JOSEPH P. CARRARA & SONS, INC.

LETTER OF TRANSMITTAL

2464 CASE STREET
MIDDLEBURY, VERMONT 05753

TEL (802) 388-6363
FAX (802) 388-9010

DATE :	JOB NO. :
May 9, 2014	**23419-013**
ATTENTION : **Mr. Kevin Ture** *KTure@wmschultz.com*	
RE : **Vermont Route 73**	
Rochester, Vermont	
Rochester BRF 0162 (16) Bridge No. 15	
Rochester BRF 0162 (17) Bridge No. 16	
Transmittal #3	**Precast Concrete**

TO: **W.M. Schultz Construction, Inc.**
831 Route 67 PO Box 2620
Ballston Spa, New York 12020

518-885-0060

WE ARE SENDING YOU [x] Attached [ ] Under separate cover via **Email** the following items:

[x] Shop Drawings [ ] Prints [ ] Plans [ ] Samples [ ] Specifications

[ ] Copy of Letter [ ] Change Order [ ] Other:

COPIES	DATE	NO.	DESCRIPTION
1	**as noted**	**as noted**	**J. P. Carrara & Sons' Precast Framing and Individual Piece Detail Drawings, Bridge No. 15:**
			"For Approval" Drawings: C1, F1 - F5, NB1 - NB11, AB1 - AB5, AS1 - AS3,
			WW1, WW2, & M1 - M3
1	**as noted**	**as noted**	**J. P. Carrara & Sons' Precast Framing and Individual Piece Detail Drawings, Bridge No. 16:**
			"For Approval" Drawings: C1, F1 - F5, NB1 - NB6, AB1 - AB5, AS1 - AS3,
			WW1, WW2, M1, & M2

THESE ARE TRANSMITTED as checked below :

[x] For approval [ ] Approved as submitted [ ] Resubmit ____ copies for approval

[ ] For your use [ ] Approved as noted [ ] Submit ____ copies for distribution

[ ] As requested [ ] Returned for corrections [ ] Return ____ corrected prints

[ ] For review and comment [ ] ____

[ ] FOR BIDS DUE ____ 20 ____ [ ] PRINTS RETURNED AFTER LOAN TO US

REMARKS **Kevin,**

Attached please find our precast framing drawings and individual piece details for the precast/prestressed concrete NEXT Beams, abutment walls, pier caps, wingwalls, and approach slabs, which are resubmitted for approval on the project.

Please contact us at 802-388-6363 with any questions.

COPY TO :

SIGNED : Michael Weigand

If enclosures are not as noted, please notify us at once.

NEXT BEAM GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 9,000 PSI.
2. MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 7,000 PSI.
3. REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) AND SHALL ADHERE TO THE REQUIREMENTS OF LEVEL II (DUAL COATED) REINFORCING STEEL IN ACCORDANCE WITH VERMONT SPECIFICATION SECTION 507. 2
4. PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0.60"ø x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
5. 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.)
6. ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF NEXT BEAM STEMS (UNLESS NOTED OTHERWISE) AND EPOXY PAINTED.
7. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
8. THE TOP OF BEAMS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
9. SHEAR KEY SURFACES SHALL BE SAND BLASTED CLEAN. 1
10. BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 90° (VERTICAL PICK). RIGGING SHALL BE CONFIGURED SUCH THAT THE BEAMS REMAIN PLUMB AND LEVEL AT ALL TIMES. A SPREADER BEAM OR FRAME MAY BE REQUIRED. THE PINS OF THE SHACKLES SHALL BE PLACED THOUGH THE LIFTING LOOPS – SEE DETAIL, THIS SHEET. BEAMS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 3'-0" OF THE BEAM ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC. 1
11. MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. P510.02 AND P510.05 RESPECTIVELY.

    DESIGN MIX: J.P.C. BRIDGE MIX #430M (5 GAL./CY DCI)
12. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
13. 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 70°F. 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.
14. OWNER SHALL PROVIDE APPROPRIATE WATERPROOFING TO GROUTED SHEAR KEYS. J.P. CARRARA & SONS, INC. SHALL NOT BE HELD LIABLE FOR PROBLEMS ASSOCIATED WITH MOISTURE INFILTRATING GROUTED SHEAR KEYS.
15. PRECAST CONCRETE PARAPET SHALL HAVE A RUBBED FINISH IN ACCORDANCE WITH VERMONT SPECIFICATION SECTION 501. 2

ABUTMENT, WING WALL, & APPROACH SLAB GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 5,000 PSI.
2. MIN. CONCRETE STRENGTH AT STRIPPING SHALL BE 3,500 PSI.
3. REINFORCING STEEL IN THE ABUTMENTS & APPROACH SLABS SHALL BE GR-60, ASTM A-615 (AASHTO M31) AND SHALL ADHERE TO THE REQUIREMENTS OF LEVEL I REINFORCING STEEL IN ACCORDANCE WITH VERMONT SPECIFICATION SECTION 507 (UNLESS NOTED OTHERWISE).

   REINFORCING STEEL IN THE WING WALLS SHALL BE GR-60, ASTM A-615 (AASHTO M31) AND SHALL ADHERE TO THE REQUIREMENTS OF LEVEL II (DUAL COATED) REINFORCING STEEL IN ACCORDANCE WITH VERMONT SPECIFICATION SECTION 507 (UNLESS NOTED OTHERWISE). 2
4. THE TOP OF ABUTMENTS, APPROACH SLABS, & WING WALLS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
5. SHEAR KEY SURFACES SHALL BE SAND BLASTED CLEAN. 1
6. 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 5th POINTS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
7. MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPECIFICATION SECTION 540. 2

   DESIGN MIX:
   - WING WALLS: J.P.C. BRIDGE MIX #425M NO DCI
   - APPROACH SLABS: J.P.C. BRIDGE MIX #425M NO DCI
   - ABUTMENTS: J.P.C. BRIDGE MIX #445M
8. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
9. 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.
10. ABUTMENT POST-TENSIONING SEQUENCE: 2

    A. ERECT PRECAST CONCRETE ABUTMENTS. APPLY SIKADUR 32 HI-MOD EPOXY TO FIRST UNIT ERECTED AT MATCH CAST JOINT.

    B. THREAD (2) ½"ø POLY STRAND TENDON THROUGH EACH DUCT IN ABUTMENTS, AND POST-TENSION ALL TENDONS TO APPROXIMATELY 3,000 LBS.

    C. AFTER 12 HOURS, POST-TENSION ALL TENDONS TO 32,000 LBS.

STRAND TENSIONING PROCEDURE:

1. PULL EACH STRAND INITIALLY TO 3,000* LBS. AND MARK STRAND.
2. 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.

EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING

(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE: 0.60"ø x 270 KSI
AREA: 0.217 IN^2
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:

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

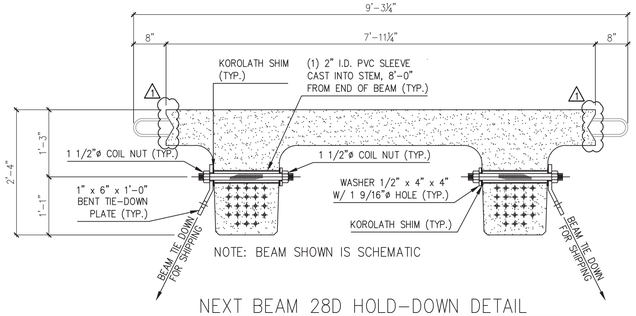
THEREFORE: (TOLERANCES € 5%)

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:

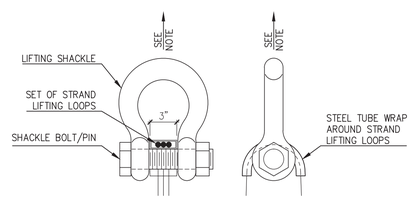
$$\Delta P = \frac{0.5 \times 41{,}000}{19.977} = 1{,}026 \text{ LBS.}$$

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



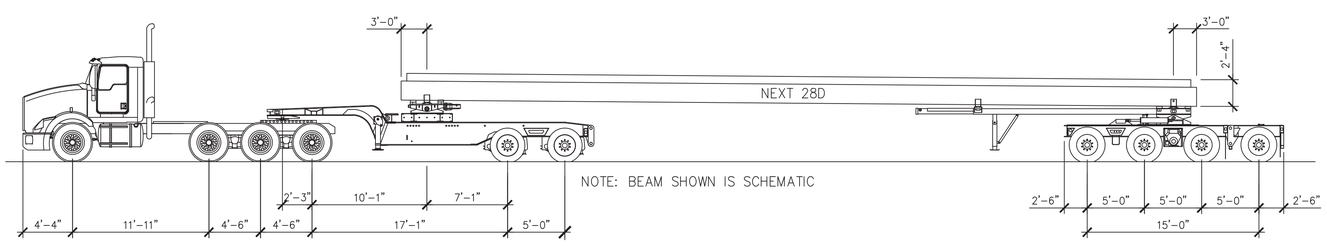
NOTE: BEAM SHOWN IS SCHEMATIC

NEXT BEAM 28D HOLD-DOWN DETAIL FOR SHIPPING
N.T.S.



1 NOTE: BEAMS AND ABUTMENTS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. SHACKLE BOLT/PIN SHALL BE PLACED UNDER LIFT LOOPS AS SHOWN. DESIGN AND CONFIGURATION OF RIGGING BY PURCHASER.

LIFTING SHACKLE DETAILS
N.T.S.



NOTE: BEAM SHOWN IS SCHEMATIC

SHIPPING ELEVATION
N.T.S.

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

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W.M. SHULTZ CONSTRUCTION, INC.
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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

BRIDGE 15 COVER SHEET

DATE:	MAR. 14, 2014
SCALE:	NOTED
CHKD:	DFTM: AAT/RWS JLJ/KLT
JOB NO:	23419-013
DWG. NO:	C1

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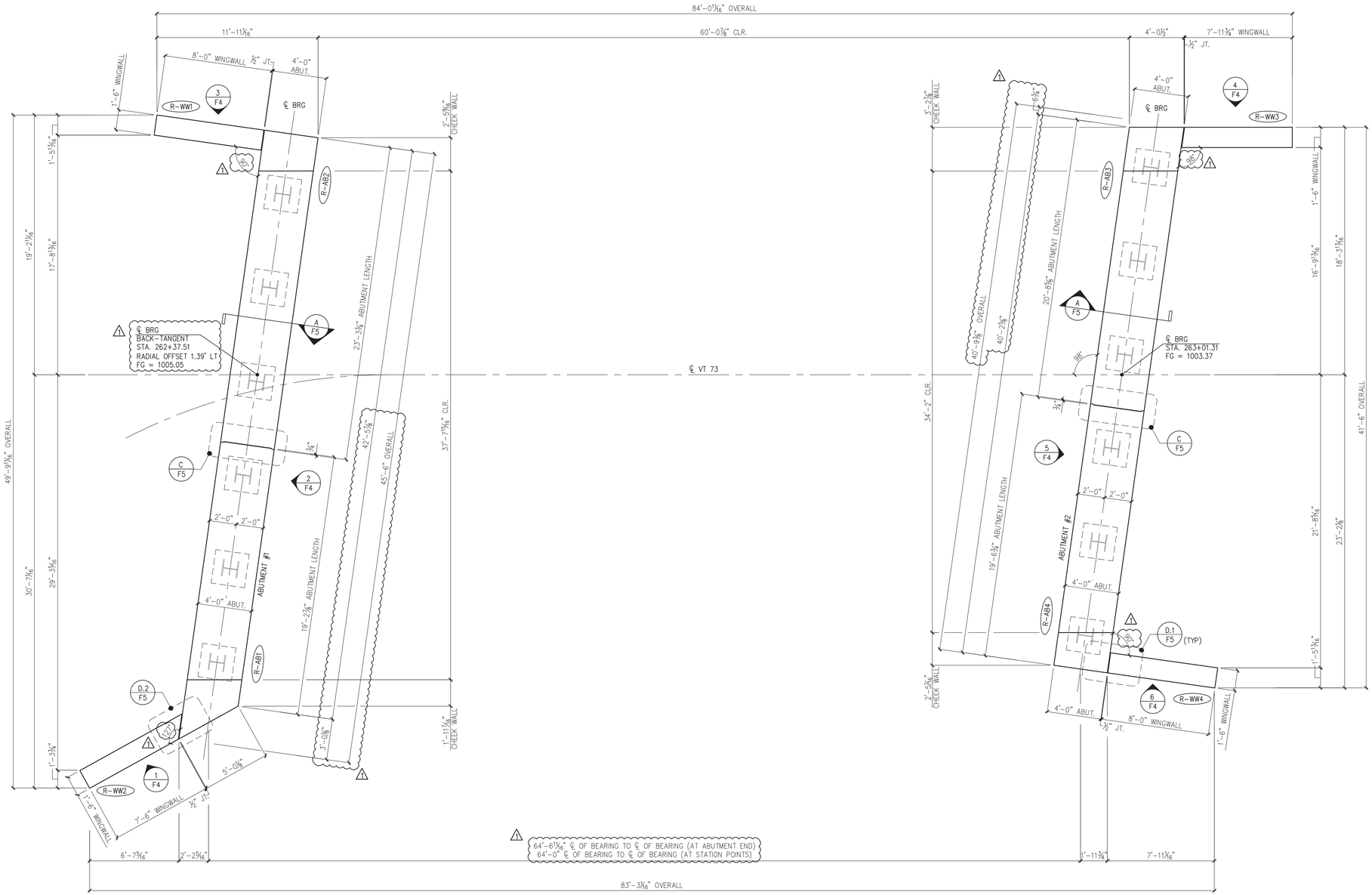

1 / F1 PRECAST CONCRETE ABUTMENT AND WINGWALL LAYOUT
1/4" =1'-0"

△1 4/11/14 REVISE & RESUBMIT

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COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

△1 SUBSTRUCTURE PLANS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: F1

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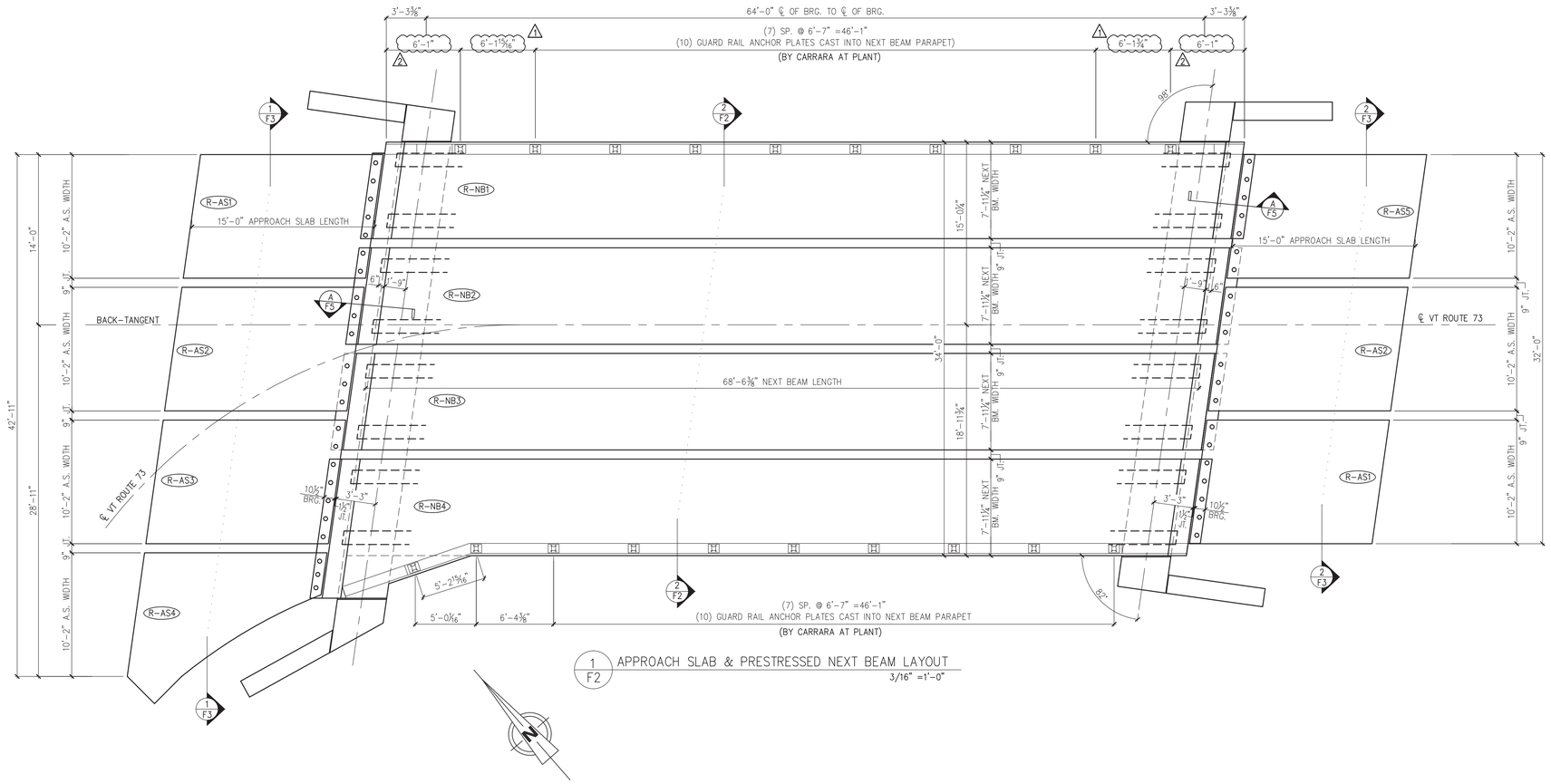

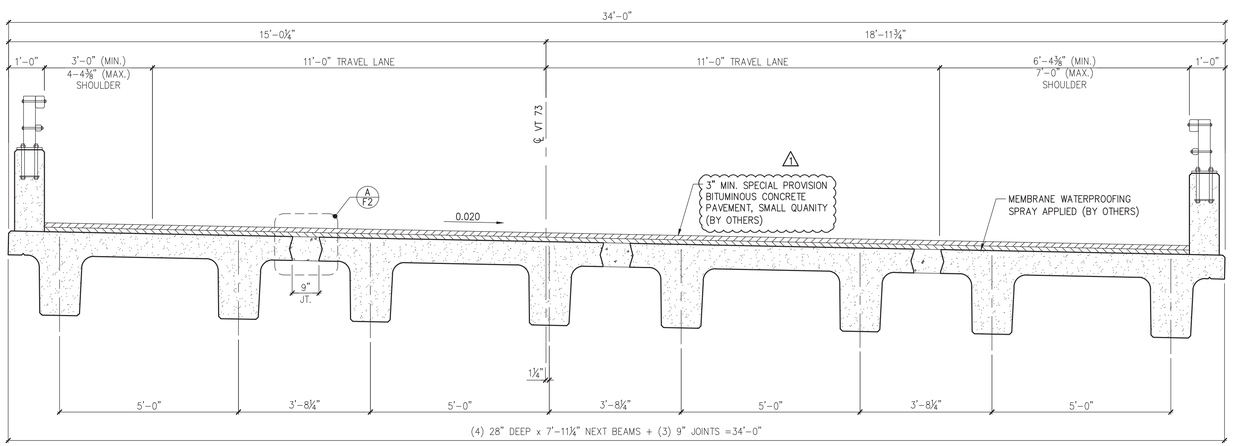

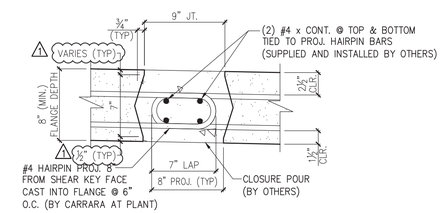

4/30/14 REVISE & RESUBMIT

4/11/14 REVISE & RESUBMIT

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COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

SUPERSTRUCTURE PLANS & SECTIONS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: F2

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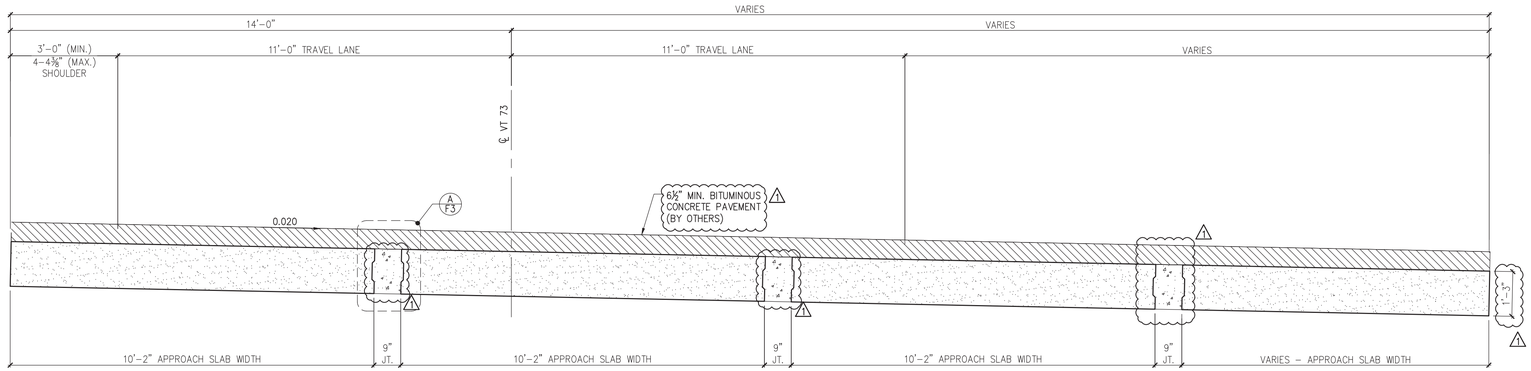
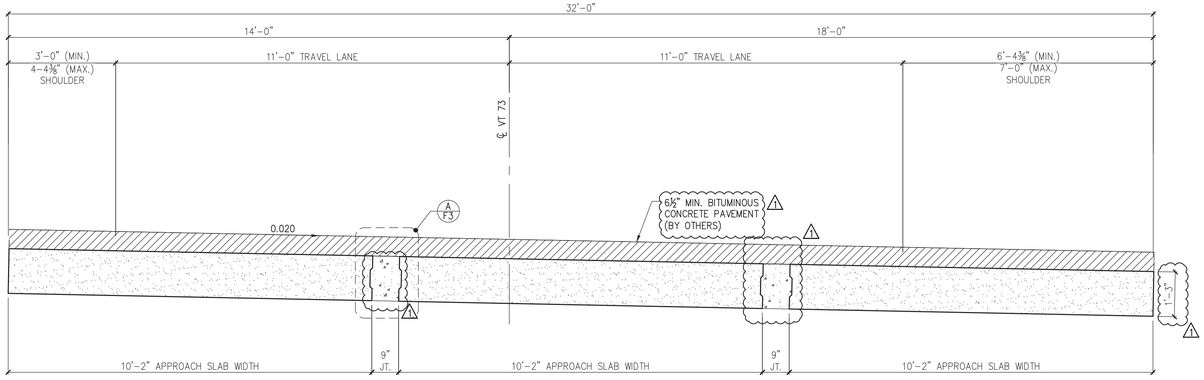


1 / F3 NORTH APPROACH SLAB TRANSVERSE SECTION
1/2" =1'-0"



2 / F3 SOUTH APPROACH SLAB TRANSVERSE SECTION
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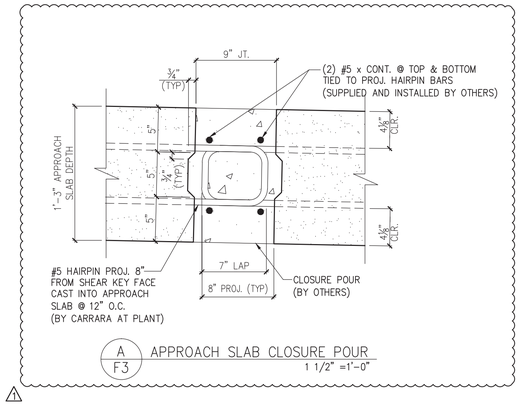

A / F3 APPROACH SLAB CLOSURE POUR
1 1/2" =1'-0"

1 4/11/14 REVISE & RESUBMIT

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COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

TRANSVERSE SECTIONS & DETAILS

DATE: MAR. 14, 2014
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DWG. NO: F3

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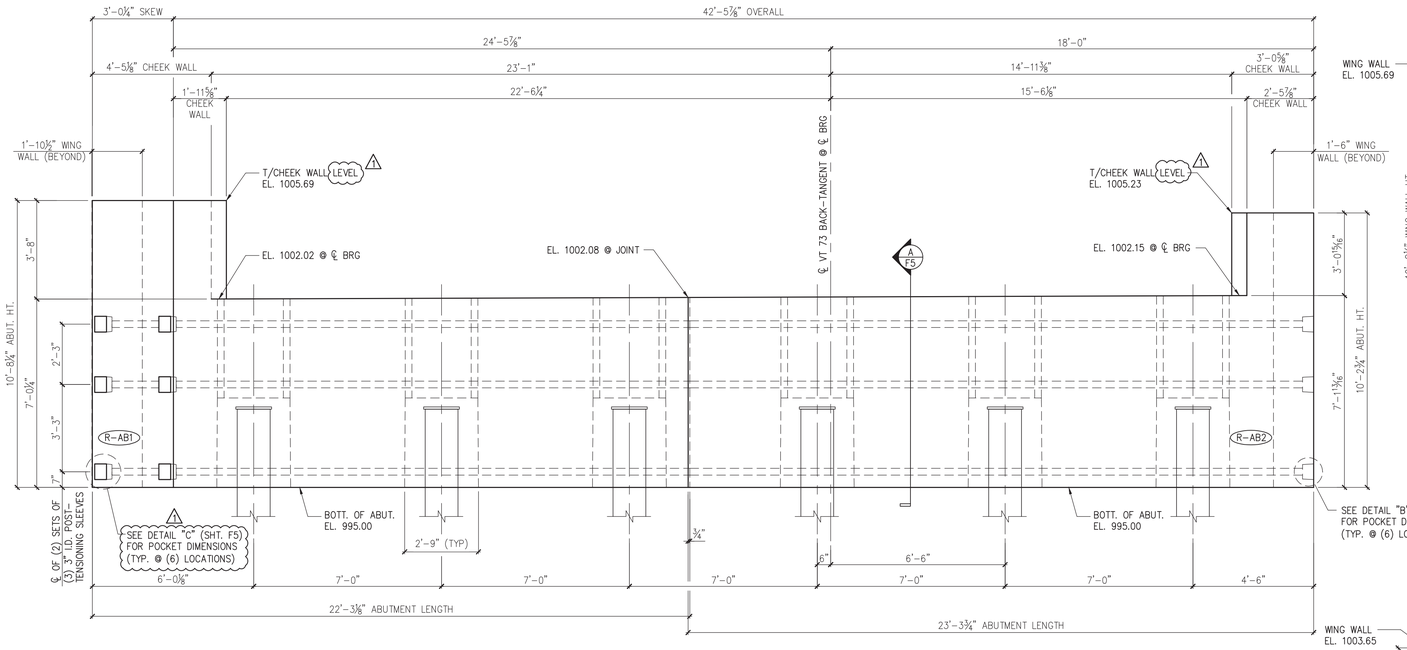
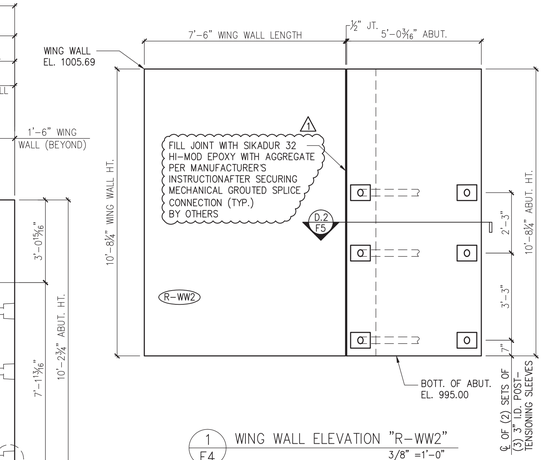
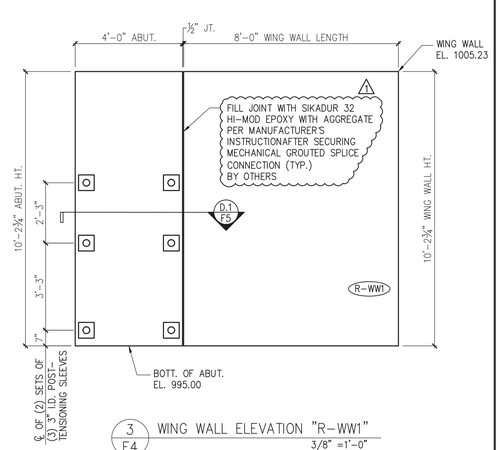


