



LEED

LEED-ND Pilot Project Checklist

Wisconsin Avenue Giant
Washington, DC

Key:

- Yes - Project either currently complies or can easily comply with minimal cost.
- Likely - Project can easily comply with minimal cost, but verification or minimal changes to current design are needed.
- Less Likely - Compliance will have significant impact of cost, design, and/or schedule.
- No - Either not applicable or cost prohibitive.

Available Points					
	Yes	Likely	Less Likely	No	
30	21	0	1	8	Smart Location and Linkage
30	Y				Prereq 1 Smart Location Status/Next Steps: Project is located on an infill site and will comply with Option 1.
	Y				Prereq 2 Proximity to Water and Wastewater Infrastructure Status/Next Steps: Existing infrastructure will likely be updated, which complies with the intent of Option 1.
	Y				Prereq 3 Imperiled Species and Ecological Communities Status/Next Steps: Confirm with NHP that no imperiled species or ecological communities exist onsite. It is highly unlikely that there are imperiled species or habitat on this site.
	Y				Prereq 4 Wetland and Water Body Conservation Status/Next Steps: There are no wetlands or water bodies onsite.
	Y				Prereq 5 Agricultural Land Conservation Status/Next Steps: Compliance will be met through SSLp1.
	Y				Prereq 6 Floodplain Avoidance Status/Next Steps: Site likely lies in Zone X and will comply with Option 1.
2	2	0	0	0	Credit 1 Brownfields Redevelopment Status/Next Steps: Site is likely contaminated due to dry-cleaning business on site and possible due to asbestos containing materials located in the buildings onsite.. Once the Phase II is completed this credit can be documented.
1	0	0	0	1	Credit 2 High Priority Brownfields Redevelopment This neighborhood does not meet the required criteria.
10	7	0	0	3	Credit 3 Preferred Locations Status/Next Steps: Status as a previously developed infill site will earn 6 credits, a centerline mile calculation will need to be performed (1 mile radius from perimeter of site) to determine remaining points available. (Parks, recreational facilities, public campuses, and areas preserved from development because of public regulations or rating system requirements are exempt.) Further work needed to clarify credit compliance..
8	6	0	0	2	Credit 4 Reduced Automobile Dependence Status/Next Steps: Total points earned will depend on number of rides available per weekday via public transportation. Calculate number of daily stops at stations within 1/4 mile walking distance. (~250?) An additional point can be earned for instituting a car sharing program onsite (such as Zip Car or Flex Car). One car is required for every 100 dwelling units or every 100 employees. Calculate FTE and determine if more credits are feasible. Three Zipcars will be located onsite, if there are less than 250 employees onsite three Zipcars will be sufficient to meet this credit.
1	0	0	1	0	Credit 5 Bicycle Network Status/Next Steps: The site does is approximately one block from an existing bike path. It is unclear if there is a separate bike lane, this will need to be determined.
3	3	0	0	0	Credit 6 Housing and Jobs Proximity Status/Next Steps: Determine number of existing jobs in 1/2 mile radius. There are numerous offices and schools that are located within 1/2 mile. An innovation point can likely be obtained by exceeding the requirement.
1	1	0	0	0	Credit 7 School Proximity Status/Next Steps: There are a number of schools within 1/2 mile of the site.

1	1	0	0	0	Credit 8	Steep Slope Protection The steep slopes will be mitigated through use of retaining walls and by building location to prevent erosive conditions.
1	1	0	0	0	Credit 9	Site Design for Habitat or Wetland Conservation Status/Next Steps: Option 2 requirements can be met if the site is planted with native and non-invasive species.
1	0	0	0	1	Credit 10	Restoration of Habitat or Wetlands There are no wetlands or habitats on site.
1	0	0	0	1	Credit 11	Conservation Management of Habitat or Wetlands There are no wetlands or habitats on site.

					Yes Likely Less Likely No 39 25 0 2 12 Neighborhood Pattern and Design	
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	Y				Prereq 1	Open Community Status/Next Steps: All streets and sidewalks must be designated as public-no gated areas are permitted.
	Y				Prereq 2	Compact Development Status/Next Steps: All residential components must be built at an average of 7+ units per acre. Non-residential buildings must have an average density of 0.50 FAR per acre.
7	4	0	0	3	Credit 1	Compact Development Status/Next Steps: Preliminary density calculations based off of density numbers received 10-3-08.
4	4	0	0	0	Credit 2	Diversity of Uses Status/Next Steps: 10 uses can likely be found onsite and with 1/2 mile resulting in 4 points.
3	2	0	0	1	Credit 3	Diversity of Housing Types Status/Next Steps: Breakdown of housing types and Simpson Diversity Index score was determined based on LEED-ND reference guide.
2	0	0	0	2	Credit 4	Affordable Rental Housing Status/Next Steps: 15% of units need to be below 50% of area median income OR 30% of units need to be below 80% of area median income (or both for 2 points). These affordable levels will be maintained for a minimum of 15 years. Exact breakdown of rental housing costs is required to determine compliance.
2	0	0	1	1	Credit 5	Affordable For-Sale Housing Status/Next Steps: 10% of units at 80% of median area income pricing OR 20% of units at 120% of median area income pricing (or both for 2 points). Exact breakdown of for-sale housing costs is required. 1 point potential between credit 4 and credit 5, details of rental/sale is currently unknown.
2	2	0	0	0	Credit 6	Reduced Parking Footprint Status/Next Steps: Current parking plan will likely meet criteria, if bicycle parking equals 10% of car parking available. On grade multi story garages covered by light colored materials, one story garages which are over or under habitable space, and on-street parking spaces are exempt. Current parking plan includes 0 surface parking lots, bicycle racks must be incorporated.
8	7	0	0	1	Credit 7	Walkable Streets Status/Next Steps: Site does not comply with street width/building height ratio due to height restrictions. Look into CIRs to possibly achieve points for this credit. Other requirements to achieve initial 4 points are met, and potential to earn 4 additional points if height issue can be resolved. Upon further review it is likely that the site will comply with the building height to street width ratio. The distance across a street from building facade to building facade cannot be more than three times the average heights of the buildings facing the street. Further work needed to clarify credit compliance.
2	1	0	0	1	Credit 8	Street Network Status/Next Steps: Street grid density of the site will need to be determined. If greater than 30 two points can be earned, if less than 20, no points will be earned. Rough calculations show 2 points unlikely. (Street grid density= ~11 within the project site which achieves no points.) Calculations must be done to determine the street grid density within 1/4 mile radius from center of project site. (parks, waterbodies etc. are exempt from the site area)
1	1	0	0	0	Credit 9	Transit Facilities Status/Next Steps: Partially enclosed shelters and ride boards will need to be utilized. If any bus stops will be located onsite they must be covered, well lit and provide benches and transit information.

2	1	0	0	1	Credit 10	Transportation Demand Management Status/Next Steps: Subsidized transit passes, a shuttle program or a transportation demand management program (TDM) will earn 1 point each, up to 2 points total. Look into creating either of these. The TDM will need to show a reduction of weekday peak period trips by at least 20% compared to the forecasted trip generation for the project without the TDM strategies; and that it will be funded for a minimum of two years following buildout of the project
1	1	0	0	0	Credit 11	Access to Surrounding Vicinity Status/Next Steps: There is a through-street at least every 800 feet at the project's boundaries.
1	0	0	0	1	Credit 12	Access to Public Spaces Glover parkway is greater than the maximum 1/6 mile walking distance.
1	1	0	0	0	Credit 13	Access to Active Spaces Status/Next Steps: There are active spaces located at the schools nearby, within 1/2 mile of 90% of project entrances.
1	0	0	1	0	Credit 14	Universal Accessibility Status/Next Steps: Comply with FHAA and Rehabilitation Act for 20% of each housing type. For common use areas comply with FHAA, Rehabilitation Act and ADA requirements.
1	1	0	0	0	Credit 15	Community Outreach and Involvement Status/Next Steps: Confirm the extent of community involvement in the planning process.
1	0	0	0	1	Credit 16	Local Food Production There are no existing farmers markets within 1/4 mile of site.

31	6	1	10	14	Green Construction & Technology	
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	Y				Prereq 1	Construction Activity Pollution Prevention Status/Next Steps: Project size likely requires compliance by law.
3	0	0	1	2	Credit 1	Certified Green Buildings Status/Next Steps: Compliance is determined by percentage of square footage that is LEED certified. A minimum of 20% of buildings will need to be LEED certified to earn one point. Consider LEED for Homes certification for condos. Further work needed to clarify credit compliance.
3	0	0	1	2	Credit 2	Energy Efficiency in Buildings Status/Next Steps: 90% of buildings need to be in compliance. Determine energy efficiency of buildings. Energy Star, or 10% above ASHRAE.
3	1	0	2	0	Credit 3	Reduced Water Use Status/Next Steps: Reduce indoor water use in 90% of buildings by 20% (1 point) or 30% (2 points) of the Energy Policy Act of 1992 baseline. Use non-potable water for irrigation, or install landscaping that does not require permanent irrigation (1 point). Indoor use reduction can be achieved by low flow and low flush fixtures. Irrigation with captures rainwater will be used in limited areas. Further work needed to clarify credit compliance.
2	0	0	0	2	Credit 4	Building Reuse and Adaptive Reuse There will be no buildings reused on site.
1	0	0	0	1	Credit 5	Reuse of Historic Buildings There are no historic buildings on site.
1	1	0	0	0	Credit 6	Minimize Site Disturbance through Site Design Status/Next Steps: Site is 100% previously developed.
1	1	0	0	0	Credit 7	Minimize Site Disturbance during Construction Status/Next Steps: Site is 100% previously developed.
1	0	0	0	1	Credit 8	Contaminant Reduction in Brownfields Remediation Status/Next Steps: Determine if the site is contaminated, consider remediation methods that treat, reduce or eliminate the volume or toxicity of contaminated material found on site. It is unlikely that 100% of any contaminated soil will be remediated onsite, therefore compliance not likely be met.
5	0	0	5	0	Credit 9	Storm water Management Status/Next Steps: Determine extent of storm water management plan. Infiltration and reuse are recommended. Further work needed to determine feasibility of this credit.

1	1	0	0	0	Credit 10	Heat Island Reduction Status/Next Steps: Option 1-Site plan will need to be examined to determine if 50% of the impervious area can be shaded, paved with materials with an SRI of 29+ or paved with an open grid pavement. OR Place a minimum of 50% of parking undercover of a material with an SRI of 29+ Option 2-75% of the roof area of the project must have an SRI of 29+ for a low-sloped roof and 78+ for a steep roof. 50% of parking will be located below the supermarket. Supermarket roof will have an SRI of 29+.
1	0	0	0	1	Credit 11	Solar Orientation The current building orientation will not comply.
1	0	0	0	1	Credit 12	On-Site Energy Generation Likely cost-prohibitive for this project.
1	0	0	0	1	Credit 13	On-Site Renewable Energy Sources Likely cost-prohibitive for this project.
1	0	0	0	1	Credit 14	District Heating and Cooling Central plant is not practical due to project size.
1	0	0	1	0	Credit 15	Infrastructure Energy Efficiency Status/Next Steps: All infrastructure systems should achieve a 15% reduction from the baseline. May be cost prohibitive
1	0	0	0	1	Credit 16	Wastewater Management Likely cost-prohibitive for this project.
1	0	0	0	1	Credit 17	Recycled Content in Infrastructure Status/Next Steps: All roads, sidewalks and curbs need to contain a specified amount of recycled content. Unlikely due to strict requirements.
1	1	0	0	0	Credit 18	Construction Waste Management Status/Next Steps: Minimum of 50% of construction waste should be recycled. This credit should not be difficult to achieve, most waste handlers are already meeting the 50% requirement. Documentation of waste will need to be kept throughout construction.
1	1	0	0	0	Credit 19	Comprehensive Waste Management Status/Next Steps: Include recycling and hazardous waste drop off areas for all project occupants.
1	0	1	0	0	Credit 20	Light Pollution Reduction Status/Next Steps: Determine lighting zone for site. Do not exceed lighting power densities for required areas as defined in ASHRAE 90.1-2004.

6	3	2	0	1	Innovation & Design Process	
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1	1	0	0	0	Credit 1.1	Innovation in Design: Education
1	1	0	0	0	Credit 1.2	Innovation in Design: Green Cleaning
1	0	1	0	0	Credit 1.3	Innovation in Design: Housing and Jobs Proximity.
1	0	1	0	0	Credit 1.4	Innovation in Design: Reduced Parking Footprint
1	0	0	0	1	Credit 1.5	Innovation in Design: Additional innovation credits to be determined.
1	1	0	0	0	Credit 2	LEED® Accredited Professional: Several SWA staff members are LEED AP.

106	55	3	13	35	Project Totals (pre-certification estimates)	
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Silver Level Targeted

Certified 40-49 points Silver 50-59 points Gold 60-79 points Platinum 80-106 points



for Homes

LEED for Homes Mid-rise Pilot Project Checklist

Builder Name:	
Project Team Leader:	Lucy Wildrick, Street Works
Home Address (Street/City/State):	Wisconsin Ave & Newark St, NW, Washington, DC

Project Description

Building Type: **Mid-rise MF**
 # of Bedrooms: **0**

Project type: **Production**
 Floor Area: **0**

Adjusted Certification Thresholds

Certified: **39.0** Gold: **69.0**
 Silver: **54.0** Platinum: **84.0**

Project Point Total	Final Credit Category Point Totals
Prelim: 60 + 24 maybe pts Final: 11.5	ID: 0 SS: 3 EA: 5 EC: 0
Certification Level	LL: 0 WE: 2 MR: 1.5 AL: 0
Prelim: Not Certified Final: Not Certified	<i>Min. Point Thresholds Not Met for Prelim. OR Final Rating</i>

date last updated : **6-Oct-08**
 last updated by : **Ed Acker**

Max Pts. Available	Preliminary Rating			Notes
	Y / Pts	Maybe	No	
Max: 11	Y:5	M:1		

Innovation & Design Process (ID) (Minimum 0 ID Points Required) **Max: 11** **Y:5** **M:1**

1. Integrated Project Planning

1.1 Preliminary Rating	Prereq.	Y			Green Rater
Target performance tier:					<input type="text" value="Silver"/>
1.2 Energy Expertise for MID-RISE	Prereq.	Y			Green Rater and MEP engineers
1.3 Professional Credentialed with Respect to LEED for Homes	1	0	0		unavailable until further notice
1.4 Design Charrette	1	1	0		likely
1.5 Building Orientation for Solar Design (<i>meet all of the following</i>)	1	0	0	N	not likely
<input type="checkbox"/> a) Glazing area on north/south walls 50% greater than on east/west walls					<input type="checkbox"/> c) At least 450 sq. ft. of south-facing roof area, oriented for solar applications
<input type="checkbox"/> b) East-west axis is within 15 degrees of due east-west					<input type="checkbox"/> d) 90% of south-facing glazing is shaded in summer, unshaded in winter
1.6 Trades Training for MID-RISE	1	0	1		recommended

2. Quality Management for Durability

2.1 Durability Planning (<i>meet all of the following</i>)	Prereq.	Y			
<input checked="" type="checkbox"/> a) Durability evaluation completed					<input checked="" type="checkbox"/> d) Durability strategies incorporated into project documentation
<input checked="" type="checkbox"/> b) Strategies developed to address durability issues					<input checked="" type="checkbox"/> e) Durability measures listed in durability inspection checklist
<input checked="" type="checkbox"/> c) Moisture control measures from Table 1 incorporated					
2.2 Durability Management (<i>meet one of the following</i>)	Prereq.	Y			
<input type="checkbox"/> Builder has a quality management process in place					<input checked="" type="checkbox"/> Builder conducted inspection using durability inspection checklist
2.3 Third-Party Durability Management Verification	3	3	0		likely to achieve by Rater

3. Innovative or Regional Design						
3.1	Innovation 1 (ruling #):	Density	1	1	0	131 units per acre
3.2	Innovation 2 (ruling #):		1	0	0	possible
3.3	Innovation 3 (ruling #):		1	0	0	
3.4	Innovation 4 (ruling #):		1	0	0	
Location & Linkages (LL) (Minimum 0 LL Points Required)			Max: 10 Y:10 M:10			
1. LEED for Neighborhood Development						
1	LEED for Neighborhood Development		10	10	10	LEED ND possible, disregard LL 2-6
2. Site Selection						
2	Site Selection (meet all of the following)		2	0	0	tb verified
	<input type="checkbox"/>	a) Built above 100-year floodplain defined by FEMA		<input type="checkbox"/>	d) Not built on land that was public parkland prior to acquisition	
	<input checked="" type="checkbox"/>	b) Not built on habitat for threatened or endangered species		<input type="checkbox"/>	e) Not built on land with prime soils, unique soils, or soils of state significance	
	<input type="checkbox"/>	c) Not built within 100 ft of water, including wetlands				
3. Preferred Locations						
3.1	Edge Development		1	0	0	
OR	3.2	Infill	2	0	0	
AND/OR	3.3	Brownfield Redevelopment for MID-RISE	1	0	0	
4. Infrastructure						
4	Existing Infrastructure		1	0	0	
5. Community Resources / Transit						
5.1	Basic Comm. Resources for MID-RISE (meet one of the following)		1	0	0	
	<input type="checkbox"/>	a) Within 1/4 mile of 4 basic community resources		<input type="checkbox"/>	b) Within 1/2 mile of 7 basic community resources	
OR	5.2	Extensive Comm. Resources for MID-RISE (meet one of the following)	2	0	0	
	<input type="checkbox"/>	a) Within 1/4 mile of 7 basic community resources		<input type="checkbox"/>	b) Within 1/2 mile of 11 basic community resources	
OR	5.3	Outstanding Comm. Resources for MID-RISE (meet one of the following)	3	0	0	
	<input type="checkbox"/>	a) Within 1/4 mile of 11 basic community resources		<input type="checkbox"/>	b) Within 1/2 mile of 14 basic community resource	
6. Access to Open Space						
6	Access to Open Space		1	0	0	
Sustainable Sites (SS) (Minimum 5 SS Points Required)			Max: 22 Y:18 M:2			
1. Site Stewardship						
1.1	Erosion Controls During Construction (meet all of the following)		Prereq.	Y		
	<input type="checkbox"/>	a) Stockpile and protect disturbed topsoil from erosion.		<input type="checkbox"/>	d) Provide swales to divert surface water from hillsides	
	<input type="checkbox"/>	b) Control the path and velocity of runoff with silt fencing or equivalent.		<input type="checkbox"/>	e) Use tiers, erosion blankets, compost blankets, etc. on sloped areas.	
	<input type="checkbox"/>	c) Protect sewer inlets, streams, and lakes with straw bales, silt fencing, etc.				
1.2	Minimize Disturbed Area for MID-RISE (meet appropriate requirements)		1	1	0	131 d.u. per acre

Where the site is not previously developed, meet all the following:

- a) Develop tree / plant preservation plan with "no-disturbance" zones
- b) Leave 40% of buildable lot area, not including area under roof, undisturbed

OR Where the site is previously developed, meet all the following:

- c) Develop tree / plant preservation plan with "no-disturbance" zones AND
- Rehabilitate lot; undo soil compaction and remove invasive plants AND
- Meet the requirements of SS 2.2

OR d) FOR MIDRISE BUILDINGS: Build on a lot of 40 units per acre.

2. Landscaping

	Prereq.	Y	
2.1 No Invasive Plants			
2.2 Basic Landscaping Design (<i>meet all of the following</i>)	1	1	0 likely
<input checked="" type="checkbox"/> a) Any turf must be drought-tolerant. <input checked="" type="checkbox"/> b) Do not use turf in densely shaded areas. <input checked="" type="checkbox"/> c) Do not use turf in areas with slope of 25%			<input checked="" type="checkbox"/> d) Add mulch or soil amendments as appropriate. <input checked="" type="checkbox"/> e) All compacted soil must be filled to at least 6 inches.
2.3 Limit Conventional Turf for MID-RISE	2	0	0 assumes 50%, 21-40% needed for (1)
<input type="text" value="50%"/> Percentage of designed landscape softscape area that is turf			
AND/OR 2.4 Drought-Tolerant Plants for MID-RISE	1	0	0 assumes 50%, 90% needed for credit
<input type="text" value="50%"/> Percentage of installed plants that are drought-tolerant			<input type="checkbox"/> Both points in SS 2.3 are met (≤20% turf)
OR 2.5 Reduce Overall Irrigation Demand by at Least 20% for MID-RISE	3	0	2 alternate to SS 2.3&2.4, likely can att
<input type="text" value="20%"/> Percentage reduction in estimated irrigation water demand			<input checked="" type="checkbox"/> Landscape designed by certified or licensed professional

3. Reduce Local Heat Island Effects

3.1 Reduce Site Heat Island Effects for MID-RISE (meet one)	1	1	0 likely, incl covered parking
<input checked="" type="checkbox"/> a) Locate trees / plantings to provide shade for 50% of hardscapes <input type="checkbox"/> b) Install light-colored, high-albedo materials for 50% of hardscapes			
3.2 Reduce Roof Heat Island Effects for MID-RISE (meet one)	1	1	0 likely
<input type="checkbox"/> a) Install roof with high albedo materials (see Table in Mid-rise Guidance) <input type="checkbox"/> b) Install a vegetated roof for at least 50% of roof area			<input checked="" type="checkbox"/> c) Install combination of high albedo and vegetated roof

4. Surface Water Management

4.1 Permeable Lot for MID-RISE	2	2	0
<input type="text" value="50%"/> vegetative landscape			
<input type="text" value="0%"/> permeable paving			
<input type="text" value="100%"/> impermeable surfaces directed to on-site infiltration features			
<input type="text" value="-50%"/> other impermeable surfaces			
4.2 Permanent Erosion Controls (<i>meet one of the following</i>)	1	1	0 likely, good practice if applicable
<input checked="" type="checkbox"/> a) For portions of lot on steep slope, use terracing and retaining walls			<input checked="" type="checkbox"/> b) Plant trees, shrubs, or groundcover
4.3 Stormwater Quality Control for MID-RISE	2	2	0 likely, good points for DC

5. Nontoxic Pest Control

5 Pest Control Alternatives (meet any of the following, 1/2 pt each) 2 2 0 all likely, good practice

- a) Keep all wood at least 12" above soil
- b) Seal external cracks, joints, etc. with caulking and install pest-proof screens
- c) Include no wood-to-concrete connections, or separate connections with dividers
- d) Install landscaping so mature plants are 24" from home

e) In 'moderate' to 'very heavy' termite risk areas:

- i) Treat all cellulosic material with borate product to 3' above foundation
- ii) Install sand or diatomaceous earth barrier
- iii) Install steel mesh barrier termite control system
- iv) Install non-toxic termite bait system
- v) Use noncellulosic wall structure
- vi) Use solid concrete foundation walls or pest-proof masonry wall design

6. Compact Development

6.1 Moderate Density for MID-RISE 2 0 0

OR 6.2 High Density for MID-RISE 3 0 0

OR 6.3 Very High Density for MID-RISE 4 4 0 131 d.u. per acre

7. Alternative Transportation

7.1 Public Transit for MID-RISE (meet one of the following) 2 2 0 likely, served by several bus lines

- a) Within 1/2 mile of transit services providing 30 rides per weekday

- a) Within 1/2 mile of transit services providing 60 rides per weekday

7.2 Bicycle Storage for MID-RISE 1 1 0 likely - for housing tenants use

7.3 Parking Capacity/Low-Emitting Vehicles for MID-RISE (meet one) 1 0 0

- a) Provide low-emitting, fuel-efficient vehicles for 3% of the total parking capacity
- b) 5% of total capacity is preferred parking spots for low-emitting vehicles
- c) Alternative-fuel refueling stations for 3% of total vehicle capacity

- d) Size parking to not exceed min zoning req'ts, AND
- d) Provide infrastructure to facilitate shared vehicle usage
- e) Provide no new parking

Water Efficiency (WE) (Minimum 3 WE Points Required)

Max: 15 Y:10.5 M:3

1. Water Reuse

1 Water Reuse for MID-RISE 5 2 2 tb confirmed by design info

of total water demand offset by water reuse strategies

- Rainwater harvesting
- Graywater reuse
- Municipal recycled water

2. Irrigation System

2.1 High-Efficiency Irrigation System for MID-RISE (meet any, 0.5 pt each) 2 1.5 0 likely

- a) Irrigation system designed by EPA Water Sense certified professional
- b) Irrigation system with head-to-head coverage
- c) Install central shut-off valve
- d) Install submeter for the irrigation system
- e) Use drip irrigation for 50% of planting beds
- f) Create separate zones for each type of bedding

- g) Install timer or controller for each watering zone
- h) Install pressure-regulating devices
- i) High-efficiency nozzles with distribution uniformity of at least 0.70.
- j) Check valves in heads
- k) Install moisture sensor or rain delay controller
- l) Third-party inspection of irrigation system

OR 2.2 Reduce Overall Irrigation Demand by at Least 45% for MID-RISE 2 0 0 need design info

- Full points earned in SS 2.4

20% Percentage reduction in estimated irrigation water demand (see SS 2.4)

3. Indoor Water Use

3.1 High-Efficiency Fixtures and Fittings (meet any of the following, 1 pt each)	3	2	0	likely, 1.3 gpf or dual-flush toilets
<input checked="" type="checkbox"/> a) Average flow rate of lavatory faucets is \leq 2 gpm				
<input checked="" type="checkbox"/> b) Average flow rate for all showers is \leq 2.0 gpm per stall				
<input type="checkbox"/> c) Average flow rate for all toilets is \leq 1.3 gpf; OR				
<input checked="" type="checkbox"/> Toilets are dual-flush; OR				
<input type="checkbox"/> Toilets meet the EPA Water Sense specification				
3.2 Very High-Efficiency Fixtures and Fittings (meet any, 2 pts each)	6	4	0	likely to achieve
<input checked="" type="checkbox"/> a) Average flow rate of lavatory faucets is \leq 1.5 gpm; OR				
<input type="checkbox"/> Lavatory faucets meet the EPA Water Sense specification				
<input checked="" type="checkbox"/> b) Average flow rate for all showers \leq 1.75 gpm per stall				
<input type="checkbox"/> c) Average flow rate for all toilets is \leq 1.1 gpf				
3.3 Water Efficient Appliances for MID-RISE (meet any of following, 1 pt each)	2	1	1	WE clothes washer possible
<input type="checkbox"/> a) Water-efficient clothes washers with MEF \geq 2.0 and WF $<$ 5.5				
<input checked="" type="checkbox"/> b) ENERGY STAR dishwasher(s) that use \leq 6.0 gallons per cycle				

Energy & Atmosphere (EA) (Minimum 0 EA Points Required)

Max: 38 Y:6 M:1

1. Optimize Energy Performance in Mid-rise Buildings

1.1 Minimum Energy Performance for MID-RISE	Prereq.	Y		
<input type="checkbox"/> Met mandatory prov. of ASHRAE Std. 90.1-2004, Sec. 5.4, 6.4, 7.4, 8.4, 9.4, 10.4				
<input checked="" type="checkbox"/> Exceed performance of ASHRAE Std. 90.1-2004 by 14% using Appendix G				
1.2 Reduced Envelope Leakage for MID-RISE	Prereq.	Y		tb verified
<input checked="" type="checkbox"/> Include list of elements to be sealed in construction documents				
<input checked="" type="checkbox"/> Include Air Barrier sheet in bid documents				
<input checked="" type="checkbox"/> Include a compartmentalization sheet in bid documents				
1.3 Optimize Energy Performance for MID-RISE	34	5	0	likely to get 15.5% > ASHRAE 90.1
15.5% % energy savings compared with ASHRAE 90.1				

7. Water Heating

7.1 Efficient Hot Water Distribution System (meet one of the following)	2	0	0	N	difficult to achieve
<input type="checkbox"/> a) Structured plumbing system					
<input type="checkbox"/> b) Central manifold distribution system					
<input type="checkbox"/> c) Compact design of conventional system					
7.2 Pipe Insulation	1	0	1		possible, R-4 insulation min.

11. Residential Refrigerant Management

11.1 Refrigerant Charge Test	Prereq.	Y			by HVAC contractor
11.2 Appropriate HVAC Refrigerants (meet one of the following)	1	1	0		R-410A or Puron likely
<input type="checkbox"/> a) Use no refrigerants					
<input checked="" type="checkbox"/> b) Use non-HCFC refrigerants					
<input type="checkbox"/> c) Use refrigerants that complies with global warming potential equation					

Materials & Resources (MR) (Minimum 2 MR Points Required)

Max: 16 Y:3.5 M:1

1. Material-Efficient Framing

1.1 Framing Order Waste Factor	Prereq.	Y			If not wood framed construction
1.2 Detailed Framing Documents	1	0	0		

	1.3 Detailed Cut List and Lumber Order	1	0	0	not applicable
	<input type="checkbox"/> Requirements of MR 1.2 have been met				<input type="checkbox"/> Detailed cut list and lumber order corresponding to framing plans or scopes
AND/OR	1.4 Framing Efficiencies (meet any of the following, see Rating System for pts)	3	0	0	not applicable
	<input type="checkbox"/> Precut framing packages				<input type="checkbox"/> Stud spacing greater than 16" on center
	<input type="checkbox"/> Open-web floor trusses				<input type="checkbox"/> Ceiling joist spacing greater than 16" on center
	<input type="checkbox"/> Structural insulated panel walls				<input type="checkbox"/> Floor joist spacing greater than 16" on center
	<input type="checkbox"/> Structural insulated panel roof				<input type="checkbox"/> Roof rafter spacing greater than 16" on center
	<input type="checkbox"/> Structural insulated panel floors				<input type="checkbox"/> Two of the following: Size headers for loads; ladder blocking; drywall clips; 2-
OR	1.5 Off-site Fabrication (meet one of the following)	4	0	0	pre-cast concrete plank floor decks
	<input checked="" type="checkbox"/> a) Panelized construction				<input type="checkbox"/> b) Modular, prefabricated construction

2. Environmentally Preferable Products

2.1 FSC Certified Tropical Wood (meet both of the following)	Prereq.	Y	notify all suppliers of any wood, not j	
<input checked="" type="checkbox"/> a) Provide wood suppliers with a notice of preference for FSC-certified products			<input type="checkbox"/> b) Only use tropical wood that is FSC-certified	
2.2 Environmentally Preferable Products (meet any, 1/2 pt each)	8	2	1	more may be likely

Assembly : component	(a) EPP	(b) Low emission	(c) Local production
Exterior wall: framing	<input type="checkbox"/> type: _____		<input type="checkbox"/>
Exterior wall: siding or masonry	<input type="checkbox"/> type: brick		<input checked="" type="checkbox"/>
Floor: flooring	<input type="checkbox"/> (45%) type: _____	<input type="checkbox"/> 90% hard flooring	<input type="checkbox"/> (45%)
Floor: flooring	<input type="checkbox"/> (90%) type: _____	<input type="checkbox"/> SCS FloorScore	<input type="checkbox"/> (90%)
Floor: carpet	<input type="checkbox"/> type: _____	<input checked="" type="checkbox"/> Green Label Plus	<input type="checkbox"/>
Floor: framing	<input type="checkbox"/> type: _____	<input type="checkbox"/>	<input type="checkbox"/>
Foundation: aggregate			<input checked="" type="checkbox"/>
Foundation: cement	<input type="checkbox"/>		<input type="checkbox"/>
Interior wall: framing	<input type="checkbox"/> type: metal stud		<input checked="" type="checkbox"/>
Interior wall, ceiling: gypsum board			<input type="checkbox"/>
Interior wall, ceiling, millwork: paint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landscape: decking or patio	<input type="checkbox"/> type: _____		<input type="checkbox"/>
Other: cabinet	<input type="checkbox"/> type: _____		<input type="checkbox"/>
Other: counter	<input type="checkbox"/> type: _____		<input type="checkbox"/>
Other: door	<input type="checkbox"/> type: _____		<input type="checkbox"/>
Other : trim	<input type="checkbox"/> type: _____		<input type="checkbox"/>
Other : adhesive, sealant		<input type="checkbox"/>	<input type="checkbox"/>
Other : window frame	<input type="checkbox"/> type: _____		<input type="checkbox"/>
Roof: framing	<input type="checkbox"/>		<input type="checkbox"/>
Roof: roofing	<input type="checkbox"/>		<input type="checkbox"/>
Roof, floor, wall: insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roof, floor, wall (2 of 3): sheathing	<input type="checkbox"/> type: _____		<input type="checkbox"/>

3. Waste Management

3.1 Construction Waste Management Planning (meet both of the following)	Prereq.	Y		
<input checked="" type="checkbox"/> a) Investigate local options for waste diversion			<input checked="" type="checkbox"/> b) Document diversion rate for construction waste	
3.2 Construction Waste Reduction (use one of the following methods)	3	1.5	0	assumed 50% diversion likely
4.0 a) pounds waste / square foot				

25.5 cubic yards waste / 1,000 square feet

50% b) percentage of waste diverted

Indoor Environmental Quality (EQ) (Minimum 6 EQ Points Required)

Max: 21 Y:5 M:6

1. ENERGY STAR with Indoor Air Package

1 ENERGY STAR with Indoor Air Package 13 0 0 will follow prescriptive path

2. Combustion Venting

2 Basic Combustion Venting Measures for MID-RISE (meet all the following) Prereq. Y need more info - gas? fireplaces?

- | | |
|--|--|
| <input type="checkbox"/> a) no unvented combustion appliances | <input type="checkbox"/> d) space, water heating equipment designed with closed combustion; OR |
| <input type="checkbox"/> b) carbon monoxide monitors on each floor | <input type="checkbox"/> space and water heating equipment has power-vented exhaust; OR |
| <input type="checkbox"/> c) all fireplaces and woodstoves have doors | <input type="checkbox"/> space and water heating equipment located in detached or open-air facility; |
| | <input type="checkbox"/> no space- or water-heating equipment with combustion |

3. Moisture Control

3 Moisture Load Control (meet one of the following) 1 0 0 not likely

- | | |
|--|--|
| <input type="checkbox"/> a) Additional dehumidification system | <input type="checkbox"/> b) Central HVAC system equipped with additional dehumidification mode |
|--|--|

4. Outdoor Air Ventilation

4.1 Basic Outdoor Air Ventilation for MID-RISE (meet all of the following) Prereq. Y must do mechanical fresh air ventln

- | | |
|--|--|
| <input checked="" type="checkbox"/> a-i) ASHRAE 62.2-2007 met (without windows) | <input checked="" type="checkbox"/> d-i) Exhaust-only system verified by licensed HVAC engineer that 62.1 and 62 |
| <input type="checkbox"/> a-ii) ASHRAE 62.1-2007 met (windows may be used) | <input type="checkbox"/> d-ii) Exhaust-only system has at least one make-up air source per room that r |
| <input checked="" type="checkbox"/> b) Outdoor air intakes not near contamination sources | <input checked="" type="checkbox"/> e) Each unit compartmentalized, with total unit leakage <= 7.0 (ACH50). |
| <input checked="" type="checkbox"/> c) Intakes designed to prevent rain, snow intrusion, entrainment | |

4.2 Enhanced Outdoor Air Ventilation for MID-RISE 2 0 0 N not likely

4.3 Third-Party Performance Testing for MID-RISE 1 0 0 possible, need minimum credits for ll

5. Local Exhaust

5.1 Basic Local Exhaust for MID-RISE (meet all of the following) Prereq. Y baths and whole kitchens or hoods

- | | |
|---|---|
| <input checked="" type="checkbox"/> a-i) Bathroom and kitchen meet ASHRAE 62.1-2007 air flow requirements | <input checked="" type="checkbox"/> b) Air exhausted to outdoors through roof or outside wall |
| <input checked="" type="checkbox"/> a-ii) Local exhaust ductwork sealed | <input checked="" type="checkbox"/> c) ENERGY STAR labeled bathroom exhaust fans |
| <input checked="" type="checkbox"/> a-iii) Ducts with kitchen or bathroom exhaust negatively pressurized | |

5.2 Enhanced Local Exhaust (meet one of the following) 1 0 1 possible

- | | |
|---|--|
| <input type="checkbox"/> a) Occupancy sensor | <input type="checkbox"/> c) Automatic timer tied to switch |
| <input type="checkbox"/> b) Automatic humidistat controller | <input type="checkbox"/> d) Continuously operating exhaust fan |

5.3 Third-Party Performance Testing for MID-RISE 1 0 1 possible

6. Distribution of Space Heating and Cooling

6.1 Room-by-Room Load Calculations Prereq. ACCA Manual J air flow, Manual D du

6.2 Return Air Flow / Room-by-Room Controls (meet one of the following) 1 0 0 difficult to meet reqts, not likely

A. Forced-Air Systems

- a) Return air opening of 1 sq. inch per cfm of supply
- b) Limited pressure differential between closed room and adjacent spaces

B. Nonducted HVAC Systems

- Flow control valves on every radiator

6.3 Third-Party Performance Test / Multiple Zones (meet one of the following) 2 0 0 costly, not likely

A. Forced-Air Systems

- Have supply air flow rates in each room tested and confirmed

B. Nonducted HVAC Systems

- Install at least two distinct zones with independent thermostat control

7. Air Filtering

7.1 Good Filters Prereq. Y MERV 8

7.2 Better Filters 1 0 0 can do MERV 10, check static pressu

OR 7.3 Best Filters 2 0 0 not likely

8. Contaminant Control

8.1 Indoor Contaminant Control during Construction 1 0 1 tb decided, good practice

8.2 Indoor Contaminant Control for MID-RISE (meet any of following, 1 pt each) 2 1 0 6' long recessed mat at street entranc

- a) Install permanent walk-off mats OR entryway systems

- c) Install central vacuum system with exhaust to outdoors

- b) In each unit, design shoe removal and storage space near primary entryway

8.3 Preoccupancy Flush 1 0 1 good idea, 48 hr non-continuous

9. Radon Protection

9.1 Radon-Resistant Construction in High-Risk Areas Prereq. Y hazard level tb checked

9.2 Radon-Resistant Construction in Moderate-Risk Areas 1 1 0 moderate zone per DC radon map, tb

10. Garage Pollutant Protection

10.1 No HVAC in Garage for MID-RISE Prereq. Y

10.2 Minimize Pollutants from Garage for MID-RISE (meet all of the following) 2 0 0

a) In conditioned spaces above garage:

- Seal all penetrations and connecting floor and ceiling joist bays
- Paint walls and ceilings of shared walls, including garage

b) In conditioned spaces next to garage

- Weather-strip all doors
- carbon monoxide detectors in rooms that share a door with garage
- Seal all penetrations and cracks at the base of walls
- Include vestibule that provides airlock OR provide self-closing doors

AND/OR 10.3 Exhaust Fan in Garage for MID-RISE (meet all of the following) 1 0 0

- Exhaust fan runs continuously, with no air recirculation

- At least 0.50 cfm/sq ft of exhaust

OR 10.4 Detached Garage or No Garage 3 3 0 d.u. units above retail above parking

11. Environmental Tobacco Smoke Control

11.1 Env. Tobacco Smoke Reduction for MID-RISE (meet one of the following) 2 0 2 possible

a) Reduce smoke exposure and transfer (1 point)

- Prohibit smoking in all common areas
- Designated smoking areas > 25 ft from entries, air intakes, windows
- Seal units and vertical chases
- Weather-strip doors leading to common hallways

a) Significantly reduce smoke exposure and transfer (2 points)

- Prohibit smoking in all common areas
- Designated smoking areas > 25 ft from entries, air intakes, windows
- Seal units and vertical chases
- Weather-strip doors leading to common hallways
- Demonstrate total unit leakage ≤ 4ACH 50

OR	11.2 Environmental Tobacco Smoke Prohibition for MID-RISE (meet both)	2	0	0
<input type="checkbox"/>	Prohibit smoking throughout the building	<input type="checkbox"/>	Designated smoking areas > 25 ft from entries, air intakes, windows	

Awareness & Education (AE) (Minimum 0 AE Points Required) **Max: 3 Y:2 M:0**

1. Education of the Homeowner or Tenant				
1.1	Basic Operations Training (meet both of the following)	Prereq.	Y	tenant education mandatory
<input checked="" type="checkbox"/>	a) Operations and training manual	<input checked="" type="checkbox"/>	b) One-hour walkthrough with occupant(s)	
1.2	Enhanced Training	1	0	0 not likely
1.3	Public Awareness (meet three of the following)	1	1	0 likely, put in PR and marketing mater
<input type="checkbox"/>	a) Open house on at least four weekends	<input checked="" type="checkbox"/>	c) Newspaper article on the project	
<input type="checkbox"/>	b) Website about features and benefits of LEED homes	<input checked="" type="checkbox"/>	d) Display LEED signage on the exterior of the home	

2. Education of the Building Manager				
2	Education of the Building Manager (meet both of the following)	1	1	0 good idea
<input checked="" type="checkbox"/>	a) Operations and training manual	<input checked="" type="checkbox"/>	b) One-hour walkthrough with building manager	

By affixing my signature below, the undersigned does hereby declare and affirm to the USGBC that the LEED for Homes requirements, as specified in the LEED for Homes Rati have been met for the indicated credits and will, if audited, provide the necessary supporting documents.

Project Team Leader	Lucy Wildrick	Company	Street Works
Signature		Date	

By affixing my signature below, the undersigned does hereby declare and affirm to the USGBC that the required inspections and performance testing for the LEED for Homes re as specified in the LEED for Homes Rating System, have been completed, and will provide the project documentation file, if requested.

Green Rater		Company	Steven Winter Associates
Signature		Date	

By affixing my signature below, the undersigned does hereby declare and affirm to the USGBC that the required inspections and performance testing for the LEED for Homes re as specified in the LEED for Homes Rating System, have been completed, and will provide the project documentation file, if requested.

Provider's Certifier	Maureen Mahle	Company	Steven Winter Associates
Signature		Date	