

DATE: November 25, 2008
TO: Mayor and City Council
FROM: Director of Department of Development Services
SUBJECT: Proposed Green Building Ordinance for Private Development

RECOMMENDATION

That Council adopts the attached resolution finding that the adoption of the attached ordinance is categorically exempt from the California Environmental Quality Act (CEQA), and introduces the attached ordinance related to green building standards for private development.

SUMMARY

At its meeting of October 21, the City Council continued action on introducing a green building ordinance for private development, to allow staff the opportunity to meet with the development community to exchange information on the proposed ordinance, to gather information related to the costs of "building green," and to consider impacts of the ordinance and provide recommendations regarding how entitled projects are to be addressed (see meeting minutes, Exhibit A).

Information regarding costs related to complying with the green building provisions of the ordinance for residential and non-residential development is provided in the following sections. In summary, the relative costs for building green are not substantial (approximately one percent above traditional construction costs), but in the current economic market, any additional construction costs borne by developers is of concern to the development community.

To address entitled projects, the revised ordinance exempts projects that would have vesting tentative map approval by January 1, 2009, and would defer compliance for entitled projects without vesting tentative map approval, but subject to an approved Development Agreement, to January 1, 2011 (see summary matrix, Exhibit B).

Also, the non-residential provisions have been revised to provide an additional option for compliance with energy efficiency standards that would be effective next August 1 (recently changed from July 1 by the State), and to provide greater clarity regarding which projects are subject to the ordinance provisions. The revised checklist is included as Exhibit D.

For projects that are not entitled or for entitled projects that do not include a Vesting Tentative Map or Development Agreement approval, the effective date for compliance with mandatory standards for which building permit applications are submitted would coincide with the effective date of the new State Energy Efficiency Code, now established as August 1, 2009. However, in recognition of the possibility that the City may not acquire the required approval by then from the California Energy Commission and California Building Standards Commission, the effective date noted in the ordinance is now August 1, 2009, or the date such approvals are obtained, whichever date is later. The ordinance also requires submittal of checklists for the purpose of encouraging familiarity with green building measures until then. Staff will encourage the use of these future requirements as guidelines during the intervening period of time.

A red-lined version of the revised ordinance is attached that shows changes to the previously presented October 21, 2008 version.

BACKGROUND

City staff met with Chamber members and developers on November 6. All attendees questioned why the City was moving so quickly to mandate green building standards, ahead of the other cities in the area, especially in the current economic environment. Concerns were expressed about the difficulty developers were having in selling homes, and the loss of projected sales revenues, due to the current depressed housing market and economy. Representatives of developments indicated that such action could result in potential development in Hayward being located to other communities, where such requirements do not exist. In summary, general support was expressed for voluntary green building, but concerns were expressed over mandating such building standards, especially during this economic climate.

On November 7, staff also attended a meeting of the South Alameda County Green Building Task Force, where representatives of Stopwaste.org, Hayward, Fremont, Union City, San Leandro and Alameda County discussed local jurisdictions' efforts in developing consistent green building standards. Hayward staff has been attending these meetings, which are held at least quarterly. Staffs at the meeting indicated their jurisdictions are currently developing ordinances, most of which would require some type of green building standard to be met, with the GreenPoint standards most commonly referenced. Also, San Leandro will be hosting a forum on December 9 to provide information related to completing the GreenPoint Rated checklists. For reference, attached as Exhibit E is a summary of the status of green building measures in Bay area cities, created by Alameda County staff. It identifies standards, indicates whether such standards are mandatory, and identifies the responsible verifying entity. As indicated, half of the 12 cities with green building residential standards mandate compliance, and most require achieving GreenPoint Rating (50 points minimum) and verification by third party raters, which is the standard recommended in the proposed attached ordinance.

On November 13, staff attended a meeting of the Technical Advisory Committee related to Build It Green's current efforts to revise its GreenPoint Rated guidelines and checklist for new single-family homes. Build It Green is indicating that the new guidelines and checklist would be effective July 1, 2009, to roughly coincide with the effective date of the new California Energy Efficiency Code (August 1, 2009). A major issue being addressed is what level below new energy standards should

be required, and how many points would be given for such compliance. Currently, the checklist requires as a prerequisite that projects be designed to 15% below current standards. Build It Green will vet the new checklist through a public input process, and will conduct test cases before final adoption. After that adoption, Build It Green would revise its checklist for new multi-family development, to be consistent with the single-family checklist.

On November 14, City staff met with representatives of entitled larger residential projects for which discretionary review has been granted, including Citation Homes (Cannery Place), Stonebrae, KB Home (Eden Point in Mt. Eden area), Zaballos and Sons, and the La Vista and Garin Vista projects. Jeff Jacobs, a certified green point rater who previously worked for Centex Homes and Meritage Homes, and who assisted in developing the current GreenPoint Rated Single-Family Guidelines and Checklist, also attended to answer questions regarding what are the costs and process involved in having a new home become GreenPoint Rated. Additionally, during the meeting, attendees encouraged staff to include language in the ordinance that would exempt entitled projects from mandatory green building standards, and to provide incentives to encourage voluntary green building.

DISCUSSION

Applicability of Proposed Ordinance to Entitled Residential Projects:

Concerns have been expressed by the development community with how a new ordinance mandating green building standards would impact projects that have already been entitled. Some developers have requested that all such projects be exempt from a new ordinance. For comparison, Livermore's ordinance, which was adopted in January of 2008, exempts all entitled projects. San Jose's recently adopted ordinance has an effective date of Fall of 2010 and applies only to new project applications. Rohnert Park's ordinance, adopted in April of 2007, exempts projects for which an approved Development Agreement existed on effective date of ordinance.

Exhibit C contains a summary of entitled major residential projects in Hayward. As indicated in that attachment, there are over 2,000 units that have been entitled, almost half of which have not had building permit applications or master construction design plans submitted. Some of those projects have tentative maps that will not expire until 2013 (Stonebrae) and 2016 (Garin Vista and La Vista). Final designs for most of those units have not been submitted, though staff is working with architects on design for some of the projects, such as La Vista. There are another approximately 1,000 units that are part of projects that are under construction and for which building permit or master plan applications have been submitted and approved, which would also be exempt from the ordinance.

As shown in Exhibit C, of the 1,086 units to be built associated with entitled projects that are not under construction, over 70 percent of those (786 units) are associated with an approved Vesting Tentative Map. Given the vesting rights associated with those projects, staff is recommending that such projects be exempt from the ordinance. For the Legacy project that is entitled via a Development Agreement, but for which a tentative map has not been submitted or approved, staff is recommending it not be required to meet the ordinance provisions, unless building permit applications are submitted after January 1, 2011. Such time would acknowledge the conceptual

approval of such development via a Development Agreement, but also recognize that designs for the 167 residences have not been submitted. Such date would also allow time to incorporate green building measures into unit designs and plans, and will be after the State's Green Building Code becomes effective in July of 2010. Such Code will establish state-wide green building measures, some of which would be voluntary.

All other projects, including those that have received some discretionary approval, but have not been entitled with a Development Agreement or Vesting Tentative Map approval, would be required to comply with the ordinance provisions.