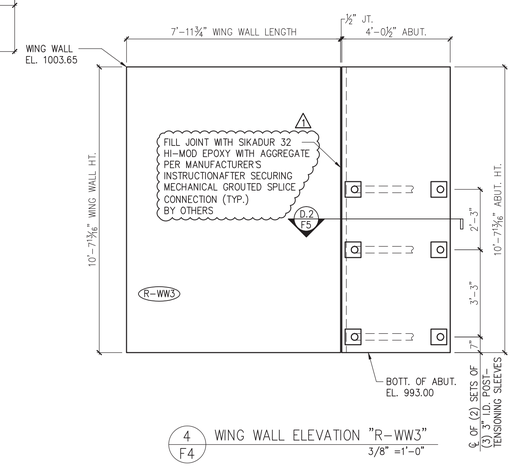
2 F4 ABUTMENT #1 ELEVATION
3/8" =1'-0"



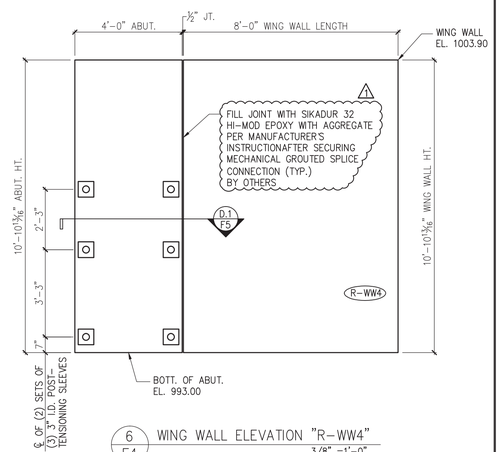
1 F4 WING WALL ELEVATION "R-WW2"
3/8" =1'-0"



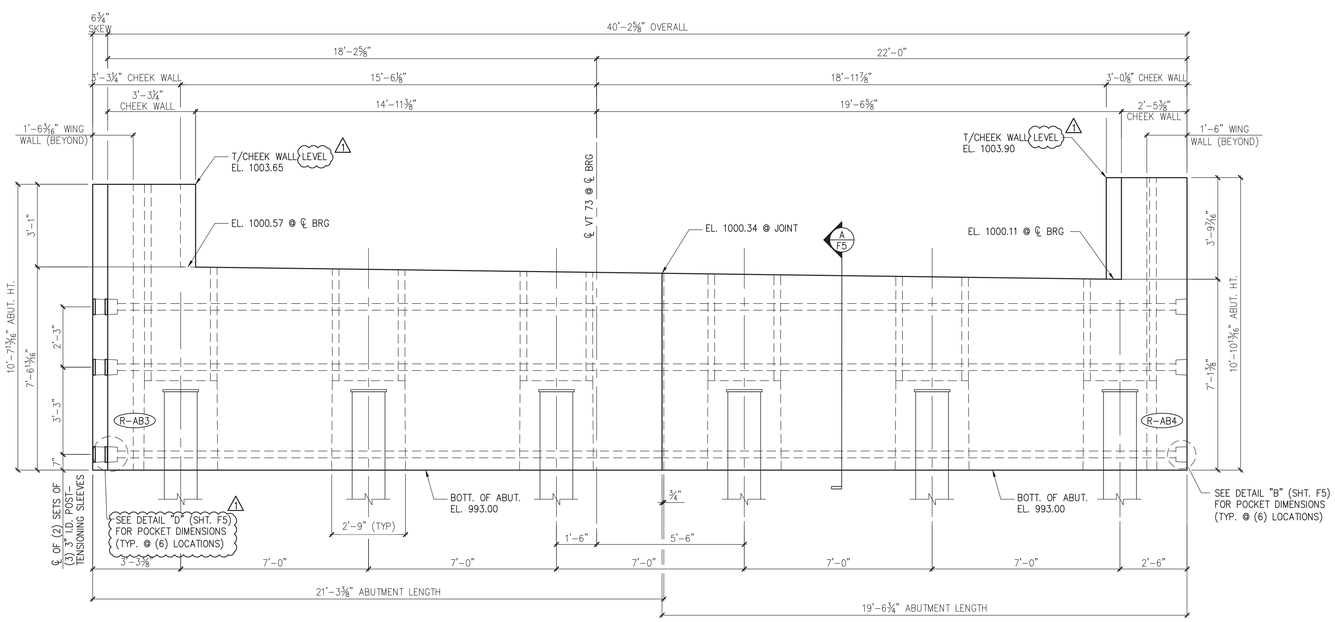
3 F4 WING WALL ELEVATION "R-WW1"
3/8" =1'-0"



4 F4 WING WALL ELEVATION "R-WW3"
3/8" =1'-0"



6 F4 WING WALL ELEVATION "R-WW4"
3/8" =1'-0"



5 F4 ABUTMENT #2 ELEVATION
3/8" =1'-0"

△1 4/11/14 REVISE & RESUBMIT

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VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

ABUTMENT ELEVATIONS

DATE: MAR. 14, 2014
SCALE: NOTED
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DWG. NO: F4

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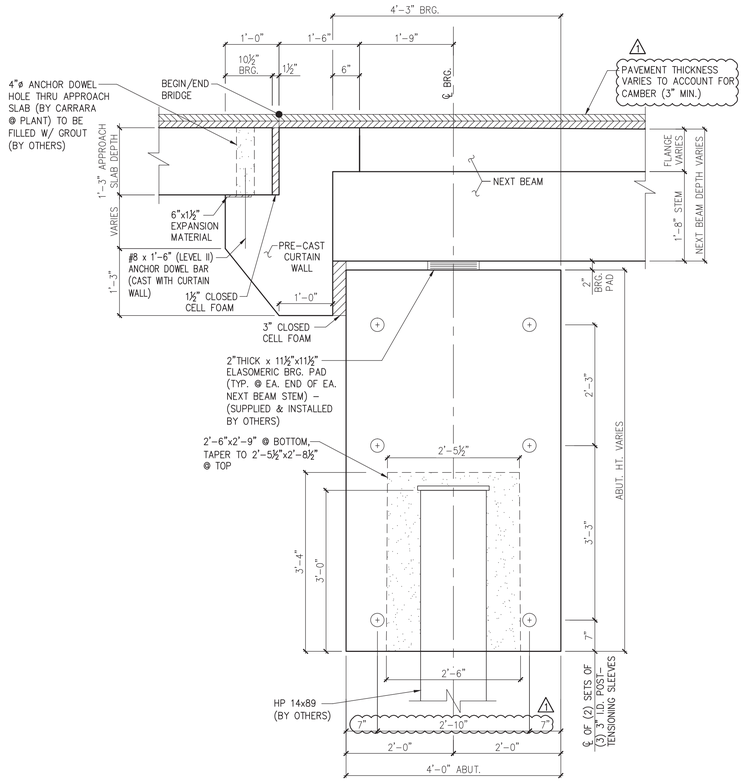
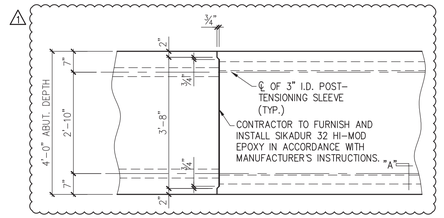
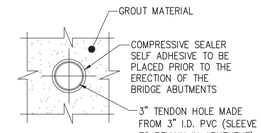


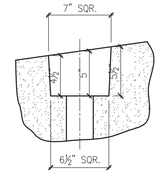
A / F5 BEARING SECTION
NEXT BEAM STEM BEARING 3/4" =1'-0"



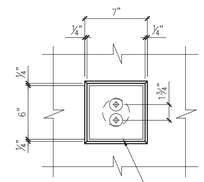
C / F5 MATCH CAST SECTION @ P.T. SLEEVE
1/2" =1'-0"



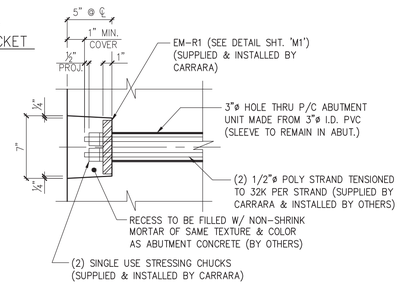
SECTION - "A"
1 1/2" =1'-0"



PLAN OF POCKET



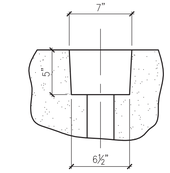
ABUTMENT ELEVATION



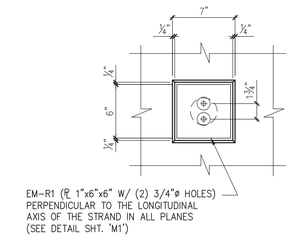
SECTION AT CENTERLINE

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

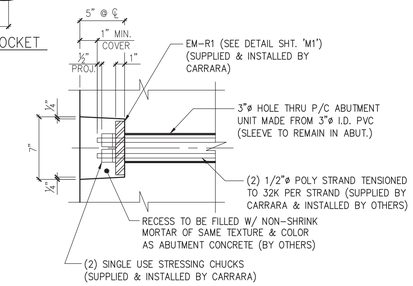
NOTE: ANCHORAGE ASSEMBLIES SHALL BE EPOXY PAINTED AFTER INSTALLATION, BY OTHERS.



PLAN OF POCKET



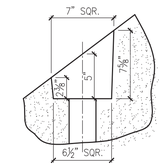
ABUTMENT ELEVATION



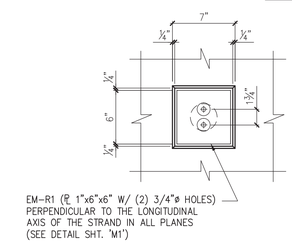
SECTION AT CENTERLINE

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

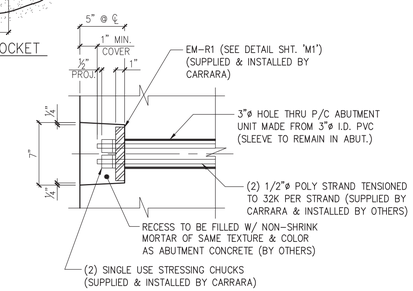
NOTE: ANCHORAGE ASSEMBLIES SHALL BE EPOXY PAINTED AFTER INSTALLATION, BY OTHERS.



PLAN OF POCKET



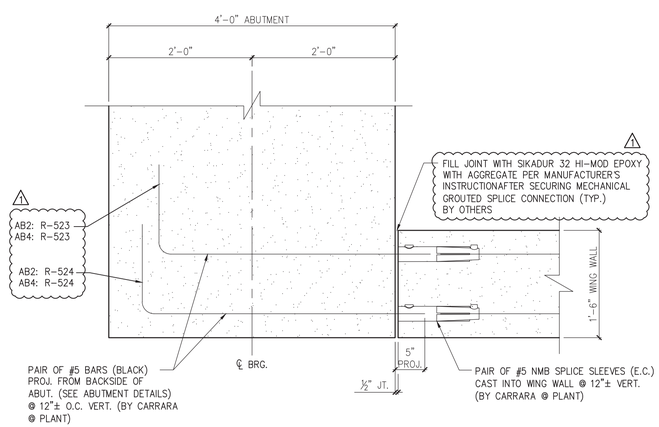
ABUTMENT ELEVATION



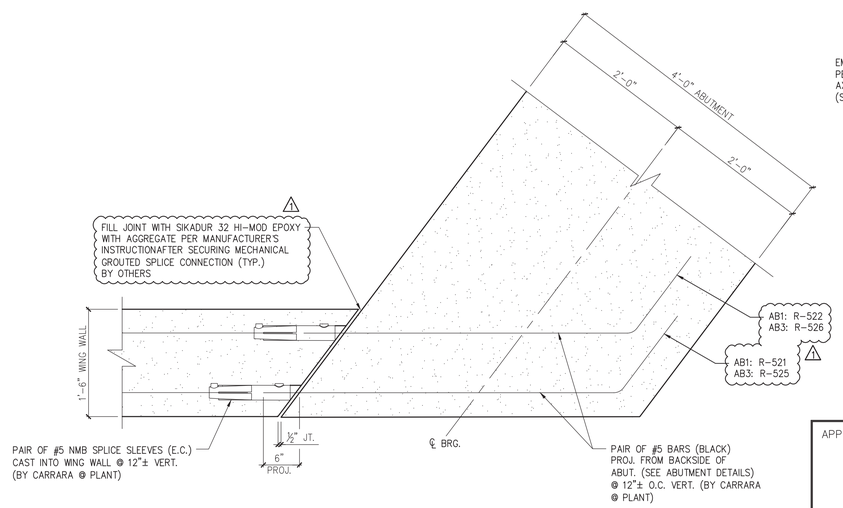
SECTION AT CENTERLINE

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

NOTE: ANCHORAGE ASSEMBLIES SHALL BE EPOXY PAINTED AFTER INSTALLATION, BY OTHERS.



D.1 / F5 WING WALL CONNECTION DETAIL
1" =1'-0"



D.2 / F5 WING WALL CONNECTION DETAIL
1" =1'-0"

1 4/11/14 REVISE & RESUBMIT

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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

ABUTMENT DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JJ/KLT
JOB NO: 23419-013
DWG. NO: F5

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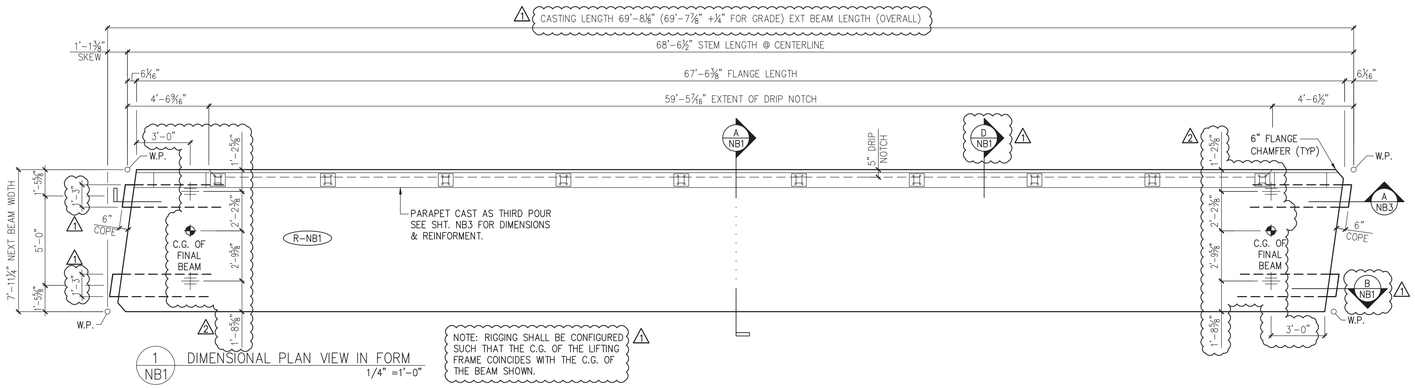
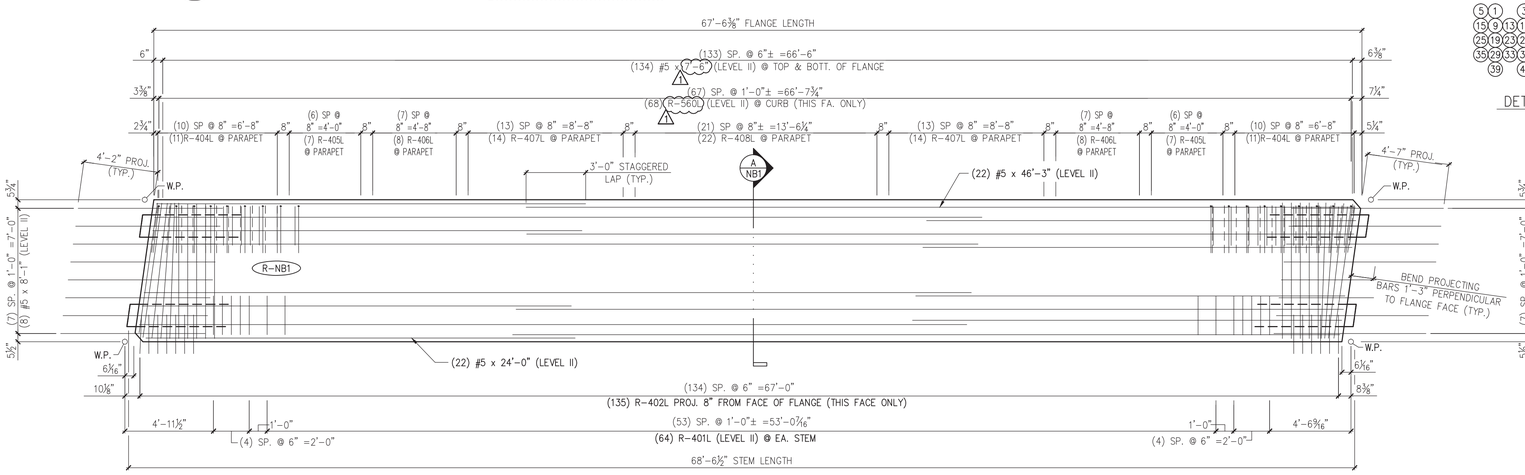
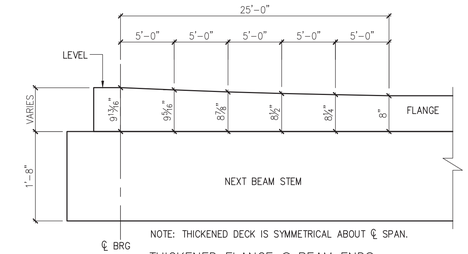


1 NB1 DIMENSIONAL PLAN VIEW IN FORM
1/4" =1'-0"

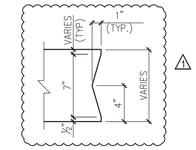


2 NB1 REINFORCING PLAN VIEW IN FORM
ALL DIMENSIONS INDICATED ARE PARALLEL OR PERPENDICULAR TO ℄ OF STEMS U.N.O.
1/4" =1'-0"



NOTE: THICKENED DECK IS SYMMETRICAL ABOUT ℄ SPAN.

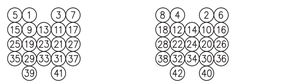
THICKENED FLANGE @ BEAM ENDS
N.T.S.



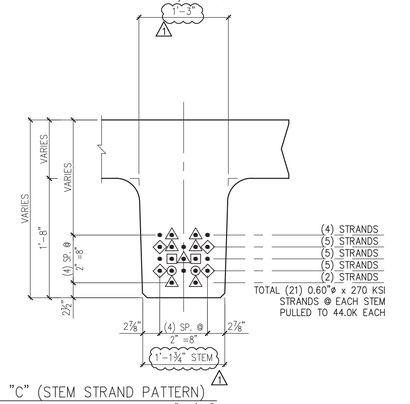
DETAIL – "A"
1 1/2" =1'-0"

PRESTRESSING NOTATIONS

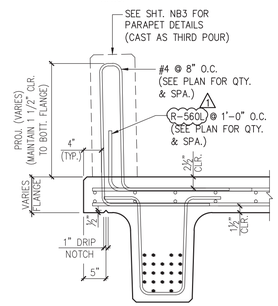
- DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO PROJECT 1'-6" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 8'-0" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 10'-0" FROM EA. END OF EA. STEM



DETENSIONING SCHEDULE
N.T.S.



DETAIL – "C" (STEM STRAND PATTERN)
1" =1'-0"

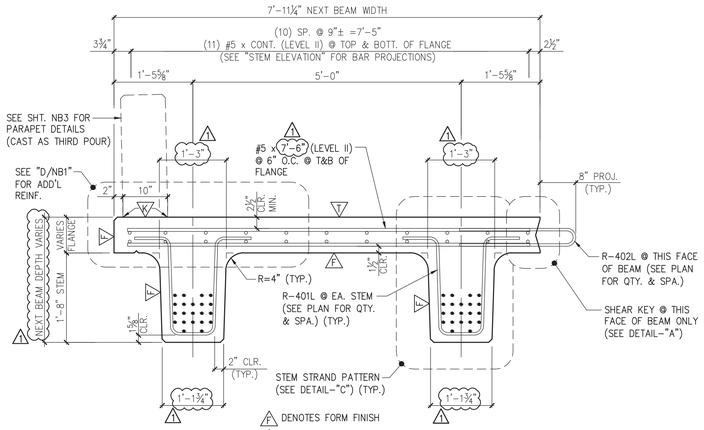


D NB1 REINFORCING @ PARAPET
3/4" =1'-0"

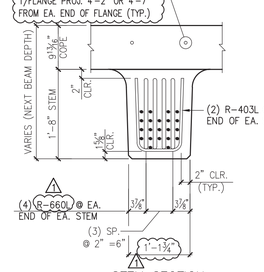
MARK:	R-NB1	QTY.:	1	WT.:	49.7 T	VOL.:	24.12 cy
TOTAL WITH CURTAIN WALLS & PARAPET – WT.:					69.2 T	VOL.:	34.28 cy

MATERIAL LIST / NEXT BEAM

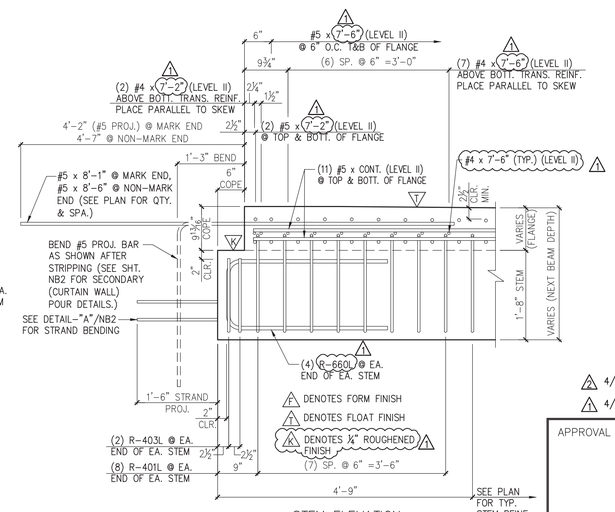
ITEM	MARK	DESCRIPTION	QTY.
1	R-401L	#4 BENT BAR (LEVEL II, DUAL COATED)	1 160
2	R-402L	#4 BENT BAR (LEVEL II, DUAL COATED)	135
3	R-403L	#4 BENT BAR (LEVEL II, DUAL COATED)	1 8
4	R-404L	#4 BENT BAR (LEVEL II, DUAL COATED)	22
5	R-405L	#4 BENT BAR (LEVEL II, DUAL COATED)	14
6	R-406L	#4 BENT BAR (LEVEL II, DUAL COATED)	16
7	R-407L	#4 BENT BAR (LEVEL II, DUAL COATED)	28
8	R-408L	#4 BENT BAR (LEVEL II, DUAL COATED)	22
9	R-560L	#5 BENT BAR (LEVEL II, DUAL COATED)	68
10	1	#4 x 7'-2" (LEVEL II, DUAL COATED)	4
11		#4 x 7'-6" (LEVEL II, DUAL COATED)	14
12		#5 x 7'-2" (LEVEL II, DUAL COATED)	4
13		#5 x 7'-6" (LEVEL II, DUAL COATED)	268
14		#5 x 8'-1" (LEVEL II, DUAL COATED)	8
15		#5 x 8'-6" (LEVEL II, DUAL COATED)	8
16		#5 x 24'-0" (LEVEL II, DUAL COATED)	22
17	1	#5 x 46'-3" (LEVEL II, DUAL COATED)	22
18	R-660L	#6 BENT BAR (LEVEL II, DUAL COATED)	1 16



A NB1 DIMENSIONAL & REINFORCING SECTION
3/4" =1'-0"



STEM SECTION



STEM ELEVATION

B NB1 END BLOCK STEM REINFORCING DETAILS
3/4" =1'-0"

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

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STATE OF VERMONT AGENCY OF TRANSPORTATION
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TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: NB1

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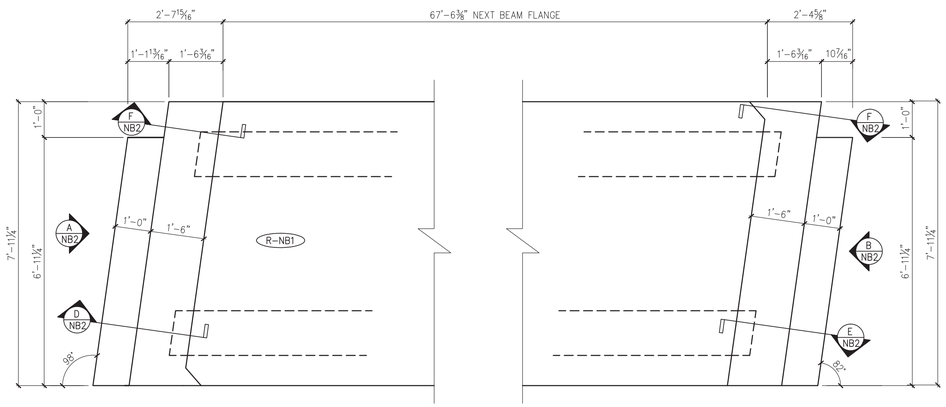
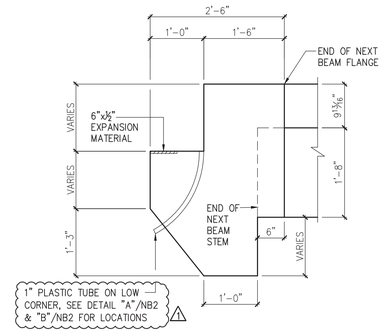
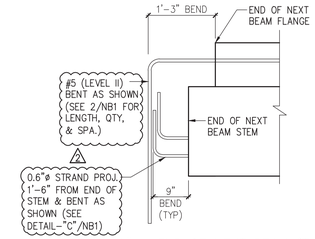


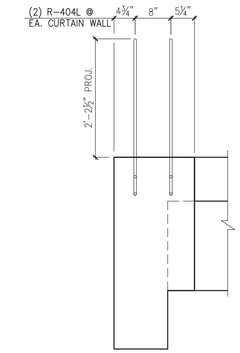
1 NB2 CURTAIN WALL PLAN VIEW IN FORM
(CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2" =1'-0"



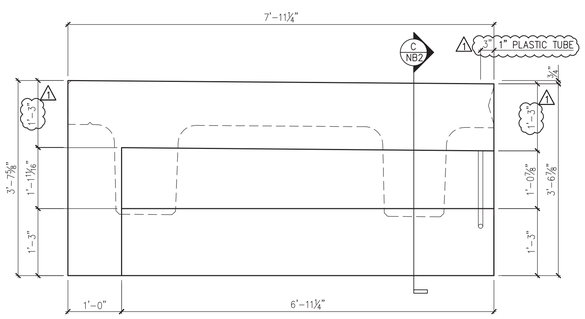
C NB2 DIMENSIONAL CURTAIN WALL SECTION
3/4" =1'-0"



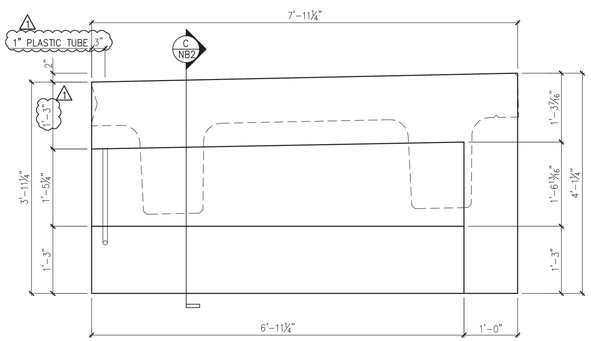
DETAIL "A" – END OF NEXT BEAM (TYP.)
(PRIOR TO CASTING CURTAIN WALL) 3/4" =1'-0"



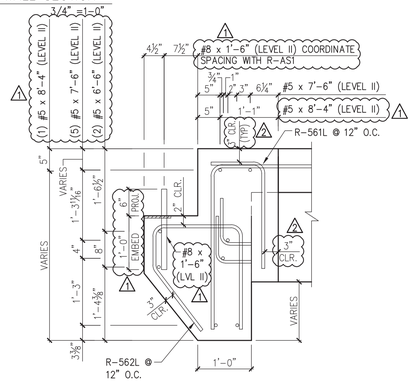
F NB2 CURTAIN WALL SECTION
3/4" =1'-0"
NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.



