Normal Avenue Neighborhood Plan – Sustainability Framework

The City of Ashland is committed to the development of a vibrant livable community. The following table provides an overview of a methodological framework derived from the US Green Building Council's LEED rating system for Neighborhood Development. The framework of the LEED ND system (as modified for Ashland) will require integrated consideration of land use, transportation, and environmental tasks and analyses. For example, walkable streets require certain ingredients including sidewalks, traffic calming, urban design, multi-modalism, etc.

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)

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 help direct growth into places with existing infrastructure and amenities.

The LEED ND rating system provides more evaluation criteria than would be appropriate for this project and that could be included as zoning code performance standards to help streamline applications that meet some or all of the criteria. The final development of any land use criteria addressing sustainability will occur in conjunction with the development of the preferred site concept to insure the criteria can be met in an economical manner.

The table provides the name of the credit, the points that the rating system assigns to each, altered to fit Ashland, and how the credit might help inform the project.

Dark Orange items are streetscape and urban design considerations, to be applied in design of housing units, parking, and to be featured in renderings.					
Light Orange items are transportation network and concept planning considerations, to be applied in land use and transportation planning.					
LEED ND rating system framework for application in the City of Ashland, Normal Avenue Plan					
Credit Number	**Credit Title**	**Application for Ashland**			**USGBC points**
		Priority	**Test**	**Other**	
Neighborhood Pattern and Design					
Credit 1	Walkable Streets	13	a) functional entrance faces public space (street, square, park, plaza) and is connected with sidewalks, for 90% new bldg frontage; b) new street frontage min 1:3 bldg height-street ratio; c) continuous 4'/8'walks along both sides of 90% street frontage; d) ≤20% street frontage faced by garage & service bay openings	These criteria are form the pre-requisite for simplicity. These requirements can be in voluntary guidelines or required by code.	12
Credit 2	Compact Development	2	a) 7 DU/ac and b) 0.5 FAR - include exist & new bldgs	7DU/ NET acre should be the minimum density allowed for the plan and for subsequent developments	6
Credit 3	Mixed-Use Neighborhood Centers	3	Required by LEED, not preferred in neighborhood survey.	Though a critically important element of the ND rating system, this metric should only be used if there is a shift in public perception, or with support of City leaders. Please refer to the market feasibility report for more information.	4
Credit 5	Reduced Parking Footprint	1	a) all surface pkg for new non res & MF at rear or side, and b) surface pkg < 2ac. ea. & < 20% dev footprint, and c) bicycle storage/racks as follows: - MF: 1/30% planned occupancy (min 1/DU) & 1/10 DU (4 min.)	Should be incorporated into overly or other code.	1

Credit 6	Street Network	1	a) Thru street or r/w at boundary every 400' or at abutting streets. Some boundary exclusions. b) Pedestrian or bike connection at 90% cul-de-sacs. c) internal and/or external connectivity w/in ¼ mile: >300-400 int/SM: (1 pt); >400 int/SM: (2 pts)	Should be incorporated into overly or other code.	2
Credit 7	Transit Facilities	2	a) install/fund shelter & improvements at identified locations by 50% build-out	A commitment to these investments can be made in the plan.	1
Credit 8	Transportation Demand Management	3	Opt. 4: Vehicle Sharing: 50% DU entrances w/in ¼ mile of vehicle-sharing vehicle. 1 sp/200 DU. Publicize availability and benefits. Opt. 5: Unbundling of parking for 90% of MF DU & non res sf	Should be incorporated into overly or other code.	2
Credit 9	Access to Civic and Public Spaces	3	a) min 1/6 ac civic space w/in ¼ mile of 90% of DU & non-res entrances	These are good guides for planning, but the open space plan for the study area should be the primary guide.	1
Credit 10	Access to Recreation Facilities	3	1 ac. outdoor rec facility OR 25K sf indoor rec ctr within half a mile of 90% of `DU & non-res entrances.		1
Credit 12	Community Outreach and Involvement	2	Consistent with scope of work public involvement tasks		2
Credit 13	Local Food Production	2	CCRs not prohibiting growing of produce in yards, AND Opt. 1: Nghbd farms & gardens w/in project or w/in ½ mile of geo ctr >7-14 DU/ac: 200 sf/DU >14-22 DU/ac: 100 sf/DU >22-28 DU/ac: 80 sf/DU >28-35 DU/ac: 70 sf/DU >35 DU/ac: 60 sf/DU Opt. 2: Community Supported Agriculture (CSA): purchase shares for 2 yrs in CSA program for 80% of DU for farm w/in 150 miles of site. Shares delivered to ½ mile of geo ctr of project 2x/month for 4 months of year. Opt. 3: Proximity to Farmers Market: geo ctr of project w/in ½ mile of farmers market, open 1x/week for 5 months. Produce only from	Presume 14-22 DU/ac so at 364 DU requires – 36400sf. Should be considered in plan.	1
Credit 14	Tree-Lined and Shaded Streets	1	Opt. 1: Tree-Lined Streets (1 pt): street trees 40' o.c. avg on both sides of 60% of streets, AND/OR Opt. 2: Shaded Streets (1 pt): Shade from trees & structures on 40% of sidewalks on streets w/in ten years, AND For both: LA to review tree planting plans/details	These criteria are form the pre-requisite for simplicity. These requirements can be in voluntary guidelines or required by code.	2

