

LEED-CI ANALYSIS

June 2015

125 CHUBB AVENUE LYNDHURST, NJ



To learn more please visit the sustainability section of our website:
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Prepared for Reckson,
A division SL Green Realty Corp. by



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LEED CI 2009 Background

The LEED for Commercial Interiors (LEED-CI) 2009 program provides a set of criteria for certifying tenant and interior projects. Unlike the whole-building approach set forth in the LEED-NC program, LEED-CI places emphasis on green office and retail environments that are healthy and productive spaces for employees and occupants alike. LEED for Commercial Interiors gives the power to make sustainable choices to tenants and designers, who do not always have control over whole building operations. Achieving LEED certification for a commercial interior space distinguishes the tenant as a socially responsible company dedicated to sustainability.

The overall intent of LEED-CI is to assist in the creation of high performance, energy efficient, healthful, durable, affordable, and environmentally sound interior environments that reduce operation and maintenance costs. Similarly, prerequisites and credits under the LEED-CI program are comparable to other LEED programs, focusing on reduced water use, efficient energy and system performance, sustainable and low-volatile organic compound (low-VOC) materials, and enhanced indoor air quality.

The LEED certification system is a point based system comprised of different “green” measures spread over six (6) categories of sustainability:

1. Sustainable Sites (SS)
2. Water Efficiency (WE)
3. Energy & Atmosphere (EA)
4. Materials & Resources (MR)
5. Indoor Environmental Quality (EQ)
6. Innovation in Operations (IO)

A CI space can accrue points by implementing a number of these credits where the higher number of points earned, the higher level of certification is obtained such that:

- **Certified:** 40-49 credits
- **Silver:** 50-59 credits
- **Gold:** 60-79 credits
- **Platinum:** 80-110 credits

While achieving a LEED-CI certified space may in large part be the result of tenant motivated sustainability measures, the selection of the correct base building and the sustainability characteristics of the building itself can greatly aid a project in achieving a LEED-CI certification.

LEED-CI Certification at 125 Chubb Avenue

For a space pursuing LEED-CI certification, characteristics of the base building itself can attribute a multitude of points towards certification. 125 Chubb Avenue provides base building characteristics and has implemented sustainable measures that may contribute up to 25 points towards a tenant space pursuing LEED-CI certification. This potentially provides any space beginning the certification process with more than half of the total 40 points required for basic certification. With additional sustainable design and material considerations, as well as additional tracking during construction and adherence to the Construction Rules and Regulations for the building, it should be very feasible for tenants to build-out their space to achieve a LEED certification.

The following is a detailed description of the credits and characteristics at 125 Chubb Avenue that may contribute to a tenant’s pursuit of LEED-CI certification. 125 Chubb Avenue provides a tenant project with 25 potential points, which is broken out as follows under the LEED credit categories:

Sustainable Sites	17 pts
Materials & Resources	3 pts
Indoor Environmental Quality	4 pts
Innovation in Design	1 pt

TOTAL: 25 pts

SUSTAINABLE SITES (SS)

The selection of a building that addresses sustainability in both its site and development are of fundamental importance in the build-out of a sustainable CI space. This category under the LEED program addresses building landscape, hardscape, and exterior building issues. The following outlines sustainable characteristics as they apply to LEED-CI credits that 125 Chubb Avenue may contribute to a CI build-out within the building:

Path 12. Other Quantifiable Environmental Performance – Green Cleaning – 1pt

125 Chubb Avenue is associated with a cleaning/supply company that offers Green Cleaning. This is a quantifiable action that is beneficial to the environment and would earn 1 LEED point.

SSc2: Development Density and Community Connectivity – 6 pts

To channel development to urban areas with existing infrastructure, protect greenfields and preserve habitat and natural resources, the LEED-CI program encourages tenants to choose a space located within half a mile of at least 10 service locations and 1 densely populated residential area. 125 Chubb Avenue is conveniently located in Lyndhurst, NJ – an area that provides many different basic services and a nearby residential complex. Please see the Appendix for a map documenting the building's Community Connectivity.