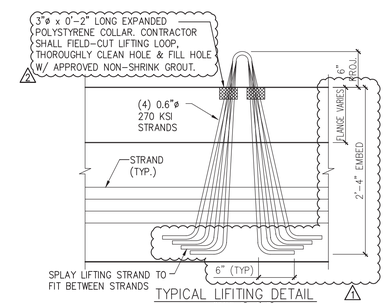
A NB2 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1'-0"



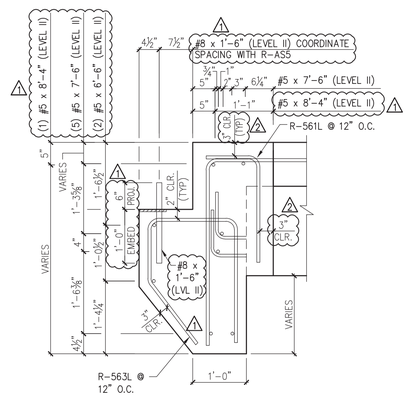
B NB2 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1'-0"



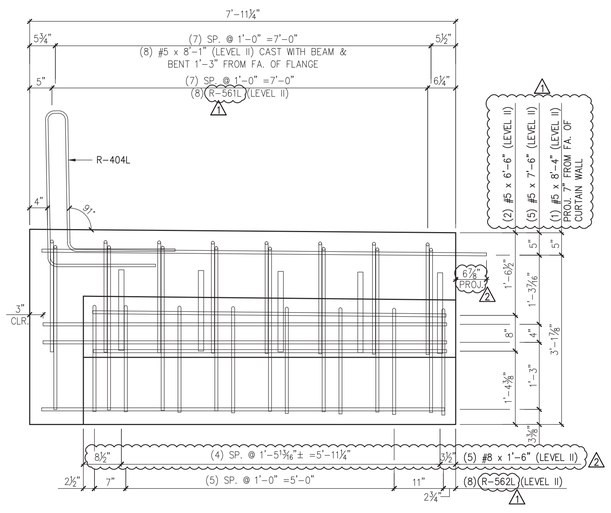
D NB2 REINFORCING CURTAIN WALL SECTION
3/4" =1'-0"



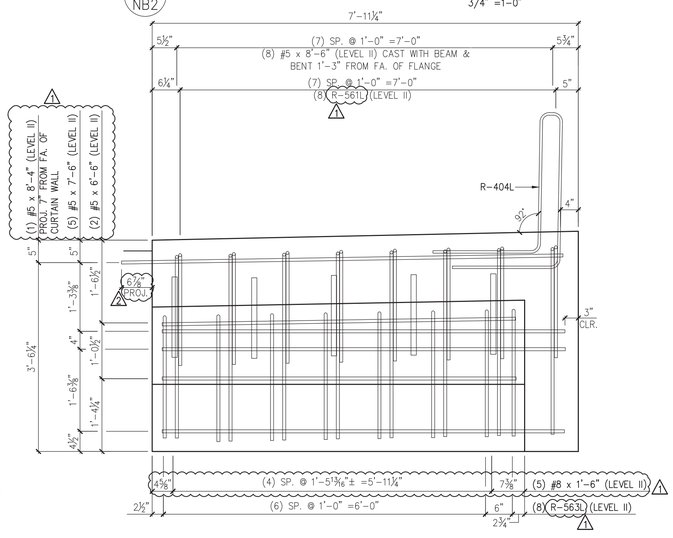
TYPICAL LIFTING DETAIL
SCALE: 1" =1'-0"
NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.



E NB2 REINFORCING CURTAIN WALL SECTION
3/4" =1'-0"



A NB2 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1'-0"



B NB2 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1'-0"

2 4/30/14 REVISE & RESUBMIT

1 4/11/14 REVISE & RESUBMIT

MARK: R-NB1	QTY.: 1	WT.: 8.0 T	VOL.: 3.96 cy

MATERIAL LIST / CURTAIN WALLS

ITEM	MARK	DESCRIPTION	QTY.
1	R-404L	#4 BENT BAR (LEVEL II, DUAL COATED)	4
2			
3	R-561L	#5 BENT BAR (LEVEL II, DUAL COATED)	16
4	R-562L	#5 BENT BAR (LEVEL II, DUAL COATED)	8
5	R-563L	#5 BENT BAR (LEVEL II, DUAL COATED)	8
6			
7		#5 x 6'-6" (LEVEL II, DUAL COATED)	4
8		#5 x 7'-6" (LEVEL II, DUAL COATED)	10
9	1	#5 x 8'-4" (LEVEL II, DUAL COATED)	2
10			
11		#8 x 1'-6" (LEVEL II, DUAL COATED)	10
12			
13	1	SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4
14			
15	2	1" PLASTIC TUBE	2

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DWG. NO: NB2

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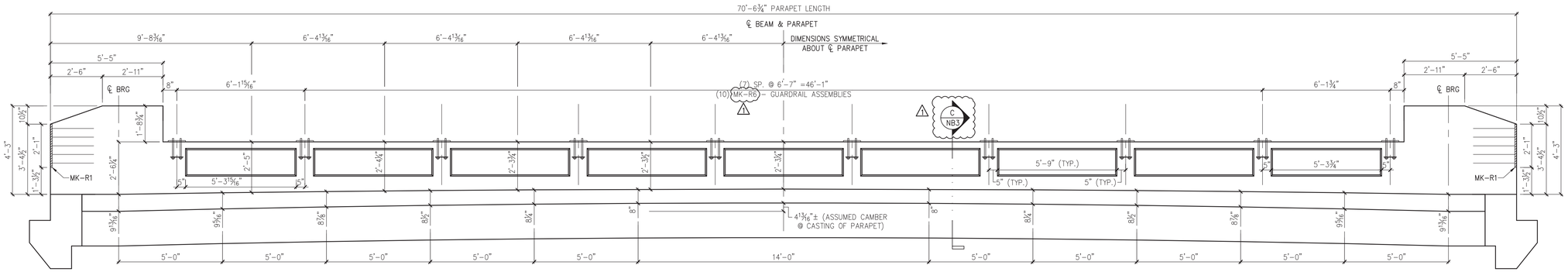
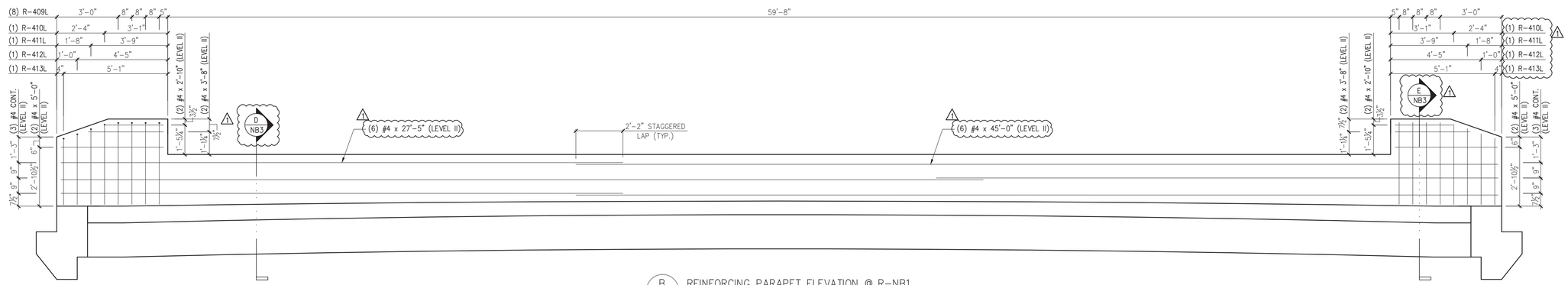
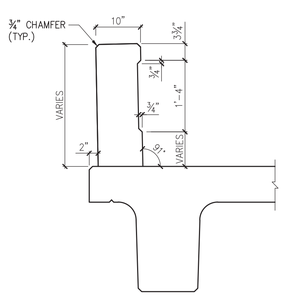


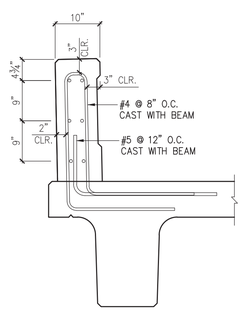
A NB3 DIMENSIONAL PARAPET ELEVATION @ R-NB1
(CAST AS THIRD POUR WITH R-NB1)
3/8" =1-0"



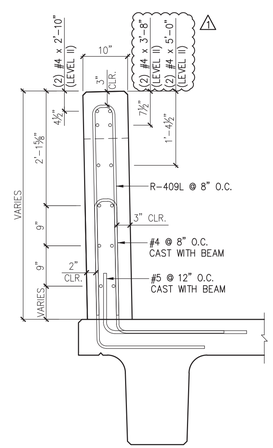
B NB3 REINFORCING PARAPET ELEVATION @ R-NB1
3/8" =1-0"



C NB3 DIMENSIONAL PARAPET SECTION
3/4" =1'-0"



D NB3 REINFORCING @ PARAPET
3/4" =1'-0"



E NB3 REINFORCING @ PARAPET
3/4" =1'-0"

MARK: R-NB1	QTY.: 1	WT.: 11.5 T	VOL.: 5.40 cy

MATERIAL LIST / PARAPET

ITEM	MARK	DESCRIPTION	QTY.
1	R-409L	#4 BENT BAR (LEVEL II, DUAL COATED)	8
2	R-410L	#4 BENT BAR (LEVEL II, DUAL COATED)	2
3	R-411L	#4 BENT BAR (LEVEL II, DUAL COATED)	2
4	R-412L	#4 BENT BAR (LEVEL II, DUAL COATED)	2
5	R-413L	#4 BENT BAR (LEVEL II, DUAL COATED)	2
6		1	
7		#4 x 2'-10" (LEVEL II, DUAL COATED)	4
8		#4 x 3'-8" (LEVEL II, DUAL COATED)	4 1
9		#4 x 5'-0" (LEVEL II, DUAL COATED)	4
10		#4 x 27'-5" (LEVEL II, DUAL COATED)	6
11		#4 x 45'-0" (LEVEL II, DUAL COATED)	6
12			
13	MK-R1	PL 10"x½"x2'-1" LONG STEEL ANCHOR PLATE	2
14	MK-R6	GUARDRAIL ASSEMBLY (SUPPLIED BY CONTR. AND INSTALLED BY CARRERA)	10 1

1 4/11/14 REVISE & RESUBMIT

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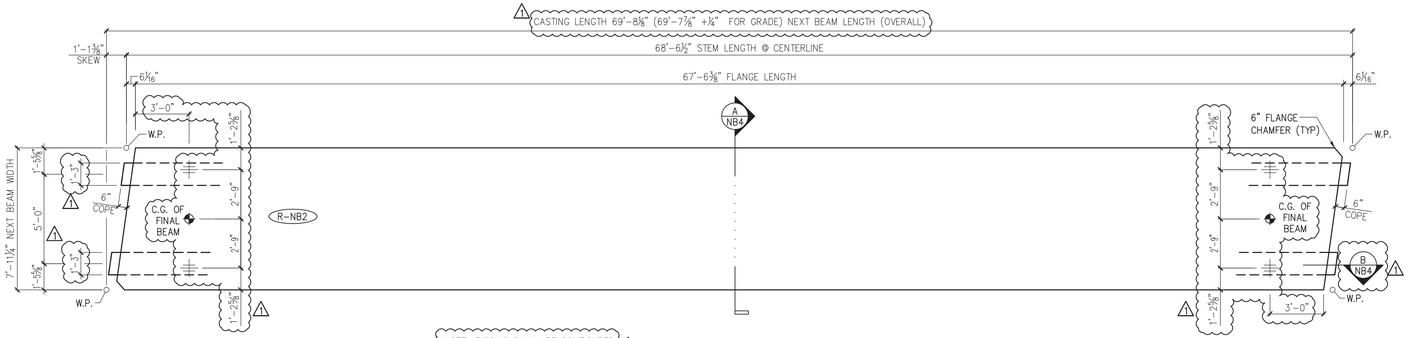
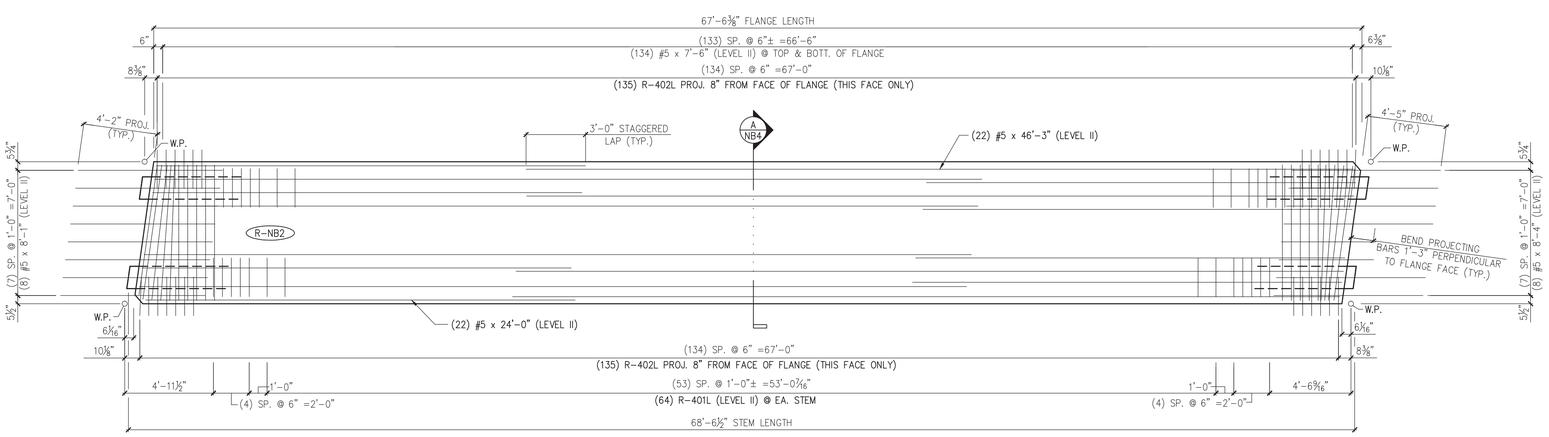


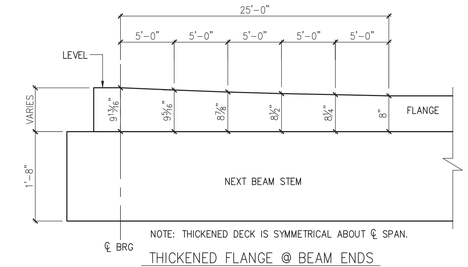
1 NB4 DIMENSIONAL PLAN VIEW IN FORM
1/4" =1'-0"

NOTE: RIGGING SHALL BE CONFIGURED SUCH THAT THE C.G. OF THE LIFTING FRAME COINCIDES WITH THE C.G. OF THE BEAM SHOWN.



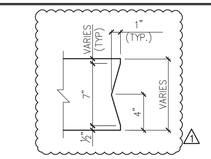
2 NB4 REINFORCING PLAN VIEW IN FORM
1/4" =1'-0"

ALL DIMENSIONS INDICATED ARE PARALLEL OR PERPENDICULAR TO ℄ OF STEMS U.N.O.



NOTE: THICKENED DECK IS SYMMETRICAL ABOUT ℄ SPAN.

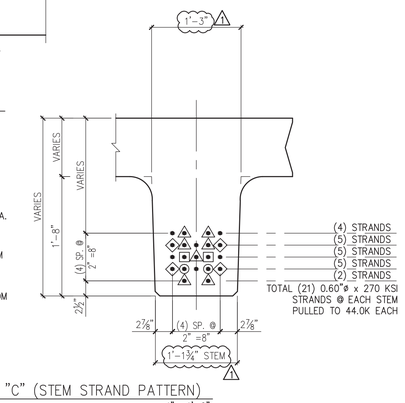
THICKENED FLANGE @ BEAM ENDS
N.T.S.



DETAIL – "A"
1 1/2" =1'-0"

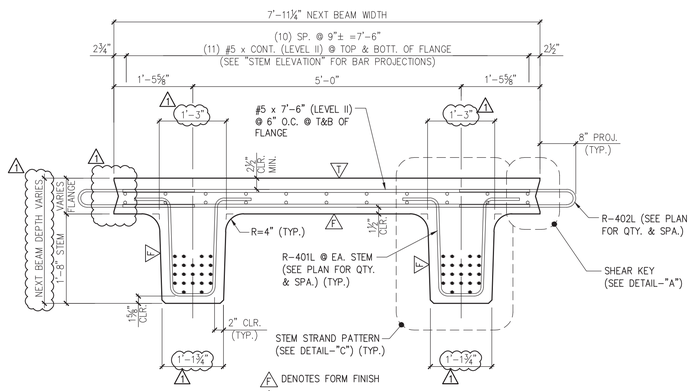
PRESTRESSING NOTATIONS

- ● DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- ◇ DENOTES STRAIGHT STRANDS TO PROJECT 1'-6" FROM EA. END OF EA. STEM
- △ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" 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 10'-0" FROM EA. END OF EA. STEM

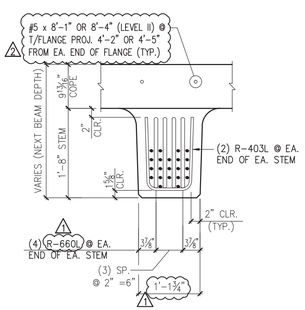


DETAIL – "C" (STEM STRAND PATTERN)
1" =1'-0"

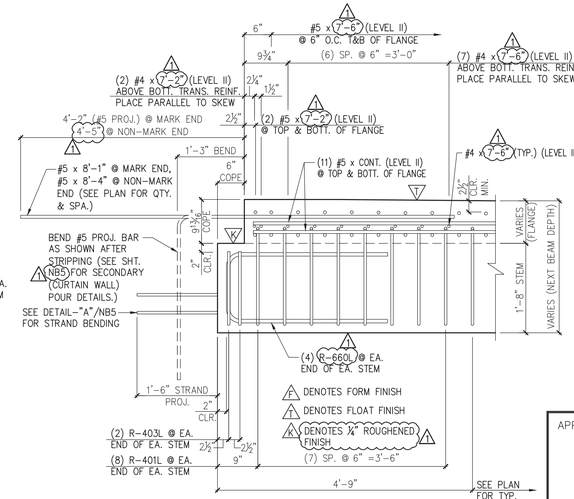
DETENSIONING SCHEDULE
N.T.S.



A NB4 DIMENSIONAL & REINFORCING SECTION
3/4" =1'-0"



STEM SECTION



STEM ELEVATION

B NB4 END BLOCK STEM REINFORCING DETAILS
3/4" =1'-0"

MARK:	R-NB2	QTY.:	1	WT.:	49.7 T	VOL.:	24.12 cy
TOTAL WITH CURTAIN WALLS –				WT.:	57.7 T	VOL.:	32.48 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	R-401L	#4 BENT BAR (LEVEL II, DUAL COATED)	1 160
2	R-402L	#4 BENT BAR (LEVEL II, DUAL COATED)	270
3	R-403L	#4 BENT BAR (LEVEL II, DUAL COATED)	1 8
4			
5		#4 x 7'-2" (LEVEL II, DUAL COATED)	4
6		#4 x 7'-6" (LEVEL II, DUAL COATED)	14
7			
8		#5 x 24'-0" (LEVEL II, DUAL COATED)	22
9		#5 x 46'-3" (LEVEL II, DUAL COATED)	22
10	1	#5 x 7'-2" (LEVEL II, DUAL COATED)	4
11		#5 x 7'-6" (LEVEL II, DUAL COATED)	268
12		#5 x 8'-1" (LEVEL II, DUAL COATED)	8
13		#5 x 8'-4" (LEVEL II, DUAL COATED)	8
14			
15	1		
16	R-660L	#6 BENT BAR (LEVEL II, DUAL COATED)	1 16

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

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

W.M. SHULTZ CONSTRUCTION, INC.
PO BOX 2620
BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: NB4

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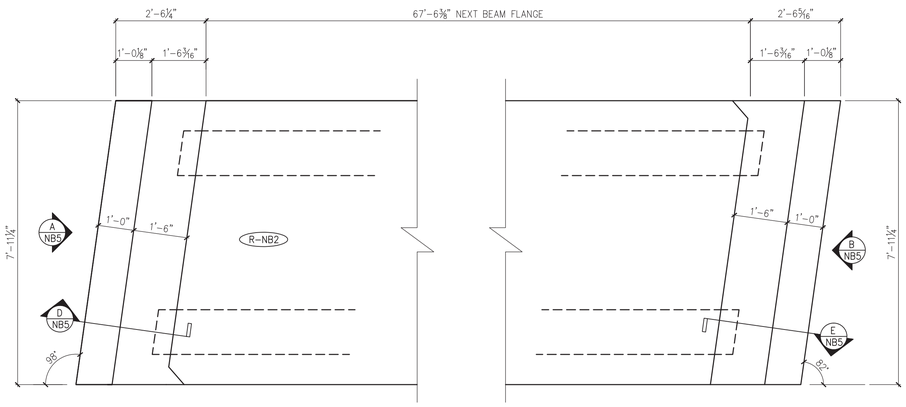
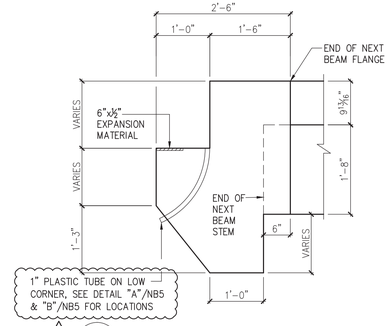
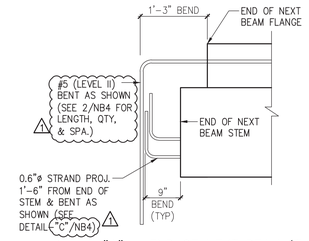


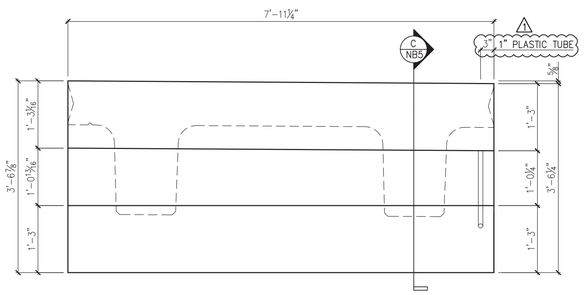
1 NB5 CURTAIN WALL PLAN VIEW IN FORM
(CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2" =1'-0"



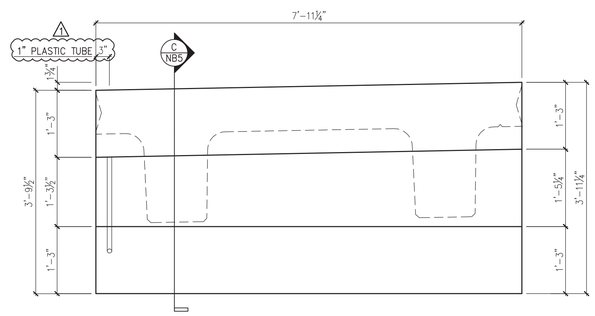
C NB5 DIMENSIONAL CURTAIN WALL SECTION
3/4" =1-0"



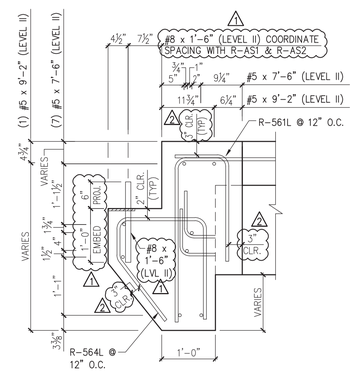
DETAIL "A" – END OF NEXT BEAM (TYP.)
(PRIOR TO CASTING CURTAIN WALL) 3/4" =1'-0"



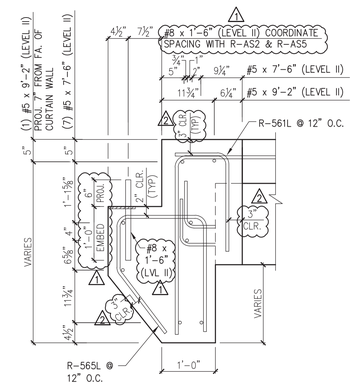
A NB5 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1-0"



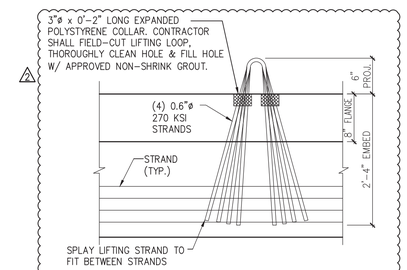
B NB5 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1-0"



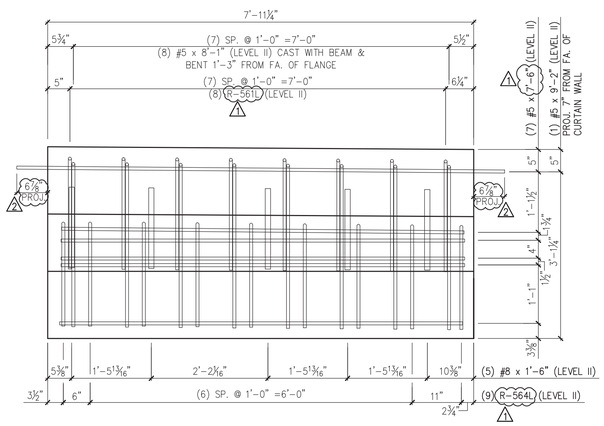
D NB5 REINFORCING CURTAIN WALL SECTION
3/4" =1-0"



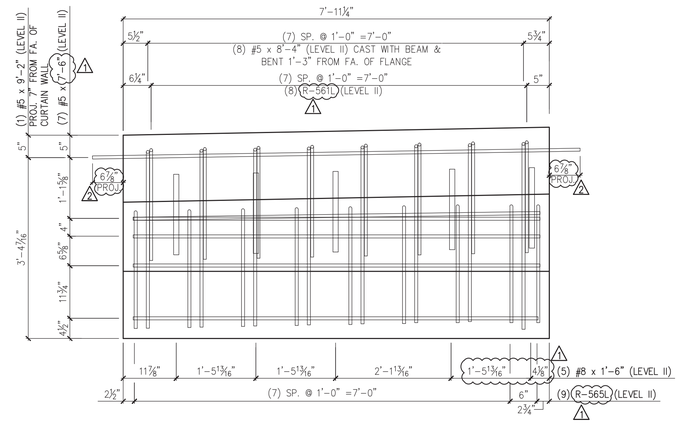
E NB5 REINFORCING CURTAIN WALL SECTION
3/4" =1-0"



TYPICAL LIFTING AND HANDING DETAIL
SCALE: 1" =1'-0"
NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.



A NB5 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1-0"



B NB5 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1-0"

MARK: R-NB2	QTY.: 1	WT.: 8.0 T	VOL.: 3.96 cy

MATERIAL LIST / CURTAIN WALLS

ITEM	MARK	DESCRIPTION	QTY.
1			
2			
3	R-561L	#5 BENT BAR (LEVEL II, DUAL COATED)	16
4	R-564L	#5 BENT BAR (LEVEL II, DUAL COATED)	9
5	R-565L	#5 BENT BAR (LEVEL II, DUAL COATED)	9
6			
7		#5 x 7'-6" (LEVEL II, DUAL COATED)	14
8		#5 x 9'-2" (LEVEL II, DUAL COATED)	2
9			
10		#8 x 1'-6" (LEVEL II, DUAL COATED)	10
11			
12			
13		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4
14			
15		1" PLASTIC TUBE	2

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

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BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

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JOB NO: 23419-013
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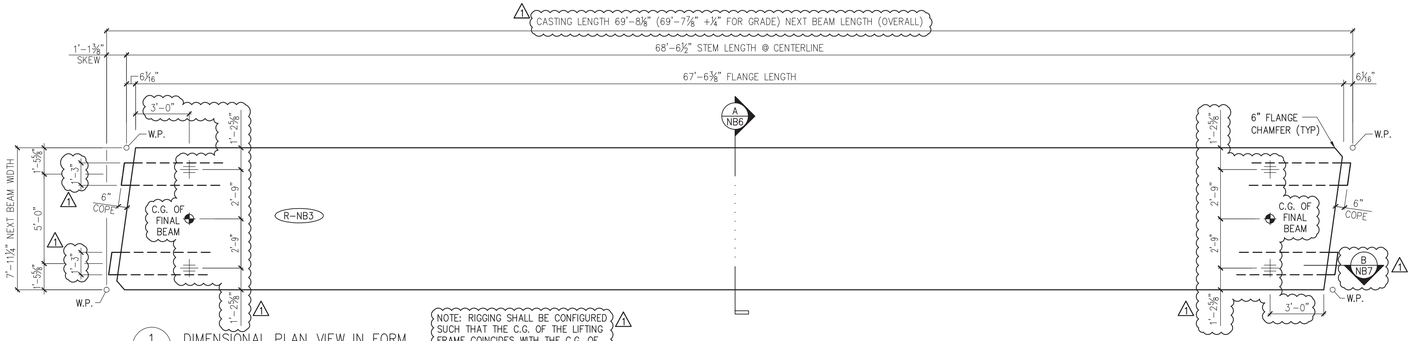
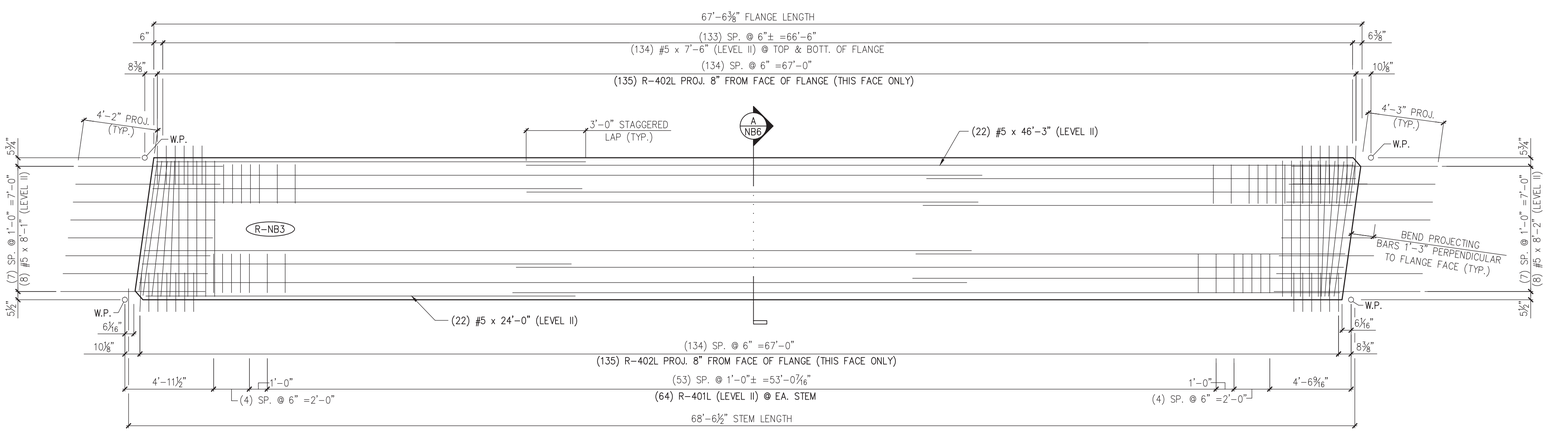
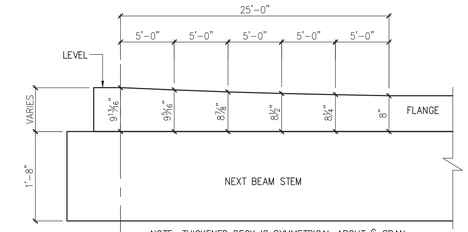


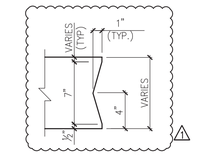
1 NB6 DIMENSIONAL PLAN VIEW IN FORM
1/4" =1'-0"



2 NB6 REINFORCING PLAN VIEW IN FORM
1/4" =1'-0"
ALL DIMENSIONS INDICATED ARE PARALLEL OR PERPENDICULAR TO ℄ OF STEMS U.N.O.



