH, CAMBER TOLERANCES SHALL NOT APPLY.

Vermont Agency of Transportation

RECEIVED
ON: **May 29, 2015**
and Checked for
CONFORMANCE
BY: **Todd A. Sumner** DATE: **06/02/2015**

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

Job Number: **120174**
Reviewed by: **SRB**
Date: **06/01/2015**

EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING
(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE: 0.60" x 270 KSI
AREA: 0.217 IN²
TENSION: 44,000 LB. EACH STRAND
GRIP-TO-GRIP: 252'-0" = 252.00'
Es = 28,600,000 PSI (ASSUMED FOR THESE CALCULATIONS; VALUE TO BE OBTAINED FOR STRAND SPOOL ACTUALLY USED)

EXAMPLE:
 $\Delta = \frac{PL}{AE} = \frac{(44,000 - 3,000) \times 252.00 \times 12}{0.217 \times 28,600,000} = 19.977"$

THEREFORE: (TOLERANCES ± 5%)
 Δ UPPER LIMIT = 1.05 x 19.977" = 20.98" = 21"
 Δ LOWER LIMIT = 0.95 x 19.977" = 18.98" = 19"

EXTRA FORCE REQUIRED TO COMPENSATE FOR 1/2" CHUCK SLIPPAGE:
 $\Delta P = \frac{0.5 \times 41,000}{19.977} = 1,026$ LBS.

TOTAL TENSIONING FORCE = 44,000 + 1,026 = 45,026 LBS.

ADDITIONALLY, INCREASED ELONGATION AND THE CORRESPONDING FORCE DUE TO FORM SHORTENING SHALL BE ACCOUNTED FOR IN THE CALCULATIONS USED FOR CONSTRUCTION PER PROVISION PCI MNL-116 5.3.11.3.

STRAND TENSIONING PROCEDURE:

- PULL EACH STRAND INITIALLY TO 3,000+ LBS. AND MARK STRAND.
- THEN PULL EACH STRAND TO A TOTAL TENSION OF 45,026+ LBS. AND MEASURE ELONGATION AFTER SEATING. IT MUST BE BETWEEN 19" AND 21".
* NOTE: FORCES READ ON STRESSING JACK GAUGES MUST BE MADE TO CORRESPOND TO ABOVE VALUES BASED ON CALIBRATION DATA FOR SPECIFIC JACK USED.
- STRANDS IN BOTTOM TWO ROWS SHALL BE RE-PULLED TO VERIFY SHORTENING EFFECT OF SELF STRESSING BEG. RE-PULL FORCE SHALL NOT INCLUDE OVER-PULL FOR SHORTENING.

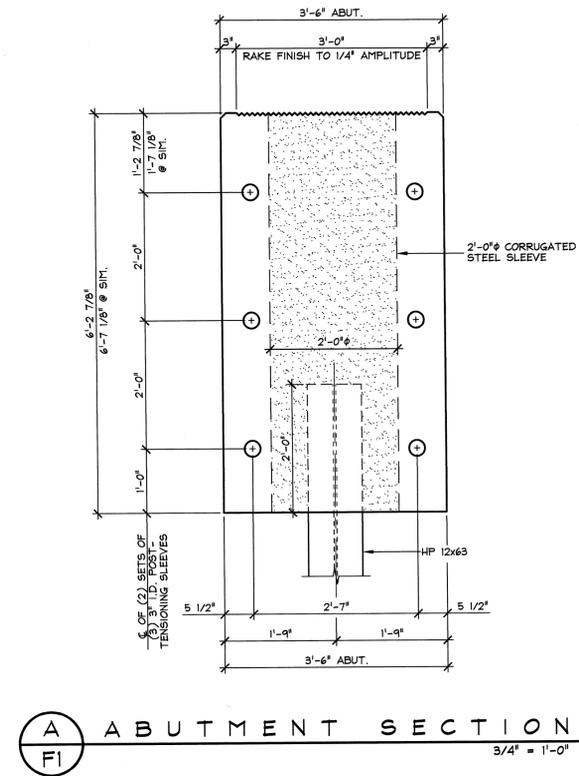
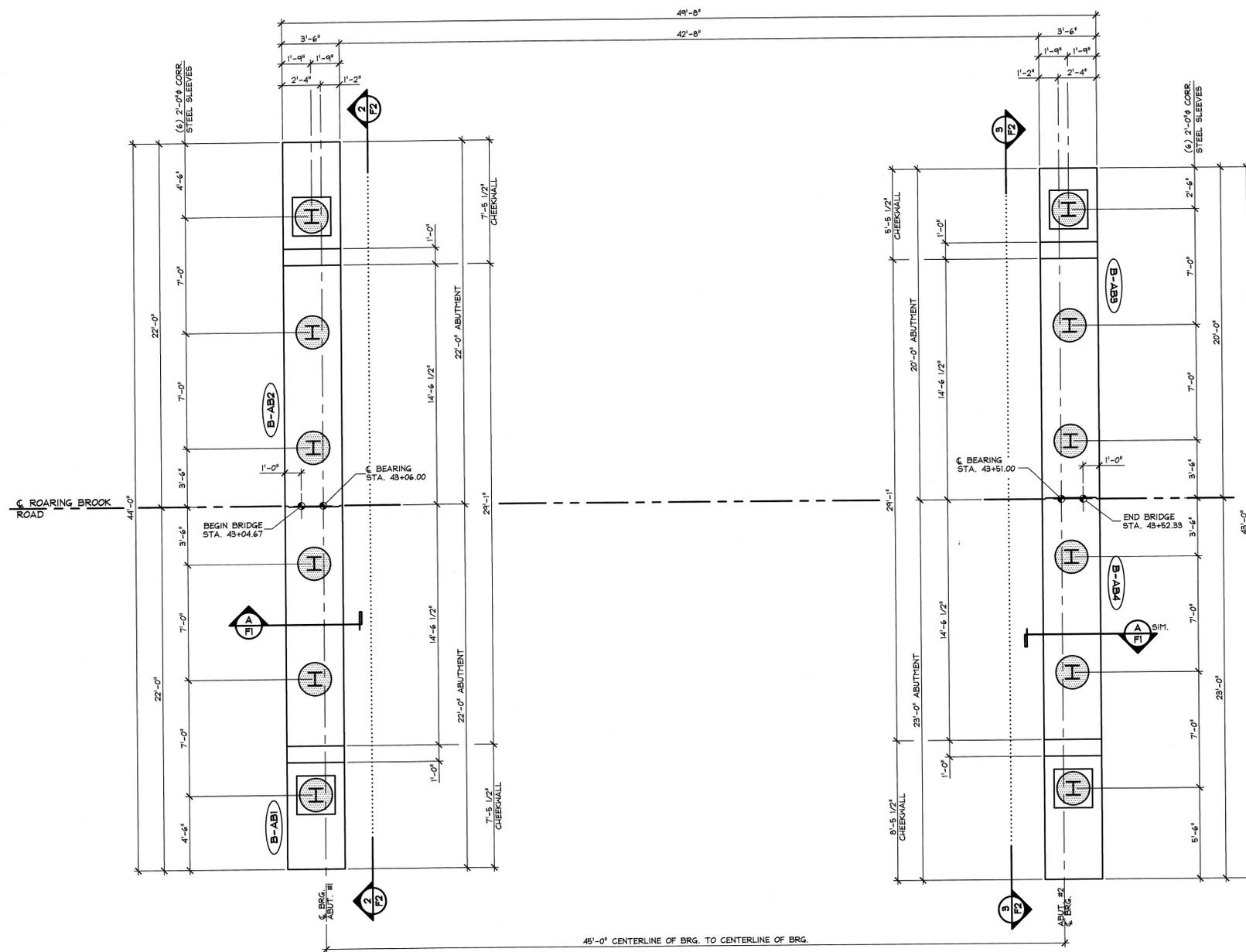
DESIGN LIVE LOAD: HL-93

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 264 OSE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9810	J.P. Sicard CONTRACTOR BARTON, VERMONT
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB. 25, 2015
TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)		SCALE: NOTED
		CHKD: DFTM: T.D.
		JOB NO: 23462-015
		DWG. NO: C1

COVER SHEET



1 PRECAST ABUTMENT LAYOUT
 F1 1/4" = 1'-0"



Vermont Agency of Transportation
RECEIVED
 ON: **May 29, 2015**
 and Checked for
CONFORMANCE
 BY: **Todd A. Sumner** DATE: **06/02/2015**

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

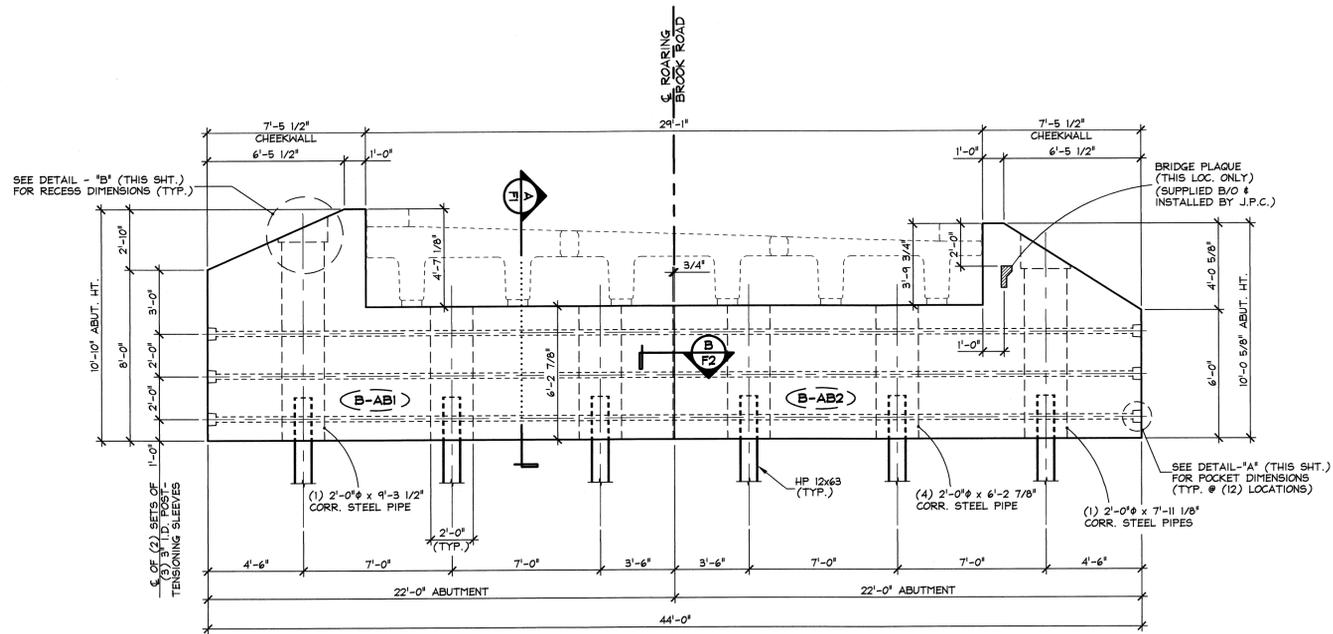
 J.P. Carrara & Sons, Inc.
 246 Commercial Street
 Manchester, NH 03101
 603-888-6262

Job Number: **120174**
 Reviewed by: **SRB**
 Date: **06/01/2015**

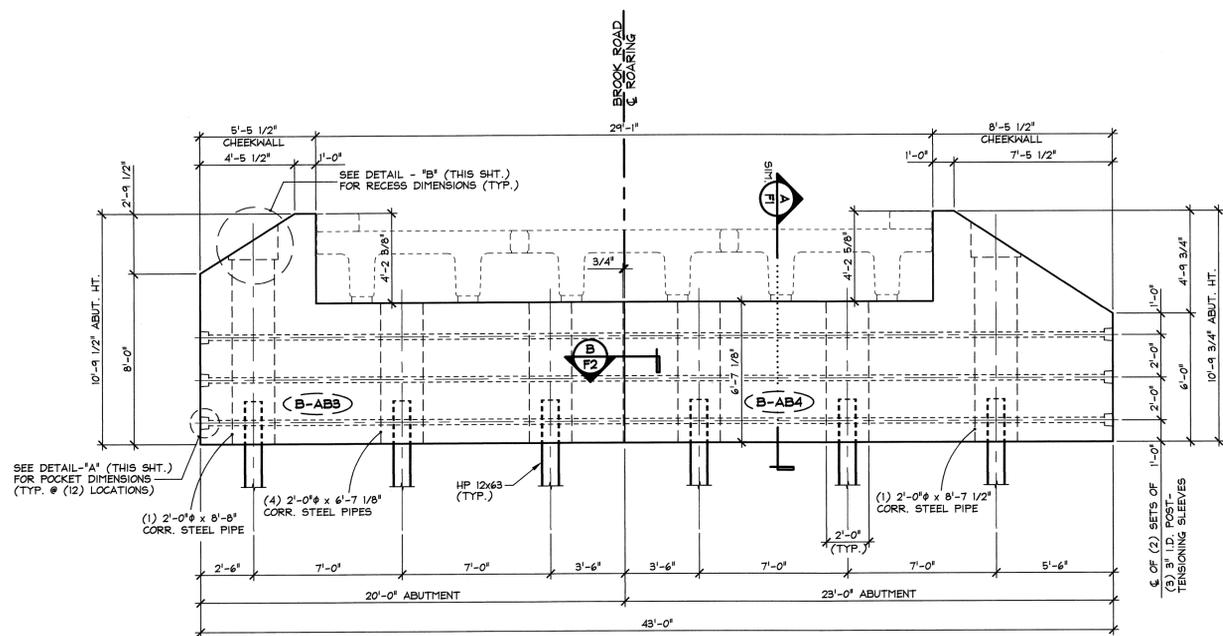
APPROVAL STAMP:

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer <small>2464 CASE ST., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010</small>		J.P. Sicard CONTRACTOR BARTON, VERMONT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB. 25, 2015 SCALE: NOTED	
TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)		CHKD: DFTM: T.D. JOB NO: 23462-015	
PRECAST ABUTMENT LAYOUT		DWG. NO: F1	

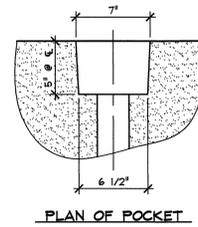
SUBMITTED
 5-29-15
 J.P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753



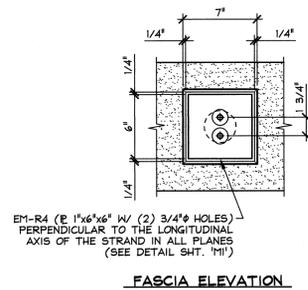
2 PRECAST ABUTMENT #1 ELEVATION
 F2
 1/4" = 1'-0"



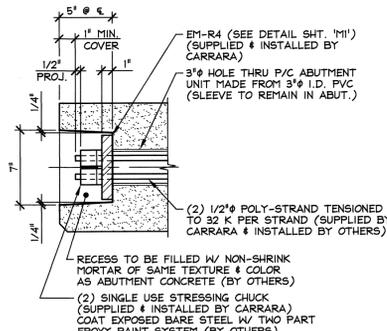
3 PRECAST ABUTMENT #2 ELEVATION
 F2
 1/4" = 1'-0"



PLAN OF POCKET

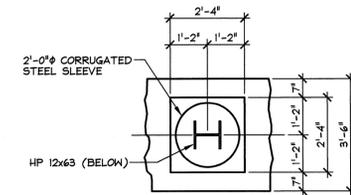


FASCIA ELEVATION

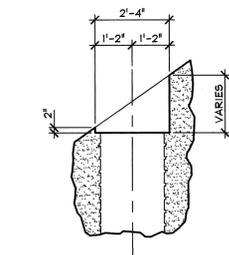


SECTION AT CENTERLINE

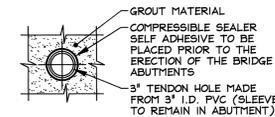
DETAIL - "A"
 1 1/2" = 1'-0"



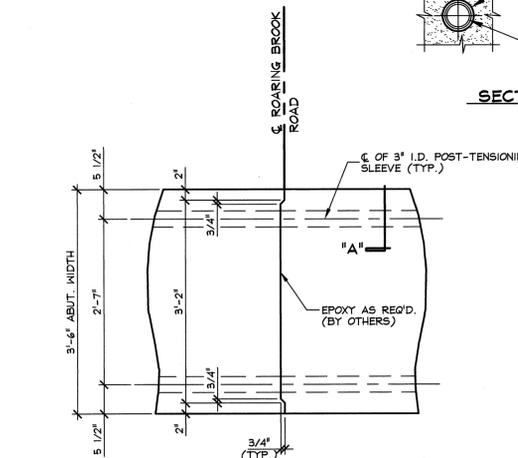
PLAN VIEW



DETAIL - "B"
 3/8" = 1'-0"



SECTION - "A"
 1 1/2" = 1'-0"



B CONSTRUCTION JOINT SECTION
 F2 @ P.T. SLEEVE (ABUTMENT)
 3/4" = 1'-0"

