



Perimeter Control

INSTALLATION

1. Perimeter control will be placed as directed on site plans and in accordance with the engineer, manufacturer, or regulating authority.
2. Perimeter control should be installed parallel to the base of a slope or other disturbed area. If there are challenging conditions (i.e., 2:1 slopes), another perimeter control will be constructed at the top of slope. Staking methods will be changed to increase the performance of the product if needed.
3. Effective height should be as follows: 200mm diameter = 165mm high; 300mm diameter = 240mm high; 450 diameter = 370mm high; 600mm diameter = 480mm high. When determining when to remove material build up, refer to the maintenance section.
4. Stakes are recommended to be installed directly through the middle of the perimeter control on 3m centres, using 50mm by 50mm by 1m wooden stakes. In a situation where staking is not possible, i.e., perimeter control is used on pavement, heavy concrete blocks shall be used in a combination of behind, on top, in front, or all three as directed by engineer or regulating authority to help stabilize during rainfall/runoff events.
5. Staking depth for sand and silt loam soils are recommended to be 300mm, and 200mm for clay soils for best results.
6. Loose compost can be backfilled along the construction side of the perimeter control, filling the joint between the soil surface and barrier product, thereby improving erosion, sediment, and filtration performance.
7. If the perimeter control is to be left to be a part of the landscape, it can be seeded at installation for permanent vegetation growth. The engineer will have to specify seed requirements, as results may vary. Perimeter control is not to be used in long-standing, short-lived, or intermittent streams.

INSPECTION: PERIMETER CONTROL

Erosion Solutions Ltd. recommend that inspections should take place every 24 hours or as directed by regulating authority. Perimeter control inspection should take place every 24 hours to ensure that shape is consistent, hydraulic flow through rates are adequate, and that damage has not occurred. If pooling or sediment accumulation becomes substantial enough to have an effect on perimeter control, additional sediment and erosion measures may be needed. Consult with the regulating authority if you are unsure if any action is required. Perimeter control shall be inspected until the area in question has been stabilized and construction activity has stopped.

MAINTENANCE

1. The contractor will maintain perimeter control to a condition where Erosion Solutions Ltd. products are used for their intended purpose and the product is able to perform adequately at all times. Routine inspection will be followed as discussed above.
2. When damaged, the product will be repaired. If damage is beyond repair the product will be replaced.
3. The contractor will remove sediment and other accumulated materials at the base of the of the perimeter control when accumulation has reached 1/2 of the effective height of the product, or as directed by the engineer. An alternative would be to place a new perimeter control on top of and slightly behind the original one, creating a larger sediment barrier without disturbing the soil.
4. Perimeter control will be maintained until the disturbed area that the barrier is protecting has been fully stabilized, construction has stopped, or as directed by regulating authority.
5. The components of the barrier will be distributed on site once permitted by an engineer or regulating authority.
6. For long-term sediment and pollution control operations, the barrier can be seeded, and a vegetative barrier may form. This will be determined by the engineer or regulating authority.

