STATE OF VERMONT
AGENCY OF TRANSPORTATION

# REINFORCING STEEL SCHEDULE

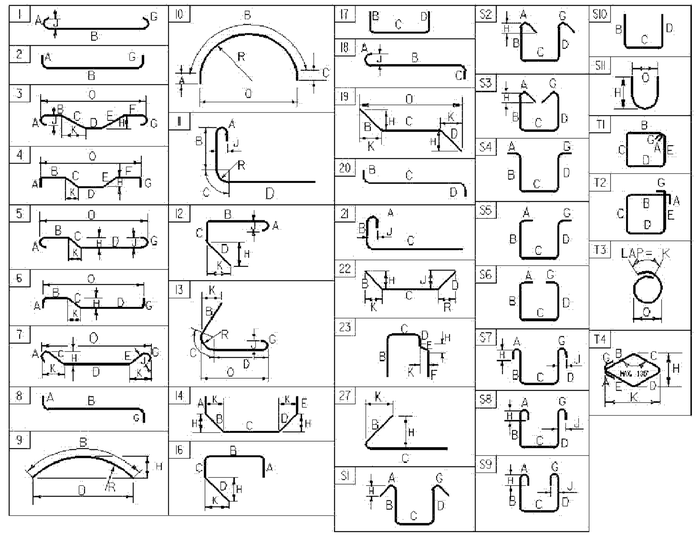
Metric

| ITEM | EACH | SIZE | LENGTH | MARK | TYPE | A | B | C | D | E | F | G | H | J | K | R | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DECK** | | | | | | | | | | | | | | | | | |
| ✳ | 53 | 16 | 9750 | ES1601 | STR | | | | | | | | | | | | |
| | 240 | 16 | 9750 | ES1602 | STR | | | | | | | | | | | | |
| | 414 | 16 | 8700 | ES1603 | STR | | | | | | | | | | | | |
| | 247 | 16 | 1650 | ES1604 | STR | | | | | | | | | | | | |
| | 246 | 16 | 1330 | ES1605 | S5 | 155 | 335 | 350 | 335 | | | 155 | | | | | |
| | 122 | 16 | 2610 | ES1606 | S6 | 155 | 300 | 1650 | 350 | | | 155 | | | | | |
| | 22 | 16 | 8700 | ES1607 | STR | | | | | | | | | | | | |
| ✳ | 3 | 19 | 8700 | ES1901 | STR | | | | | | | | | | | | |
| | 118 | 16 | 1050 | ES1608 | 1 | 200 | 850 | | | | | | | 75 | | | |
| | 118 | 16 | 2100 | ES1609 | 1 | 200 | 1900 | | | | | | | 75 | | | |
| | 118 | 16 | 1650 | ES1610 | 17 | | 600 | 450 | 600 | | | | | | | | |
| | 30 | 16 | 2050 | ES1611 | 3 | 240 | 1150 | 660 | | | | | | | | | |
| | 59 | 16 | 4440 | ES1612 | 3 | 240 | 900 | 3300 | | | | | | | | | |
| **APPROACH SLAB 1** | | | | | | | | | | | | | | | | | |
| ✳ | 22 | 16 | 7950 | 1EAS1601 | STR | | | | | | | | | | | | |
| ✳ | 34 | 29 | 6225 | 1EAS2901 | 1 | 375 | 5850 | | | | | --- | | 300 | | | |
| **ABUTMENT 1** | | | | | | | | | | | | | | | | | |
| ✳ | 13 | 29 | 10875 | 1EA2901 | STR | | | | | | | | | | | | |
| ✳ | 15 | 29 | 10875 | 1A2901 | STR | | | | | | | | | | | | |
| ✳ | 28 | 16 | 1825 | 1EA1601 | 1 | 180 | 1465 | | | | | 180 | | | | | |
| ✳ | 26 | 19 | 2235 | 1EA1901 | 12 | 205 | 1330 | --- | 700 | | | | 566 | | 566 | | |
| ▲ | 16 | 29 | 4185 | 1EA2902 | S10 | | 1750 | 685 | 1750 | | | | | | | | |
