

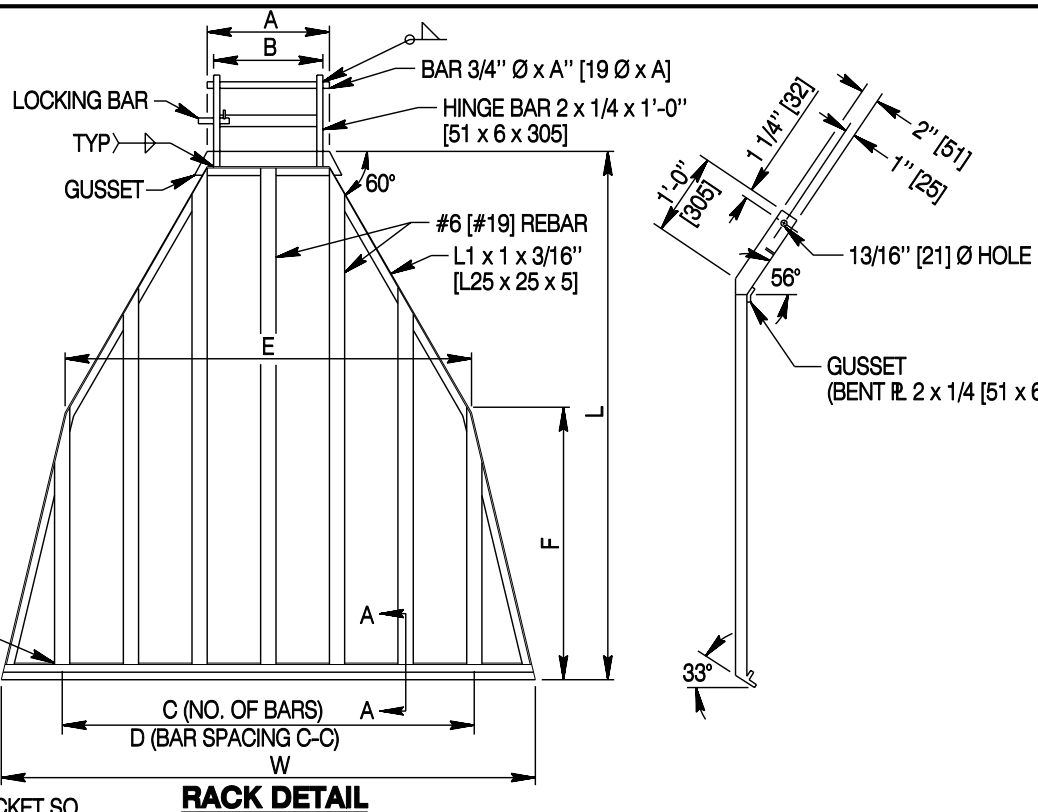
PARTIAL SIDE VIEW

SIDE VIEW

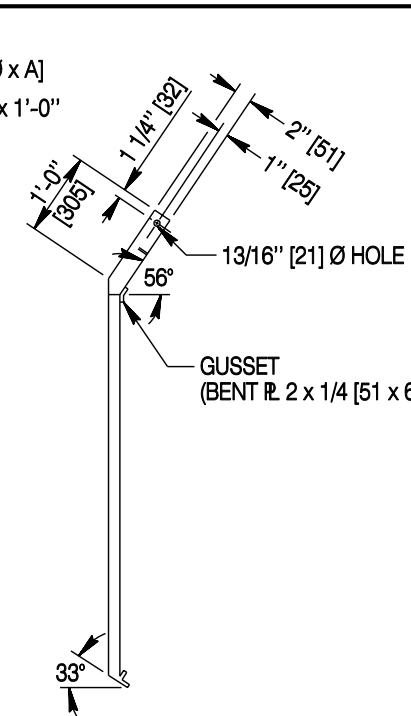
TRASH GUARD INSTALLED

GENERAL NOTES

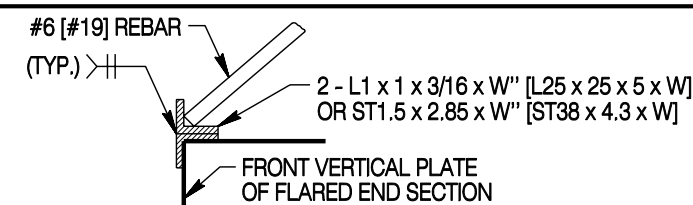
Trash guards are not designed to carry wheel loadings and as such are not to be used as safety grates. If the flared end dimensions vary from these shown in the standard plans, make necessary adjustments to trash guard dimensions.



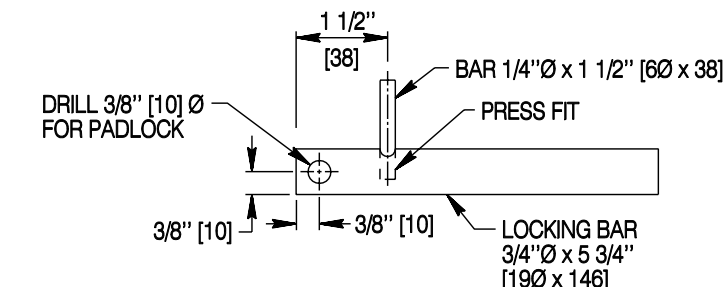
RACK DETAIL



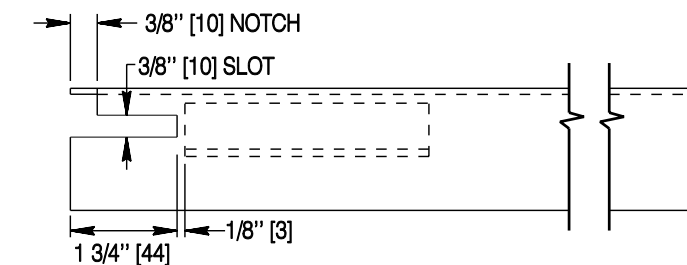
SIDE VIEW



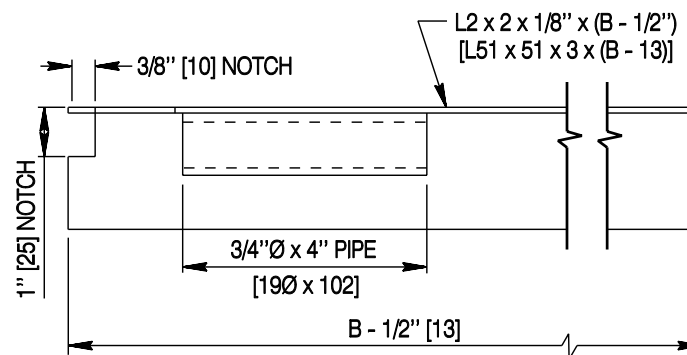
SECTION A-A



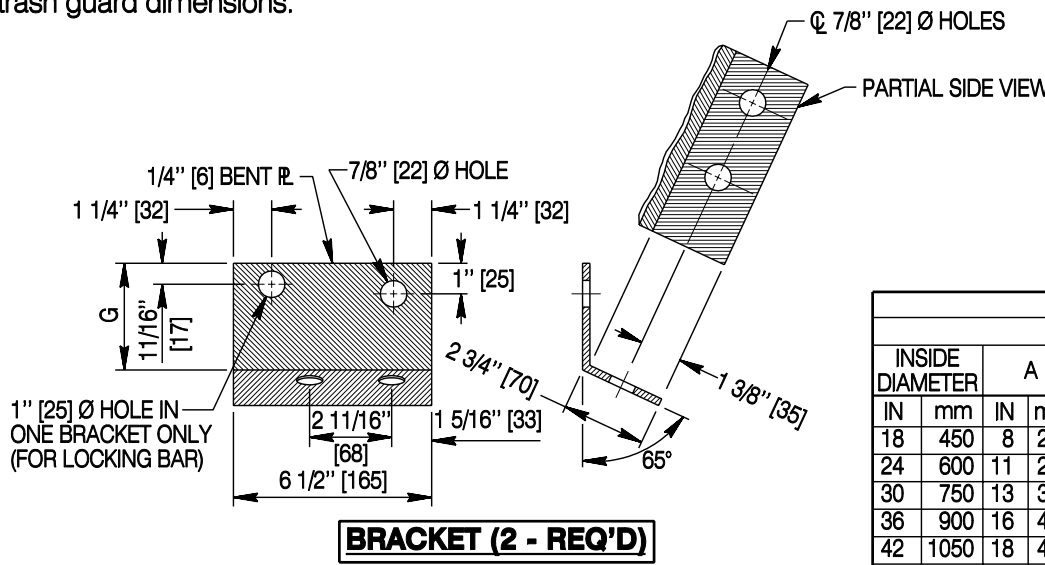
LOCKING BAR



TOP VIEW



LOCKING BAR SUPPORT



BRACKET (2 - REQ'D)