Inlet Protection

INSTALLATION

1. Inlet protection will be placed as directed on site plans and in accordance with the engineer, manufacturer, or regulating authority. Inlet protection will be installed in a method that completely protects the inlet area.
2. Installation of curb inlet protection will have an overlapping distance of 460mm on either side of the opening that is to be protected. Inlet protection will be anchored to material behind the curb using staples, stakes or other anchoring methods capable of holding the inlet protection in place.
3. Inlet protection and curb sediment containment will use 200mm diameter inlet protection and drain inlets on soil will use 300mm or 450mm diameter inlet protection. In severe flow situations, larger inlet protection will be specified by the engineer. During the curb installation process, the inlet protection can be compacted to be shorter than curb height as long as there is no damage to the inlet protection barrier.
4. In the case that the inlet protection will not drain properly because it is clogged with material, it will be serviced to ensure proper flow into the drain. In the case of unusual storm events, overflow can be accepted to prevent the area from becoming flooded.
5. Inlet protection will be positioned so material will collect outside the barrier to ensure proper filtration.
6. For drains and inlets without street grates, a spacer is needed to keep the barrier away from the drain opening. This spacer should be wire fencing with substantial rigidity to cover the drain opening to prevent the barrier from falling into the drain. Use at least one spacer 1.5m of curb drain opening. The wire grid will also inhibit most waste from entering the drain.
7. Stakes are recommended to be installed directly through the middle of the inlet protection on 1.5m centres, using 50mm by 50mm by 1m wooden stakes. In a situation where staking is not possible (i.e., inlet protection is used on pavement), heavy concrete blocks shall be used in a combination of behind, on top, in front, or all three as directed by engineer or regulating authority to help stabilize during rainfall/runoff events. Staking depth for sand and silt loam soils are recommended to be 300mm, 200mm for clay soils for best results.

INSPECTION: INLET PROTECTION

Erosion Solutions Ltd. recommend that inspections should take place every 24 hours or as directed by regulating authority. Inlet protection inspection should take place every 24 hours to ensure that shape is consistent, hydraulic flow through rates are adequate, and that damage has not occurred. If pooling or sediment accumulation becomes substantial enough to have an effect on inlet protection additional sediment and erosion measures may be needed. Consult with the regulating authority if you are unsure if any action required. Inlet protection shall be inspected until area in question has been stabilized and construction activity has stopped.

MAINTENANCE

1. The contractor will maintain inlet protection to a condition where Erosion Solutions Ltd. products are used for their intended purpose and the product is able to perform adequately at all times. Routine inspection will be followed as discussed above.
2. When damaged, the product will be repaired. If damage is beyond repair, the product will be replaced.
3. The contractor will remove sediment and other accumulated materials at the base of the of the perimeter control when accumulation has reached 1/2 of the effective height of the product, or as directed by the engineer. An alternative would be to place a new inlet protection barrier on top of and slightly behind the original one creating a larger sediment barrier without disturbing the soil.



4. Inlet protection will be maintained until the disturbed area that the barrier is protecting has been fully stabilized, construction has stopped, or as directed by regulating authority.
5. Regular maintenance includes moving, lifting, and/or temporarily removing the barrier to clean around and under them as materials collect.
6. The barrier will be removed from paved or concrete surfaces, or distributed on site once permitted by an engineer or regulating authority.

Check Dams

INSTALLATION

1. Check dams will be placed as per site plan for clarification on orientation seek direction from the engineer or manufacturer. The check dam's installation should be oriented to reduce runoff speed, ditch erosion, and collect sediment while allowing flow of filtered water to continue.
2. Check dams can be pre manufactured or manufactured at site.
3. Installation of check dams will exceed the width of the normal ditch/channel flow line by 1.5m on both slopes to ensure water flows through the device.
4. The centre of the check dam will be at least 150mm lower than the sides of the ditch/channel.
5. Recommended diameter size of check dams 300mm. In higher flow ditches/channels, the designs may recommend a larger check dams (450mm or 600mm diameter) or increase staking requirements.
6. Check dams can be stacked on top of each other if required for additional height and weight.
7. 200mm diameter check dams can be placed close together for the purpose of slowing down the flow and reduce ditch/channel bed erosion.
8. If check dams are specified in an open based triangle construction design, it is recommended they be configured at a 90-degree angle with the right angle facing up the slope in the centre of the ditch/channel bed with the open end facing towards the down slope. Ends of check dams will reach to the maximum flow line of the ditch/channel or overtop of the ditch/channel depending on site design. Stakes will stabilize the ends of the check dam.
9. Stakes will be installed through the centre of the check dam on 1.5m centres, using 50mm by 50mm by 1m wooden stakes.
10. Staking depth for sand and silt loam soils are recommended to be 300mm and 200mm for clay soils.
11. Check dams can be installed on top of erosion control blankets and other reinforcement geotextiles.

