

W1 NOTES:

INSTALLATION:
WHEN INSTALLING RUNNING LENGTHS OF WATTLES, BUTT THE SECOND WATTLE TIGHTLY AGAINST THE FIRST, DO NOT OVERLAP THE ENDS. STAKE THE WATTLES AT EACH END AND FOUR FOOT ON CENTER. FOR EXAMPLE:

- A 25 FOOT WATTLE USES 6 STAKES
- A 20 FOOT WATTLE USES 5 STAKES
- A 12 FOOT WATTLE USES 4 STAKES

STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE, LEAVING 2 - 3 INCHES OF THE STAKE PROTRUDING ABOVE THE WATTLE. A HEAVY SEDIMENT LOAD WILL TEND TO PICK THE WATTLE UP AND COULD PULL IT OFF THE STAKES IF THEY ARE DRIVEN DOWN TOO LOW. IT MAY BE NECESSARY TO MAKE A HOLE IN THE WATTLE WITH A PICK END OF YOUR MADDOX IN ORDER TO GET THE STAKE THROUGH THE STRAW. WHEN STRAW WATTLES ARE USED FOR FLAT GROUND APPLICATIONS, DRIVE THE STAKES STRAIGHT DOWN; WHEN INSTALLING WATTLES ON SLOPES, DRIVE THE STAKES PERPENDICULAR TO THE SLOPE.

DRIVE THE FIRST END STAKE OF THE SECOND WATTLE AT AN ANGLE TOWARD THE FIRST WATTLE IN ORDER TO HELP ABUT THEM TIGHTLY TOGETHER. IF YOU HAVE DIFFICULTY DRIVING THE STAKE INTO EXTREMELY HARD OR ROCKY SLOPES, A PILOT BAR MAY BE NEEDED TO BEGIN THE STAKE HOLE.

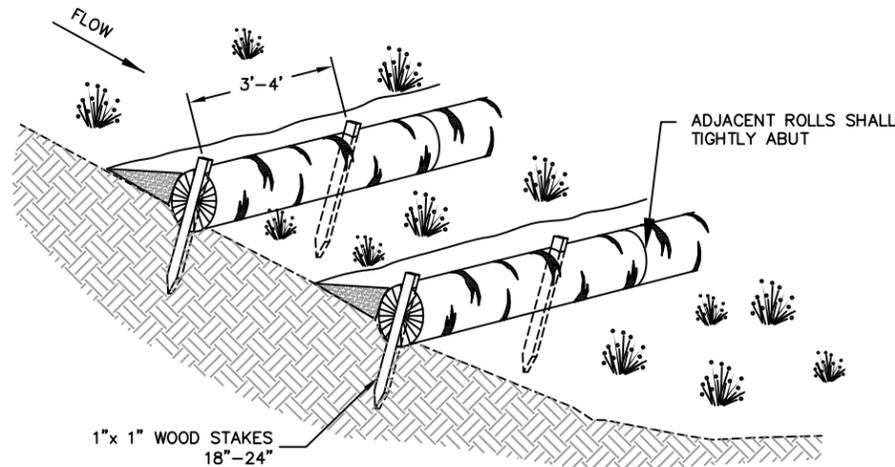
W1 & W2 INSTALLATION NOTES:

1. THE LOCATION AND LENGTH OF WATTLE IS DEPENDENT ON THE CONDITIONS OF EACH SITE.
2. WATTLES SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
3. WATTLES SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
4. NOT FOR USE IN CONCENTRATED FLOW AREAS.
5. THE WATTLES SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF TWO (2) INCHES.
6. WATTLES SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
7. ON SLOPES, WATTLES SHOULD BE INSTALLED ON CONTOUR WITH A SLIGHT UPWARD ANGLE AT THE END OF THE ROW IN ORDER TO CREATE PONDING AT THE MID SECTION.
8. RUNNING LENGTHS OF WATTLES SHOULD BE ABUTTED FIRMLY TO ENSURE NO LEAKAGE AT THE ABUTMENTS.
9. SPACING - DOWNSLOPE:
VERTICAL SPACING FOR SLOPE INSTALLATIONS SHOULD BE DETERMINED BY SITE CONDITIONS. SLOPE GRADIENT AND SOIL TYPE ARE THE MAIN FACTORS. A GOOD RULE OF THUMB IS:

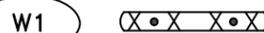
- 1:1 SLOPES = 10 FEET APART
- 2:1 SLOPES = 20 FEET APART
- 3:1 SLOPES = 30 FEET APART
- 4:1 SLOPES = 40 FEET APART, ETC.

- HOWEVER, ADJUSTMENTS MAY HAVE TO BE MADE FOR THE SOIL TYPE: FOR SOFT, LOAMY SOILS - ADJUST THE ROWS CLOSER TOGETHER; FOR HARD, ROCKY SOILS - ADJUST THE ROWS FURTHER APART. A SECONDARY WATTLE PLACED BEHIND THE ABUTMENT OF TWO WATTLES IS ENCOURAGED ON STEEP SLOPES OR WHERE JOINTS HAVE FAILED IN THE PAST.
10. STAKING: THE CITY RECOMMENDS USING WOOD STAKES TO SECURE THE WATTLES. 1/2" TO 5/8" REBAR IS ALSO ACCEPTABLE. BE SURE TO USE A STAKE THAT IS LONG ENOUGH TO PROTRUDE SEVERAL INCHES ABOVE THE WATTLE: 18" IS A GOOD LENGTH FOR HARD, ROCKY SOIL. FOR SOFT LOAMY SOIL USE A 24" STAKE.

PERVIOUS INSTALLATION



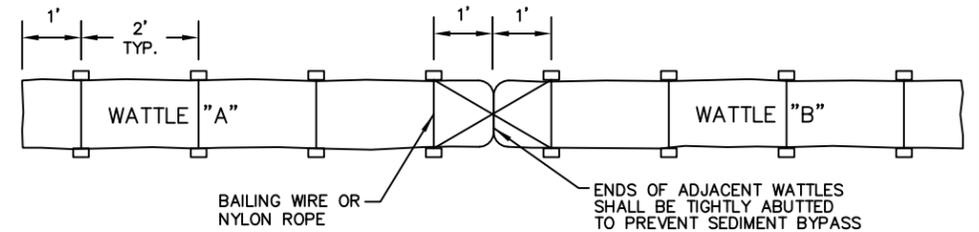
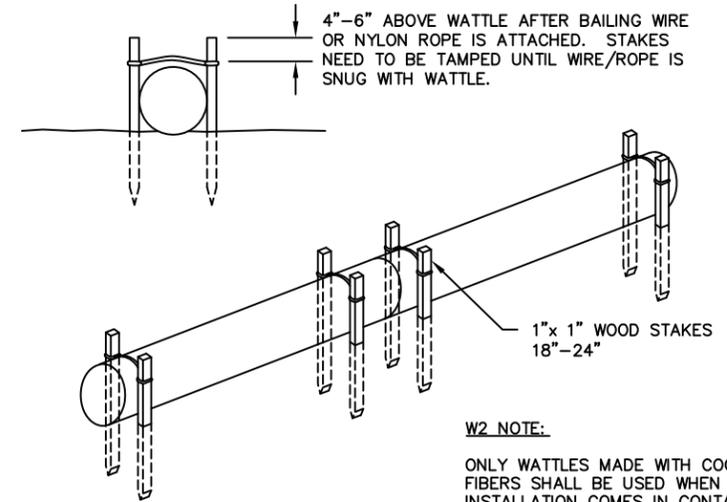
WATTLES - DETAIL A



W2 NOTES:

INSTALLATION:
STAKES SHOULD BE DRIVEN ACROSS FROM EACH OTHER AND ON EACH SIDE OF THE WATTLE. LEAVING 4"-6" OF STAKE PROTRUDING ABOVE THE WATTLE. BAILING WIRE OR NYLON ROPE SHOULD BE TIED TO THE STAKES ACROSS THE WATTLE. STAKES SHOULD THEN BE DRIVEN UNTIL THE BAILING WIRE OR NYLON ROPE IS SUFFICIENTLY SNUG TO THE WATTLE.

