STAFF REPORT

CITY OF BEVERLY HILLS

For the Planning Commission
Meeting of September 11, 2008

TO: Planning Commission

FROM: Donna Jerex, Senior Planner
Azita Motamen, AIA, Plan Review Architect, LEED AP

THROUGH: Jonathan Lait, AICP, City Planner

SUBJECT: Proposed Voluntary Green Building Program for Single Family Residences

RECOMMENDATION

Recommend that the City Council Adopt a Resolution Incorporating the attached Green Building Standards for Single Family Residences.

EXECUTIVE SUMMARY

This report outlines staff's proposed program for a Voluntary Green Building Program for Single Family Residences. The City Council adopted a Green Building Ordinance for commercial, mixed use and multi-family development which becomes effective for applications deemed complete after September 5, 2008. During the discussion of this ordinance, the Council directed staff to develop a voluntary program for single family residences.

Staff is providing the Commission with background information for this new program and requesting feedback on the proposed rating and incentive system. Staff's request is that the Commission direct that a resolution incorporating any changes to the proposal be prepared for the City Council to review and consider for adoption at the September 23, 2008 City Council meeting.

DISCUSSION

In June of this year, the City Council adopted a Green Building Ordinance implementing a mandatory, performance-based, point-scaled program to achieve the Council's environmental sustainability goals as follows:

- Encourage water, energy and resource conservation
- Reduce waste generated by construction projects
- Increase energy efficiency in buildings
- Promote health of residents, workers, and visitors
- Reduce greenhouse gas generated by building use
- Reduce the City of Beverly Hill's carbon footprint

The approved program developed through a cooperative effort by the City's Building & Safety and Planning Divisions and Public Works Department. The program is based on the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) system, yet will be directly implemented and certified by the City. Projects subject to the program would be evaluated and certified for compliance by the City's Building and Safety Division. The ordinance applies to all applications deemed complete for processing as of September 5, 2008.

During its discussions of the ordinance, the City Council directed staff to proceed with a green building program for single family Residences. This program would be voluntary and provide incentives to encourage homeowner participation.

PROPOSED VOLUNTARY RESIDENTIAL GREEN BUILDING PROGRAM

Staff's direction from the Council was to design a voluntary, yet robust program for single family homes. Incentives should be included to encourage homeowners to be part of the City's efforts to promote environmental sustainability and green objectives.

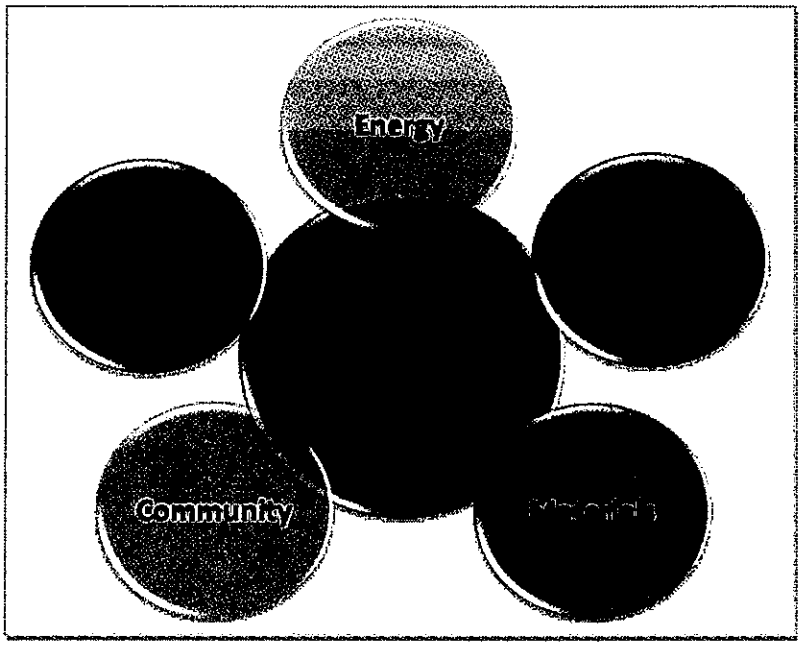
Staff's analysis built upon the research efforts made for the residential program and included:

- Review of upcoming green standards to be mandated by the State of California in 2011.
- Survey of other California cities, including those reviewed for the City's commercial green program.
- Analysis of existing Green Building Programs (i.e., "Build-it-Green," California Energy Code-Title 24, and LEED – Leadership in Energy and Environmental Design).

City of Beverly Hills Criteria

In developing the proposed program, staff's objectives were to maximize synergy amongst the elements shown in the adjacent chart by:

- Determining the best way to enact a substantial City program that is a step ahead of other programs.
- Provide sufficient incentives to entice homeowners to participate in and feel like they are making a difference in improving the environmental quality of their community.



The two dominant programs in place for Green Building Standards are LEED and Build It Green. The main differences between the two programs are shown below.

BUILD IT GREEN	LEED for Homes
• Credible starting point • Maximum Flexibility • Developed by CA stakeholders • Incorporates CA codes and building conditions	• Differentiates between greenest builders • Top 25% of new homes • More participation requirements • National environmental leadership award

SIMILARITIES – BOTH PROGRAMS

- Oriented to new California homes
- Different categorical performance requirements
- Encourages builders to improve environmental performance over time
- Verified third party rating system

The following cities were surveyed for LEED and Build it Green program requirements.

Program/ Threshold	CITY					
	Beverly Hills (Proposed)	**Los Angeles**	**Pasadena**	**San Francisco**	**Santa Monica**	**West Hollywood**
LEED	N/A	Certified	Certified	Silver	Certified	Certified
Build It Green	150 Points	N/A	N/A	75 Points	50 Points	N/A
Thresholds-SFR	New SFD	No SFR	No SFR	SFR by 2012	SFR City Points	SFR 60 min. City Points

Proposed Incentives

In accordance with the preceding "Other Cities – Current Standards" chart, the City's program would be tiered to three levels of incentives. The overall range of incentives includes:

- Expedited planning review (staff, commission and City Council levels)
- Expedited plan review
- Expedited permit processing
- Priority inspection scheduling
- City self-certification for Residential Green Building Program
- City of Beverly Hills Green Building Award

Incentives would be distributed as follows:

GREEN POINT LEVEL	PROPOSED INCENTIVE
74 - 149	Expedited Planning and Building & Safety Reviews
150+	Expedited Reviews and Inspections Eligible for Green Building Award (Awardees to be reviewed and selected annually)

Adoption by Resolution

Staff is requesting feedback from the Planning Commission and anticipates incorporating any comments into a resolution for consideration by the City Council on September 23, 2008. A resolution is proposed instead of an ordinance as the program is voluntary and can be implemented immediately upon the Council's approval. A resolution also provides more flexibility to make changes to the program as needed and as sustainable materials and methods continue to improve and further develop.

ENVIRONMENTAL REVIEW

The Project has been environmentally reviewed pursuant to the California Environmental Quality Act ("CEQA"), (Public Resource Sections 21000, et seq.), the State CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000 et seq.), and the City's Local CEQA guidelines ("Guidelines"). It has been determined that this project is not subject to CEQA pursuant to Section 15061(b)(3) of the Guidelines because CEQA only applies to projects which have the potential for causing a significant effect on the environment. This ordinance would establish requirements intended to reduce energy consumption and construction waste along with other measures, and therefore, it would not pose a significant effect on the environment. Additionally, two categorical exempts would apply to a project of this nature. Section 15307 categorically exempts actions taken by local ordinances that assure maintenance, restoration or enhancement of a natural resource. Section 15308 categorically exempts actions taken by local ordinance that assures maintenance, restoration, enhancement, or protection of the environment

CONCLUSION

Staff believes that the proposed program achieves the city Council's objectives and provides a significant community benefit. The proposed system goes beyond the proposed 2009 State of California requirements, yet uses existing industry standards in its point system. Homeowners will have added satisfaction by participating in environmental sustainability programs while benefitting from longterm energy costs and lower construction costs by reducing timelines for acquiring permit approvals from the City. Annual awards for premium designs would be issued by the City to promote this environmentally healthy and community enhancing designs, and additional cost and time savings would be realized for applicants by administering the program directly through City staff rather than a third party organization.

RECOMMENDATION

Staff recommends that the Planning Commission provide staff with direction to prepare a Resolution for the Residential Green Building Program for consideration by the City Council at its September 23, 2008 meeting.

Attachment:

1. Proposed Beverly Hills Residential Green Building Program
2. Build-It-Green Building Checklist

ATTACHMENT 1

[illegible]tial [illegible]rogram

Program Compliance Level	Beverly Hills	
California Energy T[illegible]	15%	30 pts
Indoor Water Conservation	20%	7 pts
Construction W[illegible]		0 pts
Storm Water Management	Minimum	1 pt
Low VOC [illegible]		7 pts
Low Formaldehyde Interior Finish Materials	Minimum	7 pts
Insu[illegible] A/C [illegible]		
Photovoltaic Panels	Minimum	6 pts
Cr[illegible]		
Reduce Landscaping Irrigation 50%	Minimum	9+ pts
Dro[illegible]		
BEVERLY HILLS GREEN BLDG PROGRAM	**Total**	**74 pts**

ATTACHMENT 2

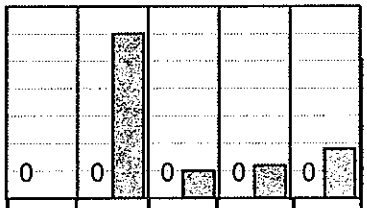
GreenPoint Rated Checklist: Single Family

Build It Green
Smart Solutions From The Ground Up

Total Points Achieved: 0

The GreenPoint Rated checklist tracks green features incorporated into the home. The recommended minimum requirements for a green home are: Earn a total of 50 points or more; obtain the following minimum points per category: Energy (30), Indoor Air Quality/Health (5), Resources (6), and Water (9); and meet the prerequisites A.3.a (50% construction waste diversion), J.1 (Exceed Title 24 by 15%), and N.1 (Incorporate Green Points checklist in blueprints).

The green building practices listed below are described in the New Home Construction Green Building Guidelines, available at www.builditgreen.org. Build It Green is a non-profit organization providing the GreenPoint Rated program as a public service. Build It Green encourages local governments to leverage program resources to support voluntary, market-based programs and strategies.



Enter Project Name

	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
A. SITE		Possible Points				
1. Protect Topsoil and Minimize Disruption of Existing Plants & Trees						
☐ a. Protect Topsoil from Erosion and Reuse after Construction	0	1				1
☐ b. Limit and Delineate Construction Footprint for Maximum Protection	0					1
☐ **2. Deconstruct Instead of Demolishing Existing Buildings On Site**	0				3	
3. Recycle Job Site Construction Waste (Including Green Waste)						
☐ a. Minimum 50% Waste Diversion by Weight (Recycling or Reuse) - *Required*	0				R	
☐ b. Minimum 65% Diversion by Weight (Recycling or Reuse)	0				2	
☐ c. Minimum 80% Diversion by Weight (Recycling or Reuse)	0				2	
4. Use Recycled Content Aggregate (Minimum 25%)						
☐ a. Walkway and Driveway	0				1	
☐ b. Roadway Base	0				1	
Total Points Available in Site = 12	0					
B. FOUNDATION		Points Available Per Measure				
1. Replace Portland Cement in Concrete with Recycled Flyash or Slag						
☐ a. Minimum 20% Flyash or Slag	0				1	
☐ b. Minimum 25% Flyash or Slag	0				1	
☐ **2. Use Frost-Protected Shallow Foundation in Cold Areas (C.E.C. Climate Zone 16)**	0				3	
☐ **3. Use Radon Resistant Construction** [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0			1		
4. Design and Build Structural Pest Controls						
☐ a. Install Termite Shields & Separate All Exterior Wood-to-Concrete Connections by Metal or Plastic Fasteners/Dividers [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0				1	
☐ b. All New Plants Have Trunk, Base, or Stem Located At Least 36 Inches from Foundation	0				1	
Total Points Available in Foundation = 8	0					
C. LANDSCAPING		Points Available Per Measure				
1. Construct Resource-Efficient Landscapes						
☐ a. No Invasive Species Listed by Cal-IPC Are Planted	0					1
☐ b. No Plant Species Will Require Hedging	0				1	
☐ c. 75% of Plants Are California Natives or Mediterranean Species or Other Appropriate Species	0					3
☐						

Enter Project Name

	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
☐ **2. Use Fire-Safe Landscaping Techniques**	0	1				
3. Minimize Turf Areas in Landscape Installed by Builder						
☐ a. All Turf Will Have a Water Requirement Less than or Equal to Tall Fescue (< = 0.8 plant factor)	0					2
☐ b. Turf Shall Not Be Installed on Slopes Exceeding 10% or in Areas Less than 8 Feet Wide	0					2
☐ c. Turf is ≤33% of Landscaped Area (total 2 points)	0					2
☐ d. Turf is ≤10% of Landscaped Area (total 4 points)	0					2
☐ **4. Plant Shade Trees**	0					3
☐ **5. Group Plants by Water Needs (Hydrozoning)**	0					2
6. Install High-Efficiency Irrigation Systems						
☐ a. System Uses Only Low-Flow Drip, Bubblers, or Low-flow Sprinklers	0					2
☐ b. System Has Smart (Weather-Based) Controllers	0					3
☐ **7. Incorporate Two Inches of Compost in the Top 6 to 12 Inches of Soil**	0					3
☐ **8. Mulch All Planting Beds to the Greater of 2 Inches or Local Water Ordinance Requirement**	0					2
☐ **9. Use 50% Salvaged or Recycled-Content Materials for 50% of Non-Plant Landscape Elements**	0				1	
☐ **10. Reduce Light Pollution by Shielding Fixtures and Directing Light Downward**	0	1				
Total Points Available in Landscaping = 31	0					
D. STRUCTURAL FRAME & BUILDING ENVELOPE		Points Available Per Measure				
1. Apply Optimal Value Engineering						
☐ a. Place Rafters and Studs at 24-Inch On Center Framing	0				1	
☐ b. Size Door and Window Headers for Load	0				1	
☐ c. Use Only Jack and Cripple Studs Required for Load	0				1	
2. Use Engineered Lumber						
☐ a. Beams and Headers	0				1	
☐ b. Insulated Engineered Headers	0		1			
☐ c. Wood I-Joists or Web Trusses for Floors	0				1	
☐ d. Wood I-Joists for Roof Rafters	0				1	
☐ e. Engineered or Finger-Jointed Studs for Vertical Applications	0				1	
☐ f. Oriented Strand Board for Subfloor	0				1	
☐ g. Oriented Strand Board for Wall and Roof Sheathing	0				1	
3. Use FSC-Certified Wood						
☐ a. Dimensional Lumber, Studs and Timber: Minimum 40%	0				2	
☐ b. Dimensional Lumber, Studs and Timber: Minimum 70%	0				2	
☐ c. Panel Products: Minimum 40%	0				1	
☐ d. Panel Products: Minimum 70%	0				1	
4. Use Solid Wall Systems (Includes SIPs, ICFs, & Any Non-Stick Frame Assembly)						
☐ a. Floors	0		2		2	
☐ b. Walls	0		2		2	
☐ c. Roofs	0		2		2	
5. Reduce Pollution Entering the Home from the Garage [*Points automatically granted when project qualifies for measure J3: ES with IAQ]						
☐ a. Tightly Seal the Air Barrier between Garage and Living Area	0			1		
☐ b. Install Garage Exhaust Fan OR Build a Detached Garage	0			1		

Enter Project Name

	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
6. Design Energy Heels on Trusses (75% of Attic Insulation Height at Outside Edge of Exterior Wall)	0		1			
☐ **7. Design Roof Trusses to Accommodate Ductwork**	0		1			
☐ **8. Use Recycled-Content Steel Studs for 90% of Interior Wall Framing**	0				1	
☐ **9. Thermal Mass Walls: 5/8-Inch Drywall on All Interior Walls or Walls Weighing more than 40 lb/cu.ft.**	0		1			
10. Install Overhangs and Gutters						
☐ a. Minimum 16-Inch Overhangs and Gutters [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0				1	
☐ b. Minimum 24-Inch Overhangs and Gutters	0		1			
Total Points Available in Structural Building Frame and Envelope = 36	0					
E. EXTERIOR FINISH		Points Available Per Measure				
☐ **1. Use Recycled-Content (No Virgin Plastic) or FSC-Certified Wood Decking**	0				2	
☐ **2. Install a Rain Screen Wall System**	0				2	
☐ **3. Use Durable and Non-Combustible Siding Materials**	0				1	
☐ **4. Use Durable and Non-Combustible Roofing Materials**	0				2	
Total Points Available in Exterior Finish = 7	0					
F. INSULATION		Points Available Per Measure				
1. Install Insulation with 75% Recycled Content						
☐ a. Walls and Floors	0				1	
☐ b. Ceilings	0				1	
2. Install Insulation that is Low-Emitting (Certified Section 01350)						
☐ a. Walls and Floors	0			1		
☐ b. Ceilings	0			1		
☐ **3. Inspect Quality of Insulation Installation before Applying Drywall** [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0		1			
Total Points Available in Insulation = 5	0					
G. PLUMBING		Points Available Per Measure				
1. Distribute Domestic Hot Water Efficiently (Additive, Maximum 7 Points)						
☐ a. Insulate Hot Water Pipes from Water Heater to Kitchen	0		1			1
☐ b. Insulate All Hot Water Pipes	0		1			1
☐ c. Use Engineered Parallel Piping	0					1
☐ d. Use Engineered Parallel Piping with Demand Controlled Circulation Loop	0					1
☐ e. Use Structured Plumbing with Demand Controlled Circulation Loop	0		1			2
☐ f. Use Central Core Plumbing	0		1		1	1
☐ **2. Install Only High Efficiency Toilets (Dual-Flush or ≤1.28 gpf)**	0					4
Total Points Available in Plumbing = Total 11	0					
H. HEATING, VENTILATION & AIR CONDITIONING		Points Available Per Measure				
☐ **1. Design and Install HVAC System to ACCA Manual J, D, and S Recommendations** [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0		4			
2. Install Sealed Combustion Units [*Points automatically granted when project qualifies for measure J3: ES with IAQ]						
☐ a. Furnaces	0			2		
☐ b. Water Heaters	0			2		
☐ **3. Install Zoned, Hydronic Radiant Heating**	0		1	1		

Enter Project Name

	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
☐ **4. Install High Efficiency Air Conditioning with Environmentally Responsible Refrigerants**	0	1				
5. Design and Install Effective Ductwork [*5b,d,&e are automatically granted when project qualifies for measure J3: ES with IAQ]						
☐ a. Install HVAC Unit and Ductwork within Conditioned Space	0		3			
☐ b. Use Duct Mastic on All Duct Joints and Seams	0		1			
☐ c. Install Ductwork under Attic Insulation (Buried Ducts)	0		1			
☐ d. Pressure Relieve the Ductwork System	0		1			
☐ e. Protect Ducts during Construction and Clean All Ducts before Occupancy	0		1			
☐ **6. Install High Efficiency HVAC Filter (MERV 6+)** [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0			1		
☐ **7. Don't Install Fireplaces or Install Sealed Gas Fireplaces with Efficiency Rating NOT Less Than 60% using CSA Standards**	0			1		
8. Install Effective Exhaust Systems in Bathrooms and Kitchens [*8a&c are automatically granted when project qualifies for measure J3: ES with IAQ]						
☐ a. Install ENERGY STAR Bathroom Fans Vented to the Outside	0			1		
☐ b. All Bathroom Fans Are on Timer or Humidistat	0			1		
☐ c. Install Kitchen Range Hood Vented to the Outside	0			1		
9. Install Mechanical Ventilation System for Cooling (Max. 4 Points)						
☐ a. Install ENERGY STAR Ceiling Fans & Light Kits in Living Areas & Bedrooms	0		1			
☐ b. Install Whole House Fan with Variable Speeds	0		1			
☐ c. Automatically Controlled Integrated System	0		2			
☐ d. Automatically Controlled Integrated System with Variable Speed Control	0		3			
10. Install Mechanical Fresh Air Ventilation System (Maximum 3 Points)						
☐ a. Any Whole House Ventilation System That Meets ASHRAE 62.2	0			2		
☐ b. Install Air-to-Air Heat Exchanger that meets ASHRAE 62.2 [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0		1	2		
☐ **11. Install Carbon Monoxide Alarm(s)** [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0			1		
Total Points Available in Heating, Ventilation and Air Conditioning = 30	0					
I. RENEWABLE ENERGY		Points Available Per Measure				
☐ **1. Pre-Plumb for Solar Hot Water Heating**	0		4			
☐ **2. Install Solar Water Heating System**	0		10			
☐ **3. Install Wiring Conduit for Future Photovoltaic Installation & Provide 200 ft² of South-Facing Roof**	0		2			
4. Install Photovoltaic (PV) Panels						
☐ a. 30% of electric needs OR 1.2 kW (total 6 points)	0		6			
☐ b. 60% of electric needsOR 2.4kW (total 12 points)	0		6			
☐ c. 90% of electric need OR 3.6 kW (total 18 points)	0		6			
Total Available Points in Renewable Energy = 28	0					
J. BUILDING PERFORMANCE		Points Available Per Measure				
1. Diagnostic Evaluations						
☐ a. House Passes Blower Door Test [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0		1			
☐ b. House Passes Combustion Safety Backdraft Test	0			1		

Enter Project Name

		Points Achieved	Community	Energy	IAQ/Health	Resources	Water
0%	2. Design and Build High Performance Homes - 15% above Title 24 - *Required*	0		≥30			
☐	3. House Obtains ENERGY STAR with Indoor Air Package Certification - *Pilot Measure* (Total 45 points; read comment)	0			5	2	
	Total Available Points in Building Performance = 109	0					
K. FINISHES			Points Available Per Measure				
☐	1. Design Entryways to Reduce Tracked in Contaminants	0			1		
	2. Use Low-VOC or Zero-VOC Paint (Maximum 3 Points)						
☐	a. Low-VOC Interior Wall/Ceiling Paints (<50gpl VOCs (Flat) & <150gpl VOCs (Non-Flat))	0			1		
☐	b. Zero-VOC: Interior Wall/Ceiling Paints (<5 gpl VOCs (Flat))	0			3		
☐	3. Use Low VOC, Water-Based Wood Finishes (<250 gpl VOCs)	0			2		
☐	4. Use Low-VOC Caulk and Construction Adhesives (<70 gpl VOCs) for All Adhesives	0			2		
☐	5. Use Recycled-Content Paint	0				1	
☐	6. Use Environmentally Preferable Materials for Interior Finish: A) FSC-Certified Wood, B) Reclaimed, C) Rapidly Renewable, D) Recycled-Content or E) Finger-Jointed						
☐	a. Cabinets (50% Minimum)	0				1	
☐	b. Interior Trim (50% Minimum)	0				1	
☐	c. Shelving (50% Minimum)	0				1	
☐	d. Doors (50% Minimum)	0				1	
☐	e. Countertops (50% Minimum)	0				1	
	7. Reduce Formaldehyde in Interior Finish (CA Section 01350)						
☐	a. Subfloor & Stair Treads (90% Minimum)	0			1		
☐	b. Cabinets & Countertops (90% Minimum)	0			1		
☐	c. Interior Trim (90% Minimum)	0			1		
☐	d. Shelving (90% Minimum)	0			1		
☐	8. After Installation of Finishes, Test of Indoor Air Shows Formaldehyde Level <27ppb	0			3		
	Total Available Points in Finishes = 21	0					
L. FLOORING			Points Available Per Measure				
	1. Use Environmentally Preferable Flooring: A) FSC-Certified Wood, B) Reclaimed or Refinished, C) Rapidly Renewable, D) Recycled-Content, E) Exposed Concrete. *Flooring Adhesives Must Have <70 gpl VOCs.*						
☐	a. Minimum 15% of Floor Area	0				1	
☐	b. Minimum 30% of Floor Area	0				1	
☐	c. Minimum 50% of Floor Area	0				1	
☐	d. Minimum 75% of Floor Area	0				1	
☐	2. Thermal Mass Floors: Floor Covering Other than Carpet on 50% or More of Concrete Floors	0		1			
☐	3. Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum) [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0			2		
	Total Available Points in Flooring = 7	0					
M. APPLIANCES AND LIGHTING			Points Available Per Measure				