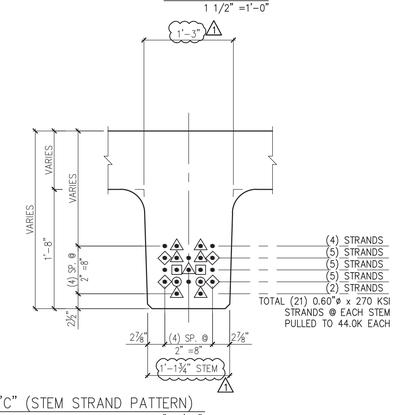
THICKENED FLANGE @ BEAM ENDS
N.T.S.



DETAIL – "A"
1 1/2" =1'-0"

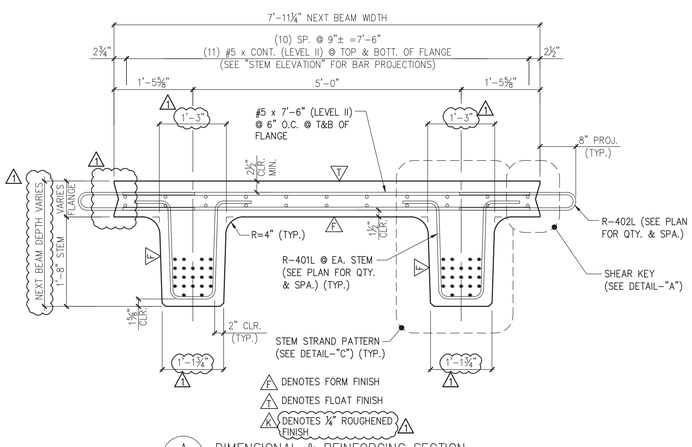
PRESTRESSING NOTATIONS

- DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO PROJECT 1'-6" FROM EA. END OF EA. STEM
- DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" 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 10'-0" FROM EA. END OF EA. STEM

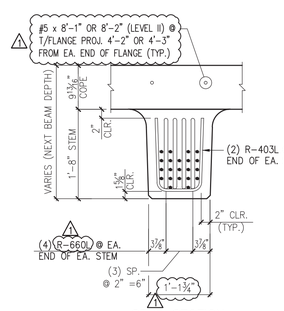


DETAIL – "C" (STEM STRAND PATTERN)
1" =1'-0"

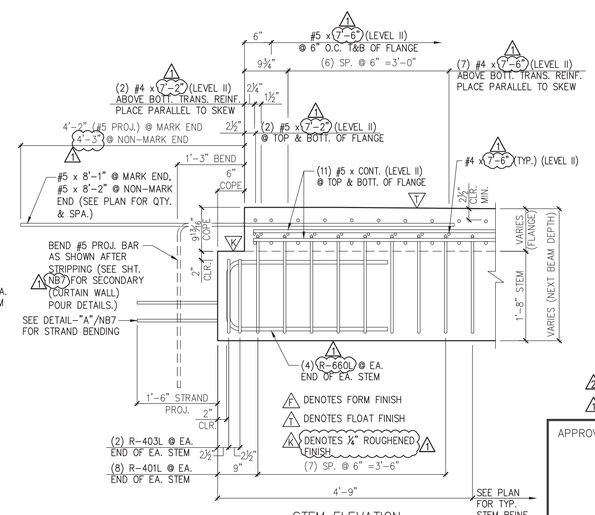
DETENSIONING SCHEDULE
N.T.S.



A NB6 DIMENSIONAL & REINFORCING SECTION
3/4" =1'-0"



STEM SECTION



STEM ELEVATION

B NB6 END BLOCK STEM REINFORCING DETAILS
3/4" =1'-0"

MARK:	R-NB3	QTY.: 1	WT.: 49.7 T	VOL.: 24.12 cy
TOTAL WITH CURTAIN WALLS –			WT.: 57.7 T	VOL.: 32.48 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	R-401L	#4 BENT BAR (LEVEL II, DUAL COATED)	160
2	R-402L	#4 BENT BAR (LEVEL II, DUAL COATED)	270
3	R-403L	#4 BENT BAR (LEVEL II, DUAL COATED)	8
4			
5		#4 x 7'-2" (LEVEL II, DUAL COATED)	4
6		#4 x 7'-6" (LEVEL II, DUAL COATED)	14
7			
8		#5 x 24'-0" (LEVEL II, DUAL COATED)	22
9		#5 x 46'-3" (LEVEL II, DUAL COATED)	22
10		#5 x 7'-2" (LEVEL II, DUAL COATED)	4
11		#5 x 7'-6" (LEVEL II, DUAL COATED)	268
12		#5 x 8'-1" (LEVEL II, DUAL COATED)	8
13		#5 x 8'-4" (LEVEL II, DUAL COATED)	8
14			
15			
16	R-660L	#6 BENT BAR (LEVEL II, DUAL COATED)	16

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

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BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

DATE: MAR. 14, 2014
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JOB NO: 23419-013
DWG. NO: NB6

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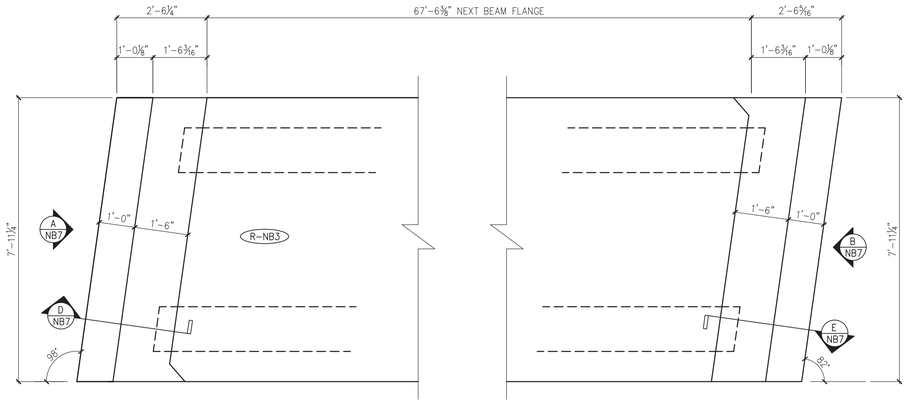
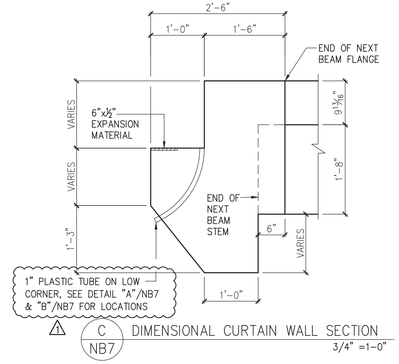
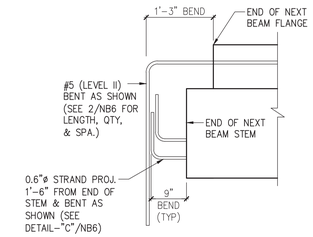


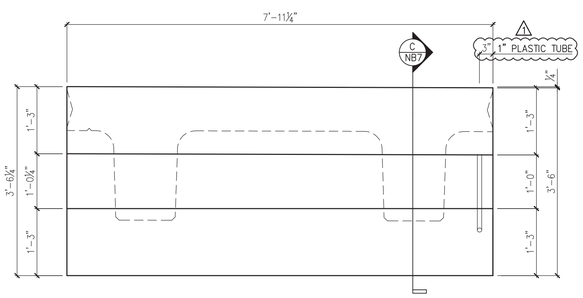
1 NB7 CURTAIN WALL PLAN VIEW IN FORM
(CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2" =1'-0"



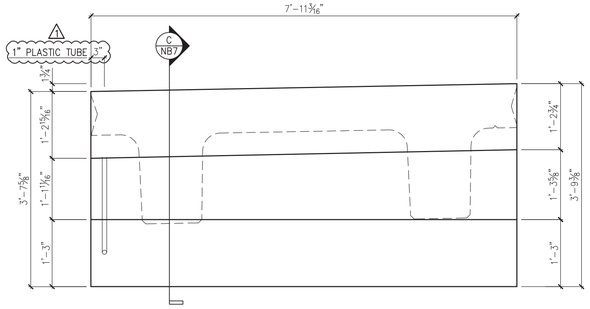
1 C NB7 DIMENSIONAL CURTAIN WALL SECTION
3/4" =1-0"



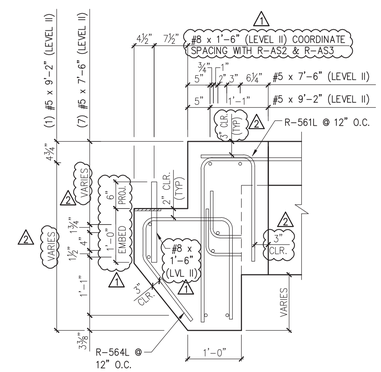
DETAIL "A" – END OF NEXT BEAM (TYP.)
(PRIOR TO CASTING CURTAIN WALL) 3/4" =1'-0"



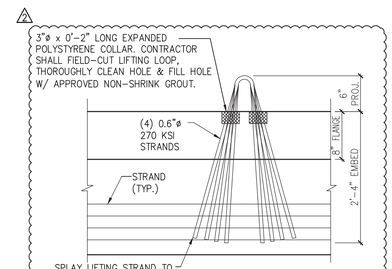
A NB7 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1-0"



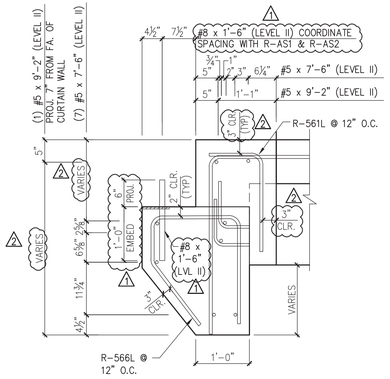
B NB7 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1-0"



D NB7 REINFORCING CURTAIN WALL SECTION
3/4" =1-0"



TYPICAL LIFTING AND HANDING DETAIL
SCALE: 1" =1'-0"
NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.



E NB7 REINFORCING CURTAIN WALL SECTION
3/4" =1-0"

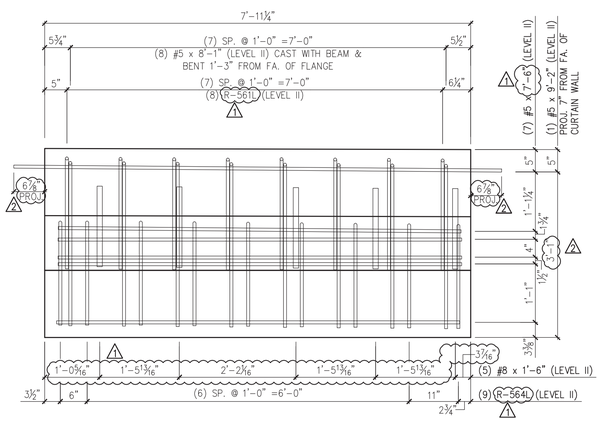
1 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

1

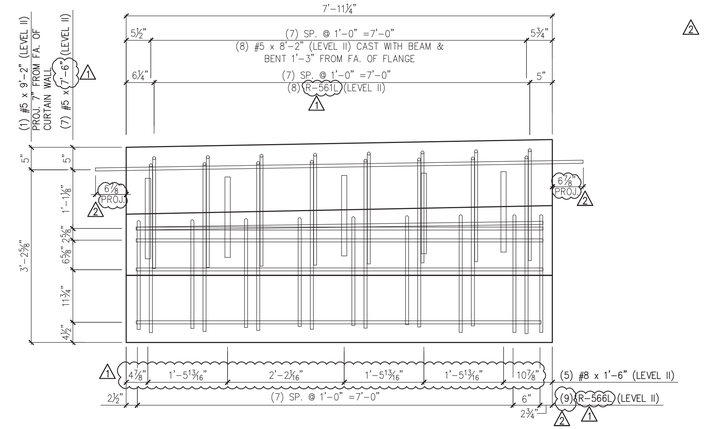
MARK: R-NB3	QTY.: 1	WT.: 7.9 T	VOL.: 3.88 cy

MATERIAL LIST / CURTAIN WALLS

ITEM	MARK	DESCRIPTION	QTY.
1			
2	1		
3	R-561L	#5 BENT BAR (LEVEL II, DUAL COATED)	16
4	R-564L	#5 BENT BAR (LEVEL II, DUAL COATED)	9
5	R-566L	#5 BENT BAR (LEVEL II, DUAL COATED)	9
6			
7		#5 x 7'-6" (LEVEL II, DUAL COATED)	14
8		#5 x 9'-2" (LEVEL II, DUAL COATED)	2
9			
10		#8 x 1'-6" (LEVEL II, DUAL COATED)	10
11			
12			
13		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4
14			
15	2	1" PLASTIC TUBE	2



A NB7 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1-0"



B NB7 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1-0"

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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: NB7

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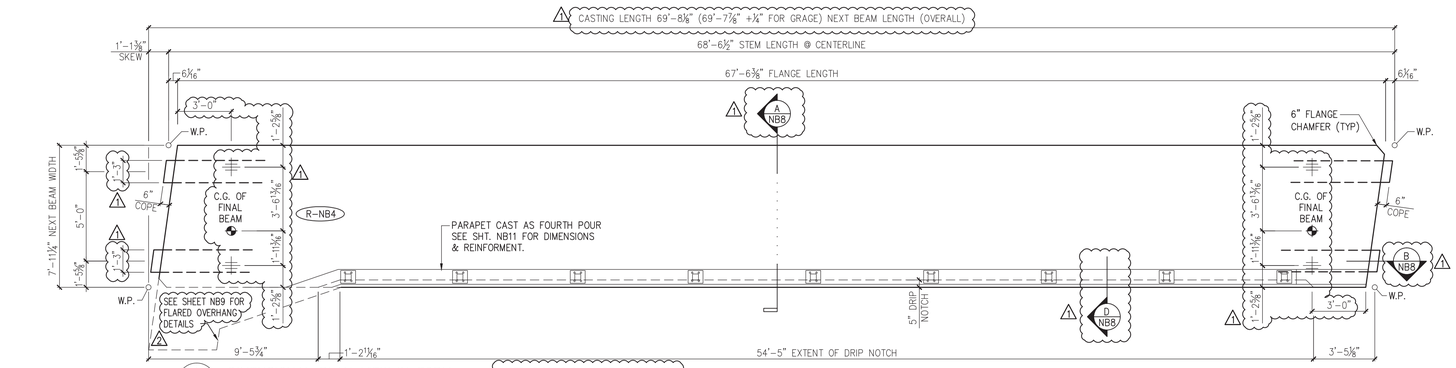
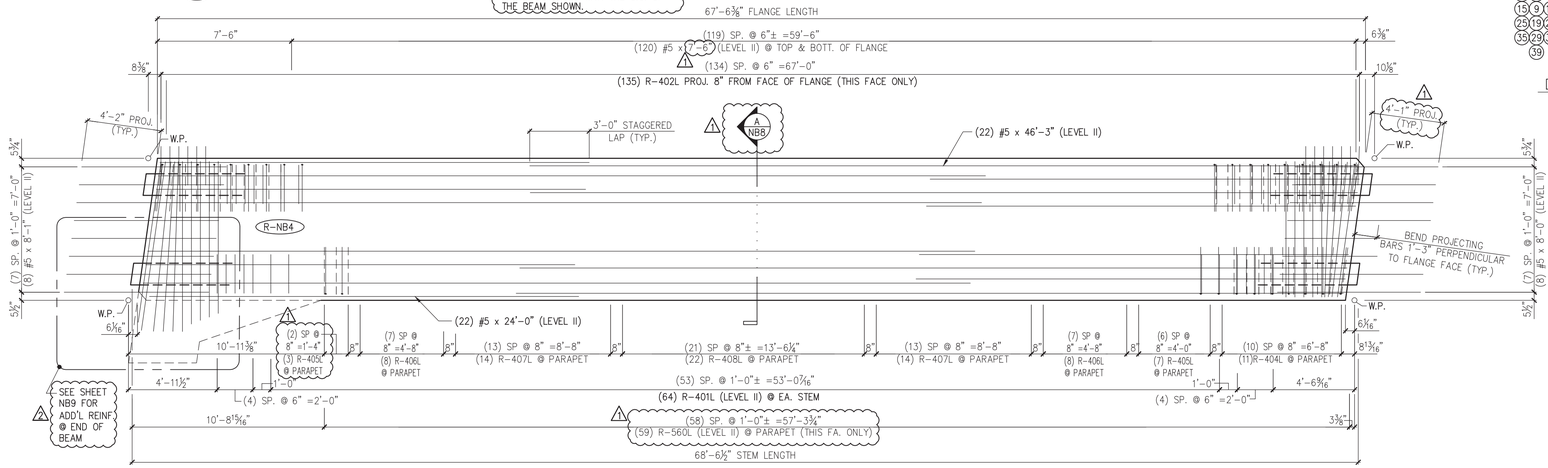
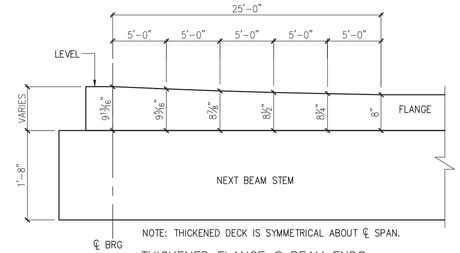


1 NB8 DIMENSIONAL PLAN VIEW IN FORM
1/4" =1'-0"

NOTE: RIGGING SHALL BE CONFIGURED SUCH THAT THE C.G. OF THE LIFTING FRAME COINCIDES WITH THE C.G. OF THE BEAM SHOWN.

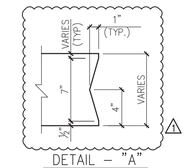


2 NB8 REINFORCING PLAN VIEW IN FORM
1/4" =1'-0"
ALL DIMENSIONS INDICATED ARE PARALLEL OR PERPENDICULAR TO ℄ OF STEMS U.N.O.

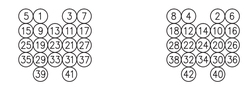


NOTE: THICKENED DECK IS SYMMETRICAL ABOUT ℄ SPAN.

THICKENED FLANGE @ BEAM ENDS
N.T.S.



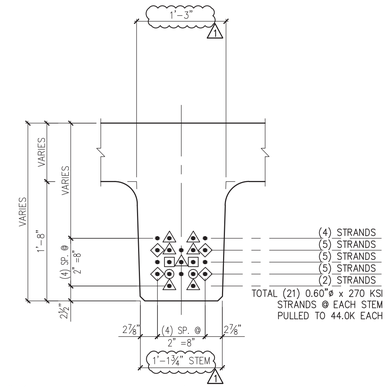
DETAIL – "A"
1 1/2" =1'-0"



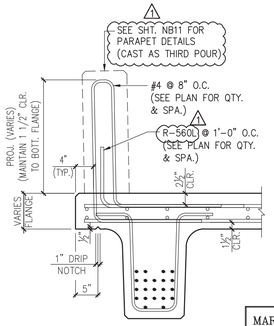
DETENSIONING SCHEDULE
N.T.S.

PRESTRESSING NOTATIONS

- ● DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- ◇ DENOTES STRAIGHT STRANDS TO PROJECT 1'-6" FROM EA. END OF EA. STEM
- △ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" 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 10'-0" FROM EA. END OF EA. STEM



DETAIL – "C" (STEM STRAND PATTERN)
1" =1'-0"

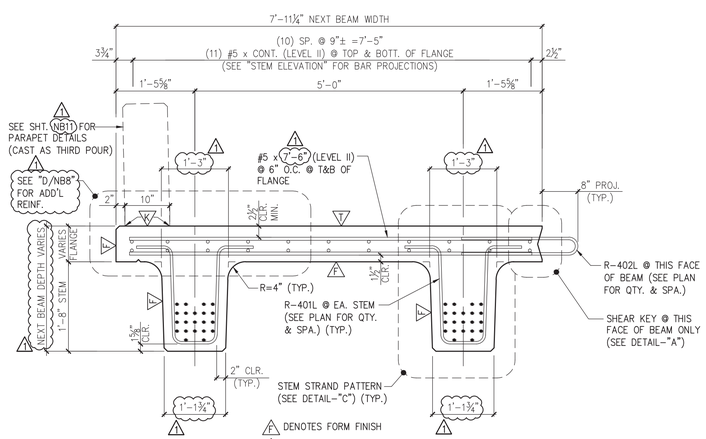


D NB8 REINFORCING @ PARAPET
3/4" =1'-0"

MARK:	R-NB4	QTY.:	1	WT.:	47.1 T	VOL.:	23.12 cy
TOTAL WITH CURTAIN WALLS & PARAPET – WT.:					71.6 T	VOL.:	35.20 cy

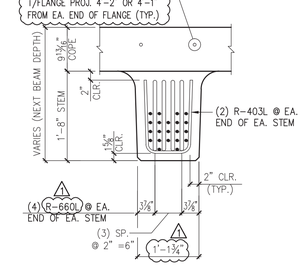
MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	R-401L	#4 BENT BAR (LEVEL II, DUAL COATED)	160
2	R-402L	#4 BENT BAR (LEVEL II, DUAL COATED)	135
3	R-403L	#4 BENT BAR (LEVEL II, DUAL COATED)	8
4	R-404L	#4 BENT BAR (LEVEL II, DUAL COATED)	11
5	R-405L	#4 BENT BAR (LEVEL II, DUAL COATED)	10
6	R-406L	#4 BENT BAR (LEVEL II, DUAL COATED)	16
7	R-407L	#4 BENT BAR (LEVEL II, DUAL COATED)	28
8	R-408L	#4 BENT BAR (LEVEL II, DUAL COATED)	22
9	R-560L	#5 BENT BAR (LEVEL II, DUAL COATED)	59
10			
11		#4 x 7'-2" (LEVEL II, DUAL COATED)	4
12		#4 x 7'-6" (LEVEL II, DUAL COATED)	14
13		#5 x 24'-0" (LEVEL II, DUAL COATED)	22
14		#5 x 46'-3" (LEVEL II, DUAL COATED)	22
15		#5 x 7'-2" (LEVEL II, DUAL COATED)	4
16		#5 x 7'-6" (LEVEL II, DUAL COATED)	240
17		#5 x 8'-0" (LEVEL II, DUAL COATED)	8
18		#5 x 8'-1" (LEVEL II, DUAL COATED)	8
19	R-660L	#6 BENT BAR (LEVEL II, DUAL COATED)	16

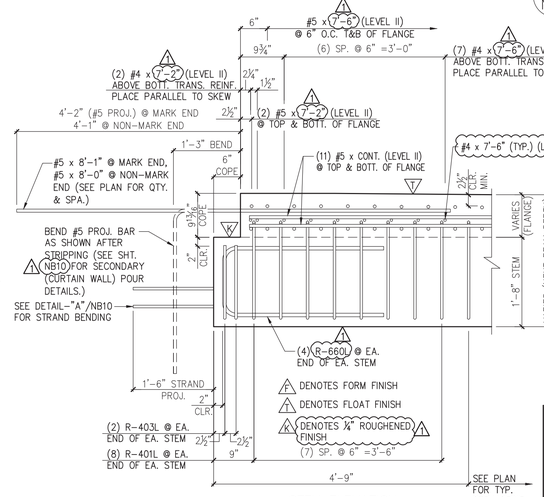


F DENOTES FORM FINISH
T DENOTES FLOAT FINISH
K DENOTES ¼" ROUGHENED FINISH

A NB8 DIMENSIONAL & REINFORCING SECTION
3/4" =1'-0"



STEM SECTION



F DENOTES FORM FINISH
T DENOTES FLOAT FINISH
K DENOTES ¼" ROUGHENED FINISH

STEM ELEVATION

B NB8 END BLOCK STEM REINFORCING DETAILS
3/4" =1'-0"

4/30/14 REVISE & RESUBMIT
4/11/14 REVISE & RESUBMIT

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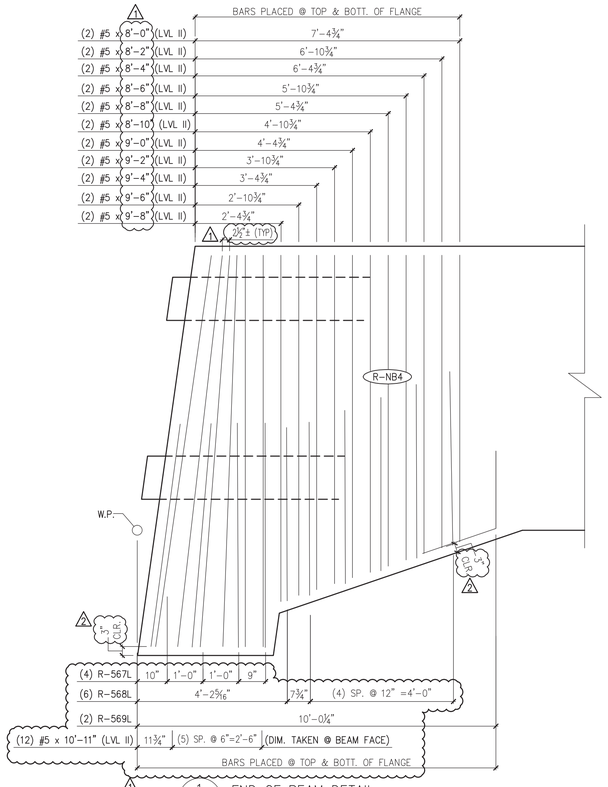
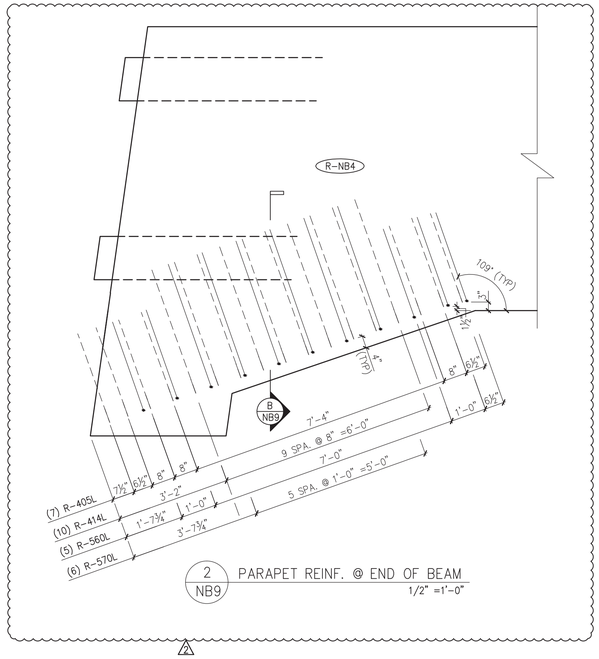
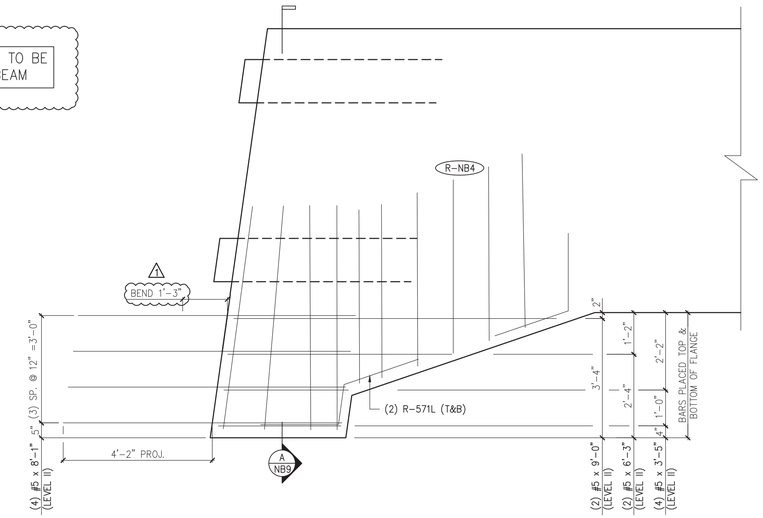


1 NB9 END OF BEAM DETAIL
1/2" =1'-0"



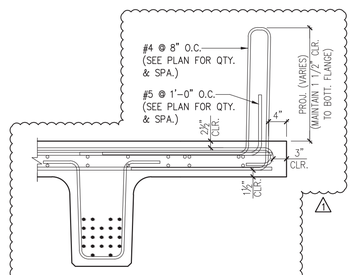
2 NB9 PARAPET REINF. @ END OF BEAM
1/2" =1'-0"

FLARED OVERHANG TO BE CAST WITH NEXT BEAM

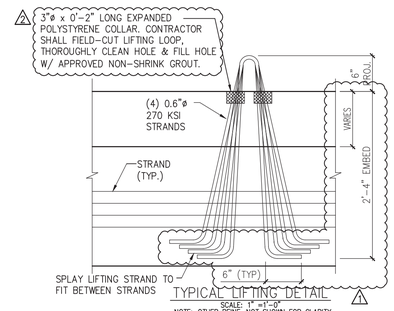


4 NB9 REINFORCING FLARED OVERHANG PLAN IN FORM
1/2" =1'-0"

NOTE: BARS DETAILED IN 1/NB9 & 2/NB9 NOT SHOWN FOR CLARITY.



