STATE OF VERMONT
AGENCY OF TRANSPORTATION

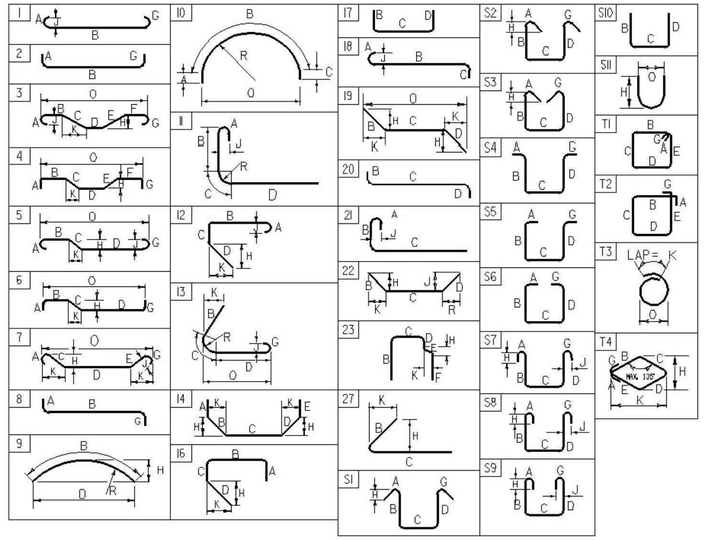
# REINFORCING STEEL SCHEDULE

| ITEM | EACH | SIZE | LENGTH | MARK | TYPE | A | B | C | D | E | F | G | H | J | K | R | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DECK REINFORCEMENT** | | | | | | | | | | | | | | | | | |
| **PHASE I** | | | | | | | | | | | | | | | | | |
| | 240 | 5 | 40'- 0" | D501 | STR | | | | | | | | | | | | |
| △1 | 48 | 5 | 19'- 0" | D502 | STR | | | | | | | | | | | | |
| | 814 | 5 | 22'- 8" | D503 | STR | | | | | | | | | | | | |
| | 407 | 5 | 5'- 10" | D504 | 17 | | 4'- 0" | 0'- 5" | 1'- 6" | | | | | | | | |
| | 5 | 5 | 28'- 0" | D506 | STR | | | | | | | | | | | | |
| | 5 | 5 | 29'- 1" | D508 | STR | | | | | | | | | | | | |
| | 5 | 5 | 22'- 7" | D510 | STR | | | | | | | | | | | | |
| | 5 | 5 | 21'- 7" | D512 | STR | | | | | | | | | | | | |
| | 64 | 5 | 5'- 4" | D514 | 17 | | 2'- 1" | 3'- 4" | | | | | | | | | |
| | 32 | 5 | 5'- 1" | D515 | S6 | 0'- 7" | 0'- 5" | 3'- 4" | 0'- 5" | | | 0'- 7" | | | | | |
| | 84 | 5 | 9'- 6" | D516 | 17 | | 3'- 7" | 6'- 0" | | | | | | | | | |
| △1 | 84 | 5 | 6 \| 4 | D517 | 19 | | | 5'- 7" | 0'- 9" | | | | 0'- 6" | | 0'- 7" | | 6'- 1" |
| **PHASE II** | | | | | | | | | | | | | | | | | |
| △1 | 275 | 5 | 40'- 0" | D501 | STR | | | | | | | | | | | | |
| | 55 | 5 | 19'- 0" | D502 | STR | | | | | | | | | | | | |
| | 407 | 5 | 5'- 10" | D504 | 17 | | 4'- 0" | 0'- 5" | 1'- 6" | | | | | | | | |
| | 814 | 5 | 22'- 5" | D505 | STR | | | | | | | | | | | | |
| | 5 | 5 | 28'- 8" | D507 | STR | | | | | | | | | | | | |
| | 5 | 5 | 27'- 7" | D509 | STR | | | | | | | | | | | | |
| | 5 | 5 | 21'- 2" | D511 | STR | | | | | | | | | | | | |
| | 5 | 5 | 22'- 2" | D513 | STR | | | | | | | | | | | | |
| | 76 | 5 | 5'- 4" | D514 | 17 | | 2'- 1" | 3'- 4" | | | | | | | | | |
| | 38 | 5 | 5'- 1" | D515 | S6 | 0'- 7" | 0'- 5" | 3'- 4" | 0'- 5" | | | 0'- 7" | | | | | |
| | 98 | 5 | 9'- 6" | D516 | 17 | | 3'- 7" | 6'- 0" | | | | | | | | | |
| △1 | 84 | 5 | 6 \| 4 | D517 | 19 | | | 5'- 7" | 0'- 9" | | | | 0'- 6" | | 0'- 7" | | 6'- 1" |
| **WINGWALL 1 REINFORCEMENT (ABUT. #1 PHASE #2)** | | | | | | | | | | | | | | | | | |
| | 5 | 4 | 12'- 3" | 1W401 | 17 | | 6'- 0" | 0'- 5" | 6'- 0" | | | | | | | | |
| | 12 | 5 | 10'- 9" | 1W501 | STR | | | | | | | | | | | | |
| | 7 | 5 | 7'- 0" | 1W502 | 2 | 2'- 3" | 2'- 8" | | | | | 2'- 3" | | | | | |
| | 1 | 5 | 6'- 2" | 1W503 | 22 | | 3'- 11" | 2'- 3" | 0'- 0" | | | | 0'- 10" | 0'- 0" | 3'- 10" | 0'- 0" | |
| | 1 | 5 | 5'- 8" | 1W504 | 22 | | 3'- 11" | 1'- 9" | 0'- 0" | | | | 0'- 10" | 0'- 0" | 3'- 10" | 0'- 0" | |
