EC-1	EROSION AND SEDIMENTATION CONTROL NOTES		
EC-2	EROSION AND SEDIMENTATION CONTROL NOTES (CONT'D)		
EC-3	SILTATION FENCE		
EC-4	HAYBALES AND SILT FENCE		
EC-5	ONSITE DEWATERING BASIN		
EC-6	DRAIN INLET PROTECTION		
EC-7	TEMPORARY CONSTRUCTION ENTRANCE		
EC-8	EROSION CONTROL MATTING		
EC-9	EROSION CONTROL MATTING INSTRUCTIONS		
EC-10	EROSION CONTROL FIBER ROLL		
EC-11	SILT SAC		
EC-12	DEWATERING SUMP DETAIL		
EC-13	LOAM & SEED DETAIL		



TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

INDEX - EROSION & SEDIMENT CONTROL

SCALE: NTS DATE:

4/20/2020

REVISED:

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DETAIL NUMBER: EC-00

### GENERAL

THIS PLAN PROPOSES EROSION CONTROL MEASURES TO ADEQUATELY CONTROL ACCELERATED SEDIMENTATION AND REDUCE THE DANGER FROM STORM WATER RUNOFF AT THE SITE. THE RUNOFF SHALL BE CONTROLLED BY THE INTERCEPTION, DIVERSION, AND SAFE DISPOSAL OF PRECIPITATION. RUNOFF SHALL ALSO BE CONTROLLED BY STAGING CONSTRUCTION ACTIVITY AND PRESERVING NATURAL VEGETATION WHEREVER POSSIBLE.

EXISTING VEGETATION SHALL BE PROTECTED AND ONLY THAT CLEARING AND GRUBBING ABSOLUTELY NECESSARY TO THE PROPOSED CONSTRUCTION SHALL BE PERFORMED. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND CONTOUR, UNLESS OTHERWISE INDICATED ON THE PLANS. THE CONTRACTOR SHALL TAKE SPECIAL CARE WITH HIS CONSTRUCTION METHODS AND SHALL COMPLY WITH THE FOLLOWING GUIDELINES.

#### SEDIMENTATION CONTROL

ALL AREAS SHALL BE PROTECTED FORM SEDIMENTATION DURING AND AFTER CONSTRUCTION, PARTICULARLY THE STORAGE OF EXCAVATED OR STOCKPILED MATERIAL. THE CONTRACTOR SHALL CAREFULLY STRIP ALL TOPSOIL, LOAM, OR ORGANIC MATTER PRIOR TO THE TRENCHING OR OTHER OPERATIONS AND SHALL STORE THEM SEPARATELY FROM ALL OTHER MATERIALS DURING EXCAVATION. EACH STOCKPILE MUST BE ADEQUATELY RINGED WITH SEDIMENT CONTROL MATERIAL (i.e. HAY BALES AND/OR FILTER FIBER ROLL).

DEBRIS AND OTHER WASTE RESULTING FROM EQUIPMENT MAINTENANCE AND CONSTRUCTION WILL NOT BE DISCARDED ON SITE.

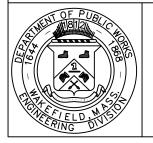
### EROSION AND SEDIMENTATION CONTROL PLAN

SEDIMENTATION CONTROL SYSTEM — THE SEDIMENTATION CONTROL SYSTEM SHALL CONSIST OF FILTER FABRIC BARRIER FENCE & HAYBALES. THE SEDIMENTATION CONTROL SYSTEM SHALL BE INSTALLED IMMEDIATELY AFTER A CUT SLOPE HAS BEEN GRADED, BEFORE A FILL SLOPE HAS BEEN CREATED AND AS INDICATED ON THE PLANS. THE SYSTEM DESIGNED TO INTERCEPT SILT AND SEDIMENT BEFORE IT REACHES THE WETLANDS OR WATERCOURSES. DEPOSITS OF SEDIMENT AND SILT ARE TO BE PERIODICALLY REMOVED FOR THE UPSTREAM SIDE OF THE FENCE. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. THE SEDIMENTATION CONTROL SYSTEM IS TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE SYSTEM ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