B NB9 REINFORCING @ PARAPET
3/4" =1'-0"

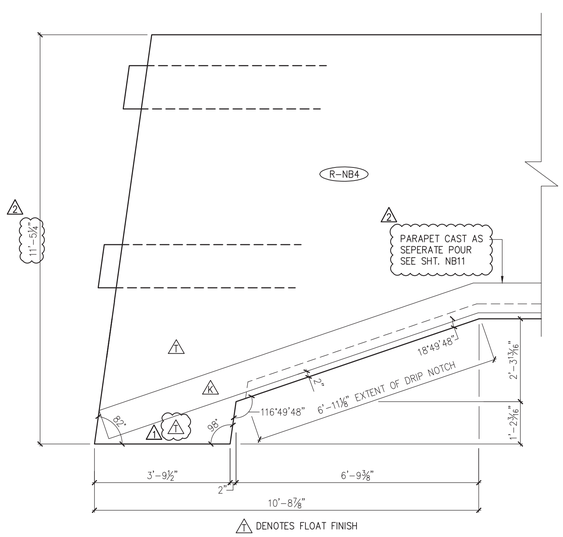


TYPICAL LIFTING DETAIL
SCALE 3"=1'-0"
NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.

MARK:	R-NB4	QTY.: 1	WT.: 1.3 T	VOL.: 0.64 cy

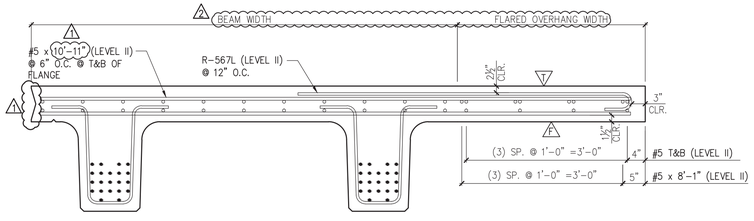
MATERIAL LIST / OVERHANG

ITEM	MARK	DESCRIPTION	QTY.
1	R-405L	#4 BENT BAR (LEVEL II, DUAL COATED)	7
2	R-414L	#4 BENT BAR (LEVEL II, DUAL COATED)	10
3			
4	R-560L	#5 BENT BAR (LEVEL II, DUAL COATED)	5
5	R-567L	#5 BENT BAR (LEVEL II, DUAL COATED)	4
6	R-568L	#5 BENT BAR (LEVEL II, DUAL COATED)	6
7	R-569L	#5 BENT BAR (LEVEL II, DUAL COATED)	2
8	R-570L	#5 BENT BAR (LEVEL II, DUAL COATED)	6
9	R-571L	#5 BENT BAR (LEVEL II, DUAL COATED)	2
10			
11		#5 x 3'-5" (LEVEL II, DUAL COATED)	4
12		#5 x 6'-3" (LEVEL II, DUAL COATED)	2
13		#5 x 8'-0" (LEVEL II, DUAL COATED)	2
14		#5 x 8'-1" (LEVEL II, DUAL COATED)	4
15		#5 x 8'-2" (LEVEL II, DUAL COATED)	2
16		#5 x 8'-4" (LEVEL II, DUAL COATED)	2
17		#5 x 8'-6" (LEVEL II, DUAL COATED)	2
18		#5 x 8'-8" (LEVEL II, DUAL COATED)	2
19		#5 x 8'-10" (LEVEL II, DUAL COATED)	2
20		#5 x 9'-0" (LEVEL II, DUAL COATED)	4
21		#5 x 9'-2" (LEVEL II, DUAL COATED)	2
22		#5 x 9'-4" (LEVEL II, DUAL COATED)	2
23		#5 x 9'-6" (LEVEL II, DUAL COATED)	2
24		#5 x 9'-8" (LEVEL II, DUAL COATED)	2
25		#5 x 10'-11" (LEVEL II, DUAL COATED)	12
26			
27	2	SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4



1 DENOTES FLOAT FINISH
2 DENOTES ¼" ROUGHENED FINISH

3 NB9 DIMENSIONAL FLARED OVERHANG PLAN IN FORM
1/2" =1'-0"



2 DENOTES FORM FINISH
1 DENOTES FLOAT FINISH

A NB9 DIMENSIONAL & REINFORCING SECTION
3/4" =1'-0"

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

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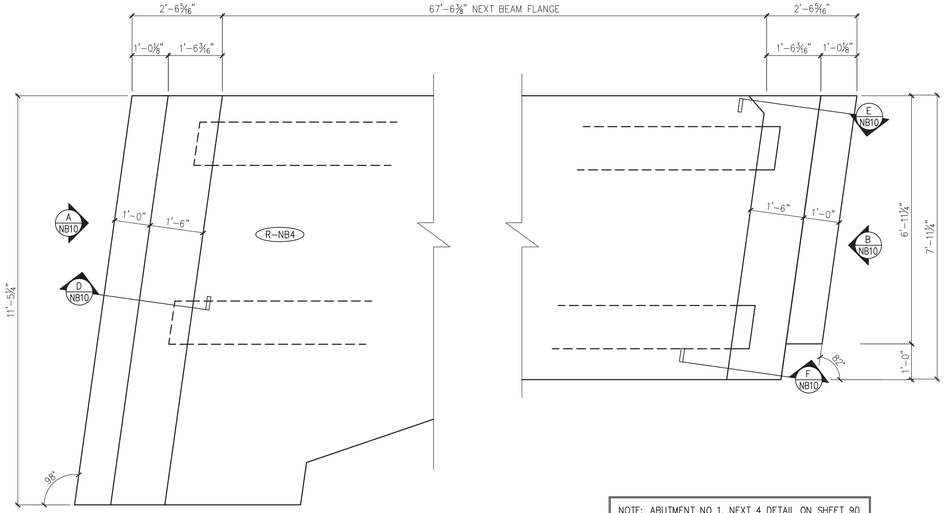
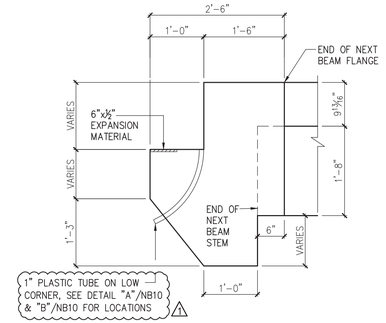
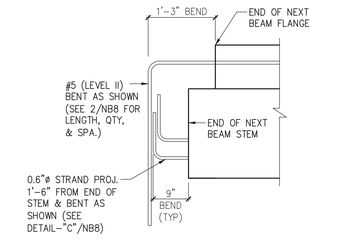


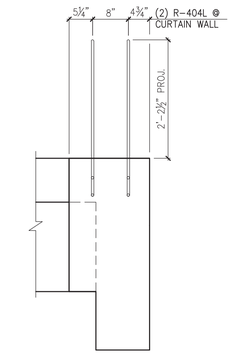
1 NB10 CURTAIN WALL PLAN VIEW IN FORM
(CAST AS SECONDARY POUR, AFTER DETENSIONING) 1/2" =1'-0"



C NB10 DIMENSIONAL CURTAIN WALL SECTION
3/4" =1'-0"



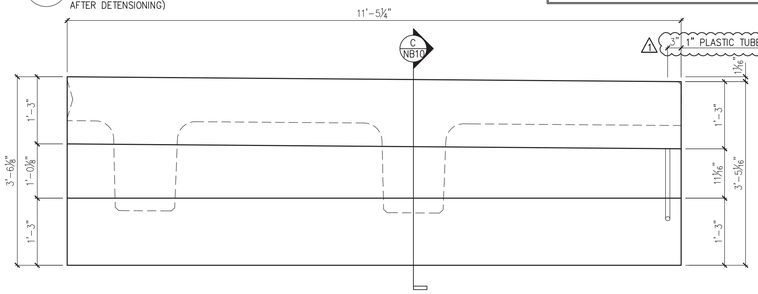
DETAIL "A" – END OF NEXT BEAM (TYP.)
(PRIOR TO CASTING CURTAIN WALL) 3/4" =1'-0"



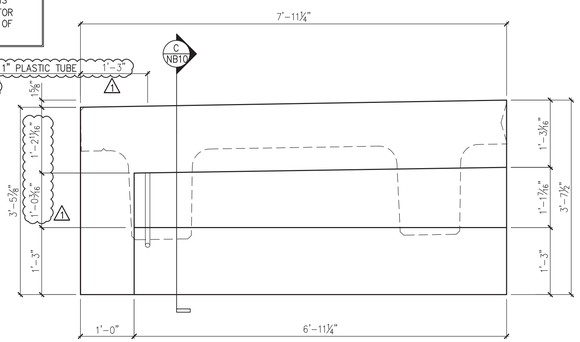
F NB10 CURTAIN WALL SECTION
3/4" =1'-0"

NOTE: OTHER REINF. NOT SHOWN FOR CLARITY.

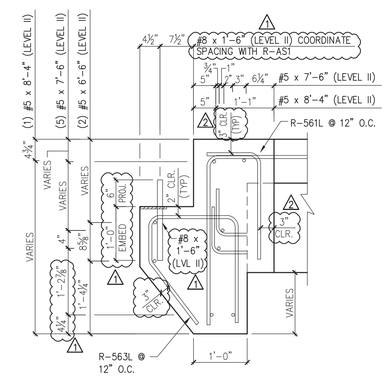
NOTE: ABUTMENT NO 1, NEXT 4 DETAIL ON SHEET 90 OF 238 OF CONTRACT DWGS APPEARS TO BE SHOWING THE INCORRECT ELEVATIONS (SLOPE IS DRAWN IN OPPOSITE DIRECTION). DIMENSIONS FOR CURTAIN WALL CALCULATED BASED ON SLOPE OF BRIDGE.



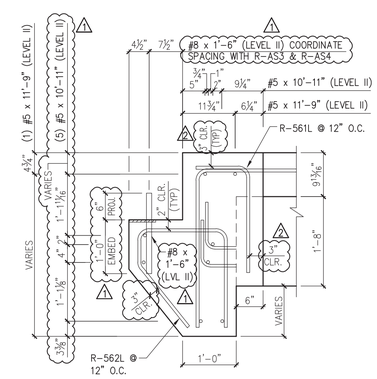
A NB10 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1'-0"



B NB10 DIMENSIONAL CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1'-0"



E NB10 REINFORCING CURTAIN WALL SECTION
3/4" =1'-0"

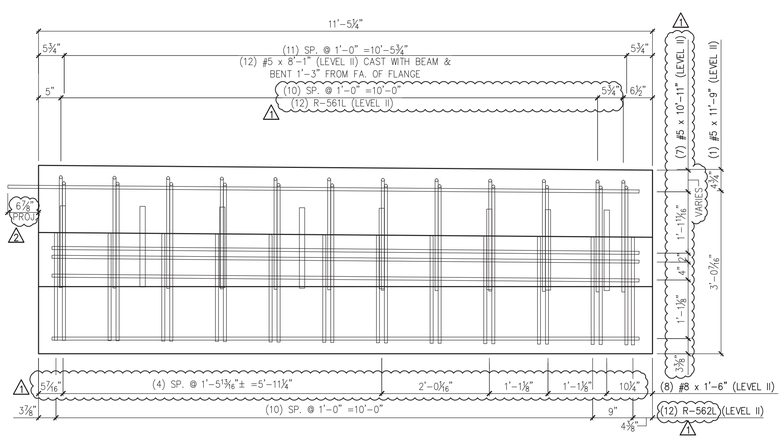


D NB10 REINFORCING CURTAIN WALL SECTION
3/4" =1'-0"

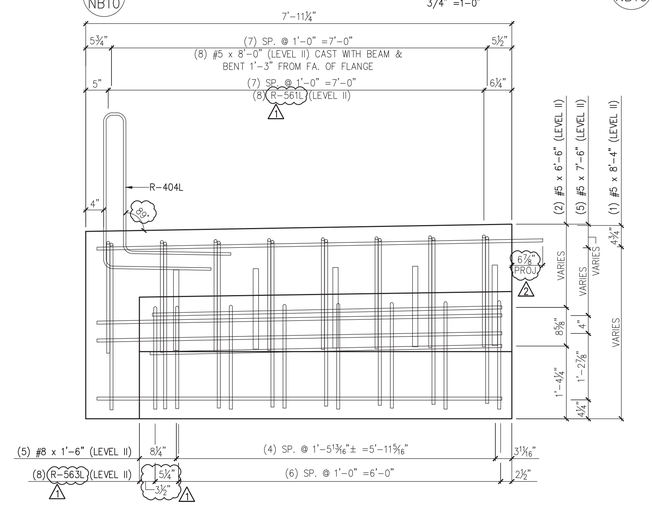
MARK:	R-NB4	QTY.: 1	WT.: 9.3 T	VOL.: 4.59 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	R-404L	#4 BENT BAR (LEVEL II, DUAL COATED)	2
2			
3	R-561L	#5 BENT BAR (LEVEL II, DUAL COATED)	20
4	R-562L	#5 BENT BAR (LEVEL II, DUAL COATED)	12
5	R-563L	#5 BENT BAR (LEVEL II, DUAL COATED)	8
6			
7		#5 x 6'-6" (LEVEL II, DUAL COATED)	2
8		#5 x 7'-6" (LEVEL II, DUAL COATED)	5
9		#5 x 8'-4" (LEVEL II, DUAL COATED)	1
10		#5 x 10'-11" (LEVEL II, DUAL COATED)	7
11		#5 x 11'-9" (LEVEL II, DUAL COATED)	1
12			
13		#8 x 1'-6" (LEVEL II, DUAL COATED)	13
14			
15		1" PLASTIC TUBE	2



A NB10 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #1
3/4" =1'-0"



B NB10 REINFORCING CURTAIN WALL ELEVATION @ ABUT. #2
3/4" =1'-0"

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

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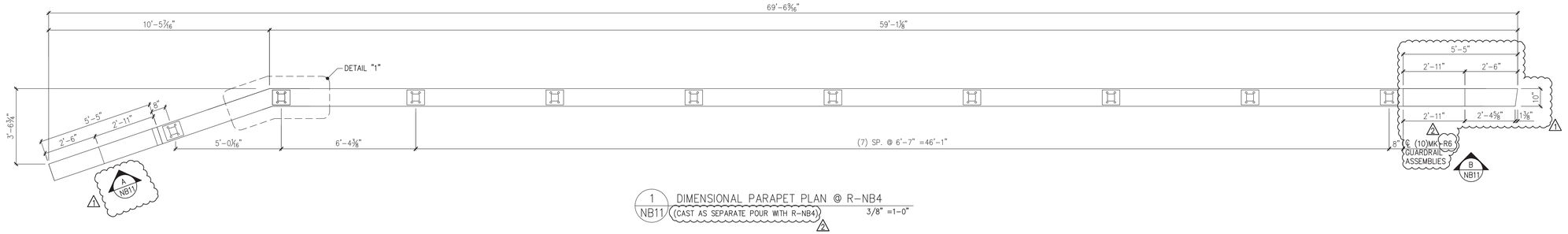
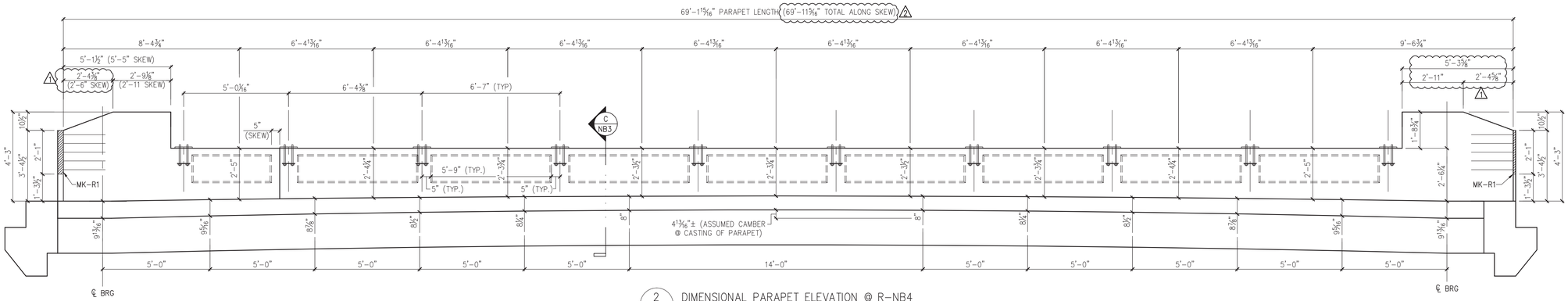
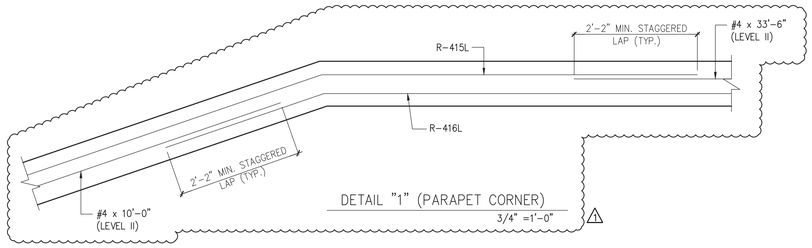


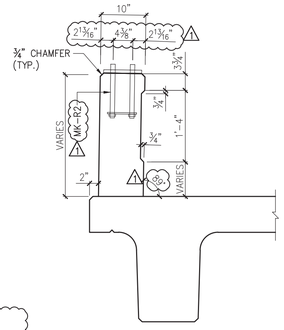
1 NB11 DIMENSIONAL PARAPET PLAN @ R-NB4
(CAST AS SEPARATE POUR WITH R-NB4) 2
3/8" =1-0"



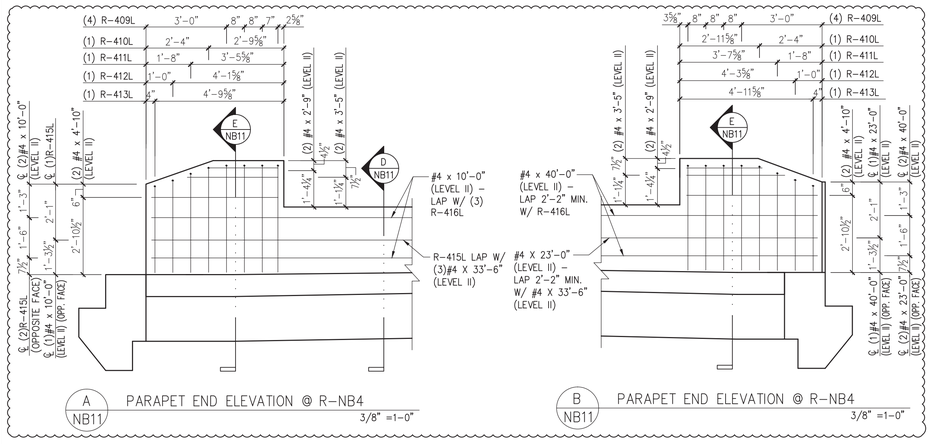
2 NB11 DIMENSIONAL PARAPET ELEVATION @ R-NB4
(CAST AS SEPARATE POUR WITH R-NB4) 2
3/8" =1-0"



DETAIL "1" (PARAPET CORNER)
3/4" =1'-0" 1

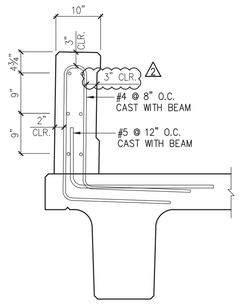


C NB11 DIMENSIONAL PARAPET SECTION
3/4" =1'-0"

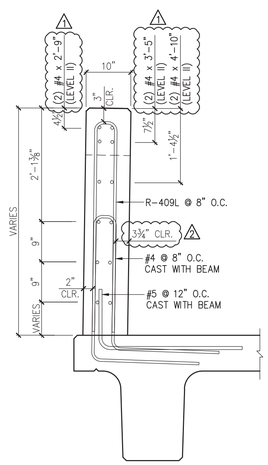


A NB11 PARAPET END ELEVATION @ R-NB4
3/8" =1-0"

B NB11 PARAPET END ELEVATION @ R-NB4
3/8" =1-0"



D NB11 REINFORCING @ PARAPET
3/4" =1'-0"



E NB11 REINFORCING @ PARAPET
3/4" =1'-0"

MARK:	R-NB4	QTY.: 1	WT.: 11.4 T	VOL.: 5.30 cy

MATERIAL LIST / PARAPET

ITEM	MARK	DESCRIPTION	QTY.
1	R-409L	#4 BENT BAR (LEVEL II, DUAL COATED)	8
2	R-410L	#4 BENT BAR (LEVEL II, DUAL COATED)	2
3	R-411L	#4 BENT BAR (LEVEL II, DUAL COATED)	2
4	R-412L	#4 BENT BAR (LEVEL II, DUAL COATED)	2
5	R-413L	#4 BENT BAR (LEVEL II, DUAL COATED)	2
6	R-415L	#4 BENT BAR (LEVEL II, DUAL COATED)	3
7	R-416L	#4 BENT BAR (LEVEL II, DUAL COATED)	3
8			
9	1	#4 x 2'-9" (LEVEL II, DUAL COATED)	4
10		#4 x 3'-5" (LEVEL II, DUAL COATED)	4
11		#4 x 4'-10" (LEVEL II, DUAL COATED)	4
12		#4 x 10'-0" (LEVEL II, DUAL COATED)	3
13		#4 x 23'-0" (LEVEL II, DUAL COATED)	3
14		#4 x 33'-6" (LEVEL II, DUAL COATED)	3
15		#4 x 40'-0" (LEVEL II, DUAL COATED)	3
16			
17	MK-R1	⅊ 10"x½"x2'-1" LONG STEEL ANCHOR PLATE	2
18	MK-R6	GUARDRAIL ASSEMBLY (SUPPLIED BY CONTR. AND INSTALLED BY CARRERA)	10 1

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

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

W.M. SHULTZ CONSTRUCTION, INC.
PO BOX 2620
BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: NB11

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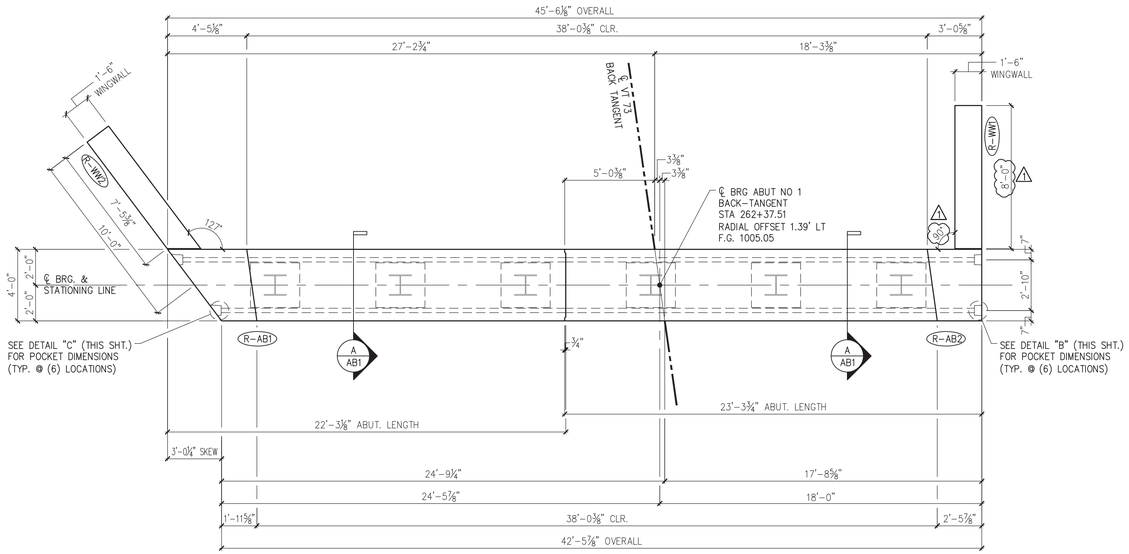
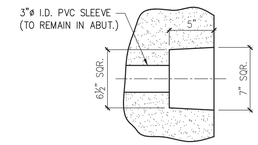
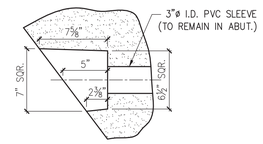


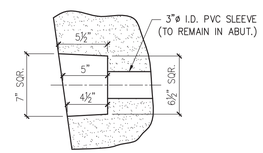
1 / AB1 ABUTMENT ASSEMBLY PLAN
1/4" =1'-0"



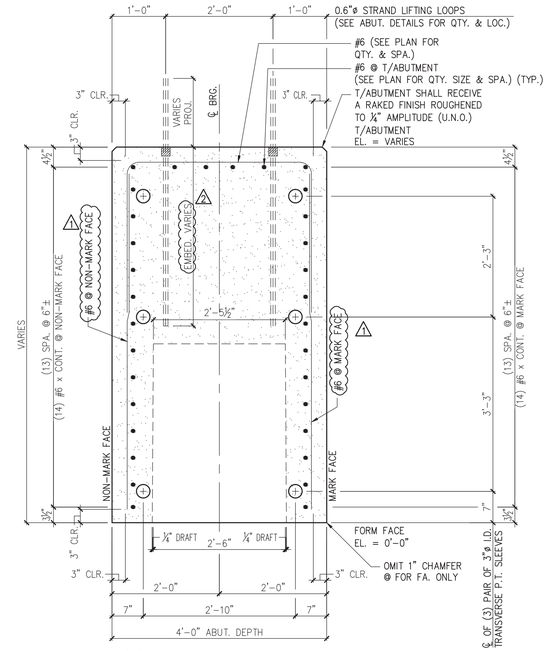
DETAIL – "B"
1 1/2" =1'-0"



DETAIL – "C"
1 1/2" =1'-0"