| | 1 | 5 | 5'- 2" | 1W505 | 22 | | 3'- 11" | 1'- 3" | 0'- 0" | | | | 0'- 10" | 0'- 0" | 3'- 10" | 0'- 0" | |
| | 1 | 5 | 4'- 8" | 1W506 | 22 | | 3'- 11" | 0'- 9" | 0'- 0" | | | | 0'- 10" | 0'- 0" | 3'- 10" | 0'- 0" | |
| **WINGWALL 2 REINFORCEMENT (ABUT. #1 PHASE #1)** | | | | | | | | | | | | | | | | | |
| | 5 | 4 | 12'- 3" | 2W401 | 17 | | 6'- 0" | 0'- 5" | 6'- 0" | | | | | | | | |
| | 12 | 5 | 9'- 6" | 2W501 | STR | | | | | | | | | | | | |
| | 1 | 5 | 5'- 0" | 2W502 | STR | | | | | | | | | | | | |
| | 1 | 5 | 5'- 9" | 2W503 | STR | | | | | | | | | | | | |
| | 1 | 5 | 6'- 6" | 2W504 | STR | | | | | | | | | | | | |
| | 1 | 5 | 7'- 0" | 2W505 | STR | | | | | | | | | | | | |
| | 5 | 5 | 7'- 0" | 2W506 | 2 | 2'- 3" | 2'- 8" | | | | | 2'- 3" | | | | | |
| | 1 | 5 | 5'- 11" | 2W507 | 22 | | 5'- 6" | 0'- 5" | 0'- 0" | | | | 3'- 4.5" | 0'- 0" | 4'- 4.5" | 0'- 0" | |
| | 1 | 5 | 6'- 5" | 2W508 | 22 | | 5'- 6" | 0'- 11" | 0'- 0" | | | | 3'- 4.5" | 0'- 0" | 4'- 4.5" | 0'- 0" | |
| | 1 | 5 | 6'- 11" | 2W509 | 22 | | 5'- 6" | 1'- 5" | 0'- 0" | | | | 3'- 4.5" | 0'- 0" | 4'- 4.5" | 0'- 0" | |
| | 1 | 5 | 7'- 5" | 2W510 | 22 | | 5'- 6" | 1'- 11" | 0'- 0" | | | | 3'- 4.5" | 0'- 0" | 4'- 4.5" | 0'- 0" | |
| | 1 | 6 | 5'- 0" | 2W601 | STR | | | | | | | | | | | | |
| | 1 | 6 | 5'- 3" | 2W602 | STR | | | | | | | | | | | | |
| | 1 | 6 | 5'- 6" | 2W603 | STR | | | | | | | | | | | | |
| | 1 | 6 | 5'- 9" | 2W604 | STR | | | | | | | | | | | | |
| | 1 | 6 | 6'- 0" | 2W605 | STR | | | | | | | | | | | | |
| | 1 | 6 | 6'- 3" | 2W606 | STR | | | | | | | | | | | | |
| | 1 | 6 | 6'- 6" | 2W607 | STR | | | | | | | | | | | | |
| | 1 | 6 | 6'- 9" | 2W608 | STR | | | | | | | | | | | | |
| **WINGWALL 3 REINFORCEMENT (ABUT # 2 PHASE #1)** | | | | | | | | | | | | | | | | | |
| | 5 | 4 | 12'- 3" | 3W401 | 17 | | 6'- 0" | 0'- 5" | 6'- 0" | | | | | | | | |
| | 12 | 5 | 9'- 6" | 3W501 | STR | | | | | | | | | | | | |
| | 1 | 5 | 6'- 6" | 3W502 | STR | | | | | | | | | | | | |
| | 1 | 5 | 7'- 0" | 3W503 | STR | | | | | | | | | | | | |
| | 1 | 5 | 5'- 7" | 3W504 | 22 | | 3'- 7" | 2'- 0" | 0'- 0" | | | | 1'- 4.5" | 0'- 3" | 3'- 4.5" | 0'- 0" | |
| | 1 | 5 | 5'- 1" | 3W505 | 22 | | 3'- 7" | 1'- 6" | 0'- 0" | | | | 1'- 4.5" | 0'- 3" | 3'- 4.5" | 0'- 0" | |
| | 1 | 5 | 4'- 6" | 3W506 | 22 | | 3'- 7" | 0'- 11" | 0'- 0" | | | | 1'- 4.5" | 0'- 3" | 3'- 4.5" | 0'- 0" | |
| | 1 | 5 | 4'- 0" | 3W507 | 22 | | 3'- 7" | 0'- 5" | 0'- 0" | | | | 1'- 4.5" | 0'- 3" | 3'- 4.5" | 0'- 0" | |
| | 1 | 6 | 6'- 6" | 3W601 | STR | | | | | | | | | | | | |
| | 1 | 6 | 6'- 8" | 3W602 | STR | | | | | | | | | | | | |
| | 1 | 6 | 6'- 10" | 3W603 | STR | | | | | | | | | | | | |
| | 1 | 6 | 7'- 0" | 3W604 | STR | | | | | | | | | | | | |

