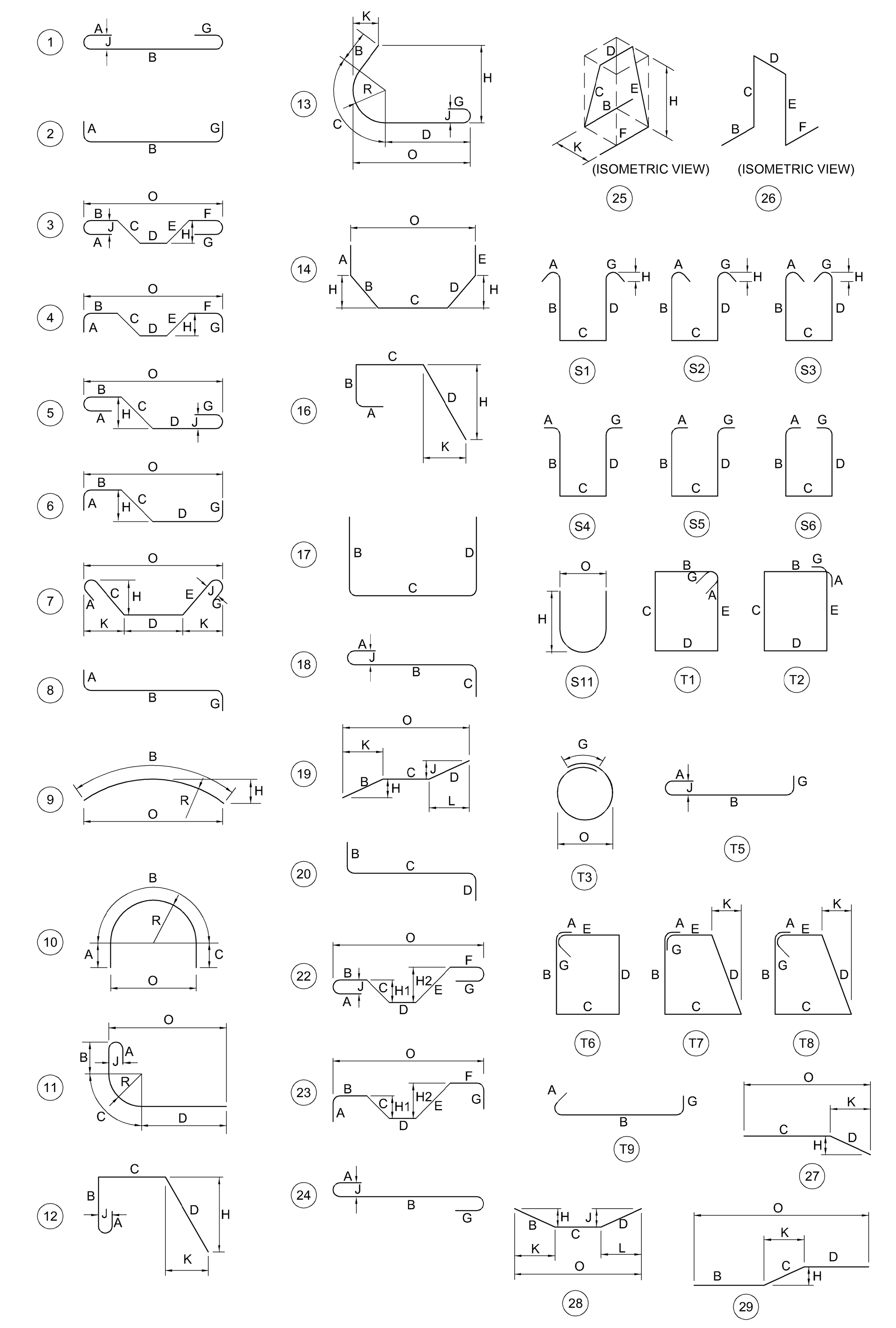
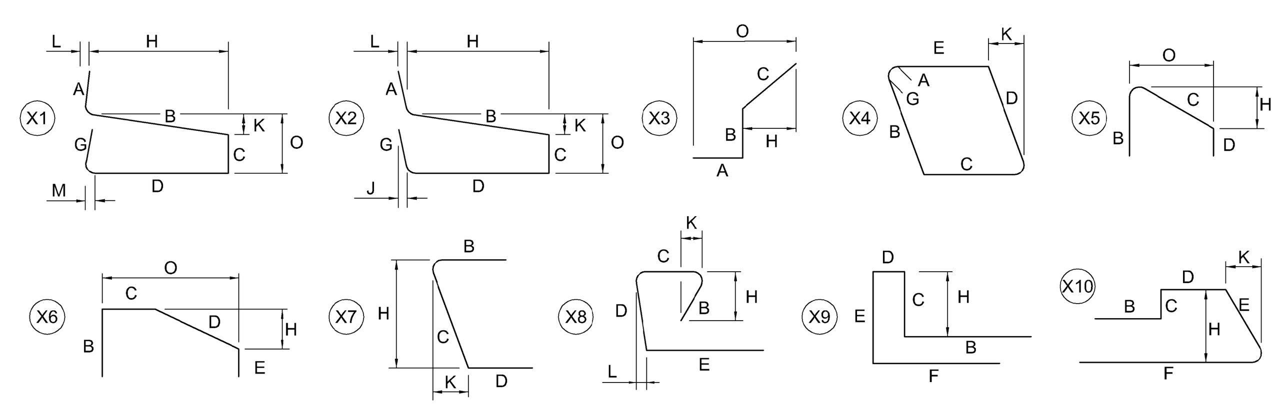
| MARKS | NO BARS | SIZE | LENGTH | TYPE | A | B | C | D | E | F | G | H | J | K | L | M | O | R | SHAPE | MASS (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHEAST WINGWALL CLADDING | | | | | | | | | | | | | | | | | | | | |
| W1601X | 16 | 16 | 2 520 | 4 | | 500 | 580 | 360 | 580 | 500 | | 360 | | | | | 2260 | | | 62.58 |
| W1602X | 26 | 16 | 2 020 | 4 | | | 580 | 360 | 580 | 500 | | 360 | | | | | 1760 | | | 81.51 |
| W1603X | 14 | 16 | 4 100 | STR | | | | | | | | | | | | | | | | 89.08 |
| W1604X | 2 | 16 | 3 220 | STR | | | | | | | | | | | | | | | | 9.99 |
| W1605X | 3 | 16 | 2 030 | STR | | | | | | | | | | | | | | | | 9.45 |
| W1606X | 3 | 16 | 830 | STR | | | | | | | | | | | | | | | | 3.86 |
| W1607X | 2 | 16 | 4 200 | STR | | | | | | | | | | | | | | | | 13.04 |
| W1609X | 2 | 16 | 2 250 | STR | | | | | | | | | | | | | | | | 6.98 |
| W1610X | 2 | 16 | 2 135 | 17 | | 300 | 635 | 1200 | | | | | | | | | | | | 6.63 |
| W1615X | 11 | 16 | 2 780 | X4 | 140 | 750 | 500 | 750 | 500 | | 140 | | | 360 | | | | | | 47.46 |
| W1616X | 57 | 16 | 1 000 | STR | | | | | | | | | | | | | | | | 88.46 |
| W1617X | 27 | 16 | 3 050 | STR | | | | | | | | | | | | | | | | 127.81 |
| W1636X | 17 | 16 | 315 | STR | | | | | | | | | | | | | | | | 8.31 |
| W1637X | 2 | 16 | 1 590 | 3 | 180 | 350 | 560 | 500 | | | | 430 | 130 | | | | | | | 4.94 |
| W1640X | 11 | 16 | 4 570 | STR | | | | | | | | | | | | | | | | 78.02 |