Vermont Agency of Transportation
RECEIVED
 ON: **May 29, 2015**
 and Checked for
CONFORMANCE
 BY: **Todd A. Sumner** DATE: **06/02/2015**

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

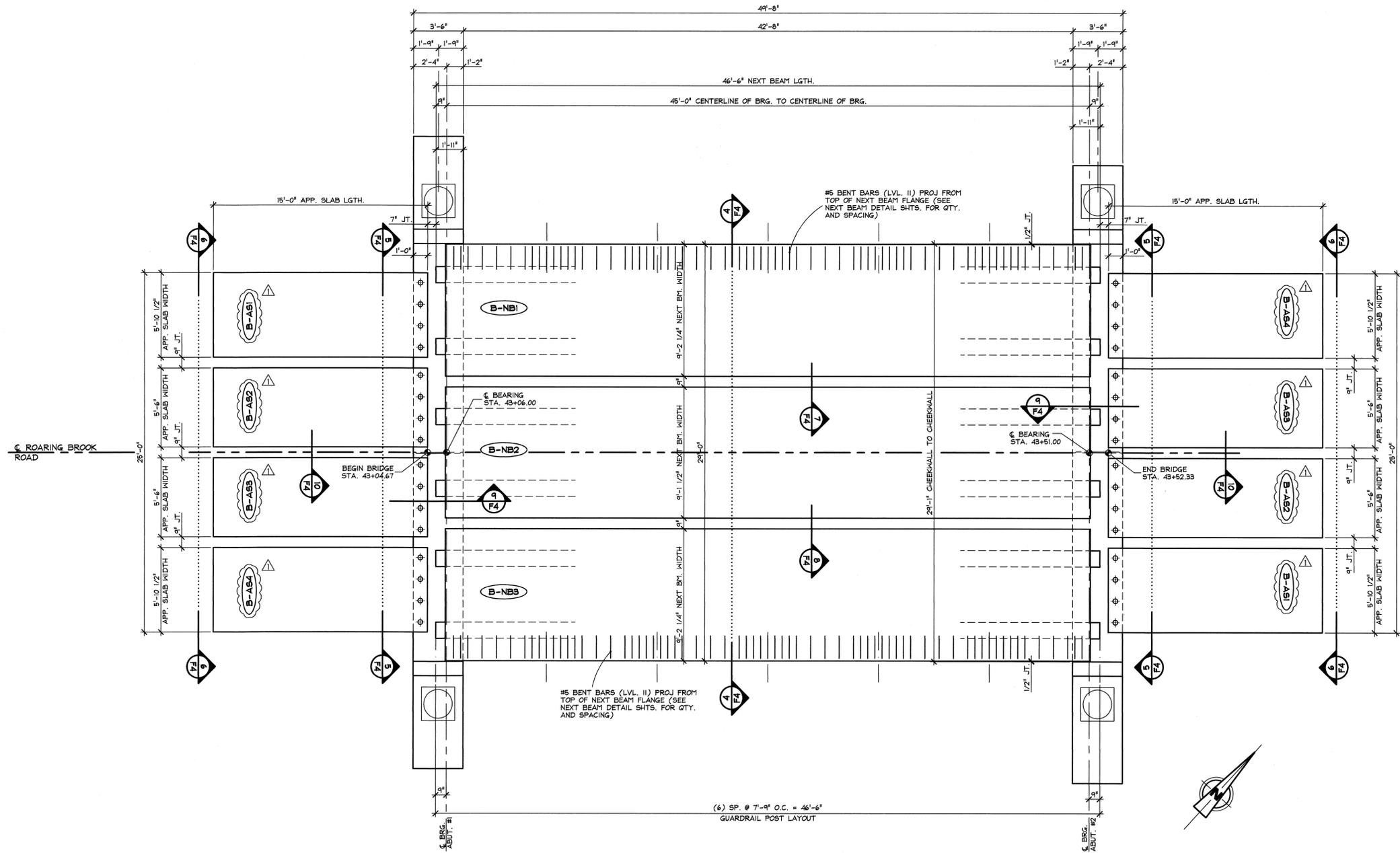
CLD Consulting Engineers
 640 Commercial Street
 Manchester, NH 03101
 603-888-6223

Job Number: **120174**
 Reviewed by: **SRB**
 Date: **06/01/2015**

APPROVAL STAMP:

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 244 OSE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010		J.P. Sicard CONTRACTOR BARTON, VERMONT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB. 25, 2015	SCALE: NOTED
TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)		CHKD:	DFTM: T.D.
PRECAST ABUTMENT ELEVATIONS & DETAILS		JOB NO: 23462-015	DWG. NO: F2

SUBMITTED
 5-29-15
 J.P. Carrara & Sons, Inc.
 Middlebury, VT 05753



1 PRESTRESSED NEXT BEAM & APPROACH SLAB LAYOUT
 F3 1/4" = 1'-0"

Vermont Agency of Transportation
RECEIVED
 ON: **May 29, 2015**
 and Checked for
CONFORMANCE
 BY: **Todd A. Sumner** DATE: **06/02/2015**

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CHD C/D Consulting Engineers
 540 Commercial Street
 Manchester, NH 03101
 603-688-8223

Job Number: **120174**
 Reviewed by: **SRB**
 Date: **06/01/2015**

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
 Precast & Prestress Manufacturer
 244 GSE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

J.P. Sicard
 CONTRACTOR
 BARTON, VERMONT

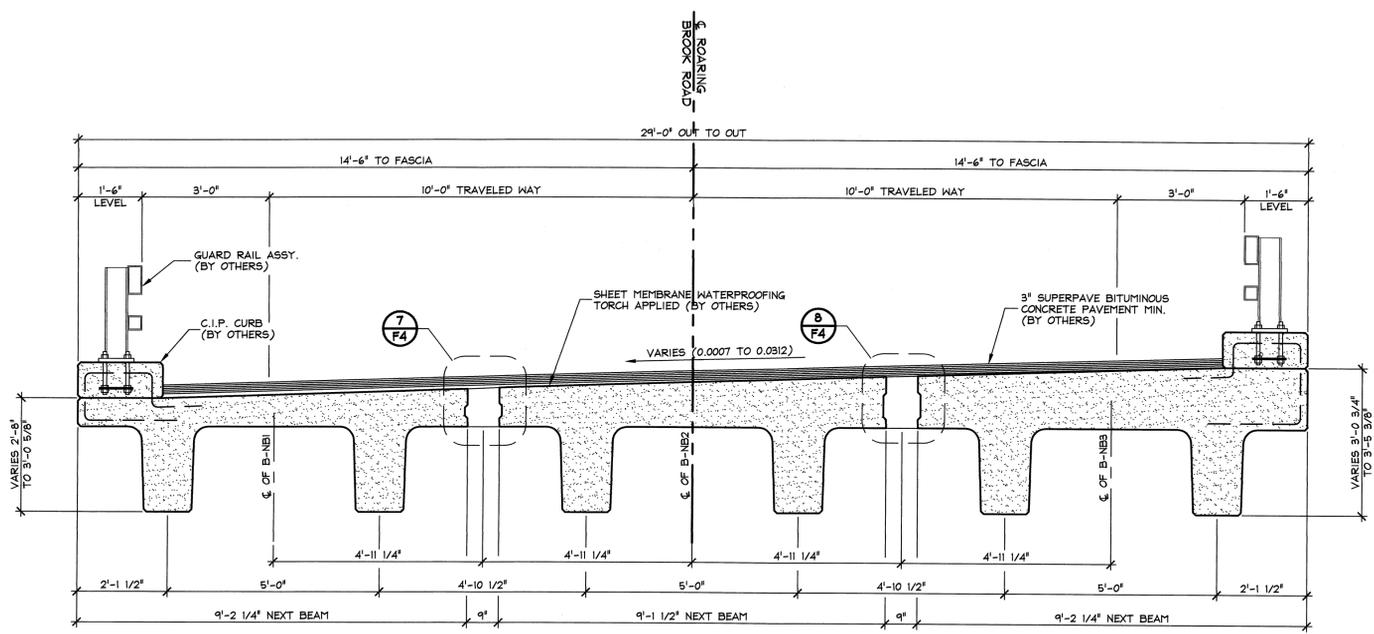
STATE OF VERMONT AGENCY OF TRANSPORTATION
 COUNTY OF ORLEANS

TOWN OF BARTON
 ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
 BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

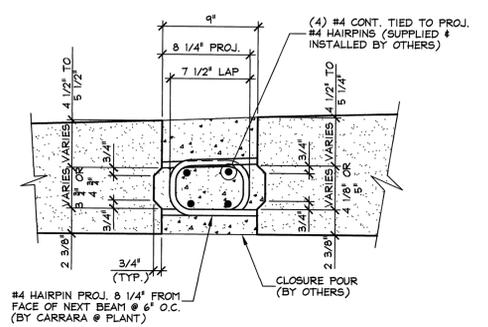
PRECAST NEXT BEAM & APPROACH SLAB LAYOUT

SUBMITTED
 5-29-15
 J. P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753

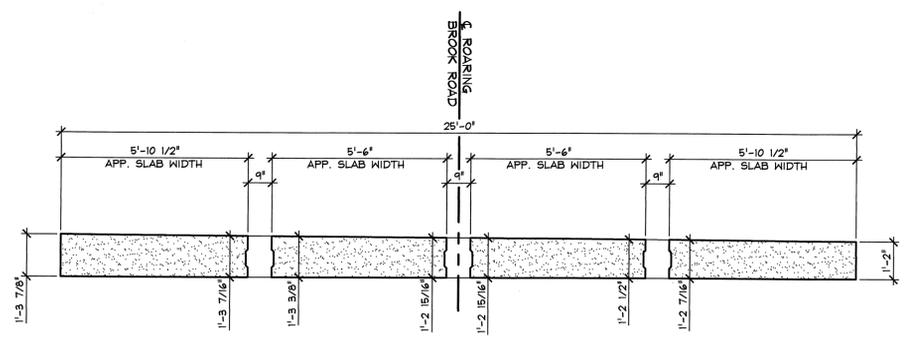
DATE: FEB. 25, 2015
 SCALE: NOTED
 CHKD: DFTM: T.D.
 JOB NO: 23462-015
 DWG. NO: **F3**



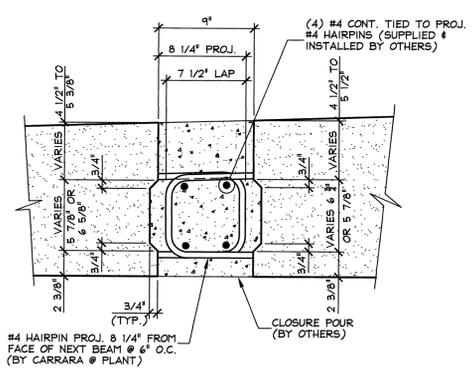
4 TRANSVERSE SECTION THRU NEXT BEAMS
F4 1/2" = 1'-0"



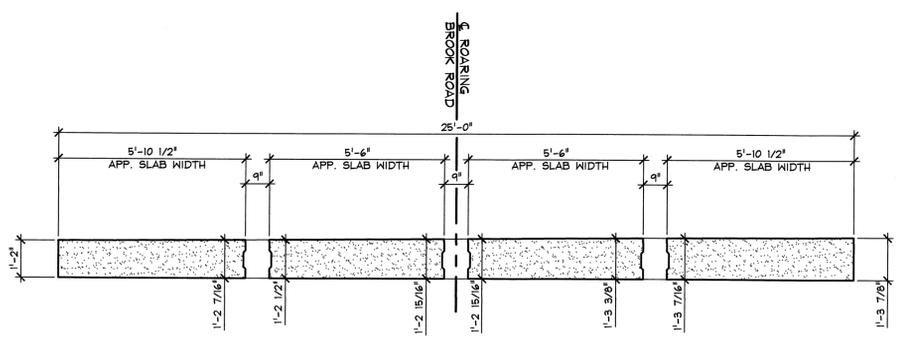
7 SHEAR KEY DETAIL
F4 1 1/2" = 1'-0"



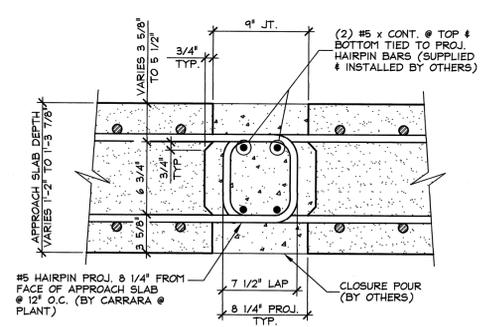
5 SECTION AT APPROACH SLABS
F4 (ABUT. #1 & ABUT. #2) 3/8" = 1'-0"



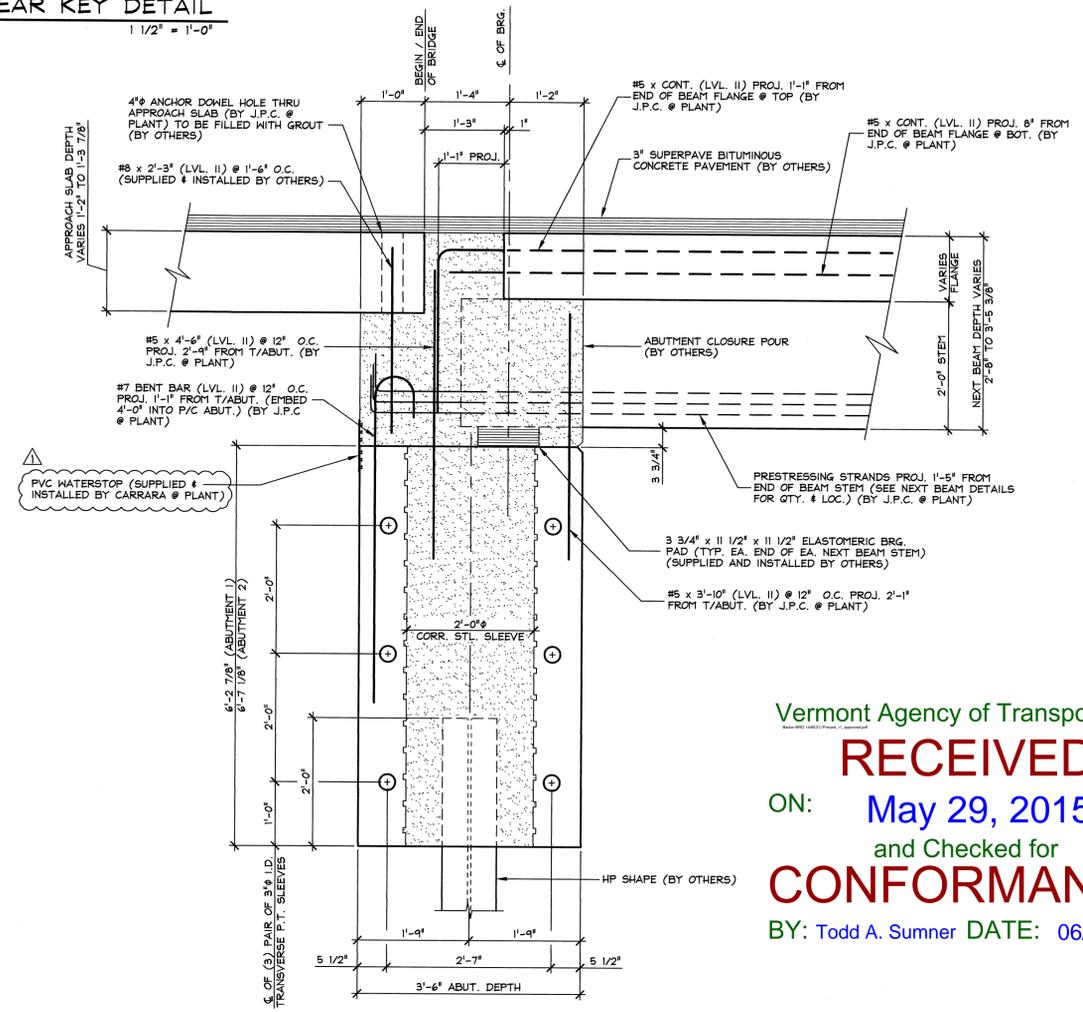
8 SHEAR KEY DETAIL
F4 1 1/2" = 1'-0"



6 SECTION AT APPROACH SLABS
F4 (ABUT. #1 & ABUT. #2) 3/8" = 1'-0"



10 APPROACH SLAB CLOSURE POUR
F4 1 1/2" = 1'-0"



9 ABUTMENT SECTION
F4 3/4" = 1'-0"

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CLD Consulting Engineers
940 Commercial Street
Manchester, NH 03101
603-888-8223