INSPECTION: CHECK DAMS

Erosion Solutions Ltd. recommend that inspections should take place every 24 hours or as directed by regulating authority. Check dam inspection should take place every 24 hours to ensure that shape is consistent, hydraulic flow through rates are adequate, that damage has not occurred, sediment accumulation levels have not exceeded effective height, and that erosion of the ditch/channel has not compromised the check dam's performance ability. If pooling or sediment accumulation becomes substantial enough to have an effect on the check dam, additional sediment and erosion measures may be needed such as adding another barrier on top of the existing one, or sediment removal from the front side of the barrier. Storm debris accumulation should never be higher than the sides of the check dam. Overflow is acceptable during large storm events. Consult with the regulating authority if you are unsure if any action is required. Check dams will be inspected until the area in question has been stabilized and construction activity has stopped.

MAINTENANCE

1. The contractor will maintain the check dam to an adequate condition and perform routine inspections.
2. When damage occurs, the product will be repaired. If damage is beyond repair, the product will be replaced.
3. The contractor will remove sediment and other accumulated materials at the base of the of the check dam when accumulation has reached 1/2 of the effective height of the product, or as directed by the engineer. An alternative would

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be to place a check dam on top of and slightly behind the original one creating a larger sediment barrier without disturbing the soil. Another barrier can be installed adjacent and parallel to the upslope side of the original check dam. This would increase sediment storage capacity without any soil disturbance.

4. When or if check dams become clogged with materials, removal of debris and sediment is necessary to ensure proper flow through the ditch or channel.
5. Check dams will be maintained until disturbed area that the barrier is protecting has been fully stabilized, construction has stopped, or as directed by regulating authority.
6. Check dam components can be distributed on site once the site is fully stabilized, construction activity has stopped, or as determined by the engineer.

Slope Interruption

INSTALLATION

1. Slope interruption is used to mediate the effects of storm water run-off, erosion on steep slopes, and soluble pollutants. It will be placed as directed on site plans and in accordance with the engineer, manufacturer, or regulating authority. Slope interruption is to be placed perpendicular to the flow of the slope. It will cover the contours of the slope to ensure the mediation of sediment and storm water run-off.
2. Stakes will be installed through the centre of the barrier on 1.5m centres, using 50mm by 50mm by 1m wooden stakes.
3. Staking depth for sand and silt loam soils are recommended to be 300mm and 200mm for clay soils.
4. Loose compost can be backfilled along the construction side of the slope interruption, filling the joint between the soil surface and barrier product, improving erosion, sediment, and filtration performance.
5. If the barrier is to be left to be a part of the landscape, it can be seeded at installation for permanent vegetation growth. The engineer will have to specify seed requirements, as results may vary. Slope interruption is not to be used in long-standing, short-lived, or intermittent streams.

INSPECTION: SLOPE INTERRUPTION

Erosion Solutions Ltd. recommend that inspections should take place every 24 hours or as directed by regulating authority. Slope interruption inspection should take place every 24 hours to ensure that shape is consistent, hydraulic flow through rates are adequate, and that damage has not occurred. If pooling or sediment accumulation becomes substantial enough to have an effect on the slope interruption performance, additional sediment and erosion measures may be needed such as adding another barrier on top of the existing one, or sediment removal from the front side of the barrier. During storm water run-off events, water flowing over the barrier is acceptable. Consult with the regulating authority if you are unsure if any action is required. Slope interruption will be inspected until the area in question has been stabilized and construction activity has stopped.

MAINTENANCE

1. The contractor will maintain slope interruption to a condition where Erosion Solutions Ltd. products are used for their intended purpose and the product is able to perform adequately at all times. Routine inspection will be followed as discussed above.
2. When damage occurs, the product will be repaired. If damage is beyond repair, the product will be replaced.
3. The contractor will remove sediment and other accumulated materials at the base of the of the slope interruption when accumulation has reached 1/2 of the effective height of the product, or as directed by the engineer. An alternative would



be to place a new slope interruption device on top of and slightly behind the original one creating a larger sediment barrier without disturbing the soil.