| W1641X | 1 | 16 | 3 930 | 19 | | | 2700 | 1230 | | | | | 300 | | 1200 | | | | | 6.10 |
| W1642X | 11 | 16 | 2 110 | 3 | 180 | 850 | 580 | 500 | | | | 450 | 130 | | | | | | | 36.02 |
| W1643X | 11 | 16 | 1 650 | X7 | | 900 | 750 | | | | | | | 360 | | | | | | 28.17 |
| W1680X | 1 | 16 | 2 980 | STR | | | | | | | | | | | | | | | | 4.62 |
| W1681X | 5 | 16 | 2 720 | STR | | | | | | | | | | | | | | | | 21.11 |
| W1682X | 5 | 16 | 2 390 | STR | | | | | | | | | | | | | | | | 18.55 |
| W1683X | 5 | 16 | 2 020 | STR | | | | | | | | | | | | | | | | 15.68 |
| W1684X | 5 | 16 | 1670 | STR | | | | | | | | | | | | | | | | 12.96 |
| W1685X | 5 | 16 | 1310 | STR | | | | | | | | | | | | | | | | 10.17 |
| W1686X | 5 | 16 | 930 | STR | | | | | | | | | | | | | | | | 7.22 |
| W1687X | 1 | 16 | 980 | STR | | | | | | | | | | | | | | | | 1.52 |
| W1688X | 1 | 16 | 900 | STR | | | | | | | | | | | | | | | | 1.40 |
| W1689X | 1 | 16 | 825 | STR | | | | | | | | | | | | | | | | 1.28 |
| W1690X | 1 | 16 | 750 | STR | | | | | | | | | | | | | | | | 1.16 |
| W1691X | 1 | 16 | 685 | STR | | | | | | | | | | | | | | | | 1.06 |
| W1692X | 1 | 16 | 610 | STR | | | | | | | | | | | | | | | | 0.95 |
| W1693X | 1 | 16 | 545 | STR | | | | | | | | | | | | | | | | 0.85 |
| W1694X | 1 | 16 | 470 | STR | | | | | | | | | | | | | | | | 0.73 |
| W1695X | 1 | 16 | 395 | STR | | | | | | | | | | | | | | | | 0.61 |
| W1696X | 1 | 16 | 335 | STR | | | | | | | | | | | | | | | | 0.52 |
| W1698X | 11 | 16 | 780 | STR | | | | | | | | | | | | | | | | 13.32 |