| ▲ | 14 | 29 | 4185 | 1A2902 | S10 | | 1750 | 685 | 1750 | | | | | | | | |
| ✳ | 38 | 32 | 4650 | 1EA3202 | 23 | | 1940 | 550 | 465 | 185 | 1510 | | | | 230 | | |
| ✳ ▲ | 75 | 32 | 3560 | 1A3201 | 2 | 550 | 3010 | | | | | --- | | | | | |
| **WINGWALL 1** | | | | | | | | | | | | | | | | | |
| ▲ | 26 | 16 | 3980 | 1EW1601 | STR | | | | | | | | | | | | |
| ▲ | 8 | 29 | 3750 | 1EW2902 | STR | | | | | | | | | | | | |
| ▲ | 8 | 29 | 3750 | 1W2902 | STR | | | | | | | | | | | | |
| | 11 | 16 | 1620 | 1EW1602 | S10 | | 660 | 300 | 660 | | | | | | | | |
| ▲ | 9 | 29 | 4690 | 1EW2901 | 2 | 940 | 3750 | | | | | --- | | | | | |
| | 8 | 29 | 3620 | 1EW2903 | 22 | | 1030 | 1560 | 1030 | | | | | | | | |
| ▲ | 8 | 29 | 4690 | 1W2901 | 2 | 940 | 3750 | | | | | --- | | | | | |
| **WINGWALL 2** | | | | | | | | | | | | | | | | | |
| ▲ | 26 | 16 | 3990 | 2EW1601 | STR | | | | | | | | | | | | |
| ▲ | 8 | 29 | 3750 | 2EW2902 | STR | | | | | | | | | | | | |
| ▲ | 8 | 29 | 3750 | 2W2902 | STR | | | | | | | | | | | | |
| | 11 | 16 | 1620 | 2EW1602 | S10 | | 660 | 300 | 660 | | | | | | | | |
| ▲ | 9 | 29 | 4690 | 2EW2901 | 2 | 940 | 3750 | | | | | --- | | | | | |
| | 8 | 29 | 3560 | 2EW2903 | 22 | | 1000 | 1560 | 1000 | | | | | | | | |
| ▲ | 8 | 29 | 4690 | 2W2901 | 2 | 940 | 3750 | | | | | --- | | | | | |
| ✳ NOTE: THE COST FOR BRIDGE RAILING REINFORCING STEEL SHALL BE INCLUDED IN THE PAY ITEM 900.640 "SPECIAL PROVISION: GALVANIZED METAL HAND RAILING/CONCRETE PARAPET COMBINATION" | | | | | | | | | | | | | | | | | |
| **BRIDGE RAIL (SPECIAL PROVISION)** | | | | | | | | | | | | | | | | | |
| × | 83 | 16 | 9775 | EBR1602 | STR | | | | | | | | | | | | |
| ▲ | 494 | 16 | 2575 | EBR1601 | S5 | 155 | 1055 | 155 | 1055 | | | 155 | | | | | |
| ✳ | 21 | 16 | 3645 | EBR1603 | S5 | 155 | 1590 | 155 | 1590 | | | 155 | | | | | |