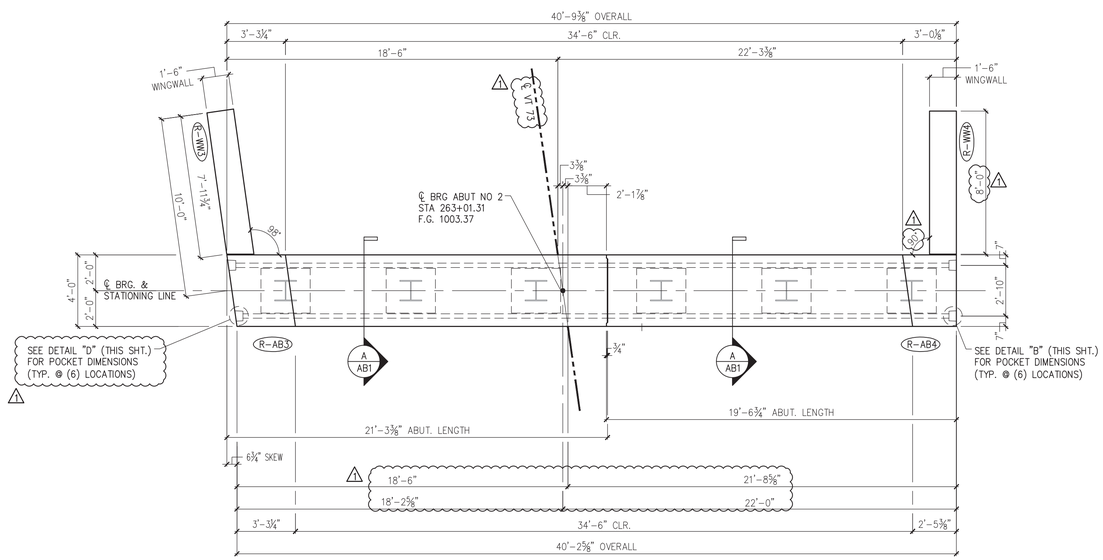


DETAIL – "D"
1 1/2" =1'-0"



A / AB1 ABUTMENT SECTION
3/4" =1'-0"

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



2 / AB1 ABUTMENT ASSEMBLY PLAN
1/4" =1'-0"

4/30/14 REVISE & RESUBMIT
4/11/14 REVISE & RESUBMIT

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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

DATE: MAR. 14, 2014
SCALE: NOTED

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013

PRECAST ABUTMENT
PLAN, SECTION & DETAILS

DWG. NO: AB1

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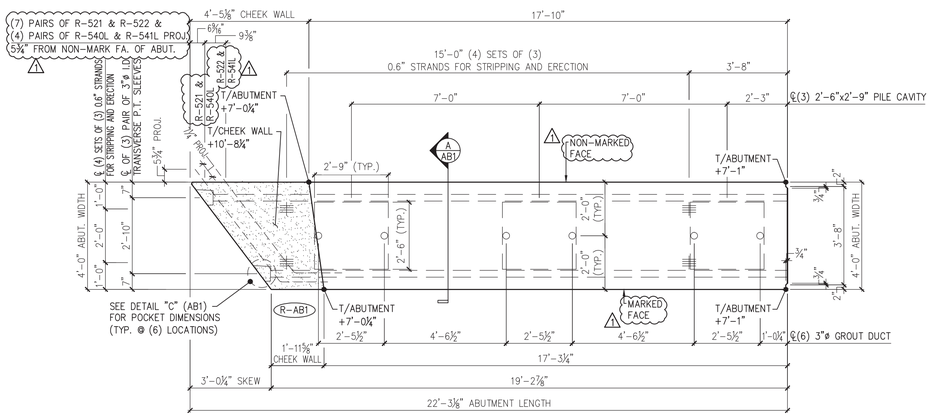
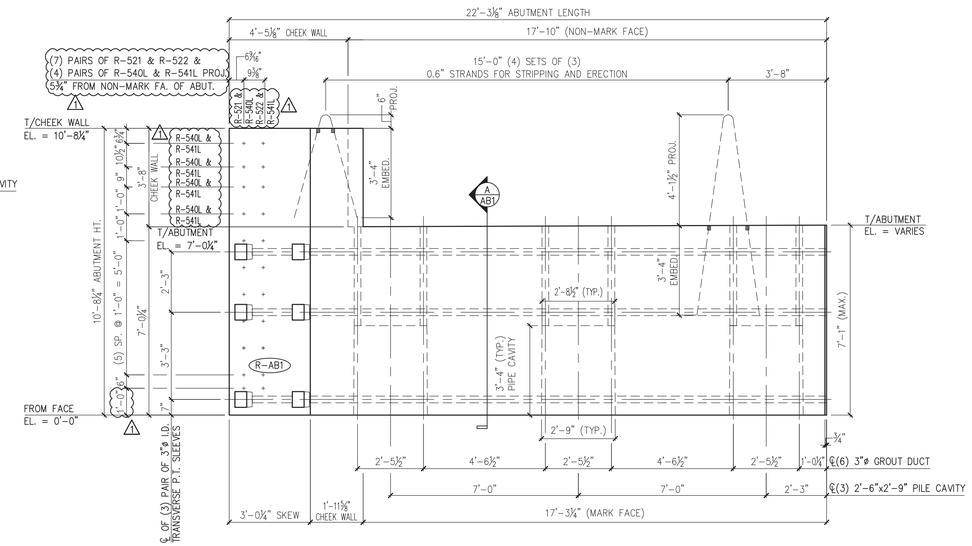
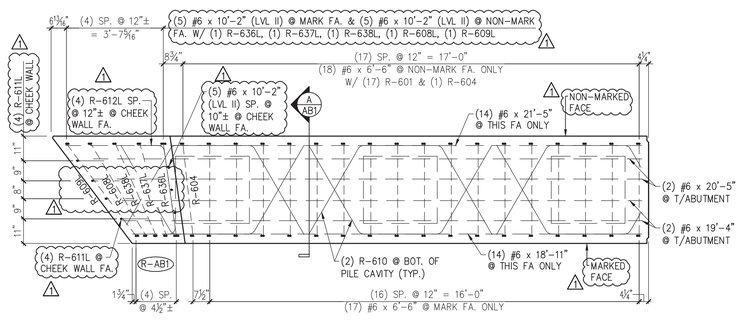


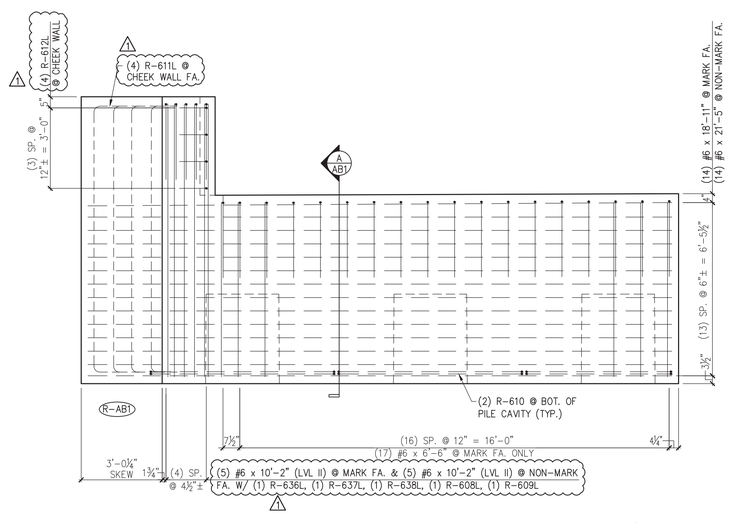
1 / AB2 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"



2 / AB2 ABUTMENT DIMENSIONAL MARK FACE ELEVATION
3/8" =1'-0"



3 / AB2 ABUTMENT REINFORCING PLAN VIEW IN FORM
3/8" =1'-0"



4 / AB2 ABUTMENT REINFORCING MARK FACE ELEV.
3/8" =1'-0"

MARK: R-AB1	QTY.: 1	WT.: 42.7 T	VOL.: 23.4 cy

MATERIAL LIST / ABUTMENT

ITEM	MARK	DESCRIPTION	QTY.
1	R-521	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	7
2	R-522	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	7
3	R-540L	#5 BENT BAR (LEVEL II, DUAL COATED)	4
4	R-541L	#5 BENT BAR (LEVEL II, DUAL COATED)	4
5			
6			
7			
8			
9			
10	R-601	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	17
11	R-604	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
12	R-608L	#6 BENT BAR (LEVEL II, DUAL COATED)	1
13	R-609L	#6 BENT BAR (LEVEL II, DUAL COATED)	1
14	R-610	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	6
15	R-611L	#6 BENT BAR (LEVEL II, DUAL COATED)	4
16	R-612L	#6 BENT BAR (LEVEL II, DUAL COATED)	4
17	R-636L	#6 BENT BAR (LEVEL II, DUAL COATED)	1
18	R-637L	#6 BENT BAR (LEVEL II, DUAL COATED)	1
19	R-638L	#6 BENT BAR (LEVEL II, DUAL COATED)	1
20			
21		#6 x 6'-6" (LEVEL I, BLACK REINFORCEMENT)	35
22		#6 x 10'-2" (LEVEL II, DUAL COATED)	15
23		#6 x 18'-11" (LEVEL I, BLACK REINFORCEMENT)	14
24		#6 x 19'-4" (LEVEL I, BLACK REINFORCEMENT)	2
25		#6 x 20'-5" (LEVEL I, BLACK REINFORCEMENT)	2
26		#6 x 21'-5" (LEVEL I, BLACK REINFORCEMENT)	14
27			
28		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST ABUTMENT DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: AB2

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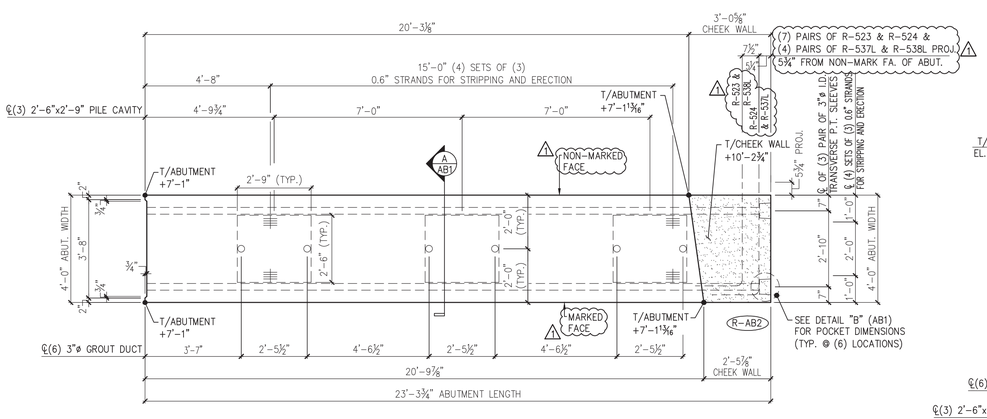
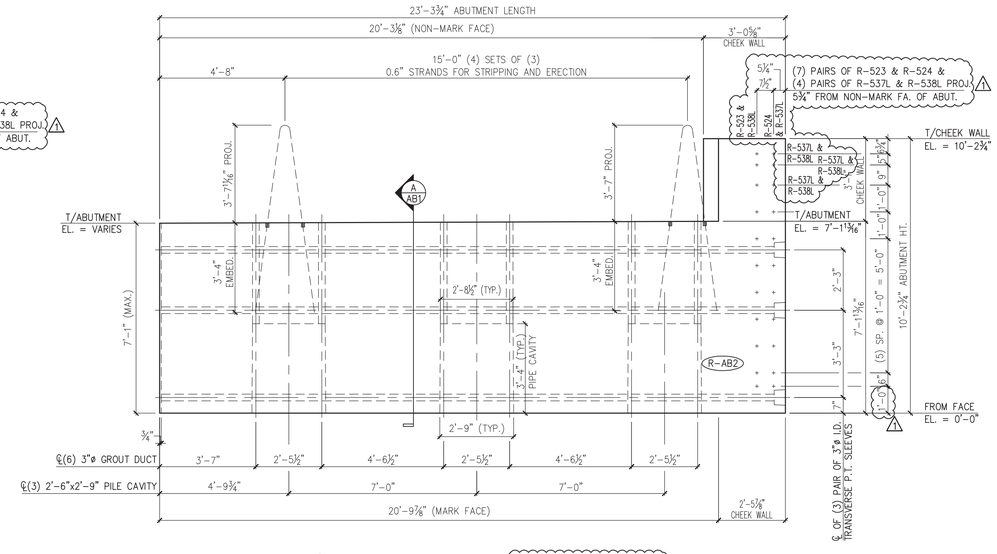
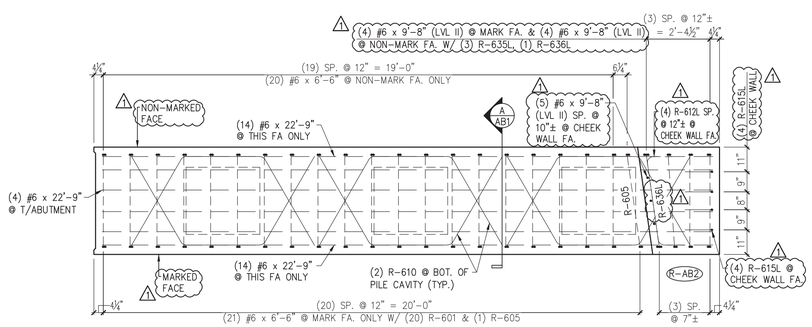


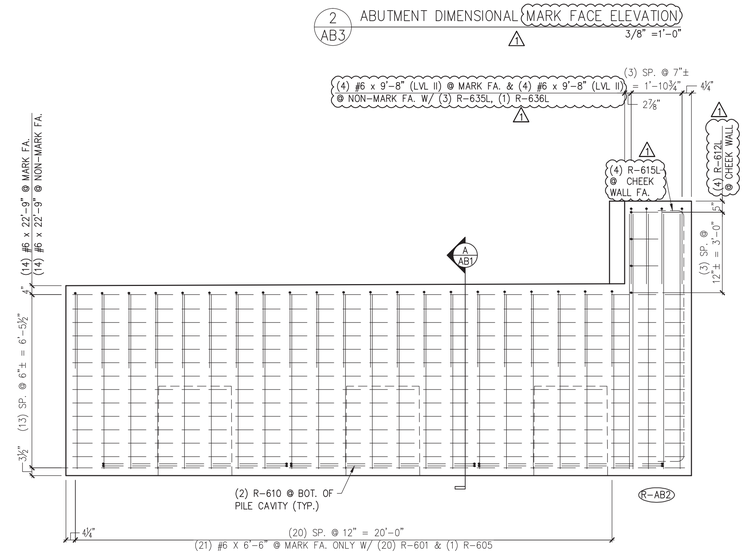
1 AB3 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"



2 AB3 ABUTMENT DIMENSIONAL MARK FACE ELEVATION
3/8" =1'-0"



3 AB3 ABUTMENT REINFORCING PLAN VIEW IN FORM
3/8" =1'-0"



4 AB3 ABUTMENT REINFORCING MARK FACE ELEV.
3/8" =1'-0"

MARK: R-AB2	QTY.: 1	WT.: 47.6 T	VOL.: 25.79 cy

MATERIAL LIST / ABUTMENT

ITEM	MARK	DESCRIPTION	QTY.
1	R-523	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1 7
2	R-524	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	7
3	R-537L	#5 BENT BAR (LEVEL II, DUAL COATED)	4 1
4	R-538L	#5 BENT BAR (LEVEL II, DUAL COATED)	4
5			
6	R-601	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	20 1
7	R-605	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
8	R-610	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	6
9	R-612L	#6 BENT BAR (LEVEL II, DUAL COATED)	4
10	R-615L	#6 BENT BAR (LEVEL II, DUAL COATED)	4
11	R-635L	#6 BENT BAR (LEVEL II, DUAL COATED)	3 1
12	R-636L	#6 BENT BAR (LEVEL II, DUAL COATED)	1
13			
14			
15			
16			
17		#6 x 6'-6" (LEVEL I, BLACK REINFORCEMENT)	1 42
18	1	#6 x 9'-8" (LEVEL II, DUAL COATED)	13
19		#6 x 22'-9" (LEVEL I, BLACK REINFORCEMENT)	32
20			
21		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4
22			

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST ABUTMENT DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JJJ/KLT
JOB NO: 23419-013
DWG. NO: AB3

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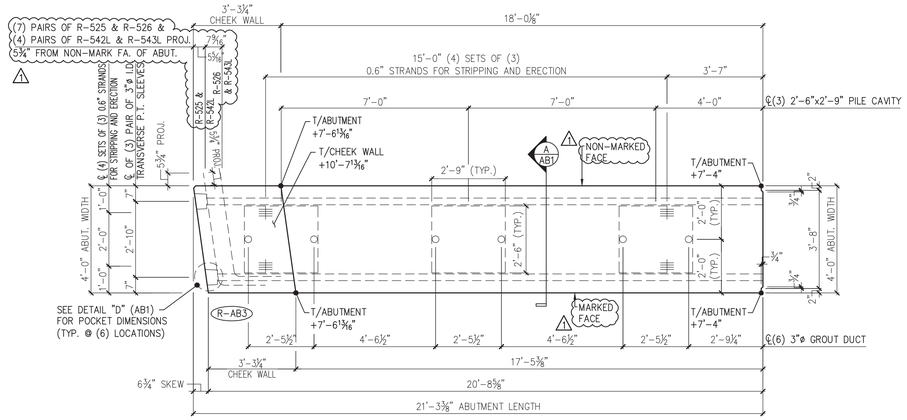
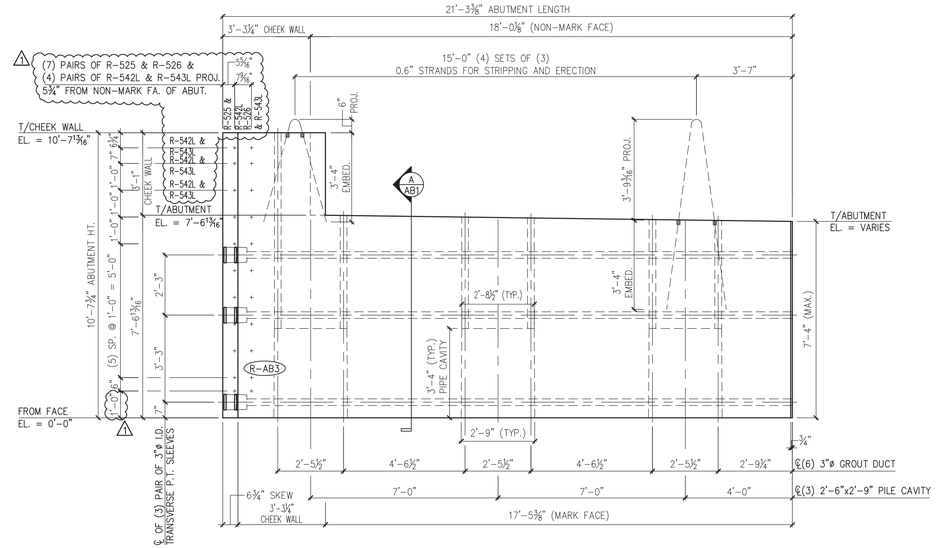
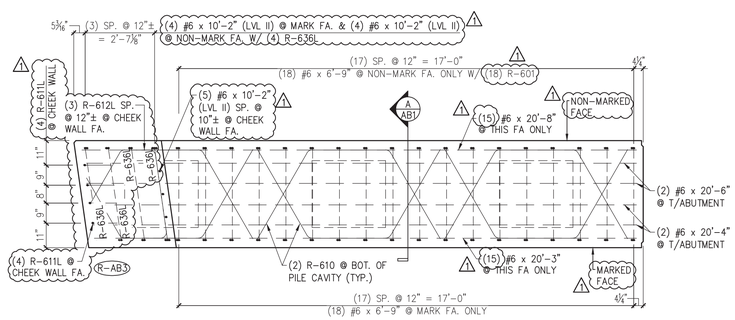


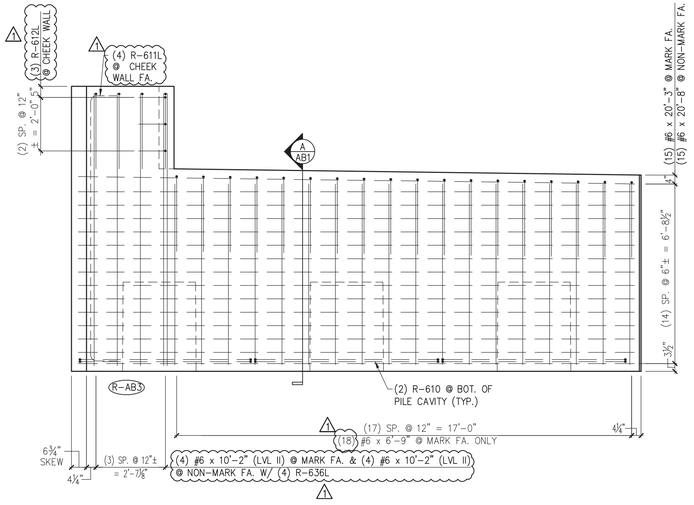
1 / AB4 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"



2 / AB4 ABUTMENT DIMENSIONAL MARK FACE ELEVATION
3/8" =1'-0"



3 / AB4 ABUTMENT REINFORCING PLAN VIEW IN FORM
3/8" =1'-0"



4 / AB4 ABUTMENT REINFORCING MARK FACE ELEV.
3/8" =1'-0"

MARK:	R-AB3	QTY.: 1	WT.: 45.4 T	VOL.: 24.74 cy

MATERIAL LIST / ABUTMENT

ITEM	MARK	DESCRIPTION	QTY.
1	R-525	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	7
2	R-526	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	7
3	R-542L	#5 BENT BAR (LEVEL II, DUAL COATED)	4
4	R-543L	#5 BENT BAR (LEVEL II, DUAL COATED)	4
5			
6			
7	R-601	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	18
8	R-610	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	6
9	R-611L	#6 BENT BAR (LEVEL II, DUAL COATED)	4
10	R-612L	#6 BENT BAR (LEVEL II, DUAL COATED)	3
11	R-636L	#6 BENT BAR (LEVEL II, DUAL COATED)	4
12			
13			
14			
15		#6 x 6'-9" (LEVEL I, BLACK REINFORCEMENT)	36
16		#6 x 10'-2" (LEVEL II, DUAL COATED)	13
17		#6 x 20'-3" (LEVEL I, BLACK REINFORCEMENT)	15
18		#6 x 20'-4" (LEVEL I, BLACK REINFORCEMENT)	2
19		#6 x 20'-6" (LEVEL I, BLACK REINFORCEMENT)	2
20		#6 x 20'-8" (LEVEL I, BLACK REINFORCEMENT)	15
		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

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BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

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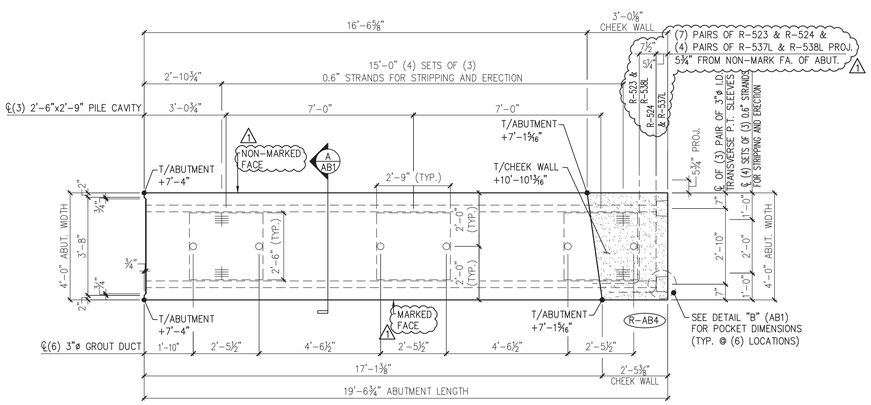
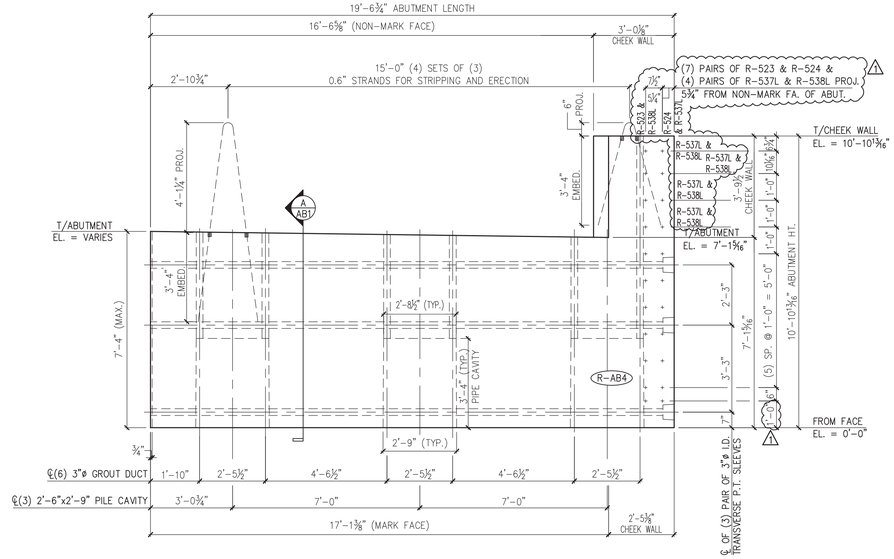
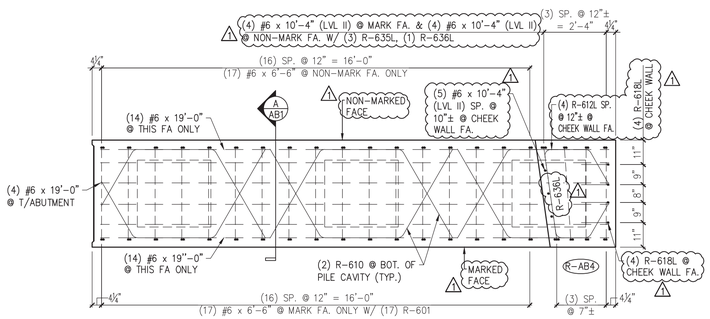


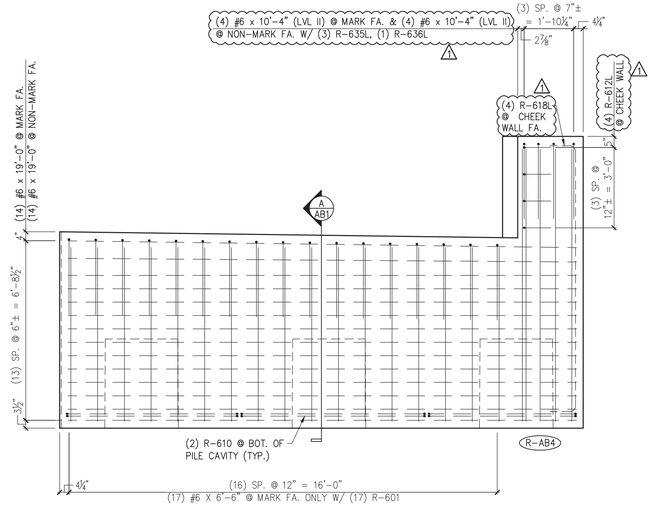
1 AB5 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
3/8" =1'-0"



2 AB5 ABUTMENT DIMENSIONAL MARK FACE ELEVATION
3/8" =1'-0"



3 AB5 ABUTMENT REINFORCING PLAN VIEW IN FORM
3/8" =1'-0"



4 AB5 ABUTMENT REINFORCING MARK FACE ELEV.
3/8" =1'-0"

MARK: R-AB4	QTY.: 1	WT.: 40.6 T	VOL.: 22.34 cy

MATERIAL LIST / ABUTMENT

ITEM	MARK	DESCRIPTION	QTY.
1	R-523	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	7
2	R-524	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	7
3	R-537L	#5 BENT BAR (LEVEL II, DUAL COATED)	4
4	R-538L	#5 BENT BAR (LEVEL II, DUAL COATED)	4
5			
6			
7	R-601	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	17
8	R-610	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	6
9	R-612L	#6 BENT BAR (LEVEL II, DUAL COATED)	4
10	R-618L	#6 BENT BAR (LEVEL II, DUAL COATED)	4
11	R-635L	#6 BENT BAR (LEVEL II, DUAL COATED)	1
12	R-636L	#6 BENT BAR (LEVEL II, DUAL COATED)	3
13			
14			
15		#6 x 6'-6" (LEVEL I, BLACK REINFORCEMENT)	34
16		#6 x 10'-4" (LEVEL II, DUAL COATED)	13
17		#6 x 19'-0" (LEVEL I, BLACK REINFORCEMENT)	32
18			
19		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	4
20			

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

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PO BOX 2620
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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST ABUTMENT DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JJ/KLT
JOB NO: 23419-013
DWG. NO: AB5

