

*Rooftop Garden MEA – Letter 1*

10/24/2010

Dear Student,

I am a real estate investor and own dozens of commercial and residential properties in the Austin area. I have researched some of the benefits of green-roofs and would like to invest in this technology. This quarter, my budget allows me to install a green-roof on **one** of my properties. I've narrowed the choice down to three. Can you help me decide which property I should choose, and why?

I've included sketches of the rooftops currently in consideration for a green roof. Please use the information listed in the tables below along with the information you have about each of the property buildings to create an algorithm and rationale for your choice. I am leaving the country for business, so I will not be able to assist you during this process. Please prioritize as you find most appropriate. You will need to document your procedure and write a memo in response with your recommendation. Thank you so much for your support with this tough decision. I look forward to learning of your recommendation when I return.

Best regards,

Meagan Ross  
Property Investment and Development  
Austin, Texas

Installation Cost Estimate	
prep roof for garden	\$10/ft <sup>2</sup>
sod	\$1/ft <sup>2</sup>
tree	~\$50/tree
shrubs	\$15/shrub
flowers	\$15/ft <sup>2</sup> of flower garden
bench	\$150 each
table & 4 chairs	\$300 each
lounge chair	\$100 each
bird bath	\$100 each
trash can	\$50 each
picnic bench	\$350 each
planter box	\$250 each
cement or brick pathways	\$4/ft <sup>2</sup>
wooden patio deck	\$5/ft <sup>2</sup>
BBQ	\$1000 each
Garden Maintenance Estimated Costs	
sod	\$1/ft <sup>2</sup> /month
tree	\$4/tree/month
shrubs	\$2/shrub/month
flowers	\$7/ft <sup>2</sup> of flower garden/month
cleaning of paths/decks & empty trash	\$20/hour - twice a week
Roof Inspections	\$100/quarter
Estimated Savings	
Energy Savings	15 - 19%
Tax Break	\$4.50/ft <sup>2</sup> of green roof/year

	Average annual energy expense (MWh)	Peak Rate (US\$/kWh)	Total cost of consumption (US\$)	Estimated Savings with Greenroof	Predicted Yearly Savings (US\$)
Apartment Building	4	0.145	?	17.0%	?
Condo Building	3	0.145	?	19.0%	?
Commercial Office Building	5	0.145	?	15.0%	?

### References

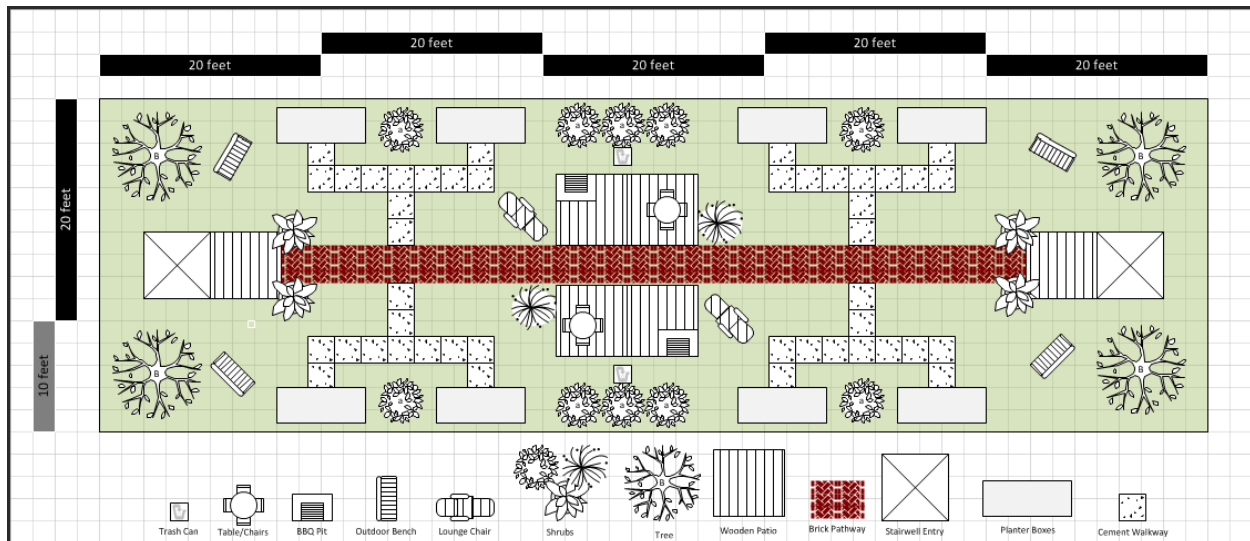
TAX Break: <http://www.habitatmag.com/Publication-Content/Save-the-Environment-Save-the-World/New-Green-Roof-Tax-Incentives>

