



Speculative Green Office Development Case Studies

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Case Study

318 National Business Park



- **LEED-CS Gold Certification**
- **Four story, 125,681 s.f. Office Building**
- **Speculatively designed and built**
- **Fully leased during construction**
- **2005 NAIOP National Green Development Award Winner**



Case Study

306 National Business Park



- **LEED-CS Silver Certification**
- **Five story, 162,500 s.f. Office Building**
- **Speculatively designed and built**
- **Fully leased during construction**



Case Study

7440 Milestone Parkway



- **LEED-CS Registered - Silver Target**
- **Five-story, 152,000 s.f. office building**
- **Speculatively designed and built**

Sustainable Sites



Core and Shell Pilot Project Checklist

Building Square Footages

				LEED Silver				LEED Gold				LEED Silver (Registered)			
				NBP 306				NBP 318				7740 Milestone			
				162,000				125,651				154,985			
Yes	?	No	Cost	Yes	?	No	Cost	Yes	?	No	Cost	Yes	?	No	Cost
5		8	\$ 55,000	6		1	\$ 67,338	6	1	7	\$ 55,000				
Y				Y				Y				Y			
1				Y										1	
1		1												1	
1		1												1	
1		1												1	
1	1		\$ 25,000	1			\$ 27,838	1			\$ 25,000				
1		1												1	
1		1												1	
1	1		NC	1			NC	1			NC	1			NC
1	1		NC	1			NC	1			NC	1			NC
1	1		NC	1			NC	1			NC	1			NC
1		1												1	
1	1		\$ 30,000	1			\$ 39,500	1			\$ 30,000				
1		1				1				1				1	
1	1		NC	1			NC	1			NC	1			NC

Sustainable Sites

15 Points

Required

- Prereq 1 **Erosion & Sedimentation Control**
- Credit 1 **Site Selection**
- Credit 2 **Urban Redevelopment**
- Credit 3 **Brownfield Redevelopment**
- Credit 4.1 **Alternative Transportation, Public Transportation**
- Credit 4.2 **Alternative Transportation, Bicycle Storage & Ch**
- Credit 4.3 **Alternative Transportation, Alternative Fuel Vehic**
- Credit 4.4 **Alternative Transportation, Parking Capacity and**
- Credit 5.1 **Reduced Site Disturbance, Protect or Restore Op**
- Credit 5.2 **Reduced Site Disturbance, Development Footprin**
- Credit 6.1 **Stormwater Management, Rate and Quantity**
- Credit 6.2 **Stormwater Management, Treatment**
- Credit 7.1 **Landscape & Exterior Design to Reduce Heat Is**
- Credit 7.2 **Landscape & Exterior Design to Reduce Heat Is**
- Credit 8 **Light Pollution Reduction**
- Credit 9 **Tenant Design and Construction Guidelines**

Water Efficiency



Core and Shell Pilot Project Checklist

Building Square Footages

LEED Silver				LEED Gold				LEED Silver (Registered)			
NBP 306				NBP 318				7740 Milestone			
162,000				125,651				154,985			
Yes	?	No	Cost	Yes	?	No	Cost	Yes	?	No	Cost
3		2	\$ 30,500	3		2	\$ 34,000	3		2	\$ 30,500
1			\$ 16,500	1			\$ 16,000	1			\$ 16,500
1		1		1		1		1		1	
1		1		1		1		1		1	
1	1		\$ 7,000	1			\$ 9,000	1			\$ 7,000
1	1		\$ 7,000	1			\$ 9,000	1			\$ 7,000

Water Efficiency

5 Points

Credit 1.1 **Water Efficient Landscaping, Reduce by 50%**

Credit 1.2 **Water Efficient Landscaping, No Potable Use or I**

Credit 2 **Innovative Wastewater Technologies**

Credit 3.1 **Water Use Reduction, 20% Reduction**

Credit 3.2 **Water Use Reduction, 30% Reduction**

Energy & Atmosphere



Core and Shell Pilot Project Checklist

Building Square Footages

				LEED Silver				LEED Gold				LEED Silver (Registered)			
				NBP 306				NBP 318				7740 Milestone			
				162,000				125,651				154,985			
Yes	?	No	Cost	Yes	?	No	Cost	Yes	?	No	Cost	Yes	?	No	Cost
1		6	\$ 57,000	7			\$ 331,000	5	4	7	\$ 108,500				
Required	Y		\$ 40,500	Required	Y		\$ 110,500	Required	Y		\$ 38,500				
Required	Y			Required	Y			Required	Y						
Required	Y			Required	Y			Required	Y						
1 to 10		1		6			\$ 200,000	4	2	4	\$ 50,000				
1		1								1					
1		1												1	
1	1		\$ 16,500	1			\$ 20,500	1			\$ 20,000				
1		1								1					
1		1												1	
1		1								1					

