

NONPOINT SOURCE PLANNING GRANT



Department of
Environmental
Conservation

Streambank Stabilization Engineering Design Report Outline

Engineering design reports for projects to address sedimentation of waterbodies caused by erosion of streambanks must include the required elements listed below. Streambank stabilization practices include but are not limited to staking, erosion control matting, root wads, and rip-rap. Rip-rap may only be used in conjunction with natural restoration principles that incorporate vegetative materials. The engineering design report must include an accurate description of the existing conditions and the proposed work, which may include a combination of streambank stabilization practices identified. Engineering designs must meet the minimum [Protection of Waters permit requirements](#).

Required Elements

- I. **Cover Page** (project title, owner, prepared by, professional's stamp, and date)
- II. **Executive Summary:** Overview of the project's purpose
- III. **Projective Objectives:** Describe goals for streambank stabilization elements. Indicate whether the elements are a portion of a larger project. Include a project background description and history/problem statement.
- IV. **Existing Conditions:** Include an analysis of the proposed project site which may include but are not limited to: historic/current erosion rates, nearby land use, soil classification, current streambank condition, and description of critical infrastructure.
- V. **Existing Conditions Graphic:** A plan or diagram of the existing project site is required. It must include:
 - a. Engineer / Landscape Architect name; date and project title
 - b. North arrow / legend
 - c. Graphical scale
 - d. Site features (wetlands, streets, buildings, etc.)
 - e. Location map
 - f. Site topography
 - g. Project location / address (including nearest cross street)
 - h. Stormwater flowpath (also consider adjacent sites)
 - i. Nearest receiving waterbody
 - j. Location relative to the 100-year floodplain
 - k. Other site considerations (hotspots, brownfield remediation or other potential design issues at the site)
 - l. Location of any available boring logs, infiltration tests, or other subsurface investigations.
- VI. **Project Description:** Provide a narrative that explains the proposed project and provides justification for the recommended streambank stabilization practices and why they were selected.
- VII. **Alternatives Analysis with cost estimates**
- VIII. **Anticipated Regulatory Approval and Permits** (*list all that will apply, e.g. NYSDEC, NYSDOT, etc.*)
- IX. **Conceptual Site Plan:** A plan or diagram of the project's conceptual design is required. It must include:
 - a. Engineer / Landscape Architect name; date and project title
 - b. North arrow / legend
 - c. Graphical scale (1 " = 10', 20', 30', 40', 50', 60' or 100')
 - d. Location map
 - e. Site features (wetlands, nearest waterbody, streets, buildings, etc.)

- f. Proposed streambank stabilization location
- h. Site grading (proposed conditions)
- i. Other design considerations

X. Site Photographs: Photographs that are representative of existing site conditions.