4. Slope interruption will be maintained until the slope has been fully stabilized, construction has stopped, or as directed by regulating authority.
5. The components of the barrier will be distributed on site once permitted by an engineer or regulating authority.
6. For long-term sediment and pollution control operations, the barrier can be seeded, and a vegetative barrier may form. This will be determined by the engineer or regulating authority.

Run-off Diversion

INSTALLATION

1. Run-off diversion will be placed on site as per the site plans, or as directed by the engineers or regulating authority.
2. Run-off diversion will be placed before areas of unprotected soil, or places that are vulnerable to erosion.
3. Run-off diversion is recommended to be installed 2m before the of the highest elevation that will need diversion to ensure that there is no water flowing around the top of the device. It will be positioned uphill into any existing vegetation.
4. Run-off diversion is recommended to be positioned downhill to prevent pooling of materials and water at the end of the device.
5. Run-off diversion will lead the flow of run-off to stabilized soil, channels, swales, drainage points, level ground, or other collection areas.
6. Run-off diversion is recommended to be on slopes equal to or greater than 1% to ensure safe and non-disruptive run-off.
7. Run-off diversion installed on slopes greater than 5% could benefit from having additional run-off, erosion, and soil stabilization. This is highly recommended in run-off concentrated areas.
8. Run-off diversion is not recommended for slopes that exceed a 2:1 slope.
9. Stakes will be installed through the centre of the barrier on 1.5m centres, using 50mm by 50mm by 1m wooden stakes.
10. Staking depth for sand and silt loam soils are recommended to be 300mm and 200mm for clay soils.
11. For long-term run-off diversion operations, the barrier can be seeded, and a vegetative barrier may form. This will be determined by the engineer or regulating authority.

INSPECTION: SLOPE INTERRUPTION

Erosion Solutions Ltd. recommend that inspections should take place every 24 hours or as directed by regulating authority. Slope interruption inspection should take place every 24 hours to ensure that shape is consistent, and that damage has not occurred. If pooling or sediment accumulation becomes substantial enough to have an effect on the slope interruption performance additional sediment and erosion measures may be needed, such as adding another barrier on top of the existing one or sediment removal from the front side of the barrier. Consult with the regulating authority if you are unsure if any action is required. Slope interruption will be inspected until area in question has been stabilized and construction activity has stopped.

MAINTENANCE

1. The contractor will maintain run-off to a condition where Erosion Solutions Ltd. products are used for their intended purpose and the product is able to perform adequately at all times. Routine inspection will be followed as discussed above.

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2. When damaged, the product will be repaired. If damage is beyond repair, the product will be replaced.
3. The contractor will remove sediment and other accumulated materials at the base of the of the slope interruption when accumulation has reached 1/2 of the effective height of the product, or as directed by the engineer. An alternative would be to place a new run-off diversion device on top of and slightly behind the original one creating a larger sediment barrier without disturbing the soil.
4. Run-off diversion will be maintained until the slope has been fully stabilized, construction has stopped, or as directed by regulating authority.
5. The components of the barrier will be distributed on site once permitted by an engineer or regulating authority.
6. For long-term sediment and pollution control operations, the barrier can be seeded, and a vegetative barrier may form. This will be determined by the engineer or regulating authority.