SSc3.1: Alternative Transportation – Public Transportation Access – 6 pts

To reduce pollution and land development as a result of automobile use, the LEED-CI program encourages tenants to choose a project space that provides access to alternative transportation modes. 125 Chubb Avenue is in close proximity to a number of buses, which provide tenants an opportunity to commute in a more sustainable manner and reducing carbon emissions and single-occupancy vehicle use.



Image 1: Satellite View of 125 Chubb Location and Surroundings

SSc3.2: Alternative Transportation – Bicycle Storage and Changing Rooms – 2 pts

To reduce pollution and land development as a result of automobile use, the LEED-CI program encourages tenants to choose a space that provides access to modes of alternative transportation. 125 Chubb Avenue is currently equipped with 6 showers/changing rooms but does not currently have a bike rack available to tenants for secure storage, however the building management has not observed any bicycle commuters and no request or complaints from tenants in regards to bicycle storage have been received. The building has a total of 160 occupants. As the amount of storage spaces required for earning this credit’s LEED points exceeds building needs, building management would prefer not to install the storage space. However, should the building management notice a rise in the number of bicycle commuters, that the racks are filling up or tenants are requesting additional racks to be added, building management will promptly install additional bicycle storage inside the building premises, to be used exclusively by building occupants.

SSc3.3: Alternative Transportation - Parking Availability, 2 pts

As part of the SS credits encouraging alternative modes of transportation, a project can gain points by providing preferred parking for carpools and vanpools for 5% of tenant occupants and by not exceeding the minimum number of parking required by local zoning regulations. 125 Chubb Avenue provides a total number of 879 parking spaces, as outlined by management. Zoning regulations in the Village Code of Bergen County (§186-49-A) calls for office buildings to provide 5 spaces for each 1,000 square feet of gross leasable area. The amount allocated by the building qualifies the tenant space for this credit under the LEED-CI program. LEED advocates this practice as a means to lessen the need for paved parking area and to encourage carpooling. Management at 125 Chubb Avenue can work with tenants to reserve preferred parking for carpools and vanpools and encourage employees to consider options other than single-occupancy vehicles.

WATER EFFICIENCY (WE)

WEp1: Water Use Reduction 20%

125 Chubb Avenue has installed plumbing fixtures that exceed the efficiency requirements of the 2006 Uniform Plumbing Code by more than 20%. For a tenant to be able to consider pursuing LEED-CI certification for their space, installing a low-flow 0.5 GPM pantry faucet is a viable, economical option to reach the 20% water use reduction required. Should the tenant decide to replace other base building fixtures, discussion with building management is advised. The installation of low-flow fixtures may allow for additional LEED-CI points to be achieved as well as further reducing water consumption. The table below outlines the current flow-rate of the fixtures installed in the building. Detailed calculations are provided at the end of this report in the Appendix.

	Installed	Recommended
Water Closets (GPF)	1.5	approved
Urinals (GPF)	1.0	approved
Lavatory Faucets (GPM)	0.5	approved
Showerheads (GPM)	1	approved



Image 2: An aerator or new faucet may be used on pantry faucet to reduce current water consumption.

MATERIALS & RESOURCES (MR)

MRc1.1: Tenant Space – Long-Term Commitment - 1 pt

In an effort to conserve resources, reduce waste, and reduce environmental impacts of tenancy as they relate to materials, manufacturing, and transport, the LEED program rewards tenants for signing a long-term lease. By arranging a lease term of a minimum of 10 years, tenants may gain 1 point towards their LEED certification.

MRc2: Construction Waste Management - 1-2 pts

Building Management has in place construction rules and regulations that outline a waste diversion plan and waste diversion rates required during construction. By adhering to the construction waste management plan and utilizing the sample tracking documentation provided by the building, the tenant space may achieve 1 or 2 points for diverting 50% or 75%, respectively, of waste from the landfill.

