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Curlex[®] Hi-Vis Excelsior Logs™ SPECIFICATION

PART I - GENERAL

1.01 Summary

- A. Curlex Hi-Vis Excelsior Logs have a highly visible tubular sleeve and contain excelsior wood fiber for the purpose of job site safety, sediment, and storm water control applications as described herein.
- B. This work shall consist of furnishing and installing the Hi-Vis Excelsior Logs[™], including fine grading, installing, staking, and miscellaneous related work, in accordance with these standard specifications and at the locations identified on drawings or designated by the owner's representative. This work shall include all necessary materials, labor, supervision, and equipment for installation of a complete system.
- C. All work of this section shall be performed in accordance with the conditions and requirements of the contract documents.
- D. Hi-Vis Excelsior Logs shall be used for job site safety, to slow water velocity, and to trap sediment. Based on a project-by-project engineering analysis, the Hi-Vis Excelsior Logs shall be suitable for the following applications:
 - 1. Control site access
 - 2. Promote safe on-site driving speeds
 - 3. Delineate sensitive areas
 - 4. Additional sediment and stormwater control applications
 - 5. Stockpile control
 - 6. Hazard marker (example: manhole delineation)
 - 7. Suitable replacement to safety fencing in certain applications

1.02 Performance Requirements

- A. Curlex Hi-Vis Excelsior Logs shall provide filtering efficiency, temporary on-site safety markers, channel and slope interruption by slowing water velocity to reduce shear stress and soil erosion. Hi-Vis Excelsior Logs performance capabilities shall be determined by large-scale testing deemed acceptable by the design engineer.
- B. Curlex Hi-Vis Excelsior Logs performance requirements:

Property	Value	Method
Filtering Efficiency	> 90 %	ASTM D5141



1.03 Submittals

A. Submittals shall include complete design data, SDS, Installation Guidelines, Manufacturing Material Specifications, Manufacturing Certifications, CAD details, and a Manufacturing Quality Control Program. In addition, the Manufacturer shall provide a test report providing data showing the performance capabilities of the Hi-Vis Excelsior Log, along with reference installations similar in size and scope to that specified for the project.

1.04 Delivery, Storage, and Handling

- A. Curlex Hi-Vis Excelsior Logs shall be furnished on pallets or master packs.
- B. Curlex Hi-Vis Excelsior Logs may be compressed when packaged. The unique packaging can result in a less-than-symmetrical shape upon arrival to the jobsite. This will not affect the performance capability of the Hi-Vis Excelsior Logs because unique Great Lakes aspen excelsior fibers naturally expand upon wetting and return to a symmetrical tubular shape.
- C. Curlex Hi-Vis Excelsior Logs shall be free of defects and voids that would interfere with proper installation or impair performance.
- D. Curlex Hi-Vis Excelsior Logs shall be stored by the Contractor in a manner that protects them from damage by construction activities.

PART II - PRODUCTS

2.01 Hi-Vis Excelsior Logs

- A. Excelsior Logs shall be Curlex Hi-Vis Excelsior Logs, as manufactured by American Excelsior Company, Arlington, TX (800-777-7645).
- B. Curlex Hi-Vis Excelsior Logs consist of naturally seed free Great Lakes Aspen wood excelsior inside a durable, highly visible flexible tubular sleeve. Curlex Hi-Vis Excelsior Logs allow water to flow through the 100% excelsior matrix, minimizing overtopping, slowing high flow water velocities, and intercepting and stopping silt movement. Curlex Hi-Vis Excelsior Logs may be installed over bare soil, over rolled erosion control products, on hard impervious surfaces, on steep slopes, around inlets and outlets, and around jobsites. Potential jobsite applications include controlling site access, promoting safe on-site driving speeds, stockpile control, and hazard marking (such as manhole delineation). Other applications include perimeter control, delineation of sensitive areas, and replacing silt or safety fence in certain instances. Curlex Hi-Vis Excelsior Logs shall be manufactured in the U.S.A. at company locations where QA/QC is implemented and managed by the manufacturer. Field fabricated products and products made by anyone other than the manufacturer (i.e. distributors, dealers, etc.) shall not be accepted.



C. Curlex Hi-Vis Excelsior Logs shall have the following nominal material characteristics:

PROPERTY	ENGLISH	METRIC
Nominal Diameter	9 in	22.9 cm
Log Length	\geq 5.0 ft	≥ 1.5 m
(+ 5%, -0%)	$\geq 10.0 \text{ ft}$	≥ 3.0 m
	\geq 18.0 ft	≥ 5.5 m

2.02 Stakes

A. Stakes shall be wooden, 1 1/8 in wide x 1 1/8 in thick by a minimum of 30 in long, for 9 in Curlex Hi-Vis Excelsior Logs for single and double-stacked installations. For triple-stacked installations, use 1 1/8 in wide x 1 1/8 in thick by a minimum of 48 in long. For triple-stacked installations on hard impervious surfaces, use an optional strap or weighted system.