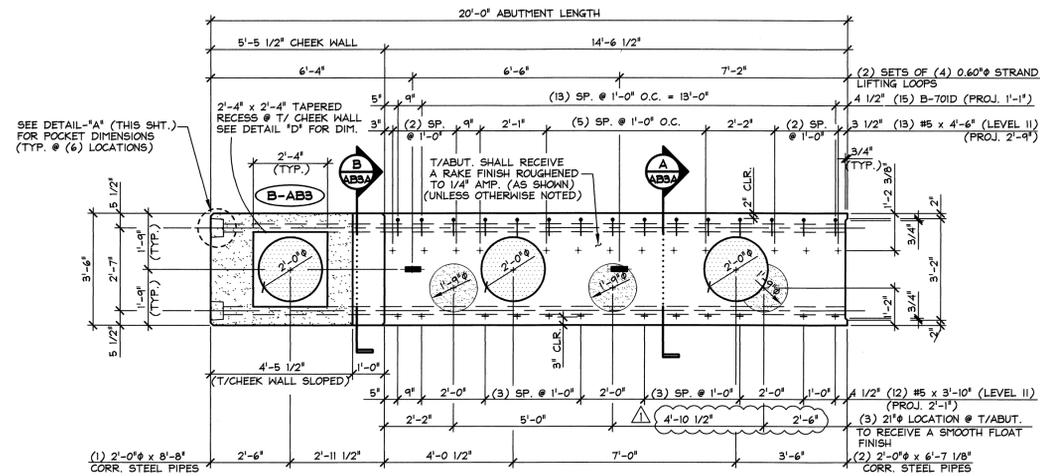
Job Number: 120174
Reviewed by: SRB
Date: 06/01/2015

Vermont Agency of Transportation
RECEIVED
ON: **May 29, 2015**
and Checked for
CONFORMANCE
BY: **Todd A. Sumner** DATE: **06/02/2015**

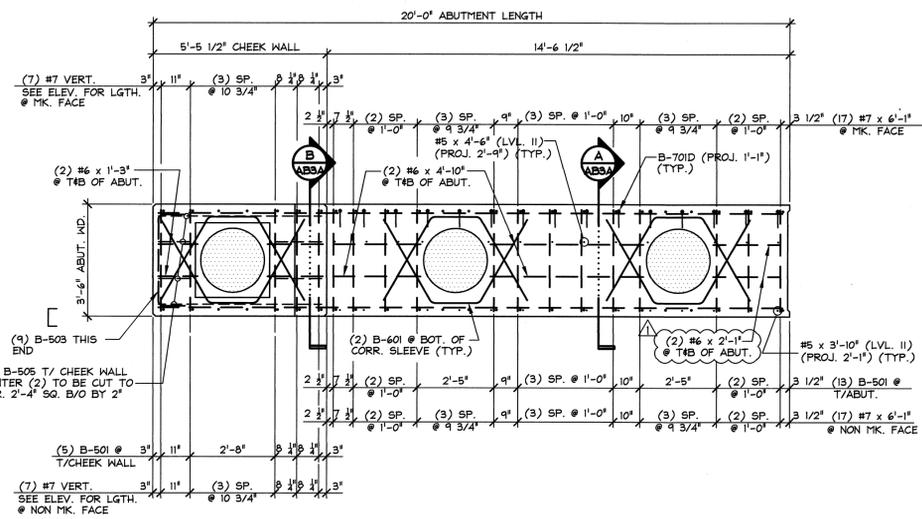
5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-8010		J.P. Sicard CONTRACTOR BARTON, VERMONT
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB. 25, 2015 SCALE: NOTED
	TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)		CHKD: DFTM: T.D. JOB NO: 23462-015
	SECTIONS AND DETAILS		DWG. NO: F4

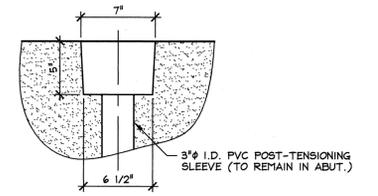
SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753



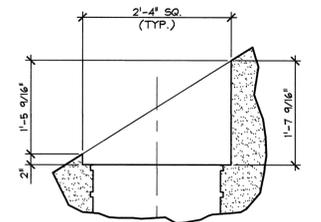
PLAN VIEW IN FORM



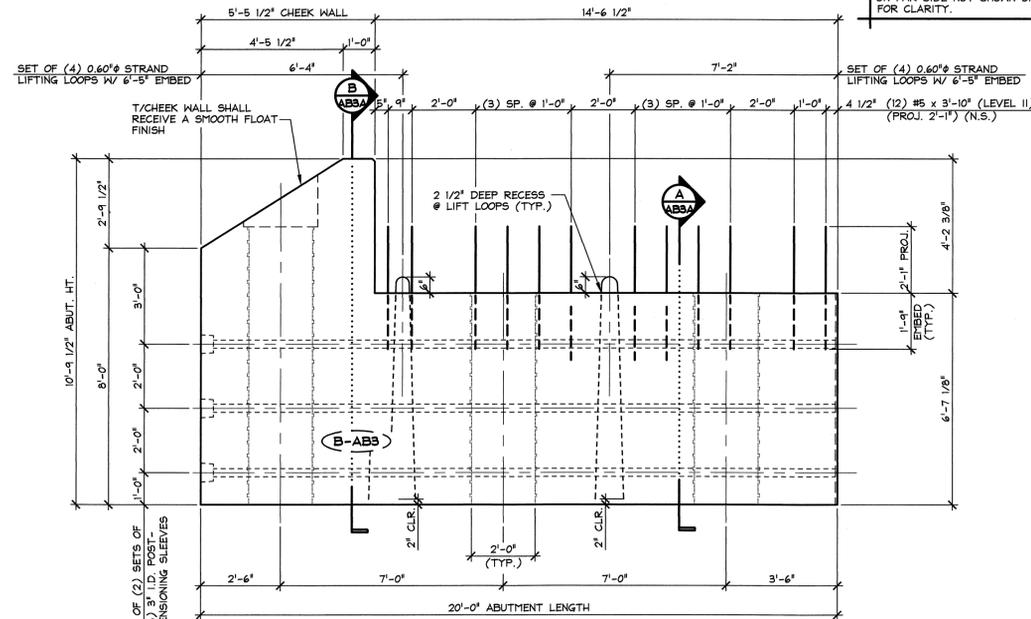
PLAN VIEW IN FORM



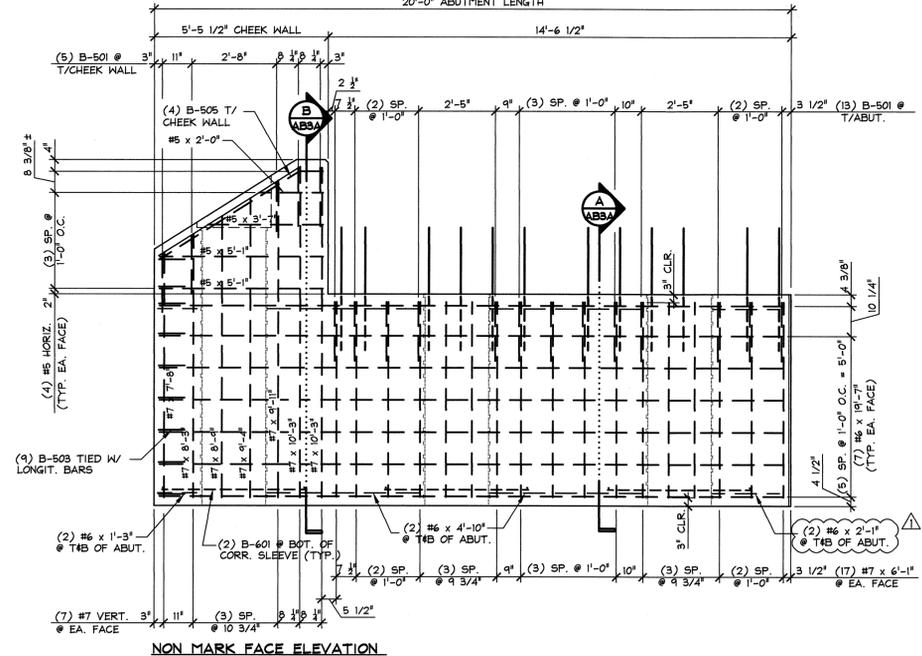
DETAIL - "A"
1/2" x 1'-0"



DETAIL - "D"
3/4" x 1'-0"



NON MARK FACE ELEVATION



NON MARK FACE ELEVATION

1 ABUTMENT DIMENSIONAL DETAILS
AB3 3/8" = 1'-0"

SHOP NOTE:
28 DAYS = 5,000 PSI
RELEASE = 5,000 PSI

MIX DESIGN:
MIX NO. 425M-NO DCI
APPROVED 3-21-2015

2 ABUTMENT REINFORCING DETAILS
AB3 3/8" = 1'-0"

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CLD Consulting Engineers
340 Commercial Street
Manchester, NH 03101
603-688-6225

Job Number: 120174
Reviewed by: SRB
Date: 06/01/2015

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
244 GAGE ST., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23462-015
DWG. NO: AB3

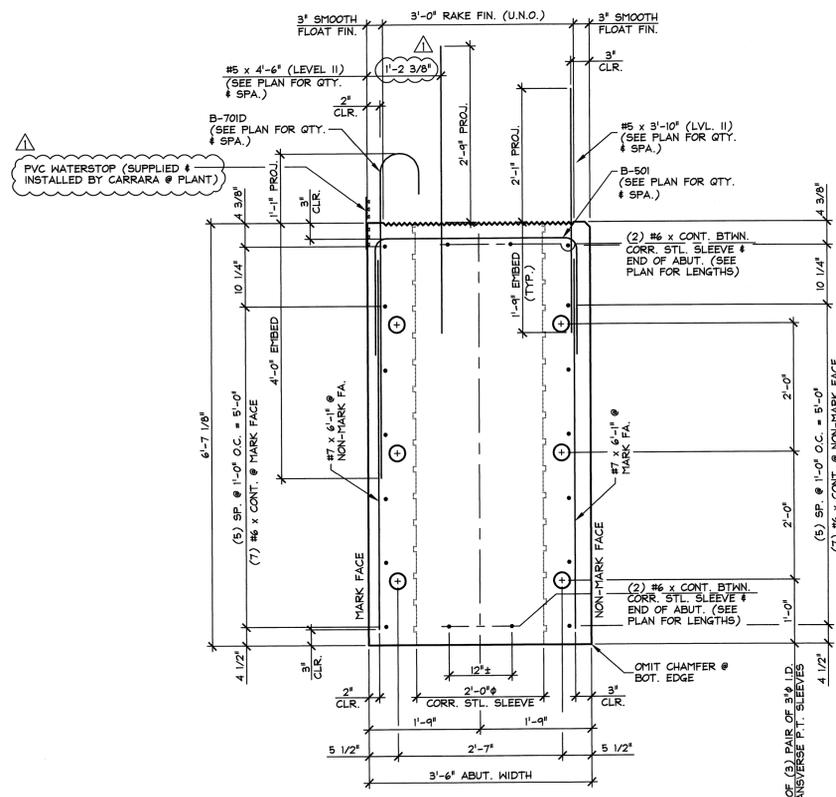
SHOP NOTE:
ALL EDGES OF ABUTMENT SHALL RECEIVE A 1" CHAMFER (U.N.O.)

MARK: B-AB3 QTY.: 1 WT.: 33.63 T VOL.: 16.61 cy

MATERIAL LIST / ABUTMENT			
ITEM	MARK	DESCRIPTION	QTY.
1			
2	B-501	#5 BENT BAR (LEVEL I)	18
3	B-505	#5 BENT BAR (LEVEL I)	4
4	B-503	#5 BENT BAR (LEVEL I)	9
5	B-601	#6 BENT BAR (LEVEL I)	6
6	B-701D	#5 BENT BAR (LEVEL II, DUAL COATED)	15
7		#5 x 3'-10" (LEVEL II, DUAL COATED)	12
8		#5 x 4'-6" (LEVEL II, DUAL COATED)	13
9		#5 x 2'-0" (LEVEL I)	2
10		#5 x 3'-7" (LEVEL I)	2
11		#5 x 5'-1" (LEVEL I)	4
12		#6 x 2'-1" (LEVEL I)	4
13		#6 x 1'-3" (LEVEL I)	4
14		#6 x 4'-10" (LEVEL I)	8
15		#6 x 19'-7" (LEVEL I)	14
16		#7 x 6'-1" (LEVEL I)	34
17		#7 x 7'-8" (LEVEL I)	2
18		#7 x 8'-3" (LEVEL I)	2
19		#7 x 9'-11" (LEVEL I)	2
20		#7 x 10'-3" (LEVEL I)	4
21		#7 x 8'-4" (LEVEL I)	2
22		#7 x 9'-4" (LEVEL I)	2
23		SET OF (4) 0.60" STRAND LIFTING LOOPS	2
24		2'-0" x 6'-7 1/8" CORRUGATED STEEL PIPE (GALV.)	2
25		2'-0" x 8'-8" CORRUGATED STEEL PIPE (GALV.)	1

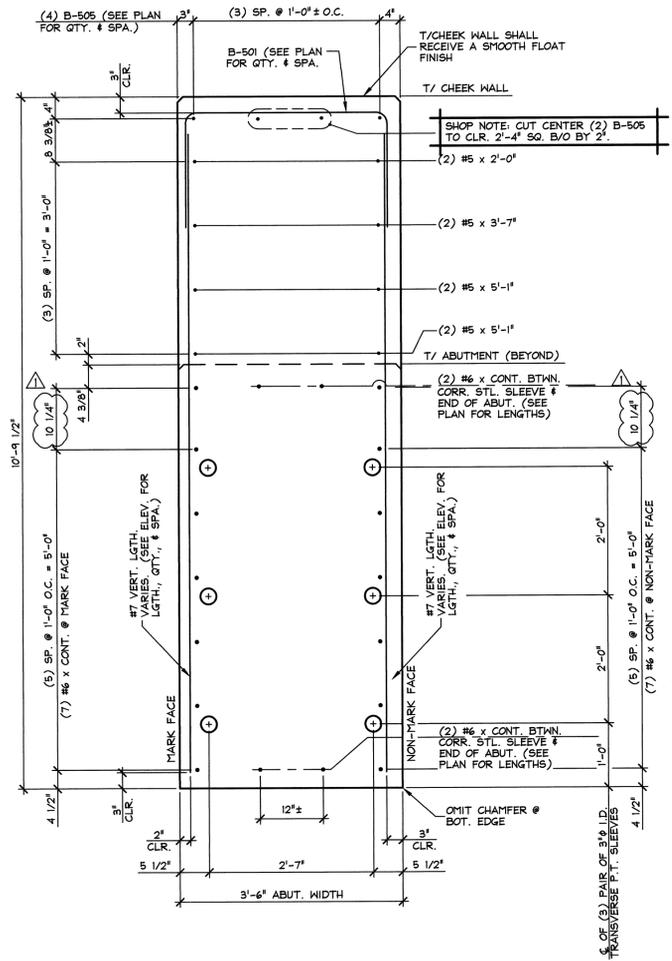
SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

Vermont Agency of Transportation
RECEIVED
ON: May 29, 2015
and Checked for
CONFORMANCE
BY: Todd A. Sumner DATE: 06/02/2015



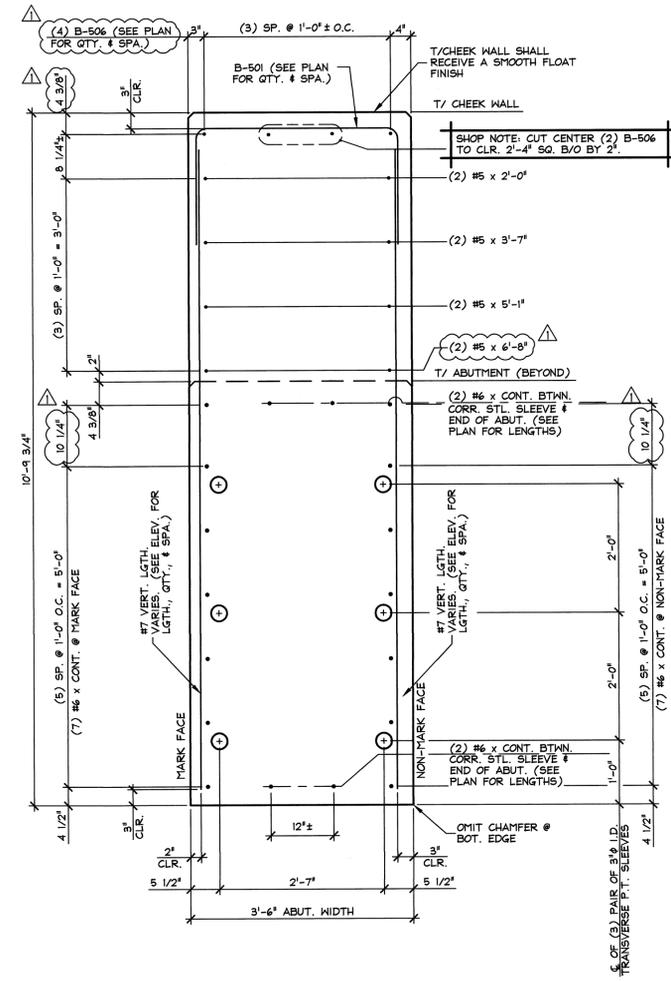
A ABUTMENT SECTION
 AB3A (B-AB3 & B-AB4) 3/4" = 1'-0"

SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL RECEIVE A 1" CHAMFER (U.N.O.)