STACKED HAY BALES — HAY OR STRAW BALES USED FOR EROSION CONTROL SHALL BE STACKED AT CATCH BASINS WHERE SEDIMENT MAY ENTER THE CATCH BASIN OR AS DIRECTED BY THE RESIDENT ENGINEER. DEPOSITS OF SEDIMENT AND SILT ARE TO BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE EROSION CHECKS. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. HAY OR STRAW BALES ARE TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE EROSION CHECKS ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

EROSION CONTROL MATTING — MATTING SHALL BE USED FOR EROSION CONTROL ON SLOPES GREATER THAN 3:1. SOIL ON SLOPES SHALL BE PREPARED BEFORE INSTALLING MATTING, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT EROSION CONTROL UNTIL VEGETATION HAS ESTABLISHED.

IN ALL AREAS, REMOVAL OF TREES, BUSHES, AND OTHER VEGETATION, AND DISTURBANCE TO THE SOIL, IS TO BE KEPT TO AN ABSOLUTE MINIMUM WHILE ALLOWING PROPER DEVELOPMENT OF THE SITE.



TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

EROSION & SEDIMENT CONTROL NOTES

SCALE: DATE: NTS 4/20/2020

REVISED:

\_

DETAIL NUMBER:

## EROSION AND SEDIMENT CONTROL MAINTENANCE PROCEDURES

DURING CONSTRUCTION, AS SMALL AN AREA OF SOIL AS POSSIBLE SHOULD BE EXPOSED OR AS SHORT A TIME AS POSSIBLE. AFTER CONSTRUCTION, GRADE, RESPREAD TOPSOIL, AND STABILIZE SOIL BY SEEDING AND MULCHING AS TO PREVENT EROSION.

ALL SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE INSPECTED DURING CONSTRUCTION ON A DAILY BASIS AND FOLLOWING ALL STORMS BY THE RESIDENT ENGINEER. THE CONTRACTOR SHALL MAINTAIN AND MAKE REPAIRS AND REMOVE SEDIMENT AS REQUESTED BY THE RESIDENT ENGINEER. THIS WORK SHALL BE PERFORMED WITHIN 24 HOURS OF REQUEST.

THE CONTRACTOR SHALL CLEAN SEDIMENT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, AND PIPES AT THE COMPLETION ON CONSTRUCTION, THE CONTRACTOR SHALL REPAIR ALL ERODED AREAS AND ENSURE A GOOD STAND OF TURF IS ESTABLISHED THROUGHOUT. THE CONTRACTOR SHALL REPAIR ALL ERODED OR DISPLACED RIPRAP, AND CLEAN SEDIMENT COVERED STONES.

### CONSTRUCTION PROCEDURES:

- 1. HAY BALES SHALL BE PLACED AROUND EXISTING CATCH BASINS AND DROP INLETS TO PREVENT SEDIMENTATION AND OTHER DEBRIS FROM ACCUMULATING ON THE GRATE OR IN THE SUMP. HAY BALES SHOULD BE KEPT CLEAN AND FREE OF DEBRIS TO FACILITATE FLOW.
- 2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- 3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR OR REBARS DRIVEN THROUGH THE BALE. THE FIRST STAKE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- 4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- 5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

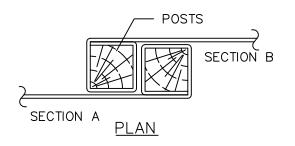
EROSION & SEDIMENT CONTROL NOTES (CONTINUED)

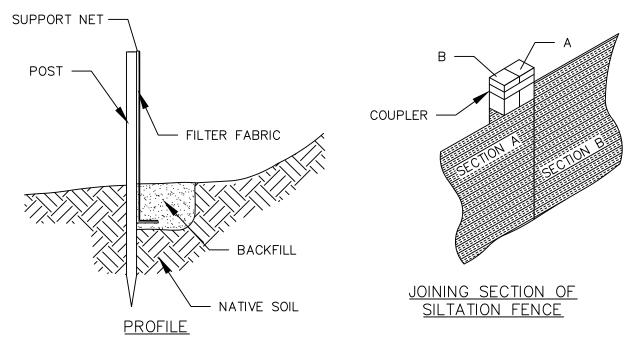
SCALE: DATE: NTS 4/20/2020

REVISED:

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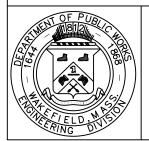
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#### CONSTRUCTION NOTES

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POST WITH WIRE TIES OR STAPLES.
- 2. FILTER FABRIC TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
- 3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES AND FOLDED.
- 4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
- 5. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- 6. FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

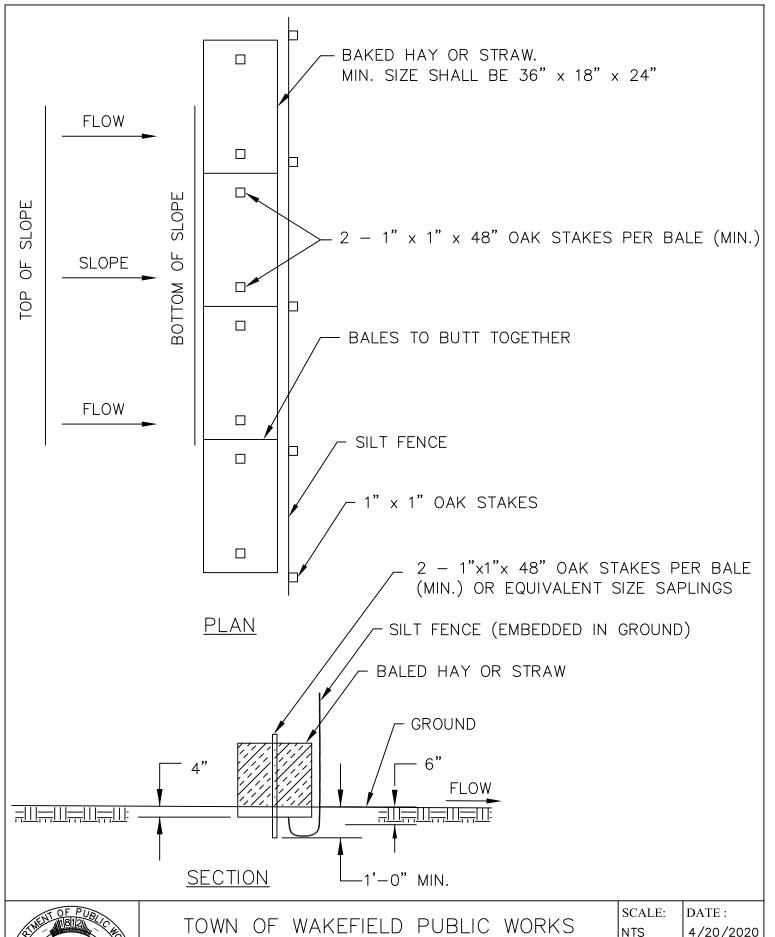
SILTATION FENCE

SCALE: NTS DATE: 4/20/2020

REVISED:

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DETAIL NUMBER:





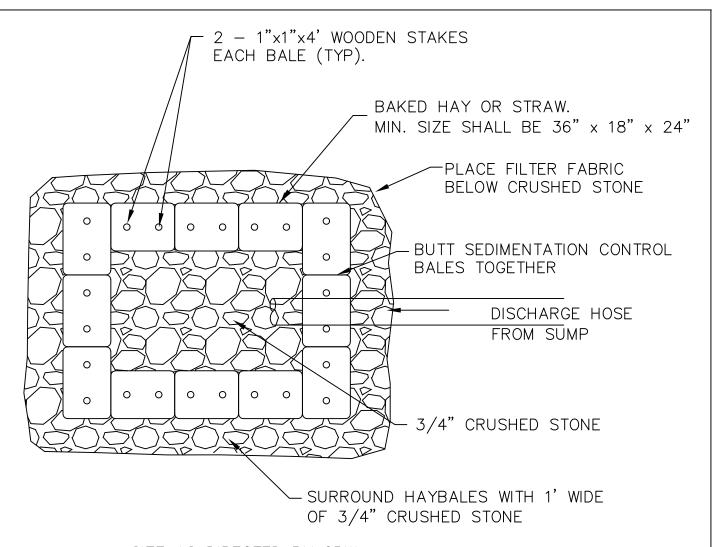
DESIGN & CONSTRUCTION STANDARDS

HAYBALES AND SILT FENCE

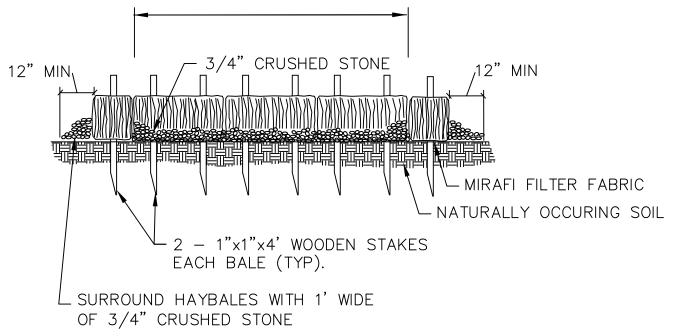
SCALE:	DATE:
NTS	4/20/2020

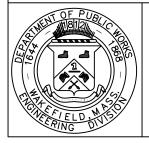
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DETAIL NUMBER: EC-4



SIZE AS DIRECTED BY CPW





TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

ONSITE DEWATERING BASIN

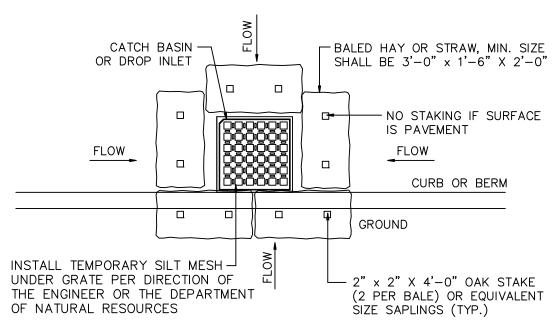
SCALE:	DATE:
NTS	4/20/2020

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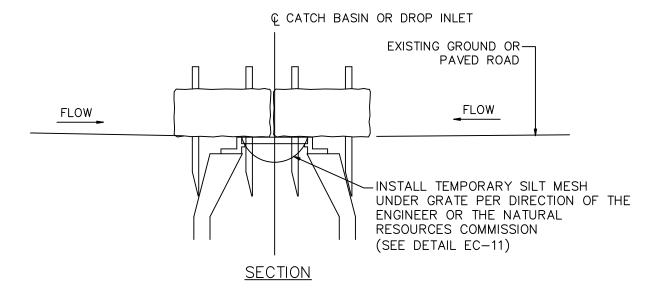
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DETAIL NUMBER: EC-5

