



ARCH 3691
2013

Advanced Design and Building Information Modeling February

Your Name:	Oscar Morales
Name of Project:	Tidewater
Preference:	I would be interested to build a BIM model of this house.
Use of Passive Solar Strategies	
Uses PV panels Uses heat exchanging reservoir Uses Dark tiled floors	
Use of Sustainable strategies	
Solar Panels Rainscreen cladding	
Use of Technology	
Uses PV panels HVAC that turns off if windows or doors are open via sensors Mechanical porch window 10 gallon heat exchanging reservoir	



Use of materials

Dark Floor Tiles
Rainscreen cladding
PV Panels

The materials used for the exterior allows the house to blend in with existing buildings of the city.

Photovoltaic strategy

The Photovoltaic panels used for this house convert the solar radiation into 18% of the electricity.

What strategy would you copy? What is the greatest strength?

The HVAC system that works with the sensory seems to be the greatest strength of the house. This is a great strategy to reduce the energy being used by the system. The ability to create a porch by the motorized window is also a great strategy to create an outdoor feeling to the space.

What is the greatest weakness of the entry? What would you avoid?

The weakest entry is the way the team tried to implement the Arts & Crafts movement in the interior of the house.

Additional comments?

Based on the floor plan, some of the spaces and circulation seems to be crowded which could be changed.



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Your Name:	Oscar Morales
Name of Project:	Y-Container House
Preference:	I would not be interested to build a BIM model of this house.
Use of Passive Solar Strategies	
Wooden screen PV panels on roof	
Use of Sustainable strategies	
Gray water system Vegetation on the exterior of the home	
Use of Technology	
Uses PV panels Gray water system for bathroom Adjustable louvers that adjust amount of sunlight Split system air conditioner	



Use of materials

Wooden screen
Shipping containers

Photovoltaic strategy

What strategy would you copy? What is the greatest strength?

The insulation strategy used with the split system air conditioner is a good strategy that made the y-container have the highest green design in the competition.

What is the greatest weakness of the entry? What would you avoid?

the moving walls would take a long time to set up everynight

Additional comments?



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Your Name:	Oscar Morales
Name of Project:	Living Light
Preference:	I would be interested to build a BIM model of this house.
Use of Passive Solar Strategies	
PV cylinders Long spans of glass	
Use of Sustainable strategies	
Water tank attracts heat and dehumidifies air	
Use of Technology	
PV Cylinders Water tank Controls energy usage, blinds, temperature, lights from app.	



Use of materials

Long spans of glass

Photovoltaic strategy

PV Cylinders
Captures 360 degree
10.9 kw

What strategy would you copy? What is the greatest strength?

The cylindrical PV is a great strategy that I would copy since it can capture the sun rays in 360 degree. Another great strength is the app that was created to control multiple things.

What is the greatest weakness of the entry? What would you avoid?

Additional comments?



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Your Name:	Oscar Morales
Name of Project:	Flex House
Preference:	I would be interested to build a BIM model of this house.
Use of Passive Solar Strategies	
Long glazed walls on north and south side Cypress louvers to control amount of sunlight allowed inside house	
Use of Sustainable strategies	
LED and Fluorescent lights	
Use of Technology	
"Smart" appliances used in the house Diagnostic software	



Use of materials

Materials used based on durability, maintainability, recyclability, origin, energy efficiency, and toxicity over their life cycle.

Photovoltaic strategy

PV panels
Solar thermal concentrating panels

What strategy would you copy? What is the greatest strength?

I would copy the use of "smart" appliances as well as the LED/ Fluorescent lights

What is the greatest weakness of the entry? What would you avoid?

Additional comments?



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Your Name:	Oscar Morales
Name of Project:	C-H-I-P
Preference:	I would not be interested to build a BIM model of this house.
Use of Passive Solar Strategies	
Natural light coming from the south	
Use of Sustainable strategies	
Storing and reusing heat in the house	
Use of Technology	
Systems in the house communicate with each other to accommodate the house to any change.	



Use of materials

Recycled vinyl for the exterior

Photovoltaic strategy

PV panels on the roof

What strategy would you copy? What is the greatest strength?

The systems in the house that communicate with each other is a great strategy that can reduce energy usage.

What is the greatest weakness of the entry? What would you avoid?

the stepping up of the house is an idea I would avoid

Additional comments?



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Your Name:	Oscar Morales
Name of Project:	Water Shed home
Preference:	I would be interested to build a BIM model of this house.
Use of Passive Solar Strategies	
PV panels South glazing –winter sun / shading device –summer sun	
Use of Sustainable strategies	
Green Roof Vertical garden	
Use of Technology	
Gray water system Liquid Desiccant wall Solar thermal wall	



Use of materials
Triple 3x4 wooden studs Soy-based spray foam insulation Liquid applied-air and water barrier Extruded Polystyrene ridged insulation Thermo-treated wood clad walls
Photovoltaic strategy
PV panels with micro inverters Micro inverters convert DC to AC to maximize efficiency on PV panels PV panels give power to lighting, appliances, water pumps and garbage disposal
What strategy would you copy? What is the greatest strength?
I would use the green roof and vertical garden in the house which gives it a great appeal to the house while also having great impact to the way the house functions.
What is the greatest weakness of the entry? What would you avoid?
Additional comments?



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Your Name:	Oscar Morales
Name of Project:	Hale Pilihonua
Preference:	I would not be interested to build a BIM model of this house.
Use of Passive Solar Strategies	
External canopy is operable to allow sunlight in	
Use of Sustainable strategies	
Phase change material for thermal storage	
Use of Technology	
Able to float Energy-conserving lighting control	



Use of materials

Bio-based , fiber-reinforced polymer
Steel frame

Photovoltaic strategy

Water cooled PV's
Location of each PV panel was engineered for maximum potential

What strategy would you copy? What is the greatest strength?

Materials that can resist rotting, termites, and possibly buoyant for flooding.

What is the greatest weakness of the entry? What would you avoid?

The narrowness of the house.

Additional comments?



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Your Name:	Oscar Morales
Name of Project:	Canada House
Preference:	I would not be interested to build a BIM model of this house.
Use of Passive Solar Strategies	
PV panels work at 93%	
Use of Sustainable strategies	
Use of Technology	
Air to water heat pump	



Use of materials

Magnesium oxide –base structural insulated panels – resistant to fire and mold

Photovoltaic strategy

8.3k PV system

What strategy would you copy? What is the greatest strength?

None

What is the greatest weakness of the entry? What would you avoid?

None

Additional comments?



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Your Name:	Oscar Morales
Name of Project:	Solar RoofPod
Preference:	I would not be interested to build a BIM model of this house.
Use of Passive Solar Strategies	
Produces 2 times the amount of energy needed	
Use of Sustainable strategies	
Outdoor Garden	
Use of Technology	
Heat storage tank	



Use of materials

Wood cladding
Shaded glass
Rendered glass

Photovoltaic strategy

Thermal tubes
Micro inverters
10.08 kw
Produces 2 times the amount of energy needed

What strategy would you copy? What is the greatest strength?

The strategy to put the house on the rooftop to share the energy gained from the sun

What is the greatest weakness of the entry? What would you avoid?

Additional comments?



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Your Name:	Oscar Morales
Name of Project:	Solar RoofPod
Preference:	I would not be interested to build a BIM model of this house.
Use of Passive Solar Strategies	
PV panels	
Use of Sustainable strategies	
Use of Technology	



Use of materials

Photovoltaic strategy

PV panels

What strategy would you copy? What is the greatest strength?

What is the greatest weakness of the entry? What would you avoid?

Additional comments?

Not much information given