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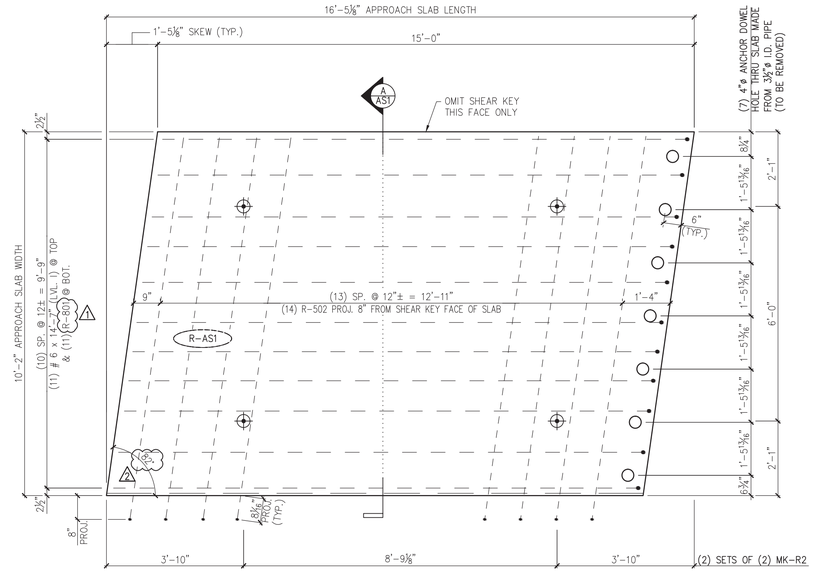
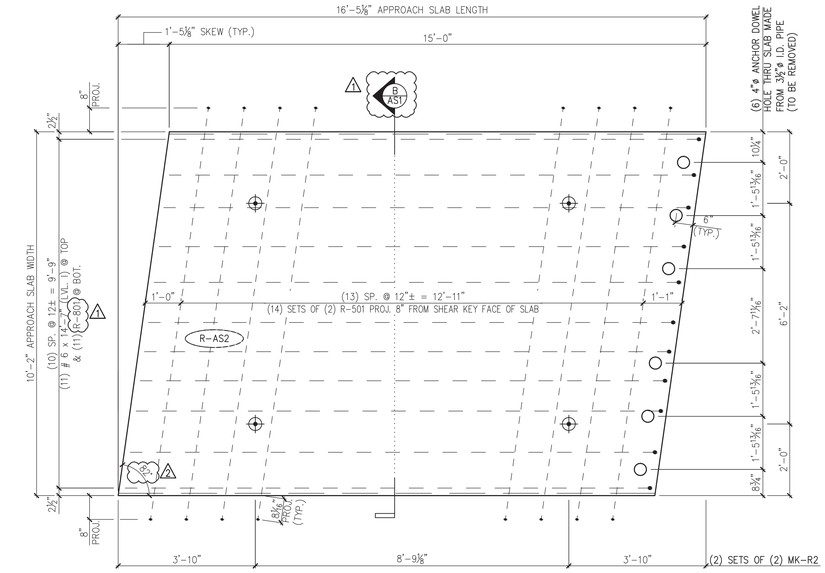
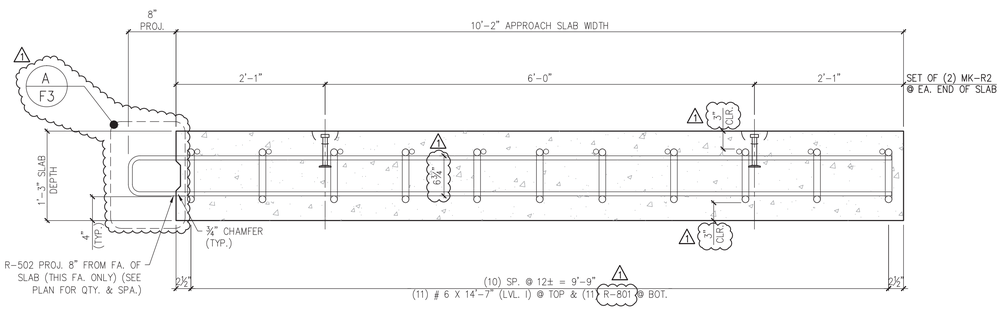


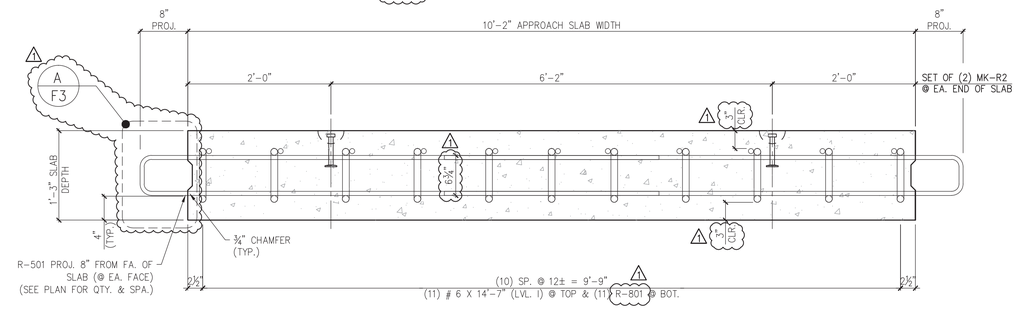
1 AS1 PLAN IN VIEW FORM
1/2" =1'-0"



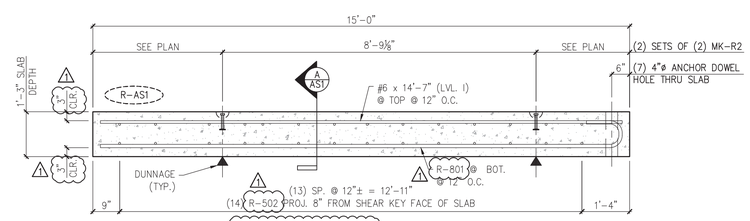
3 AS2 PLAN IN VIEW FORM
1/2" =1'-0"



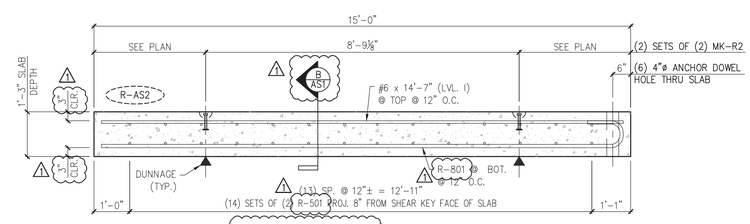
A AS1 APPROACH SLAB SECTION
1" = 1'-0"



B AS1 APPROACH SLAB SECTION
1" = 1'-0"



2 AS1 ELEVATION
1/2" = 1'-0"



4 AS1 ELEVATION
1/2" = 1'-0"

△2 4/30/14 REVISE & RESUBMIT
△1 4/11/14 REVISE & RESUBMIT

MARK:	R-AS1	QTY.: 2	WT.: 14.3 T	VOL.: 6.99 cy
MARK:	R-AS2	QTY.: 2	WT.: 14.3 T	VOL.: 7.04 cy

MATERIAL LIST / APPROACH SLAB

ITEM	MARK	DESCRIPTION	QTY./WING WALL R-AS1	QTY./WING WALL R-AS2
1	R-501	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	0	28
2	R-502	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	14	0
3	△1			
4		#6 x 14'-7" (LEVEL I, BLACK REINFORCEMENT)	11	11
5	△2			
6	R-801	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	11	11
7				
8	MK-R2	4T x 7 1/2" SWIFT LIFT LIFTER	4	4

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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST APPROACH SLAB DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: AS1

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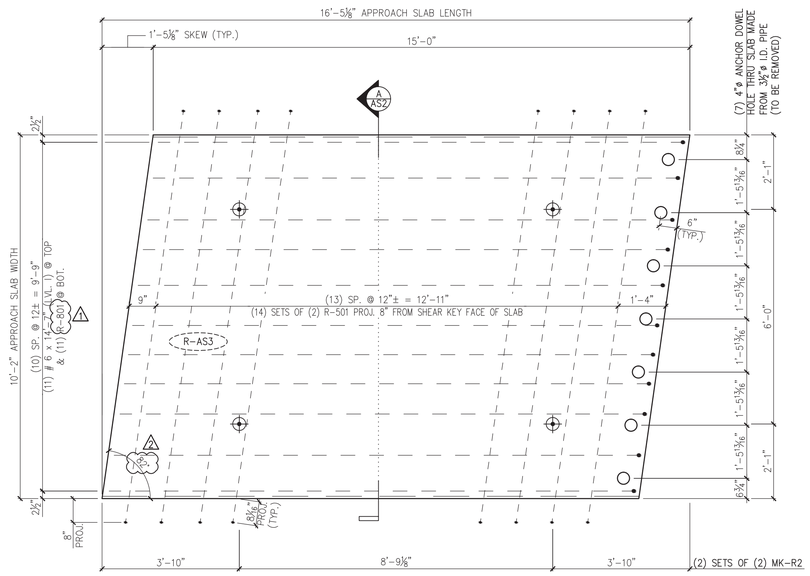
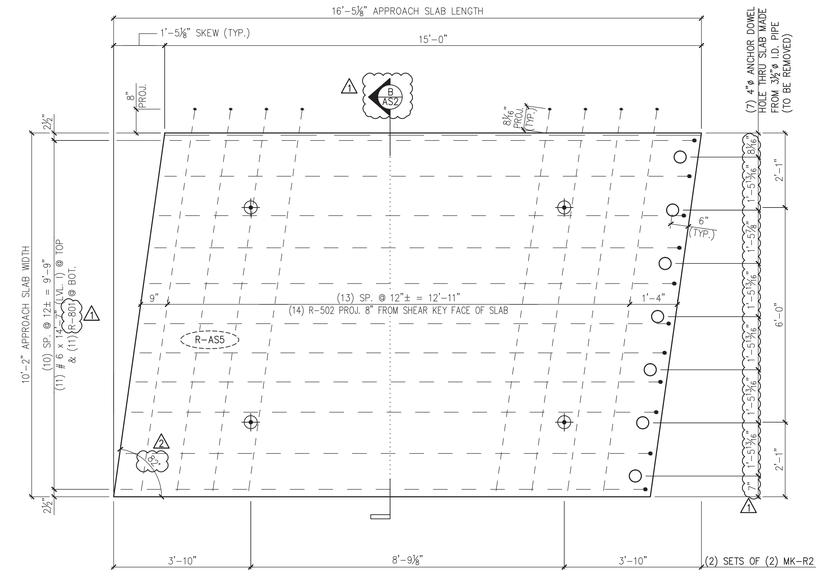
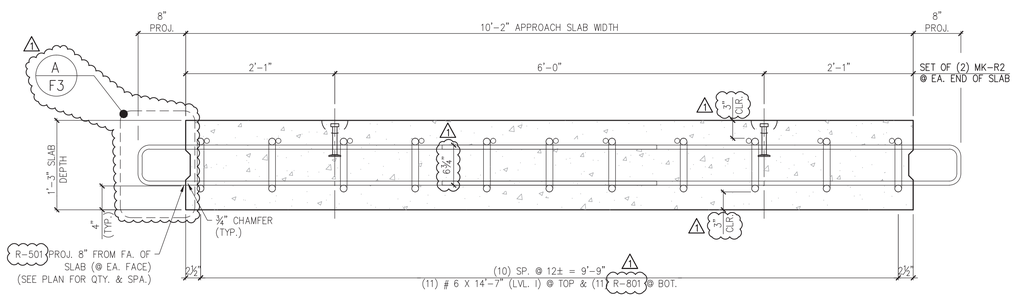


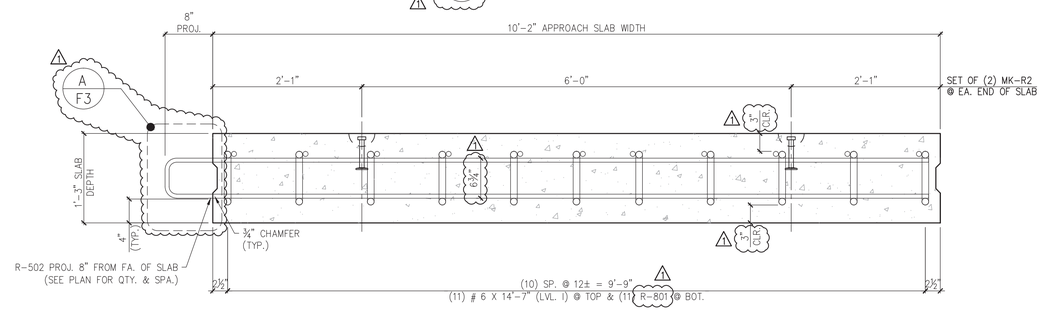
1 AS2 PLAN IN VIEW FORM
1/2" =1'-0"



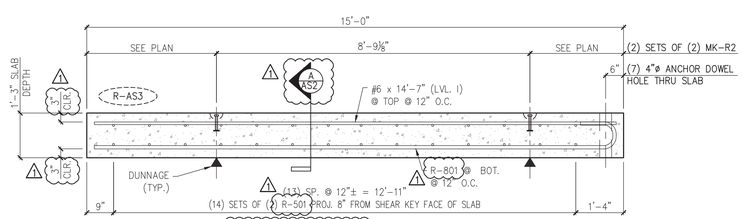
3 AS2 PLAN IN VIEW FORM
1/2" =1'-0"



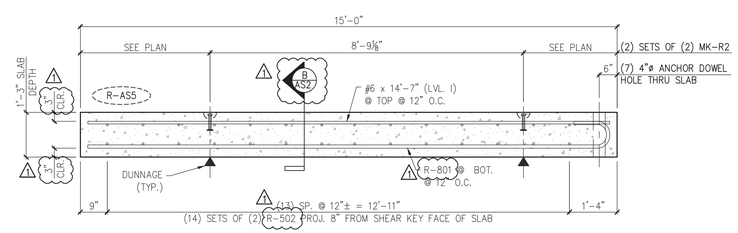
A AS2 APPROACH SLAB SECTION
1" = 1'-0"



B AS2 APPROACH SLAB SECTION
1" = 1'-0"



2 AS2 ELEVATION
1/2" = 1'-0"



4 AS2 ELEVATION
1/2" = 1'-0"

△2 4/30/14 REVISE & RESUBMIT
△1 4/11/14 REVISE & RESUBMIT

MARK:	R-AS3	QTY.:	1	WT.:	14.3 T	VOL.:	6.99 cy
MARK:	R-AS5	QTY.:	1	WT.:	14.3 T	VOL.:	6.99 cy

MATERIAL LIST / APPROACH SLAB

ITEM	MARK	DESCRIPTION	QTY./WING WALL R-AS3	QTY./WING WALL R-AS5
1	R-501	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	28	0
2	R-502	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	0	14
3	△1			
4		#6 x 14'-7" (LEVEL I, BLACK REINFORCEMENT)	11	11
5	△1			
6	R-801	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	11	11
7				
8	MK-R2	4T x 7 1/2" SWIFT LIFT LIFTER	4	4

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COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST APPROACH SLAB DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JJJ/KLT
JOB NO: 23419-013
DWG. NO: AS2

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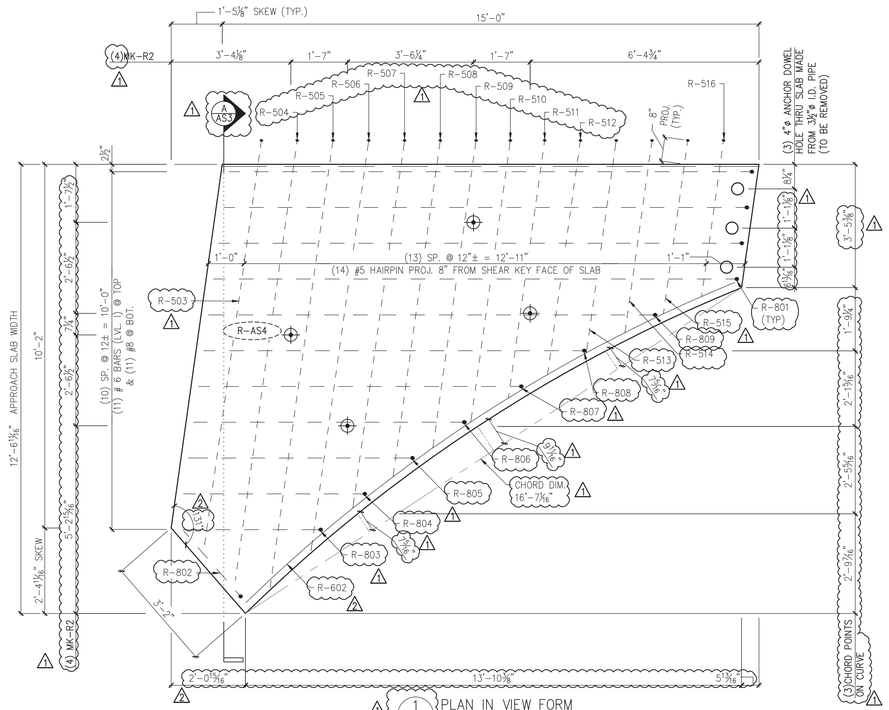

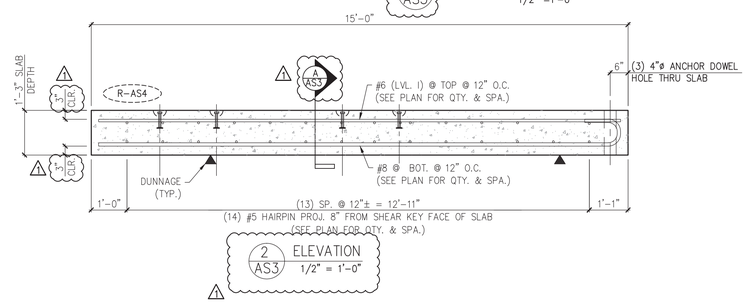

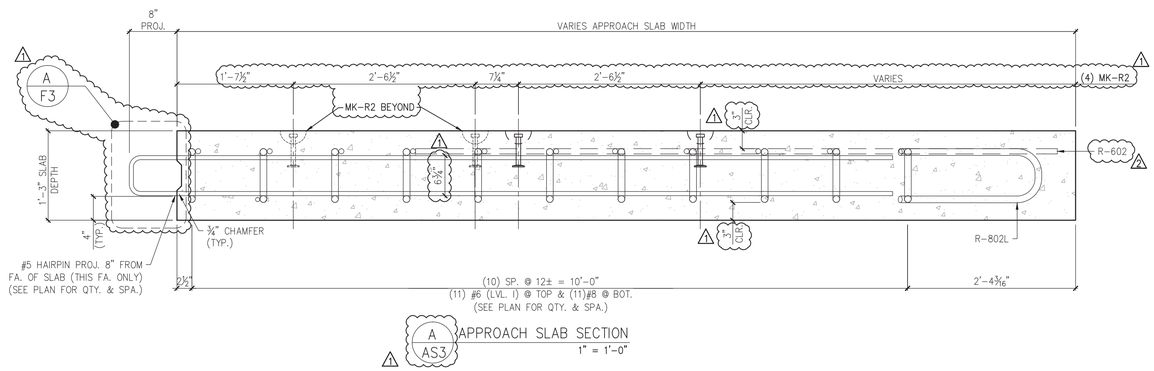

MARK: R-AS4	QTY.: 1	WT.: 11.2 T	VOL.: 5.51 cy

MATERIAL LIST / APPROACH SLAB

ITEM	MARK	DESCRIPTION	QTY./WING WALL R-AS4
1	R-503	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
2	R-504	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
3	R-505	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
4	R-506	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
5	R-507	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
6	R-508	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
7	R-509	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
8	R-510	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
9	R-511	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
10	R-512	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
11	R-513	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
12	R-514	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
13	R-515	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
14	R-516	#5 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
15			
16	2 R-602	#6 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
17			
18		#6 x 2'-5" (LEVEL I, BLACK REINFORCEMENT)	1
19		#6 x 3'-10" (LEVEL I, BLACK REINFORCEMENT)	1
20		#6 x 5'-0" (LEVEL I, BLACK REINFORCEMENT)	1
21		#6 x 6'-3" (LEVEL I, BLACK REINFORCEMENT)	1
22		#6 x 7'-6" (LEVEL I, BLACK REINFORCEMENT)	1
23		#6 x 9'-0" (LEVEL I, BLACK REINFORCEMENT)	1
24		#6 x 10'-7" (LEVEL I, BLACK REINFORCEMENT)	1
25		#6 x 12'-5" (LEVEL I, BLACK REINFORCEMENT)	1
26		#6 x 14'-6" (LEVEL I, BLACK REINFORCEMENT)	4
27			
28	R-801	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	4
29	R-802	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
30	R-803	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
31	R-804	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
32	R-805	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
33	R-806	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
34	R-807	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
35	R-808	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
36	R-809	#8 BENT BAR (LEVEL I, BLACK REINFORCEMENT)	1
37			
38	MK-R2	4T x 7 1/2" SWIFT LIFT LIFTER	4

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST APPROACH SLAB DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: AS3

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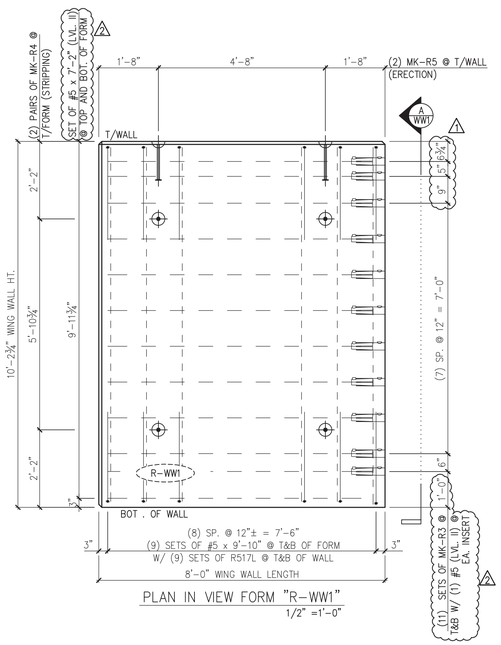
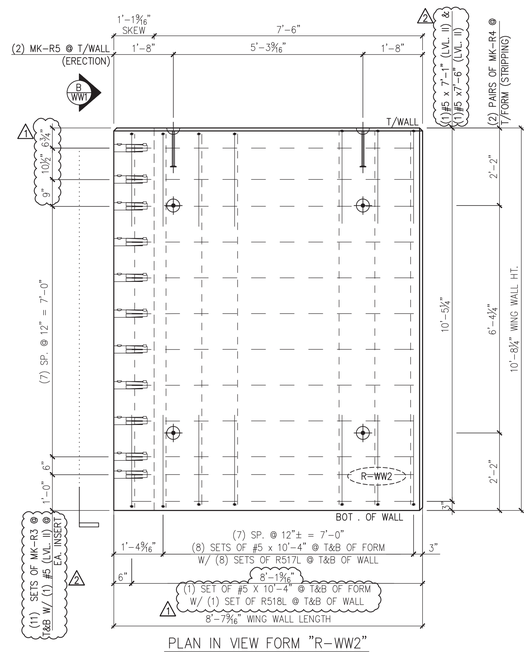
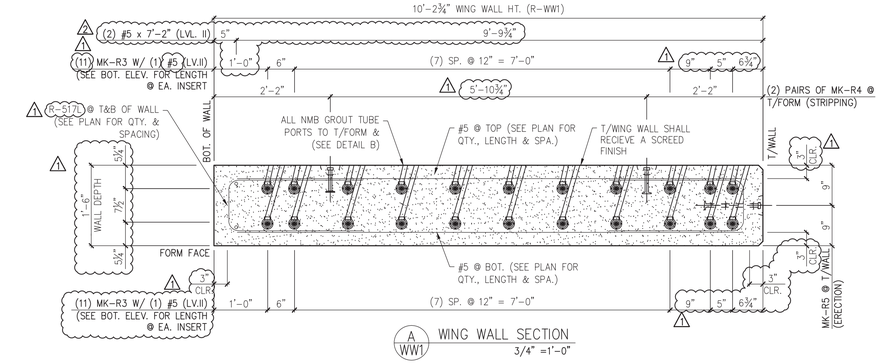


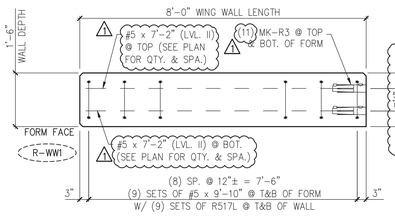
PLAN IN VIEW FORM "R-WW1"
1/2" =1'-0"



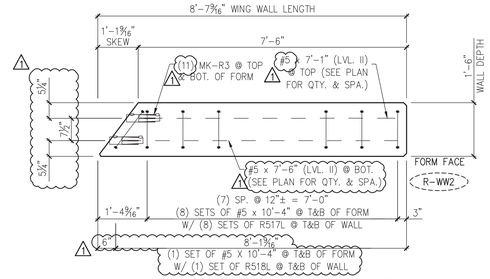
PLAN IN VIEW FORM "R-WW2"
1/2" =1'-0"



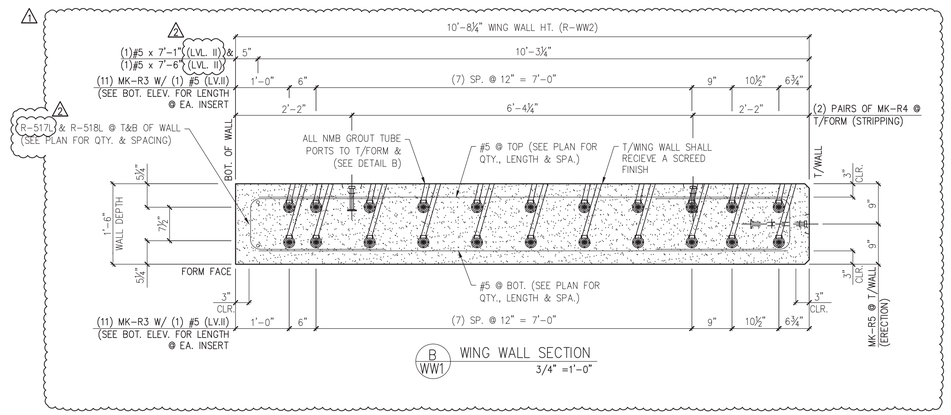
A WW1 WING WALL SECTION
3/4" =1'-0"



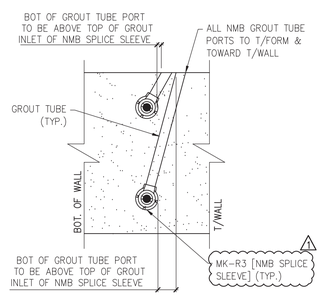
WING WALL BOTTOM ELEVATION "R-WW1"
1/2" =1'-0"



WING WALL BOTTOM ELEVATION "R-WW2"
1/2" =1'-0"



B WW1 WING WALL SECTION
3/4" =1'-0"



DETAIL – "B"
1-1/2" =1'-0"

MARK:	R-WW1	QTY.:	1	WT.:	9.2 T	VOL.:	4.54 cy
MARK:	R-WW2	QTY.:	1	WT.:	9.7 T	VOL.:	4.78 cy

MATERIAL LIST / WING WALL

ITEM	MARK	DESCRIPTION	QTY./WING WALL R-WW1	QTY./WING WALL R-WW2
1	R-517L	#5 BENT BAR (LEVEL II, DUAL COATED)	18	16
2	R-518L	#5 BENT BAR (LEVEL II, DUAL COATED)	0	2 △1
3				
4		#5 x 9'-10" (LEVEL II, DUAL COATED)	18	0
5		#5 x 10'-4" (LEVEL II, DUAL COATED)	0	18 △1
6				
7		#5 x 7'-1" (LEVEL II, DUAL COATED)	0	12
8	△1	#5 x 7'-2" (LEVEL II, DUAL COATED)	△2 24	0
9		#5 x 7'-6" (LEVEL II, DUAL COATED)	0	12
10				
11				
12	MK-R3	NMB SPLICE SLEEVE #5 U-X(PG) (EPOXY COATED) △1	22	22
13	MK-R4	4T x 9 1/2" SWIFT LIFT LIFTER	4	4
14	MK-R5	20T x 19 3/4" SWIFT LIFT LIFTER	2	2

△2 4/30/14 REVISE & RESUBMIT
△1 4/11/14 REVISE & RESUBMIT

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VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST WING WALL DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JJ/KLT
JOB NO: 23419-013
DWG. NO: WW1