Enter Project Name

		Points Achieved	Community	Energy	IAQ/Health	Resources	Water
	1. Install Water and Energy Efficient Dishwasher						
☐	a. ENERGY STAR (total 1 point)	0		1			
☐	b. Dishwasher Uses No More than 6.5 Gallons/Cycle (total 2 points)	0					1
	2. Install ENERGY STAR Clothes Washing Machine with Water Factor of 6 or Less						
☐	a. Meets Energy Star and CEE Tier 2 requirements (modified energy factor 2.0, Water Factor 6.0 or less) (total 3 points)	0		1			2
☐	b. Meets Energy Star and CEE Tier 3 requirements (modified energy factor 2.2, Water Factor 4.5 or less) (total 5 points)	0					2
	3. Install ENERGY STAR Refrigerator						
☐	a. ENERGY STAR Qualified & < 25 Cubic Feet Capacity	0		1			
☐	b. ENERGY STAR Qualified & < 20 Cubic Feet Capacity	0		1			
	4. Install Built-In Recycling Center and Composting Center						
☐	a. Built-In Recycling Center	0				2	
☐	b. Built-In Composting Center	0				1	
	Total Available Points in Appliances and Lighting = 12	0					
N. OTHER			Points Available Per Measure				
☐	**1. Incorporate GreenPoint Rated Checklist in Blueprints - *Required***	0				R	
☐	**2. Develop Homeowner Manual of Green Features/Benefits** [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0		1	1		1
	Total Available Points in Other = 3	0					
O. COMMUNITY DESIGN & PLANNING (maximum 20 points in this section)							
	1. Develop Infill Sites						
☐	a. Project is Located in a Built Urban Setting with Utilities in Place for Fifteen Years	0	1			1	
☐	b. Development is Located within 1/2 Mile of a Major Transit Stop	0	2				
	2. Cluster Homes & Keep Size in Check						
☐	a. Cluster Homes for Land Preservation	0	1			1	
☐	b. Conserve Resources by Increasing Density (10 Units per Acre or Greater)	0	2			2	
☐	c. Home Size Efficiency	0				9	
0	**3. Subdivision Layout & Orientation to Improve Natural Cooling and Passive Solar Attributes**	0	3	7			
	4. Design for Walking & Bicycling						
☐	a. Pedestrian Access to 5 or More Neighborhood Services within ½ Mile: 1) Community Center/Library; 2) Grocery Store; 3) School; 4) Day Care; 5) Laundry; 6) Medical; 7) Entertainment/Restaurants; 8) Post Office; 9) Place of Worship; 10) Bank	0	2				
☐	b. Development is Connected with A Dedicated Pedestrian Pathway to Places of Recreational Interest within 1/4 mile	0	1				
☐	c. At Least Two of the Following Traffic-Calming Strategies: - Designated Bicycle Lanes are Present on Roadways; - Ten-Foot Vehicle Travel Lanes; - Street Crossings Closest to Site are Located Less Than 300 Feet Apart; - Streets Have Rumble Strips, Bulbouts, Raised Crosswalks or Refuge Islands	0	2				
	5. Design for Safety & Social Gathering						
☐	a. All Home Front Entrances Have Views from the Inside to Outside Callers	0	1				
☐	b. All Home Front Entrances Can be Seen from the Street and/or from Other Front Doors	0	1				
☐	c. Orient Porches (min. 100sf) to Streets and Public Spaces	0	1				

Enter Project Name

	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
6. Design for Diverse Households						
☐ a. All Homes Have at Least One Zero-Step Entrance	0	1				
☐ b. All Main Floor Interior Doors & Passageways Have a Minimum 32-Inch Clear Passage Space	0	1				
☐ c. Locate at Least a Half-Bath on the Ground Floor with Blocking in Walls for Grab Bars	0	1				
☐ d. Provide Full-Function Independent Rental Unit	0	1				
Total Achievable Points in Community Design & Planning = 20	0					
P. INNOVATION (maximum 20 points in this section)		Possible Points				
A. Site						
☐ 1. Reduce Heat-Island Effect - Install light-colored, high albedo materials (solar reflectance index >= 0.3) for at least 50% of site's non-roof impervious surfaces	0	1				
☐ 2. Build on Designated brownfield site	0	3				
B. Foundation [*Points automatically granted when project qualifies for measure J3: ES with IAQ]						
☐ 1. Install a Foundation Drainage System	0				2	
☐ 2. Sealed and Moisture Controlled Crawlspace	0			2		
C. Landscaping						
☐ 1. Meets Bay-Friendly Landscape Program Requirement	0					4
☐ 2. Meets California-Friendly Landscape Program Requirement	0					4
3. Rain Water Harvesting System (1 point for <350 gallons, 2 points for > 350 gallons)						2
☐ a. Less than 350 gallon capacity	0					1
☐ b. Greater than 350 gallon capacity	0					2
☐ 4. Assess Site Climate, Exposure, Topography, and Drainage	0					1
☐ 5. Perform a Soil Analysis	0					1
☐ 6. Irrigation System Uses Recycled Wastewater	0					1
☐ 7. FSC Certified, Recycled Plastic or Composite Lumber - Fencing: 70%	0				1	
D. Structural Frame and Building Envelope						
1. Design, Build and Maintain Structural Pest and Rot Controls						
☐ a. Locate All Wood (Siding, Trim, Structure) At Least 12" Above Soil	0				1	
☐ b. All Wood Framing 3 Feet from the Foundation is Treated with Borates (or Use Factory-Impregnated Materials) OR Walls are Not Made of Wood	0			1		
☐ 2. Use Moisture Resistant Materials in Wet areas of Kitchen, Bathrooms, Utility Rooms, and Basements [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0			1		
3. Use FSC Certified Engineered Lumber (3 points maximum)						
☐ a. Beams and Headers	0				1	
☐ b. Insulated Engineered Headers	0				1	
☐ c. Wood I-Joists or Web Trusses for Floors	0				1	
☐ d. Wood I-Joists for Roof Rafters	0				1	
☐ e. Engineered or Finger-Jointed Studs for Vertical Applications	0				1	
☐ f. Roof Trusses: 100%	0				1	
4. FSC Certified Wood						
☐ a. Dimensional Lumber, Studs and Timber: 100%	0				2	
☐ b. Panel Products: 100%	0				2	
E. Exterior Finish						
☐ 1. Green Roofs (25% of roof area minimum)	0	1	1			
☐						