| TOTAL MASS: NORTHEAST WINGWALL CLADDING (kg) | | | | | | | | | | | | | | | | | | | | 822.11 |
| NORTHEAST WINGWALL COPING | | | | | | | | | | | | | | | | | | | | |
| C1603X(1) | 21 | 16 | 4100 | STR | | | | | | | | | | | | | | | | 133.63 |
| C1603X(6) | 7 | 16 | 1700 | STR | | | | | | | | | | | | | | | | 18.47 |
| C1603X(7) | 7 | 16 | 4120 | STR | | | | | | | | | | | | | | | | 44.76 |
| C1605X | 66 | 16 | 1570 | X5 | | 530 | 890 | 150 | | | | 375 | | | | | 830 | | | 160.82 |
| C1606X | 1 | 16 | 1575 | X6 | | | 650 | 775 | 150 | | | 350 | | | | | 1350 | | | 2.44 |
| C1607X(1) | 1 | 16 | 1970 | 17 | | 850 | 270 | 850 | | | | | | | | | | | | 3.06 |
| C1607X(2) | 1 | 16 | 2680 | 17 | | 1070 | 540 | 1070 | | | | | | | | | | | | 4.16 |
| C1607X(3) | 2 | 16 | 3410 | 17 | | 1310 | 790 | 1310 | | | | | | | | | | | | 10.58 |
| C1608X | 1 | 16 | 1350 | X6 | 330 | 475 | 395 | 150 | | | | 175 | | | | | 830 | | | 2.10 |
| C1609X(1) | 1 | 16 | 2670 | X7 | | 1200 | 270 | 1200 | | | | 270 | | 120 | | | | | | 4.14 |
| C1609X(2) | 1 | 16 | 2990 | X7 | | 1200 | 590 | 1200 | | | | 540 | | 290 | | | | | | 4.64 |
| C1609X(3) | 1 | 16 | 3280 | X7 | | 1200 | 880 | 1200 | | | | 790 | | 450 | | | | | | 5.09 |
| C1610X | 1 | 16 | 1590 | X5 | | 530 | 910 | 150 | | | | 375 | | | | | 850 | | | 2.47 |
| C1611X | 1 | 16 | 1635 | X5 | | 530 | 955 | 150 | | | | 375 | | | | | 900 | | | 2.54 |
| C1612X | 1 | 16 | 1715 | X5 | | 530 | 1035 | 150 | | | | 375 | | | | | 985 | | | 2.66 |
| TOTAL MASS: NORTHEAST WINGWALL COPING (kg) | | | | | | | | | | | | | | | | | | | | 401.56 |