#### PAVEMENT OR MEDIAN



#### PLAN



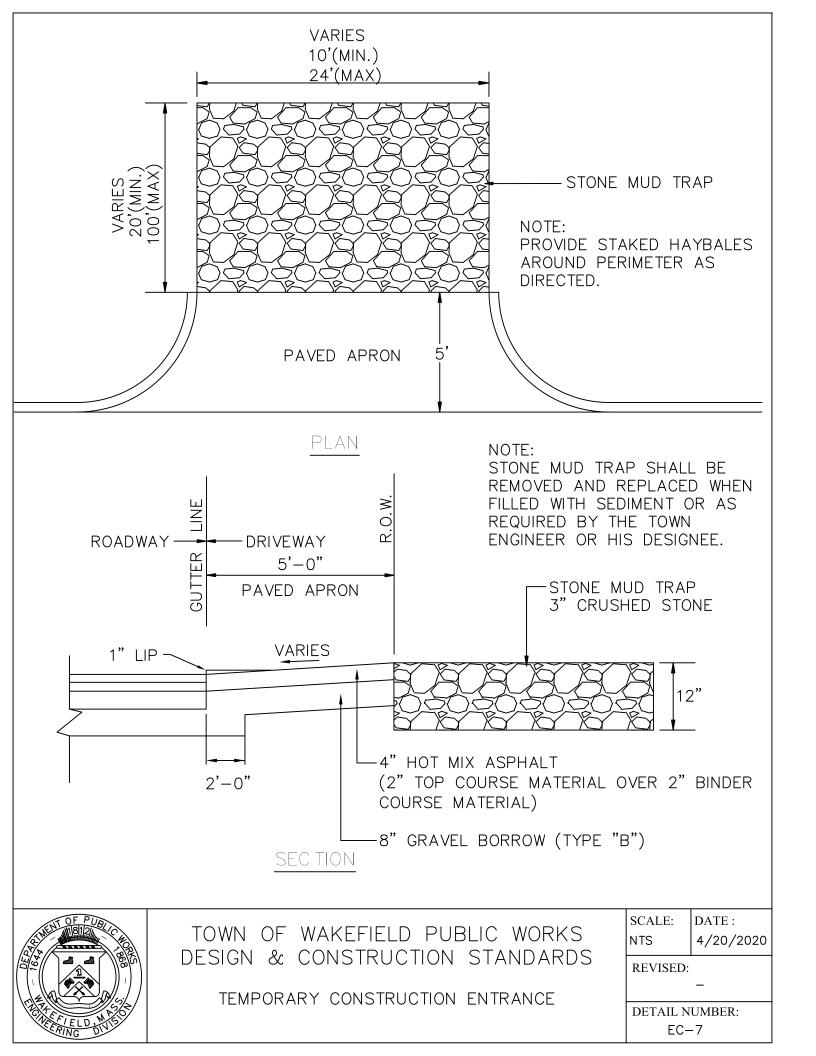


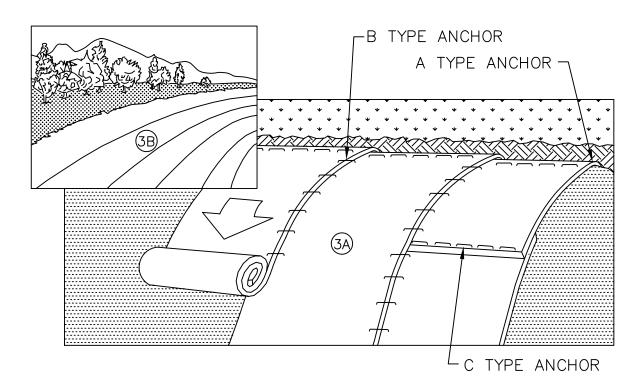
TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

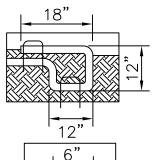
DRAIN INLET PROTECTION

SCALE: NTS	DATE : 4/20/2020
REVISED:	_

DETAIL NUMBER: EC-6







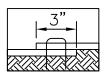
# **A TYPE ANCHOR**

(TOP OF SLOPE/CREST, TERMINATION OF TRM)



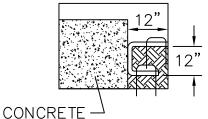
## **B TYPE ANCHOR**

(LENGTH OF OVERLAP)



### **C TYPE ANCHOR**

(WIDTH OF OVERLAP)



## **D TYPE ANCHOR**

(CONCRETE/MASONRY INTERFACE)



TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

EROSION CONTROL MATTING

SCALE: DATE: NTS 4/20/2020

REVISED:

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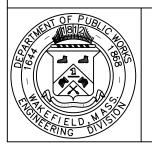
DETAIL NUMBER: EC-8