INDOOR ENVIRONMENTAL QUALITY (IEQ)

IEQp2: Environmental Tobacco Smoke (ETS) Control

The no smoking policy at the building complies with the requirements set forth in the prerequisite of the LEED-CI 2009 program. Smoking is prohibited in the building and 25' from entrances, outdoor air intakes, and operable windows.

IEQc3.1: Construction Indoor Air Quality Management Plan, 1 pt

Building Management has in place a construction rules and regulations outlining the required construction indoor air quality plan to be followed for tenant build-outs. The indoor air quality plan provided is aligned with LEED-CI credit requirements and may allow the project to earn 1 point towards certification.

IEQc4.1: Low-Emitting Materials – Adhesives and Sealants, 1 pt

Building Management has in place construction rules and regulations outlining the required use of low emitting adhesives and sealants. The construction rules and regulations outline VOC limits for each type of adhesive and sealant, all of which comply with LEED-CI credit requirements.

IEQc4.2: Low-Emitting Materials – Paints & Coatings, 1 pt

Building Management has in place construction rules and regulations outlining the required use of low emitting paints and coatings that comply with LEED-CI credit requirements.

IEQc4.4: Low-Emitting Materials – Composite Wood & Agrifiber Products, 1 pt

Building Management has in place construction rules and regulations outlining the required use of composite wood and agrifiber products with no added urea-formaldehyde resins. Adherence to this rule may gain the project 1 point under the LEED-CI program.

INNOVATION IN DESIGN (ID)

IDc2: LEED Accredited Professional, 1 pt

This credit is awarded to projects that have a LEED Accredited Professional as part of the project team. The Reckson team has a number of LEED Accredited Professionals on staff that will allow the project to earn this credit.

APPENDIX

- **Base Building Existing Credits Checklist**
- **SSc2: Community Connectivity Map**
- **WEp1: Water Efficiency Calculations**



LEED 2009 for Commercial Interiors

125 Chubb Avenue

Project Name: CI Base Building Analysis
Project Address: 125 Chubb Avenue
 Lyndhurst, NJ 07071

Yes	?	No			
17	2	2	SUSTAINABLE SITES		21 Points
1	2	2	Credit 1	Site Selection	1 to 5
				<input checked="" type="checkbox"/> Option 1: Select a LEED Certified Building OR <input checked="" type="checkbox"/> Option 2: Locate in a Building That Meets:	5 Up to 5
				<input checked="" type="checkbox"/> Path 1: Brownfield Redevelopment	1
				<input checked="" type="checkbox"/> Path 2: Stormwater Design - Quantity Control	1
				<input checked="" type="checkbox"/> Path 3: Stormwater Design - Quality Control	1
				<input checked="" type="checkbox"/> Path 4: Heat Island Effect - Nonroof	1
				<input checked="" type="checkbox"/> Path 5: Heat-Island Effect - Roof	1
				<input checked="" type="checkbox"/> Path 6: Light Pollution Reduction	1
				<input checked="" type="checkbox"/> Path 7: Water Efficient Landscaping - Reduce by 50%	2
				<input checked="" type="checkbox"/> Path 8: Water Efficient Landscaping - No Potable Water Use or Irrigation	2
				<input checked="" type="checkbox"/> Path 9: Innovative Wastewater Technologies	2
				<input checked="" type="checkbox"/> Path 10: Water Use Reduction: 30% Reduction	1
				<input checked="" type="checkbox"/> Path 11: On-site Renewable Energy	2
				<input checked="" type="checkbox"/> Path 12: Other Quantifiable Environmental Performance - Green Cleaning	1
6			Credit 2	Development Density and Community Connectivity	6
6			Credit 3.1	Alternative Transportation - Public Transportation Access	6
2			Credit 3.2	Alternative Transportation - Bicycle Storage and Changing Rooms	2
2			Credit 3.3	Alternative Transportation - Parking Availability	2