| ITEM | EACH | SIZE | LENGTH | MARK | TYPE | A | B | C | D | E | F | G | H | J | K | R | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **WINGWALL 4 REINFORCEMENT (ABUT. #2 PHASE #2)** | | | | | | | | | | | | | | | | | |
| | 5 | 4 | 12'- 3" | 4W401 | 17 | | 6'- 0" | 0'- 5" | 6'- 0" | | | | | | | | |
| | 12 | 5 | 10'- 9" | 4W501 | STR | | | | | | | | | | | | |
| | 1 | 5 | 6'- 8" | 4W502 | STR | | | | | | | | | | | | |
| | 1 | 5 | 6'- 2" | 4W503 | STR | | | | | | | | | | | | |
| | 5 | 5 | 7'- 0" | 4W504 | 2 | 2'- 3" | 2'- 8" | | | | | 2'- 3" | | | | | |
| | 1 | 5 | 6'- 1" | 4W505 | 22 | | 5'- 5" | 0'- 8" | 0'- 0" | | | | 2'- 5" | 0'- 0" | 4'- 11" | 0'- 0" | |
| | 1 | 5 | 6'- 8" | 4W506 | 22 | | 5'- 5" | 1'- 3" | 0'- 0" | | | | 2'- 5" | 0'- 0" | 4'- 11" | 0'- 0" | |
| | 1 | 5 | 7'- 2" | 4W507 | 22 | | 5'- 5" | 1'- 9" | 0'- 0" | | | | 2'- 5" | 0'- 0" | 4'- 11" | 0'- 0" | |
| | 1 | 5 | 7'- 8" | 4W508 | 22 | | 5'- 5" | 2'- 3" | 0'- 0" | | | | 2'- 5" | 0'- 0" | 4'- 11" | 0'- 0" | |
| | 1 | 6 | 6'- 10" | 4W601 | STR | | | | | | | | | | | | |
| | 1 | 6 | 6'- 8" | 4W602 | STR | | | | | | | | | | | | |
| | 1 | 6 | 6'- 6" | 4W603 | STR | | | | | | | | | | | | |
| | 1 | 6 | 6'- 4" | 4W604 | STR | | | | | | | | | | | | |
| | 1 | 6 | 6'- 2" | 4W605 | STR | | | | | | | | | | | | |
| **ABUTMENT 1 REINFORCEMENT** | | | | | | | | | | | | | | | | | |
| **PHASE I** | | | | | | | | | | | | | | | | | |
| | 22 | 5 | 7'- 0" | 1A501 | STR | | | | | | | | | | | | |
| | 25 | 5 | 8'- 6" | 1A502 | 17 | | 3'- 0" | 2'- 6" | 3'- 0" | | | | | | | | |
| | 6 | 5 | 26'- 0" | 1A503 | STR | | | | | | | | | | | | |
| △1 | 6 | 5 | 29'- 0" | 1A504 | STR | | | | | | | | | | | | |
| | 69 | 6 | 7'- 0" | 1A601 | STR | | | | | | | | | | | | |
| **PHASE II** | | | | | | | | | | | | | | | | | |
| | 29 | 5 | 7'- 0" | 1A501 | STR | | | | | | | | | | | | |
| | 25 | 5 | 8'- 6" | 1A502 | 17 | | 3'- 0" | 2'- 6" | 3'- 0" | | | | | | | | |
| | 6 | 5 | 26'- 0" | 1A503 | STR | | | | | | | | | | | | |
| △1 | 6 | 5 | 24'- 11" | 1A504 | STR | | | | | | | | | | | | |
| | 83 | 6 | 7'- 0" | 1A601 | STR | | | | | | | | | | | | |
| **ABUTMENT 2 REINFORCEMENT** | | | | | | | | | | | | | | | | | |
| **PHASE I** | | | | | | | | | | | | | | | | | |
| | 24 | 5 | 7'- 0" | 2A501 | STR | | | | | | | | | | | | |
| | 25 | 5 | 8'- 6" | 2A502 | 17 | | 3'- 0" | 2'- 6" | 3'- 0" | | | | | | | | |
| | 6 | 5 | 23'- 5" | 2A503 | STR | | | | | | | | | | | | |
| | 6 | 5 | 29'- 7" | 2A504 | STR | | | | | | | | | | | | |
| | 67 | 6 | 7'- 0" | 2A601 | STR | | | | | | | | | | | | |
| **PHASE II** | | | | | | | | | | | | | | | | | |
| | 27 | 5 | 7'- 0" | 2A501 | STR | | | | | | | | | | | | |
| | 29 | 5 | 8'- 6" | 2A502 | 17 | | 3'- 0" | 2'- 6" | 3'- 0" | | | | | | | | |
| | 6 | 5 | 27'- 2" | 2A505 | STR | | | | | | | | | | | | |
| | 6 | 5 | 28'- 3" | 2A506 | STR | | | | | | | | | | | | |
| | 85 | 6 | 7'- 0" | 2A601 | STR | | | | | | | | | | | | |
| **APPROACH SLAB REINFORCEMENT** | | | | | | | | | | | | | | | | | |
| | 42 | 5 | 18'- 9" | AS501 | STR | | | | | | | | | | | | |
| | 42 | 5 | 21'- 2" | AS502 | STR | | | | | | | | | | | | |
| + | 43 | 5 | 2'- 8" | AS503 | STR | | | | | | | | | | | | |
| + | 89 | 9 | 20'- 11" | AS901 | 1 | 1'- 3" | 19'- 8" | | | | | | | | | 0'- 0" | 0'- 10" |