B ABUTMENT SECTION
 AB3A (B-AB3) 3/4" = 1'-0"

SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL RECEIVE A 1" CHAMFER (U.N.O.)



C ABUTMENT SECTION
 AB3A (B-AB4) 3/4" = 1'-0"

SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL RECEIVE A 1" CHAMFER (U.N.O.)

Vermont Agency of Transportation
RECEIVED
 ON: **May 29, 2015**
 and Checked for
CONFORMANCE
 BY: Todd A. Sumner DATE: 06/02/2015

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

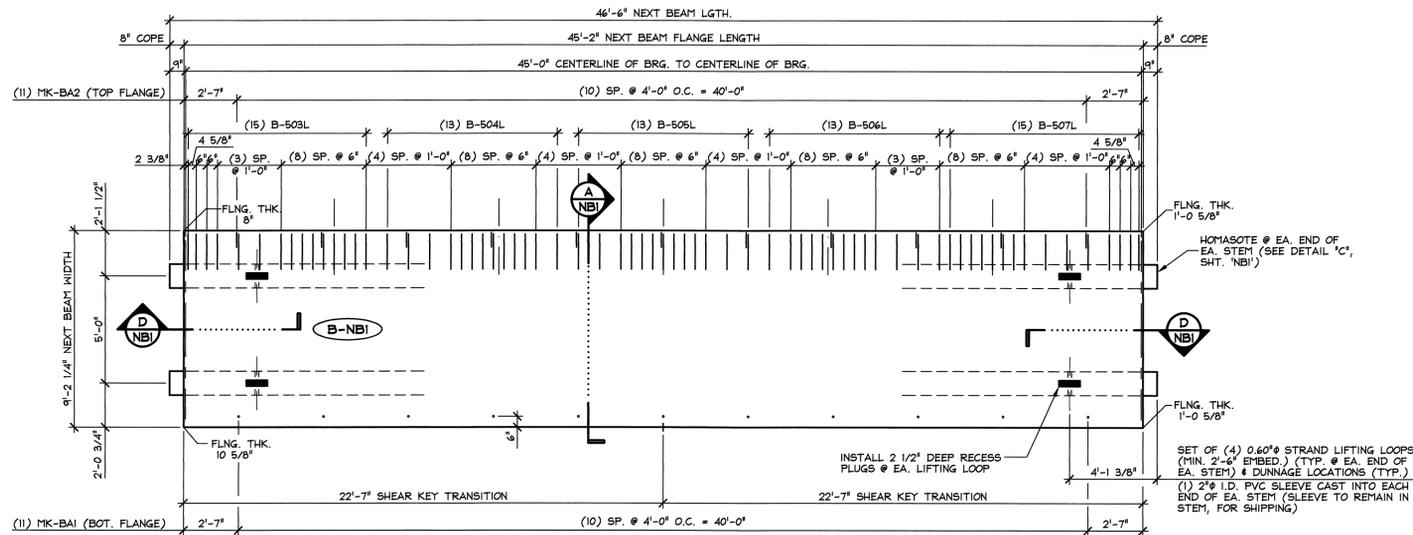
CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

 CLD Consulting Engineers
 240 Commercial Street
 Manchester, NH 03101
 603-468-6225

Job Number: 120174
 Reviewed by: SRB
 Date: 06/01/2015

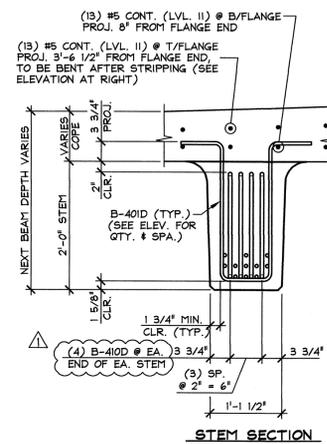
5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 244 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010		DATE: FEB. 25, 2015
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		SCALE: NOTED
	TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)		CHKD: DFTM: T.D. JOB NO: 23462-015
	PRECAST ABUTMENT SECTIONS		DWG. NO: AB3A

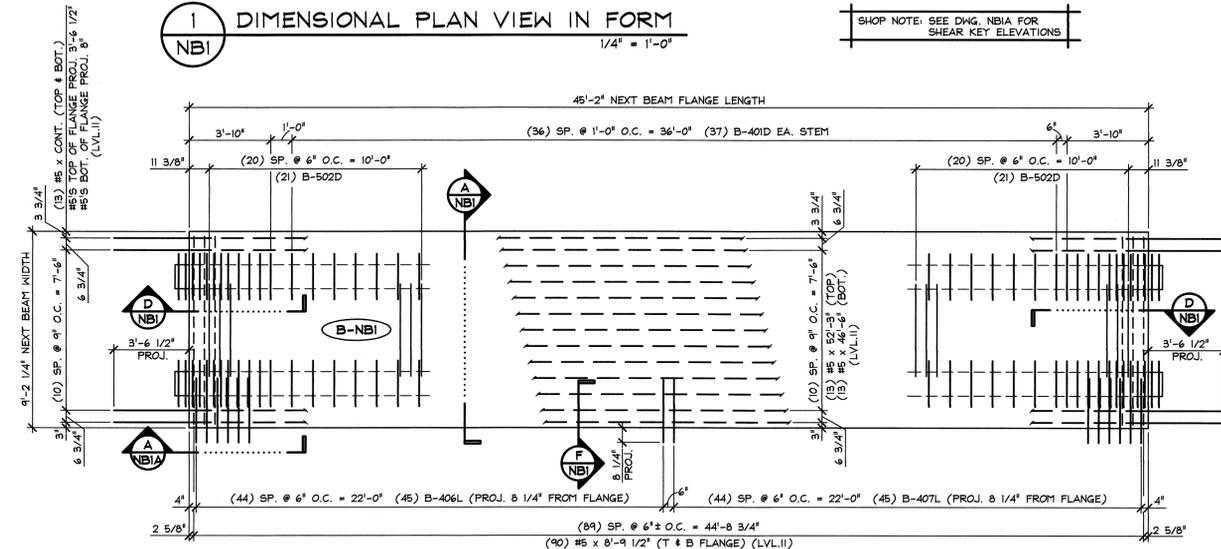
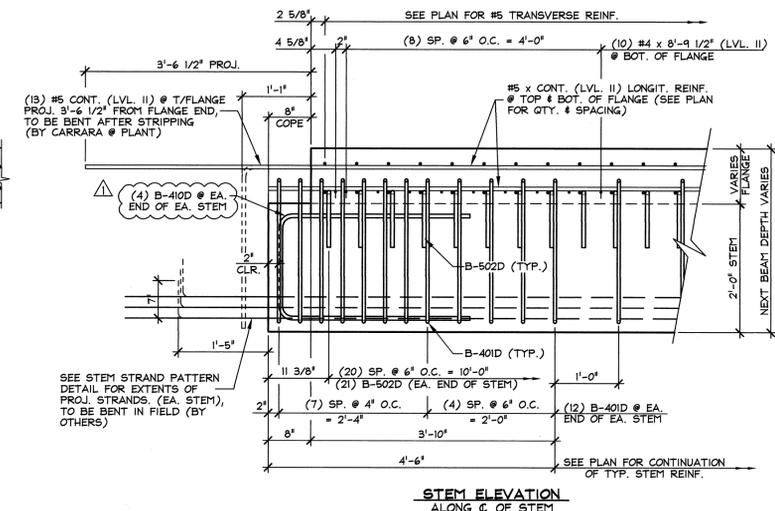


1 DIMENSIONAL PLAN VIEW IN FORM
NBI
1/4" = 1'-0"

SHOP NOTE: SEE DWG. NBIA FOR SHEAR KEY ELEVATIONS

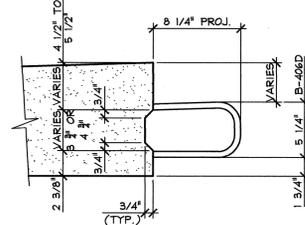


D END BLOCK STEM REINFORCING DETAILS
NBI
3/4" = 1'-0"



2 REINFORCING PLAN VIEW IN FORM
NBI
1/4" = 1'-0"

SHOP NOTE: SEE SHEAR KEY ELEVATION SHT. NBIA FOR FURTHER DIMENSIONS & BENT BAR LAYOUT



F SHEAR KEY DETAIL
NBI
1 1/2" = 1'-0"

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

C2D Consulting Engineers
540 Commercial Street
Manchester, NH 03101
603-888-8223

Job Number: 120174
Reviewed by: SRB
Date: 06/01/2015

Vermont Agency of Transportation
RECEIVED
ON: **May 29, 2015**
and Checked for
CONFORMANCE
BY: **Todd A. Sumner** DATE: **06/02/2015**

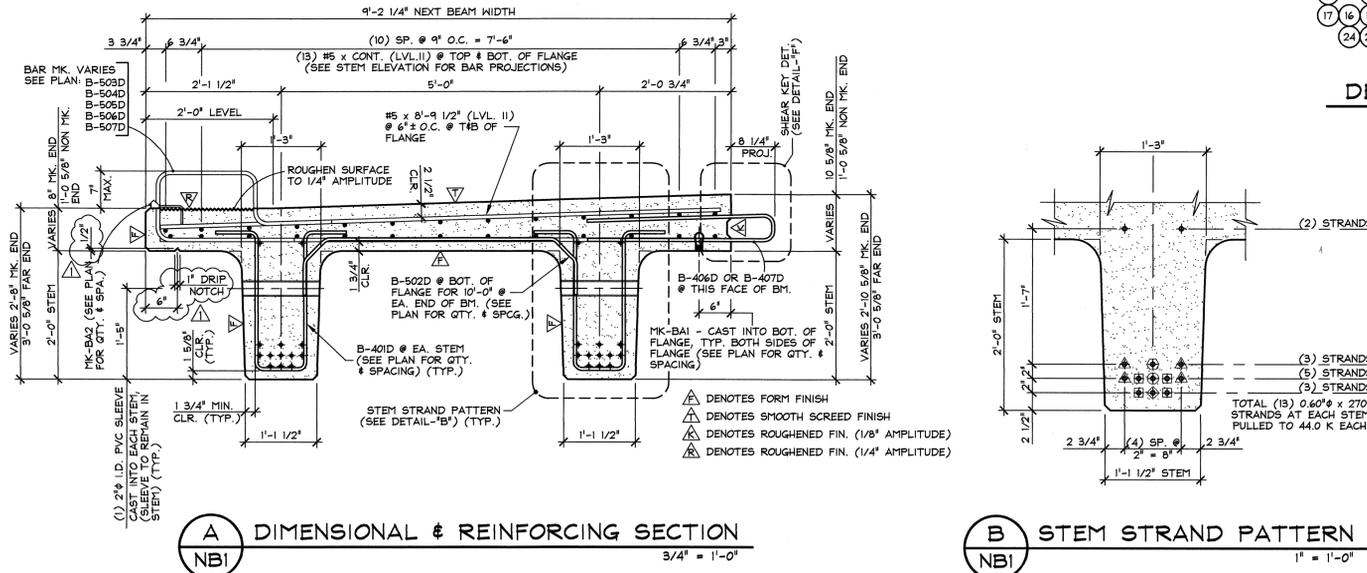
C HOMASOTE DETAIL
NBI
3" = 1'-0"

DETENSIONING SCHEDULE
N.T.S.

1	3	4	2
7	5	8	
17	16	15	18
24	23	22	21
19	13	12	11
20	26	25	20

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
Middlebury, VT 05753

MARK:	B-NBI	QTY.:	1	WT.:	44.87 T	VOL.:	22.15 cy
MATERIAL LIST / NEXT BEAM							
ITEM	MARK	DESCRIPTION	QTY.				
1	MK-BA1	3/4" F42 FERRULE INSERT (GALV.)	11				
2	MK-BA2	DAYTON C-24 TYPE 4-APR DECK FORM HANGER (GALV.)	11				
3							
4	B-40ID	#4 BENT BAR (LEVEL II, DUAL COATED)	122				
5	B-406D	#4 BENT BAR (LEVEL II, DUAL COATED)	45				
6	B-407D	#4 BENT BAR (LEVEL II, DUAL COATED)	45				
7	B-410D	#4 BENT BAR (LEVEL II, DUAL COATED)	16				
8	B-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	42				
9	B-503D	#5 BENT BAR (LEVEL II, DUAL COATED)	15				
10	B-504D	#5 BENT BAR (LEVEL II, DUAL COATED)	13				
11	B-505D	#5 BENT BAR (LEVEL II, DUAL COATED)	13				
12	B-506D	#5 BENT BAR (LEVEL II, DUAL COATED)	13				
13	B-507D	#5 BENT BAR (LEVEL II, DUAL COATED)	15				
14		#4 x 8'-9 1/2" (LEVEL II, DUAL COATED)	20				
15		#5 x 8'-9 1/2" (LEVEL II, DUAL COATED)	180				
16		#5 x 46'-6" (LEVEL II, DUAL COATED)	13				
17		#5 x 52'-3" (LEVEL II, DUAL COATED)	13				
18		SET OF (4) 0.60" STRAND LIFTING LOOPS	4				



A DIMENSIONAL & REINFORCING SECTION
NBI
3/4" = 1'-0"

B STEM STRAND PATTERN
NBI
1" = 1'-0"

- PRESTRESSING NOTATIONS**
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
 - ⊕ DENOTES FULLY BONDED STRAIGHT STRANDS EXTENDED 2'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 8'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES FULLY BONDED STRAIGHT STRANDS TO BE CUT FLUSH W/ EA. END OF EA. STEM

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

J.P. CARRARA & SONS, INC.
Precast & Prestress Manufacturer
2464 CASE STR. MIDDLEBURY, VERMONT 05753 Phone: (802) 388-6361 Fax: (802) 388-9010

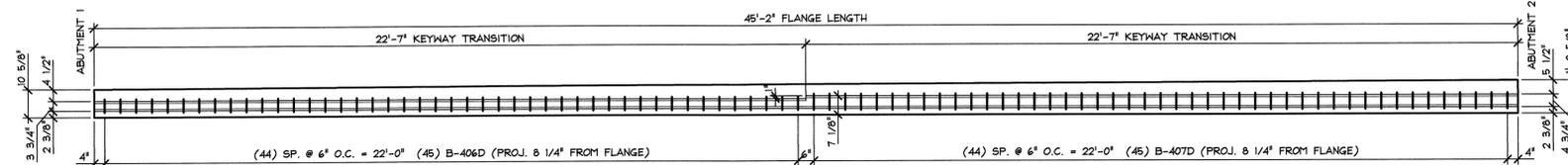
J.P. Sicard
CONTRACTOR
BARTON, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

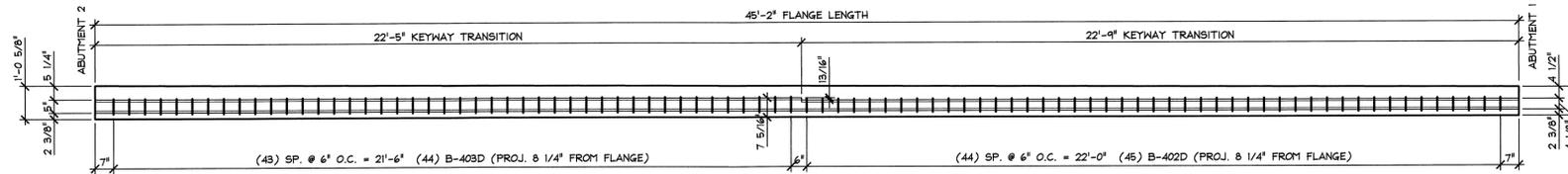
TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23462-015

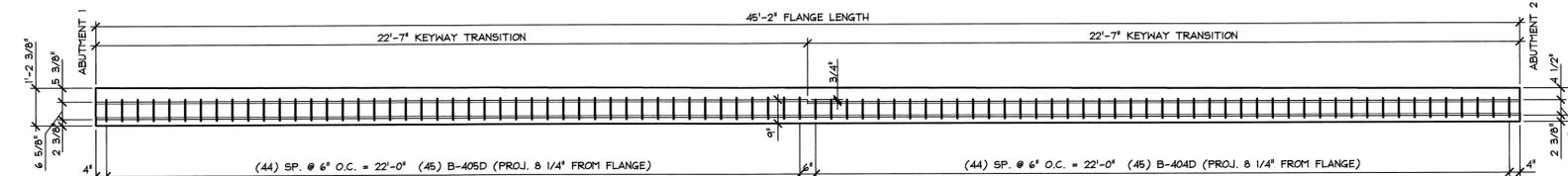
PRESTRESSED NEXT BEAM DETAILS
DWG. NO: **NBI**