| TABLE OF DIMENSIONS | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|------|-------------|-----|--------|-----|---|-------|-----|--------|------|----|----------|-------|----|--------|------|----|------|--------|-----|--------|-----|
| INSIDE DIAMETER | | TRASH GUARD | | | | | | | | | | MOUNTING | | | | | | | | | | |
| | | A | B | C | D | E | F | G | L | W | R | S | | | | | | | | | | |
| 18 | 450 | 8 | 205 | 5 1/8 | 130 | 3 | 8 | 205 | 27 1/2 | 700 | 16 | 405 | 2 1/2 | 64 | 33 | 840 | 34 | 865 | 9 1/2 | 240 | 4 1/4 | 110 |
| 24 | 600 | 11 | 280 | 7 5/8 | 194 | 5 | 7 1/2 | 190 | 38 | 965 | 22 | 560 | 2 1/2 | 64 | 44 1/2 | 1130 | 46 | 1170 | 12 1/2 | 320 | 5 1/2 | 140 |
| 30 | 750 | 13 | 330 | 10 1/4 | 260 | 5 | 9 1/2 | 240 | 44 1/2 | 1130 | 30 | 760 | 2 1/2 | 64 | 56 | 1420 | 58 | 1475 | 15 1/2 | 400 | 6 3/4 | 170 |