PART III - EXECUTION

3.01 Hi-Vis Excelsior Logs Supplier Representation

A. Contractor shall coordinate with the Hi-Vis Excelsior Logs supplier for a qualified representative to be present on the job site at the start of installation to provide technical assistance as needed. Contractor shall remain solely responsible for the quality of installation.

3.02 Site Preparation

- A. Before placing Hi-Vis Excelsior Logs, the Contractor shall certify that the subgrade has been properly compacted, graded smooth, has no depressions, voids, soft or uncompacted areas, is free from obstructions such as tree roots, protruding stones or other foreign matter, and is seeded and fertilized according to project specifications where applicable. The Contractor shall not proceed until all unsatisfactory conditions have been remedied. By beginning construction, Contractor signifies that the preceding work is in conformance with this specification.
- B. On soil-surface installations, Contractor shall fine-grade the subgrade by hand dressing where necessary to remove local deviations.
- C. For hard impervious surfaces, clear excess debris from the surface before placement.
- D. No vehicular traffic shall be permitted directly on the Hi-Vis Excelsior Logs.

3.03 Installation

- A. Curlex Hi-Vis Excelsior Logs shall be installed as directed by the owner's representative in accordance with manufacturer's Installation Guidelines and CAD details. The extent of Hi-Vis Excelsior Logs shall be as shown on the project drawings.
- B. Curlex Hi-Vis Excelsior Logs should be installed to intercept water flow, collect sediment on site, protect bare soil areas, delineate sensitive areas, serve as hazard markers, and complement previously installed rolled erosion control products on hard impervious surfaces and steep slopes, around inlets and outlets, or around jobsites. They may be placed over bare soil, on hard impervious surfaces, or on top of erosion control blankets. Hi-Vis Excelsior Logs are typically installed lying on flat ground and not trenched.



- C. They shall be secured to the subgrade by wood stakes every two lineal feet across the length of the Hi-Vis Excelsior Log. The stakes shall be driven at approximately a 45-degree angle (pressing on the Hi-Vis Excelsior Logs containment sleeve) and driven a minimum of 16 inches into the ground on the downstream side of the Hi-Vis Excelsior Log. For overlapping joints, crisscross stakes at the center of overlapped Hi-Vis Excelsior Logs. For added strength with crisscrossed stakes, cable-tie the top of the connected crisscrossed stakes.
- D. For triple-stacked installations, use cable ties (or other suitable device) to secure the stack at each abutment. On hard impervious surfaces, use an optional strap or weighted system when necessary.
- E. Hi-Vis Excelsior Logs installed in a swale or channel bottom shall allow the installation to continue up the side slopes three feet above the anticipated high-water mark and perpendicular to the flow of water.
- F. Spacing of Hi-Vis Excelsior Logs shall be such that the elevation of the bottom of the Hi-Vis Excelsior Logs upstream will be equal to the elevation of the top of the log downstream.

3.04 Quality Assurance

- A. Curlex Hi-Vis Excelsior Logs shall not be defective or damaged. Damaged or defective materials shall be replaced at no additional cost to the owner.
- B. Product shall be manufactured in accordance to a documented Quality Control Program. At a minimum, the following procedures and documentation shall be provided upon request:
 - 1. Manufacturing Quality Control Program Manual
 - 2. Additional inspections for product conformance shall be conducted during the run after the first piece inspection.
 - 3. Moisture content readings recorded for each manufacturing day.
 - 4. Each individual Hi-Vis Excelsior Logs shall be inspected, weighed, and documented prior to packaging for conformance to manufacturing specifications.
 - 5. Documentation and record retention for at least two years.

3.05 Clean-up

A. At the completion of this scope of work, Contractor shall remove from the job site and properly dispose of all remaining debris, waste materials, excess materials, and equipment required of or created by Contractor. Disposal of waste materials shall be solely the responsibility of Contractor and shall be done in accordance with applicable waste disposal regulations.

3.06 Method of Measurement

A. Curlex Hi-Vis Excelsior Logs shall be measured for payment as individual items and the unit of measure shall be each.



3.07 Basis of Payment

A. The accepted quantities of Hi-Vis Excelsior Logs shall be paid for at the contract unit price per each unit, complete in place.

Payment shall be made under:

Pay Item

Curlex Hi-Vis Excelsior Logs

<u>Pay Unit</u> Individual Item

Disclaimer: Curlex Hi-Vis Excelsior Logs are a highly visible system for perimeter and sediment control in channels and on slopes. American Excelsior Company (AEC) believes that the information contained herein to be reliable and accurate for use in sediment control applications. However, since physical conditions vary from job site to job site and even within a given job site, AEC makes no performance guarantees and assumes no obligation or liability for the reliability or accuracy of information contained herein, for the results, safety, or suitability of using Curlex Hi-Vis Excelsior Logs, or for damages occurring in connection with the installation of any erosion control product whether or not made by AEC or its affiliates, except as separately and specifically made in writing by AEC. These guidelines are subject to change without notice.