Energy & Atmosphere

16 Points

- Prereq 1 **Fundamental Building Systems Commissioning**
- Prereq 2 **Minimum Energy Performance**
- Prereq 3 **CFC Reduction in HVAC&R Equipment**
- Credit 1 **Optimize Energy Performance**
- Credit 2.1 **Renewable Energy, 1%**
- Credit 2.2 **Renewable Energy, 5%**
- Credit 3 **Additional Commissioning**
- Credit 4 **Ozone Depletion**
- Credit 5 **Measurement & Verification**
- Credit 6 **Green Power**

Materials & Resources



Core and Shell Pilot Project Checklist

Building Square Footages

Materials & Resources

11 Points

- Prereq 1 **Storage & Collection of Recyclables**
- Credit 1.1 **Building Reuse, Maintain 75% of Existing Shell**
- Credit 1.2 **Building Reuse, Maintain 95% of Shell**
- Credit 2.1 **Construction Waste Management, Divert 50%**
- Credit 2.2 **Construction Waste Management, Divert 75%**
- Credit 3 **Resource Reuse, Specify 5%**
- Credit 4.1 **Recycled Content, Specify 5% (post-consumer + 1**
- Credit 4.2 **Recycled Content, Specify 10% (post-consumer +**
- Credit 5.1 **Local/Regional Materials, 20% Manufactured Loc**
- Credit 5.2 **Local/Regional Materials, of 20% Above, 50% Ha**
- Credit 6 **Rapidly Renewable Materials**
- Credit 7 **Certified Wood**

				LEED Silver				LEED Gold				LEED Silver (Registered)											
				NBP 306				NBP 318				7740 Milestone											
				162,000				125,651				154,985											
Yes		?		No		Cost		Yes		?		No		Cost		Yes		?		No		Cost	
7				4		\$ 23,000		6				5		\$ 37,000		6		1		4		\$ 23,000	
Required		Y						Y								Y							
1				1						1				1				1				1	
1				1						1				1				1				1	
1		1				\$ 3,000		1				\$ 25,000		1				\$ 3,000				\$ 3,000	
1		1				\$ 3,000				1						1						\$ 3,000	
1				1						1				1				1				1	
1		1				\$ 500		1				In CR 2.1		1				\$ 500				\$ 500	
1		1				\$ 500		1				In CR 2.1		1				\$ 500				\$ 500	
1		1				\$ 500		1				In CR 2.1		1				\$ 500				\$ 500	
1		1				\$ 500		1				In CR 2.1		1				\$ 500				\$ 500	
1				1						1				1				1				1	
1		1				\$ 15,000		1				\$ 12,000		1				\$ 15,000				\$ 15,000	

Indoor Environmental Quality



Core and Shell Pilot Project Checklist

Building Square Footages

LEED Silver				LEED Gold				LEED Silver (Registered)			
NBP 306				NBP 318				7740 Milestone			
162,000				125,651				154,985			
Yes	?	No	Cost	Yes	?	No	Cost	Yes	?	No	Cost
9		4	\$ 21,000	10		1	\$ 15,000	6	5	2	\$ 21,000

Indoor Environmental Quality

12 Points

- Prereq 1 **Minimum IAQ Performance**
- Prereq 2 **Environmental Tobacco Smoke (ETS) Control**
- Credit 1 **Carbon Dioxide (CO₂) Monitoring**
- Credit 2 **Ventilation Effectiveness**
- Credit 3 **Construction IAQ Management Plan, During Con**
- Credit 4.1 **Low-Emitting Materials, Adhesives & Sealants**
- Credit 4.2 **Low-Emitting Materials, Paints**
- Credit 4.3 **Low-Emitting Materials, Carpet**
- Credit 4.4 **Low-Emitting Materials, Composite Wood & Agrif**
- Credit 5 **Indoor Chemical & Pollutant Source Control**
- Credit 6.1 **Controllability of Systems, Perimeter**
- Credit 6.2 **Controllability of Systems, Non-Perimeter**
- Credit 7.1 **Thermal Comfort, Comply with ASHRAE 55-1992**
- Credit 7.2 **Thermal Comfort, Permanent Monitoring System**
- Credit 8.1 **Daylight & Views, Daylight 75% of Spaces**
- Credit 8.2 **Daylight & Views, Views for 90% of Spaces**

