



# Barrett Company

## Green Roof – Roofscape Facts Ecological Benefits

### European Technology

- Over 30 years of in-place installations.
- One German company that deals in ecological roof systems, installs 3,000,000SF per year.
- 10,000,000SF of vegetated roof covers installed in 1989 alone.

### Photosynthesis converts carbon dioxide to oxygen

- This improves building air quality when in-takes are located at the roof.
- 1 square meter of grass will supply enough oxygen to fully support one person.

### Airborne particulates are filtered and removed from the air

- This improves building air quality when in-takes are located at the roof.
- 1 square meter of grass removes 0.2 kg of airbourne particulates per year.

### Reduces Heat Island Effect

- Green Roof – Roofscapes offer up to 50% better resistance to heat build-up than reflective surfaces.
- Study at Berkley indicates:
  - o 2 degrees F temperature drop will reduce Ozone levels 5-10%.
  - o 2 degrees F temperature drop in urban areas reduces energy costs \$3-4 billion dollars.

### Storm Water Run-off Benefits

- Reduces need to develop extensive storm water retention at the building site.
- Reduced run-off
  - o Summer run-off reduced 70-100%
  - o Winter run-off reduced 40-50%
- Decreases need to expand or rebuild storm water infrastructure.

### Reduces non-point source pollutants

- Removes heavy metal particulates
- Studies show
  - o Copper, lead and cadmium levels reduced 95%
  - o Zinc levels reduced 16%

### Extended Roof Life

- Reducing strain on land fills

### Psychological Benefits

- With balconies or terraces in urban areas, people are less susceptible to illness due to improved oxygen levels and humidity and therapeutic benefits.
- Post Operative studies show:
  - o Views into landscaped courtyards versus masonry walls shortened recovery.
  - o Fewer painkillers used.
  - o Fewer negative evaluations of nurses and staff