Development Agreement Entitlement:

Unlike Vesting Tentative Map provisions, which are established at the State level by law, Development Agreement conditions vary, depending on specific language contained in them. There are four projects/development areas in Hayward that are currently subject to a Development Agreement: Stonebrae, La Vista, Gary Vista, and Eden Shores (including Eden Shores, Eden Shores East (Bridgeport and Crossings subdivisions), and the Legacy project). Each of those agreements has a provision that could allow the City to mandate green building standards, with some exceptions. One exception related to building and improvement standards states the City cannot amend the agreements without consent of the involved party, which would "reduce the amount of land within the Property which can be utilized for structures and improvements, or increases the amount of open space within the Project..." Staff believes that green building standards required in the ordinance would not contradict such parameters. However, recognizing the Vesting Tentative Map provisions and the significant progress of project design incorporated in a Vesting Tentative Map, staff is recommending all projects entitled with a Vesting Tentative Map be exempt from the green building ordinance provisions.

Future Development That Would be Subject to the Ordinance:

There remains the potential for a significant number of potential new units to be constructed to green building standards. Besides the approximately 300 entitled units that are not associated with a Vesting Tentative Map, the following units would be subject to the standards in the proposed ordinance:

- 1,800-3,200 additional units anticipated in the South Hayward BART station area, approximately 800 of which are associated with a development project being proposed at the station properties;
- approximately 400 additional potential units in the Mt. Eden area, including those anticipated in the unincorporated area proposed to be annexed into Hayward; and
- up to roughly 3,000 to 4,500 additional units in the Route 238 Bypass Land Use Study Project area, depending on final determination of land use designations for those properties.

Also, according to the most recent projections by the Association of Bay Area Governments, as many as roughly 15,000 new units are anticipated to be developed in Hayward by the year 2035.

Residential Construction - Green Building Costs:

The table below summarizes potential costs for achieving GreenPoint Rating with the current rating system for a couple of example projects. Such information was obtained from a GreenPoint Rater who extrapolated from projects he has worked on, but not yet built. As noted, added construction costs associated with achieving current GreenPoint rating is about 1 percent above costs for standard construction.

Unit Type	# of Units	Unit Size (sf)	Approx. Constr. Cost per sf	Approx. Constr. Cost per unit	Total Project Constr. Cost	Additional Green Building Constr. Cost per sf	Additional Green Building Constr. Cost per unit	Build It Green Fees per unit	Build It GreenRater Fee per unit	Green Building Costs per unit	Total Project Green Building Costs	% of Total Project Constr. Costs
SF Tract Unit	101	2,000-3,000	\$60-70	\$162,500	\$16,412,500	\$0.78	\$1,945	\$53	\$200	\$2,198	\$221,998	1.35%
SF Custom Home	1	3,500	\$150	\$525,000	\$525,000	\$1.28	\$3,190	\$400	\$1,950	\$5,540	\$5,540	1.06%
Multi-Family Project	55	1,300-1,800	\$125	\$193,750	\$10,656,250	\$0.73	\$1,125	\$56	\$175	\$1,356	\$74,580	0.70%

Note that a number of GreenPoint Rated checklist points can be earned at no or minimal additional cost simply by changing a choice; for example: types of sprinklers, types of plants, type of insulation, and not over-designing headers for structural framing. In the case of multi-family development where one sprinkler controller may control landscaping that serves 30 or more units, spending \$200 more on the controller is only \$6-7 per unit and earns 3 checklist points. Also, for the multi-family project builders, points can be earned just for their location (proximity to transit, utilities, schools, etc.). The Cannery project and future developments around the South Hayward BART station are examples of such projects.

Also, the costs to become GreenPoint Rated for new single-family homes are likely to increase with the updated checklist/guidelines that will roughly coincide with the new Energy Efficiency Code update (effective August 1, 2009).

Non-Residential Construction - Green Building Costs and Revisions to Ordinance:

As stated earlier in this report, the non-residential provisions have been revised to provide an additional option for compliance with energy efficiency standards, and to provide greater clarity regarding which projects are subject to the ordinance provisions. Related to energy efficiency, the ordinance references the City of Hayward Checklist (Exhibit D), which has been revised to:

1. Indicate that mandatory provisions only apply to projects entailing 1,000 square feet or more of new or remodeled space, *and where at least half of the lighting fixtures in such areas are proposed to be replaced;*

2. Include an additional compliance measure that would provide the option of reducing overall energy use by at least 5 percent below energy efficiency standards that would be in effect starting next August. (This option was added in response to concerns that certain projects would be difficult to be designed to meet the standards previously presented. Such standards focused only on energy use associated with lighting, and required reducing lighting energy loads by 15 percent or more below energy standards, or providing such load with a renewable energy source system, like solar photovoltaic.)

3. Clarify that the requirement to reduce indoor water use to 20 percent below baseline levels applies only when a new bathroom is proposed, or where a bathroom is remodeled that involves replacement of water closets or urinals.

At the October meeting, Council directed staff to return with costs for such energy reduction and water conservation fixtures, related to the ordinance provisions. Such costs are provided below.

Lighting:

Because the costs for lighting varies greatly, dependent on occupancy type and use, and quality and style of fixtures, to illustrate costs for meeting the reduced lighting load requirements of the Ordinance, Building Division staff has conducted a lighting upgrade cost analysis for the City Hall Permit Center (Exhibit F). Such analysis assumes a 15 percent reduction from requirements of the new 2008 Title 24 Energy Efficiency Standards that will be in effect next August (0.9 watts per square foot reduced to 0.765 watts per square foot for the Permit Center). As noted in Exhibit F, for the 3,014 square feet of conditioned floor area in the Center, four options that are presented to reduce lighting load would cost \$600 to \$2,530. Such costs relate only to fixtures and are exclusive of installation and demolition costs. Such costs would be minimal compared to the overall costs associated with a remodel of the Permit Center involving replacement of at least half the fixtures. For a general idea of energy savings and payback period, the following information is presented:

Scenario	Description	Reduction of Energy Use (in watts per ft ² ; target of 0.764)	Rough Costs for New Light Fixtures	Cost Per kw per hr	Cost Savings Per Year (assuming 9 operating hours per day)	Estimate Time to Recover Costs (in years)
Existing Conditions		0.830	---	---	---	---
Enhanced Efficiency Option #1	Replace seven 2'x2' and one 2'x4' fluorescent fixtures with four sets of track lights and current limiter	0.753	\$600	\$0.155	\$285.73	2.1
Enhanced Efficiency Option #2	Change eight 2'x4' fixtures from 3-lamp to 2-lamp fixtures	0.726	\$880	\$0.155	\$285.74	3.1
Enhanced Efficiency Option #3	Options #1 and #2, plus replace four 2'x4' 3-lamp fixtures with 4-lamp fixtures	0.728	\$2,530	\$0.155	\$285.74	8.9
Enhanced Efficiency Option #4	Replace seven 2'x2' and one 2'x4' fluorescent fixtures with nine reduced output 2'x4' fluorescent fixtures	0.759	\$1,800	\$0.155	\$285.73	6.3

Plumbing:

Below is a table that compares water closets and costs.

Plumbing Fixture Type	GPF Gallons/Flush	Annual Water Use Assuming 20 uses per day	Average Cost/Unit ¹
Pre 1990 Water Closet	3.5	22,550 gallons	(no longer sold)
Conventional Water Closet	1.6	11,680 gallons	\$350
High Efficiency Water Closet	1.28	9,344 gallons	\$380
Conventional Urinal	1.0	7,300 gallons	\$330
High Efficiency Urinal	0.5	3,650 gallons	\$360
Waterless Urinal	0	0 gallons	\$450

¹Costs are based on staff's brief research of standard commercial grade products, and do not include installation costs.

Staff believes the limited checklist items provide clear direction, are reasonably attainable and not overly burdensome, in terms of cost. As indicated previously, focusing on lighting is appropriate, since lighting loads are typically the largest energy (electricity) user.

Also, representatives from Stopwaste.org have indicated they are developing a Checklist for Commercial Development, with the objective of providing direction in establishing consistent green building requirements throughout the area. According to Stopwaste.org staff, such checklist is not anticipated for public use until at least the first quarter of next calendar year. As part of the recommended review of the ordinance to occur at least annually, staff would review such checklist in consideration of making future recommendations for ordinance amendments.

Incentives for Voluntary Compliance:

To incentivize developers to build "green" projects that would not be required to comply with the standards of the ordinance (e.g., developments with approved vesting tentative maps or that are otherwise exempted by the ordinance), staff is prepared to return to Council prior to August of next year with an ordinance that includes incentives to encourage building green. Staff would meet with the development community and conduct research in developing such an ordinance. Preliminary discussions with the development community indicate a desire to allow for deferral of payment of development impact fees to close of escrow. One such fee in Hayward is the park dedication in-lieu fee, which is nearly \$12,000 per new single-family unit, and which is paid at the time a certificate of occupancy is issued.

Staff is prepared to develop such an ordinance at Council's direction.

Timing of Ordinance Implementation:

As recently announced, the new 2008 Title 24 Energy Efficiency Standards will become effective on August 1, 2009. State law indicates that in order to mandate green building measures that exceed State Title 24 Energy Efficiency Standards, which the proposed ordinance would do, approval from the California Energy Commission is required. Such process entails filing a cost effectiveness study

with the Commission that justifies such higher standards, which is a process that typically takes 3 to 5 months once an ordinance is filed with the Commission. Stopwaste.org is working on a cost effective study for its members that would be utilized by agencies in filing requests to the California Energy Commission to exceed State energy efficiency standards. Case studies for two example single-family homes ranging in size from 1,582 to 2,025 square feet indicate that complying with energy efficiency standards at 15 percent above 2008 Title 24 standards would cost an average additional \$1,720 per unit, which is compatible with the overall green building project costs outlined previously in this report. The study is anticipated to be completed by the middle of December, 2008. Nonetheless, language has been inserted in the ordinance to accommodate a possible delay, with an effective date for mandatory compliance tied to approval by the Energy Commission and Building Standards Commission.

Environmental Review:

As stated in the attached resolution, adoption of the ordinance would be categorically exempt from the California Environmental Quality Act (CEQA) per Section 15308 of the CEQA Guidelines – *Actions by Regulatory Agencies for Protection of the Environment*.

FISCAL AND ECONOMIC IMPACT

The fiscal impacts to the City would be negligible and associated with additional time that will be required for City staff to plan review and inspect projects associated with non-residential private developments are roughly estimated to be four to eight additional hours, on average, per project. Staff time required will depend on the size and scope of the project.

Approximate green building costs to developers is outlined in this report. Financial benefits to developers for building green in terms of marketing strategy are difficult to ascertain, especially in the current housing market. The ability of developers to pass on such costs to buyers is severely limited in the current economic environment; however, there may be some benefits realized due to accelerated velocity in moving sales of home “green” developments. As stated previously, for larger projects, the added cost of incorporating green building is easier to absorb than for smaller projects. Individual homeowners and commercial tenants stand to gain through reduced utility and water bills.

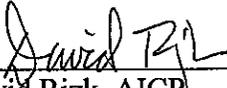
PUBLIC CONTACT

As summarized in the Background section, staff has attended two meetings with Hayward developers. The first one was organized by the Chamber of Commerce and occurred on November 6. The second meeting, on November 14, involved representatives from some of the major residential developments under construction and a GreenPoint rater. Notice of this hearing was advertised in *The Daily Review* on November 15 and notice of the hearing was mailed to over 545 interested parties.

SCHEDULE/NEXT STEPS

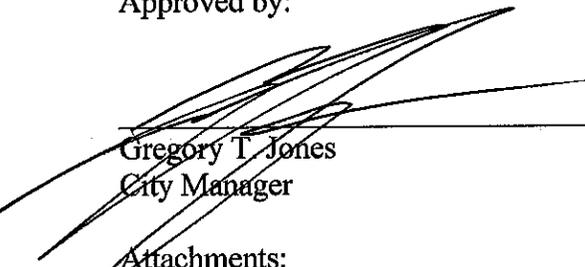
Should the Council introduce the attached ordinance, it will be scheduled for adoption at the December 2 City Council meeting, with an effective date of January 2, 2009. If Council so directs, staff will return with the appropriate ordinance amendments to develop an incentive program for compliance with Green Building Ordinance provisions.

Prepared by:



David Rizk, AICP
Director of Department of Development Services

Approved by:



Gregory T. Jones
City Manager

Attachments:

- Exhibit A: October 21, 2008 City Council Meeting Minutes
 - Exhibit B: Matrix Summarizing Standards for Entitled Projects
 - Exhibit C: List of Major Entitled Residential Projects in Hayward
 - Exhibit D: City of Hayward Non-Residential Private Development Green Building Checklist (revised from 10-21-08 version)
 - Exhibit E: Summary of Green Building Standards for Bay Area Cities
 - Exhibit F: City Hall Permit Center Potential Lighting Cost Upgrade Analysis
 - Exhibit G: October 21, 2008 City Council Staff Report with Attachments
- Draft Private Green Building Ordinance, Red-Lined Version
(revised from 10-21-08 version)
Draft Resolution

HEARINGS

8. Introduction of an Ordinance to Amend Chapter 10 of the Hayward Municipal Code by Adding Article 22, a Green Building Ordinance for Private Development

Staff report submitted by Director of Department of Development Services Rizk, dated October 21, 2008, was filed.

Director of Department of Development Services Rizk gave a synopsis of the report and introduced Acting Building Official Martinez and Plan Checker Osborne to address any technical questions.

Council Member Quirk referenced an e-mail submitted by Mr. Zaballos noting that GreenPoint Rating fees were higher than those stated in the report. Director of Department of Development Services Rizk stated that the amounts quoted in the report came from Build It Green and Stopwaste.org staff. Mr. Rizk added that Mr. Zaballos's concern seemed to be related to GreenPoint Rating for residential remodels and additions, which were only encouraged per the proposed ordinance. In response to Mr. Quirk's inquiry related to what would be required in obtaining 15% below Title 24 requirements for lighting reduction, Mr. Osborne noted that there were fixtures available to reduce the overall wattage demand. In response to the increase cost for lighting wattage per square foot, Mr. Osborne indicated that it was not expected to be significant. Mr. Quirk also inquired about the cost for reduction of indoor water use by 20% for a typical building. Acting Building Official Martinez indicated that going from a 1.6 Gallons per Flush (GPF) water closet toilet to a 1.0 GPF, there was an increase in cost of \$150, and from a 1.6 GPF urinal to a waterless urinal, an increase in cost of \$1,100. It was determined that there was not a large amount of money. Mr. Quirk requested that staff find the cost associated with the lighting reduction of a building similar to City Hall using genetic builder equipment. Mr. Quirk also mentioned that Mr. Miller, Stonebrae Country Club President, expressed concern that the proposed ordinance might generate contractual problems with builders. Mr. Rizk indicated that language could be added to amend or exclude pending projects subject to development agreements.

Council Member Zermefio noted that the information on page two of the report related to green building was helpful. Mr. Zermefio referenced page seven of the report regarding Leadership in Energy and Environmental Design (LEED) measures and its degree of difficulty in verifying the process, and inquired what happens when the measures are not able to be verified correctly. Director of Department of Development Services Rizk indicated this was a reason why staff moved away from using the LEED checklist items.

Council Member Halliday indicated that she also spoke to Mr. Miller and she asked staff to clarify if the ordinance would include projects that have been approved by the City yet building permits have not been pulled. Director of Department of Development Services Rizk indicated that per the proposed ordinance, green building requirements would apply to any building permit application submitted after July 1, 2009. Ms. Halliday noted that Council would need to review the language for already approved projects. In response to Ms. Halliday's inquiry for the estimated fees associated with Build It Green for larger projects, Mr. Rizk indicated that fees associated with the application and certificate are not as significant as the fees involving in hiring a GreenPoint Rater and incorporating building materials. He also clarified that the \$10 fee for each additional

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certificate was for each additional home in a project. In response to Ms. Halliday's inquiry for the reasoning for an independent third party rater hired by the developer, Mr. Rizk indicated that it was because of staff resources, established green building system, and objectivity factors.

Council Member Dowling, in reference to lighting requirements, inquired about the effect that the reduction requirements would have on the ability to work in an office setting. Plan Checker Osborne noted that California's Title 24 system accounts for flexibility, e.g., photovoltaic system. Director of Department of Development Services Rizk added that new technology for lighting was improving at requiring less energy for the same output. In reference to auto dealers and their requirements, Mr. Osborne responded that the Energy Commission made an exception for auto dealerships.

Council Member Henson referenced Section 10-22.130 (b)-Standards for Compliance for New Single Family Dwellings, noting that during Sustainability Committee discussions he understood that the ordinance would apply to only new projects. It was stated that the ordinance would need to be revised to clarify Council's position. Mr. Henson also added that with Governor Schwarzenegger's veto of Assembly Bill 2939 (Hancock), which would have authorized cities to adopt green building standards that exceed those adopted by the State, municipalities would need to provide findings for ordinances. Director of Development Services Department Rizk indicated that findings related to location, climate, and specific conditions that justify exceeding Title 24 requirements, would need approval by the Energy Commission and the State Building Standards Commission. He also stated that the ordinance would require an annual update and review. It was stated that some of the cost associated with new green building requirements would be reduced as cities comply with State requirements.

Council Member Quirk inquired why there was only a 15% reduction in lighting from Title 24 for commercial projects. Plan Checker Osborne indicated that lighting is the primary energy user for commercial building.

Mayor Sweeney opened the public hearing at 9:07 p.m.

Mr. Jim Wieder, Hayward Chamber of Commerce President, noted that he was in receipt of e-mails that did not favor the ordinance as written. Mr. Wieder concurred with Council Member Henson that previous discussions related to green building requirements only considered projects approved after July 1, 2009. He added that it was reasonable to provide a cost benefit analysis for the development community. He urged Council to be mindful of the current economic crisis. He recommended that the ordinance be continued for at least a week in order to include further discussion and he favored revisiting the topic next year.

Mr. Paul Campos, Senior Vice President and General Counsel for the Home Builders Association of Northern California, noted that the association became the first in the country to endorse an independent third party Green Building Program and also partnered with Build It Green in promoting its ordinance. He commended staff's recommendation to move from LEED to

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GreenPoint Rater, but he was concerned with the ordinance as drafted. He urged Council to amend the ordinance, in order to provide for a grandfather date, stating that any project that has submitted a complete application before the July 1, 2009, be exempt from the ordinance. He added that as green building progresses, long term development agreements and vesting tentative maps might not be exempt from State law requirements. He expressed interest for working with City staff regarding local stimulus measures for housing. Finally, he urged staff to ensure that water reduction for commercial buildings complies with local Code requirements.

Mr. Steve Miller, Stonebrae Country Club President, commended the City for putting together the green movement effort. Mr. Miller indicated that proposed Green Building requirements would impose a great impact on approved projects such as Stonebrae, which was approved after nine years of extensive review. He requested that Council delay its decision and reconsider appropriate language to amend the proposed ordinance. Finally, he submitted a letter for the record.

Mayor Sweeney closed the public hearing at 9:24 p.m.

Council Member Quirk made a motion to direct staff to bring back appropriate language for projects that should be grandfathered and look at the financial aspects of the builders; and to bring back an estimate of the increase in cost for commercial building regulations, e.g., City Hall.

Council Member Zermefio seconded the motion.

Council Member Dowling thanked all those involved in contributing to the progress of the proposed ordinance. Mr. Dowling indicated that improvements could have an initial cost, but over time would constitute savings for water and energy. He added that it would not make sense to impose new requirements on developments such as Stonebrae, Olson's Garden Walk, La Vista Quarry, and Citation Homes. He suggested that developments that have already been approved be encouraged and not required to follow a GreenPoint Rated Checklist. He supported the motion.

Council Member Henson also supported the motion. Mr. Henson suggested that a list of development projects that fit into the category described by Mr. Dowling be created and that the language in the ordinance be specific as what it would entail. He added that the GreenPoint Rating System process was ready to advance as well as commercial LEED certified buildings. Finally, he was optimistic that the cost associated with the GreenPoint Rating System would be reduced. He was in support of the motion as stated.

Council Member Zermefio echoed the comments made by Council members and added that building homes would benefit the economy. He concurred with the motion.

Council Member May reminded Council Members that this hearing was a result of work sessions in which she supported encouraging rather than requiring green buildings. Ms. May noted that homebuyers are most concerned with costs as opposed to GreenPoint Rating. She concurred with Council Member Henson favoring a listing of pending developments and noted that Hayward has had a reputation for being unfriendly towards developers.

Council Member Halliday supported the motion and commended the building community input, but she was disappointed for lack of constituency input. She expressed importance for creating a

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balance among the interested parties. She concurred with Council Member Dowling that builders be encouraged to consider green building and favored noting the economic unfeasibility for builders to meet the requirements. Finally, she thanked the development community and its willingness to see Hayward move towards green building.

Mayor Sweeney reminded members of Council that the July 1, 2009 date was selected to give people notice of when the green requirements would be in place. Mr. Sweeney encouraged Council to be ready to make decisions and determine the projects that should be exempt from green building requirements. He indicated that Hayward residents demand green friendly projects. He supported the motion and urged Council Members of the importance to provide leadership.

In response to Council Member Henson, City Manager Jones anticipated that the item would come back before Council on November 25, 2008.

Discussion ensued and it was determined that City staff would bring back the list of projects and would make a reasonable recommendation.

It was moved by Council Member Quirk, seconded by Council Member Zermefio, and unanimously carried to direct City staff to bring back appropriate language for projects that should be grandfathered and look at the financial aspects of the builders; and to bring back an estimate of the increase in cost for commercial building requirements, e.g., City Hall.

9. ~~Introduction of an Ordinance Implementing the Provisions of the Digital Infrastructure and Video Competition Act (DIVCA) of 2006~~

~~Staff report submitted by Assistant City Manager David, dated October 21, 2008, was filed.~~

~~Assistant City Manager David gave a synopsis of the report.~~

~~Council Member Henson expressed his dissatisfaction for the Digital Infrastructure and Video Competition Act (DIVCA) since it went into effect. In response to Mr. Henson's request for a comparison of the five percent of the state franchise holder's gross revenue plus one percent Public Education and Government (PEG) fee and the City's ability to individually negotiate, Assistant City Manager David indicated that the five percent is comparable to what was negotiated in the local franchise agreement and the one percent PEG was a continuation of what was negotiated. Ms. David further stated that the difference would constitute a charge for previous free service drops for municipal buildings, except for libraries and schools. Furthermore, auditing was identified to continue to be an issue. In reference to Section 11-1.500 of the Ordinance regarding Permits and Construction, Mr. Henson inquired if the State could control the ability of companies to come into a community. Ms. David indicated that companies would still be subject to the City's regulations related to the public rights-of-way and permits required, but the City would not have the same authority to deny a permit application, assuming they meet the requirements.~~

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Summary of Staff Recommendations for Entitled Projects to Comply with Green Building Ordinance

Type of Approvals	Compliance Date (based on when applications are submitted for Building Permits or Master Plans)
No VTM or DA (incl. regular TTM)	8/1/2009*
No VTM, but DA	1/1/2011
VTM, no DA	Exempt
VTM and DA	Exempt

DA = Development Agreement; VTM = Vesting Tentative Map; TTM = Regular Tentative Tract Map

* or when California Energy Commission and Building Standards Commission approve ordinance, whichever date is later

**DUE TO THE COLOR OF
THE REFERENCED
EXHIBIT, IT HAS
BEEN ATTACHED AS
A SEPARATE LINK**

City of Hayward Green Building Checklist for Private Non-Residential Development

Applies to all non-residential projects that exceed 1,000 square feet

Energy Efficiency

For non-residential projects entailing 1,000 square feet or more of new or remodeled space, and where at least half of the light fixtures are new or replaced:

1. the lighting load for such fixtures shall be reduced by at least 15% below 2008 Title 24 Building Energy Efficiency Standards, or
2. 15% of the lighting loads of such fixtures shall be provided by solar, wind, or other renewable energy source, as approved by the Building Official, or
3. the project must show compliance for overall energy budget at 5% below 2008 Title 24 Building Energy Efficiency Standards, using the performance method.

When tailored method is used for retail sales lighting compliance, such 15% reduction shall apply only to LTG-6-C part 1, but not to LTG-6-C parts 2 & 3 for display lighting.

Background:

According to the U.S. Department of Energy, buildings use about 68% of the electricity generated in the country on an annual basis. The California Energy Commission estimates that about one third of the energy used in commercial buildings is dedicated to lighting. This makes commercial lighting one of the single biggest energy users nationally. Reducing lighting power demand is an essential step in making buildings "green".

The California Energy Commission establishes the maximum allowed lighting power for commercial buildings and the city enforces this through the T-24 energy report. All designers and contractors are familiar with the process of calculating the allowed lighting power for a project.

This measure is based on *LEED Energy and Atmosphere Credit 2*. In the LEED system, however, the renewable energy percentage is only based on the total electricity demand of the building.

City of Hayward Green Building Checklist for Private Non-Residential Development

Applies to all non-residential projects that exceed 1,000 square feet

Water Conservation

For non-residential projects entailing 1,000 square feet or more of new or remodeled space, and where a new bathroom is proposed or a bathroom is proposed to be remodeled and involves new water closets or urinals:

- Reduce indoor water use by 20% below baseline, per 2007 California Plumbing Code, for each water closet or urinal that is installed or replaced

Background:

Reducing water use in commercial buildings is relatively easy to achieve. Technologies such as waterless urinals*, occupant sensors and ultra low-flow toilets are available and provide instant savings. This measure is based on the LEED Water Efficiency Credit 2. In the LEED system additional credit is given for a 30% reduction as well. For the Hayward ordinance it will probably be sufficient to start with a 20% reduction initially and see if a higher threshold is appropriate at a later time.

***Waterless Urinals:** These units utilize a trap insert filled with a sealant liquid instead of water. The lighter-than-water sealant floats on top of the urine collected in the U-bend, preventing odors from being released into the air. Although the cartridge and sealant must be periodically replaced, the system saves anywhere between 15,000 and 45,000 gallons of water per urinal per year.

Design Process:

Instead of 1.6 gallons per flush (gpf) toilets/water closets, 1.28 gpf units will be installed. For urinals, either 0.5 gpf or waterless units will replace the standard 1.0 gpf units.

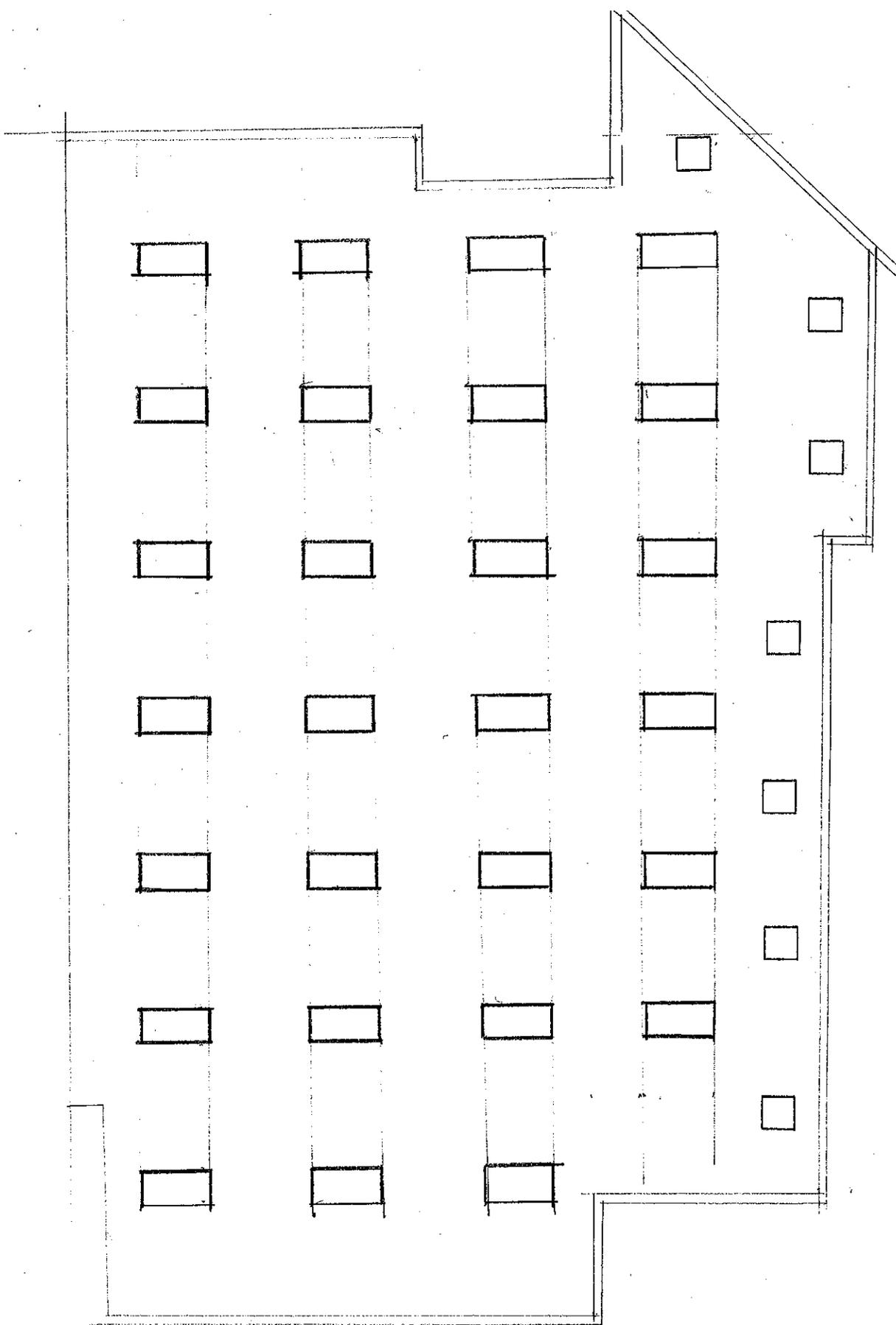
References:

- 2007 California Plumbing Code
- LEED Reference Manual
- LEED WE Credit 2 (20% reduction below baseline)

Exhibit E

JURISDICTION	COMMERCIAL			RESIDENTIAL		
	Standard	Required	Verification	Standard	Required	Verification
Alameda County	In process			In process		
Alameda	LEED Certified (public private partnership)	Y	USGBC	50 GreenPoints	Y	Build It Green
Albany	LEED Certified	Y	USGBC	50 GreenPoints	Y	City
Berkeley	LEED	N		GreenPoint checklist - no minimum	Y	Build It Green
Dublin	LEED	N		Residential GB Guidelines	N	
Emeryville	LEED	N		MF GreenPoint Checklist - no minimum	N	
Fremont	In process			In process		
Hayward	In process			In process - MF no minimum	N	
Livermore	20 LEED credits	Y	City	50 GreenPoints	Y	City
Newark						
Oakland	LEED - mandatory in process	N		GB Guidelines - mandatory in process	N	
Piedmont				50 GreenPoints	Y	Build It Green
Pleasanton	LEED "equivalent"	Y	City	50 GreenPoints	Y	City
San Leandro	LEED	N		Residential GB Guidelines	N	
Union City	LEED	N		Residential GB Guidelines	N	

CITY HALL PERMIT CENTER
POTENTIAL LIGHTING COST
UPGRADE ANALYSIS



○ PERMIT CTR LIGHTING PLAN - AS BUILT
3014 FT² LPD: .83 W/FT²

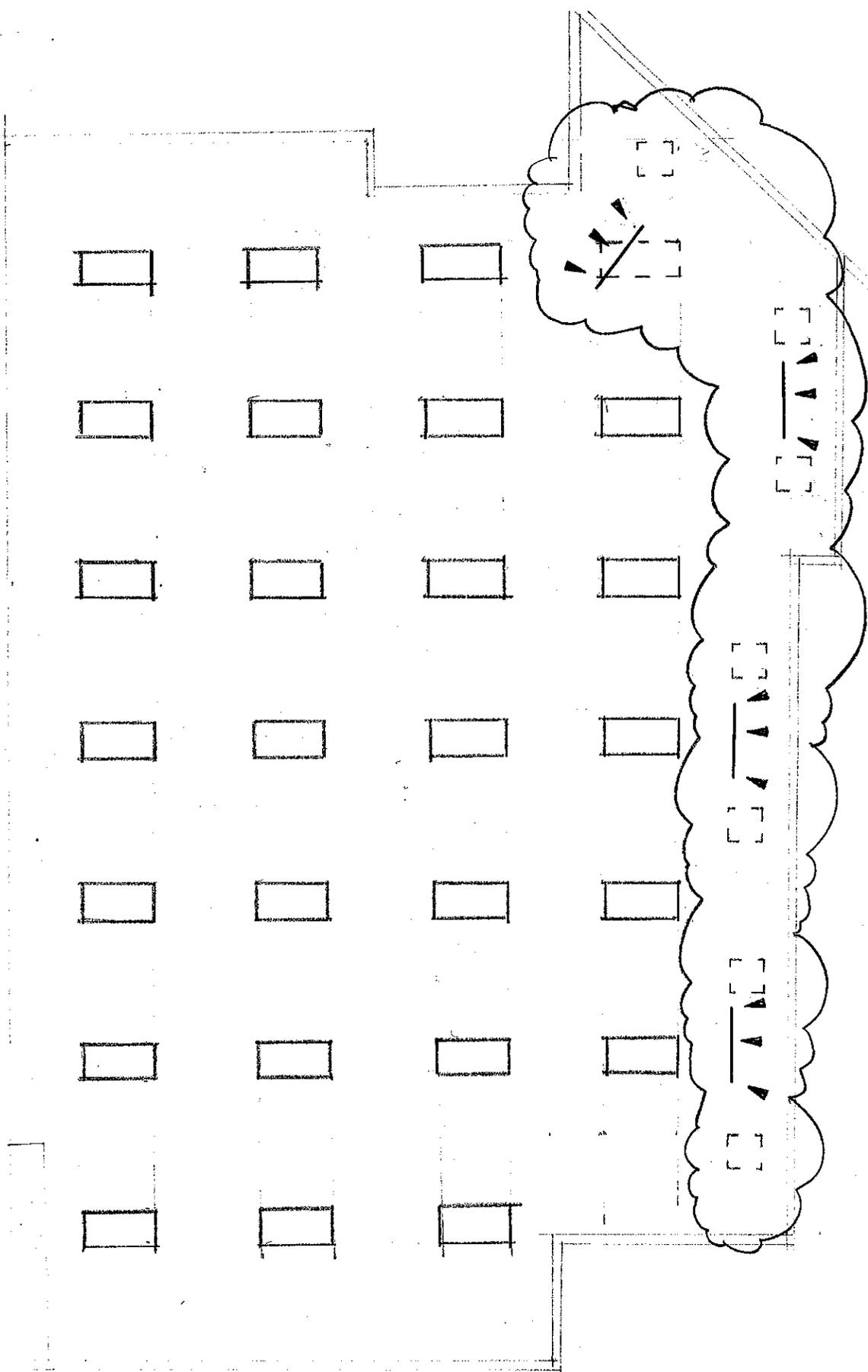
Permit Center Lighting Study

2008 Title 24 Lighting Allowance:	0.9w/ft ²
2008 Green Ordinance Lighting Allowance:	0.765w/ft ²
Conditioned Floor Area:	3014 ft ²

Base Case:

As built, no modification

Propose Lighting Power Density: 0.83w/ft²



PERMIT CTR LIGHTING PLAN - ENHANCED 1
3014 FT²

LPD : .753 W/FT²

Permit Center Lighting Study

2008 Title 24 Lighting Allowance: 0.9w/ft²
2008 Green Ordinance Lighting Allowance: 0.765w/ft²
Conditioned Floor Area: 3014 ft²

Enhanced Case 1:

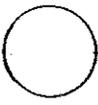
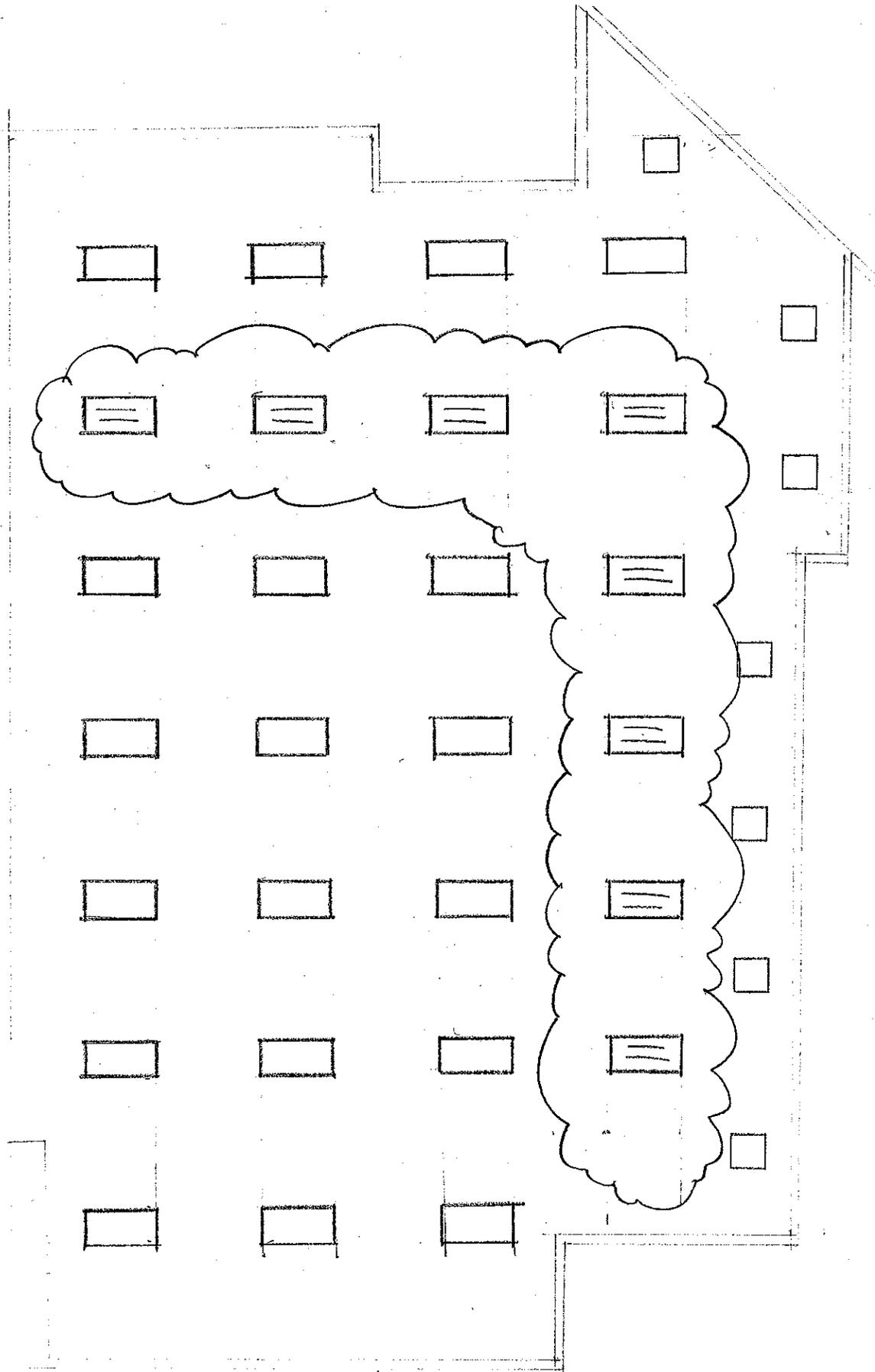
Use 16' line-voltage tracks in lieu of (7) 2x2 fluorescent fixtures and (1) 2x4 fixture in the information display area

Cost Increase due to the enhancement:

- Removed 2x2's - \$180 x 7
 - Removed 2x4's - \$160 x 1
 - Added line-voltage tracks w/ Current Limiter + \$ 600
- \$600 Costs for new fixtures.

Net Enhancement Cost: - \$820

Propose Lighting Power Density: 0.753w/ft²



PERMIT CTR LIGHTING PLAN - ENHANCED 2
3014 FT² LPD: .726 W/FT²

Permit Center Lighting Study

2008 Title 24 Lighting Allowance: 0.9w/ft²
2008 Green Ordinance Lighting Allowance: 0.765w/ft²
Conditioned Floor Area: 3014 ft²

Enhanced Case 2:

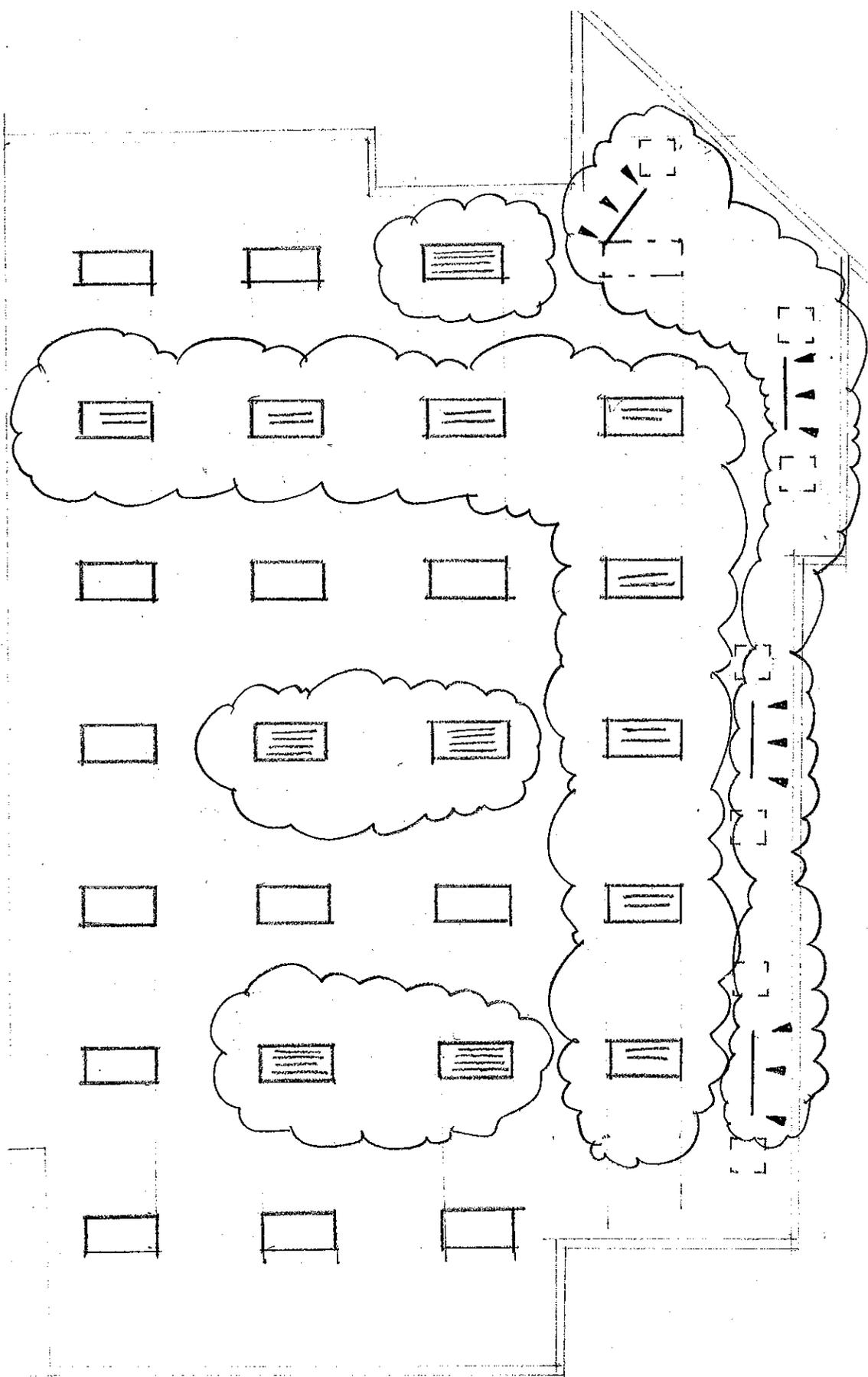
Use 2 lamp fixtures instead of 3 lamp fixtures at the circulation area