Yes	?	No			
0	0	11	WATER EFFICIENCY		11 Points
Yes			Prereq 1	Water Use Reduction	Required
		11	Credit 1	Water Use Reduction	6 to 11
				<input checked="" type="checkbox"/> 30% Reduction	6
				<input checked="" type="checkbox"/> 35% Reduction	8
				<input checked="" type="checkbox"/> 40% Reduction	11

Yes	?	No			
0	32	5	ENERGY & ATMOSPHERE		37 Points
			Prereq 1	Fundamental Commissioning of Building Energy Systems	Required
			Prereq 2	Minimum Energy Performance	Required
			Prereq 3	Fundamental Refrigerant Management	Required
	5		Credit 1.1	Optimize Energy Performance - Lighting Power	1 to 5
				<input checked="" type="checkbox"/> 15% Reduction	1
				<input checked="" type="checkbox"/> 20% Reduction	2
				<input checked="" type="checkbox"/> 25% Reduction	3
				<input checked="" type="checkbox"/> 30% Reduction	4
				<input checked="" type="checkbox"/> 35% Reduction	5
	3		Credit 1.2	Optimize Energy Performance - Lighting Controls	1 to 3
				<input checked="" type="checkbox"/> Daylight Controls for Daylit Areas	1
				<input checked="" type="checkbox"/> Daylight Controls for 50% of the Lighting Load	1
				<input checked="" type="checkbox"/> Occupancy Sensors for 75% of the Connected Lighting Load	1

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10	Credit 1.3	Optimize Energy Performance - HVAC	5 to 10
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			Equipment Efficiency	5
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			Zoning Controls	5
					OR	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			Reduce Design Energy Cost and 15% Improvement	5
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			Reduce Design Energy Cost and 30% Improvement	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	Credit 1.4	Optimize Energy Performance - Equipment and Appliances	1 to 4
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			70% ENERGY STAR	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			77% ENERGY STAR	2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			84% ENERGY STAR	3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			90% ENERGY STAR	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	Credit 2	Enhanced Commissioning	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	Credit 3	Measurement and Verification	2 to 5
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			Install Sub-Metering Equipment	2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			Tenant Pays for Energy	3
					OR	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			Metering, Measurement and Payment Accountability	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	Credit 4	Green Power	5

Yes	?	No				MATERIALS & RESOURCES	14 Points	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	7	4	Prereq 1	Storage and Collection of Recyclables	Required
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1			Credit 1.1	Tenant Space - Long-Term Commitment	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			2	Credit 1.2	Building Reuse - Maintain Interior Nonstructural Components	1 to 2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/> 40% Reuse	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/> 60% Reuse	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2			Credit 2	Construction Waste Management	1 to 2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/> Divert 50% from Disposal	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/> Divert 75% from Disposal	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			2	Credit 3.1	Materials Reuse	1 to 2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/> 5% Reuse	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/> 10% Reuse	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		1		Credit 3.2	Materials Reuse - Furniture and Furnishings	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		2		Credit 4	Recycled Content	1 to 2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/> 10% of Content	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/> 20% of Content	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		2		Credit 5	Regional Materials	1 to 2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/> 20% of Materials Manufactured	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/> 20% of Materials Manufactured and 10% Extracted	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		1		Credit 6	Rapidly Renewable Materials	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		1		Credit 7	Certified Wood	1

Yes	?	No				INDOOR ENVIRONMENTAL QUALITY	17 Points	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	11	2	Prereq 1	Minimum Indoor Air Quality Performance	Required
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			1	Credit 1	Outdoor Air Delivery Monitoring	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			1	Credit 2	Increased Ventilation	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1			Credit 3.1	Construction Indoor Air Quality Management Plan - During Construction	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		1		Credit 3.2	Construction Indoor Air Quality Management Plan - Before Occupancy	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1			Credit 4.1	Low-Emitting Materials - Adhesives and Sealants	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1			Credit 4.2	Low-Emitting Materials - Paints and Coatings	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		1		Credit 4.3	Low-Emitting Materials - Flooring Systems	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1			Credit 4.4	Low-Emitting Materials - Composite Wood and Agrifiber Products	1