Sediment Traps

INSTALLATION

1. Sediment traps will be placed on site as per the site plans, or as directed by the engineers or regulating authority.
2. Sediment traps are recommended to not be placed on fill soil, delicate, sloping, or uneven ground.
3. Sediment traps are recommended to be installed on level surfaces. Verification of a level surface is recommended before installation.
4. Sediment traps are recommended to be placed at the base of the catchment area.
5. Run-off diversion could be installed to divert run-off flows from areas to enter the sediment trap.
6. Slope interruption can be placed upslope from the run-off to slow down flow velocity to reach the sediment trap at a lower speed, reducing the likelihood of damage to the sediment trap or other products on site.
7. Concentrated flows, channels, or ditches directing flow into sediment traps are recommended to have devices such as check dams, slope interruption or equivalents to slow down the energy before entry to the sediment trap. These measures should be placed a minimum of 6.5 m from the catchment area of the sediment trap.
8. Sediment traps will be installed to have an effective height of at least 1 m.
9. Ends of sediment traps are recommended to have at least 300mm higher elevation than that of the middle of the sediment trap. The middle of the sediment trap should be the lowest of elevations for better storage capacity of the trap.
10. Sediment traps are recommended to have a base width which that is equal to the effective height. If the effective height is 1m, then the base of the sediment trap must be 1m deep.
11. Sediment trap's height is to be measured vertically, not across diagonally up the slope of the sediment trap.
12. Additional runoff-sediment storage can be created by excavation of the area directly in front of the sediment trap.
13. Devices that are paired together to make longer lengths must have an overlap. There must be an overlap of at least 1.3m. Staking for the over-lap will be placed at 200 mm from end of sock and then 700mm from the first stake.
14. Stakes will be installed through the centre of the base of the sediment trap on 1.5m centres, using 50mm by 50mm by 1m wooden stakes.
15. Stakes shall be installed at a triangular pattern; the base sock will be staked through the centre. The upper layers will cross to form triangles, fastening each layer to the bottom layer. Stakes will be tied together with either 16 gauge or multiple strand 20 gauge so that at least 200mm of the wooden stake is showing above each layer of the sock. All base layers shall be staked on 1.5 m centres; upper layers will be staked in between these (every 750 mm) to ensure a strong stable structure. Rebar can be used if the soil is very compact or frozen.
16. Stake depths will be at least 300mm regardless of the soil type.
17. Additional layers of the sediment trap will be compacted and leveled.
18. Loose, non-composted wood chips can be placed in front and up the front of the sediment trap, along joints, and within voids. This creates a stronger seal in the joints/seams between soil and other socks mediating the possibility for sediment leakage or an undermined sediment trap.



19. If the sediment trap is to be left to be a part of the landscape, it can be seeded at installation for permanent vegetation growth. The engineer will have to specify seed requirements, as results may vary. Sediment traps are not to be used in long-standing, short-lived, or intermittent streams.

INSPECTION: SEDIMENT TRAPS

Erosion Solutions Ltd. recommends that inspections should take place every 24 hours or as directed by regulating authority. Sediment trap inspection should take place every 24 hours to ensure that shape is consistent, hydraulic flow through rates are adequate, and that damage has not occurred. If pooling or sediment accumulation becomes substantial enough to have an effect on sediment trap, additional sediment and erosion measures may be needed. Consult with the regulating authority if you are unsure if any action is required. The sediment traps will be inspected until area in question has been stabilized and construction activity has stopped.

MAINTENANCE

1. The contractor will maintain sediment traps to a condition where Erosion Solutions Ltd. products are used for their intended purpose and the product is able to perform adequately at all times. Routine inspection will be followed as discussed above.
2. When damaged, the product will be repaired. If damage is beyond repair, the product will be replaced.
3. The contractor will remove sediment and other accumulated materials at the base of the of the sediment trap when accumulation has reached 1/2 of the effective height of the product, or as directed by the engineer. An alternative would be to place a new barrier on top of and slightly behind the original one creating a larger sediment barrier without disturbing the soil.
4. Sediment traps will be maintained until area that the barrier is protecting has been fully stabilized, construction has stopped, or as directed by regulating authority.
5. The components of the barrier will be distributed on site once permitted by an engineer or regulating authority.
6. For long-term sediment and pollution control operations, the barrier can be seeded, and a vegetative barrier may form. This will be determined by the engineer or regulating authority.