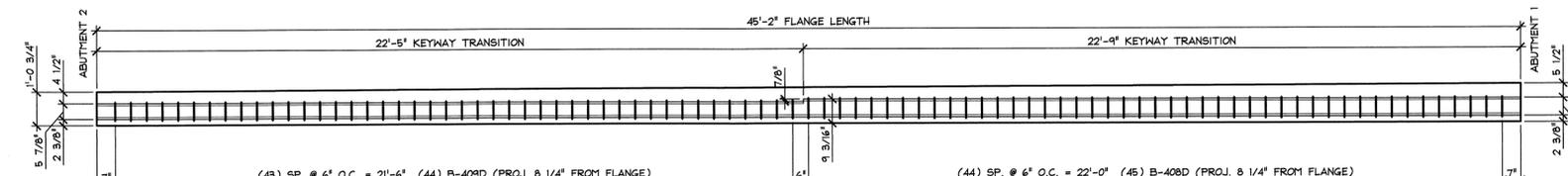
KEY ELEVATION - "A"
3/8" = 1'-0"



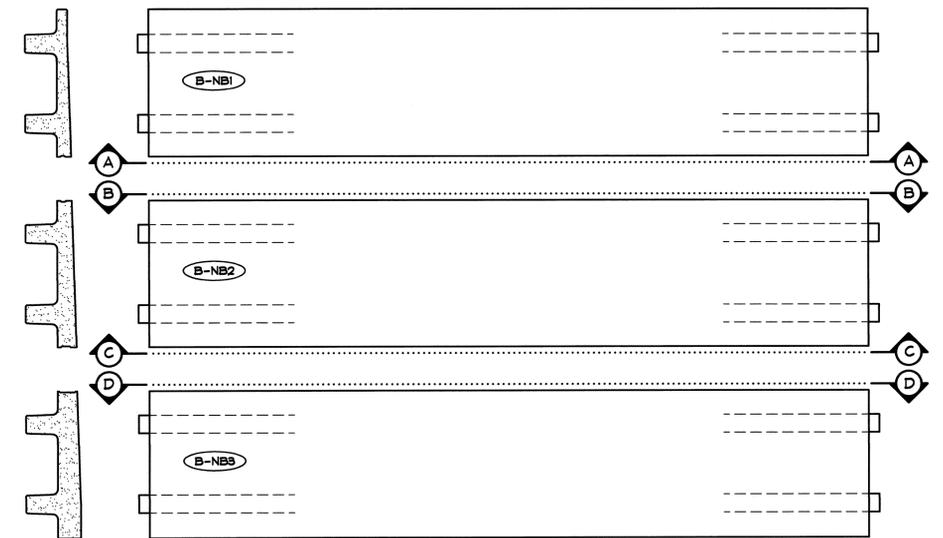
KEY ELEVATION - "B"
3/8" = 1'-0"



KEY ELEVATION - "C"
3/8" = 1'-0"



KEY ELEVATION - "D"
3/8" = 1'-0"



SCHMATIC PLAN VIEW OF NEXT BEAMS
N.T.S.

F:\VT-Bridges\23462-14 Barton\23462-NB1A.dwg, 5/28/2015 1:26:57 PM

Vermont Agency of Transportation
RECEIVED
ON: **May 29, 2015**
and Checked for
CONFORMANCE
BY: **Todd A. Sumner** DATE: **06/02/2015**

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

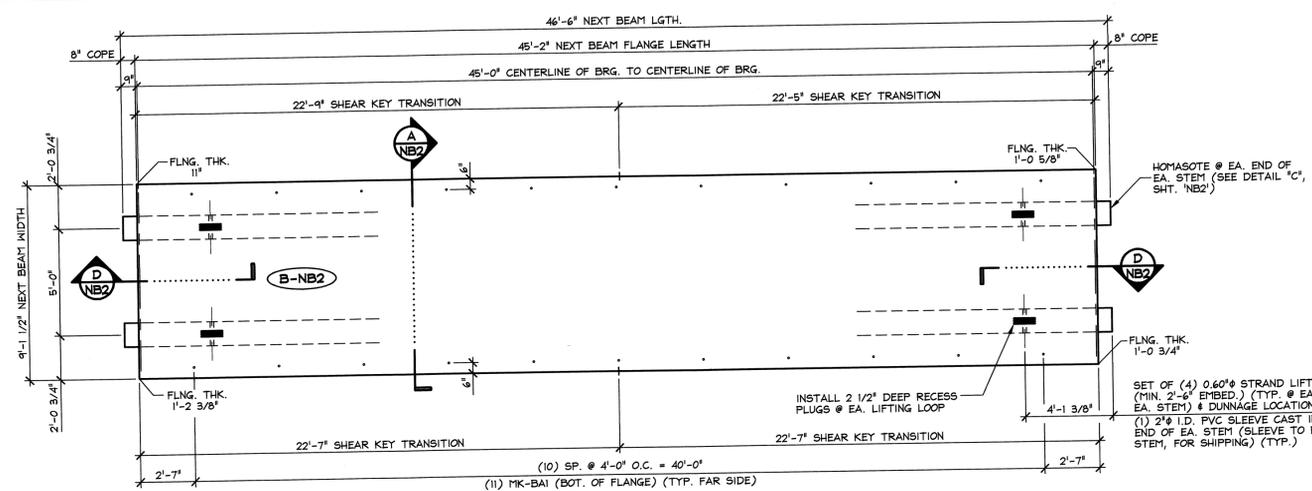
CLD CLD Consulting Engineers
240 Commercial Street
Manchester, NH 03101
603-688-5223

Job Number: **120174**
Reviewed by: **SRB**
Date: **06/01/2015**

APPROVAL STAMP:

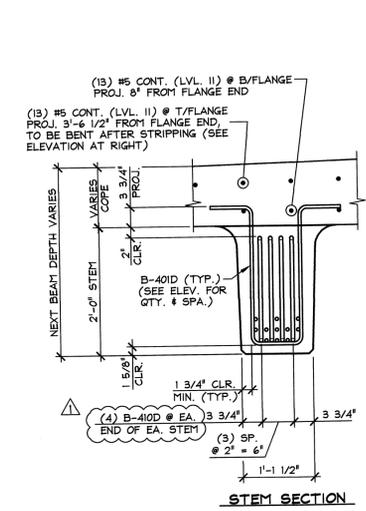
J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 OASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010		J.P. Sicard CONTRACTOR BARTON, VERMONT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ORLEANS		DATE: FEB. 25, 2015	SCALE: NOTED
TOWN OF BARTON ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)		CHKD:	DFTM: T.D.
SHEAR KEY ELEVATIONS		JOB NO: 23462-015	DWG. NO: NB1A

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

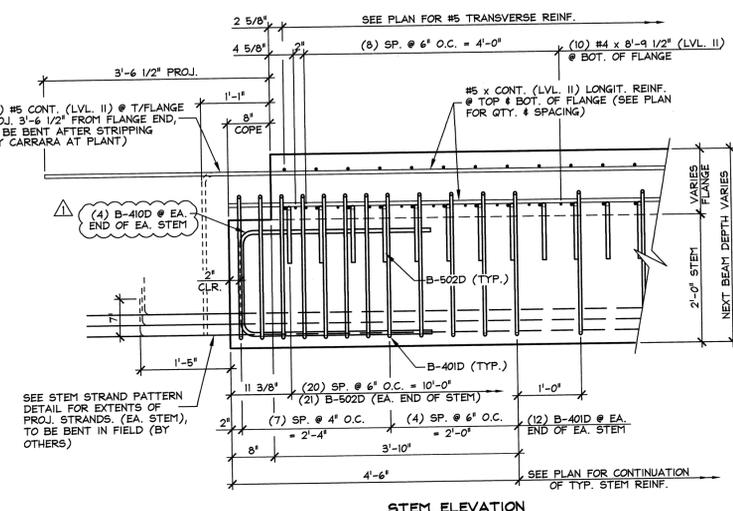


1 DIMENSIONAL PLAN VIEW IN FORM
NB2
1/4" = 1'-0"

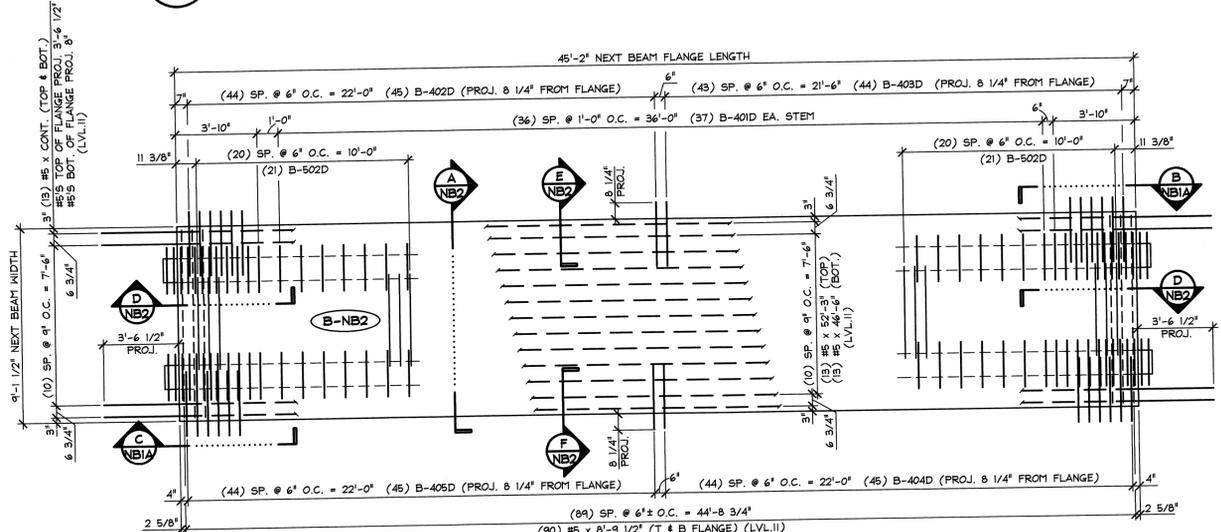
SHOP NOTE: SEE DWG. NB1A FOR SHEAR KEY ELEVATIONS



D END BLOCK STEM REINFORCING DETAILS
NB2
3/4" = 1'-0"



STEM ELEVATION ALONG C OF STEM



2 REINFORCING PLAN VIEW IN FORM
NB2
1/4" = 1'-0"

SHOP DRAWING REVIEW

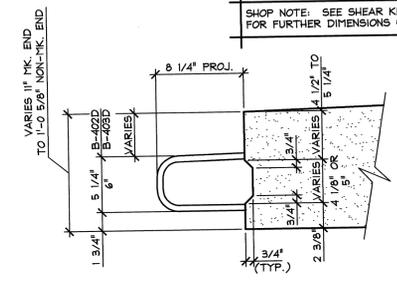
REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

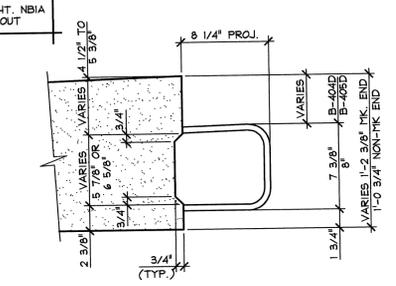
CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CLD Consulting Engineers
540 Commercial Street
Middlebury, VT 05751
802-888-8224

Job Number: 120174
Reviewed by: SRB
Date: 06/01/2015



E SHEAR KEY DETAIL
NB2
1 1/2" = 1'-0"

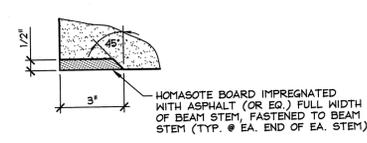


F SHEAR KEY DETAIL
NB2
1 1/2" = 1'-0"

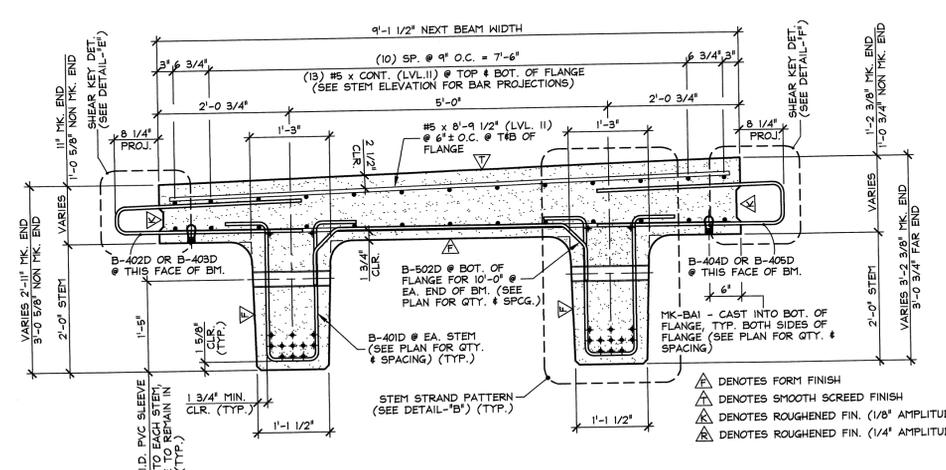
1 3 4 2

7 5 8
16 15 14 18
24 25 23

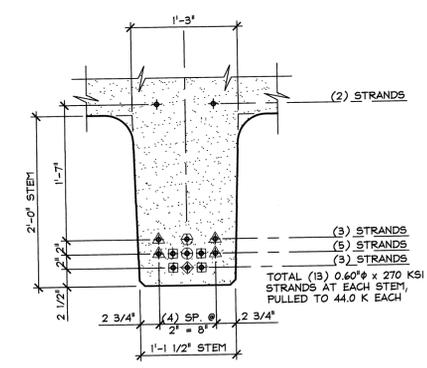
DETENSIONING SCHEDULE
N.T.S.



C HOMASOTE DETAIL
NB2
3" = 1'-0"



A DIMENSIONAL & REINFORCING SECTION
NB2
3/4" = 1'-0"



B STEM STRAND PATTERN
NB2
1" = 1'-0"

- PRESTRESSING NOTATIONS**
- ▲ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
 - DENOTES FULLY BONDED STRAIGHT STRANDS EXTENDED 2'-0" FROM EA. END OF EA. STEM
 - ◆ DENOTES STRAIGHT STRANDS TO BE DEBONDED 8'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM
 - ⊖ DENOTES STRAIGHT STRANDS TO BE DEBONDED 2'-0" FROM EA. END OF EA. STEM
 - ⬤ DENOTES FULLY BONDED STRAIGHT STRANDS TO BE CUT FLUSH W/ EA. END OF EA. STEM
- (3) STRANDS
(5) STRANDS
(3) STRANDS
- TOTAL (15) 0.60" x 270 KSI STRANDS AT EACH STEM, PULLED TO 44.0 K EACH

Vermont Agency of Transportation
RECEIVED
ON: May 29, 2015
and Checked for CONFORMANCE
BY: Todd A. Sumner DATE: 06/02/2015

MARK: B-NB2 QTY.: 1 WT.: 49.36 T VOL.: 24.38 cy

MATERIAL LIST / NEXT BEAM			
ITEM	MARK	DESCRIPTION	QTY.
1	MK-BA1	3/4" F42 FERRULE INSERT (GALV.)	22
2	B-401D	#4 BENT BAR (LEVEL II, DUAL COATED)	122
3	B-402D	#4 BENT BAR (LEVEL II, DUAL COATED)	45
4	B-403D	#4 BENT BAR (LEVEL II, DUAL COATED)	44
5	B-404D	#4 BENT BAR (LEVEL II, DUAL COATED)	45
6	B-405D	#4 BENT BAR (LEVEL II, DUAL COATED)	45
7	B-400D	#4 BENT BAR (LEVEL II, DUAL COATED)	16
8	B-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	42
9			
10		#4 x 8'-9 1/2" (LEVEL II, DUAL COATED)	20
11		#5 x 8'-9 1/2" (LEVEL II, DUAL COATED)	180
12		#5 x 46'-6" (LEVEL II, DUAL COATED)	13
13		#5 x 52'-3" (LEVEL II, DUAL COATED)	13
14			
15		SET OF (4) 0.60" STRAND LIFTING LOOPS	4

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
244 OASE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-5361 Fax: (802)388-9010