## ~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. SUPERSTRUCTURE, ABUTMENT, AND PIER REINFORCEMENT SHALL BE LEVEL II. APPROACH SLAB REINFORCEMENTSHALL BE LEVEL I.




**ASTM STANDARD REINFORCING BARS**

| BAR SIZE DESIGNATION | WEIGHT POUNDS PER FOOT | NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES | AREA INCHES$^2$ | PERIMETER INCHES |
|---|---|---|---|---|
| #3 | 0.376 | 0.375 | 0.11 | 1.178 |
| #4 | 0.668 | 0.500 | 0.20 | 1.571 |
| #5 | 1.043 | 0.625 | 0.31 | 1.963 |
| #6 | 1.502 | 0.750 | 0.44 | 2.356 |
| #7 | 2.044 | 0.875 | 0.60 | 2.749 |
| #8 | 2.670 | 1.000 | 0.79 | 3.142 |
| #9 | 3.400 | 1.128 | 1.00 | 3.544 |
| #10 | 4.303 | 1.270 | 1.27 | 3.990 |
| #11 | 5.313 | 1.410 | 1.56 | 4.430 |
| #14 | 7.65 | 1.693 | 2.25 | 5.32 |
| #18 | 13.60 | 2.257 | 4.00 | 7.09 |

PROJECT NAME: ROCKINGHAM
PROJECT NUMBER: BRF 0126(12)

FILE NAME:
PROJECT MANAGER:
DESIGNED BY:
REINFORCING STEEL SCHEDULE

PLOT DATE:
DRAWN BY:
CHECKED BY:
SHEET 44 OF 69


CALDERWOOD ENGINEERING, ETC.
STRUCTURAL ENGINEERING • DETAILING SERVICES
222 RIVER RD, RICHMOND, ME 04357 PH/FX (207)737-2007/(207) 737-2008


PREPARED FOR:
COLD RIVER BRIDGES, LLC

CEE 106-BR-14

P.E. NUMBER

DATE:

| BY | DATE | REVISIONS |
|---|---|---|
| ETC | 2014 | 1 |
| | | 2 |
| | | 3 |
| | | 4 |

DESIGN-DETAILED
CHECKED-REVIEWED
FIELD CHANGES

VE SUPER. DESIGN
ROCKINGHAM VT. BRF 0126 (12)

REINFORCING STEEL SCHEDULE

SHEET NUMBER

44


CALDERWOOD ENGINEERING, ETC.
222 RIVER ROAD
RICHMOND, ME 04357
PH. (207) 737-2007 FAX (207) 737-2008