Credit 15	Neighborhood Schools	3	a) min 30% res component, w/ 50% of DU w/in ½ mile of elem/middle school & 1 mile of HS b) streets w/ sidewalks (both sides) & bike lanes (or traffic calming) from DU to school	Not used in analysis. Likely only Ashland Middle School is within required range.	1
					36 possible
Smart Location and Linkage					
Credit 4	Bicycle Network and Storage	2	Storage (secure, enclosed, locked)/Racks (secure, visible, lit, protected, 100' from entry): - MF: 1/30% planned occupancy (min 1/DU) & 1/10 DU (4 min.)	Likely not used in Plan – but in implementing code.	1
Credit 6	Steep Slope Protection	3	Applies to slopes >15%, >20 vert ft., & <30' horizontal separation between slopes Opt. 1: no disturbance >15% Opt. 2: prev dev sites: restore w/native/adapted plants and w/CCR as follows: >40% slope = 100% restoration >25-40% slope = 60% restoration 15-25% slope = 40% restoration For undeveloped slopes, comply with Opt. 3 below	Likely not used in Plan – but in implementing code.	1
Credit 7	Site Design for Habitat or Wetland and Water Body Conservation	2	Development will be consistent with City code requirements of use and setback.		1
					3 possible
Green Infrastructure and Buildings					
Credit 4	Water-Efficient Landscaping	2	Reduce irrigation by 50% from midsummer baseline by: - spp selection, plant density, microclimate - irrigation efficiency - captured rainwater & recycled wastewater - nonpotable water from public or other sources	Likely not used in this plan. Do not require modeling by property owners, unless large parcel-aggregated multifamily development occurs.	1

Credit 8	Stormwater Management	2	Retain stormwater on site for tot vol from dev footprint, disturbed & treated areas. 80%ile (1 pt); 85%ile (2 pts); 90%ile (3 pts); 95%ile (4 pts) Draw down w/in 72 hrs	Will be addressed on Infrastructure memo. This area does not have well-drained soils and will not infiltrate well. Underpiping of green street facilities will be necessary. Refer to Infrastructure Framework for more details.	4
Credit 9	Heat Island Reduction	2	Opt. 1: Non-roof measures: for 50% of hardscape a) shade by open structures w/ min SRI of 29; OR b) paving w/ min SRI of 29; OR c) open grid pvmt w/ 50% openings; OR d) shade from tree canopy w/in 10 yrs Opt 2: High reflectance & vegetated roofs: a) Roofing for 75% new bldg roof area w/ min SRI Low slope(≤2:12) = 78; steep slope (>2:12) =29 OR b) Vegetated roof for 50% new bldg roof area OR c) Combo of SRI compliant & veg roofs for 75% new bldgs	Could be good code language or Input to infrastructure design standards. Refer to Infrastructure Framework for more details.	1
Credit 10	Solar Orientation	3	Opt. 1: Block Orientation b) 75% of blocks with longer axis w/in 15° of east/west	Option two applies to buildings. This should be used as a guideline in planning and development review.	1
Credit 13	Infrastructure Energy Efficiency	3	All new infrastructure to achieve 15% annual reduction in energy use, calculated from lowest first-cost infrastructure items.	Input to infrastructure design standards. Refer to Infrastructure Framework for more details. Input to infrastructure design standards. Input to infrastructure design standards.	1
Credit 15	Recycled Content in Infrastructure	3	Postconsumer + 50% preconsumer + in-place reclaimed materials = 50% total mass of infrastructure materials for pvmts, vaults, base, and piping.		
Credit 17	Light Pollution	3	a) residential areas: 50% external lights w/ motion sensors, reducing levels by 50% when no activity w/in 15 min. b) shared areas: auto controls turning off lights in daylight and when not needed at night, per max lighting power densities. c) cut-off shields and no upward lighting.		1
					10 possible

Stormwater management, open space planning, habitat creation and protection, and transportation infrastructure should be systematically designed and constructed within the study area. The credits above will provide certain synergies, helping to realize the benefits of a systems thinking approach. For example, reduced impervious surface reduced run-off and infrastructure needs. Reduced run-off has benefits for streams and habitat. And the reduced impervious surfaces will help reduce urban heat island, and thereby cooling costs and energy demands.

This matrix needs to be used, and augmented as necessary, to implement the concepts found in the other framework documents. For example, open space utilization and having a walkable street network are mentioned in other frameworks. Credits 1, 5, and 6 of the Neighborhood Pattern and Design provide metrics and a guide to making these either encouraged or required elements of the plan and implementing code for the Normal Avenue area.

The future development of the neighborhood should be based on the metrics shown above. City leadership will have to deliberate on whether these should be enforced through required code amendments, encouraged through the use of voluntary guidelines, or incentivized. The incentives, in many cases are inherent in the design. It is important, however, to be sure that these sustainable strategies are not actually prevented by the implementing code. When the final set of sustainable strategies is selected, the City should be sure to remove barriers that might arise from the minimum street standards, minimum lot size, and barriers to greywater usage, etc. The City's density transfer provisions should be amended within this area so that density can be transferred among different property owners. Currently transfers can only occur for properties under common ownership. With this change, density can move away from the protected water features and into the more easily buildable, density receiving areas.