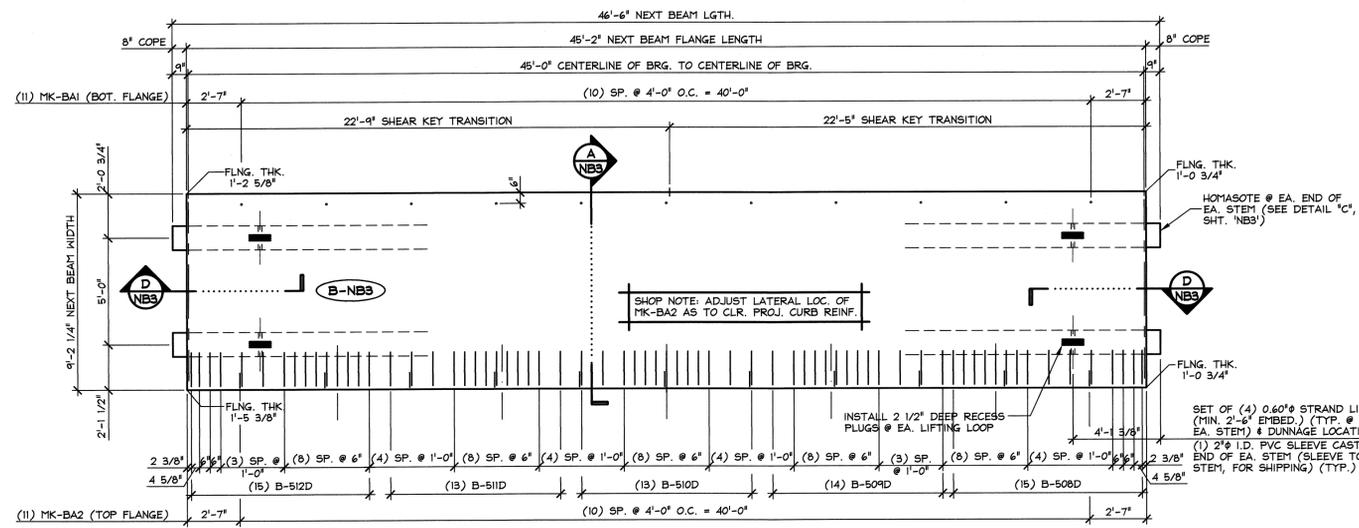
J.P. Sicard
CONTRACTOR
BARTON, VERMONT

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23462-015
DWG. NO: NB2

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

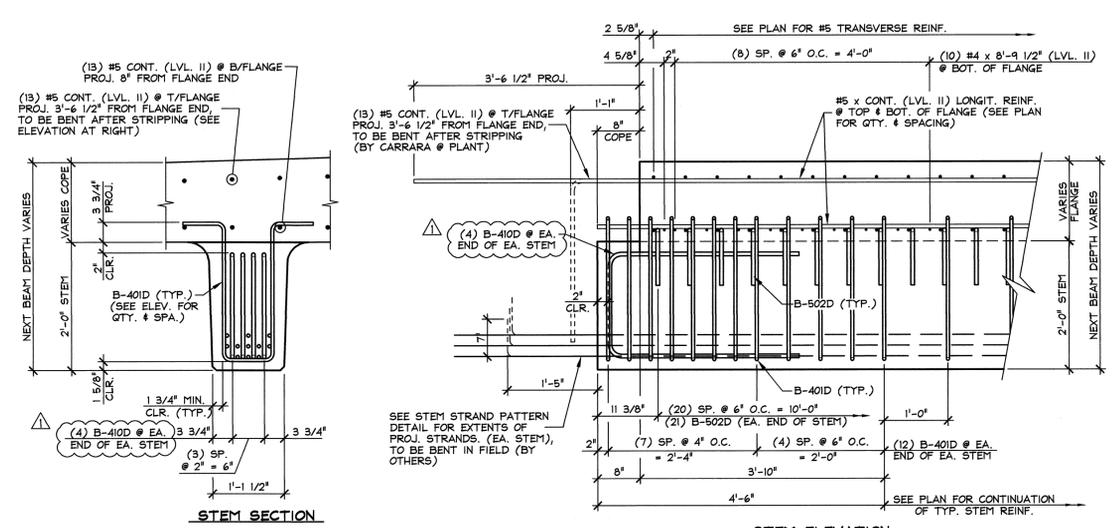
TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

PRESTRESSED NEXT BEAM DETAILS

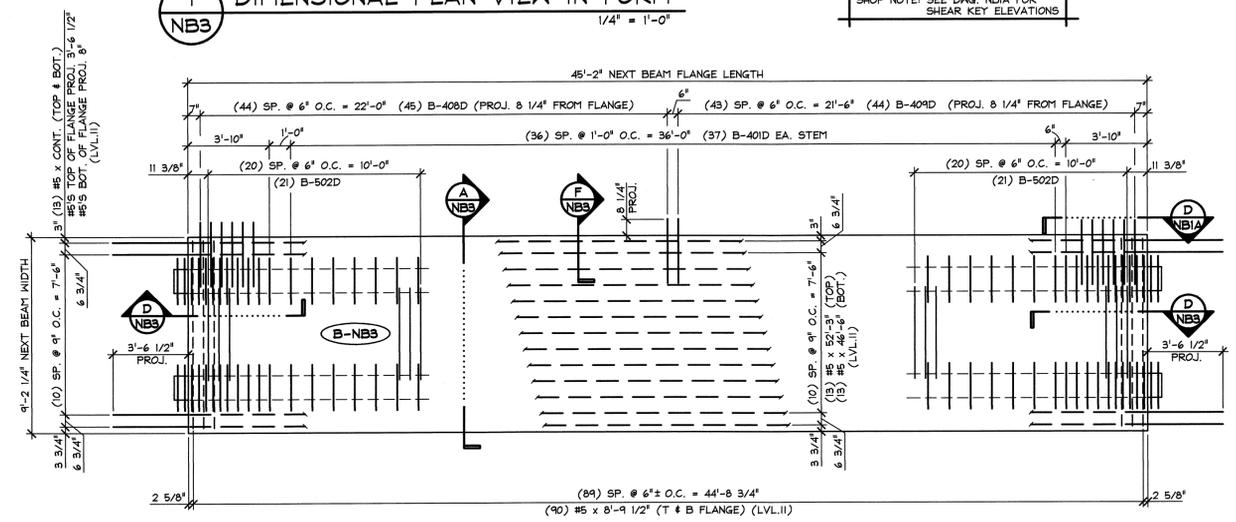


1 DIMENSIONAL PLAN VIEW IN FORM
NBS
1/4" = 1'-0"

SHOP NOTE: SEE DWG. NBIA FOR SHEAR KEY ELEVATIONS



D END BLOCK STEM REINFORCING DETAILS
NBS
3/4" = 1'-0"



2 REINFORCING PLAN VIEW IN FORM
NBS
1/4" = 1'-0"

SHOP DRAWING REVIEW

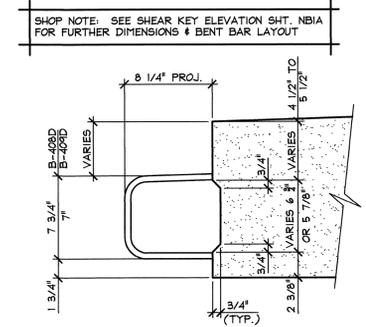
REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADERS, AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CLD Consulting Engineers
580 Commercial Street
Manchester, NH 03101
603-888-6225

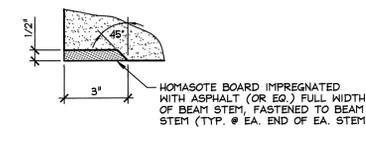
Job Number: 120174
Reviewed by: SRB
Date: 06/01/2015



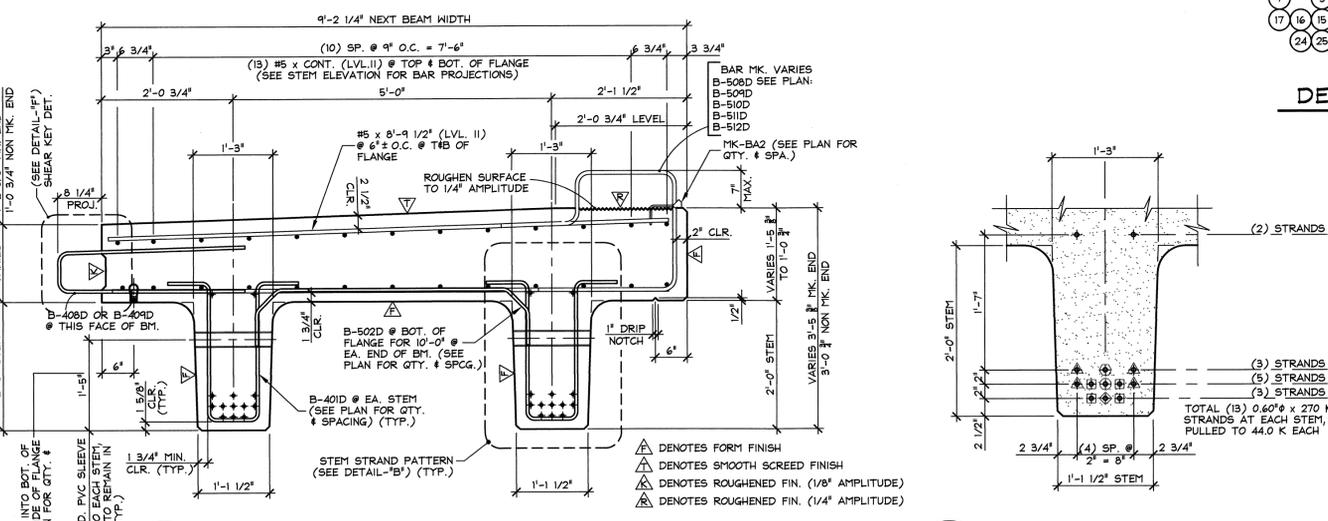
F SHEAR KEY DETAIL
NBS
1 1/2" = 1'-0"

DETENSIONING SCHEDULE
N.T.S.

1	3	4	2
7	5	6	10
17	16	15	14
24	25	23	22
19	18	12	11
22	26	21	



C HOMASOTE DETAIL
NBS
3" = 1'-0"



A DIMENSIONAL & REINFORCING SECTION
NBS
3/4" = 1'-0"

B STEM STRAND PATTERN
NBS
1" = 1'-0"

- PRESTRESSING NOTATIONS**
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
 - ⊕ DENOTES FULLY BONDED STRAIGHT STRANDS EXTENDED 2'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 8'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM
 - ⊕ DENOTES FULLY BONDED STRAIGHT STRANDS TO BE CUT FLUSH W/ EA. END OF EA. STEM

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
244 GASE ST., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

J.P. Sicard
CONTRACTOR
BARTON, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

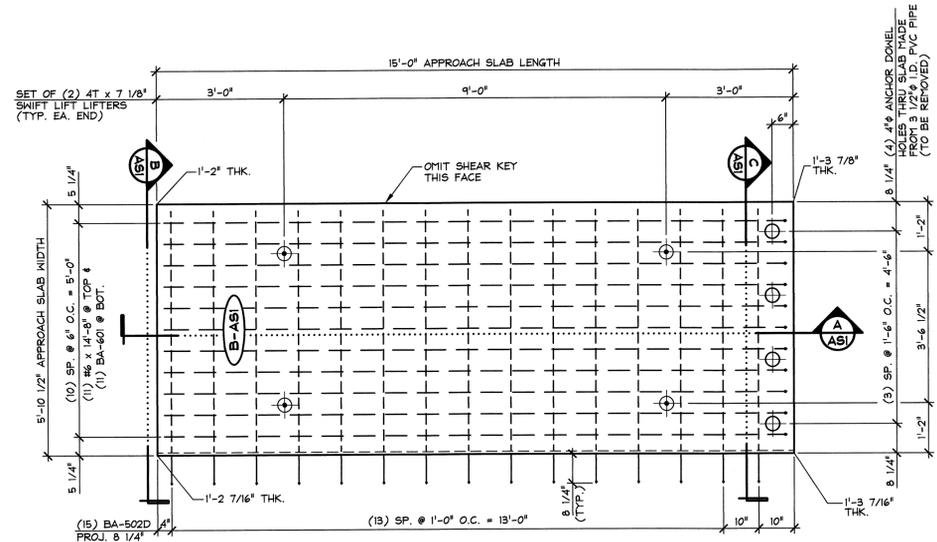
TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 6 PROJECT NO.: BRO 1449(31)

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23462-015
DWG. NO: **NBS**

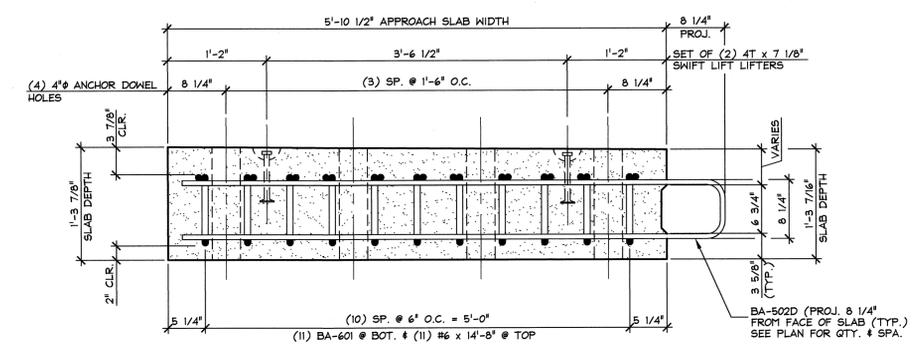
Vermont Agency of Transportation
RECEIVED
ON: **May 29, 2015**
and Checked for
CONFORMANCE
BY: **Todd A. Sumner** DATE: **06/02/2015**

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

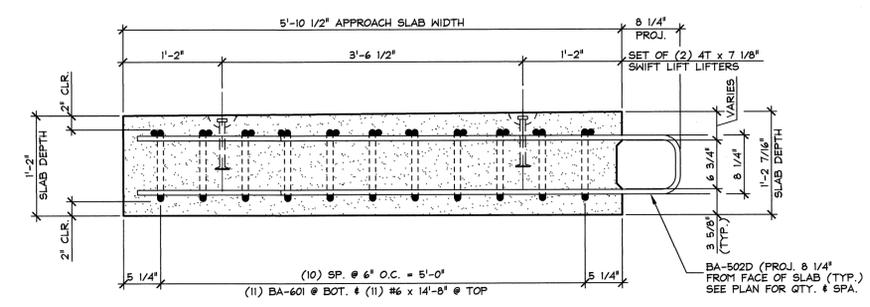
MARK:	B-NBS	QTY.:	1	WT.:	54.39 T	VOL.:	26.86 cy
MATERIAL LIST / NEXT BEAM							
ITEM	MARK	DESCRIPTION	QTY.				
1	MK-BA1	3/4" F42 FERRULE INSERT (GALV.)	11				
2	MK-BA2	DAYTON C-24 TYPE 4-APR DECK FORM HANGER (GALV.)	11				
3							
4	B-401D	#4 BENT BAR (LEVEL II, DUAL COATED)	122				
5	B-408D	#4 BENT BAR (LEVEL II, DUAL COATED)	45				
6	B-409D	#4 BENT BAR (LEVEL II, DUAL COATED)	44				
7	B-410D	#4 BENT BAR (LEVEL II, DUAL COATED)	16				
8	B-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	42				
9	B-508D	#5 BENT BAR (LEVEL II, DUAL COATED)	15				
10	B-509D	#5 BENT BAR (LEVEL II, DUAL COATED)	14				
11	B-510D	#5 BENT BAR (LEVEL II, DUAL COATED)	13				
12	B-511D	#5 BENT BAR (LEVEL II, DUAL COATED)	13				
13	B-512D	#5 BENT BAR (LEVEL II, DUAL COATED)	15				
14		#4 x 8'-9 1/2" (LEVEL II, DUAL COATED)	20				
15		#5 x 8'-9 1/2" (LEVEL II, DUAL COATED)	180				
16		#5 x 46'-6" (LEVEL II, DUAL COATED)	13				
17		#5 x 52'-3" (LEVEL II, DUAL COATED)	13				
18		SET OF (4) 0.60" STRAND LIFTING LOOPS	4				



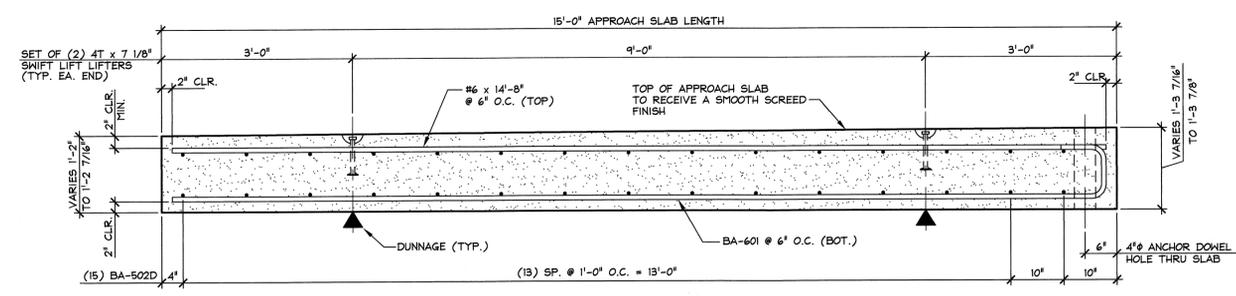
1 PLAN VIEW IN FORM
ASI
1/2" = 1'-0"



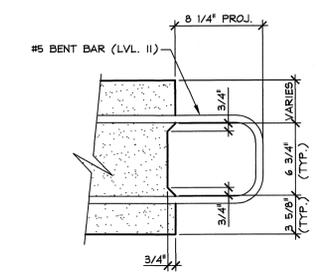
C SECTION
ASI
1" = 1'-0"



B SECTION
ASI
1" = 1'-0"



A LONGITUDINAL SECTION
ASI
3/4" = 1'-0"



