

ノーサウンド側溝

No.0

マニング(manning)公式による流速流量表

$$V=1/n \times R^{2/3} \times I^{1/2}$$

$$Q=A \times V$$

ここで、

V:流速(m/sec)

n:粗度係数

0.013

R:径深(m)=A/P

A:通水断面積('m²)

P:潤辺(m)

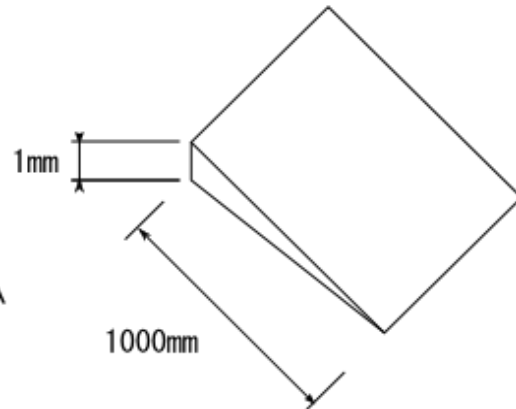
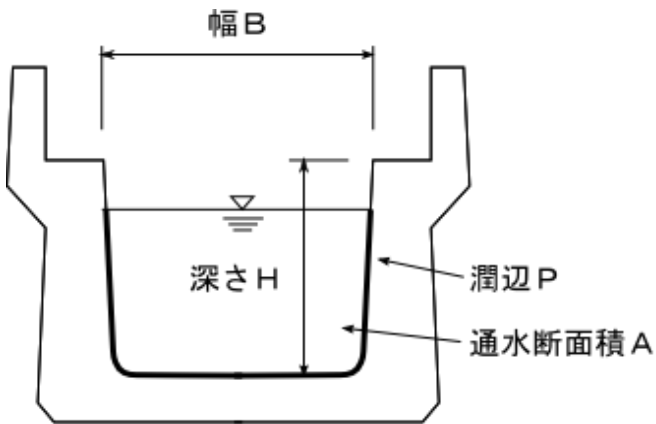
I:水路勾配(‰)

※1‰(ノパーミル)=0.1%

Q:流量(m³/sec)

※8割水深(0.8H)で計算

1‰(=ノパーミル)