| MARKS | NO BARS | SIZE | LENGTH | TYPE | A | B | C | D | E | F | G | H | J | K | L | M | O | R | SHAPE | MASS (kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHWEST WINGWALL CLADDING | | | | | | | | | | | | | | | | | | | | |
| W1601X | 16 | 16 | 2 520 | 4 | | 500 | 580 | 360 | 580 | 500 | | 360 | | | | | 2260 | | | 62.58 |
| W1602X | 29 | 16 | 2 020 | 4 | | | 580 | 360 | 580 | 500 | | 360 | | | | | 1760 | | | 90.92 |
| W1603X | 15 | 16 | 4 100 | STR | | | | | | | | | | | | | | | | 95.45 |
| W1604X | 2 | 16 | 3 220 | STR | | | | | | | | | | | | | | | | 9.99 |
| W1605X | 3 | 16 | 2 030 | STR | | | | | | | | | | | | | | | | 9.45 |
| W1606X | 3 | 16 | 830 | STR | | | | | | | | | | | | | | | | 3.86 |
| W1607X | 2 | 16 | 4 200 | STR | | | | | | | | | | | | | | | | 13.04 |
| W1609X | 2 | 16 | 2 250 | STR | | | | | | | | | | | | | | | | 6.98 |
| W1610X | 2 | 16 | 2 135 | 17 | | 300 | 635 | 1200 | | | | | | | | | | | | 6.63 |
| W1611X | 11 | 16 | 3 845 | STR | | | | | | | | | | | | | | | | 65.64 |
| W1612X | 1 | 16 | 3 130 | 19 | | | 2800 | 330 | | | | | 75 | | 325 | | | | | 4.86 |
| W1613X | 11 | 16 | 1 910 | 3 | 180 | 650 | 580 | 500 | | | | 450 | 130 | | | | | | | 32.61 |
| W1614X | 11 | 16 | 1 650 | 16 | | | 900 | 750 | | | | | | 430 | | | | | | 28.17 |
| W1615X | 11 | 16 | 2 780 | X4 | 140 | 750 | 500 | 750 | 500 | | 140 | | | 360 | | | | | | 47.46 |
| W1616X | 55 | 16 | 1 000 | STR | | | | | | | | | | | | | | | | 85.36 |
| W1636X | 19 | 16 | 315 | STR | | | | | | | | | | | | | | | | 9.29 |
| W1637X | 2 | 16 | 1 590 | 3 | 180 | 350 | 560 | 500 | | | | 430 | 130 | | | | | | | 4.94 |
| W1644X | 25 | 16 | 2 900 | STR | | | | | | | | | | | | | | | | 112.52 |
| W1658X | 1 | 16 | 3 210 | STR | | | | | | | | | | | | | | | | 4.98 |
| W1659X | 5 | 16 | 2 800 | STR | | | | | | | | | | | | | | | | 21.73 |
| W1660X | 5 | 16 | 2 425 | STR | | | | | | | | | | | | | | | | 18.82 |
| W1661X | 5 | 16 | 2 075 | STR | | | | | | | | | | | | | | | | 16.10 |
| W1662X | 5 | 16 | 1 720 | STR | | | | | | | | | | | | | | | | 13.35 |
| W1663X | 5 | 16 | 1 340 | STR | | | | | | | | | | | | | | | | 10.40 |
| W1664X | 1 | 16 | 1 385 | STR | | | | | | | | | | | | | | | | 2.15 |
| W1665X | 1 | 16 | 1 320 | STR | | | | | | | | | | | | | | | | 2.05 |
| W1666X | 1 | 16 | 1 245 | STR | | | | | | | | | | | | | | | | 1.93 |
| W1667X | 1 | 16 | 1 170 | STR | | | | | | | | | | | | | | | | 1.82 |
| W1668X | 1 | 16 | 1 090 | STR | | | | | | | | | | | | | | | | 1.69 |
| W1669X | 1 | 16 | 1 055 | STR | | | | | | | | | | | | | | | | 1.64 |
| W1670X | 1 | 16 | 975 | STR | | | | | | | | | | | | | | | | 1.51 |
| W1671X | 1 | 16 | 900 | STR | | | | | | | | | | | | | | | | 1.40 |
| W1672X | 1 | 16 | 825 | STR | | | | | | | | | | | | | | | | 1.28 |
| W1673X | 1 | 16 | 760 | STR | | | | | | | | | | | | | | | | 1.18 |
| W1674X | 1 | 16 | 690 | STR | | | | | | | | | | | | | | | | 1.07 |
| W1675X | 1 | 16 | 625 | STR | | | | | | | | | | | | | | | | 0.97 |
| W1676X | 1 | 16 | 550 | STR | | | | | | | | | | | | | | | | 0.85 |
| W1677X | 1 | 16 | 475 | STR | | | | | | | | | | | | | | | | 0.74 |
| W1678X | 1 | 16 | 410 | STR | | | | | | | | | | | | | | | | 0.64 |
| W1679X | 1 | 16 | 335 | STR | | | | | | | | | | | | | | | | 0.52 |
| W1697X | 11 | 16 | 890 | STR | | | | | | | | | | | | | | | | 15.19 |
| TOTAL MASS: NORTHWEST WINGWALL CLADDING (kg) | | | | | | | | | | | | | | | | | | | | 811.74 |
| NORTHWEST WINGWALL COPING | | | | | | | | | | | | | | | | | | | | |
| C1603X(1) | 21 | 16 | 4100 | STR | | | | | | | | | | | | | | | | 133.63 |
| C1603X(5) | 7 | 16 | 3725 | STR | | | | | | | | | | | | | | | | 40.47 |
| C1603X(6) | 7 | 16 | 1700 | STR | | | | | | | | | | | | | | | | 18.47 |
| C1605X | 65 | 16 | 1570 | X5 | | 530 | 890 | 150 | | | | 375 | | | | | 830 | | | 158.38 |
| C1606X | 1 | 16 | 1575 | X6 | | | 650 | 775 | 150 | | | 350 | | | | | 1350 | | | 2.44 |
| C1607X(1) | 1 | 16 | 1970 | 17 | | 850 | 270 | 850 | | | | | | | | | | | | 3.06 |
| C1607X(2) | 1 | 16 | 2680 | 17 | | 1070 | 540 | 1070 | | | | | | | | | | | | 4.16 |
| C1607X(3) | 2 | 16 | 3410 | 17 | | 1310 | 790 | 1310 | | | | | | | | | | | | 10.58 |
| C1608X | 1 | 16 | 1350 | X6 | 330 | 475 | 395 | 150 | | | | 175 | | | | | 830 | | | 2.10 |
| C1609X(1) | 1 | 16 | 2670 | X7 | | 1200 | 270 | 1200 | | | | 270 | | 120 | | | | | | 4.14 |
| C1609X(2) | 1 | 16 | 2990 | X7 | | 1200 | 590 | 1200 | | | | 540 | | 290 | | | | | | 4.64 |
| C1609X(3) | 1 | 16 | 3280 | X7 | | 1200 | 880 | 1200 | | | | 790 | | 450 | | | | | | 5.09 |
| C1610X | 1 | 16 | 1590 | X5 | | 530 | 910 | 150 | | | | 375 | | | | | 850 | | | 2.47 |
| C1611X | 1 | 16 | 1635 | X5 | | 530 | 955 | 150 | | | | 375 | | | | | 900 | | | 2.54 |
| C1612X | 1 | 16 | 1715 | X5 | | 530 | 1035 | 150 | | | | 375 | | | | | 985 | | | 2.66 |
| TOTAL MASS: NORTHWEST WINGWALL (kg) | | | | | | | | | | | | | | | | | | | | 394.83 |
| TOTAL MASS OF CHROMX = 2 430.24 kg | | | | | | | | | | | | | | | | | | | | |



