Skiing, Skating and Storm Watching…
Making Winter Landscapes

Michael Hubicki, OALA, CSLA
Agenda:

- Introduction
- Skiing
- Skating
- Storm Watching
- Challenges
- Considerations for the L.A.
Format:

- Introduce each Project
- Review Climate, Users, Objectives
- Describe Unique Approaches
- Highlight Challenges
Michael Hubicki

- U of Manitoba Master of Land Arch
- 20 Years Experience
- Manager Land. Arch. at TSH Associates
- Interest in Sustainability
- Work on Infrastructure Projects
the 45th Parallel = a good winter
Dubai’s big dreams inspire awe

800 skyscrapers grow in desert, (a ski hill, too) as good times flow

MARCO PORTER

Dubai, United Arab Emirates — A skier Analogously widget in the Middle East’s most
desert to experience the thrill of skiing on
the Persian Gulf. The tallest
tow is from Dubai.

When tourists ask about the
skating price of a ski lift, oil
prices is in the Middle East, it’s
a normal reaction to ask about
the prices of oil.

But down the road,
next month, an Alpine ski
resort will open in the
southern United Arab Emirates
in the midst of a
highly competitive market.

The resort, Dubai Ski, is
expected to attract hundreds
of millions of visitors a year.

But the resort’s success
depends on its ability to
attract visitors.

Skiing: Oukaimeden, Morocco

Stefan Melhem has
built a skiing resort in
Morocco’s Atlas Mountains,
The world’s tenth-largest
producer of strawberries.

Still, he’s determined to
make Ski Dubai the
core of Oukaimeden.

That’s because Oukaimeden
is the largest ski resort in
the Middle East and
one of the largest in the
world.

Melhem’s resort
will have six slopes,
including one that’s
more than 1,000 meters
long.

Dubai Ski will
feature the
largest indoor ski slope in
the world, with a
total length of 1,000 meters.

The slopes will be
made of artificial snow
and will be open year-round.

Canadian makes the desert bloom

Dubai — A Canadian is
playing a crucial role in
carving the country’s
southern desert.

The project is called
the Dubai Desert Conservation Reserve.

The reserve is located
on the outskirts of Dubai.

The project aims
to protect
the natural
ecosystems
and
wildlife of the
region.

The reserve is
managed by the
Dubai Ruler’s
Office.

The project
involves
transforming
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Palais Royale, Rabat, Dec. 05

Skiing: Oukaïmeden, Morocco
Skiing: Oukaimeden, Morocco

View from Marrakech
• High Atlas Mountains
• 45 km S.E. of Marrakech
• 1 – 2 m of snow fall annually
• Elev. 3200 m
• Low Precipitation
• Existing lifts and runs
• Established ski destination

Skiing: Oukaimeden, Morocco
Skiing: Oukaimeden, Morocco

8’ X 8’ Contour Model
Skiing: Oukaimeden, Morocco
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Infrastructure: Unique Approaches

Oukaimden Municipal Infrastructure

- Buried Primary
- Buried Secondary
- Power Distribution
- Main Roads
- Sidewalks
- Multi-use Trails
- Transportation
- Neighbourhood Roads
- Bus
- Visitor Surface
- Visitor Structure
- Resident
- Staff
- Retail/Commercial
- Administration
- Engineering
- Solar Generation
- Wind Generation
- Supplied Electricity
- Diesel Generation
- Co Generation from Coal/Diesel/Garbage
- Electricity
- Parking
- Facilities
- Incineration
- Recycling
- Solid Waste
- Compost
- Land Fill
- Well Water
- Surface Water
- Grey Water
- Heat & Cooling
- Co-Gen
- Incineration
- Central Heat
- Passive Ventilation
- In Road Hydronic Heating
- Snow Removal
- Plough and Removal
- Sewage Treatment Plant
- Grey Water Treatment
- Snow Making for Polishing
- Incineration
Infrastructure: Unique Approaches

Landscape Integration:
- Water Harvesting Reservoir System
- Slope Reforestation
- Desert Plantings
- Include Transhumance
- Vehicle Free

Skiing: Oukaimeden, Morocco
Challenges and Considerations

International Client
- Requires proactive communications

Remote Site
- Requires local collaboration

Complex Components
- Requires well coordinated team
Challenges and Considerations

Sensitive Site and Cultures
• Requires careful planning / consultation

User Profile
• Requires market analysis

Lack of Water and Snow
• Requires water harvesting and reuse

Skiing: Oukaimeden, Morocco
Challenges and Considerations

African Climate
• Requires definition of expectations

Global Warming
• Requires contingency plans

Demanding Client
• Requires flexibility, patience and humour

Skiing: Oukaimeden, Morocco
Cobourg Waterfront Rink: History

Park Concept selected in August 2003 included a pond

2006 Concept evolved into refrigerated skating rink and fountain

2007 Tender was over budget and project is under review

Skating: Cobourg
Skating: Cobourg Provincial Grant

Premier McGuinty tours downtown Cobourg with Cobourg Mayor Peter Delanty and Northumberland MPP Leu Rinaldi.

BUILDING RECREATIONAL OPPORTUNITIES FOR COBOURG FAMILIES

March 27, 2007
Non - Design Challenges

- Vocal Public Opposition
- Fixed Budget and Scope Creep
- Split Council
- Compressed Construction Schedule
- Winter Construction
- Societal Values: Winter Landscape?
Design Challenges

- Windy and Exposed Site
- Poor Soils
- High Ground Water Table
- Complex User Restrictions
- Fixed Budget and Creeping Scope
- Environmental Impacts e.g. GHG’s
Skating: Cobourg
Skating: Cobourg
Rink Size Comparison

Skating: Cobourg

Nathan Phillips Square
Area: 1780m²
Length: 56m
Width: 22m

Memorial Arena
Pad 1
Area: 1281m²
Length: 56m
Width: 23.9m

Rotary Rink/Fountain
Area: 780m²
Length: 48m
Width: 22m
Unique Approaches

- Combining Rink and Fountain
- 4 Season Attraction
- Focus on Winter Activity in Downtown
- For All Ages and Abilities
- No User Fee
- Synthetic Ice - considered
Synthetic Ice?

Skating: Cobourg
Storm Watching

- Lake Ontario has year round storm events
- Breaking waves cover landscape with ice
- Ice bergs limit access to water
- People are intrigued by lake storms
- Growing in popularity
- Burlington promoting

Storm Watching: Burlington
Lake Ontario
Dec. 17, 2007

Storm Watching: Burlington
Storm Watching: Burlington
Storm Watching

Burlington’s Waterfront
Storm Watching

Hydraulic Tank Test
Storm Watching
Storm Watching
Lighting Effects:
LED reflectance on fabric
Lighting on beacon tower
Lighting below upper deck of beacon lookout
Lighting below pier deck
Storm Watching

December 2007
Storm Watching

January 2008
Unique Approaches

- WOW factor
- 4 Season Programming
- Safety – pier height, railings, traction
- Conductive concrete - considered
- 10 kw wind generator
- LED lighting computer controlled
- Cost Consultant
Societal Values?

• Are winter landscapes important?
• Do we want to use these landscapes?
• Are winter landscapes marketable?
• Do winter landscapes represent value?

YES!...but...
Challenges

• Local Climate (south of the 45th)
• Global Warming
• Resource Conservation
• Changing User Preferences
• Short Durations
• Weather Dependence
• Sustainability
Landscape Architect’s Role

- Educator
- Facilitator
- Researcher
- Estimator
- Designer
- Champion
Merci