ノーサウンド側溝

No.1

| 呼び名 幅B × 深さH(mm) | | 250 | | 300A | | 300B | |
|-------------------------|-----------|-----------|--------|-----------|--------|-----------|--------|
| | | 250 × 250 | | 300 × 300 | | 300 × 400 | |
| 通水断面積A(m ²) | | 0.0466 | | 0.0681 | | 0.0892 | |
| 潤辺P(m) | | 0.5912 | | 0.7204 | | 0.8710 | |
| 径深R(m) | | 0.0788 | | 0.0945 | | 0.1024 | |
| R ^{2/3} | | 0.1838 | | 0.2075 | | 0.2189 | |
| 粗度係数n | | 0.0130 | | 0.0130 | | 0.0130 | |
| 勾配I(0/00) | $I^{1/2}$ | V | Q | V | Q | V | Q |
| 100 | 0.3162 | 4.4710 | 0.2083 | 5.0467 | 0.3437 | 5.3242 | 0.4749 |
| 75.0 | 0.2739 | 3.8720 | 0.1804 | 4.3706 | 0.2976 | 4.6109 | 0.4113 |
| 50.0 | 0.2236 | 3.1615 | 0.1473 | 3.5686 | 0.2430 | 3.7648 | 0.3358 |
| 40.0 | 0.2000 | 2.8277 | 0.1318 | 3.1918 | 0.2174 | 3.3673 | 0.3004 |
| 35.0 | 0.1871 | 2.6451 | 0.1233 | 2.9857 | 0.2033 | 3.1499 | 0.2810 |
| 30.0 | 0.1732 | 2.4489 | 0.1141 | 2.7642 | 0.1882 | 2.9162 | 0.2601 |
| 25.0 | 0.1581 | 2.2355 | 0.1042 | 2.5234 | 0.1718 | 2.6621 | 0.2375 |
| 20.0 | 0.1414 | 1.9995 | 0.0932 | 2.2570 | 0.1537 | 2.3811 | 0.2124 |
| 18.0 | 0.1342 | 1.8969 | 0.0884 | 2.1412 | 0.1458 | 2.2589 | 0.2015 |
| 16.0 | 0.1265 | 1.7884 | 0.0833 | 2.0187 | 0.1375 | 2.1297 | 0.1900 |
| 14.0 | 0.1183 | 1.6729 | 0.0780 | 1.8883 | 0.1286 | 1.9921 | 0.1777 |
| 12.0 | 0.1095 | 1.5488 | 0.0722 | 1.7482 | 0.1191 | 1.8444 | 0.1645 |
| 10.0 | 0.1000 | 1.4139 | 0.0659 | 1.5959 | 0.1087 | 1.6837 | 0.1502 |
| 9.0 | 0.0949 | 1.3413 | 0.0625 | 1.5140 | 0.1031 | 1.5973 | 0.1425 |
| 8.0 | 0.0894 | 1.2646 | 0.0589 | 1.4274 | 0.0972 | 1.5059 | 0.1343 |
| 7.0 | 0.0837 | 1.1829 | 0.0551 | 1.3352 | 0.0909 | 1.4087 | 0.1257 |
| 6.0 | 0.0775 | 1.0952 | 0.0510 | 1.2362 | 0.0842 | 1.3042 | 0.1163 |
| 5.5 | 0.0742 | 1.0485 | 0.0489 | 1.1836 | 0.0806 | 1.2486 | 0.1114 |