SHEAR KEY DETAIL
1 1/2" = 1'-0"

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

MATERIAL LIST / APPROACH SLAB			
ITEM	MARK	DESCRIPTION	QTY.
1			
2	BA-502D	#5 BENT BAR (LEVEL II, DUAL COATED)	15
3	BA-601	#6 BENT BAR (LEVEL I)	11
4			
5			
6		#6 x 14'-8" (LEVEL I)	11
7			
8			
9			
10			
11			
12			
13			
14		DAYTON 4T x 7 1/8" SWIFT LIFT (DOMESTIC)	4
15			

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CLD Consulting Engineers
240 Commercial Street
Manchester, NH 03101
603-888-8223

Job Number: 120174
Reviewed by: SRB
Date: 06/01/2015

Vermont Agency of Transportation
RECEIVED
ON: **May 29, 2015**
and Checked for
CONFORMANCE
BY: **Todd A. Sumner** DATE: **06/02/2015**

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

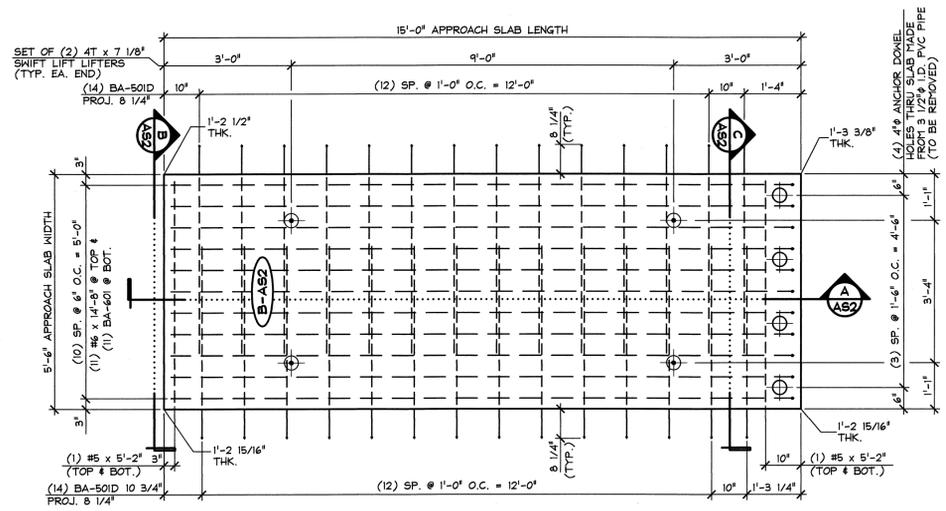
J.P. Sicard
CONTRACTOR
BARTON, VERMONT

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23462-015

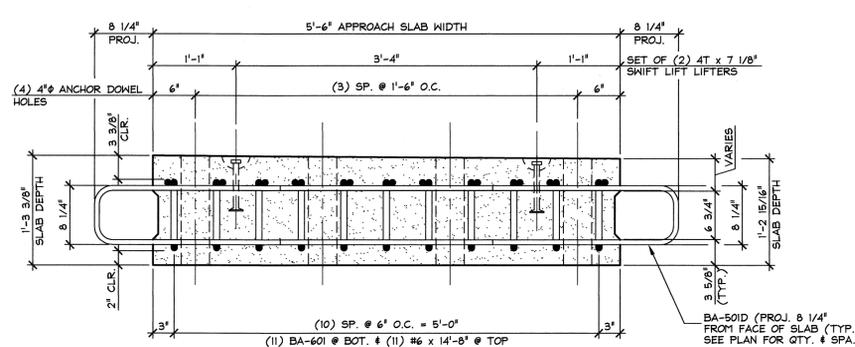
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

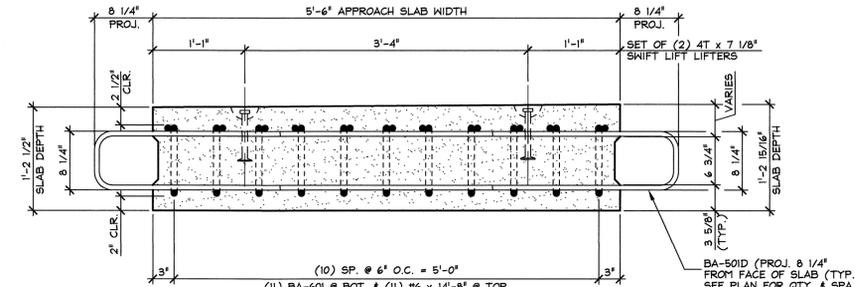
APPROACH SLAB DETAILS
DWG. NO: ASI



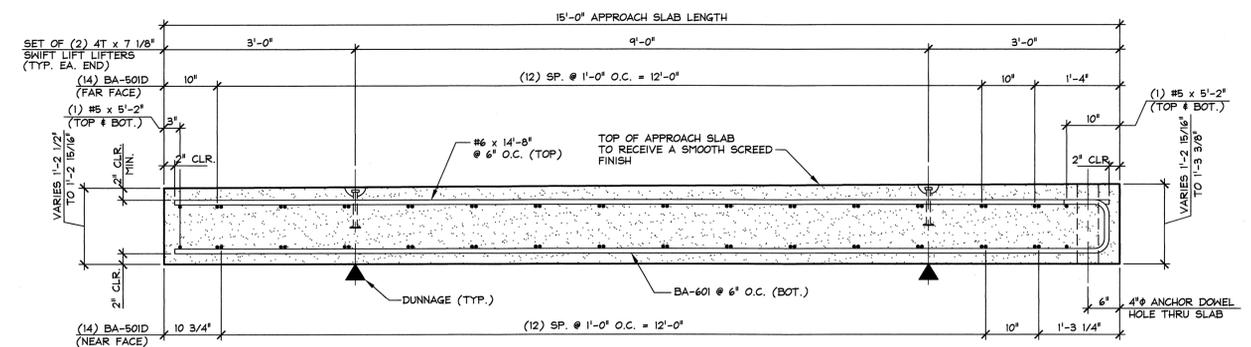
1 PLAN VIEW IN FORM
AS2
1/2" = 1'-0"



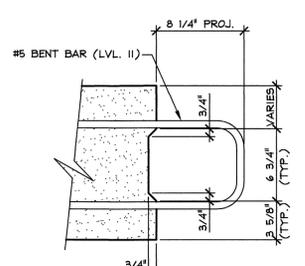
C SECTION
AS2
1" = 1'-0"



B SECTION
AS2
1" = 1'-0"



A LONGITUDINAL SECTION
AS2
3/4" = 1'-0"



SHEAR KEY DETAIL
1 1/2" = 1'-0"

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

MARK: B-AS2	QTY.: 2	WT.: 7.73 T	VOL.: 3.82 cy
MATERIAL LIST / APPROACH SLAB			
ITEM	MARK	DESCRIPTION	QTY.
1			
2	BA-501D	#5 BENT BAR (LEVEL II, DUAL COATED)	28
3	BA-601	#6 BENT BAR (LEVEL I)	11
4			
5			
6		#6 x 14'-8" (LEVEL I)	11
7		#5 x 5'-2" (LEVEL I)	4
8			
9			
10			
11			
12			
13			
14		DAYTON 4T x 7 1/8" SWIFT LIFT (DOMESTIC)	4
15			

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Contractor
244 GALE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

J.P. Sicard
CONTRACTOR
BARTON, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23462-015

APPROACH SLAB DETAILS
DWG. NO: AS2

Vermont Agency of Transportation
RECEIVED
ON: **May 29, 2015**
and Checked for
CONFORMANCE
BY: **Todd A. Sumner** DATE: **06/02/2015**

SHOP DRAWING REVIEW

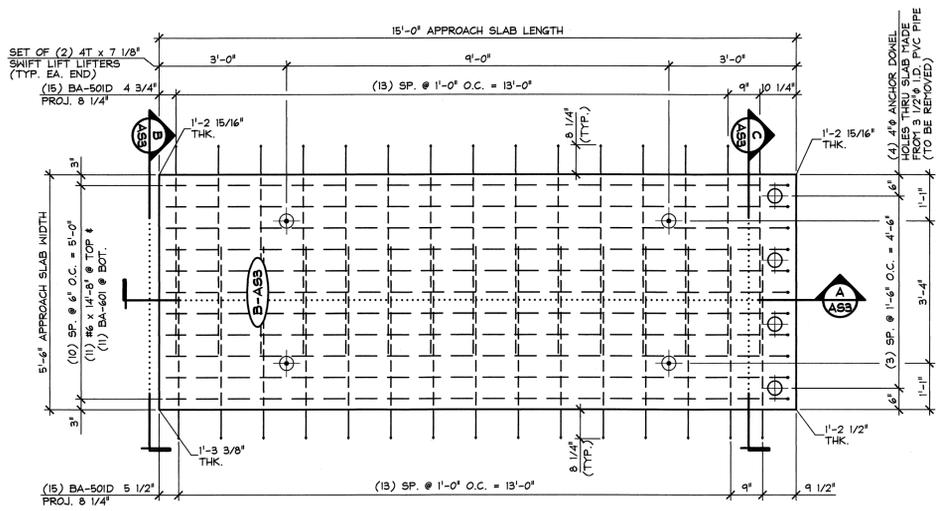
REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

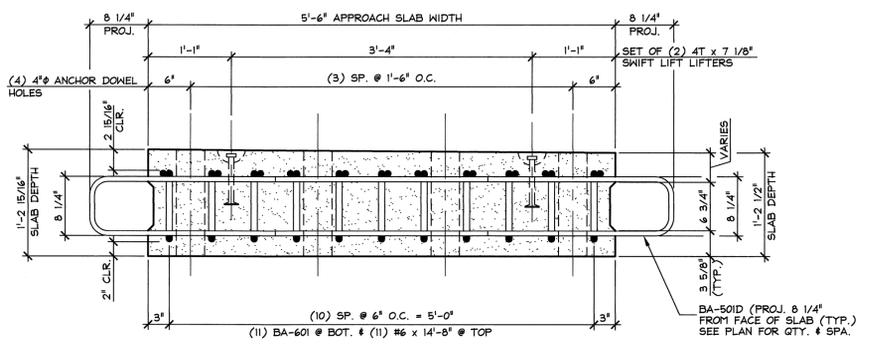
CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CLD Consulting Engineers
540 Commercial Street
Manchester, NH 03101
603-688-9223

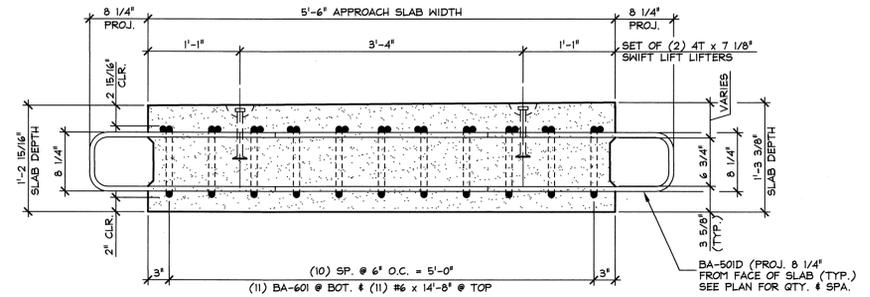
Job Number: 120174
Reviewed by: SRB
Date: 06/01/2015



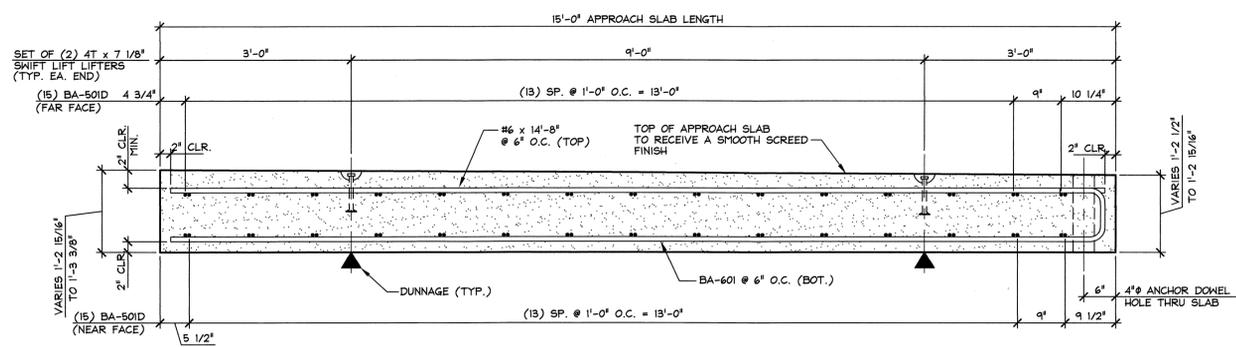
1 PLAN VIEW IN FORM
AS3
1/2" = 1'-0"



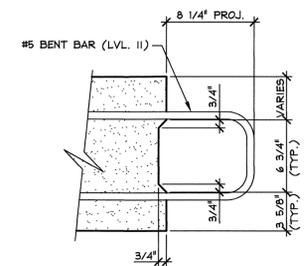
C SECTION
AS2
1" = 1'-0"



B SECTION
AS2
1" = 1'-0"



A LONGITUDINAL SECTION
AS3
3/4" = 1'-0"



SHEAR KEY DETAIL
1 1/2" = 1'-0"

SUBMITTED
5-29-15
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

MARK: B-AS3	QTY.: 2	WT.: 7.73 T	VOL.: 3.82 cy
MATERIAL LIST / APPROACH SLAB			
ITEM	MARK	DESCRIPTION	QTY.
1			
2	BA-501D	#5 BENT BAR (LEVEL II, DUAL COATED)	30
3	BA-601	#6 BENT BAR (LEVEL I)	11
4			
5			
6		#6 x 14'-8" (LEVEL I)	11
7			
8			
9			
10			
11			
12			
13			
14		DAYTON 4T x 7 1/8" SWIFT LIFT (DOMESTIC)	4
15			

Vermont Agency of Transportation
RECEIVED
ON: **May 29, 2015**
and Checked for
CONFORMANCE
BY: **Todd A. Sumner** DATE: **06/02/2015**

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CLD Consulting Engineers
540 Commercial Street
Manchester, NH 03101
603-688-8223

Job Number: 120174
Reviewed by: SRB
Date: 06/01/2015

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

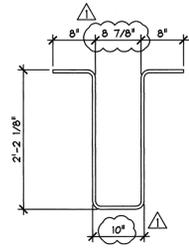
J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2444 OSE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

J.P. Sicard
CONTRACTOR
BARTON, VERMONT

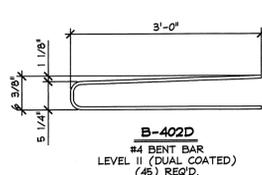
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

TOWN OF BARTON
ROARING BROOK RD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

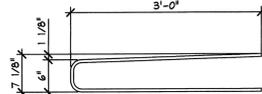
DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: DFTM: T.D.
JOB NO: 23462-015
DWG. NO: **AS3**



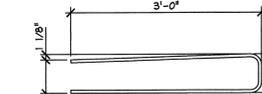
B-401D
#4 BENT BAR
LEVEL II (DUAL COATED)
(366) REQ'D.



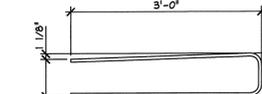
B-402D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



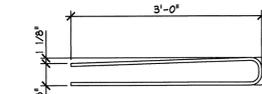
B-403D
#4 BENT BAR
LEVEL II (DUAL COATED)
(44) REQ'D.



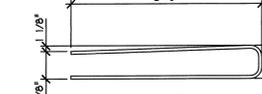
B-404D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



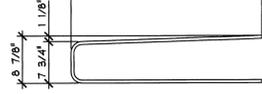
B-405D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



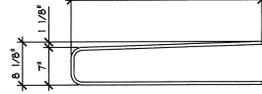
B-406D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



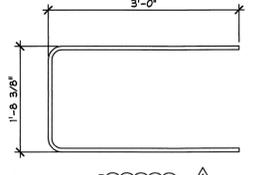
B-407D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



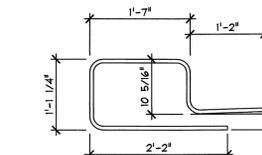
B-408D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



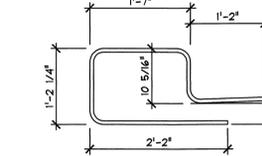
B-409D
#4 BENT BAR
LEVEL II (DUAL COATED)
(44) REQ'D.



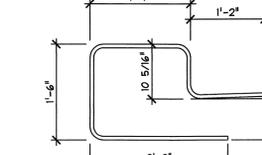
B-410D
#4 BENT BAR
LEVEL II (DUAL COATED)
(46) REQ'D.



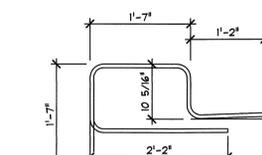
B-503L
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



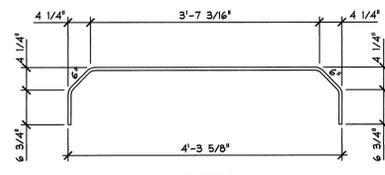
B-504L
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



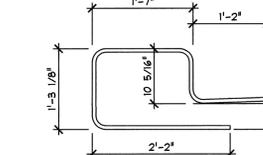
B-505D
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



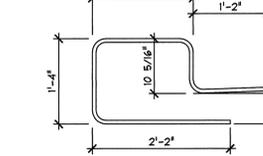
B-509D
#5 BENT BAR
LEVEL II (DUAL COATED)
(14) REQ'D.



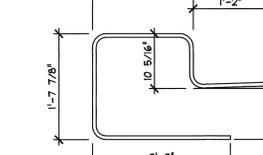
B-502D
#5 BENT BAR
LEVEL II (DUAL COATED)
(126) REQ'D.



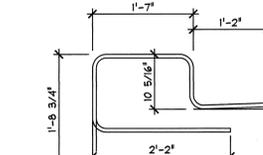
B-505L
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



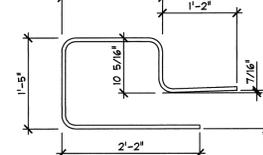
B-506L
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



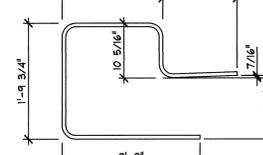
B-510D
#5 BENT BAR
LEVEL II (DUAL COATED)
(13) REQ'D.



B-511D
#5 BENT BAR
LEVEL II (DUAL COATED)
(13) REQ'D.



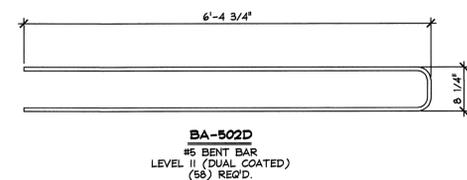
B-507L
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.



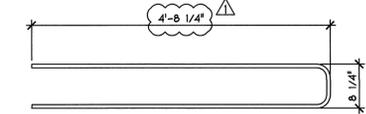
B-512D
#5 BENT BAR
LEVEL II (DUAL COATED)
(15) REQ'D.

MISCELLANEOUS MATERIALS				P/S NEXT BEAMS	
ITEM	MARK	QTY.	DESCRIPTION	REMARKS	
1	B-401D	366	#4 BENT BAR (LEVEL II, DUAL COATED)		
2	B-402D	46	#4 BENT BAR (LEVEL II, DUAL COATED)		
3	B-403D	44	#4 BENT BAR (LEVEL II, DUAL COATED)		
4	B-404D	46	#4 BENT BAR (LEVEL II, DUAL COATED)		
5	B-405D	46	#4 BENT BAR (LEVEL II, DUAL COATED)		
6	B-406D	46	#4 BENT BAR (LEVEL II, DUAL COATED)		
7	B-407D	46	#4 BENT BAR (LEVEL II, DUAL COATED)		
8	B-408D	46	#4 BENT BAR (LEVEL II, DUAL COATED)		
9	B-409D	44	#4 BENT BAR (LEVEL II, DUAL COATED)		
10	B-410D	46	#4 BENT BAR (LEVEL II, DUAL COATED)		
11	B-502D	126	#5 BENT BAR (LEVEL II, DUAL COATED)		
12	B-503D	15	#5 BENT BAR (LEVEL II, DUAL COATED)		
13	B-504D	15	#5 BENT BAR (LEVEL II, DUAL COATED)		
14	B-505D	15	#5 BENT BAR (LEVEL II, DUAL COATED)		
15	B-506D	15	#5 BENT BAR (LEVEL II, DUAL COATED)		
16	B-507D	15	#5 BENT BAR (LEVEL II, DUAL COATED)		
17	B-508D	15	#5 BENT BAR (LEVEL II, DUAL COATED)		
18	B-509D	14	#5 BENT BAR (LEVEL II, DUAL COATED)		
19	B-510D	13	#5 BENT BAR (LEVEL II, DUAL COATED)		
20	B-511D	13	#5 BENT BAR (LEVEL II, DUAL COATED)		
21	B-512D	15	#5 BENT BAR (LEVEL II, DUAL COATED)		
22					
23		61	#4 x 8'-9 1/2" (LEVEL II, DUAL COATED)		(+1 SAMPLE) Δ
24		541	#5 x 8'-9 1/2" (LEVEL II, DUAL COATED)		(+1 SAMPLE) Δ
25		39	#5 x 46'-6" (LEVEL II, DUAL COATED)		
26		39	#5 x 52'-3" (LEVEL II, DUAL COATED)		
27		12	SET OF (4) 0.60" STRAND LIFTING LOOPS		
28	PK-BA1	44	3/4" F42 FERRULE INSERT (GALV.)		
29	PK-BA2	22	DAYTON C-24 TYPE 4-APR DECK FORM HANGER (GALV.)		

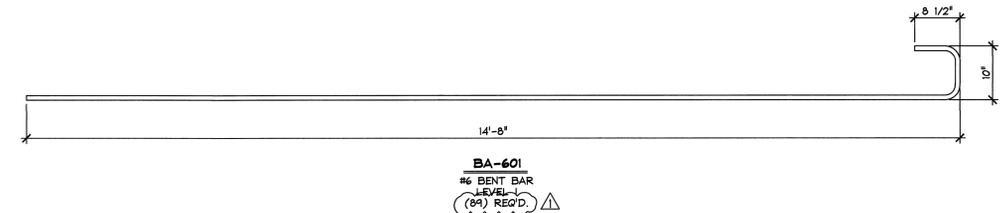
MISCELLANEOUS MATERIALS				P/C APPROACH SLABS	
ITEM	MARK	QTY.	DESCRIPTION	REMARKS	
1	BA-501D	116	#5 BENT BAR (LEVEL II, DUAL COATED)		
2	BA-502D	58	#5 BENT BAR (LEVEL II, DUAL COATED) Δ		
3	BA-601	89	#6 BENT BAR (LEVEL I)		(+1 SAMPLE) Δ
4					
5					
6		88	#6 x 14'-8" (LEVEL I)		
7		8	#5 x 5'-2" (LEVEL I)		
8		8	#5 x 5'-6" (LEVEL I)		
9					
10		32	DAYTON 4T x 7 1/8" SWIFT LIFT (DOMESTIC) Δ		



BA-502D
#5 BENT BAR
LEVEL II (DUAL COATED)
(58) REQ'D.



BA-501D
#5 BENT BAR
LEVEL II (DUAL COATED)
(116) REQ'D.



BA-601
#6 BENT BAR
LEVEL I
(89) REQ'D.

Vermont Agency of Transportation

RECEIVED
ON: **May 29, 2015**
and Checked for
CONFORMANCE
BY: **Todd A. Sumner** DATE: **06/02/2015**

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS; SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES; AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CLD Consulting Engineers
240 Commercial Street
Manchester, NH 03101
603-688-9222

Job Number: 120174
Reviewed by: SRB
Date: 06/01/2015

5/28/2015 REVISED AS NOTED T.D.

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
244 GAGE ST., WOODBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

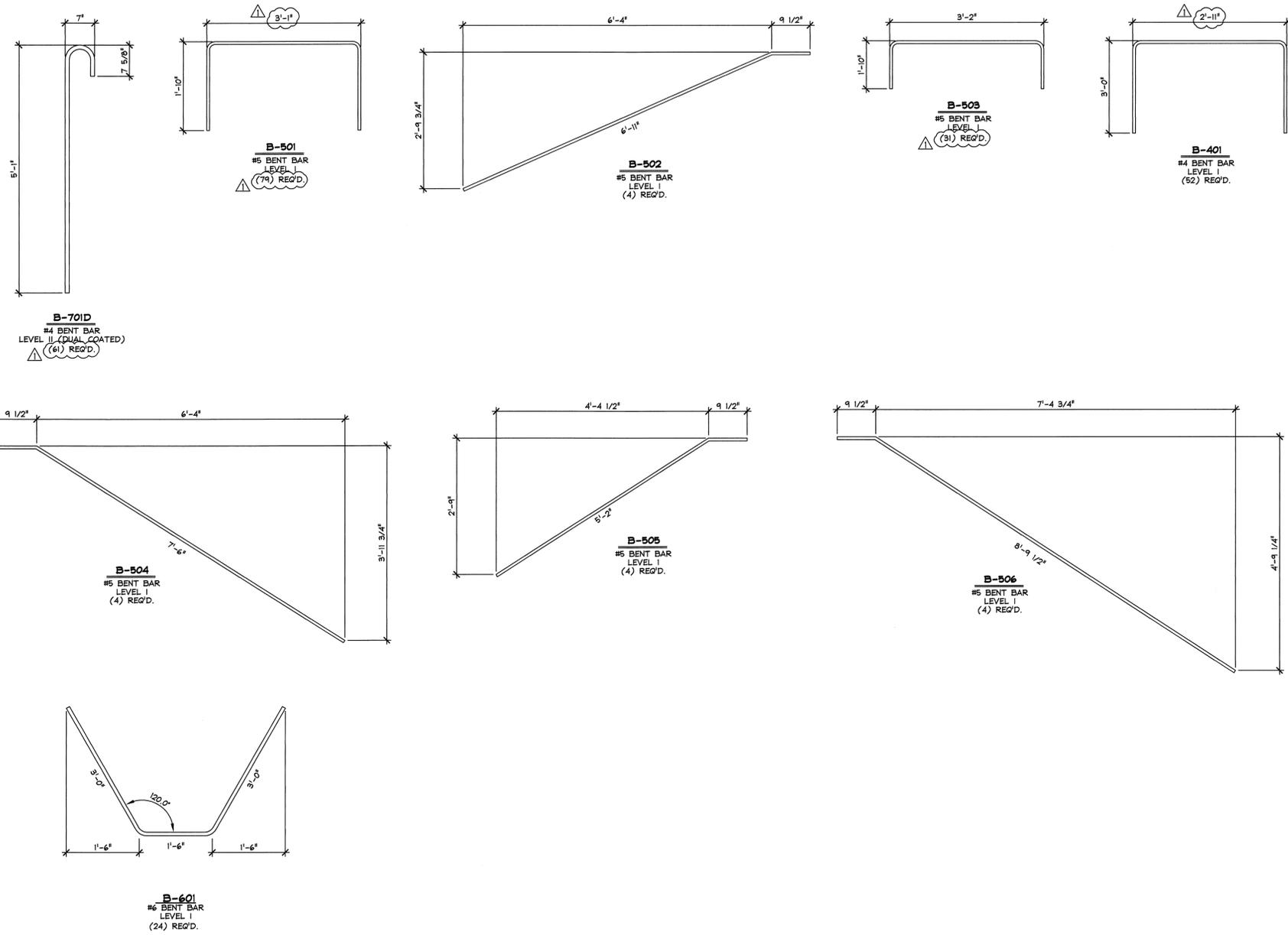
J.P. Sicard
CONTRACTOR
BARTON, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ORLEANS

DATE: FEB. 25, 2015
SCALE: NOTED
CHKD: - DFTM: T.D.
JOB NO: 23462-015
TOWN OF BARTON
ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

NEXT BEAM MATERIAL LIST

DWG. NO: M1



MISCELLANEOUS MATERIALS				
ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1	B-401	52	#4 BENT BAR (LEVEL I)	
2	B-501	79	#5 BENT BAR (LEVEL I)	
3	B-502	4	#5 BENT BAR (LEVEL I)	
4	B-503	3	#5 BENT BAR (LEVEL I)	
5	B-504	4	#5 BENT BAR (LEVEL I)	
6	B-505	4	#5 BENT BAR (LEVEL I)	
7	B-506	4	#5 BENT BAR (LEVEL I)	
8	B-601	24	#6 BENT BAR (LEVEL I)	
9	B-701D	61	#7 BENT BAR (LEVEL II, DUAL COATED)	(+1 SAMPLE) Δ
10				
11		46	#5 x 3'-10" (LEVEL II, DUAL COATED)	
12		52	#5 x 4'-6" (LEVEL II, DUAL COATED)	
13				
14		4	#5 x 2'-0" (LEVEL I)	
15		4	#5 x 3'-7" (LEVEL I)	
16		2	#5 x 3'-3" (LEVEL I)	
17		2	#5 x 3'-0" (LEVEL I)	Δ
18		2	#5 x 4'-7" (LEVEL I)	
19		6	#5 x 5'-1" (LEVEL I)	
20		2	#5 x 5'-6" (LEVEL I)	Δ
21		2	#5 x 6'-2" (LEVEL I)	
22		2	#5 x 6'-8" (LEVEL I)	
23		4	#5 x 7'-1" (LEVEL I)	
24				
25		4	#6 x 1'-3" (LEVEL I)	
26		8	#6 x 2'-1" (LEVEL I)	
27		8	#6 x 2'-2" (LEVEL I)	
28		8	#6 x 3'-3" (LEVEL I)	
29		4	#6 x 4'-3" (LEVEL I)	Δ
30		32	#6 x 4'-10" (LEVEL I)	
31		14	#6 x 19'-7" (LEVEL I)	
32		14	#6 x 21'-7" (LEVEL I)	
33		14	#6 x 21'-8" (LEVEL I)	
34		12	#6 x 22'-7" (LEVEL I)	
35		2	#6 x 21'-11" (LEVEL I)	
36				
37		68	#7 x 5'-9" (LEVEL I)	
38		68	#7 x 6'-1" (LEVEL I)	
39		4	#7 x 5'-8" (LEVEL I)	
40		2	#7 x 6'-3" (LEVEL I)	
41		2	#7 x 7'-8" (LEVEL I)	
42		4	#7 x 7'-7" (LEVEL I)	
43		4	#7 x 6'-11" (LEVEL I)	
44		2	#7 x 6'-4" (LEVEL I)	
45		2	#7 x 7'-6" (LEVEL I)	
46		2	#7 x 8'-2" (LEVEL I)	
47		2	#7 x 8'-3" (LEVEL I)	
48		4	#7 x 8'-0" (LEVEL I)	
49		2	#7 x 8'-6" (LEVEL I)	
50		2	#7 x 8'-7" (LEVEL I)	
51		4	#7 x 8'-9" (LEVEL I)	
52		2	#7 x 8'-10" (LEVEL I)	
53		2	#7 x 9'-3" (LEVEL I)	
54		2	#7 x 9'-2" (LEVEL I)	
55		4	#7 x 9'-4" (LEVEL I)	
56		4	#7 x 9'-7" (LEVEL I)	
57		2	#7 x 9'-8" (LEVEL I)	
58		4	#7 x 9'-11" (LEVEL I)	
59		4	#7 x 10'-3" (LEVEL I)	
60		8	#7 x 10'-4" (LEVEL I)	
61		2	#7 x 10'-0" (LEVEL I)	
62				
63		4	2'-0" x 6'-2 7/8" CORRUGATED STEEL PIPE (GALV.)	
64		4	2'-0" x 6'-7 1/8" CORRUGATED STEEL PIPE (GALV.)	
65		1	2'-0" x 9'-3 1/2" CORRUGATED STEEL PIPE (GALV.)	
25		1	2'-0" x 7'-11 1/8" CORRUGATED STEEL PIPE (GALV.)	
25		1	2'-0" x 8'-8" CORRUGATED STEEL PIPE (GALV.)	
25		1	2'-0" x 8'-7 1/2" CORRUGATED STEEL PIPE (GALV.)	
25		8	SET OF (4) 0.60" STRAND LIFTING LOOPS	

Vermont Agency of Transportation
RECEIVED
 ON: **May 29, 2015**
 and Checked for
CONFORMANCE
 BY: Todd A. Sumner DATE: 06/02/2015

SHOP DRAWING REVIEW

REVIEWED AS REQUIRED BY THE CONSTRUCTION CONTRACT DOCUMENTS AND APPROVED, BUT ONLY FOR CONFORMANCE TO THE DESIGN CONCEPT OF THE WORK, AND SUBJECT TO FURTHER LIMITATIONS AND REQUIREMENTS CONTAINED IN THE CONSTRUCTION CONTRACT DOCUMENTS.

REJECTED REVISE AND RESUBMIT APPROVED AS NOTED

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DID NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. THIS CHECK IS ONLY FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THEIR WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING THEIR WORK IN A SAFE AND SATISFACTORY MANNER.

CLD Consulting Engineers
 340 Commercial Street
 Manchester, NH 03101
 603-689-8223

Job Number: 120174
 Reviewed by: SRB
 Date: 06/01/2015

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
 Precast & Prestress Manufacturer
 244 GAZE STR., MOULBERRY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

J.P. Sicard
 CONTRACTOR
 BARTON, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
 COUNTY OF ORLEANS

TOWN OF BARTON
 ROARING BROOK ROAD TH #2, RURAL MINOR COLLECTOR
 BRIDGE NO.: 8 PROJECT NO.: BRO 1449(31)

PRECAST ABUTMENT MATERIAL LIST

DATE: FEB. 25, 2015
 SCALE: NOTED
 CHKD: - DFTM: T.D.
 JOB NO: 23462-015
 DWG. NO: **M2**

Δ 5/28/2015 REVISED AS NOTED T.D.