

GREEN ROOFS FOR STORMWATER MANAGEMENT

San Francisco

San Francisco Specific Stormwater Calculations and Details

Columbia Green Technologies provides AutoCAD details and stormwater calculations that are specifically designed with San Francisco's stormwater regulations in mind. Through our technical support we strive to make designing and implementing a green roof in the Bay Area as easy as possible. San Francisco specific details can be downloaded from <http://columbia-green.com/resources/regional-stormwater-information/> along with Stormwater Regulation Sheets for other areas of the country.

Policies and Regulations in San Francisco

Stormwater Design Guidelines

New developments and renovations that disturb over 5,000 square feet must comply with the Stormwater Design Guidelines. Both the rate and total volume of runoff must be controlled. The guidelines have different criteria for developments connected to Combined Sewer systems and those connected to Separate Sewer systems.

Combined Sewer Systems development sites with 50% or less impervious area must control both 1 and 2 year 24 hour design storm runoff to pre-development levels. Sites with over 50% impervious area must reduce both the volume and rate of runoff by 25% from the pre-development conditions for a 2 year 24 hour design storm.

Separate Sewer Systems must capture and treat the rainfall from a design storm of 0.75".

The City of San Francisco lists green roofs as a BMP for controlling both the volume and rate of stormwater runoff by evapotranspiration. The depth of growing media can drastically alter a roof's volume controlling capability. Columbia Green Technologies offers a variety of green roof systems with medium depths ranging from 4.5" to over 12".

Green Stormwater Management

The City of San Francisco actively encourages the increased use of sustainable stormwater management and green building techniques. Green stormwater management systems like green roofs, can be used to fulfill many of the city's stormwater regulations.

LEED Certification according to the San Francisco Green Building Ordinance all new non-residential projects over 25,000 ft² must achieve LEED Gold and all high-rise residential developments must be certified LEED Silver.

Stormwater Calculator in order to make calculating stormwater flows and required retention rates easier the City of San Francisco developed a stormwater calculator that includes green roofs and many other green management practices.

For access to the Stormwater Calculator go to <http://sfwater.org/index.aspx?page=446>

Columbia Green roofs are a great way to meet San Francisco's Stormwater requirements while extending the life of the roof two to three times and increasing the aesthetic appeal of the building. Our green roof solutions can qualify for up to 10 of the 60 total LEED points required for Gold certification.

Local Green Roof Incentive Programs

Initiated by the California Energy Commission, the San Francisco Properly Assessed Clean Energy program (PACE) offers low rate loans with longer payback periods for commercial property owners to install renewable energy, energy efficient, and water conservation systems. Green roofs are eligible for inclusion in the PACE program.

For more information go to https://commercial-pace.energyupgradeca.org/county/san_francisco/overview

About Columbia Green Technologies

At Columbia Green Technologies we offer a variety of comprehensive green roof solutions; from extensive to intensive green roofs, available with both tray based and layered systems. Designers appreciate the flexibility our systems offer and the technical support that accompanies any project we undertake. Building owners love the single-source 'Roof to Green Roof' warranty options provided through our roofing partners.



www.columbia-green.com
503-327-8723
info@columbia-green.com

Note: This summary has been prepared and compiled by Columbia Green Technologies for informational purposes only. The information contained herein is accurate to the best of our knowledge as of Spring/Summer 2014. Please consult the regulatory agency and/or a licensed engineer before using this information for the purposes of facility design or permitting.