| 5.0 | 0.0707 | 0.9998 | 0.0466 | 1.1285 | 0.0768 | 1.1905 | 0.1062 |
| 4.8 | 0.0693 | 0.9796 | 0.0456 | 1.1057 | 0.0753 | 1.1665 | 0.1041 |
| 4.6 | 0.0678 | 0.9589 | 0.0447 | 1.0824 | 0.0737 | 1.1419 | 0.1019 |
| 4.5 | 0.0671 | 0.9484 | 0.0442 | 1.0706 | 0.0729 | 1.1294 | 0.1007 |
| 4.4 | 0.0663 | 0.9379 | 0.0437 | 1.0586 | 0.0721 | 1.1168 | 0.0996 |
| 4.2 | 0.0648 | 0.9163 | 0.0427 | 1.0343 | 0.0704 | 1.0911 | 0.0973 |
| 4.0 | 0.0632 | 0.8942 | 0.0417 | 1.0093 | 0.0687 | 1.0648 | 0.0950 |
| 3.8 | 0.0616 | 0.8716 | 0.0406 | 0.9838 | 0.0670 | 1.0379 | 0.0926 |
| 3.5 | 0.0592 | 0.8365 | 0.0390 | 0.9442 | 0.0643 | 0.9961 | 0.0888 |
| 3.4 | 0.0583 | 0.8244 | 0.0384 | 0.9306 | 0.0634 | 0.9817 | 0.0876 |
| 3.0 | 0.0548 | 0.7744 | 0.0361 | 0.8741 | 0.0595 | 0.9222 | 0.0823 |
| 2.8 | 0.0529 | 0.7481 | 0.0349 | 0.8445 | 0.0575 | 0.8909 | 0.0795 |
| 2.6 | 0.0510 | 0.7209 | 0.0336 | 0.8138 | 0.0554 | 0.8585 | 0.0766 |
| 2.5 | 0.0500 | 0.7069 | 0.0329 | 0.7980 | 0.0543 | 0.8418 | 0.0751 |
| 2.4 | 0.0490 | 0.6926 | 0.0323 | 0.7818 | 0.0532 | 0.8248 | 0.0736 |
| 2.2 | 0.0469 | 0.6632 | 0.0309 | 0.7486 | 0.0510 | 0.7897 | 0.0704 |
| 2.0 | 0.0447 | 0.6323 | 0.0295 | 0.7137 | 0.0486 | 0.7530 | 0.0672 |
| 1.8 | 0.0424 | 0.5999 | 0.0280 | 0.6771 | 0.0461 | 0.7143 | 0.0637 |
| 1.6 | 0.0400 | 0.5655 | 0.0264 | 0.6384 | 0.0435 | 0.6735 | 0.0601 |
| 1.5 | 0.0387 | 0.5476 | 0.0255 | 0.6181 | 0.0421 | 0.6521 | 0.0582 |
| 1.4 | 0.0374 | 0.5290 | 0.0247 | 0.5971 | 0.0407 | 0.6300 | 0.0562 |
| 1.2 | 0.0346 | 0.4898 | 0.0228 | 0.5528 | 0.0376 | 0.5832 | 0.0520 |
| 1.0 | 0.0316 | 0.4471 | 0.0208 | 0.5047 | 0.0344 | 0.5324 | 0.0475 |
| 0.8 | 0.0283 | 0.3999 | 0.0186 | 0.4514 | 0.0307 | 0.4762 | 0.0425 |
| 0.6 | 0.0245 | 0.3463 | 0.0161 | 0.3909 | 0.0266 | 0.4124 | 0.0368 |

| 呼び名 幅B × 深さH(mm) | 300C | | 400A | | 400B | | |
|-------------------------|------------------|--------|-----------|--------|-----------|--------|--------|
| | 300 × 500 | | 400 × 400 | | 400 × 500 | | |
| 通水断面積A(m ²) | 0.1094 | | 0.1212 | | 0.1494 | | |
| 潤辺P(m) | 1.0216 | | 0.9710 | | 1.1216 | | |
| 径深R(m) | 0.1071 | | 0.1248 | | 0.1332 | | |
| R ^{2/3} | 0.2255 | | 0.2497 | | 0.2608 | | |
| 粗度係数n | 0.0130 | | 0.0130 | | 0.0130 | | |
| 勾配I(0/00) | I ^{1/2} | V | Q | V | Q | V | Q |
| 100 | 0.3162 | 5.4859 | 0.6002 | 6.0748 | 0.7363 | 6.3444 | 0.9479 |
| 75.0 | 0.2739 | 4.7509 | 0.5198 | 5.2609 | 0.6376 | 5.4944 | 0.8209 |
| 50.0 | 0.2236 | 3.8791 | 0.4244 | 4.2955 | 0.5206 | 4.4862 | 0.6702 |
| 40.0 | 0.2000 | 3.4696 | 0.3796 | 3.8421 | 0.4657 | 4.0126 | 0.5995 |
| 35.0 | 0.1871 | 3.2455 | 0.3551 | 3.5939 | 0.4356 | 3.7534 | 0.5608 |
| 30.0 | 0.1732 | 3.0048 | 0.3287 | 3.3273 | 0.4033 | 3.4750 | 0.5192 |
| 25.0 | 0.1581 | 2.7430 | 0.3001 | 3.0374 | 0.3681 | 3.1722 | 0.4739 |
| 20.0 | 0.1414 | 2.4534 | 0.2684 | 2.7167 | 0.3293 | 2.8373 | 0.4239 |
| 18.0 | 0.1342 | 2.3275 | 0.2546 | 2.5773 | 0.3124 | 2.6917 | 0.4021 |
| 16.0 | 0.1265 | 2.1944 | 0.2401 | 2.4299 | 0.2945 | 2.5378 | 0.3791 |
| 14.0 | 0.1183 | 2.0526 | 0.2246 | 2.2730 | 0.2755 | 2.3739 | 0.3547 |
| 12.0 | 0.1095 | 1.9004 | 0.2079 | 2.1044 | 0.2551 | 2.1978 | 0.3283 |
| 10.0 | 0.1000 | 1.7348 | 0.1898 | 1.9210 | 0.2328 | 2.0063 | 0.2997 |
| 9.0 | 0.0949 | 1.6458 | 0.1800 | 1.8224 | 0.2209 | 1.9033 | 0.2844 |
| 8.0 | 0.0894 | 1.5517 | 0.1698 | 1.7182 | 0.2082 | 1.7945 | 0.2681 |
| 7.0 | 0.0837 | 1.4514 | 0.1588 | 1.6072 | 0.1948 | 1.6786 | 0.2508 |
| 6.0 | 0.0775 | 1.3438 | 0.1470 | 1.4880 | 0.1803 | 1.5541 | 0.2322 |
| 5.5 | 0.0742 | 1.2866 | 0.1407 | 1.4247 | 0.1727 | 1.4879 | 0.2223 |
| 5.0 | 0.0707 | 1.2267 | 0.1342 | 1.3584 | 0.1646 | 1.4187 | 0.2119 |
| 4.8 | 0.0693 | 1.2019 | 0.1315 | 1.3309 | 0.1613 | 1.3900 | 0.2077 |
| 4.6 | 0.0678 | 1.1766 | 0.1287 | 1.3029 | 0.1579 | 1.3607 | 0.2033 |
| 4.5 | 0.0671 | 1.1637 | 0.1273 | 1.2887 | 0.1562 | 1.3459 | 0.2011 |
| 4.4 | 0.0663 | 1.1507 | 0.1259 | 1.2743 | 0.1544 | 1.3308 | 0.1988 |
| 4.2 | 0.0648 | 1.1243 | 0.1230 | 1.2450 | 0.1509 | 1.3002 | 0.1943 |
| 4.0 | 0.0632 | 1.0972 | 0.1200 | 1.2150 | 0.1473 | 1.2689 | 0.1896 |
| 3.8 | 0.0616 | 1.0694 | 0.1170 | 1.1842 | 0.1435 | 1.2368 | 0.1848 |
| 3.5 | 0.0592 | 1.0263 | 0.1123 | 1.1365 | 0.1377 | 1.1869 | 0.1773 |
| 3.4 | 0.0583 | 1.0116 | 0.1107 | 1.1201 | 0.1358 | 1.1699 | 0.1748 |
| 3.0 | 0.0548 | 0.9502 | 0.1040 | 1.0522 | 0.1275 | 1.0989 | 0.1642 |
| 2.8 | 0.0529 | 0.9180 | 0.1004 | 1.0165 | 0.1232 | 1.0616 | 0.1586 |
| 2.6 | 0.0510 | 0.8846 | 0.0968 | 0.9795 | 0.1187 | 1.0230 | 0.1528 |
| 2.5 | 0.0500 | 0.8674 | 0.0949 | 0.9605 | 0.1164 | 1.0031 | 0.1499 |
| 2.4 | 0.0490 | 0.8499 | 0.0930 | 0.9411 | 0.1141 | 0.9829 | 0.1468 |
| 2.2 | 0.0469 | 0.8137 | 0.0890 | 0.9010 | 0.1092 | 0.9410 | 0.1406 |
| 2.0 | 0.0447 | 0.7758 | 0.0849 | 0.8591 | 0.1041 | 0.8972 | 0.1340 |
| 1.8 | 0.0424 | 0.7360 | 0.0805 | 0.8150 | 0.0988 | 0.8512 | 0.1272 |
| 1.6 | 0.0400 | 0.6939 | 0.0759 | 0.7684 | 0.0931 | 0.8025 | 0.1199 |
| 1.5 | 0.0387 | 0.6719 | 0.0735 | 0.7440 | 0.0902 | 0.7770 | 0.1161 |
| 1.4 | 0.0374 | 0.6491 | 0.0710 | 0.7188 | 0.0871 | 0.7507 | 0.1122 |
| 1.2 | 0.0346 | 0.6010 | 0.0657 | 0.6655 | 0.0807 | 0.6950 | 0.1038 |
| 1.0 | 0.0316 | 0.5486 | 0.0600 | 0.6075 | 0.0736 | 0.6344 | 0.0948 |
| 0.8 | 0.0283 | 0.4907 | 0.0537 | 0.5433 | 0.0659 | 0.5675 | 0.0848 |
| 0.6 | 0.0245 | 0.4249 | 0.0465 | 0.4706 | 0.0570 | 0.4914 | 0.0734 |