WHEN INSTALLING RUNNING LENGTHS OF WATTLES, TO PREVENT SHIFTING, BUTT THE SECOND WATTLE TIGHTLY AGAINST THE FIRST. DO NOT OVERLAP THE ENDS. STAKES SHOULD BE DRIVEN 1 FT. FROM END, ACROSS FROM AND ON EACH SIDE OF WATTLE LEAVING 4"-6" OF STAKE PROTRUDING ABOVE THE WATTLE. BAILING WIRE OR NYLON ROPE SHOULD BE TIED TO STAKES IN AN HOUR GLASS FORMATION (FRONT TO BACK OF WATTLE "A", ACROSS TO FRONT OF WATTLE "B", ACROSS TO BACK AND BACK TO FRONT OF WATTLE "A"). STAKES SHOULD THEN BE DRIVEN UNTIL BAILING WIRE OR NYLON ROPE IS SUFFICIENTLY SNUG TO THE WATTLE.



WATTLES - DETAIL B



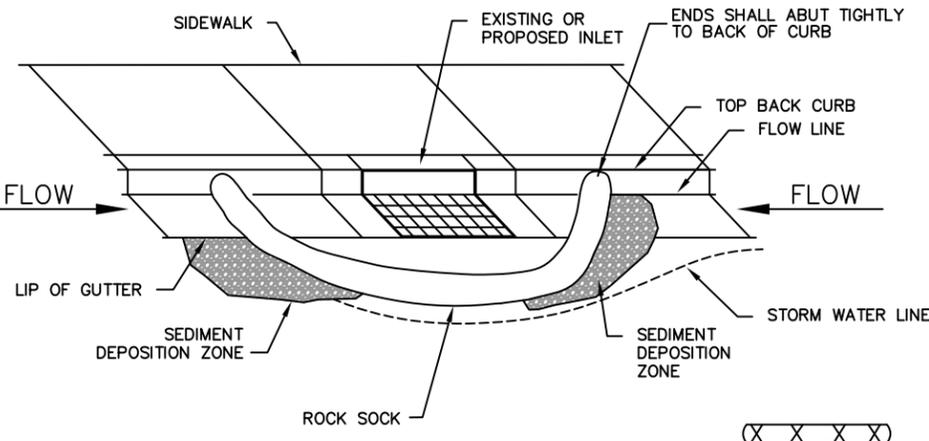
RS1, RS2 & RS3 NOTES:

1. ALL PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
2. OTHER PRODUCTS MAY BE USED IN PLACE OF ROCK SOCKS UPON WRITTEN APPROVAL FROM THE CITY. NOTE: A COPY OF DETAILS AND SPECIFICATIONS WILL NEED TO BE INCORPORATED INTO THE SWMP.

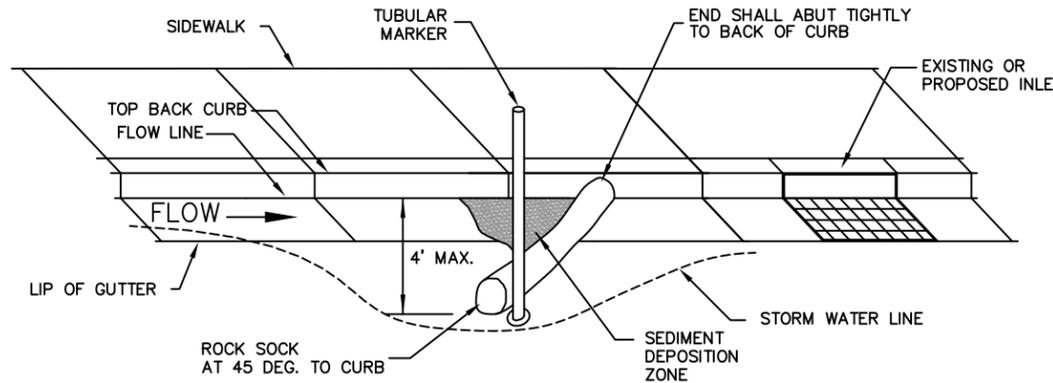
RS1 NOTE:

IF THE AREA BEHIND THE INLET IS NOT STABILIZED, A BMP SHOULD BE USED TO PREVENT SEDIMENT FROM ENTERING THE INLET

IMPERVIOUS INSTALLATION



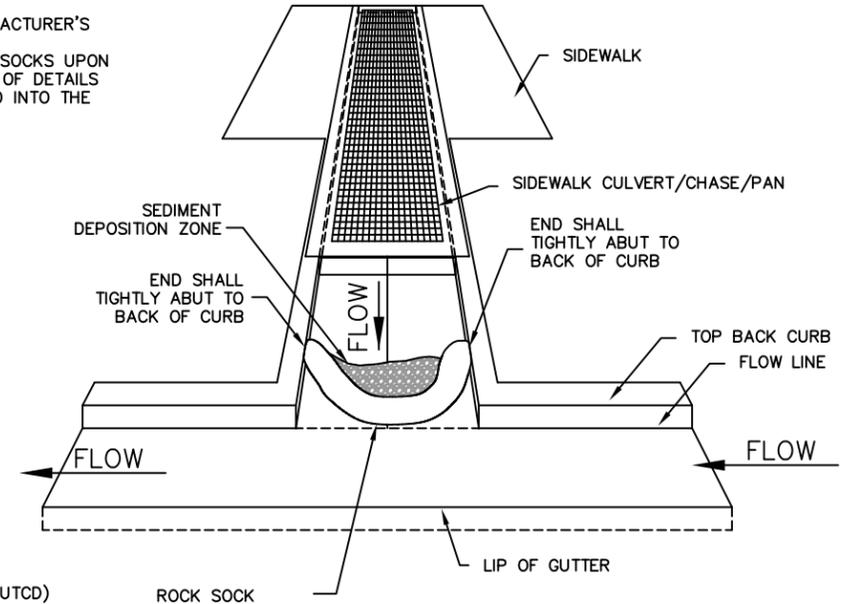
CURB INLET ROCK SOCK PROTECTION SETUP RS1



RS2 NOTES:

1. NUMBER OF ROCK SOCKS AND SPACING SHOULD BE DETERMINED BY THE SLOPE AND SITE CONDITIONS.
2. TUBULAR MARKERS SHALL MEET THE REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
3. CITY RECOMMENDS INSTALLING AT LEAST 3 CHECKDAMS WHEN USING THIS SETUP.

CURBSIDE CHECKDAMS SETUP RS2



CONCRETE CHASE/TRICKLE CHANNEL SETUP RS3

ROCK SOCK MAINTENANCE NOTES:

1. THE CONTRACTOR SHALL INSPECT ROCK SOCK EVERY TWO WEEKS AND AFTER ANY SIGNIFICANT STORM EVENT AND MAKE REPAIRS OR REMOVE SEDIMENT ACCUMULATED BEHIND ROCK SOCK AS NECESSARY.
2. SEDIMENT ACCUMULATED BEHIND ROCK SOCK SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DIAMETER OF THE ROCK SOCK.
3. ROCK SOCK SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND IS ACCEPTED BY THE CITY.

WATTLE AND ROCK SOCK INSTALLATION



CITY OF LOVELAND
PUBLIC WORKS DEPT.
STORMWATER

STORMWATER
CONSTRUCTION
DRAWINGS

APPROVED: KWG
DATE: 08/04/20
DRAWN BY: TBK/SLs

DRAWING
SW-13