1	1		Credit 4.5	Low-Emitting Materials - Systems Furniture and Seating	1
1	1		Credit 5	Indoor Chemical and Pollutant Source Control	1
1	1		Credit 6.1	Controllability of Systems - Lighting	1
1	1		Credit 6.2	Controllability of Systems - Thermal Comfort	1
1	1		Credit 7.1	Thermal Comfort - Design	1
1	1		Credit 7.2	Thermal Comfort - Verification	1
2	2		Credit 8.1	Daylight and Views - Daylight	1 to 2

x	75% of Spaces	1
x	90% of Spaces	2

1	1		Credit 8.2	Daylight and Views - Views for Seated Spaces	1
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Yes	?	No	1	5	0	INNOVATION IN DESIGN	6 Points
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1	5		Credit 1	Innovation in Design	1 to 5
x	Innovation or Exemplary Performance	1			
x	Innovation or Exemplary Performance	1			
x	Innovation or Exemplary Performance	1			
x	Green Education	1			
x	Innovation	1			

1			Credit 2	LEED® Accredited Professional	1
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Yes	?	No	0	4	0	REGIONAL PRIORITY	4 Points
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Zip Code 07071 IEQc6.1/IEQc7.1/MRc3.1(10%)/SSc1-Option2-Path1/Sc1-Option2-Path2/WEc1(40%)

4			Credit 1	Regional Priority	1 to 4
x	IEQc6.1	1			
x	IEQc7.1	1			
x	MRc3.1	1			
x	SSc2	1			

Yes	?	No	25	61	24			110
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Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points



Figure 1 - An illustration of 10 basic services and a residential area within half a mile of the project location.

Residential Area with 10 units per acre – Avalon Lyndhurst

1. Bank – Citibank – 700 Edwin L Ward Sr. Memorial, Rutherford, NJ
2. School – Bergen Community College, Lyndhurst, NJ
3. Fitness – Classic Athletic Club, Lyndhurst, NJ
4. Restaurant # 1 – Whiskey Café, Lyndhurst, NJ
5. Supermarket – Grand Super Center, Lyndhurst, NJ
6. Hardware – Restoration Hardware, Lyndhurst, NJ
7. Grocery - HMart, Lyndhurst, NJ
8. Medical Office – Juliane C. Gardner, OTR, Lyndhurst, NJ
9. Beauty Salon and Services – L’Occitane, Lyndhurst, NJ
10. Restaurant # 2 – Skyline Gourmet, Lyndhurst, NJ



WEp1: Water Use Reduction
125 Chubb
Existing Conditions

Annual days of Operation	FTE	Retail Customers	Average Transients (Student/Visitor)	Residents	Total	Male	Female
260	160	0	0	0	160	80	80

Fixture ID	Total daily	Baseline	Installed	Baseline	Performance Case
Water Closet (female)	240	1.6	1.5	99.84	93.6
Water Closet (male)	80	1.6	1.5	33.28	31.2
Urinal	160	1	1	41.6	41.6

Total calculated Flow fixture water use annual volume, baseline case (kGal)	174.72
Total calculated Flow fixture water use annual volume, performance case (kGal)	166.4
Percent reduction of water in flow fixtures	4.76%

Fixture ID	Total daily	Base line	Duration (sec)	Installed	Baseline	Performance Case
Shower head	16	2.5	300	1	52	20.8
Lavatory	480	0.5	15	0.5	15.6	15.6
Pantry Faucet	160	2.2	15	0.5	22.88	5.2

Total calculated Flow fixture water use annual volume, baseline case (kGal)	90.48
Total calculated Flow fixture water use annual volume, performance case (kGal)	41.6
Percent reduction of water in flow fixtures	54.02%

Flush & Flow Fixtures Summary Statistics

Total calculated fixture water use annual volume, baseline case (kGal)	265.2
Total calculated fixture water use annual volume, performance case (kGal)	208
Percent reduction of water use in all fixtures (%)	21.57%



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