| 36 | 900 | 16 | 405 | 12 3/4 | 325 | 7 | 9 | 230 | 56 | 1420 | 35 | 890 | 3 1/2 | 90 | 67 1/4 | 1710 | 70 | 1780 | 18 1/2 | 470 | 8 | 205 |
| 42 | 1050 | 18 | 460 | 15 1/4 | 390 | 8 | 9 | 230 | 69 1/2 | 1765 | 40 | 1016 | 3 1/2 | 90 | 78 | 1980 | 82 | 2085 | 21 1/2 | 545 | 9 1/2 | 240 |
| 48 | 1200 | 21 | 535 | 17 3/4 | 450 | 9 | 8 1/2 | 215 | 75 1/2 | 1920 | 46 | 1170 | 3 1/2 | 90 | 88 1/2 | 2250 | 88 | 2235 | 24 1/2 | 620 | 10 3/4 | 275 |

Designed by: BOS
 Drawn by: GLD
 Checked by: RRC
 Previous Dep. No. 619-01A

ROUND CORRUGATED METAL PIPE



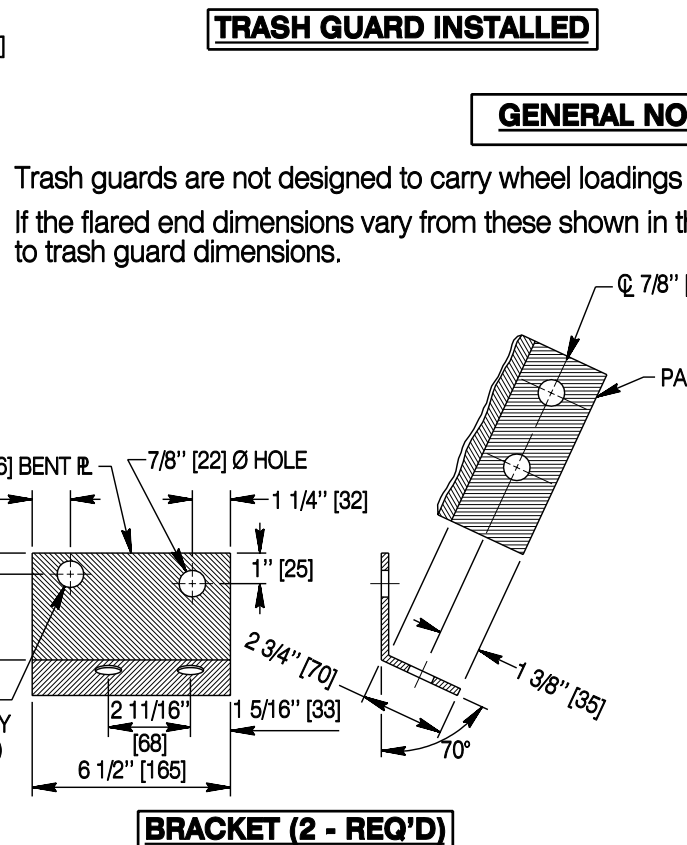
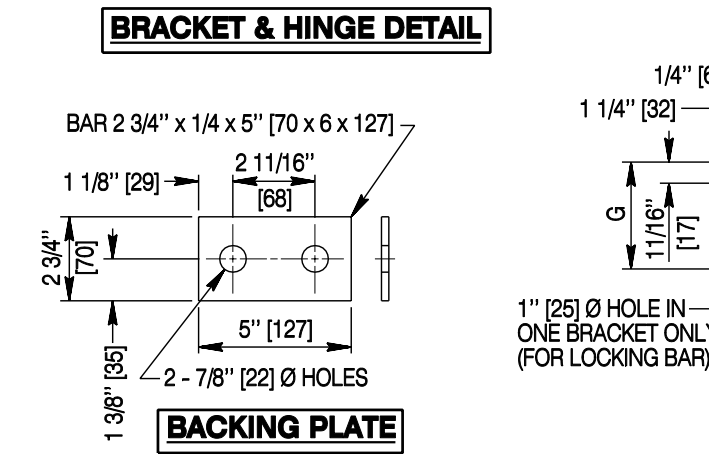
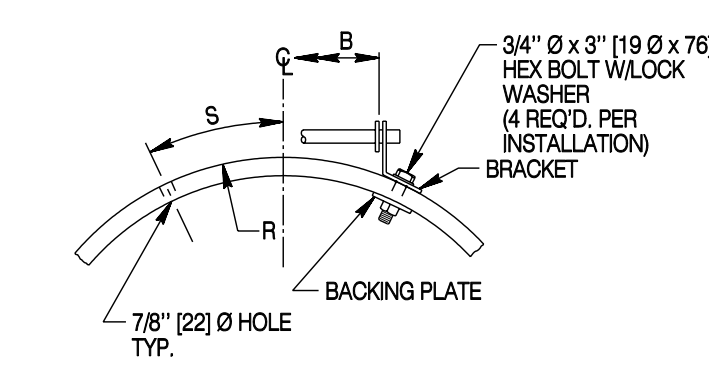
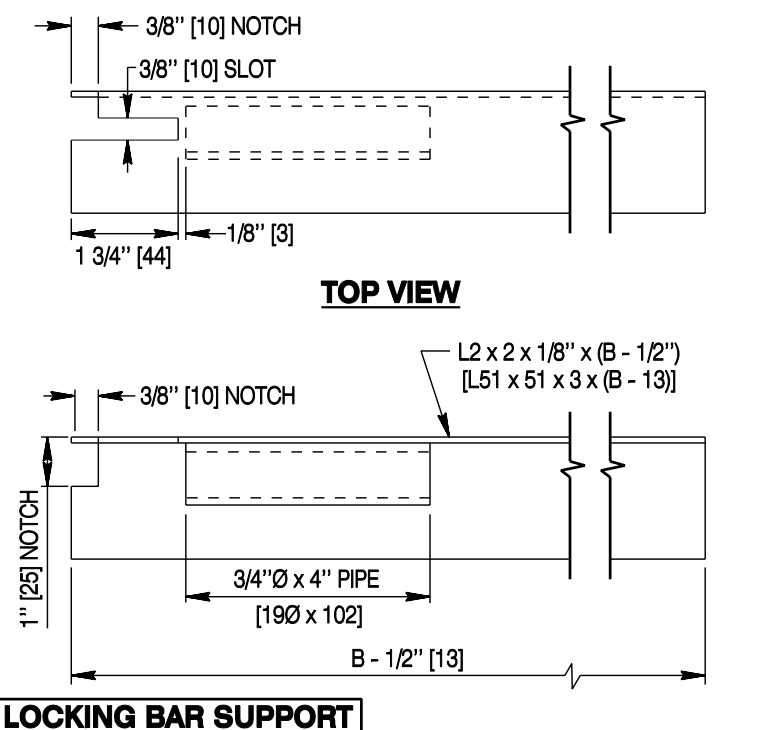
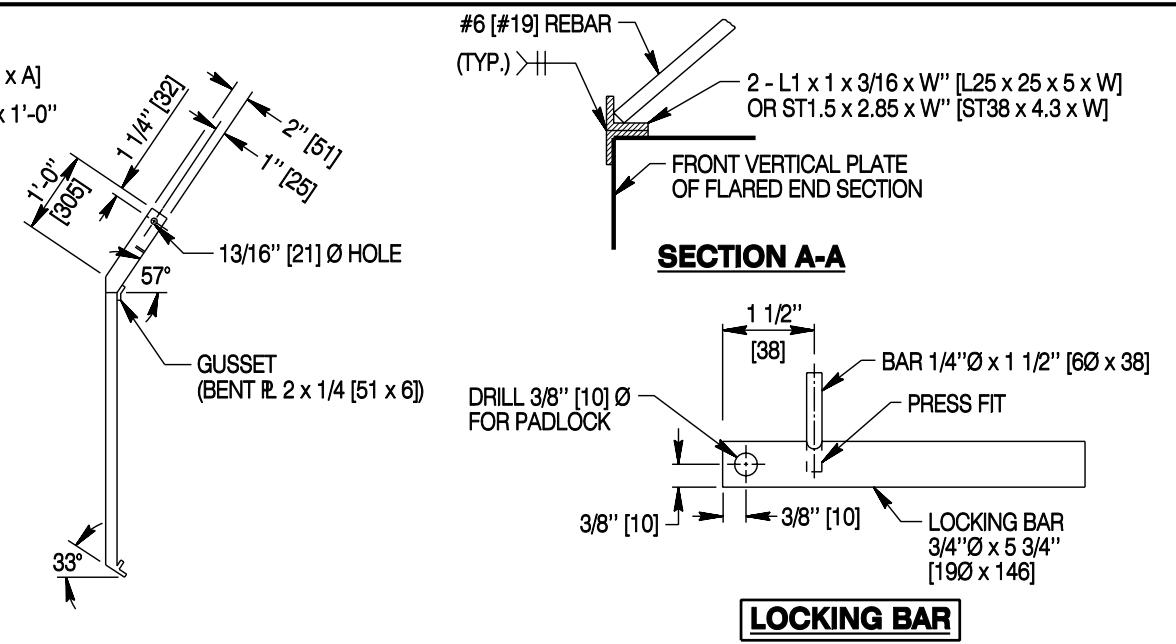
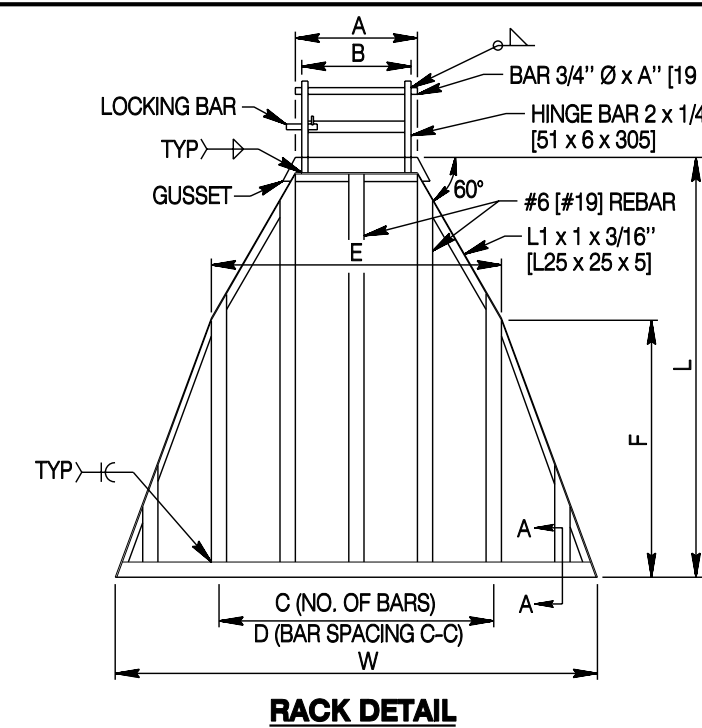
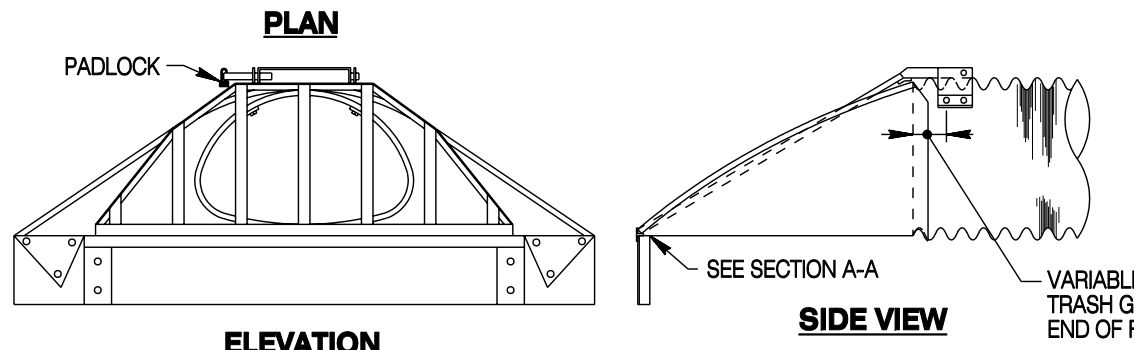
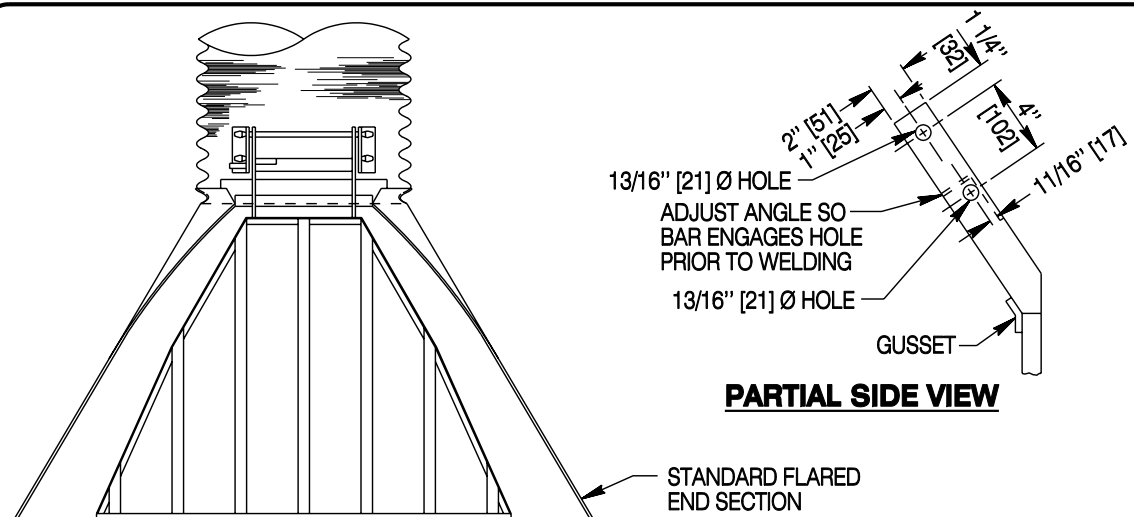
TRASH GUARDS FOR PIPE