Energy Savings: [http://hubpages.com/hub/Green\\_Roofs\\_Energy\\_Savings](http://hubpages.com/hub/Green_Roofs_Energy_Savings) <http://www.coolroofs.org/HomeandBuildingOwnersInfo.html>

Exposed Roof: [http://www.protan.com/businessareas/roofing/application\\_areas/exposed\\_roof/pages/default.aspx](http://www.protan.com/businessareas/roofing/application_areas/exposed_roof/pages/default.aspx)



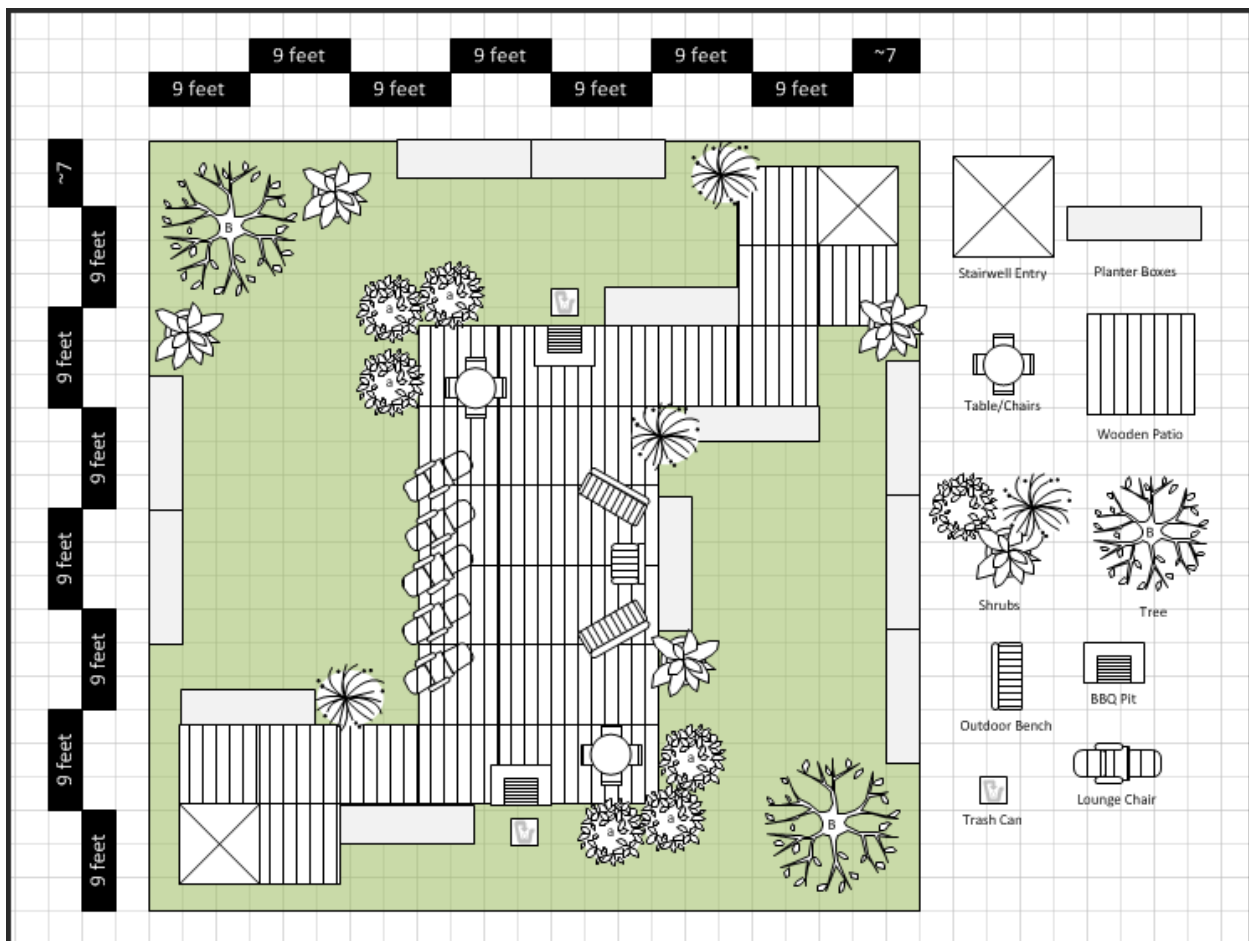
This **apartment building** is located in the historic downtown Austin. Four floors and 8 rentals, this building has a roof surface area of 3000 square feet. The objective of this rooftop garden would be to provide an outdoor area for tenants to enjoy and rent planters to grow vegetables or herbs, or whatever they might like. The planter rental fee will be \$5 a month. If planters are not being rented, these will need to be maintained by an outside source. Currently this building only has two tenants. Having a rooftop garden will be a great selling point. I might even be able to raise rent with this property improvement.