## EROSION CONTROL MATTING INSTALLATION NOTES

- 1. INSTALL TURF REINFORCEMENT MAT (TRM) IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. MANUFACTURERS REPRESENTATIVE SHALL INSPECT THE SITE PREPARATION PRIOR TO INSTALLATION OF THE TURF REINFORCEMENT MAT AND PROVIDE ON SITE SUPERVISION FOR THE INSTALLATION. UPON COMPLETION, THE REPRESENTATIVE SHALL PROVIDE WRITTEN CERTIFICATION AS TO THE ACCEPTABILITY OF THE INSTALLATION.
- 2. PREPARE SOIL BEFORE INSTALLING TRM, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED. NOTE: WHEN USING CELL DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- 3. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE TRM IN A 6"dX6"w TRENCH WITH APPROXIMATELY 12" OF TRM EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE TRM WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF TRM BACK OVER SEED AND COMPACTED SOIL. SECURE TRM OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE TRM
- 4. ROLL THE TRM (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. TRM WILL UNROLL WITH APPROPRIATE SIDÉ AGAINST THE SOIL SURFACE. ALL TRM MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- 5. THE EDGES OF PARALLEL TRM MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON TRM TYPE.
- 6. CONSECUTIVE TRM SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE TRM WIDTH.

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE TRM.

7. WHERE THE BLANKETS RUN PARALLEL TO CONCRETE OR STONE MASONRY WALL, PLACE AND SECURE BLANKET WITH D-TYPE ANCHOR.



TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

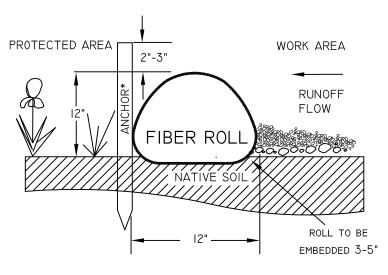
> EROSION CONTROL MATTING INSTALLATION NOTES

SCALE: NTS

DATE: 4/20/2020

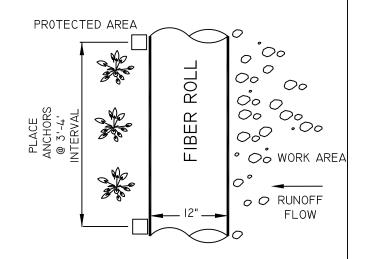
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DETAIL NUMBER:

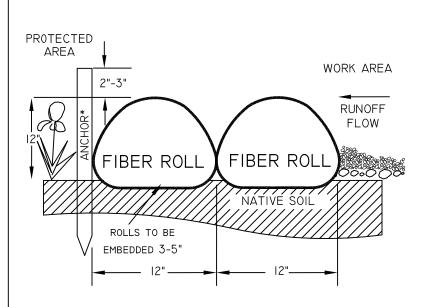


FIBER ROLL
SECTION VIEW

ANCHOR STAKES TO BE 1"x1"x24" WOOD, AND DRIVEN TO 2"-3" ABOVE THE TOP OF THE FIBER ROLL.

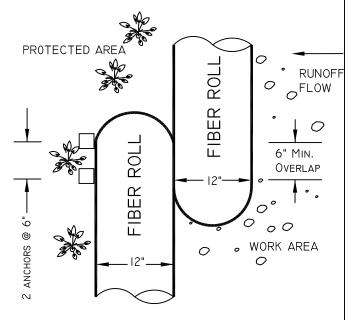


TOP VIEW



<u>FIBER ROLL</u> <u>OVERLAP END VIEW</u>

ANCHOR STAKES TO BE 1"x1"x24" WOOD, AND DRIVEN TO 2"-3" ABOVE THE TOP OF THE FIBER ROLL.