STANDARD PLAN

STANDARD PLAN NUMBER
619-1
 SHEET 1 of 5

Issued by: ENGINEERING SERVICES
 Date Issued: NOVEMBER, 2004
 FILE: j:\StanDual_Std_Wrk6191_01.dgn

Note: Units shown in brackets [] are metric and are in millimeters (mm) unless other units are shown.



GENERAL NOTES

Trash guards are not designed to carry wheel loadings and as such are not to be used as safety grates. If the flared end dimensions vary from these shown in the standard plans, make necessary adjustments to trash guard dimensions.

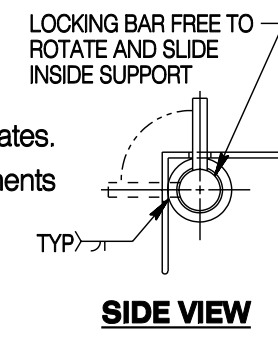
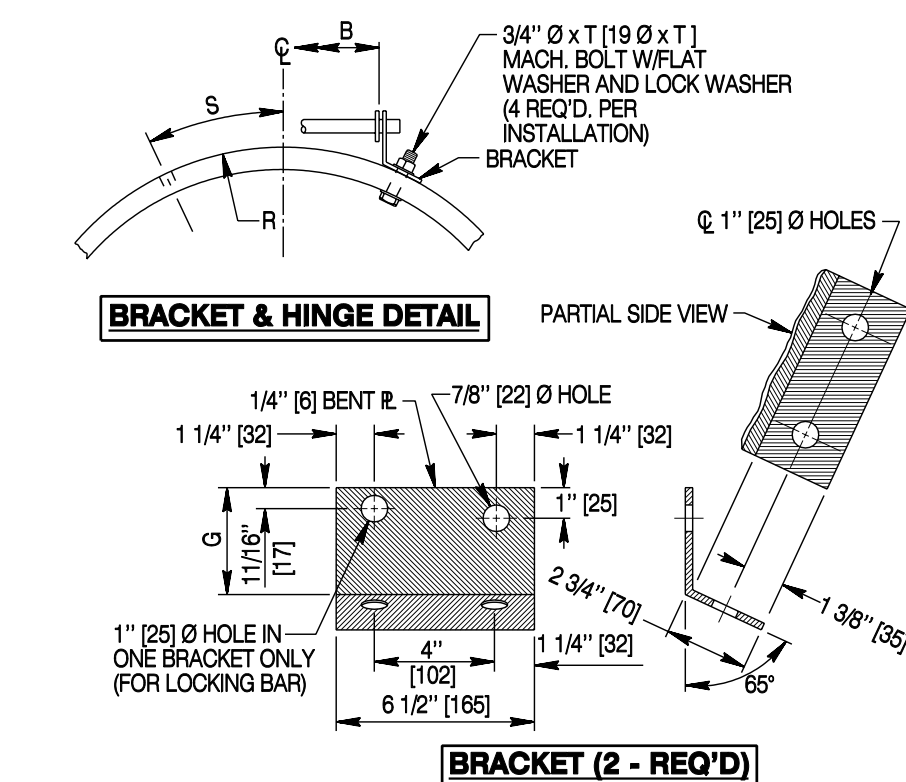
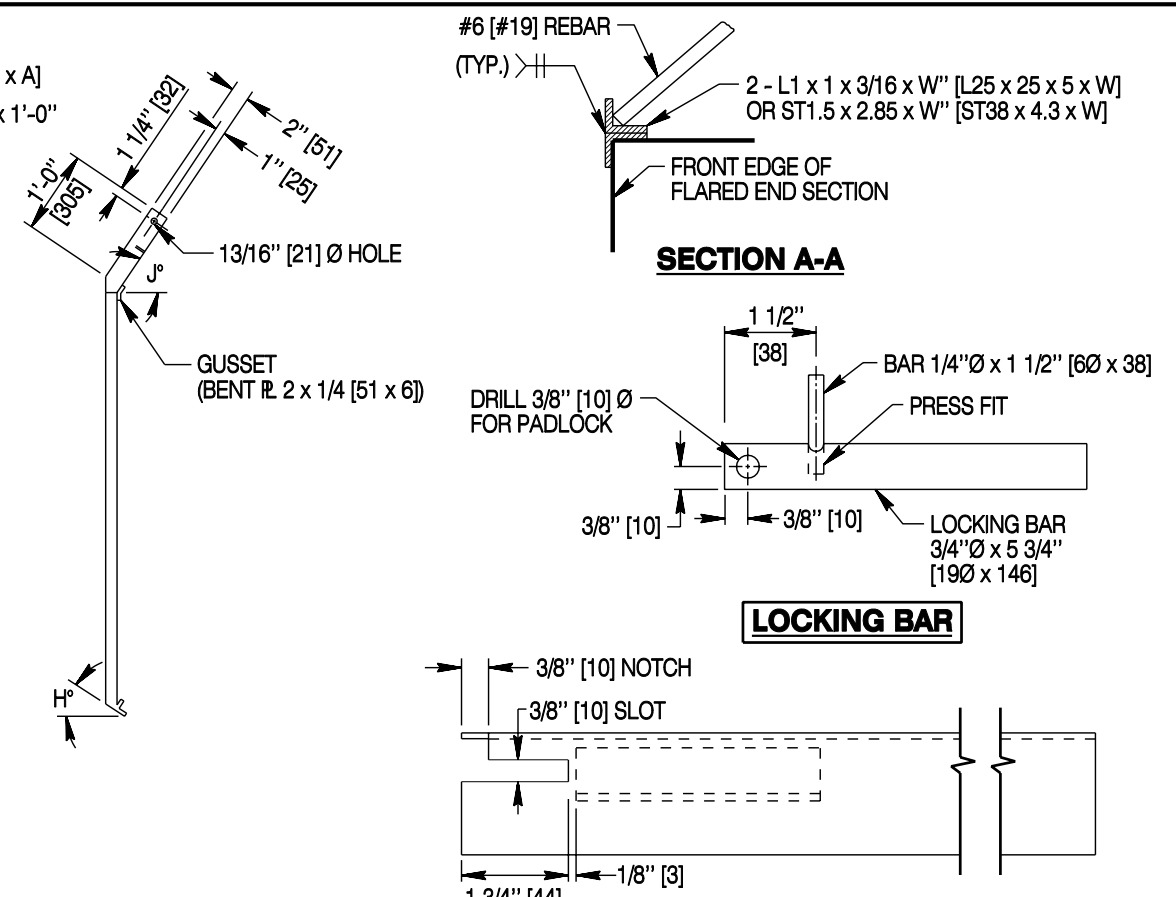
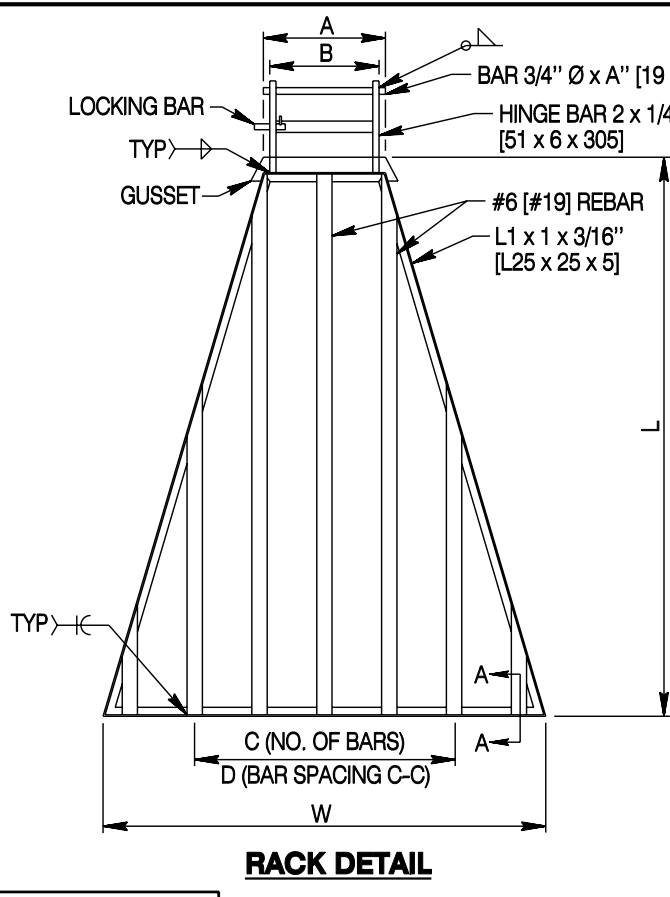
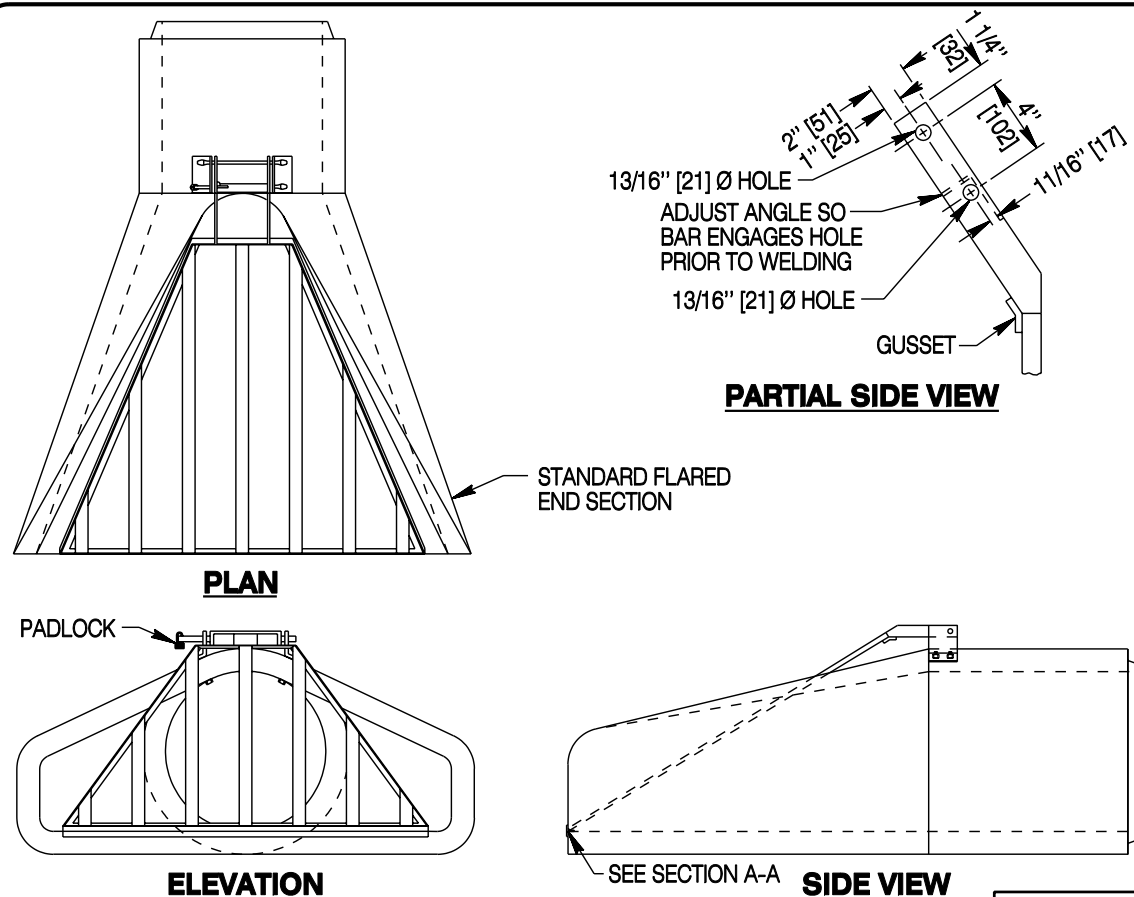


TABLE OF DIMENSIONS

| TRASH GUARD | | | | | | | | | | | | | | MOUNTING | | | | | | | | | | | | |
|---------------------|------|----|------|----|-----|----|-----|--------|-----|----|-------|-----|--------|----------|----|-----|----|----|--------|------|----|------|---------|-----|--------|-----|
| EQUIVALENT DIAMETER | SPAN | | RISE | | A | | B | | C | | D | | E | | F | | G | | L | | W | | R | | S | |
| IN | mm | IN | mm | IN | mm | IN | mm | IN | mm | EA | IN | mm | IN | mm | IN | mm | IN | mm | IN | mm | IN | mm | IN | mm | IN | mm |
| 18 | 450 | 21 | 525 | 15 | 375 | 8 | 205 | 5 | 125 | 3 | 8 | 205 | 22 1/4 | 565 | 11 | 280 | 2 | 50 | 24 1/2 | 620 | 33 | 840 | 11 7/8 | 300 | 4 3/8 | 110 |
| 24 | 600 | 28 | 700 | 20 | 500 | 10 | 255 | 7 | 180 | 5 | 7 1/2 | 190 | 30 1/4 | 770 | 16 | 405 | 2 | 50 | 34 1/2 | 875 | 45 | 1145 | 14 3/4 | 375 | 5 3/8 | 135 |
| 30 | 750 | 35 | 875 | 24 | 600 | 12 | 305 | 9 1/2 | 240 | 5 | 9 1/2 | 240 | 37 1/2 | 950 | 20 | 510 | 3 | 75 | 43 | 1090 | 57 | 1450 | 18 1/4 | 465 | 6 1/2 | 165 |
| 36 | 900 | 42 | 1050 | 29 | 725 | 15 | 380 | 12 | 305 | 7 | 9 | 230 | 44 3/8 | 1125 | 25 | 635 | 3 | 75 | 51 1/2 | 1310 | 72 | 1830 | 21 9/16 | 550 | 7 3/4 | 195 |
| 42 | 1050 | 49 | 1225 | 33 | 825 | 17 | 430 | 14 1/2 | 370 | 8 | 9 | 230 | 50 3/4 | 1290 | 29 | 735 | 3 | 75 | 59 1/2 | 1510 | 82 | 2085 | 25 1/8 | 640 | 9 | 230 |
| 48 | 1200 | 57 | 1425 | 38 | 950 | 20 | 510 | 17 | 430 | 9 | 8 1/2 | 215 | 59 1/2 | 1510 | 35 | 890 | 3 | 75 | 70 3/8 | 1790 | 87 | 2210 | 29 1/8 | 740 | 10 3/8 | 265 |



GENERAL NOTES

Trash guards are not designed to carry wheel loadings and as such are not to be used as safety grates.

If the flared end dimensions vary from these shown in the standard plans, make necessary adjustments to trash guard dimensions.

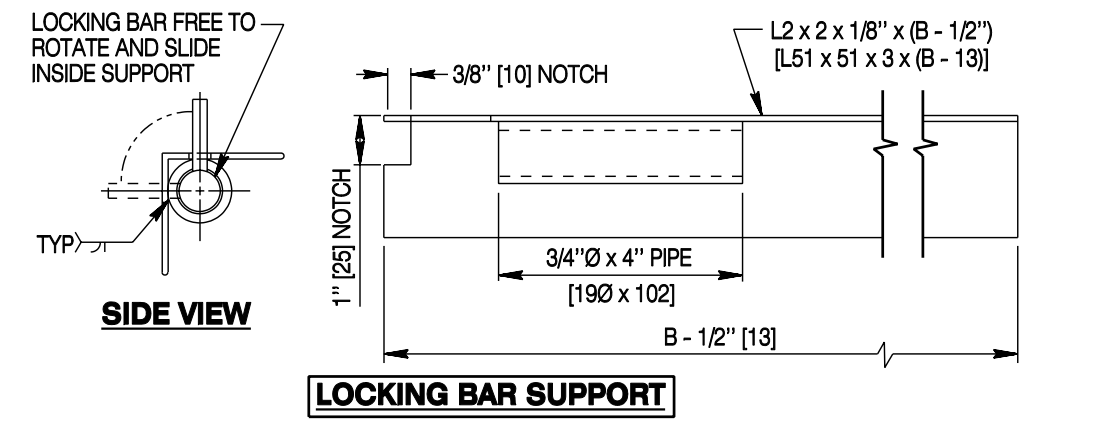
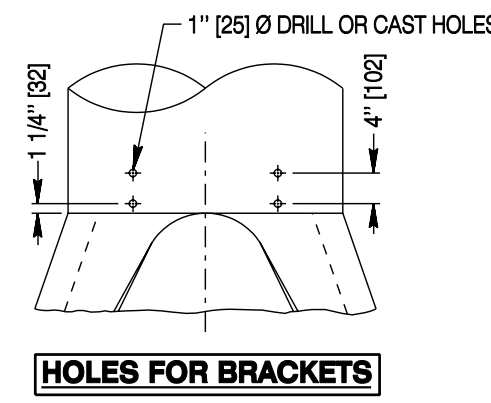
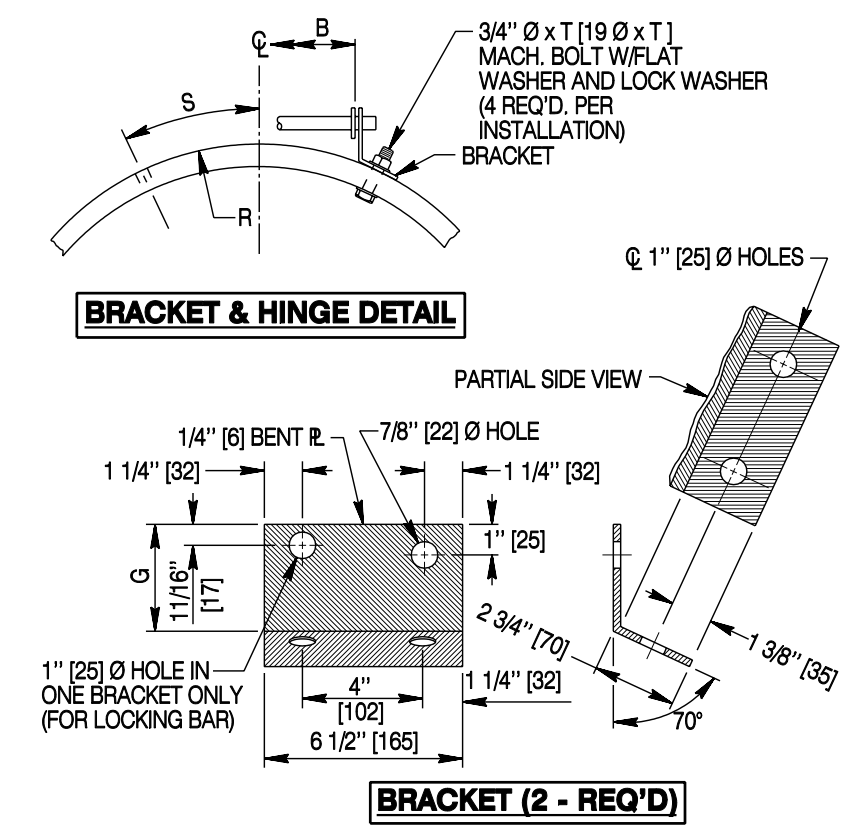
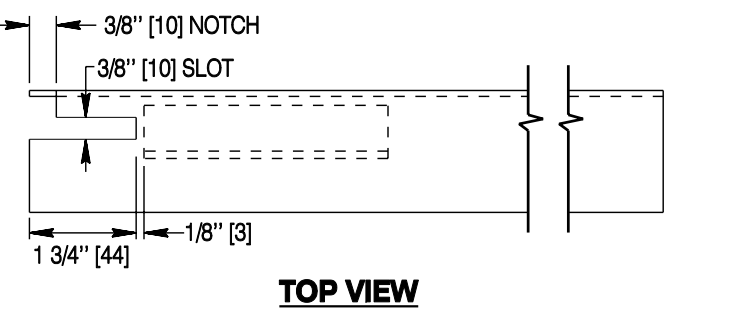
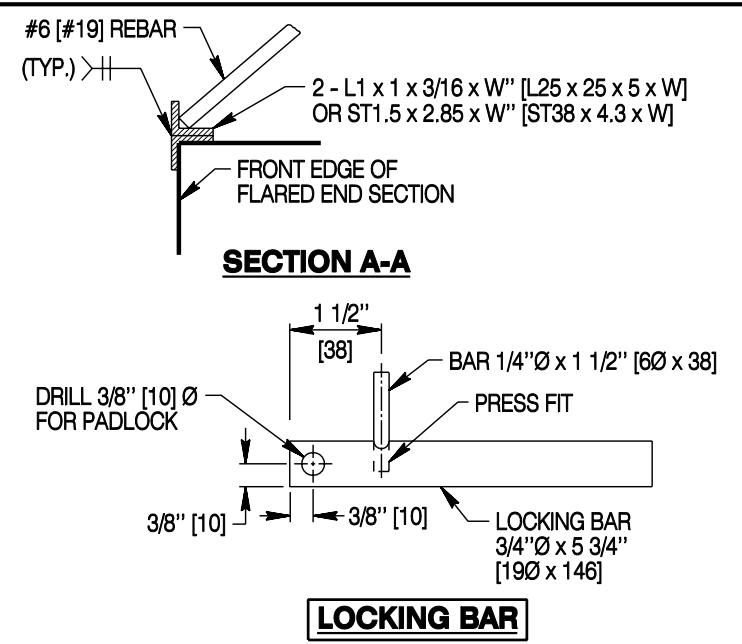
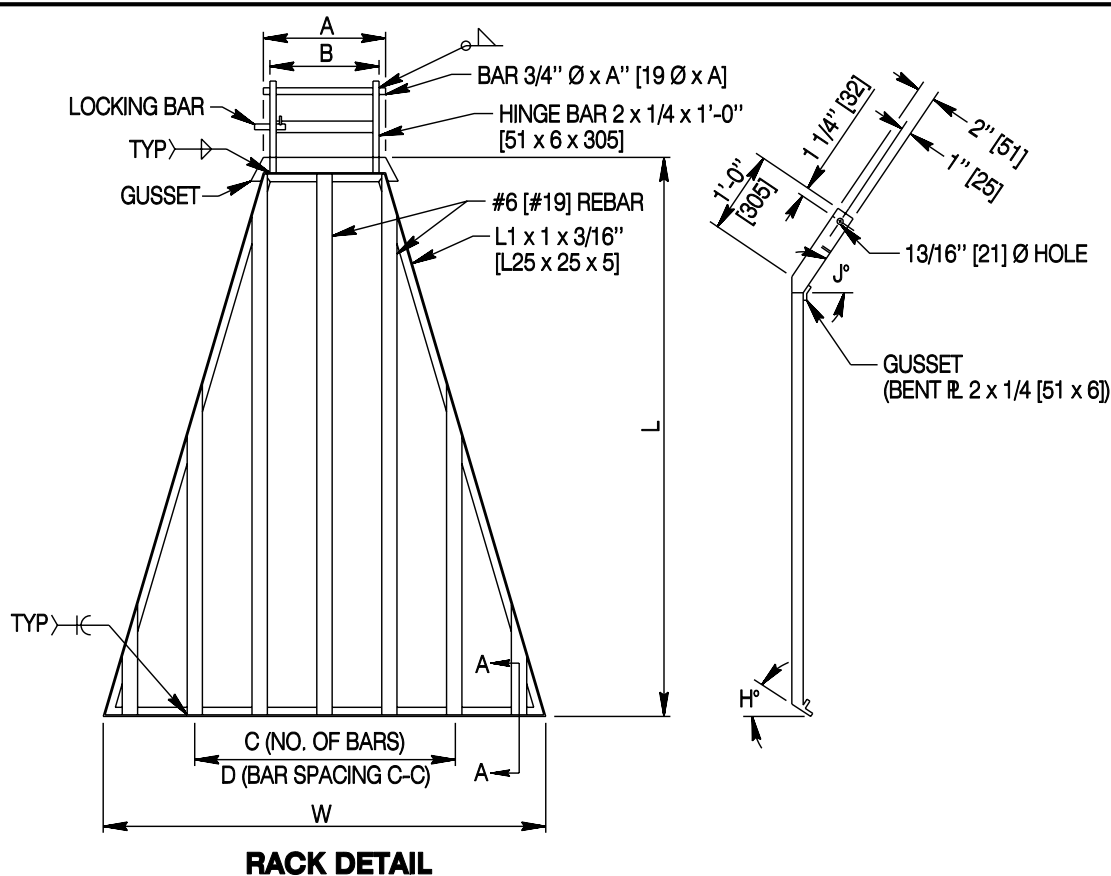
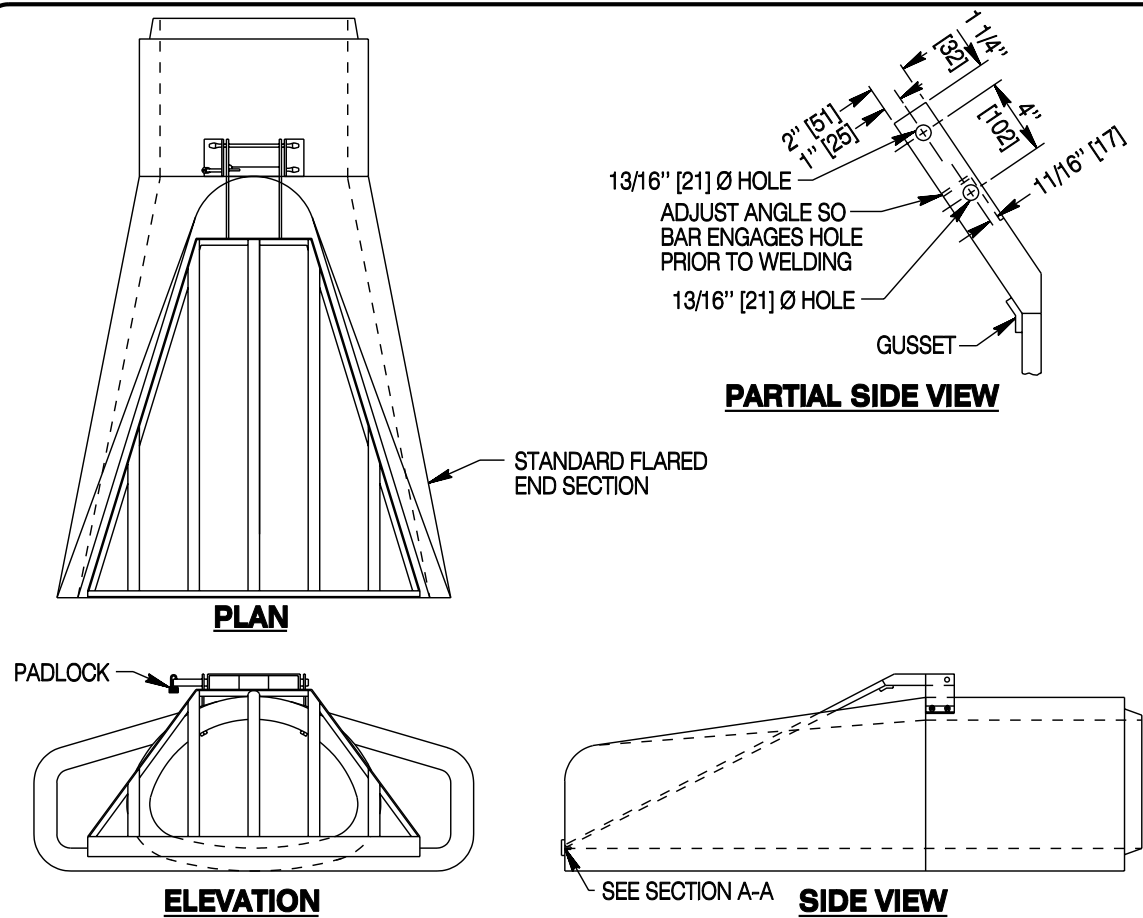


TABLE OF DIMENSIONS

| INSIDE DIAMETER | TRASH GUARD | | | | | | | | | | | | MOUNTING | | | | | | | | | | | |
|-----------------|-------------|----|-----|--------|-----|----|-------|-----|----|-----|-----|-----|----------|------|----|------|--------|-----|--------|-----|-------|-----|----|----|
| | A | | B | | C | | D | | G | | H | | J | | L | | W | | R | | S | | T | |
| IN | mm | IN | mm | IN | mm | EA | IN | mm | IN | mm | DEG | DEG | IN | mm | IN | mm | IN | mm | IN | mm | IN | mm | IN | mm |
| 18 | 450 | 10 | 255 | 6 1/2 | 165 | 3 | 8 | 205 | 3 | 75 | 45° | 45° | 31 | 790 | 28 | 710 | 11 1/2 | 290 | 5 | 125 | 5 | 125 | | |
| 24 | 600 | 12 | 305 | 9 1/2 | 240 | 5 | 8 | 205 | 3 | 75 | 35° | 55° | 47 1/2 | 1210 | 40 | 1015 | 15 | 380 | 6 1/2 | 165 | 5 1/2 | 140 | | |
| 30 | 750 | 15 | 380 | 12 1/2 | 320 | 5 | 9 | 230 | 3 | 75 | 35° | 55° | 59 3/4 | 1520 | 52 | 1320 | 18 1/2 | 470 | 8 | 205 | 6 | 150 | | |
| 36 | 900 | 18 | 460 | 15 1/2 | 390 | 7 | 8 1/2 | 215 | 4 | 100 | 35° | 55° | 71 1/4 | 1810 | 58 | 1475 | 22 | 560 | 9 1/2 | 240 | 6 1/2 | 165 | | |
| 42 | 1050 | 21 | 535 | 18 1/2 | 470 | 7 | 9 | 230 | 4 | 100 | 40° | 50° | 75 | 1905 | 64 | 1625 | 25 1/2 | 650 | 11 | 280 | 7 | 180 | | |
| 48 | 1200 | 24 | 610 | 21 1/2 | 545 | 9 | 8 | 205 | 4 | 100 | 40° | 50° | 82 3/4 | 2100 | 70 | 1780 | 29 | 740 | 12 3/4 | 325 | 7 1/2 | 190 | | |



TRASH GUARD INSTALLED

GENERAL NOTES

Trash guards are not designed to carry wheel loadings and as such are not to be used as safety grates.

If the flared end dimensions vary from these shown in the standard plans, make necessary adjustments to trash guard dimensions.

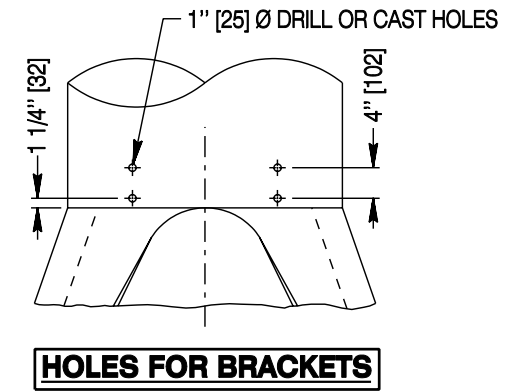
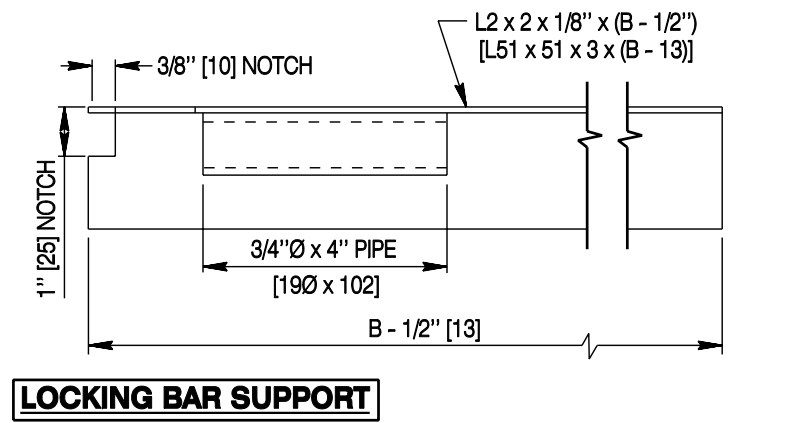
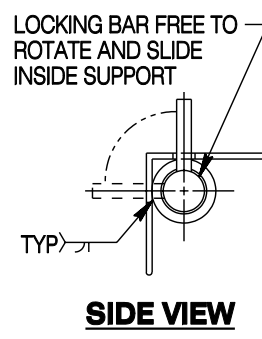
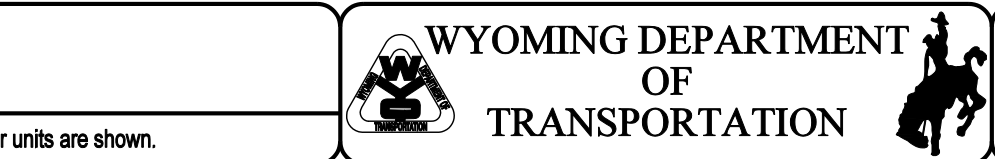