Enter Project Name

	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
☐ 2. Flashing Installation Techniques Specified [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0				1	
F. Insulation						
G. Plumbing						
☐ 1. Graywater Pre-plumbing (includes washing machine at minimum)	0					1
☐ 2. Graywater System Operational (includes washing machine at minimum)	0					2
☐ 3. Innovative Wastewater Technology (Constructed Wetland, Sand Filter, Aerobic System)	0					1
☐ 4. Composting or Waterless Toilet	0					2
☐ 5. Install Drain Water Heat-recovery System	0		1			
6. Install Water Efficient Fixtures						
☐ a. Showerheads or Shower Towers Use <2.0 Gallons Per Minute (GPM) Total	0					1
☐ b. Faucets - bathrooms <1.5 gpm	0					1
☐ c. Faucets - Kitchen & Utility <2.0 gpm	0					1
H. Heating, Ventilation, and Air Conditioning						
☐ 1. Humidity Control Systems (only in California humid/marine climate zones 1,3,5,6,7)	0			1		
I. Renewable Energy						
☐ 1. Extraordinary Passive Solar Design (> 50% of load) That is Not Already Reflected in T-24 Modeling	0		5			
J. Building Performance						
☐ 1. Test Total Supply Air Flow Rates	0		1			
K. Finishes						
1. Use Environmentally Preferable Materials for Interior Finishes						
☐ a. Cabinets (80% minimum)	0				1	
☐ b. Interior Trim (80% minimum)	0				1	
☐ c. Shelving (80% minimum)	0				1	
☐ d. Doors (80% minimum)	0				1	
☐ e. Countertops (80% minimum)	0				1	
L. Flooring						
☐ 1. Flooring Meets Section 01350 or CRI Green Label Plus Requirements (80% Minimum) [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0			1		
M. Appliances						
N. Other						
☐ 1. Homebuilder's Management Staff are Certified Green Building Professionals	0	1				
☐ 2. Detailed Durability Plan [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0				2	
☐ 3. Third-Party Verification of Implementation of Durability Plan	0				2	
☐ 4. Materials Sourced, Processed and Manufactured Within a 500 Mile Radius of the Home	0	1				
☐ 5. Comprehensive Owner's Manual and Homeowner Educational Walkthroughs	0		1			
Total Achieveable Points in Innovation = 20	0					

Summary

		Community	Energy	IAQ/Health	Resources	Water
Total Available Points in Specific Categories		32	193	51	103	71
Minimum Points Required in Specific Categories		0	30	5	6	9
Total Points Achieved	**0**	**0**	**0**	**0**	**0**	**0**

Enter Project Name

Points Achieved	Community	Energy	IAQ/Health	Resources	Water

Project has not yet met the following recommended minimum requirements:

- *Total Project Score of At Least 50 Points*
- *Required measures:*
  - *-A3a: 50% waste diversion by weight*
  - *-J2: 15% above Title 24*
  - *-N1: Incorporate GreenPoint Rated Checklist into blueprints*
- *Minimum points in specific categories:*
  - *-Energy (30 points)*
  - *-IAQ/Health (5 points)*
  - *-Resources (6 points)*
  - *-Water (9 points)*
- *-Maximum 20 points pursued under Community Design and Planning*
- *-Maximum 20 points pursued under Innovation*