Apartment Building Image: <http://www.faqs.org/photo-dict/phrase/554/apartment-building.html>



This **condo building** is located in North Austin. Three stories high, this building has 12 condos that are owned by the tenants. The surface area of this roof is 4900 square feet. The Home Owner's Association (HOA) for this building has petitioned to me that I improve this building by adding a rooftop garden. The tenants would like this amenity to host parties, garden, and have a place to walk their pets since the complex is in a strictly urban area. I could increase their monthly HOA dues to cover some of my costs.

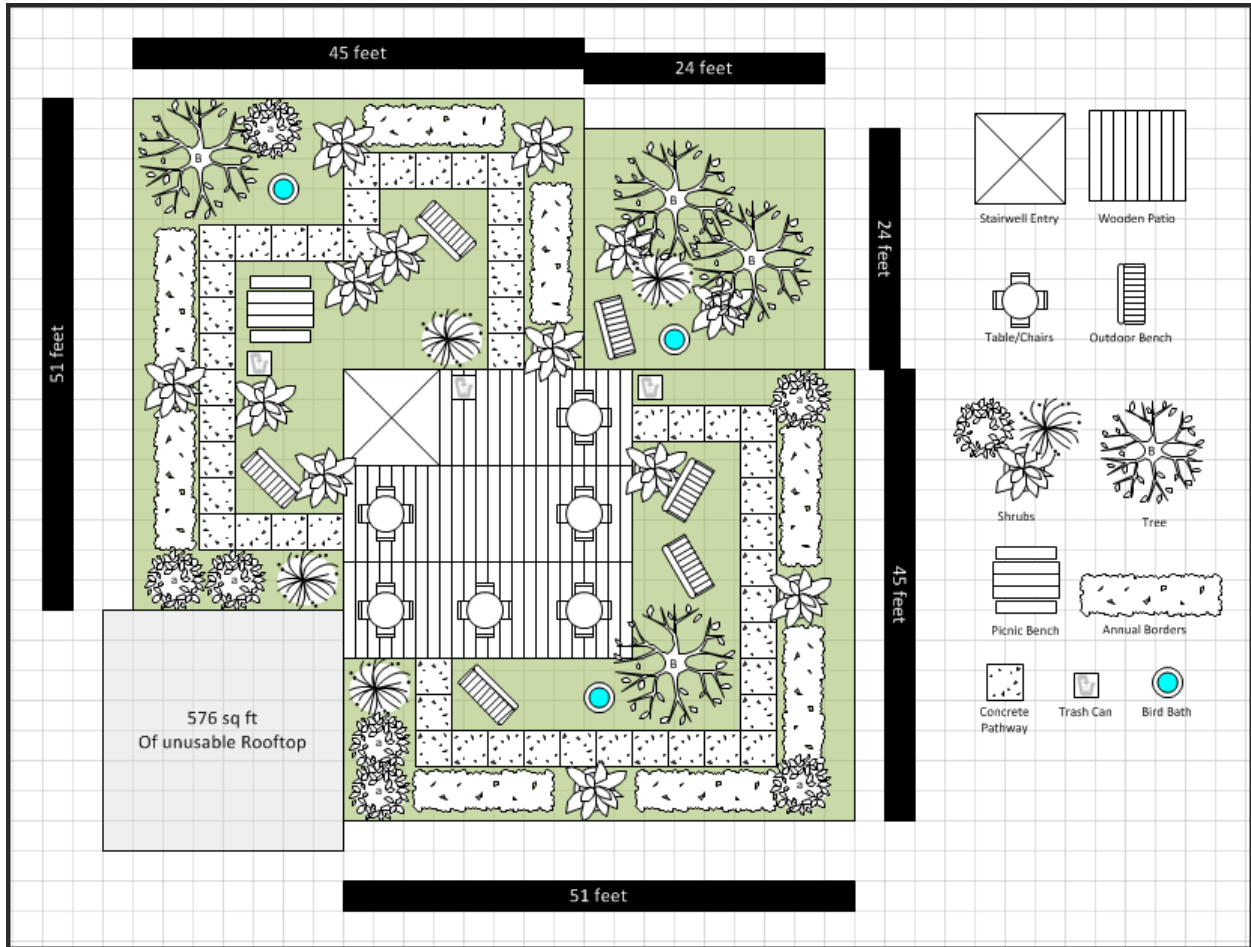


Condo Building Image: <http://urbandallasrealestate.com/Condo3.html>



This commercial building is located in the developing area of East Austin. At five stories, the surface area of this roof available for a rooftop garden is 4725 square feet. I believe that a rooftop garden on this building will attract important businesses to build their offices here. A rooftop garden available to employees to use during their lunch or other breaks will be an excellent perk for the companies housed here. I would be able to charge a premium monthly fee to the companies whose

employees have access to the rooftop garden. However, the grassy area next the building may take away from the necessity for a green space on the roof.



Commercial Building: <http://hyderabad.olx.in/lease-commercial-building-at-madhapur-iid-34612231#pics>

*Rooftop Garden MEA – Letter 2*

10/28/2010

Dear Student,

I spoke with another company about installing a rooftop garden. They offered me a better price per square foot, a \$2 savings, to prepare the roof for the garden, and promised different yearly energy savings. This company predicts that the two newer buildings (condo & commercial) will not have as great of savings since the buildings are already rated energy efficient. Since the apartment building is historic, it would see an increase in estimated savings. They will only need to inspect the roof once a year at \$100 a visit. Given this information, does this change which of the three properties I should choose to install a rooftop garden? Please use the same algorithm, priorities, and rationale you used previously. Also, which company do you recommend I choose?

Best regards,

Meagan Ross  
 Property Investment and Development  
 Austin, Texas

<i>company 2</i>	Estimated Savings with Greenroof
Apartment Building	19.0%
Condo Building	14.0%
Commercial Office Building	12.0%