TABLE OF DIMENSIONS

| EQUIVALENT DIAMETER | TRASH GUARD | | | | | | | | | | | | MOUNTING | | | | | | | | | | | | | | | |
|---------------------|-------------|----|------|----|-----|----|-----|----|-----|----|-------|-----|----------|----|-----|-----|--------|------|----|------|---------|-----|--------|-----|-------|-----|----|----|
| | SPAN | | RISE | | A | | B | | C | | D | | G | | H | | J | | L | | W | | R | | S | | T | |
| IN | mm | IN | mm | IN | mm | IN | mm | EA | IN | mm | IN | mm | IN | mm | DEG | DEG | IN | mm | IN | mm | IN | mm | IN | mm | IN | mm | IN | mm |
| 24 | 600 | 29 | 725 | 18 | 450 | 12 | 305 | 9 | 230 | 5 | 8 | 205 | 2 1/2 | 64 | 30° | 60° | 39 3/4 | 1110 | 40 | 1015 | 17 9/16 | 445 | 6 1/8 | 155 | 5 1/2 | 140 | | |
| 30 | 750 | 36 | 900 | 23 | 575 | 15 | 380 | 12 | 305 | 5 | 9 | 230 | 2 1/2 | 64 | 30° | 60° | 52 | 1320 | 52 | 1320 | 22 1/4 | 565 | 7 3/4 | 195 | 6 | 150 | | |
| 36 | 900 | 44 | 1100 | 27 | 675 | 18 | 455 | 15 | 380 | 7 | 8 1/2 | 215 | 3 1/2 | 90 | 30° | 60° | 62 3/4 | 1595 | 58 | 1475 | 26 1/2 | 675 | 9 1/4 | 235 | 6 1/2 | 165 | | |
| 42 | 1050 | 51 | 1275 | 31 | 775 | 21 | 535 | 18 | 455 | 7 | 9 | 230 | 3 1/2 | 90 | 30° | 60° | 65 1/2 | 1665 | 64 | 1625 | 30 3/4 | 780 | 10 3/4 | 275 | 7 | 180 | | |
| 48 | 1200 | 59 | 1475 | 36 | 900 | 24 | 610 | 21 | 535 | 9 | 8 | 205 | 3 1/2 | 90 | 35° | 55° | 69 | 1755 | 70 | 1780 | 35 | 890 | 12 1/4 | 310 | 7 1/2 | 190 | | |

Designed by: BOS
 Drawn by: GLD
 Checked by: RRC
 Previous Dwg. No. 619-01A

REINFORCED CONCRETE PIPE - ARCH

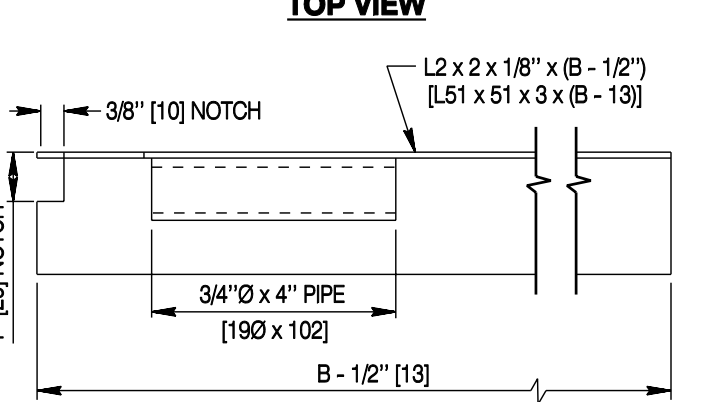
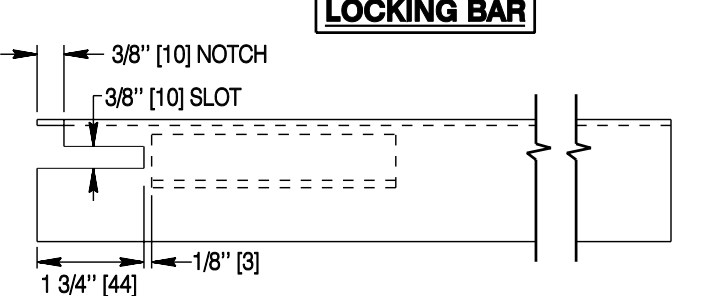
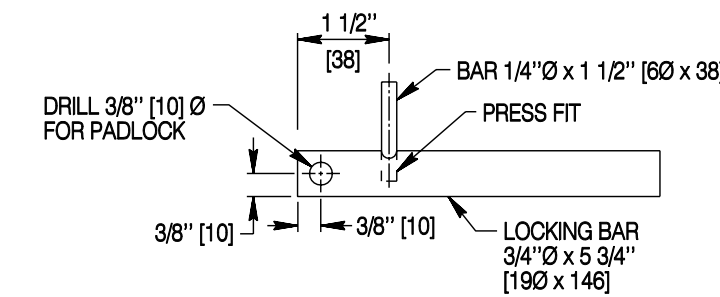
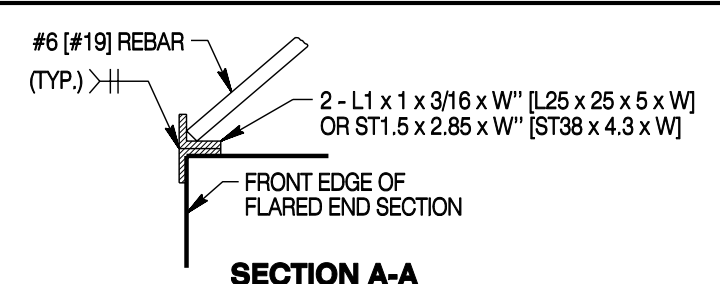
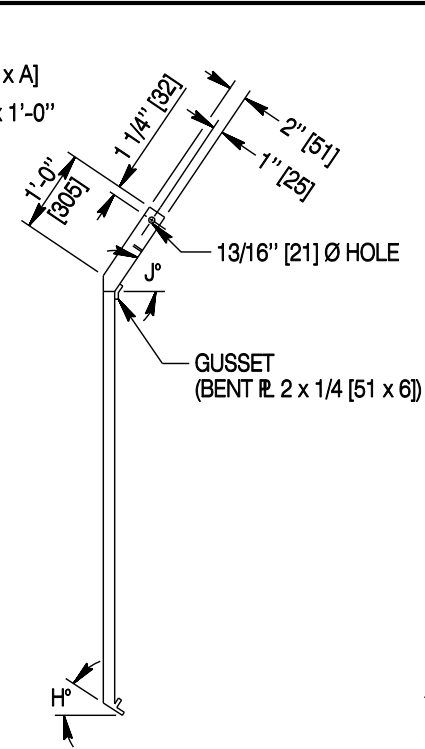
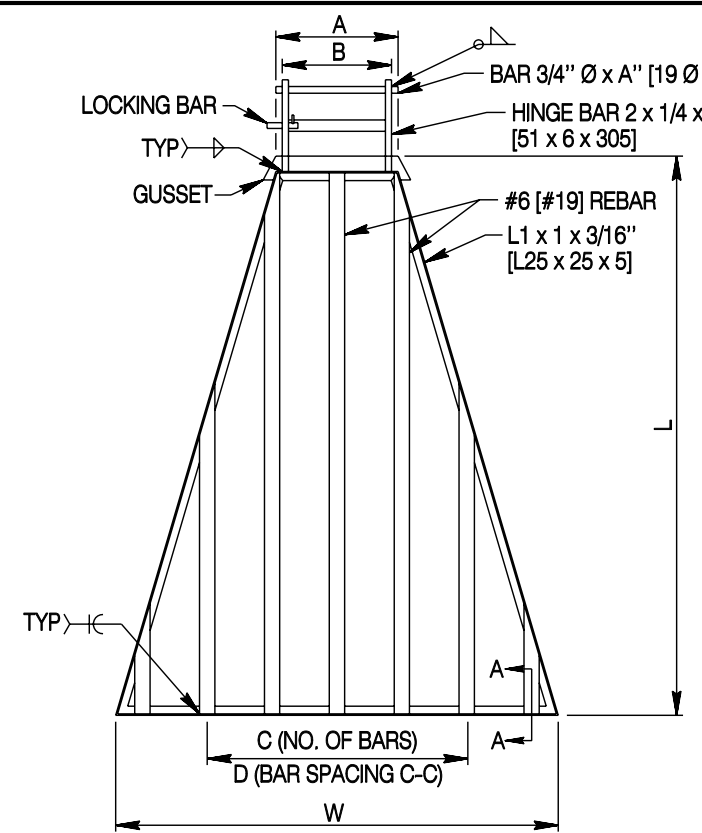
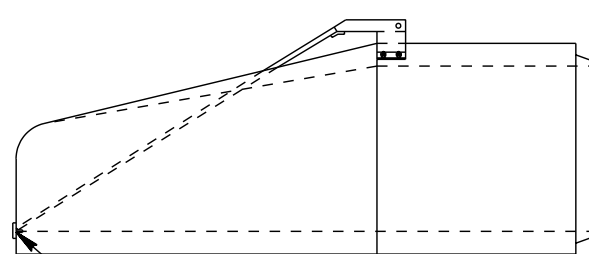
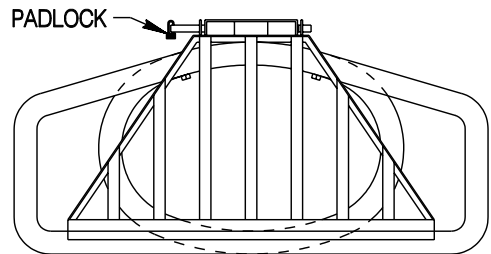
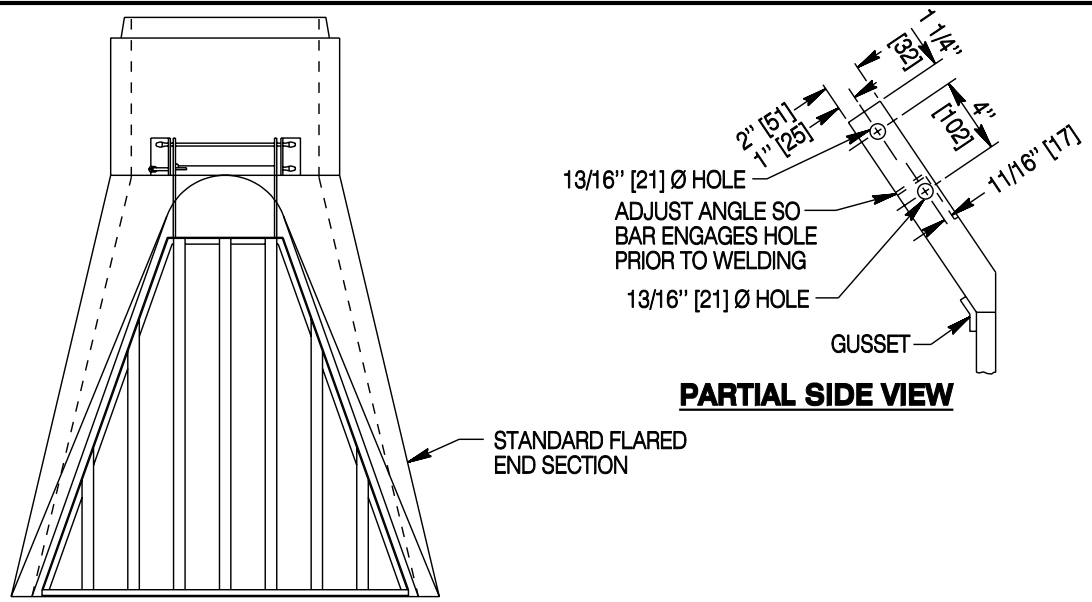