| 呼び名 幅B × 深さH(mm) | | 500A | | 500B | |
|-------------------------|-----------|-----------|--------|-----------|--------|
| | | 500 × 500 | | 500 × 600 | |
| 通水断面積A(m ²) | | 0.1894 | | 0.2246 | |
| 潤辺P(m) | | 1.2216 | | 1.3720 | |
| 径深R(m) | | 0.1550 | | 0.1637 | |
| R ^{2/3} | | 0.2886 | | 0.2992 | |
| 粗度係数n | | 0.0130 | | 0.0130 | |
| 勾配I(0/00) | $I^{1/2}$ | V | Q | V | Q |
| 100 | 0.3162 | 7.0190 | 1.3294 | 7.2793 | 1.6349 |
| 75.0 | 0.2739 | 6.0787 | 1.1513 | 6.3041 | 1.4159 |
| 50.0 | 0.2236 | 4.9632 | 0.9400 | 5.1472 | 1.1561 |
| 40.0 | 0.2000 | 4.4392 | 0.8408 | 4.6038 | 1.0340 |
| 35.0 | 0.1871 | 4.1525 | 0.7865 | 4.3065 | 0.9672 |
| 30.0 | 0.1732 | 3.8445 | 0.7281 | 3.9870 | 0.8955 |
| 25.0 | 0.1581 | 3.5095 | 0.6647 | 3.6396 | 0.8175 |
| 20.0 | 0.1414 | 3.1390 | 0.5945 | 3.2554 | 0.7312 |
| 18.0 | 0.1342 | 2.9779 | 0.5640 | 3.0883 | 0.6936 |
| 16.0 | 0.1265 | 2.8076 | 0.5318 | 2.9117 | 0.6540 |
| 14.0 | 0.1183 | 2.6263 | 0.4974 | 2.7237 | 0.6117 |
| 12.0 | 0.1095 | 2.4315 | 0.4605 | 2.5216 | 0.5664 |
| 10.0 | 0.1000 | 2.2196 | 0.4204 | 2.3019 | 0.5170 |
| 9.0 | 0.0949 | 2.1057 | 0.3988 | 2.1838 | 0.4905 |
| 8.0 | 0.0894 | 1.9853 | 0.3760 | 2.0589 | 0.4624 |
| 7.0 | 0.0837 | 1.8571 | 0.3517 | 1.9259 | 0.4326 |
| 6.0 | 0.0775 | 1.7193 | 0.3256 | 1.7831 | 0.4005 |
| 5.5 | 0.0742 | 1.6461 | 0.3118 | 1.7071 | 0.3834 |
| 5.0 | 0.0707 | 1.5695 | 0.2973 | 1.6277 | 0.3656 |
| 4.8 | 0.0693 | 1.5378 | 0.2913 | 1.5948 | 0.3582 |
| 4.6 | 0.0678 | 1.5054 | 0.2851 | 1.5612 | 0.3507 |
| 4.5 | 0.0671 | 1.4890 | 0.2820 | 1.5442 | 0.3468 |
| 4.4 | 0.0663 | 1.4723 | 0.2789 | 1.5269 | 0.3429 |
| 4.2 | 0.0648 | 1.4385 | 0.2724 | 1.4918 | 0.3351 |
| 4.0 | 0.0632 | 1.4038 | 0.2659 | 1.4559 | 0.3270 |
| 3.8 | 0.0616 | 1.3683 | 0.2591 | 1.4190 | 0.3187 |
| 3.5 | 0.0592 | 1.3131 | 0.2487 | 1.3618 | 0.3059 |
| 3.4 | 0.0583 | 1.2942 | 0.2451 | 1.3422 | 0.3015 |
| 3.0 | 0.0548 | 1.2157 | 0.2303 | 1.2608 | 0.2832 |
| 2.8 | 0.0529 | 1.1745 | 0.2225 | 1.2181 | 0.2736 |
| 2.6 | 0.0510 | 1.1318 | 0.2144 | 1.1738 | 0.2636 |
| 2.5 | 0.0500 | 1.1098 | 0.2102 | 1.1510 | 0.2585 |
| 2.4 | 0.0490 | 1.0874 | 0.2060 | 1.1277 | 0.2533 |
| 2.2 | 0.0469 | 1.0411 | 0.1972 | 1.0797 | 0.2425 |
| 2.0 | 0.0447 | 0.9926 | 0.1880 | 1.0294 | 0.2312 |
| 1.8 | 0.0424 | 0.9417 | 0.1784 | 0.9766 | 0.2193 |
| 1.6 | 0.0400 | 0.8878 | 0.1682 | 0.9208 | 0.2068 |
| 1.5 | 0.0387 | 0.8597 | 0.1628 | 0.8915 | 0.2002 |
| 1.4 | 0.0374 | 0.8305 | 0.1573 | 0.8613 | 0.1934 |
| 1.2 | 0.0346 | 0.7689 | 0.1456 | 0.7974 | 0.1791 |
| 1.0 | 0.0316 | 0.7019 | 0.1329 | 0.7279 | 0.1635 |
| 0.8 | 0.0283 | 0.6278 | 0.1189 | 0.6511 | 0.1462 |
| 0.6 | 0.0245 | 0.5437 | 0.1030 | 0.5639 | 0.1266 |