| ITEM | EACH | SIZE | LENGTH | MARK | TYPE | A | B | C | D | E | F | G | H | J | K | R | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **APPROACH SLAB 2** | | | | | | | | | | | | | | | | | |
| ✳ | 22 | 16 | 7950 | 2EAS1601 | STR | | | | | | | | | | | | |
| ✳ | 34 | 29 | 6225 | 2EAS2901 | 1 | 375 | 5850 | | | | | --- | | 300 | | | |
| **ABUTMENT 2** | | | | | | | | | | | | | | | | | |
| ✳ | 31 | 16 | 2100 | 2A1601 | STR | | | | | | | | | | | | |
| | 8 | 16 | 8700 | 2A1602 | STR | | | | | | | | | | | | |
| ✳ | 13 | 19 | 8700 | 2A1901 | STR | | | | | | | | | | | | |
| | 30 | 19 | 2250 | 2A1902 | 17 | | 1000 | 750 | 1000 | | | | | | | | |
| | 30 | 19 | 2850 | 2A1903 | 17 | | 1350 | 1500 | | | | | | | | | |
| | 30 | 19 | 3000 | 2A1904 | 17 | | 1500 | 1500 | | | | | | | | | |
| ✳ | 39 | 25 | 1500 | 2A2501 | 17 | | 300 | 1200 | | | | | | | | | |
| **WINGWALL 3** | | | | | | | | | | | | | | | | | |
| ✳ ▲ | 18 | 16 | 4150 | 3EW1601 | 17 | | 1350 | 2800 | | | | | | | | | |
| ▲ | 18 | 16 | 4450 | 3W1602 | STR | | | | | | | | | | | | |
| ▲ | 18 | 16 | 2000 | 3W1603 | STR | | | | | | | | | | | | |
| | 5 | 16 | 4755 | 3W1604 | 17 | | 875 | 3880 | | | | | | | | | |
| | 7 | 16 | 4755 | 3EW1604 | 17 | | 875 | 3880 | | | | | | | | | |
| | 5 | 16 | 4755 | 3W1605 | 17 | | 875 | 3880 | | | | | | | | | |
| | 7 | 16 | 4755 | 3EW1605 | 17 | | 875 | 3880 | | | | | | | | | |
| ▲ | 15 | 16 | 3350 | 3W1606 | 17 | | 2150 | 300 | 2150 | | | | | | | | |
| | 13 | 19 | 4025 | 3EW1901 | 17 | | 1225 | 2800 | | | | | | | | | |
| ✳ | 14 | 19 | 4625 | 3EW1901 | 17 | | 1225 | 3400 | | | | | | | | | |
| **WINGWALL 4** | | | | | | | | | | | | | | | | | |
| ▲ | 4 | 16 | 4700 | 4EW1601 | 17 | | 1500 | 3200 | | | | | | | | | |
| ▲ | 4 | 16 | 3750 | 4EW1602 | 17 | | 1425 | 900 | 1325 | | | | | | | | |
| | 7 | 16 | 2100 | 4W1603 | STR | | | | | | | | | | | | |
| | 12 | 16 | 1160 | 4EW1604 | STR | | | | | | | | | | | | |
| | 14 | 16 | 1160 | 4W1605 | STR | | | | | | | | | | | | |
| | 4 | 16 | 1150 | 4W1606 | 14 | 230 | 230 | 230 | 230 | 230 | | | 230 | | 230 | | |
| ▲ | 4 | 19 | 4550 | 4EW1901 | 17 | | 1350 | 3200 | | | | | | | | | |

## ~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-SI). ALL BARS SHALL BE GRADE 420, 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. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.




**ASTM STANDARD REINFORCING BARS**

| BAR SIZE | NOMINAL MASS (Kg/m) | NOMINAL DIMENSIONS ROUND SECTION | | |
|---|---|---|---|---|
| | | DIAMETER (mm) | CROSS SECTIONAL AREA (mm²) | PERIMETER (mm) |
| #10 | 0.560 | 9.5 | 71 | 29.84 |
| #13 | 0.994 | 12.7 | 129 | 39.90 |
| #16 | 1.552 | 15.9 | 199 | 49.95 |
| #19 | 2.235 | 19.1 | 284 | 60.00 |
| #22 | 3.042 | 22.2 | 387 | 69.74 |
| #25 | 3.973 | 25.4 | 510 | 79.80 |
| #29 | 5.060 | 28.7 | 645 | 90.16 |
| #32 | 6.404 | 32.3 | 819 | 101.47 |
| #36 | 7.907 | 35.8 | 1006 | 112.47 |
| #43 | 11.380 | 43.0 | 1452 | 135.09 |
| #57 | 20.240 | 57.3 | 2581 | 180.01 |

PROJECT NAME: Newfane
PROJECT NUMBER: BRF 0106(3)S

FILE NAME: s96j280rss
PROJECT MANAGER: C. CARLSON
DESIGNED BY: T. LACKEY
REINFORCING STEEL SCHEDULE SHEET #1

PLOT DATE: 7/29/2011
DRAWN BY: I. DEGUTIS
CHECKED BY: D. PETERSON
SHEET 46 OF 70