A.C.I. - TYPICAL BAR BENDS

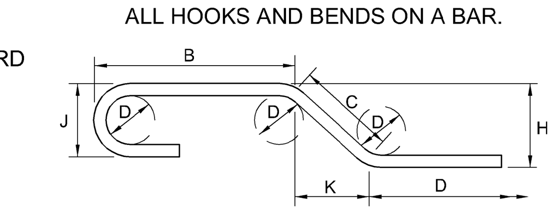


SPECIAL BAR BENDS

NOTES:

1. ALL DIMENSIONS ARE OUT-TO-OUT OF A BAR EXCEPT 'A' AND "G" ON STANDARD 180° AND 135° HOOKS.
2. "J" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ON TRUSS BARS "J" WILL BE KEPT EQUAL TO OR LESS THAN "H". WHERE "J" CAN EXCEED "H" IT SHOULD BE SHOWN.
4. THE STIRRUPS "H" DIMENSION SHOULD BE SHOWN ONLY WHERE NECESSARY TO FIT WITHIN CONCRETE.
5. CRITICAL DIMENSIONS ARE TO BE IDENTIFIED WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCES.
6. ON TYPE T3 "G" DIMENSION IS EQUAL TO CLASS C SPLICE.
7. FIGURES SHOWN IN CIRCLES SHOW TYPES.
8. ALL BAR BENDS OTHER THAN THE TYPES SHOWN ABOVE MUST BE DESIGNATED TYPE "X".

UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL HOOKS AND BENDS ON A BAR.



ENLARGED VIEW SHOWING BAR BENDING DETAILS

APEGM
Certificate of Authorization
Dillon Consulting Limited (MB)
No. 1789 Date: 2018/02/09

| NO. | REVISIONS | DATE | BY |
|---|---|---|---|
| 0 | ISSUED FOR TENDER | 18/02/09 | DRA |

DILLON CONSULTING

DESIGNED BY: DRA
CHECKED BY: SSR
DRAWN BY: MG
APPROVED BY: MBL
HOR. SCALE: AS SHOWN
VERTICAL: AS SHOWN
RELEASED FOR CONSTRUCTION
DATE: 2018/02/09
DATE:

ENGINEER'S SEAL
PROVINCE OF MANITOBA
D.R.C. AMORIM
Member 33215
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT PROJECT NUMBER: 17-5932

Winnipeg
THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT

FERMOR AVENUE BRIDGE OVER SEINE RIVER
BRIDGE REHABILITATION, PEDESTRIAN-CYCLIST UNDERPASS STRUCTURE AND ROADWORKS FROM ST. ANNE'S ROAD TO ARCHIBALD STREET

PEDESTRIAN-CYCLIST UNDERPASS
REINFORCING STEEL SCHEDULE 6 OF 6

CITY DRAWING NUMBER: U-243-2017-CS-088
SHEET 088 OF 100
CONSULTANT DRAWING NUMBER: CS- 088

G:\CAD\175932\Drawings\Structural\Contract\UNDERPASS\175932-UNDERPASS-CON-CS-REINF SCHED WW2.dwg