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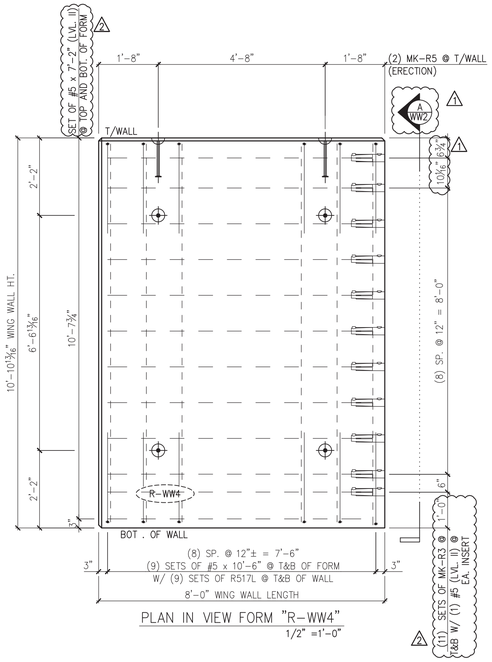
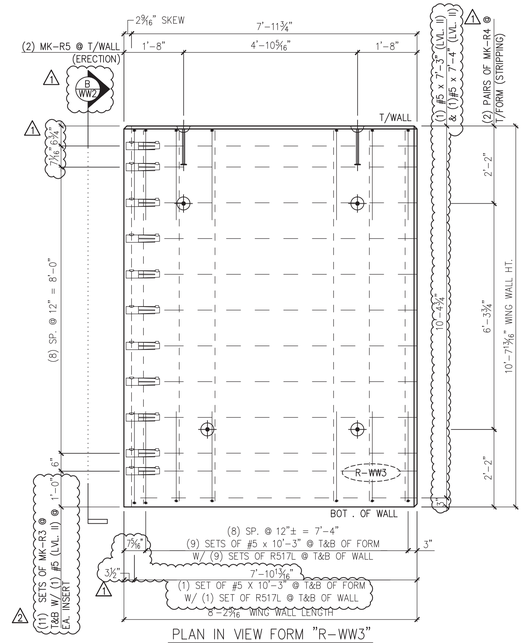
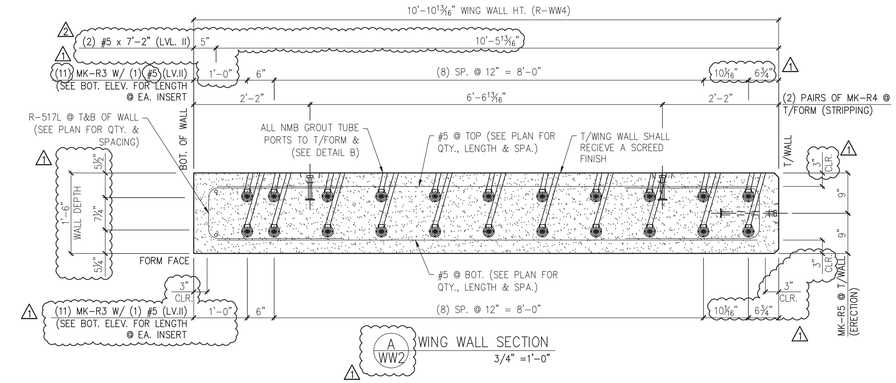
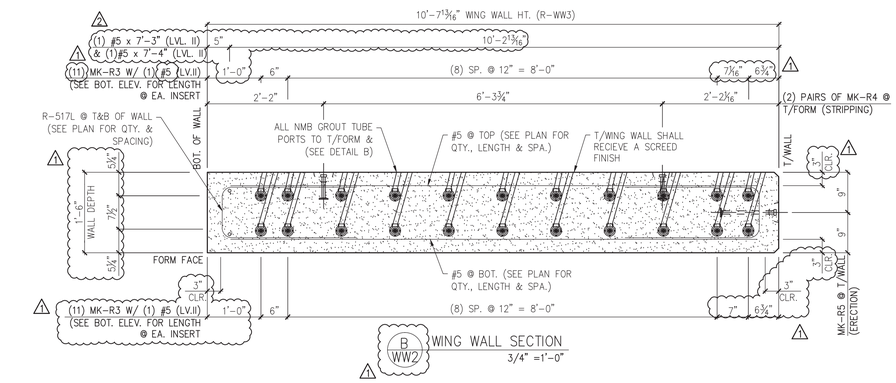


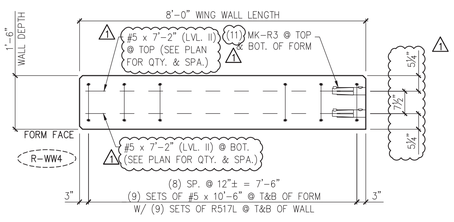
PLAN IN VIEW FORM "R-WW4"
1/2" =1'-0"



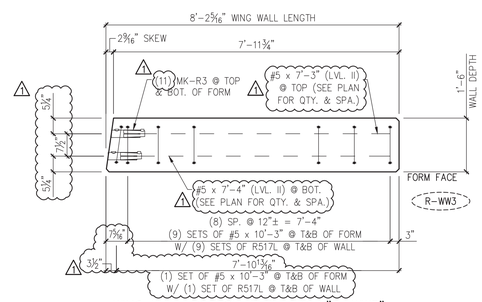
PLAN IN VIEW FORM "R-WW3"
1/2" =1'-0"



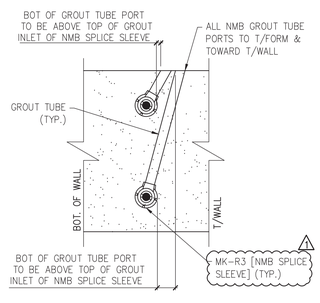




WING WALL BOTTOM ELEVATION "R-WW4"
1/2" =1'-0"



WING WALL BOTTOM ELEVATION "R-WW3"
1/2" =1'-0"



DETAIL – "B"
1-1/2" =1'-0"

MARK:	R-WW4	QTY.:	1	WT.:	9.9 T	VOL.:	4.84 cy
MARK:	R-WW3	QTY.:	1	WT.:	9.7 T	VOL.:	4.78 cy

MATERIAL LIST / WING WALL

ITEM	MARK	DESCRIPTION	QTY./WING WALL R-WW4	QTY./WING WALL R-WW3
1	R-517L	#5 BENT BAR (LEVEL II, DUAL COATED)	18	20
2				
3		#5 x 10'-3" (LEVEL II, DUAL COATED)	0	20
4		#5 x 10'-6" (LEVEL II, DUAL COATED)	18	0
5				
6				
7		#5 x 7'-2" (LEVEL II, DUAL COATED)	24	0
8		#5 x 7'-3" (LEVEL II, DUAL COATED)	0	12
9		#5 x 7'-4" (LEVEL II, DUAL COATED)	0	12
10				
11				
12	MK-R3	NMB SPLICE SLEEVE #5 U-X(PG) (EPOXY COATED)	22	22
13	MK-R4	4T x 9 1/2" SWIFT LIFT LIFTER	4	4
14	MK-R5	20T x 19 3/4" SWIFT LIFT LIFTER	2	2

2 4/30/14 REVISE & RESUBMIT
1 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

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

W.M. SHULTZ CONSTRUCTION, INC.
PO BOX 2620
BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

PRECAST WING WALL DETAILS

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JJ/KLT
JOB NO: 23419-013
DWG. NO: WW2

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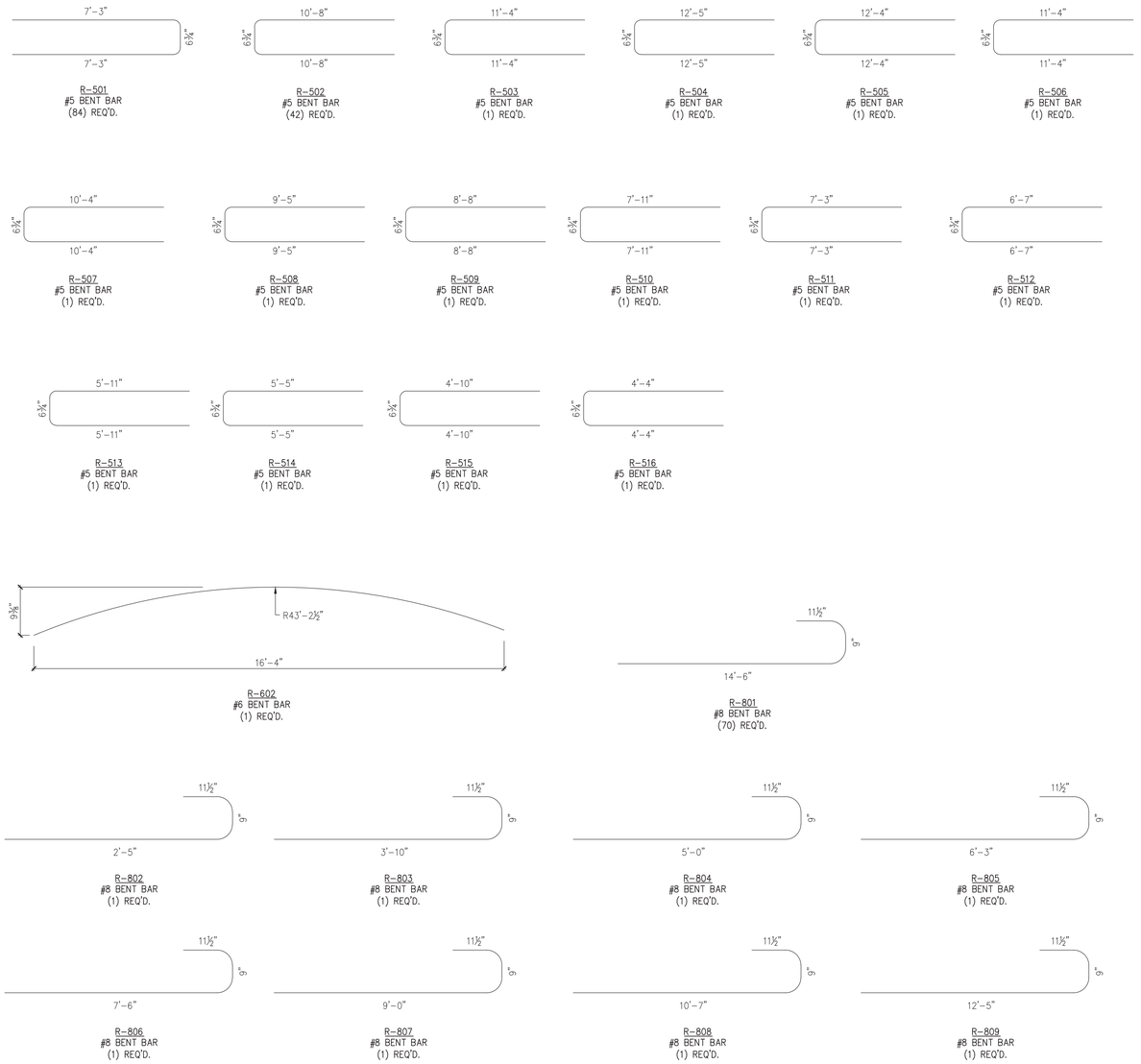
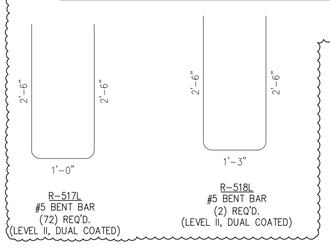


PRECAST APPROACH SLABS



PRECAST WINGWALLS

MISCELLANEOUS MATERIALS

ITEM	MARK	QTY.	DESCRIPTION	REMARKS	
1		ONE	#6 x 2'-5" (LEVEL I, BLACK REINFORCEMENT) △1		PRECAST APPROACH SLABS
2		ONE	#6 x 3'-10" (LEVEL I, BLACK REINFORCEMENT)		
3		ONE	#6 x 5'-0" (LEVEL I, BLACK REINFORCEMENT)		
4		ONE	#6 x 6'-3" (LEVEL I, BLACK REINFORCEMENT)		
5		ONE	#6 x 7'-6" (LEVEL I, BLACK REINFORCEMENT)		
6		ONE	#6 x 9'-0" (LEVEL I, BLACK REINFORCEMENT)		
7		ONE	#6 x 10'-7" (LEVEL I, BLACK REINFORCEMENT)		
8		ONE	#6 x 12'-5" (LEVEL I, BLACK REINFORCEMENT)		
9		4	#6 x 14'-6" (LEVEL I, BLACK REINFORCEMENT) △1		
10		66	#6 x 14'-7" (LEVEL I, BLACK REINFORCEMENT)		
11		△1			
12	MK-R2	28	4T x 7 1/2" SWIFT LIFT LIFTER		
13					
14					
15					
16					
17					
18					
19					
20					PRECAST WING WALLS
21					
22	△1	12	#5 x 7'-1" (LEVEL II, DUAL COATED)		
23		36	#5 x 7'-2" (LEVEL II, DUAL COATED)		
24		12	#5 x 7'-3" (LEVEL II, DUAL COATED)		
25		12	#5 x 7'-4" (LEVEL II, DUAL COATED)		
26		12	#5 x 7'-6" (LEVEL II, DUAL COATED)		
27		18	#5 x 9'-10" (LEVEL II, DUAL COATED)		
28		20	#5 x 10'-3" (LEVEL II, DUAL COATED)		
29		18	#5 x 10'-4" (LEVEL II, DUAL COATED)		
30		18	#5 x 10'-6" (LEVEL II, DUAL COATED)		
31					
32					
33					
34					
35					
36					
37					
38	MK-R3	88	NMB SPLICE SLEEVE #5 U-X(PG) (EPOXY COATED)		
39	MK-R4	16	4T x 9 1/2" SWIFT LIFT LIFTER		
40	MK-R5	8	20T x 19 3/4" SWIFT LIFT LIFTER		
41	△1				

△1 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

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W.M. SHULTZ CONSTRUCTION, INC.
PO BOX 2620
BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

DATE: MAR. 14, 2014
SCALE: NOTED

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

CHKD: DFTM: AAT/RWS JJ/KLT
JOB NO: 23419-013

MATERIALS LIST

DWG. NO: M1

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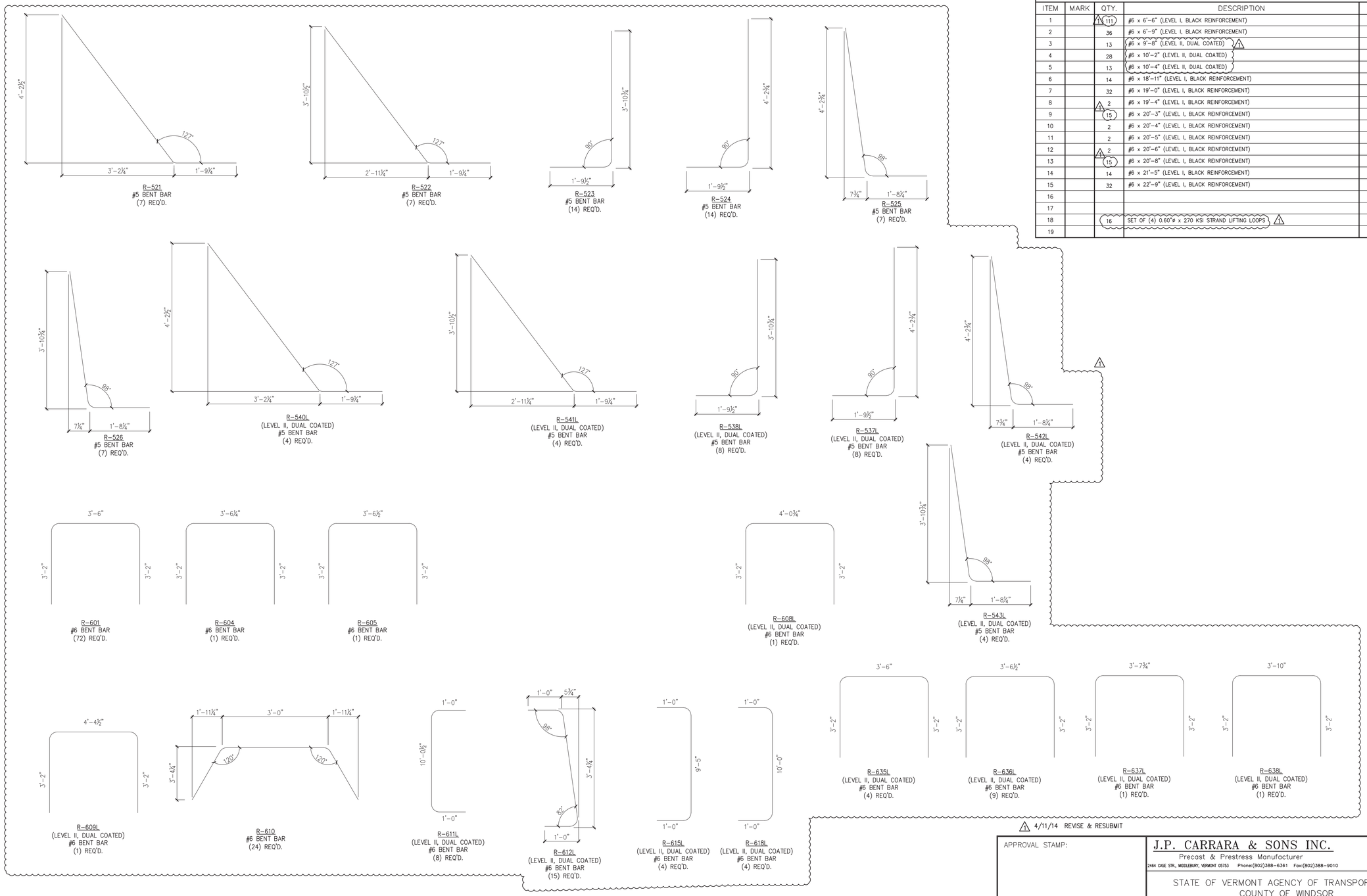
MISCELLANEOUS MATERIALS

ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1		1 111	#6 x 6'-6" (LEVEL I, BLACK REINFORCEMENT)	PRECAST ABUTMENT
2		36	#6 x 6'-9" (LEVEL I, BLACK REINFORCEMENT)	
3		13	#6 x 9'-8" (LEVEL II, DUAL COATED) 1	
4		28	#6 x 10'-2" (LEVEL II, DUAL COATED)	
5		13	#6 x 10'-4" (LEVEL II, DUAL COATED)	
6		14	#6 x 18'-11" (LEVEL I, BLACK REINFORCEMENT)	
7		32	#6 x 19'-0" (LEVEL I, BLACK REINFORCEMENT)	
8		1 2	#6 x 19'-4" (LEVEL I, BLACK REINFORCEMENT)	
9		15	#6 x 20'-3" (LEVEL I, BLACK REINFORCEMENT)	
10		2	#6 x 20'-4" (LEVEL I, BLACK REINFORCEMENT)	
11		2	#6 x 20'-5" (LEVEL I, BLACK REINFORCEMENT)	
12		1 2	#6 x 20'-6" (LEVEL I, BLACK REINFORCEMENT)	
13		15	#6 x 20'-8" (LEVEL I, BLACK REINFORCEMENT)	
14		14	#6 x 21'-5" (LEVEL I, BLACK REINFORCEMENT)	
15		32	#6 x 22'-9" (LEVEL I, BLACK REINFORCEMENT)	
16				
17				
18		16	SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS 1	
19				



PRECAST ABUTMENT

1 4/11/14 REVISE & RESUBMIT

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BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

MATERIALS LIST

DATE: MAR. 14, 2014
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CHKD: DFTM: AAT/RWS JJJ/KLT
JOB NO: 23419-013
DWG. NO: M2

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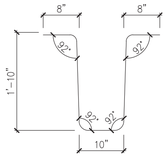
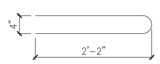
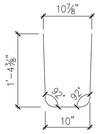


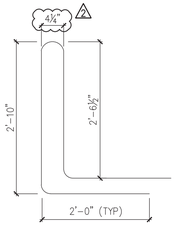
R-401L
#4 BENT BAR
(640) REQ'D.
(LEVEL II, DUAL COATED)



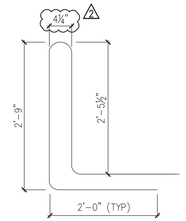
R-402L
#4 BENT BAR
(810) REQ'D.
(LEVEL II, DUAL COATED)



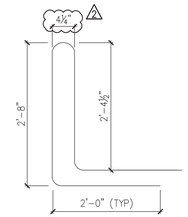
R-403L
~~#4 BENT BAR~~
(39) REQ'D.
(LEVEL II, DUAL COATED)



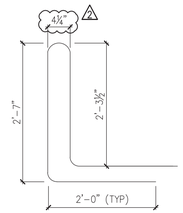
R-404L
#4 BENT BAR
(39) REQ'D.
(LEVEL II, DUAL COATED)



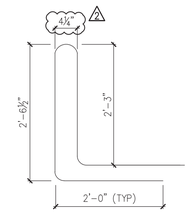
R-405L
#4 BENT BAR
(31) REQ'D.
(LEVEL II, DUAL COATED)



R-406L
#4 BENT BAR
(32) REQ'D.
(LEVEL II, DUAL COATED)



R-407L
#4 BENT BAR
(56) REQ'D.
(LEVEL II, DUAL COATED)



R-408L
#4 BENT BAR
(44) REQ'D.
(LEVEL II, DUAL COATED)

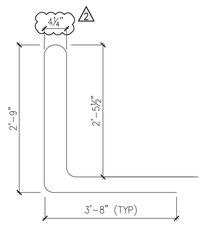
R-409L
#4 BENT BAR
(16) REQ'D.
(LEVEL II, DUAL COATED)

R-410L
#4 BENT BAR
(4) REQ'D.
(LEVEL II, DUAL COATED)

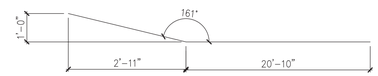
R-411L
#4 BENT BAR
(4) REQ'D.
(LEVEL II, DUAL COATED)

R-412L
#4 BENT BAR
(4) REQ'D.
(LEVEL II, DUAL COATED)

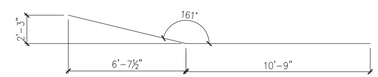
R-413L
#4 BENT BAR
(4) REQ'D.
(LEVEL II, DUAL COATED)



R-414L
#4 BENT BAR
(10) REQ'D.
(LEVEL II, DUAL COATED)



R-416L
#4 BENT BAR
(3) REQ'D.
(LEVEL II, DUAL COATED)

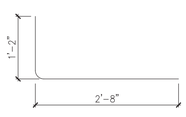


R-415L
#4 BENT BAR
(3) REQ'D.
(LEVEL II, DUAL COATED)

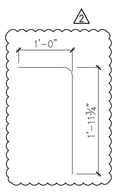
MISCELLANEOUS MATERIALS

ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1		16	#4 x 7'-2" (LEVEL II, DUAL COATED)	
2		56	#4 x 7'-6" (LEVEL II, DUAL COATED)	
3				
4				
5		4	#4 x 2'-9" (LEVEL II, DUAL COATED)	
6		4	#4 x 2'-10" (LEVEL II, DUAL COATED)	
7		4	#4 x 3'-5" (LEVEL II, DUAL COATED)	
8		4	#4 x 3'-8" (LEVEL II, DUAL COATED)	
9		4	#4 x 4'-10" (LEVEL II, DUAL COATED)	
10		4	#4 x 5'-0" (LEVEL II, DUAL COATED)	
11		3	#4 x 10'-0" (LEVEL II, DUAL COATED)	
12		3	#4 x 23'-0" (LEVEL II, DUAL COATED)	
13		6	#4 x 27'-5" (LEVEL II, DUAL COATED)	
14		3	#4 x 33'-6" (LEVEL II, DUAL COATED)	
15		6	#4 x 45'-0" (LEVEL II, DUAL COATED)	
16		3	#4 x 40'-0" (LEVEL II, DUAL COATED)	
17				
18				
19				
		2	#5 x 6'-3" (LEVEL II, DUAL COATED)	
		6	#5 x 6'-6" (LEVEL II, DUAL COATED)	
		16	#5 x 7'-2" (LEVEL II, DUAL COATED)	
		1087	#5 x 7'-6" (LEVEL II, DUAL COATED)	
		10	#5 x 8'-0" (LEVEL II, DUAL COATED)	
		36	#5 x 8'-1" (LEVEL II, DUAL COATED)	
		2	#5 x 8'-2" (LEVEL II, DUAL COATED)	
		21	#5 x 8'-4" (LEVEL II, DUAL COATED)	
		10	#5 x 8'-6" (LEVEL II, DUAL COATED)	
		2	#5 x 8'-8" (LEVEL II, DUAL COATED)	
		2	#5 x 8'-10" (LEVEL II, DUAL COATED)	
		4	#5 x 9'-0" (LEVEL II, DUAL COATED)	
		2	#5 x 9'-2" (LEVEL II, DUAL COATED)	
		2	#5 x 9'-4" (LEVEL II, DUAL COATED)	
		2	#5 x 9'-6" (LEVEL II, DUAL COATED)	
		2	#5 x 9'-8" (LEVEL II, DUAL COATED)	
		19	#5 x 10'-11" (LEVEL II, DUAL COATED)	
		1	#5 x 11'-9" (LEVEL II, DUAL COATED)	
		88	#5 x 24'-0" (LEVEL II, DUAL COATED)	
		88	#5 x 46'-3" (LEVEL II, DUAL COATED)	
		43	#8 x 1'-6" (LEVEL II, DUAL COATED)	
		16	SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS	
	MK-R1	4	PL 10"x½"x2'-1" LONG STEEL ANCHOR PLATE	SEE DETAIL
	MK-R6	20	GUARDRAIL ASSEMBLY (SUPPLIED BY CONTR. AND INSTALLED BY CARRERA)	

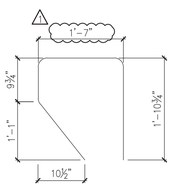
PRECAST BEAMS



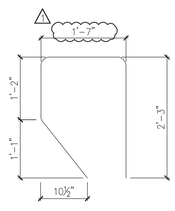
R-560L
#5 BENT BAR
(132) REQ'D.
(LEVEL II, DUAL COATED)



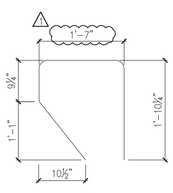
R-561L
#5 BENT BAR
(68) REQ'D.
(LEVEL II, DUAL COATED)



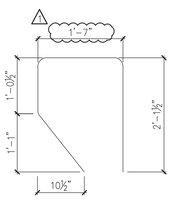
R-562L
#5 BENT BAR
(20) REQ'D.
(LEVEL II, DUAL COATED)



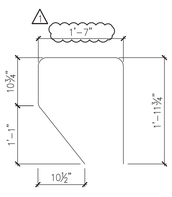
R-563L
#5 BENT BAR
(16) REQ'D.
(LEVEL II, DUAL COATED)



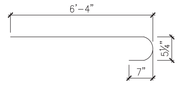
R-564L
#5 BENT BAR
(18) REQ'D.
(LEVEL II, DUAL COATED)



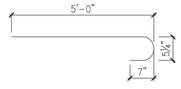
R-565L
#5 BENT BAR
(9) REQ'D.
(LEVEL II, DUAL COATED)



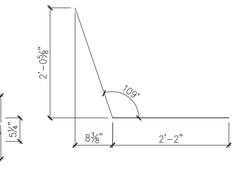
R-566L
#5 BENT BAR
(9) REQ'D.
(LEVEL II, DUAL COATED)



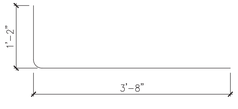
R-567L
#5 BENT BAR
(4) REQ'D.
(LEVEL II, DUAL COATED)



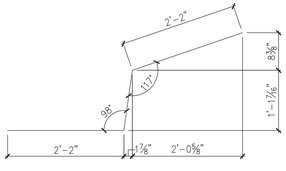
R-568L
#5 BENT BAR
(6) REQ'D.
(LEVEL II, DUAL COATED)



R-569L
#5 BENT BAR
(2) REQ'D.
(LEVEL II, DUAL COATED)

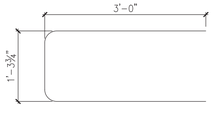


R-570L
#5 BENT BAR
(6) REQ'D.
(LEVEL II, DUAL COATED)

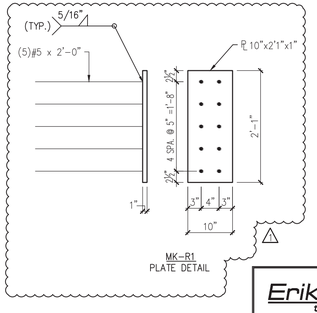


R-571L
#5 BENT BAR
(2) REQ'D.
(LEVEL II, DUAL COATED)

PRECAST BEAM



R-660L
#6 BENT BAR
(64) REQ'D.
(LEVEL II, DUAL COATED)



MK-R1
PLATE DETAIL

△2 4/30/14 REVISE & RESUBMIT
△1 4/11/14 REVISE & RESUBMIT

APPROVAL STAMP:

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

W.M. SHULTZ CONSTRUCTION, INC.
PO BOX 2620
BALLSTON SPA, NY 12020

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF WINDSOR

TOWN OF ROCHESTER
VT ROUTE 73 (RURAL MAJOR COLLECTOR)
BRIDGE NO.: 15 PROJECT NO.: BRF 0162 (16)

MATERIALS LIST

DATE: MAR. 14, 2014
SCALE: NOTED
CHKD: DFTM: AAT/RWS JLJ/KLT
JOB NO: 23419-013
DWG. NO: M3

Eriksson technologies
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