	Required	Y		Y		Y		Y		Y		
	Required	Y		Y		Y		Y		Y		
1	1			\$ 15,000	1			\$ 15,000	1			\$ 15,000
1	1			NC	1			NC	1			NC
1	1			\$ 6,000	1			NC		1		\$ 6,000
1 point for 2	1			NC	1			NC	1			NC
2 points for 3	1			NC	1			NC	1			NC
3 points for 4	1			NC	1			NC	1			NC
1	1			NC	1			NC		1		NC
1	1			NC	1			NC	1			NC
1			1				1				1	
1			1				NC				1	
1	1			NC	1			NC	1			NC
1			1							1		
1			1							1		
1	1			NC	1			NC		1		NC

Innovation & Design Process



Core and Shell Pilot Project Checklist

Building Square Footages

				LEED Silver				LEED Gold				LEED Silver (Registered)			
				NBP 306				NBP 318				7740 Milestone			
				162,000				125,651				154,985			
Yes	?	No	Cost	Yes	?	No	Cost	Yes	?	No	Cost	Yes	?	No	Cost
5			\$ -	5			\$ -	3	2		\$ -				
1	1		NC	1			NC	1			NC	1			NC
1	1		In WE 3.2	1			In WE 3.2	1			In WE 3.2	1			In WE 3.2
1	1		NC	1			NC			1					
1	1		NC	1			NC			1					
1	1		NC	1			NC	1			NC	1			NC

Innovation & Design Process

5 Points

- Credit 1.1 **Innovation in Design: Green Housekeeping Progr**
- Credit 1.2 **Innovation in Design: 40% Water Use Reduction**
- Credit 1.3 **Innovation in Design: 40% Locally Manufactured I**
- Credit 1.4 **Innovation in Design: 15% Recycled Content Mat**
- Credit 2 **LEED™ Accredited Professional**

Summary Cost Data



Core and Shell Pilot Project Checklist

Building Square Footages

		LEED Silver			LEED Gold			LEED Silver (Registered)					
		NBP 306			NBP 318			7740 Milestone					
		162,000			125,651			154,985					
		Yes	?	No	Cost	Yes	?	No	Cost	Yes	?	No	Cost
Project Totals (pre-certification estimates)	65 Points	30		24	\$ 186,500	36		1	\$ 484,338	29	13	22	\$ 238,000
Certified 24-29 points Silver 30-34 points Gold 35-40 points Platinum 41-65 points													
General Contractor Premiums (15%)		\$ 27,975			\$ 72,651			\$ 35,700					
Total Hard Cost Premium		\$ 214,475			\$ 556,989			\$ 273,700					
General Contractor Premiums		\$ -			\$ 127,000			\$ -					
Recordkeeping					\$ 30,000								
Contractor Liability Insurance					\$ 2,000								
Contingency					\$ 30,000								
Fee					\$ 9,000								
Miscellaneous					\$ 8,000								
Total Hard Cost Premium		\$ 214,475			\$ 683,989			\$ 273,700					
Design Premiums													
Architect		\$ 30,000			\$ 4,300			Incl.					
MEP Engineer/Energy Modeling		\$ 15,000			\$ 20,000			\$ 20,000					
LEED Consultant		(In Arch #)			\$ 22,050			\$ 24,520					
Total Soft Cost Premium		\$ 45,000			\$ 46,350			\$ 44,520					
Total LEED Premium		\$ 259,475			\$ 603,339			\$ 318,220					
Total Project Budget		\$ 24,130,863			\$ 20,991,944			\$ 32,432,403					
LEED Premium (as a % of Total)		1.08%			2.87%			0.98%					

Short Term Bottom Line: Pay Back/Value Creation



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		162,000			125,651			154,985					
		Yes	?	No	Cost	Yes	?	No	Cost	Yes	?	No	Cost
Project Totals	(pre-certification estimates) 65 Points	30		24	\$ 186,500	36		1	\$ 484,338	29	13	22	\$ 238,000
	LEED Premium/SF Cost				\$ 1.60				\$ 4.80				\$ 2.05
	Projected Operating Expense Savings				\$ 31,446				\$ 90,005				\$ 139,472
	Energy Savings/SF				\$ 0.19				\$ 0.72				\$ 0.90
	Simple Payback (in years)				8.42				6.67				2.28
	Payback with Capital Charge @ 7% (in years)				13.16				9.29				2.57
	Energy Savings per SF Capped at 7%				\$ 2.77				\$ 10.23				\$ 12.86
	Less Cost /SF				\$ 1.60				\$ 4.80				\$ 2.05
	Net Value Creation/SF				\$ 1.17				\$ 5.43				\$ 10.80