TRASH GUARDS FOR PIPE

STANDARD PLAN

STANDARD PLAN NUMBER
619-1
 SHEET 4 of 5
 Issued by: ENGINEERING SERVICES
 Date Issued: NOVEMBER, 2004
 FILE: j:\StanDwg_Std_Wrk\6191_04.dgn

Note: Units shown in brackets [] are metric and are in millimeters (mm) unless other units are shown.



GENERAL NOTES

Trash guards are not designed to carry wheel loadings and as such are not to be used as safety grates.

If the flared end dimensions vary from these shown in the standard plans, make necessary adjustments to trash guard dimensions.

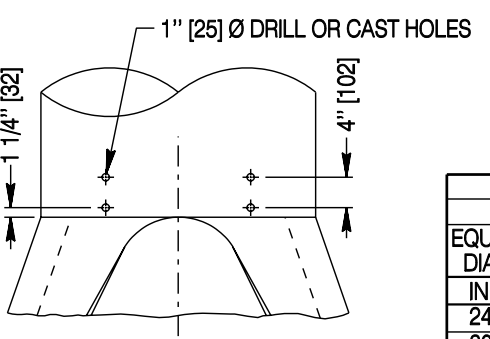
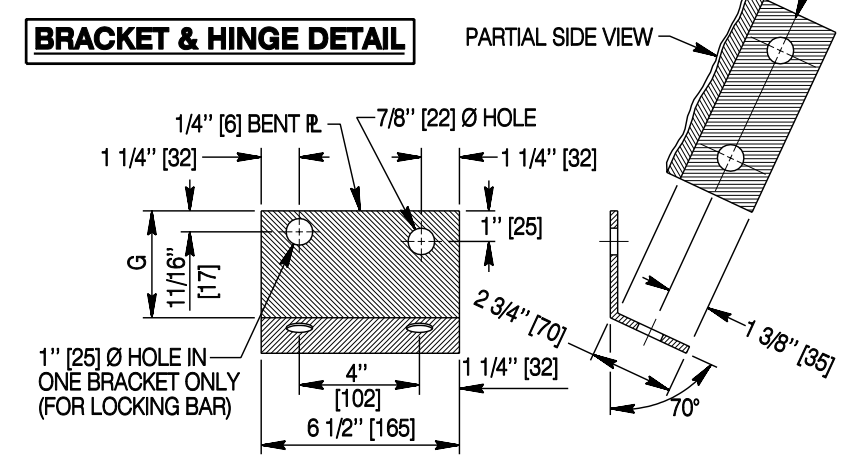
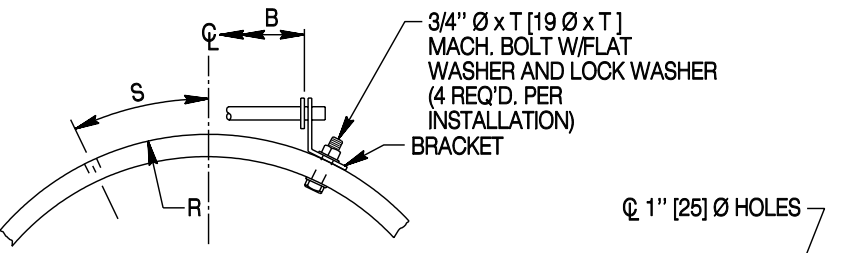
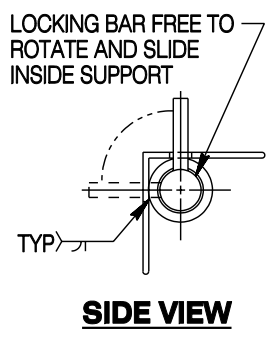


TABLE OF DIMENSIONS

| EQUIVALENT DIAMETER | TRASH GUARD | | | | | | | | | | | | MOUNTING | | | | | | | | | | | | | | | |
|---------------------|-------------|----|------|----|-----|----|-----|--------|-----|----|-------|-----|----------|-----|-----|-----|--------|------|----|------|--------|------|--------|-----|-------|-----|----|----|
| | SPAN | | RISE | | A | | B | | C | | D | | G | | H | | J | | L | | W | | R | | S | | T | |
| IN | mm | IN | mm | IN | mm | IN | mm | IN | mm | EA | IN | mm | IN | mm | DEG | DEG | IN | mm | IN | mm | IN | mm | IN | mm | IN | mm | IN | mm |
| 24 | 600 | 30 | 750 | 19 | 475 | 20 | 510 | 17 | 430 | 4 | 8 1/2 | 215 | 3 1/2 | 90 | 30° | 60° | 39 1/2 | 1005 | 40 | 1015 | 29 | 735 | 10 1/4 | 260 | 5 3/4 | 145 | | |
| 30 | 750 | 38 | 950 | 24 | 600 | 25 | 635 | 21 3/4 | 550 | 5 | 9 | 230 | 3 1/2 | 90 | 30° | 60° | 55 | 1395 | 52 | 1320 | 36 1/4 | 920 | 12 3/4 | 325 | 6 1/4 | 160 | | |
| 36 | 900 | 45 | 1125 | 29 | 725 | 30 | 760 | 26 3/4 | 680 | 6 | 9 1/2 | 240 | 4 1/2 | 115 | 30° | 60° | 62 3/4 | 1595 | 64 | 1625 | 43 1/2 | 1105 | 15 1/4 | 390 | 7 | 180 | | |
| 42 | 1050 | 53 | 1325 | 34 | 850 | 35 | 890 | 31 1/2 | 800 | 6 | 9 1/2 | 230 | 4 1/2 | 115 | 35° | 55° | 65 | 1650 | 64 | 1625 | 50 1/2 | 1285 | 17 3/4 | 450 | 7 1/2 | 190 | | |
| 48 | 1200 | 60 | 1500 | 38 | 950 | 39 | 990 | 36 3/8 | 925 | 7 | 9 | 230 | 4 1/2 | 115 | 35° | 55° | 67 | 1700 | 70 | 1780 | 57 5/8 | 1465 | 20 | 510 | 8 | 205 | | |

Designed by: BOS
Drawn by: GLD
Checked by: RRC
Previous Dwg. No. 619-01A

REINFORCED CONCRETE PIPE ELLIPTICAL

Note: Units shown in brackets [] are metric and are in millimeters (mm) unless other units are shown.



TRASH GUARDS FOR PIPE

STANDARD PLAN

STANDARD PLAN NUMBER
619-1
SHEET 5 of 5
Issued by: ENGINEERING SERVICES
Date Issued: NOVEMBER, 2004
FILE: j:\StanDual_Std_YWR6191_05.dgn