FIBER ROLL OVERLAP TOP VIEW

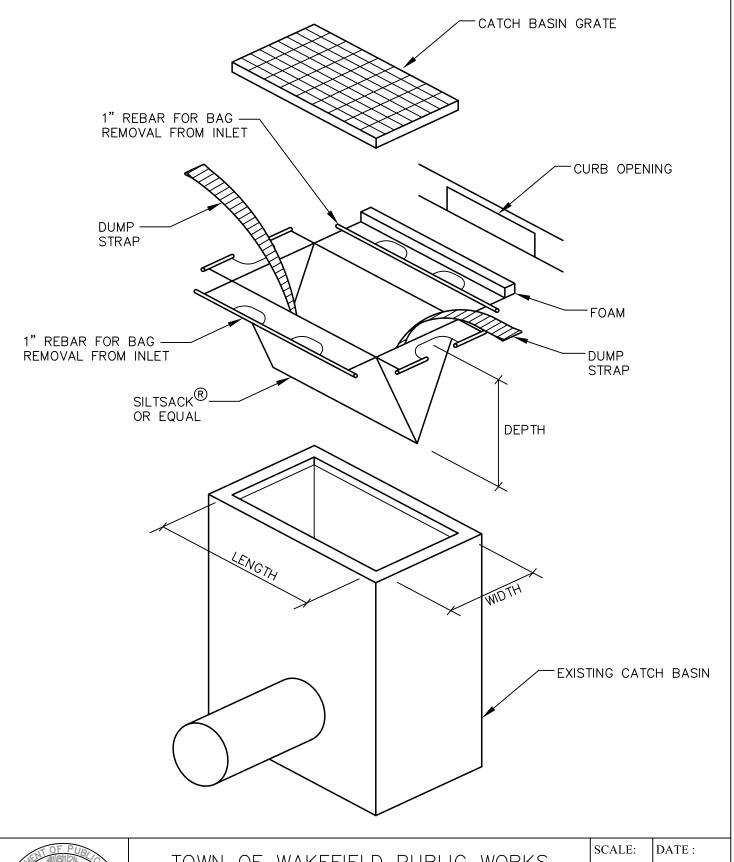


TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

EROSION CONTROL FIBER ROLL DETAIL

SCALE: NTS	DATE: 4/20/2020	
REVISED:		
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DETAIL NUMBER: EC-10





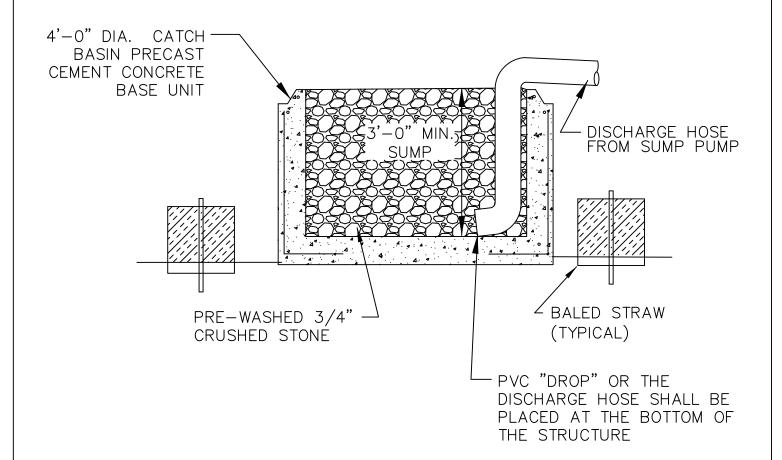
TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

SILT SACK DETAIL

4/20/2020 NTS

REVISED:

DETAIL NUMBER: EC-11A





TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

DEWATERING SUMP DETAIL

SCALE:

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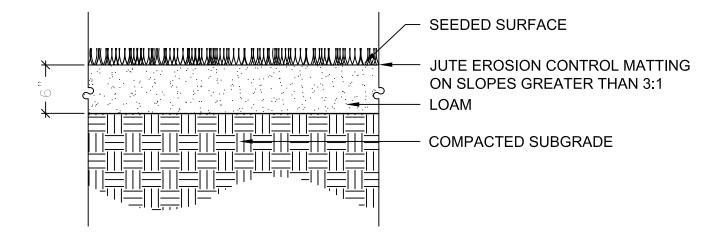
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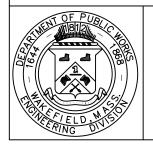
4/20/2020

REVISED:

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DETAIL NUMBER:





TOWN OF WAKEFIELD PUBLIC WORKS DESIGN & CONSTRUCTION STANDARDS

LOAM & SEED DETAIL

SCALE:

DATE:

NTS 4/20/2020

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DETAIL NUMBER: