





Sustainability Analysis The Loring Park Neighborhood

An Analysis of Neighborhood Wide Sustainability Utilizing USGBC's 2009 LEED for Neighborhood Development Rating System Updated April 12, 2011

This analysis was performed by a workgroup of four professionals involved in the Loring Park Master Plan process: Peter Musty, Master Plan consultant Team Leader;, Neil Reardon, Master Plan Steering Committee Member; Lauren Huynh, Minneapolis Planning Commissioner; and John Van Heel, Loring Park Neighborhood Master Plan Steering Committee Co-Chair. The following document includes:

- Approach
- Summary of Results
 - 0 Smart Location & Linkage
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- LEED-ND Scorecard
- LEED-ND Credit-by-Credit Analysis: SLL|NPD|GIB
- List of Ideas from Community Design Workshop
- Meeting Notes from March 2011 Workgroup Session
- Recommended Master Plan Policies (Draft)

Attached Document: Introduction to USGBC's LEED for Neighborhood Development



Approach

The four member Loring Park Neighborhood Master Plan LEED-ND Workgroup met several times, and worked in parallel independently, in a collaborative effort to develop the information and recommendations contained in this report. The objective was to understand the strengths and weaknesses of the Loring Park Neighborhood in regards to sustainability, as defined by the LEED for Neighborhood Development rating system. (Introduction to LEED-ND is included in later pages.) The workgroup followed a four step approach:

- Estimate, with data available or previously developed (such as the 2010 CURA Study), Loring Park Neighborhood's performance (credit-by credit) against the metrics and requirements of each prerequisite and credit in the 2009 LEED-ND rating system.
- Further analyze each credit according to three criteria: Applicability to Loring; Local Resources Available; Potential for Use in Guidelines or Incentives for Developers or for Public Realm Investments
- Tally the neighborhood's cumulative score & analyze all credits to idenitfy and summarize the neighborhood's overall strengths and weaknesses.
- Draft and recommend policies to the Master Plan Steering Committee for inclusion in the Master Plan.

The following pages present a complete credit-bycredit analysis of USGBC's 2009 LEED for Neighborhood Development Rating System (http://www.usgbc.org/leed/nd), as applied to the entirety of the Loring Park Neighborhood of Minneapolis. The analysis was performed by the Loring Park Neighborhood Master Plan Steering Committee's Sustainability workgroup including Lauren Huynh, John Van Heel, Neil Reardon, and consultant Peter Musty. The boundaries of the analysis match the formal municipal boundaries of the Neighborhood. Documentation of partial to complete compliance with many of the prerequisites and credits was made possible by the 2010 CURA Report titled LEED for Neighborhood Development and the Park Neighborhood Loring (http://www.loringpark.org). Compliance with credits not researched for the CURA report are estimates based on collective knowledge of the existing neighborhood conditions and various mapping and statistical resources on hand from the master plan discovery and other previous research by CLPC. Each prerequisite includes an estimated score in addition to the following:

- A. GENERAL NOTES Discuss the credit's applicability to Loring and/or Existing Neighborhoods in general. Can Loring do better? How? Is it too late for Loring?
- **B. RESOURCES** List local agencies or individuals that could be helpful *in any way to verify compliance with each credit.*
- **C. USE IN GUIDELINES & INCENTIVES** – Does this credit hold potential for use as a guideline for project review/approval at a neighborhood level? Is there a way this credit could be tied to current or future incentives?



Summary of Results

The following are a summary of results broken down by the three sections of the LEED-ND rating system:

SLL

Smart Location & Linkages

Loring is clearly well located – and enjoys great coonectivity to its surrounding urban context.

Loring also is relatively well served by transit and a diverse mix of services within walking distance. Further,



there is a density of residential and commericial development that is compact and supportive of transit. There is an improving multi-modal network, and there is an apparent wide diveristy of housing types, including some percentage of affordable units. Housing is close to many jobs, another criteria that scores highly within LEED standards.

All prerequisites met; 63-82% of credits achieved.

NPD

Neighborhood Pattern & Design

Loring boasts a wonderful Victorian/Indutrial era

block pattern that is highly connective with smaller blocks in its core (high number of intersecvtions per square mile). It is very wlakable and has a great spectrum of



building frontages that establish great public to private relationships along most street throughout the district. There is a prevalence of surface pakring lots, and somoe stretches of blank walls and harsher streetscapes. Public safety also cuts down on walkability later at night. Commercial spaces are somewhat undrutilized along commercial corridors, and several streets are difficult to cross – particularly at the perimeter of Loring Park. There is an apparent wide diversity of housing types, including some percentage of affordable units.

All prerequisites met; 36-86% of credits achieved.

GIB

Green Infrastructure & Buildings

The neighborhood apparently has a long way to go – and must make considerable investments in order to bring the neighborhood's older building stock to a point where they are considered certifiably green or sustainable by any standard of performance. There is also likely

much that can be done in terms of district wide energy, groundwater and stormwater technologies to lower the



neighborhoods 'footprint' in terms of its overall demand for energy, and the amount of GHG (greehouse gas) emissions form building operating energy. The LEED rating system presents several other criteria – such as urban heat island and night sky radiation that the neighborhood could use bulk buying power and economies of scale to address.

Prerequisites NOT met; 7-31% of credits achieved.



LEED 2009 for Neighborhood Development Project Scorecard

The Loring Park Neighborhood

Yes ? No							
17 5 <mark>5</mark>	Smart L	ocation and Linkage 27 Points	Possible				
Y	Prereq 1	Smart Location	Required				
Y	Prereq 2	Imperiled Species and Ecological Communities	Required				
Y	Prereq 3	Wetland and Water Body Conservation	Required				
Y	Prereq 4	Agricultural Land Conservation	Required				
Y	Prereq 5	Floodplain Avoidance	Required				
8 1 1	Credit 1	Preferred Locations	10				
2	Credit 2	Brownfield Redevelopment	2				
7	Credit 3	Locations with Reduced Automobile Dependence	7				
1	Credit 4	Bicycle Network and Storage	1				
2 1	Credit 5	Housing and Jobs Proximity	3				
1	Credit 6	Steep Slope Protection	1				
1	Credit 7	Site Design for Habitat or Wetland and Water Body Conservation	1				
1	Credit 8	Restoration of Habitat or Wetlands and Water Bodies	1				
1	Credit 9	Long-Term Conservation Management of Habitat or Wetlands and Water Bodie	1				
Yes ? No							
16 22 6	Neighbo	orhood Pattern and Design 44 Points	Possible				
Y	Prereq 1	Walkable Streets	Required				
Y	Prereq 2	Compact Development	Required				
Y	Prereq 3	Connected and Open Community	Required				
1 10 1	Credit 1	Walkable Streets	12				
1 5	Credit 2	Compact Development	6				
4	Credit 3	Mixed-Use Neighborhood Centers	4				
3 4	Credit 4	wixed-income Diverse Communities	7				
1	Credit 5	Reduced Farking Footprint	1				
2	Credit 6	Sueen weiwork	2				
	Credit /	Transmertation Domand Management	1				
1	Credit 0	Transportation Demand Management	2				
1	Credit 10	Access to Decreation Facilities	1				
- 1	Credit 11	Visitability and Universal Design	1				
2	Credit 12	Community Outroach and Involvement	י ז				
1	Credit 13	Local Food Production	2 1				
2	Credit 14	Tree-I ined and Shaded Streets	2				
1	Credit 15	Neighborhood Schools	- 1				
Yes ? No							
2 7 20	Green li	nfrastructure and Buildings 29 Points	Possible				
Y	Prereq 1	Certified Green Building	Required				
N	Prereq 2	Minimum Building Energy Efficiency	Required				
N	Prereq 3	Minimum Building Water Efficiency	Required				
?	Prereq 4	Construction Activity Pollution Prevention	Required				
5	Credit 1	Certified Green Buildings	5				
2	Credit 2	Building Energy Efficiency	2				
1	Credit 3	Building Water Efficiency	1				
1	Credit 4	Water-Efficient Landscaping	1				
1	Credit 5	Existing Building Use	1				
1	Credit 6	Historic Resource Preservation and Adaptive Reuse	1				
1	Credit 7	Minimized Site Disturbance in Design and Construction	1				
4	Credit 0	Stormwater Management	4				
1	Credit 10	Solar Orientation	1				
2	Credit 11	On-Site Renewable Energy Sources	1				
2	Credit 12	District Heating and Cooling	ა 2				
2	Credit 13	Infrastructure Energy Efficiency	2				
2	Credit 14	Wastewater Management	2				
1	Credit 15	Recycled Content in Infrastructure	1				
1	Credit 16	Solid Waste Management Infrastructure	1				
1	Credit 17	Light Pollution Reduction	1				
Yes ? No		J					
2	Innovati	ion and Design Process	6 Points				
1	Credit 1.1	Innovation and Exemplary Performance: Provide Specific Title	1				
1	Credit 1.2	Innovation and Exemplary Performance: Provide Specific Title	1				
	Credit 1.3	Innovation and Exemplary Performance: Provide Specific Title	1				
	Credit 1.4	Innovation and Exemplary Performance: Provide Specific Title	1				
	Credit 1.5	Innovation and Exemplary Performance: Provide Specific Title	1				
	Credit 2	LEED [®] Accredited Professional	1				
Yes ? No							
3	Regiona	al Priority Credit	4 Points				
1	Credit 1.1	Regional Priority Credit: Region Defined	1				
1	Credit 1.2	Regional Priority Credit: Region Defined	1				
1	Credit 1.3	Regional Priority Credit: Region Defined	1				
	Credit 1.4	Regional Priority Credit: Region Defined	1				
Yes ? No							
	Project	Totals (Certification estimates) 1	10 Points				
35 39 31		Certified: 40-49 points, Silver: 50-59 points, Gold: 60-79 points, Platinum: 80+ points					



SLL

Smart Location & Linkage



SLL Prerequisite 1 Smart Location

We likely comply.

The entire Loring Park neighborhood qualifies as an existing community. Any new development would be regarded as an infill site (Option 1)

SLL Prerequisite 2 Imperiled Species and Ecological Communities We likely comply.

This prerequisite requires that the state Natural Heritage Program and state wildlife agency (our DNR) be consulted regarding the presence of imperiled species. However, while some imperiled species may pass through the neighborhood, it is unlikely that the neighborhood would be considered as those species habitat, given the neighborhood's urban location.

SLL Prerequisite 3 Wetlands and Water body Conservation

We likely comply.

The entire Loring Park neighborhood qualifies as an existing community. Any new development would be regarded as an infill site (Option 1).

SLL Prerequisite 4 Agricultural Land Conservation

We likely comply.

There is no agricultural land in the Loring Park Neighborhood.

SLL Prerequisite 5 Floodplain Avoidance We likely comply.

There are no flood plains in or near the Loring Park Neighborhood.

SLL Credit 1 Preferred Locations

5 out of 10 credits

A. GENERAL NOTES - These points are broken into two parts: Location Type and Connectivity. Loring would earn the full 5 points available for location since the neighborhood is all previously developed. Another 5 points are available for connectivity as based on number of intersections per square mile. Intersection density varies from one part of the neighborhood to another. When the convention center is included the neighborhood does not meet the minimum 200 intersections per mile average for the first point in this category. If the convention center included part of the were not as



neighborhood, the average would go above 200 intersections per square mile and the neighborhood would be eligible for one point. An additional three points can be earned under the Neighborhood Pattern Design Credit Mixed-Income Diverse Communities, Option 2, Affordable Housing. Additional information about the amount of affordable housing in Loring Park would be required, however it is possible that the neighborhood currently meets this requirements.

Can Loring do better in the future? Future changes to the neighborhood are unlikely to have any significant affect on the connectivity portions of this credit. If it does not currently meet the credit requirement for affordable housing, future development could conceivably change this status. This is best addressed under NPD credit 4.

- B. RESOURCES- CPED City of Minneapolis, Housing division
- C. USE IN GUIDELINES & INCENTIVES -Significant potential. In terms of future LEED based projects the neighborhood offers a significant number of points in this area. More generally our preferred location, being an already developed inner city neighborhood, is more valuable as a sales tool because of our excellent status, than as an area where improvements can be made.

Can Loring do better in the future? Future changes to the neighborhood are unlikely to have any significant affect on the connectivity portions of this credit. If it does not currently meet the credit requirement for affordable housing, future development could conceivably change this status. This is best addressed under NPD credit 4.

Additional Work for Pilot – Establish what the amount of affordable housing is in Loring Park according to the Credit requirements.

SLL Credit 2 Brownfield Redevelopment 0 out of 2 credits

- A. GENERAL NOTES This credit is very specifically directed to new development. As such it may play a part in future planning and development if brownfield sites are identified in the neighborhood. Such sites are possible considering the neighborhood's auto business history.
- B. RESOURCES City of Minneapolis, Hennepin County
- C. USE IN GUIDELINES & INCENTIVES minimal

Can Loring do better in the future? N/A

Additional Work for Pilot – Investigate whether there are any known or suspected brownfield sites in the neighborhood that have been identified for potential (re)development.

SLL Credit 3 Locations with Reduced Automobile Dependence

7 out of 7 credits

- A. GENERAL NOTES his credit offers two options for achieving up to seven points. For option 1 - Transit-Served Location the summer LEED-ND study documented that the entire neighborhood met the transit stop proximity element of the credit. The study surmised that it also met the top rating for transit frequency. It is also likely that the neighborhood would rank high under option 2 which is based on low vehicle miles (auto) traveled per capita (I surmise).
- B. RESOURCES
- C. USE IN GUIDELINES & INCENTIVES -Significant potential. The neighborhood's high status would be an incentive to those who might invest in the neighborhood. And while the neighborhood may currently be eligible for all of the points possible, there would still



facilities.

seem to be room for improvement and innovation.

Can Loring do better in the future? Yes. While the neighborhood likely could receive all 7 points possible, reducing automobile dependence further could be a worthwhile area to go after innovation credit. And setting LEED aside, it stands on its own as a valuable goal, particularly in terms of reducing carbon output.

Additional Work for Pilot – 1. Confirm transit frequency in neighborhood. 2. Establish neighborhood vehicle miles traveled per capita (VMT). 3. Verify whether Loring Park is with-in an excepted transportation organization (like the Metro Council) that either has or can conduct a household transportation survey that either has or can establish the VMT for Loring Park.

SLL Credit 4 Bicycle Network and Storage

0-1 out of 1 credits

A. GENERAL NOTES - This credit has two requirements in order to earn 1 possible point. Loring Park easily meets the first requirement, which is access to existing bicycle network (trails). The second requirement is less clear. It is based on the number of storage spots for bicycles and, for non-residential buildings, also access to shower facilities. This requirement is intended for new construction, however if it is our intent to apply the credit to the existing condition then either a preliminary guess would be needed or some intensive neighborhood surveying. My guess is that the neighborhood would not meet this requirement if applied to all building types across the neighborhood.

B. RESOURCES

C. USE IN GUIDELINES & INCENTIVES – significant primarily as a way to encourage public and private investment in bicycle

Can Loring do better in the future? I am not certain if it is reasonable to think that the whole neighborhood could meet the storage and shower requirement in order to meet this credit, however there is certainly room for improvement for new and existing properties.

Additional Work for Pilot – Survey neighborhood's bicycle storage and shower facilities.

SLL Credit 5 Housing and Jobs Proximity

2-3 out of 3 credits

- A. GENERAL NOTES The summer LEED-ND project provided evidence that the neighborhood does meet the jobs proximity requirement under one or two of the options provided. It is also possible to earn an additional credit for affordable housing as defined under NPD Credit 4. Because of its high status, Loring Park can use this category to promote investment. There is also room for improvement and innovation.
- B. RESOURCES
- C. USE IN GUIDELINES & INCENTIVES -Very significant. Promoting the option of living within walking distance to work has significant potential as a way to reduce carbon emissions. If the downtown work force increased the percentage of those who also lived nearby by, say 5%, one could I think establish a significant number for the reduction in emissions.

Can Loring do better in the future? Yes

Additional Work for Pilot – 1. Verify that job proximity numbers provided in summer study meet LEED-ND requirements. 2. Establish what the amount of affordable housing is in Loring Park according to the Credit requirements.



SLL Credit 6 Steep Slope Protection 2-3 out of 3 credits

- A. GENERAL NOTES This credit is very specific to new construction and the disturbance of existing slopes. Loring Park may have land that meets the credit's slope definition in the Loring Hill portion of the
 - neighborhood. The chief use for this credit is its place in guidelines for future development / improvement activity on 'the hill'.
- B. RESOURCES ?
- C. USE IN GUIDELINES & INCENTIVES -Has a place in development guidelines

Can Loring do better in the future? In future construction activity perhaps.

Additional Work for Pilot – Compare slope options defined in credit with property slope conditions on Loring Hill. Possible task. May not contribute much to pilot since it is directed toward new construction.

SLL Credit 7 Site Design for Habitat or Wetland and Waterbody Conservation

0-1 out of 1 credit

- A. GENERAL NOTES This credit is very specifically directed toward new construction. The only wetland in the neighborhood is Loring Pond. The park is the only place where construction and new buildings would likely affect the pond. I believe that all surrounding streets and properties drain into the city's sewer system. The neighborhood likely has no significant habitat as defined under the credit. The neighborhood does affect larger water systems though. Perhaps LEED for existing neighborhoods would for what action provide credit the neighborhood could take in that regard.
- B. RESOURCES MN Department of Natural

Resources, Mpls Park Board, Lee Frelich of Friends

C. USE IN GUIDELINES & INCENTIVES – May have a spot in guidelines and recommendations.

Can Loring do better in the future? For this specific credit, probably not, but in regards to the general intent there may be opportunities.

Additional Work for Pilot – Possibly investigate strategies and improvements that urban neighborhoods can make to reduce the volume, and improve the quality of storm water runoff.

SLL Credit 8 Restoration of Habitat or Wetlands and Water Bodies 0 out of 1 credit

- A. GENERAL NOTES If it is possible submit past projects then it may be possible that Loring Park could be eligible for the one point available under this credit. CLPC funded the Loring Pond restoration in 1998. The restoration included the slope protection and planting of native species. An invasive cattail has since mostly taken over, but perhaps we could re-establish a long-term conservation program to re-establish natural plant diversity around the edge of the pond. This could earn us an additional point under the next credit below.
- B. RESOURCES MN Department of Natural Resources, Mpls Park Board, Lee Frelich of Friends
- C. USE IN GUIDELINES & INCENTIVES -Wouldn't it be great if we could use LEED as an incentive to fix the cattail problem?

Can Loring do better in the future? Yes in regards to native plant species.

Additional Work for Pilot: Verify whether past pond work could satisfy credit requirement.



SLL Credit 9 Long term Conservation Management of Habitat or Wetlands and Waterbodies

0-1 out of 1 credit

- A. GENERAL NOTES Current conservation management of Loring Pond probably does not meet the requirements for this credit.
- B. RESOURCES MN Department of Natural Resources, Mpls Park Board, Lee Frelich of Friends of Loring Park
- C. USE IN GUIDELINES & INCENTIVES ves, but minimal given that it seems to be mostly a park issue.

Can Loring do better in the future? Yes.

Additional Work for Pilot: If it is determined that a point can be earned as part of the pilot program, establish what kind of conservation management plan can be implemented under criteria that would be acceptable for LEED recognition.



NPD

Neighborhood Pattern & Design



NPD Prerequisite 1 Walkable Streets

We likely comply.

- A. GENERAL NOTES The Loring district developed is generally very walkable, scoring highly.
 - **Functional Entries.** Yes. Throughout most of the district, except for block forntages of larger towers nearer to downtown, well of over 90% of buildings have a principal functional entry facing a public space. It is in the downtown area – particularly parking ramps – where entries become scarce. Areas of concern:
 - i. northeast block frontages of Loring Park / MCTC
 - ii. parking structures adjacent to large towers and nearer to downtown.
 - iii. Convention Center (west side)

1:3 Street Enclosure Ratio. (CURA

Map 16) Yes, at least 15% of street within and frontages bordering the neighborhood have a minimum building height-to- street width ration of 1:3. Many streets throughout Loring are between 50-80' wide, which translates to building heights from 18-24' to satisfy enclosure ratio The CURA study requirement. only documents the Nicollet area. Area of concern:

- iv. All surface parking lots.
- v. Nicollet Ave south of 14th Street (one story commercial buildings to not achieve this ratio given width of Nicollet.)
- vi. LaSalle Avenue (empty parking lots)

Continuous Sidewalks. (CURA Map 17) Yes, the district provides sidewalks along more than 90% of street frontages. There are very few exceptions.

- Garage & Service Bays. (CURA Map 17) Yes, garage and service bays take up much less than 20% of street frontages in the district. Areas of concern:
- vii. MCTC along Spruce
- viii. Hotel parking structures near Nicollet Mall.
- ix. 15th along Convention Center (south side)
- B. LOCAL RESOURCES The CURA study is a good model for the type of documentation necessary to achieve these credits.
- C. USE IN GUIDELINES & INCENTIVES Yes, this credit holds great potential to utilize as guidleines for development. I believe many of the district wide ratios are still applicable at the building and block level.



NPD Prerequisite 2 Compact Development We likely comply.

- A. GENERAL NOTES All of Loring's 'buildable land' is wihtin ¼ mile from transit service; therefore is required to comply under OPTION 1: Projects in Transit Corridors..
 - a. Residential Density near Transit exceeds 12 du/acre. (CURA Map 8.) Likely, given the CURA block by block densities, it is fair to estimate that the district exceeds 12 du/acre on buildable land.
 - b. **Residential Density away from transit.** This requirement does not apply as there is very little if any buildable land more than ¹/₄ mile form transit service.!!
 - c. Nonresidential FAR near Transit exceeds .80 FAR. (CURA Map 9.) Likely, particulalry if one accounts for the Convention Center, the hotels and MCTC as contributing to nonresidential. (CURA analysis errantly refers to Commercial FAR.)
 - d. Nonresidential FAR away from transit exceeds .50 FAR. This requirement does not apply as there is very little if any buildable land more than ¹/₄ mile form transit service.!!
- B. LOCAL RESOURCES More work would be needed with the City or County GIS data to understand the built SF of existing buildings throughout the district. CURA MAP 3 demonstrates that much of the district's buildable land is within ¹/₄ mile of transit stop.
- C. USE IN GUIDELINES & INCENTIVES I think Residential Density (du/acre) & Nonresidential FAR (both exclude parking structures) are good ways to measure a project (how they contribute to Loring's performance – perhaps in the form of a setting minimums: Baselines needed:
 - a. Total Residential Units.
 - b. Total Nonresidential Floor Area.
 - c. Total Buildable Land.
 - i. within walk to transit
 - ii. outside walk to transit $(\sim n/a)$

NPD Prerequisite 3 Connected and Open Community

We easily comply.

- A. GENERAL NOTES There are two requirements:
 - a. Street Connectivity must be greater than 140 intersections/ square mile. (CURA Table 1.) Loring comes in at 176.5 intersections/square mile when including all sectors of the neighborhood. Opportunities for improvement:
 - a. South block along Loring this presents an abnormally long block with no breaks which forces all forms of traffic to one intersection at 15th & Oak Grove, excarsecerbating the feud over crosswalks and safe crossings to the park. Vehicles are given little reason to slow down for nearly a quarter mile along the south side of the Park. Additional midblock connections through to Loring Hill would allow more connections to the Park formo that sector, increasing walkability and reducing vehicle trips to and from Loring Hill.
 - b. Perimeter connections every 800 feet. The neighborhood connects to the surrounding fabric very well, albeit with connections of varying quality, all the way around the perimeter of the neighborhood, despite being bordered by interstates 94 & 394. Such connections across interstate bridges are often not optimal, but the district is technically compliant in all directions, even wihen not accounting for the exlcusions allowed by the prerequisite. All downtown blocks connect. The overall performance of the district in terms of internal connectivity is actually much higher when excluding Convention Center.
- B. LOCAL RESOURCES More work would be needed with the City or County GIS data to understand the built SF of existing buildings throughout the district. CURA MAP 3



demonstrates that much of the district's buildable land is within 1/4 mile of transit stop.

C. USE IN GUIDELINES & INCENTIVES – It is recommended that the current network connectivity of ~175 intersections/square mile is set as a permanent minimum for the neighborhood, and that bonuses or incentives could be set in place for projects that increase connectivity of street level public thoroughfares (intersections /square mile).

NPD Credit 1 Walkable Streets

Items achieved:

Likely: b,k Maybe: a,c,d,f,h,i,j,l,m,n,o,p No: e,g

1-11 out of 12 credits

Façade Setbacks

GENERAL NOTES – There are three possible points to earn:

- a. **80% of frontages within 25ft of sidewalk.** Not sure. This is a very close call – but likely Loring is not compliant, given all the public buildings, campus buildings and mansions with front yard setbacks over 25'. (CURA Map 12.)
- b.50% of lineal frontage within 18'. Not sure. We likely do comply with this point given a cursory scan of CURA Map 12.
- c. 50% of lineal nonresidential and mixed use frontage within 1' of sidewalk. Not sure. We likely do not comply not when accounting for certain nonresidential frontages: (CURA Map 12.)
 - i. Convention Center
 - ii. MCTC
 - iii. Churches

LOCAL RESOURCES – 90% of the work has been done through the CURA work (except for Downtown sector.)

USE IN GUIDELINES & INCENTIVES – It would be interesting to map zoning setbacks

throughout the district (vs the standards) – to see if zoning complies with this credit – and to establish if there is a policy conflict between current zoning and the Neighborhoods walkability goals. It is completely viable to expect that individual buildings comply with these setback percentages as a standard within each project – so that they are 'contributing' to the district's walkability goals.

Entry Spacing of Functional Entries

GENERAL NOTES – There are two points to earn:

- d. Functional Entries occur every 75ft on average. Not sure. We likely do not comply with this point given a cursory scan of CURA Map 13. Nicollet at Laurel Village and Hennepin at Laurel Village between 12th & 13th contribute more than their share. Culprits:
 - i. Convention Center
 - ii. MCTC
 - iii. Church grounds
 - iv. Harmon between Spruce & 13th.
 - v. Nicollet Mall buildings
- e. Functional Entries occur every 30ft on average. No. It will not be possible for the district to comply with this point for a long time. It is one of the hardest – but worth aspiring to. It may be possible for the neighborhood to require that a maximum entry spacing be set up for incentives.

LOCAL RESOURCES – 90% of the work has been done through the CURA work (except for Downtown sector.)

USE IN GUIDELINES & INCENTIVES – It is doubtful that current zoning or any overlay, currently specifies entry spacing. However, it is completely viable to expect that individual buildings comply with these setback percentages as a standard wihtin each project – so that they are 'contributing' to the district's walkability goals.

Again, incentives could easily be set up to reward projects for contributing to the



neighborhoods overall performance on this walkability standard.

Alternatively, specific streets could set in place a maximum entry spacing average to ensure specific compliance along the busiest retail streets.

Commercial Ground Level Glazing

f. **60% Clear Glass.** All ground level retail, service and trade uses facing a public space must have 60% clear glass between 3'-8' above grade. Neighborhood wide, likely very close to being compliant. This was not documented in the CURA study.

LOCAL RESOURCES detailed documentation of these ground level frontages would be necessary utilizing Bing Maps, Google Earth or Google StreetView web tool - all freely accessible. No expertise required. USE IN GUIDELINES & INCENTIVES -Many of the buildings along Harmon have blocked up windows. I think there is room for improvement in the Harmon guidelines on this credit. It would also be worth understanding what is the current zoning minimum for certain districts - if there is one. It is at least worth an analysis to see if there is a policy conflict.

Blank Walls

- g. 40% max blank (windowless, doorless) walls along sidewalks. There are several places where long stretches of blank walls occur, most of them along frontages built after the 1960's.:
 - i. South apt building frontages along Loring Park
 - ii. Loring Greenway
 - iii. Nicollet Mall buildings
 - iv. LaSalle under the Greenway
 - v. Convention Center east and west sides, east parking structure.
 - vi. MCTC parking structures and campus

LOCAL RESOURCES – detailed documentation of these ground level frontages would be necessary utilizing Bing Maps,

Google Earth or Google StreetView web tool – all freely accessible. No expertise required. USE IN GUIDELINES & INCENTIVES – It would be interesting to map zoning setbacks throughout the district (vs the standards) – to see if zoning deals with this parameter. It is completely viable to expect that individual buildings comply with these percentages as a standard wihtin each project – so that they are 'contributing' to the district's walkability goals.

Unshuttered Nightime Ground Level Retail

h. All retail, service and trade windows facing a public space must be kept visible (transparent) at night. Perhaps, but probably not.

LOCAL RESOURCES – doucmentation would need to be at night by car. No expertise required.

USE IN GUIDELINES & INCENTIVES – Unknown if the City requires windows to be transparent, and for what hours. Research needed as to current policy.

On Street Parking

i. **70% both sides.** (CURA Map 14.) Definitely maybe, perhaps yes. It look as if the district maximizes on street parking. One exception is along the Park

LOCAL RESOURCES – doucmentation would need to be at night by car. No expertise required.

USE IN GUIDELINES & INCENTIVES – Unknown if the City requires windows to be transparent, and for what hours. Research needed as to current policy.

Continuous Sidewalks

- j. **70% both sides.** (CURA Map 15.) We essentially comply with the continuous sidewalk requirement, except for the width requirement of 10' for retail and 5' everywhere else, of which we comply everywhere (CURA Map 15.) except for a handful of block lengths:
 - i. LaSalle in front of SuperAmerica
 - ii. Grant between LaSalle & Loring Park



Loring Park Neighborhood Master Plan

- iii. 14th along Ping's
- iv. Street along south side of GreatTapes
- v. Eastern perimeter of St Mark's block
- vi. Spruce (MCTC)
- vii. Harmon between 13th & (14th)
- viii. Hennepin in front of Basilica
- ix. $12^{\text{th}} \& 13^{\text{th}}$ off of Hennepin
- x. 12th between Nicollet & LaSalle

LOCAL RESOURCES – The City of Minneapolis Planning Dept and Public Works can be consulted about pedestrian 'gaps' in the neighborhood.

USE IN GUIDELINES & INCENTIVES -Setting street standards is an ongoing collaboration with public sector agencies. Research should be done on the City's policy to apply Context Sensitive Solutions, and further to explore the Hennepin County and State policy for Complete Streets. Another reference can be Institute of Transportation Engineers (ITE's) Design Manual for Major Urban Thoroughfares. Transit for Livable Communities administers for grants infrastructure projects that advance multimodalism.

Elevated Residential Ground Floor

k. 50% at 24" above grade. Loring is for the most part a text book for all the ways in which this design characteristic contributes to the walkability of the neighborhood (prospect over the street & establishing public/private advantage). If Loring does not qualify – then no neighborhood should. The district is well above 50% elevated ground floors in its residential buildings, including the post war buildings (the towers and along the Greenway, etc.). This does present accessibility issues (reuse obstacle) for buildings types such as the mansions.

LOCAL RESOURCES – Google Earth, counting steps, counting brick courses to viusally verify compliance.

USE IN GUIDELINES & INCENTIVES – This should be a standard requirement of all residential units, but should be within the context of ADA – which requires officially accessible entries into a portion of buildings under a certain size (1 for every 6 units?), and most if not all units in buildings above a certain size* (research). Another more comprehensive strategy is termed 'visitability'. This is also an element of CPTED, where ground level windows into spaces below 24" tend to get closed at night, under 1' at times windows tend to remain closed 'shuttered' all day long, just to retain privacy from the street into residential spaces. Another way to measure; the breakfast test (PMusty).

At-Grade Nonresidential

 50% of office buildings include retail along 60% of street facing facade. A solid maybe.
 100% of mixed use buildings include ground floor retail, live-work, or ground floor dwelling units along 60% of street facing façade. A solid maybe. All ground level businesses are accessible from public space other than a parking lot. Likely, but it has not been documented.

LOCAL RESOURCES – This was not documented in the CURA report – but could be done so easily with Google Earth or Streetview web tools. No expertise required.

USE IN GUIDELINES & INCENTIVES – This would be a suitable guideline for the entire district – tied to simple approval. It is not known what the City has on the books for this, if anything.

Street Enclosure

m. 40% of street frontage within the project has a minimum 1:3 building height-tostreet width ratio. No. The prevalence of surface parking lots, and the height of buildings along Nicollet and the larger setbacks in Loring Hill, make the district lower than 40% blocks that meet the ratio, but it is within reach.

LOCAL RESOURCES – More careful and complete documentation needed throughout the entire district – but could be done so easily with Google Earth or Streetview web tools. No expertise required.

USE IN GUIDELINES & INCENTIVES – This would be a suitable guideline for the entire district – tied to simple approval. It



would be interesting to apply this ratio as a minimum average building height throughout the entire district – or to tie it to incentives.

Design Speeds

- n. 75% of residential desinged for target speed under 20 mph.
- o. 70% of nonresidential and/or mixed use streets are desgined for target speeds under 25 mph. Unclear, given that posted speed (typically 30 mph for locals, is often much different than design speed.

LOCAL RESOURCES – A study to determine the current design speeds of neighborhood streets may go a long way towards revealing why some 30 mph streets feel safe, and some feel unsafe.

USE IN GUIDELINES & INCENTIVES -Research should be done to inquire whether a design speed of 20 mph is not unreasonable for streets classified as Locals, or for certain streets specified in the Comp Plan as Street Type. Again - design of public realm improvements should be an collaboration ongoing with City of Minneapolis Plannign and Public Works Depts - along with other agencies on streets that are County or State Aid. However, a study can be done regardless, to find out what the design speeds are throughout the neighborhood. This would take some doucmentation of the varying street sections, as well as a a civil engineer's expertise. The City of Minneapolis may have this capacity - or have this This issue could be information at hand. brought to CLPC Traffic Calming Committee for discussion and exploration.

Sidewalk Intrusions

p. At grade crossings with driveways account for no more than 10% of total sidewalk length. Maybe. CURA Map 17 displays that about half of the blocks comply, and half do not. More careful study would reveal that the downtown area mitigates against the conditions in Loring Hill, where there are many curbcuts due to lackk of alleys and severe topography. LOCAL RESOURCES – The data required to compute this neighborhood wide may already be on hand via the CURA study. Work with the GIS data would be necessary.

USE IN GUIDELINES & INCENTIVES – Access managament and the prevalence of curb cuts is an ongoing battle. The general move towards more biking and wlaking will alleviate the overall demand for surface parking lots – which contribute many of the interruptions. Although Loring Hill is a major culprit and there are no eay solutions there.

NPD Credit 2 Compact Development

1-6 out of 6 credits

A. GENERAL NOTES – There are six possible credits based on a sliding scale of residential and nonresidential density, weighted in proportion of buildable land dedicated to each:

Minimums for 1 credit:	
Residential	> 10 du/acre
Nonresidential	> .75 FAR
Minimums for 6 credits:	
Residential	> 63 du/acre
Nonresidential	> 3.0 FAR

Research and computation will be needed to compute the overall density and FAR of the district.

- B. LOCAL RESOURCES More work would be needed with the City or County GIS data to understand the built SF of existing buildings throughout the district. CURA MAP 3 demonstrates that much of the district's buildable land is within ¹/₄ mile of transit stop.
- C. USE IN GUIDELINES & INCENTIVES I think Residential Density (du/acre) & Nonresidential FAR (both exclude parking structures) are good ways to measure a project (how they contribute to Loring's performance – perhaps in the form of a setting minimums: Baselines needed:

a. Total Residential Units.

- b. Total Nonresidential Floor Area.
- c. Total Buildable Land.



NPD Credit 3 Mixed Use Neighborhood Centers

4 out of 4 credits

A. GENERAL NOTES – Cursory scan of CURA Map 18 reveals that Loring, which can be considered a 100% built community, has 19 or more diverse use within 50% of the districts residential uses. Especially when you consider that probably half of the districts density is cludtered within ¼ mile of Nicollet.

Also, the district is over 40 acres and so is also required to cluster diverse uses according to the credit requirements. This was not documented, but it is appraent that the district likely does comply, with clusters around the Loring Park office building, Nicollet, Nicollet Mall, Hennepin/Harmon, and the Fawkes Block.

Futhermore, it is required to comply with SLL Credit 3 – locations with reduced auto dependence – which the access to transit throughout the neighborhood satisfies likely very well. (We achieve those credits.)

- B. LOCAL RESOURCES Another pass at mapping the diverse use in the neighborhood could reveal even more uses – and greater variety. This data was well documented via GIS through the CURA study.
- C. USE IN GUIDELINES & INCENTIVES The analysis (CURA Map 18) reveals where the neighborhood centers are in the neighborhood – and begs the question if these centers could be improved in some ways – to either diversify or increase the uses that exist there. Some analysis of how these nodes are serviced by tranist whould also be done. In addition – these nodes may deserve some urban design analysis to see if they are ad hoc or designed to serve residents in the dsafest and most comfortable manner.

NPD Credit 4 Mixed Income Diverse Communities

4 out of 7 credits

Option 1:

Diversity of Housing Types (3 credits)

A. GENERAL NOTES – Cursory scan of CURA Map 19, and knowledge of the neighborhood reveals that Loring performs fairly well in both requirements of this credit:

Using the Simpson Diversity Index – which calculates the probablility that two randomly selected units will be of a differing size and building type, it is likely the district scorse highly, as there are quite a few differnet building types, and are fairly well distributed throughout many categories. 3 o3 creidts likely

- B. LOCAL RESOURCES This would be a lot of busy work but is possible to establish with some on the ground research and County tax data.
- D. USE IN GUIDELINES & INCENTIVES -Requiring a diversity of housing types within a residential or mixed use building is very important. Incentives can and should be set up to encourage housing diversity. Can the district improve? Yes - especially because it identifies itself as home to a great diversity as a strength. Quantifying and cultivating this diversity could be done using these metrics. New development could be rewarded for increasing the neighborhood's Simpson Diversity Index – but only if the neighborhood has this data on hand. Conversely - there could be specific types of units identified by such an analysis - and those types could be promoted proactively by the neighborhood.

Option 2:

Affordable Housing (3 credits)

A. GENERAL NOTES – Cursory scan of CURA Map 19, and knowledge of the neighborhood reveals that Loring performs



fairly well (neighborhod wide) in both requirements of this credit:

Three credits are awarded based on percentage thresholds of affordable units (5, 10 or 15%) at a sliding scale for Average Median Income (AMI) levels. For instance – 15 % at 60% AMI gets you 3 credits. A threshold to achieve one credit is 8% at 120% AMI – see table.

- B. LOCAL RESOURCES This would be a lot of busy work but is possible to establish with some on the ground research and County tax data and/or census data. Perfect for a graduate student paper or MCTC class group to take on. There are many local housing programs, the county, and nonprofits – even local developers, such as Aeon, that may see merit in assisting with this research.
- E. USE IN GUIDELINES & INCENTIVES -Requiring affordability within a residential or mixed use building is very important. Incentives can and should be set up to encourage housing affordability. Can the district improve? Yes - especially because it identifies itself as home to a great diversity as a strength. Quantifying and cultivating this diversity could be done using these metrics. New development could be rewarded for increasing the neighborhood's percentage of affordability according to AMI - but only if the neighborhood has this data on hand. Conversely - there could be specific types of units identified by such an analysis – and those types could be promoted proactively by the neighborhood.

It is estimated that Loring complies with at least one credit – but may earn more – there is typically always room to improve on affordability.

Option 3: Mixed Income Diverse Communities

(1 extra credit)

This is an extra credit awarded based on cumulative performance on Option 1 & 2. It is estimated that it is possible, but not definite, that Loring would quailify for this credit.

NPD Credit 5 Reduced Parking Footprint

1 out of 1 credits

- A. GENERAL NOTES Cursory scan of CURA Map 20 surface lots, reveals that Loring, This is another maybe for Loring – based on further documentation. The City policy bans the construction of new surface parking in downtown (include Loring). It is not clear whether Loring currently
- B. LOCAL RESOURCES CURA study generated good data – but not comprehensive, so further study should be done to carry out computations neighborhood wide. If credits stay focused on requirements of NEW projects, then Loring should do well, givne the policies on the books (salthough the 20% max parking lot coverage should be verified with zoning requirments.) The bike and car sharing spaces can be documented through organized on the ground survey work.
- C. USE IN GUIDELINES & INCENTIVES Study can be done to see whether existing zoning complies matches or exceeds these requirements. Public education could be developed, and incentives might be created for bike parkign and storage. Discussions with apratment managers and owners seemd open to this idea – as it could make units more marketable.

NPD Credit 6 Street Network 0 out of 2 credits

- A. GENERAL NOTES Portions of the neighborhoodd have high scores, others have lower, but with an overall intersection density of 175, Loring does not comply with any of the criedt requirements.
- B. LOCAL RÉSOURCES This was well documented by the CURA study.
- C. USE IN GUIDELINES & INCENTIVES 175 intersections /square mile should be set up as an overall permanent minimum for the



neighborhood. Incentives, or community goals, could be set up to increase the connectivity of the neighborhood – perhaps incentives tied to whether a project improves the connectivity or detracts.

NPD Credit 7 Transit Facilities

1 out of 1 credits

- A. GENERAL NOTES We comply with this credit due to the advanced network of existing and planned transit facilities including transit stops with posted schedules and bike racks.
- A. LOCAL RESOURCES Metro Transit, City of Minneapolis, DID.
- B. USE IN GUIDELINES & INCENTIVES -The provision of transit supportive facilities and/or integration of tranist stops within developments can and should be encouraged or incentivized. There is an opportunity to engage the streetcar improvements so that transit facilities are well developed and integrated within development. New streetscape projects are planned to be context sensitive and follow complete streets principles. (Loring Park is located in a City and County that is and has demonstrated increasing commitment to advancing multimodal transportation and transportation access in policy and in practice.

NPD Credit 8 Transportation Demand Management

0 out of 2 credits

- A. GENERAL NOTES We likely do not comply. Although the City has engaged Travel Demand Management, there is not a TDM plan specifically developed for the Loring Park Neighborhood (or it was not found in research.)
- B. LOCAL RESOURCES City of Minneapolis Public Works
- C. USE IN GUIDELINES & INCENTIVES Research needed on how the neighborhood

can develop a TDM plan (if necessary) for the neighborhood.

NPD Credit 9 Access to Civic & Public Spaces

1 out of 1 credits

- A. GENERAL NOTES The neighborhood is complaint. Documentation is needed to verify that enough dwelling units are within the allowed proximity for the neighborhood to comply with this credit.
- B. LOCAL RESOURCES A list of areas other than the park that qualify should be listed. Use City data to calculate the dwelling units.
- C. USE IN GUIDELINES & INCENTIVES The creation of additional small scale public spaces at voids within the neighborhood could achieve an Innovation in Design credit.

NPD Credit 10 Access to Recreation Facilities

1 out of 1 credits

- A. GENERAL NOTES The neighborhood is complaint. Many recreation facilities exist within Loring Park.
- B. LOCAL RESOURCES Listing recreation areas within the park that qualify as recreational. Identifying the facilities outside of the park that qualify.
- C. USE IN GUIDELINES & INCENTIVES -The addition of winter recreational spaces in the park would help to enhance this credit and possibly go towards reaching an Innovation in Design credit. Also there are opportunities here to add recreation



facilities that are not currently offered within the neighborhood.

NP&D Credit 11 Visitability and Universal Design

0 out of 1 credits

- A. GENERAL NOTES The credit is not achievable by a technicality. All new buildings are required to do this by code within the State of Minnesota thus it is already being achieved. Only states that do not require this by code will be eligible for this credit.
- B. LOCAL RESOURCES N/A
- C. USE IN GUIDELINES & INCENTIVES While this credit is not achievable opportunities for improvement exist.

NPD Credit 12 Community Outreach and Involvement

2 out of 2 credits

- A. GENERAL NOTES The neighborhood is complaint for both credits. This is something CLPC does right now. Option 1 is achievable and able to be documented. Option 2 has been done in the past and can be used in the future. Option 3 could be used in the event Option 1 or 2 cannot be documented properly.
- B. LOCAL RESOURCES CLPC Land Use Committee and Sub-Committees; CLPC Executive Coordinator, Jana Metge
- C. USE IN GUIDELINES & INCENTIVES N/A

NP&D Credit 13 Local Food Production

1 out of 1 credits

- A. GENERAL NOTES The neighborhood is complaint. For Option 3 the Nicollet Mall Farmer's Market should qualify with the ¹/₂ mile distance. The Minneapolis Farmer's Market should contribute for the north part of the neighborhood. In regards to Options 1 and 2 very little if any of these spaces exist right now. These spaces could be activated rather quickly. A number of initiatives are currently underway that may lead to this.
- B. LOCAL RESOURCES Draft of the City's Urban Agriculture document may illustrate what will be permitted and/or encouraged for Options 1 and 2. A comparative analysis of that document to option 1 and 2's stipulations should be done.
- C. USE IN GUIDELINES & INCENTIVES Ideas and opportunity sites for urban agriculture may be identified in the master plan.

NP&D Credit 14 Tree-Lined and Shaded Streets

0-2 out of 2 credits

- A. GENERAL NOTES The neighborhood may comply currently. Planting additional street trees at new or existing parcels will allow Option 1 and 2 to be achieved.
- B. LOCAL RESOURCES CURA report will document locations but not shading coverage of the canopies. City of Minneapolis Pedestrian Master Plan could be a resource to guide recommendations.
- C. USE IN GUIDELINES & INCENTIVES The master plan could make recommendations for locations where



additional street trees should be added. Additional documentation will be needed.

NP&D Credit 15 Neighborhood Schools

1 out of 1 credits

- D. GENERAL NOTES The neighborhood is complaint. Emerson school will remain for the near future. The Spanish Language Charter School and the Downtown FAIR schools both contribute. The walk-ability stipulations may be achieved by adding sidewalks at missing locations and by traffic control and calming measures.
- E. LOCAL RESOURCES Minneapolis School District; Emerson School, Spanish Charter School, Downtown FAIR School; City of Minneapolis Pedestrian Master Plan.
- F. USE IN GUIDELINES & INCENTIVES The pedestrian and traffic issues alluded to above may be dealt with in the master plan.



GIB

Green Infrastructure and Buildings



GIB Prerequisite 1 Certified Green Building We likely do not comply.

- A. GENERAL NOTES -Loring Park is currently not compliant with this credit. There are no green certified buildings within the neighborhood. Prereq requires new developments/existing redevelopments to seek a third party certification within LEED boundaries. It is applicable to Loring Park through the variety of certifications available; however, certifications earned pre-project do not achieve the Prereq. Loring Park must address potential for certification with developer/ landowner when new construction/ major renovation start to take place within the neighborhood.
- B. RESOURCES Loring Park Neighborhood, Minnesota USGBC Chapter, and Minnesota Green Communities
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed and encouraged at the neighborhood level considering it will tie in the sustainability goals of the Master Plan.

There may be costs impacts associated with completing the green certification.

GIB Prerequisite 2 Minimum Building Energy Efficiency We likely do not comply.

- A. GENERAL NOTES Loring Park is currently not compliant with this credit. Although a survey was not completed, it is assumed that existing homes will not be efficient enough to earn Energy Star rating for Homes. Prereq requires a minimum of 90% of project buildings to achieve 10%-12% improvement for new construction and 5%-8% improvement for renovations, and for new single family/multiunit residential 3 story buildings, they must meet ENERGY STAR. The final weight average of all buildings determines compliance. This is difficult to achieve in an old existing neighborhood and will require building owner and residents' commitment to modify buildings/ homes for compliance.
- B. LOCAL RESOURCES Loring Park Neighborhood, Minnesota USGBC Chapter, Minnesota Green Communities, and Energy Star. May also tap into utility companies such as Xcel Energy and CenterPoint for evaluation assistance.
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed and encouraged at the neighborhood level. There may be upfront initial costs associated with going with a more energy efficient system and equipment upgrades. May look to EPA, Xcel Energy and CenterPoint for incentives offered for upgrading home/building with more energy efficient strategies.

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GIB Prerequisite 3 Minimum Building Water Efficiency

We likely do not comply.

- A. GENERAL NOTES -Loring Park is currently not compliant with this credit. Although a survey was not completed, it is assumed that existing homes will not have all of the most current plumbing fixture technologies to meet the water savings minimum. Prereq requires a water savings reduction at 20% above code for new construction and a minimum of 90% of project buildings including Single/ Multifamily (under 3 stories) homes. This is a credit that can be retrofitted in most buildings and homes but will require some initial assessment and upfront costs.
- B. RESOURCES Loring Park Neighborhood, Minnesota USGBC Chapter, and Minnesota Green Communities.
- C. USE IN GUIDELINES or INCENTIVES: Credit could be addressed and encouraged at the neighborhood level. However, it may be difficult to enforce since land use approvals are not based on water fixture efficiencies.

GIB Prerequisite 4 Construction Activity Pollution Prevention

We likely comply.

- A. GENERAL NOTES Loring Park is compliant with this credit. Prereq requires a comprehensive stormwater management plan be implemented or in place. This should not be an issue for the neighborhood given local enforcement and regulatory policies.
- B. RESOURCES Mississippi Headwaters Watershed District, City of Minneapolis, USGBC, and Minnesota Green Communities
- C. USE IN GUIDELINES & INCENTIVES: Credit could be addressed at the neighborhood level. Review of stormwater best management practices.

GIB Credit 1 Certified Green Buildings 0 out of 5 credits

- A. GENERAL NOTES -Loring Park is currently not compliant with this credit. There are no green certified buildings within the Credit requires neighborhood. new developments/existing redevelopments to seek a third party certification within LEED boundaries. It is applicable to Loring Park through the variety of certifications available; however the scope of how much of Loring Park is going to depend on what gets proposed.
- B. RESOURCES Loring Park Neighborhood, Minnesota USGBC Chapter, and Minnesota Green Communities
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed and encouraged at the neighborhood level considering it will tie in the sustainability goals of the Master Plan. There may be costs impacts associated with completing the green certification and will vary depending on the percentage of neighborhood certified.

GIB Credit 2 Building Energy Efficiency 0 out of 2 credits

A. GENERAL NOTES -Loring Park is currently not compliant with this credit. Although a survey was not completed, it is assumed that existing homes will not be efficient enough to earn Energy Star rating for Homes. Credit requires a minimum of 90% of project buildings to achieve 18%-26% improvement for new construction and 14%-22% improvement for renovations, and for new single family/multiunit residential 3 story buildings, they must meet ENERGY STAR. The final weight average of all buildings determines compliance. This is difficult to achieve in an old existing neighborhood and will require building owner and residents'

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commitment to modify buildings/ homes for compliance.

- B. RESOURCES Loring Park Neighborhood, Minnesota USGBC Chapter, Minnesota Green Communities, and Energy Star. May also tap into utility companies such as Xcel Energy and CenterPoint for evaluation assistance.
- C. USE IN GUIDELINES & INCENTIVES -Credit could be used addressed and encouraged at the neighborhood level. There may be upfront initial costs associated with going with a more energy efficient system and equipment upgrades. May look to EPA, Xcel Energy and CenterPoint for incentives offered for upgrading home/building with more energy efficient strategies.

GIB Credit 3 Minimum Building Water Efficiency

0 out of 1 credit

- A. GENERAL NOTES Loring Park is currently not compliant with this credit. Although a survey was not completed, it is assumed that existing homes will not have the most current plumbing fixture technologies to meet the water savings minimum. Credit requires a water savings reduction at 40% above code for new construction and a minimum of 90% of project buildings including Single/ Multi-family (under 3 stories) homes. This is a credit that can be retrofitted in most buildings and homes but will require some initial assessment and upfront costs.
- B. RESOURCES Loring Park Neighborhood, Minnesota USGBC Chapter, and Minnesota Green Communities.
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed and encouraged at the neighborhood level. However, it may be difficult to enforce since land use approvals are not based on water fixture efficiencies.

GIB Credit 4 Water Efficient Landscaping

0-1 out of 1 credits

- A. GENERAL NOTES Loring Park is currently not compliant with this credit. Although a survey was not completed, it is assumed that existing buildings will need to modify their landscaping to comply. Credit applies to areas with minimally landscaped areas if the cover is at least 3% of the development footprint. Must demonstrate a 50% reduction In potable water use for irrigation. Use of native vegetation and stormwater best management practices are encouraged.
- B. RESOURCES ASLA, Loring Park Neighborhood, Minnesota USGBC Chapter, and Minnesota Green Communities.
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed and encouraged at the neighborhood level. Review of stormwater best management practices.

GIB Credit 5 Existing Building Use 0-1 out of 1 credits

- A. GENERAL NOTES Loring Park may be compliant with this credit but will require commitment from developer/ building owner for construction practices. Compliant if no historic buildings or cultural landscapes are And for project(s) rehabbed, must altered. achieve higher benchmark of 1) reuse 50% of one existing building structure or 2) 20% of all Loring Park has the Harmon buildings. Overlay District and would appear to have several historic buildings or cultural landscapes within the boundary. Most projects have been a renovation of an existing building within the neighborhood
- B. RESOURCES National Park Service, City of Minneapolis, Loring Park Neighborhood and Minnesota USGBC Chapter.



C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed and encouraged at the neighborhood level. However, the extent of the renovation and alteration may not be enforceable.

GIB Credit 6 Historic Resource Preservation and Adaptive Reuse

1 out of 1 credit likely

- A. GENERAL NOTES Loring Park is likely to be compliant with this credit. Compliant if no historic buildings or cultural landscapes are altered. Project will need to identify and document historic buildings or cultural landscapes. Buildings must apply for a local or federal designation or already be designated to be eligible for credit. Since Loring Park is in older neighborhood with rich architecture, documentation should be readily available at the neighborhood or city on which buildings are registered.
- B. RESOURCES National Park Service, City of Minneapolis, Loring Park Neighborhood and Minnesota USGBC Chapter.
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed at the neighborhood level, and brought to the attention of the Minneapolis Heritage Preservation Commission for further discussion.

GIB Credit 7 Minimized Site Disturbance in Design and Construction

1 out of 1 credit likely

A. GENERAL NOTES - Loring Park is likely to be compliant with this credit; compliant if the development footprint is on previously developed area and/or reducing the building footprints. Since the neighborhood is in an urban downtown context, all development will be on a previously developed area.

- B. RESOURCES Loring Park Neighborhood and Minnesota USGBC Chapter.
- C. USE IN GUIDELINES & INCENTIVES -Credit will likely not be an issue for discussion at project review or approvals.

GIB Credit 8 Stormwater Management 0 out of 4 credits

- A. GENERAL NOTES Loring Park is likely not to be in compliance since the neighborhood was built up over time and not to current stormwater standards. Compliant if the project retains 80% to 95% of rainfall events measured in volume. Requirements are met through implementing a comprehensive stormwater management plan.
- B. RESOURCES Mississippi Headwaters Watershed District, City of Minneapolis, USGBC, and Minnesota Green Communities
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed and encouraged at the neighborhood level. Review of stormwater best management practices.
- D. Additional Comments:

GIB Credit 9 Heat Island Reduction 0 out of 1 credit

A. GENERAL NOTES - Loring Park is likely not to be in compliance. Non-roof measures were built a long time ago. (Compliant if the project has either 50% of the non-roof site hardscape implementing certain strategies or for new projects, 75% of the roof must be green or high-reflectance.) Since the calculation for non-roof measures include roads and sidewalk, this option would be difficult to achieve. However; for new projects, a green or high-reflectance roof is a possibility.

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Loring Park Neighborhood Master Plan

- B. RESOURCES USGBC, Minnesota Green Communities, and Energy Star.
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed and encourage at the neighborhood level.

GIB Credit 10 Solar Orientation

0-1 out of 1 credit

- A. GENERAL NOTES Loring Park may be compliance. However; additional calculations will need to verify this. (Compliant if the project is located on existing blocks or designed to orient within 15% of the east-west axis for 75% of the blocks within the project. or design buildings at a 1:1.5 ratio within 15% along the east-west axis.) The neighborhood axis shifts throughout the neighborhood and may be restricted land use site plan review guidelines.
- B. RESOURCES Loring Park Neighborhood and City of Minneapolis
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed at the neighborhood level but is determined by existing site context.

GIB Credit 11 On-Site Renewable Energy Sources

0-3 out of 3 credits

- A. GENERAL NOTES Loring Park may be in compliance. However, additional calculations will need to verify this. (Compliant if the project provides 5% - 20% of the project's annual energy costs. Does not apply to existing buildings.) The Convention Center has photovoltaic panels on the roof but energy usage and savings have not been calculated.
- B. RESOURCES Loring Park Neighborhood, City of Minneapolis, Xcel Energy, EPA, Minnesota USGBC, and Minnesota Green Communities.

C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed and encouraged at the neighborhood level. Xcel Energy has a separate Solar Program for on-site renewable sources and could be a partner for future development.

GIB Credit 12 District Heating and Cooling 0 out of 2 credits

- A. GENERAL NOTES Loring Park is likely not in compliance with this credit. (Compliant if at least 80% of the project's annual energy heating and cooling is provided by a district plant. Does not apply to existing buildings or single family homes. There may be buildings within the neighborhood that are using district energy but each system component must exceed ASHRAE 90.1 2007 energy performance.) Given that this standard is more stringent than our state code, it is not likely the neighborhood is in compliance.
- B. RESOURCES Loring Park Neighborhood, City of Minneapolis, Xcel Energy, Minnesota USGBC, and Minnesota Green Communities.
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed at the neighborhood level. Xcel Energy has public utility energy programs that could assist in this credit.

GIB Credit 13 Infrastructure Energy Efficiency 0 out of 1 credit

A. GENERAL NOTES - Loring Park is likely not in compliance with this credit. (Compliant if new infrastructure (traffic lights, street lights, and water and wastewater pumps) achieves a 15% reduction in annual energy use.) Since all infrastructure is existing and has not been updated, this credit would be difficult to achieve without proper funds. Neighborhood



Loring Park Neighborhood Master Plan

will need to meet with Minneapolis Public Works if this is a direction they would like to pursue.

- B. RESOURCES City of Minneapolis and Minnesota USGBC.
- C. USE IN GUIDELINES & INCENTIVES -This credit is outside the realm for approvals since it deals with elements in the public right of way.

GIB Credit 14 Wastewater Management

0 out of 2 credits

- A. GENERAL NOTES Loring Park is likely not in compliance with this credit. (Compliant if 25% - 50% of the average annual wastewater is to be retained on site and reused to reduce potable water consumption on-site.) Current plumbing and building code standards may not allow for this to be implemented.
- B. RESOURCES City of Minneapolis and Minnesota USGBC
- C. USE IN GUIDELINES & INCENTIVES -Credit will likely not be an issue for discussion at project review or approvals.

GIB Credit 15 Recycled Content in Infrastructure

0 out of 1 credit

- A. GENERAL NOTES Loring Park is likely not in compliance with this credit. (Compliant if 50% of the total mass of new infrastructure is from post-consumer and pre-consumer recycled content.) Since the neighborhood is built out, the credit would not apply. Control of credit is controlled by a local municipal agency and will require early collaboration if this is a direction the neighborhood would like to pursue.
- B. RESOURCES MnDot, Hennepin County, City of Minneapolis, and Minnesota USGBC

C. USE IN GUIDELINES & INCENTIVES -Credit will likely not be an issue for discussion at project review or approvals.

GIB Credit 16 Solid Waste Management Infrastructure

0-1 out of 1 credit

- A. GENERAL NOTES Loring Park may be in compliance with this credit. However, calculations will need to be verified. (Compliant if the volume of waste is reduced is from landfills with at least four of the five following measures: at least one recycling/ reuse stations, at least one drop of point for hazardous waste, at least one compost station, at least one recycling container every 800 ft, or recycle/ salvage 50% of the construction debris.) Control of credit is controlled by a local municipal agency and will require early collaboration if this is a direction the neighborhood would like to pursue.
- B. RESOURCES MnDot, Hennepin County, City of Minneapolis, and Minnesota USGBC
- C. USE IN GUIDELINES & INCENTIVES -Credit will likely not be an issue for discussion at project review or approvals.

GIB Credit 17. Light Pollution Reduction 0 out of 1 credit

A. GENERAL NOTES - Loring Park is likely not in compliance with this credit. (Compliant if all of the measures are met: 50% of the exterior lights in residential areas have motion sensors to reduce light levels to 50% within 15 minutes of no activity, install automatic controls that turn off exterior lighting when daylight is available, meet light trepass requirements per zone and stipulate CC&R to require continued adherence.) Since the project covers a lot of building owners, developers, and residents, it would be very



Loring Park Neighborhood Master Plan

difficult to get commitment to get all of these measures implemented.

- B. RESOURCES City of Minneapolis, and Minnesota USGBC
- C. USE IN GUIDELINES & INCENTIVES -Credit could be addressed and encouraged at the neighborhood level.



Loring Park Neighborhood Master Plan

List of Ideas from Community Design Workshop

The following is a list of ideas generated by participants (three teams) at the January 22, 2011 Desgin Workshop coducted at Hennepin United Methodist Church. The brainstorming exercise on sustainable solutions was one of a circuit of three stations that engaged participants, and was faciliatated by Minneapolis Planning Commissioner Lauren Huynh.



Short Term Solutions

Team: Air Loring

- o Historic Architecture Sustained
- o Invest in green infrastructure such as locations for recharging electric vehicles
- o Dedicate parking for low-emitting vehicles and scooters
- More community gardens
- Greening the neighborhood
 - Container gardens
 - Green roofs
 - Window boxes
 - Motivating residents to do more
- o Walkable streets that are pedestrian friendly and safe
 - Improvements on LaSalle
- Adding more street trees
- o Improve energy and water efficiency
 - Replace windows and light bulbs
- o Improving Stormwater Practices
 - Addition of rain gardens
 - Provide information to residents on how to reduce stormwater runoff
- o CLPC Neighborhood Agreement and Sustainable Commitment from residents
- o Addition of Public Safety Center with police outpost
 - Max. two officers

Team: Walkability Inc

- Add green roof on the Hyatt hotel
- o Add visible public recycling stations around neighborhood



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- o Add sidewalks around perimeter of Loring Park
- Improve stormwater best management practices (BMPs) at the Mpls Convention Ctr and surface parking lots
- o Evaluation of properties for potential expansion of district energy
- o Improve walkability and safety for residents
- Provide more (energy efficient) lighting to improve walkability and safety
- Team: Loring United

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- Tap into local utility programs to help energy usage of older buildings in neighborhood
- o Climate friendly, low maintenance or no maintenance landscaping
- Increase vertical greening such as green walls
 - Provide recognition for neighborhood greening
 - Awards
- o Promote (correctly done) composting
 - Promote neighborhood rideshare program
 - Place on community website
- More trees in neighborhood
 - Street trees and in parks
 - Along 94/ Lyndale/ Henn.
 - Planting of mid-size trees that can provide shade in fewer years
- o Better lighting throughout the neighborhood
 - Minimize hot spots from parking ramps
 - Use colors that are more aesthetically pleasing for residents
 - Current LEDs has less than ideal color output
- o Increase urban agriculture/ community gardens in the city
 - Edible fruit trees in boulevard

Long Term Solutions

Team: Air Loring

- o Prioritize lots for future development
 - Along streetcar line
 - o Solar powered aerial tram from Loring Hill
 - o More green roofs

- o Rid of surface parking
- o Streetcar on Henn./ Nicollet
- o More diversity of housing using Danish model
 - Multi-generational
 - Co-housing model

Team: Walkability Inc

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- o Utilize more pervious pavers for surface parking and in pilot areas in neighborhood
- o Solar powered aerial tram from Loring Hill
- o Expanding district energy options
- o Nicollet Area LEED development/ new construction be LEED certified/certifiable
- o Improve building energy efficiency for existing buildings
- o Build parking ramp in Oak Grove
 - Utilize water efficient fixtures
 - Tied to remodeling



Loring Park Neighborhood Master Plan

Apartments/ residential dwellings

Team: Loring United

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- Increase building energy efficiency
- o Extend district energy to other more residents and building owners
- o Increase green by connecting to the Loring Park with the Sculpture Gardens
- o Increase connection improve on bikability/walkability
- Reduce use of single occupancy vehicles
- o Increase car sharing programs such as Hourcar
- o Increase building water efficiency
 - Plant more edible landscapes
 - Fruit and nut trees
- o Improve stormwater practices
 - Green roofs

Additional comments at wrap up for Table 3

- Expand downtown bus line boundary/ property
- Expand Hourcar program to all of Minneapolis
 - o Improve traffic in Loring Park



Notes from Workgroup Meeting - March 2011

Strengths Identified by LEED-ND Credit:

SLL 1 - Smart Location SLL Credit 1 - Preferred Locations SLL Credit 3 - Locations with Reduced Automobile Dependence* SLL Credit 5 - Housing & Jobs Proximity NPD Prerequisite - Walkable Streets A, B*, C, D (most of neighborhood) NPD Prereq 2 - Compact Development NPD Prereq 3 - Connected and Open Community (most areas) NPD Credit 1 - Walkable Streets A, D, I*, J*, K, L*, M, P* NPD Credit 2 NPD Credit 3 NPD Credit 4 - Mixed Income Diverse Communities NPD Credit 6 NPD Credit 7 NPD Credit 9 NPD Credit 10 NPD Credit 11* - mandated by state, but room for some improvement NPD Credit 12 NPD Credit 13 – farmers market NPD Credit 14 - in general NPD Credit 15

GIB Credit 5 - Existing Building Reuse – also threat GIB Credit 6 - Preservation – also threatening

Weaknesses & Opportunities for Improvement* Identified by LEED-ND Credit:

SLL Credit 4 - Bicycle Network* & Storage*
SLL Credit 7 & 8 – Site Habitat & Wetlands Restoration
SLL Credit 9 – Long term Habitat/wetlands Conservation Management
NPD Prerequisite 1 – Walkable Streets
D (specific areas – Convention Center, MCTC, Parking Ramp, Hyatt, LaSalle)
NPD Prereq 3 – Connected and Open Community

– Loring Hill, LaSalle & Greenway, Convention

Center, MCTC vacation of Harmon Place (careful!), Freeway edge from LaSalle to Nicollet NPD Prerequisite - Walkable Streets NPD Credit 1 - Walkable Streets D (Grant @ Hyatt, LaSalle, 1st), F-G-H (blocked up where they exist...like on Harmon, Grant, others), G 9 Convention Center, etc), N-O (15th west of Willow, east of Nicollet, because of snow plows, Groveland, Harmon, Willow) NPD Credit 5 - Reduced Parking Footprint NPD Credit 8- TDM NPD Credit 13 - neighborhood farms & gardens, CSA's? NPD Credit 14 - Harmon, Grant, 15th, LaSalle -City planting program - CURA report GIB Prereq 1 & C1 – Green Buildings GIB Prereq 2 & C2 – Energy GIB Prereq 3 & C3 – Water Efficiency GIB Credit 4 – Water Efficient Landscaping GIB Credit 9 - Heat Island Reduction GIB Credit 11 – On-Site Renewable Energy GIB Credit 12 - District Heating & Cooling expand district heating (steam) - * Beth? Expand? - is it strength? What other ways can we develop this? GIB Credit 13 – Infrastructure Energy Efficiency GIB Credit 14 - Wastewater Management GIB Credit 15 – Recycled Content in Infrastructure GIB Credit 16 0- Solid Waste Management -GIB Credit 17 - Light Pollution Reduction, Quality & Amount of Lighting balanced with Public Safety - character - sensors?

(* Opportunities for Improvement)

References Identified:

Chris Backes, Public Works, Property Development – Jose Cervantes – Director of Building Services, Greg Geoke & Paul Miller – Property Services

Scoring Changes Identified:

SLL credit 7 – maybe SLL credit 8 – no SLL credit 9 - maybe

Citizens for a Loring Park Community <u>www.loringpark.org</u> 612-874-9002 <u>clpcloring@gmail.com</u> PETER MUSTY LLC Page **31** of 32



Recommended Master Plan Policies

The following are three key recommendations of the workgroup:

#1 Leverage Strengths

Several important 'high scoring' characteristics of the Loring Park Neighborhood are unique in the region, and give the district a competitive advantage in attracting and maintaining investment. There should be organized efforts to preserve, enhance and promote them:

- Location & Access
- Walkable (Internal) Street Network
- Compact Pattern
- Housing Diversity

#2 Explore Opportunities for Improvement

There are several categories of sustainability* where the neighborhood can most easily improve its sustainability performance:

- Energy Efficiency Building & Infrastructure
- District & On-Site Energy Sources
- Water Efficiency of Buildings & Infrastructure
- Stormwater Management
- Walkability at Neighborhood Perimeter
- Reduction of Surface Parking
- Greenery
- Community Gardening & Local Food Sources

#3 Set High Standards

Explore possibilities of certification in LEED–ND US Green Building Council (USGBC)'s LEED for Neighborhood Development (LEED-ND) Rating System (http://www.usgbc.com/leed/nd) through one of two avenues;

- a) 'Small Area Plan' pilot
- b) 'Existing Neighborhood' pilot

Further utilize the LEED-ND rating system as a framework to:

- periodically gauge neighborhood wide performance and progress toward sustainability goals
- set in place (or augment) design guidelines or to set parameters for private project review and approval, or to gauge the merits of specific capital improvement projects
- structure performance criteria for various incentives

 preparation for government grants or other support from agencies that are familiar with LEED-ND rating system or that directly utilize LEED-ND standards as performance criteria

INTRODUCTION

I. THE CASE FOR GREEN NEIGHBORHOOD DEVELOPMENTS

As the U.S. population continues to expand rapidly, consumption of land grows exponentially—currently, three times the rate of population growth. At this breathtaking pace, two-thirds of the development on the ground in 2050 will be built between now and then.¹ The way we grow—especially how and where we grow—will have a profound effect on our planet and on us.

Land use and neighborhood design patterns create a particular physical reality and compel behaviors that have a significant effect on the environmental performance of a given place. Segregated land uses accessed by highspeed roadways that necessitate the use of cars have been the predominant development pattern over the past 50 years. In the United States, transportation accounts for roughly one-third of greenhouse gas emissions, a large portion of which can be attributed to personal automobile use.² Burning fossil fuels for transportation increases air pollution and related respiratory diseases. Automobile-oriented neighborhoods tend to be hostile to pedestrians and unsupportive of traditional mixed-use neighborhood centers. Sprawling development patterns fragment habitat, endanger sensitive land and water bodies, destroy precious farmland, and increase the burden on municipal infrastructure.

In contrast, by placing residences and jobs proximate to each other, thoughtful neighborhood planning and development can limit automobile trips and the associated greenhouse gas emissions. Mixed-use development and walkable streets encourage walking, bicycling, and public transportation for daily errands and commuting. Environmentally responsible buildings and infrastructure are an important component of any green neighborhood, further reducing greenhouse gas emissions by decreasing energy consumption. Green buildings and infrastructure also lessen negative consequences for water resources, air quality, and natural resource consumption.

Green neighborhood developments are beneficial to the community and the individual as well as the environment. The character of a neighborhood, including its streets, homes, workplaces, shops, and public spaces, significantly affects the quality of life. Green neighborhood developments enable a wide variety of residents to be part of the community by including housing of varying types and price ranges. Green developments respect historical resources and the existing community fabric; they preserve open space and encourage access to parks. Green buildings, community gardens, and streets and public spaces that encourage physical activity are beneficial for public health. Combine the substantial environmental and social benefits and the case for green neighborhoods makes itself.

II. LEED[®] RATING SYSTEMS

Background on LEED®

Following the formation of the U.S. Green Building Council (USGBC) in 1993, the organization's members quickly realized that the sustainable building industry needed a system to define and measure "green buildings." USGBC began to research existing green building metrics and rating systems. Less than a year after formation, the members acted on the initial findings by establishing a committee to focus solely on this topic. The composition of the committee was diverse; it included architects, real estate agents, a building owner, a lawyer, an environmentalist, and

¹ Reid Ewing, Keith Bartholomew, Steve Winkelman, Jerry Walters, and Don Chen, *Growing Cooler: The Evidence on Urban Development and Climate Change* (Washington, D.C.: Urban Land Institute, 2008).

^{2 &}quot;Greenhouse Gases, Climate Change, and Energy" (Energy Information Administration, May 2008).

industry representatives. This cross section of people and professions added a richness and depth both to the process and to the ultimate product, the Leadership in Energy and Environmental Design (LEED) certification system.

The first LEED Pilot Project Program, also referred to as LEED Version 1.0, was launched at the USGBC Membership Summit in August 1998. After extensive modifications, LEED Green Building Rating System Version 2.0 was released in March 2000, with LEED Version 2.1 following in 2002 and LEED Version 2.2 following in 2005.

As LEED has evolved and matured, the program has undertaken new initiatives. In addition to a rating system specifically devoted to building operational and maintenance issues (LEED for Existing Buildings: Operations & Maintenance), LEED addresses the different project development and delivery processes that exist in the U.S. building design and construction market, through rating systems for specific building typologies, sectors, and project scopes: LEED for Core & Shell, LEED for New Construction, LEED for Schools, LEED for Retail, LEED for Healthcare, LEED for Homes, and LEED for Commercial Interiors. LEED for Neighborhood Development is the latest LEED certification system to be released.

The green building and neighborhood development field is growing and changing daily. New technologies and products are being introduced into the marketplace, and innovative designs and practices are proving their effectiveness. The LEED rating systems and reference guides will evolve as well. Project teams must comply with the version of the rating system that is current at the time of their registration. USGBC will highlight new developments on its website on a continual basis, at <u>www.usgbc.org</u>.

Background on LEED for Neighborhood Development

The U.S. Green Building Council (USGBC), the Congress for the New Urbanism (CNU), and the Natural Resources Defense Council (NRDC)—organizations that represent leading design professionals, progressive builders and developers, and the environmental community—have come together to develop a rating system for neighborhood planning and development based on the combined principles of smart growth, New Urbanism, and green infrastructure and building. The goal of this partnership is to establish a national leadership standard for assessing and rewarding environmentally superior green neighborhood development practices within the framework of the LEED[®] Green Building Rating System[™].

Unlike other LEED rating systems, which focus primarily on green building practices and offer only a few credits for site selection and design, LEED for Neighborhood Development places emphasis on the site selection, design, and construction elements that bring buildings and infrastructure together into a neighborhood and relate the neighborhood to its landscape as well as its local and regional context. The work of the LEED-ND core committee, made up of representatives from all three partner organizations, has been guided by sources such as the Smart Growth Network's ten principles of smart growth, the charter of the Congress for the New Urbanism, and other LEED rating systems. LEED for Neighborhood Development creates a label, as well as guidelines for both decision making and development, to provide an incentive for better location, design, and construction of new residential, commercial, and mixed-use developments.

Whereas the other LEED rating systems have five environmental categories, LEED for Neighborhood Development has three: Smart Location and Linkage, Neighborhood Pattern and Design, and Green Infrastructure and Buildings. An additional category, Innovation and Design Process, addresses sustainable design and construction issues and measures not covered under the three categories. Regional bonus credits are another feature of LEED-ND. These credits acknowledge the importance of local conditions in determining best environmental design and construction practices as well as social and health practices.

The LEED 2009 minimum program requirements define the minimum characteristics that a project must possess to be eligible for certification under LEED 2009. These requirements do not apply to LEED for Neighborhood Development projects.

LEED Credit Weightings

In LEED 2009, the allocation of points among credits is based on the potential environmental impacts and human benefits of each credit with respect to a set of impact categories. The impacts are defined as the environmental or human effect of the design, construction, operation, and maintenance of the building, such as greenhouse gas emissions, fossil fuel use, toxins and carcinogens, air and water pollutants, and indoor environmental conditions. In the LEED for Neighborhood Development Rating System, social and public health benefits were added to the impact categories, and the impact categories were then applied at the neighborhood scale. A combination of approaches, including energy modeling, life-cycle assessment, and transportation analysis, is used to quantify each type of impact. The resulting allocation of points among credits is called credit weighting.

LEED 2009 uses the U.S. Environmental Protection Agency's TRACI³ environmental impact categories as the basis for weighting each credit. TRACI was developed to assist with impact evaluation for life-cycle assessment, industrial ecology, process design, and pollution prevention. LEED 2009 also takes into consideration the weightings developed by the National Institute of Standards and Technology (NIST); these compare impact categories with one another and assign a relative weight to each. Together, the two approaches provide a solid foundation for determining the point value of each credit in LEED 2009.

The LEED 2009 credit weightings process is based on the following parameters, which maintain consistency and usability across rating systems:

- All LEED credits are worth a minimum of 1 point.
- All LEED credits are positive, whole numbers; there are no fractions or negative values.
- All LEED credits receive a single, static weight in each rating system; there are no individualized scorecards based on project location.
- All LEED rating systems have 100 base points; Innovation and Design Process and Regional Priority credits provide opportunities for up to 10 bonus points.

Given the above criteria, the LEED 2009 credit weightings process involves three steps for LEED for Neighborhood Development:

- 1. A reference neighborhood is used to estimate the environmental impacts in 15 categories associated with a typical neighborhood development pursuing LEED certification.
- 2. The relative importance of neighborhood impacts in each category is set to reflect values based on the NIST weightings.⁴
- 3. Data that quantify neighborhood impacts on environmental and human health are used to assign points to individual credits.

Each credit is allocated points based on the relative importance of the neighborhood-related impacts that it addresses. The result is a weighted average that combines neighborhood impacts and the relative value of the impact categories. Credits that most directly address the most important impacts are given the greatest weight, subject to the system design parameters described above. Credit weights also reflect a decision by LEED to recognize the market implications of point allocation.

The details of the weightings process vary slightly among individual rating systems. For example, LEED for Neighborhood Development includes credits related to infill development but LEED for New Construction does not. This results in a difference in the portion of the environmental footprint addressed by each rating system and the relative allocation of points.

³ Tools for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI) (U.S. Environmental Protection Agency, Office of Research and Development, <u>http://www.epa.gov/nrmrl/std/sab/traci/)</u>.

⁴ Relative impact category weights based on an exercise undertaken by NIST (National Institute of Standards and Technology) for the BEES program, <u>http://www.bfrl.nist.gov/oae/software/bees/</u>.

The weightings process for each rating system is fully documented in a weightings workbook. The credit weightings process will be reevaluated over time to incorporate changes in values ascribed to different neighborhood impacts and neighborhood types, based on both market reality and evolving knowledge related to buildings and neighborhood design. A complete explanation of the LEED credit weightings system is available on the USGBC website, at www.usgbc.org.

III. OVERVIEW AND PROCESS

The LEED 2009 for Neighborhood Development Rating System is a set of performance standards for certifying the planning and development of neighborhoods. The intent is to promote healthful, durable, affordable, and environmentally sound practices in building design and construction.

Prerequisites and credits in the rating system address five topics:

- Smart Location and Linkage (SLL)
- Neighborhood Pattern and Design (NPD)
- Green Infrastructure and Buildings (GIB)
- Innovation and Design Process (IDP)
- Regional Priority Credit (RPC)

When to Use LEED for Neighborhood Development

The LEED for Neighborhood Development Rating System responds to land use and environmental considerations in the United States. It is designed to certify exemplary development projects that perform well in terms of smart growth, urbanism, and green building. Projects may constitute whole neighborhoods, portions of neighborhoods, or multiple neighborhoods. There is no minimum or maximum size for a LEED-ND project, but the core committee's research has determined that a reasonable minimum size is at least two habitable buildings and that the maximum area that can appropriately be considered a neighborhood is 320 acres, or half a square mile. A project larger than 320 acres is eligible but may find documenting certain credits difficult and may want to consider dividing the area into separate LEED-ND projects, each smaller than 320 acres. Although projects may contain only a single use, typically a mix of uses will provide the most amenities to residents and workers and enable people to drive less and safely walk or bike more. Small infill projects that are single use but complement existing neighboring uses, such as a new affordable-housing infill development in a neighborhood that is already well served by retail and commercial uses, are also good candidates for certification.

This rating system is designed primarily for the planning and development of new green neighborhoods, whether infill sites or new developments proximate to diverse uses or adjacent to connected and previously developed land. Many infill projects or projects near transit will be in urban areas, which helps direct growth into places with existing infrastructure and amenities. LEED-ND also promotes the redevelopment of aging brownfield sites into revitalized neighborhoods by rewarding connections beyond the site, walkable streets within the site, and the integration of any historic buildings and structures that will give the new neighborhood development a unique sense of place.

Existing neighborhoods can also use the rating system, and its application in this context could be especially beneficial in urban areas and historic districts. It is, however, important to point out that the owner or owners applying for certification should already own, have title to, or have significant control over a majority of the land within the project boundary and the plan for new construction or major renovation for the majority of the project's square footage. The new construction could take place on vacant land within the boundary, and the major renovations could involve existing buildings, recent or historic, within the project. In addition to guiding infill development opportunities, LEED-ND has additional relevance for existing neighborhoods, as a tool to set

performance levels for a group of owners wanting to retrofit their homes, offices, or shops, and finally for shaping new green infrastructure, such as sidewalks, alleys, and public spaces. Many prerequisites or credits have a specific compliance path for existing buildings; this is highlighted in the rating system, and more detail is provided in the reference guide.

LEED-ND also can be used in suburban locations. There are tremendous opportunities to retrofit the suburbs, whether this involves reviving old shopping centers and their surrounding parking lots or adding new units and vibrant walkable town centers to existing subdivisions. Increasingly, many suburbs are well served by transit and thus should be considered good candidates for creating mixed-use, walkable developments with the potential to decrease residents' and workers' dependence on personal automobiles.

LEED for Neighborhood Development was not designed as a rating system for existing campuses, such as colleges, universities, and military bases. Many campuses have circulation patterns and building forms and placement that differ from the strategies outlined in LEED-ND. As a result, the rating system may not be appropriate for such facilities, but it could be applied in certain situations. For example, LEED-ND could be used for a civilian-style development on or adjacent to a military base, especially now that there is increased interest in developing mixed-use main streets as a focal point for new residential development in military bases. In addition, with many installations facing closure under the Base Realignment and Closure Act, LEED-ND could be used to guide the redevelopment of a base as it finds a new use. For colleges and universities, the program best lends itself to campuses that are expanding or undergoing major redevelopment. Increasingly, many universities are creating mixed-use development projects, often with local partners, to serve as catalytic projects in their communities, and LEED-ND could be a good framework and certification tool. Some universities are looking to their own campus lands for new development opportunities, particularly for housing that is affordable to faculty and staff but also walkable to campus and other amenities, and LEED-ND may be appropriate.

LEED for Neighborhood Development is not meant to be a national standard that replaces zoning codes or comprehensive plans, nor has it been designed to certify sector plans or other policy tools. Local development patterns and performance levels vary greatly across the country because land regulation is largely controlled by local governments. One city may be a leader in stormwater management, and another an innovator in traffic calming, but neither may be advanced in all areas covered by LEED-ND. The rating system should therefore not be considered a one-size-fits-all policy tool. Instead, LEED-ND is a voluntary leadership standard, and local governments should consider promoting its use by the development community or public-private partnerships. In addition, LEED-ND can be used to analyze whether existing development regulations, such as zoning codes, development standards, landscape requirements, building codes, or comprehensive plans are "friendly" to sustainable developments. By comparing a locality's development practices with the rating system, public officials and the planning department can better identify code barriers that make it onerous, costly, or even impossible to undertake some aspects of sustainable development. Finally, public sector projects (e.g., those sponsored by housing authorities, redevelopment agencies, or specialized development authorities) are eligible to use the rating system. Please visit the LEED for Neighborhood web page at <u>www.usgbc.org</u> for LEED-ND policy guidance for state and local governments.

"Neighborhood Development," Defined

Based on research on the origins of neighborhood design and current best practices for locating and designing new development, the LEED for Neighborhood Development core committee has developed a rating system for smart, healthy, and green neighborhood development. Although LEED-ND does not strictly define what constitutes a neighborhood, the prerequisites and credits are written to encourage a type of development that recalls the siting and design of traditional neighborhoods and promotes best practices in new neighborhood development today.

Since ancient times, cities around the world have been spatially divided into districts or neighborhoods. Excavations of some of the earliest cities reveal evidence of social neighborhoods. Urban scholar Lewis Mumford noted that "neighborhoods, in some primitive, inchoate fashion exist wherever human beings congregate, in permanent family dwellings; and many of the functions of the city tend to be distributed naturally—that is, without any theoretical preoccupation or political direction—into neighborhoods."⁵ In basic terms, a neighborhood is an area of dwellings, employment, retail, and civic places and their immediate environment that residents and/or employees identify with in terms of social and economic attitudes, lifestyles, and institutions.

A neighborhood can be considered the planning unit of a town. The charter of the Congress for the New Urbanism characterizes this unit as "compact, pedestrian-friendly, and mixed-use."⁶ By itself the neighborhood is a village, but combined with other neighborhoods it becomes a town or a city. Similarly, several neighborhoods with their centers at transit stops can constitute a transit corridor. The neighborhood, as laid out in LEED-ND, is in contrast to sprawl development patterns, which create podlike clusters that are disconnected from surrounding areas. Existing and new traditional neighborhoods provide an alternative to development patterns that characterize sprawl, such as the single-zoned, automobile-dominated land uses that have been predominant in suburban areas since the 1950s. Instead, traditional neighborhoods meet all those same needs—for housing, employment, shopping, civic functions, and more—but in formats that are compact, complete, and connected, and ultimately more sustainable and diverse.⁷ The metrics of a neighborhood vary in density, population, mix of uses, and dwelling types and by regional customs, economies, climates, and site conditions. In general, they include size, identifiable centers and edges, connectedness with the surroundings, walkable streets, and sites for civic uses and social interaction.

Size is a defining feature of a neighborhood and is typically based on a comfortable distance for walking from the center of the neighborhood to its edge; that suggests an area of 40 to 160 acres. In the 1929 Regional Plan of New York and Environs, urban planner Clarence Perry outlined a neighborhood center surrounded by civic uses, parks, residential uses, a school, and retail at the edge, all within one-quarter mile—about a 5-minute walk. This amounts to an area or pedestrian "shed" of 125 acres, or if the land area is a square, 160 acres. Although Perry's diagram does not address many of the sustainable features of LEED-ND, such as access to multimodal transportation options, location of infrastructure, and building form, it serves as a reference point for the mix of uses and walkable scale of neighborhood development encouraged in the rating system. Most people will walk approximately one-quarter mile (1,320 feet) to run daily errands; beyond that, many will take a bicycle or car. Additional research shows that people will walk as far as a half-mile (2,640 feet) to reach heavy rail transit systems or more specialized shops or civic uses.⁸ Since half a square mile contains 320 acres, the core committee has decided that this size should serve as guidance for the upper limit of a LEED-ND project.

7 Ibid

8 H. Dittmar and G. Ohland, eds., The New Transit Town: Best Practices in Transit-Oriented Development (Washington, D.C.: Island Press, 2004), p. 120.

⁵ Lewis Mumford, "The Neighbourhood and the Neighbourhood Unit," Town Planning Review 24 (1954): 256-270, p. 258.

⁶ Charter of the Congress for the New Urbanism, <u>www.cnu.org/charter</u>, 1996.

Figure 1. Clarence Perry's Neighborhood Unit, 1929. Source: Regional Plan Association



Figure 2. A "sustainable" update of Perry's

neighborhood unit. Source: Douglas Farr,

A neighborhood should have places where the public feels welcome and encouraged to congregate, recognizable as the heart of the community. A proper center has at least one outdoor public space for this purpose, designed with pedestrians in mind; this is the most well-defined outdoor "room" in the neighborhood. The best centers are within walking distance of the primarily residential areas, and typically some gradient in density is discernible from center to edge. The "center" need not be in the geographic center of the neighborhood; it can be along the edge, on an arterial or transit line. It is important for a neighborhood to have boundaries as well as a defined center, and this characteristic is often achieved through identifiable edges, either man-made or natural, such as adjacent farmland, parks, greenways, schools, major rights-of-way, or other uses.

When a neighborhood has a robust network of internal streets and good connections to surrounding communities, pedestrians, bicyclists, and drivers can move more efficiently and more safely. Multiple intersections and short blocks also give pedestrians a more interesting environment. The maximum average block perimeter to achieve an integrated network is 1,500 feet, with a maximum uninterrupted block face of ideally no more than 450 feet; intersecting streets are placed at intervals of 500 to 600 feet, and no greater than 800 feet apart along any single stretch.

The morphology of a sustainable neighborhood—the design of its blocks, streets, and buildings—can serve as the foundation of a walkable environment. Walkable streets have many features, and those elements deemed most important by the core committee are encouraged by the LEED-ND Rating System. These features, such as human-scaled buildings and street widths, wide sidewalks, buildings that are pulled up to the sidewalk to create a continuous street wall, retail storefronts and other uses, and interesting street furniture and trees, are meant to create a safe, inviting, and well-used public realm with visual interest. To keep loading docks, garage openings, and utilities away from sidewalks, neighborhoods with walkable streets often feature alleys.



Figure 3. Examples of neighborhood morphology. Source: Douglas Farr, Sustainable Urbanism

A mix of uses is often integral to the vitality of a neighborhood; the mix can include not only residential and commercial but also a variety of retail establishments, services, community facilities, and other kinds of "diverse uses," whether available within the neighborhood or adjacent. Urban theorist Ray Oldenburg would classify diverse uses as "Third Places"—small neighborhood grocers, coffee shops, pubs, or post offices that allow residents and workers to mingle and have social interactions. A mix of active and diverse retail uses on a walkable street can create a place that is alive day and night, and not closed down at 6 p.m.

Existing neighborhoods have the added benefit of historic buildings and events with cultural significance. Jane Jacobs argued that every neighborhood needed a mixture of newer and older buildings to allow for a variety of uses, income levels, and even ideas within the neighborhood.⁹ New neighborhoods can bring some of the architectural diversity found in existing neighborhoods by including a mix of uses and housing types, each of which might need a different building type and design, thus generating visual interest. Finally, placing important civic buildings, such as churches, libraries, schools, or local government buildings at the termination of a street can create civic pride and also an interesting vista for pedestrians. With a focus on civic buildings and gathering places and the pedestrian experience in general, it is no surprise that walkable neighborhoods are often defined by the social interaction among people living and working near one another.

In conclusion, LEED for Neighborhood Development emphasizes the creation of compact, walkable, vibrant, mixed-use neighborhoods with good connections to nearby communities. In addition to neighborhood morphology, pedestrian scale, and mix of uses, the rating system also emphasizes the location of the neighborhood and the performance of the infrastructure and buildings within it. The sustainable benefits of a neighborhood increase when it offers proximity to transit and when residents and workers can safely travel by foot or bicycle to jobs, amenities,

9 Jane Jacobs, The Death and Life of Great American Cities (New York: Random House, 1961), p. 187.

and services. This can create a neighborhood with a high quality of life and healthy inhabitants. Likewise, green buildings can reduce energy and water use, and green infrastructure, such as landscaping and best practices to reduce stormwater runoff, can protect natural resources. Together, well-located and well-designed green neighborhood developments will play an integral role in reducing greenhouse gas emissions and improving quality of life.

Certification

To earn LEED certification, the applicant project must satisfy all the prerequisites and qualify for a minimum number of points to attain the project ratings listed below. Having satisfied the basic prerequisites of the program, applicant projects are then rated according to their degree of compliance within the rating system.

LEED for Neighborhood Development certifications are awarded according to the following scale:

Certified	40–49 points
Silver	50–59 points
Gold	60–79 points
Platinum	80 points and above

Stages of Certification

LEED for Neighborhood Development involves projects that may have significantly longer construction periods than single buildings, and as a result the standard LEED certification process has been modified. To provide developers of certifiable projects with conditional approval at an early stage, LEED 2009 for Neighborhood Development certification is divided into a three-stage process. A land-use entitlement, referred to below, is the existing or granted right to use property for specific types and quantities of residential and nonresidential land uses.

Stage 1. Conditional Approval of a LEED-ND Plan. This stage is optional for projects at any point before the entitlement process begins, or when no more than 50% of a project's total new and/or renovated building square footage has land-use entitlements to use property for the specific types and quantities of residential and nonresidential land uses proposed, either by right or through a local government regulatory change process. Projects with more than 50% of new and/or renovated square footage already entitled must complete the local entitlement process for 100% of new and/or renovated square footage and apply under Stage 2. If conditional approval of the plan is achieved, a letter will be issued stating that if the project is built as proposed, it will be eligible to achieve LEED for Neighborhood Development certification. The purpose of this letter is to help the developer build a case for entitlement among land-use planning authorities, as well as attract financing and occupant commitments.

Stage 2. Pre-Certified LEED-ND Plan. This stage is available after 100% of the project's total new and/or renovated building square footage has been fully entitled by public authorities with jurisdiction over the project. The project can also be under construction or partially completed, but no more than 75% of the total square footage can be constructed; projects that are more than 75% constructed must finish and use Stage 3. Any changes to the conditionally approved plan that could affect prerequisite or credit achievement must be communicated as part of this submission. If precertification of the plan is achieved, a certificate will be issued stating that the plan is a Pre-Certified LEED for Neighborhood Development Plan and it will be listed as such on the USGBC website.

Stage 3. LEED-ND Certified Neighborhood Development. This final step takes place when the project can submit documentation for all prerequisites and attempted credits, and when certificates of occupancy for buildings and acceptance of infrastructure have been issued by public authorities with jurisdiction over the project. Any changes to the Pre-Certified LEED-ND Plan that could affect prerequisite or credit achievement must be communicated as part of this submission. If certification of the completed neighborhood development is achieved, a plaque or similar award for public display at the project site will be issued and it will be listed as certified on the USGBC website.

Since the location of a project cannot be changed, whereas its design and technologies can, a review is offered to determine a project's compliance with the Smart Location and Linkage (SLL) prerequisites and inform the team whether the location qualifies. If it does, a project team can proceed; if it doesn't, the team can end its participation in the program before investing more time. This optional review of the SLL prerequisites is available to projects in advance of a Stage 1, Stage 2, or Stage 3 application.

IV. EXEMPLARY PERFORMANCE

Exemplary performance strategies result in performance that greatly exceeds the performance level or expands the scope required by an existing credit. To earn an exemplary performance point, teams must meet the performance level defined by the next step in the threshold progression. For a credit with more than one compliance path, an Innovation and Design Process point can be earned by satisfying more than one compliance path if their benefits are additive.

The credits for which exemplary performance points are available are listed in the LEED Reference Guide for Green Neighborhood Development, 2009 Edition.

V. REGIONAL PRIORITY

To provide incentive to address geographically specific environmental issues, USGBC regional councils and chapters, the Congress for the New Urbanism chapters, and representatives of Smart Growth America's State and Local Caucus have identified 6 credits per rating system that are of particular importance to specific areas. Each Regional Priority credit is worth an additional 1 point, and a total of 4 additional points may be earned by achieving Regional Priority credits, with 1 point earned per credit. If the project achieves more than 4 Regional Priority credits, the team can choose the credits for which these points will apply. The USGBC website contains a searchable database of Regional Priority credits.