Cost Increase due to the enhancement:

Cost: -\$50

Propose Lighting Power Density: 0.726w/ft²

8 x \$110 = \$880: Costs for eight new 2-lamp fixtures.



PERMIT CTR LIGHTING PLAN - ENHANCED 3
3014 FT² LPD: .728 W/FT²

Permit Center Lighting Study

2008 Title 24 Lighting Allowance: 0.9w/ft²
 2008 Green Ordinance Lighting Allowance: 0.765w/ft²
 Conditioned Floor Area: 3014 ft²

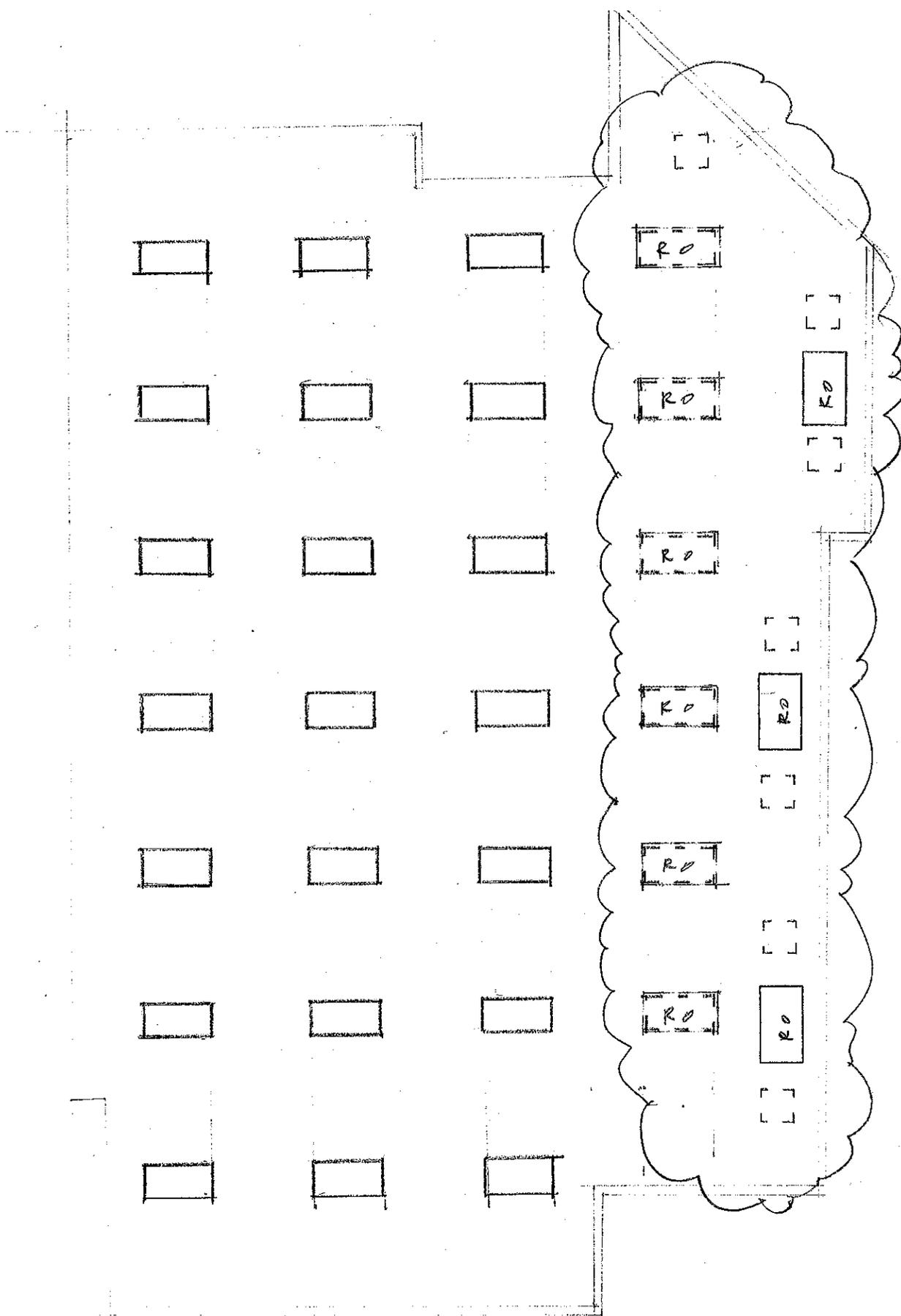
Enhanced Case 3:

*Use 16' line-voltage tracks in lieu of (7) 2x2 fluorescent fixtures and (1) 2x4 fixture in the information display area
 Use 2 lamp fixtures instead of 3 lamp fixtures at the circulation area
 Use 4 lamp fixtures above clerical desks*

Cost Increase due to the enhancement:

- Removed 2x2's	- \$180 x 7	Costs for New Fixtures
- Removed 2x4's	- \$160 x 1	
- Added line-voltage tracks w/ Current Limiter	+ \$ 600	\$600.00
- Replace 3 lamp fixtures with 2 lamp fixtures	- \$ 5 x 8	\$110 x 8 = \$880
- Replace 3 lamp fixtures with 4 lamp fixtures	+ \$ 5 x 5	\$210 x 5 = \$1050
Net Enhancement Cost:	-\$835	\$2,530

Propose Lighting Power Density: 0.728w/ft²



○ PERMIT CTR LIGHTING PLAN - ENHANCED 4
 3014 FT² LPD: .759W/FT²

Permit Center Lighting Study

2008 Title 24 Lighting Allowance: 0.9w/ft²
2008 Green Ordinance Lighting Allowance: 0.765w/ft²
Conditioned Floor Area: 3014 ft²

Enhanced Case 4:

Replace display area 2x2's and circulation area 2x4's with "reduced output" 2x4's

Cost increase due to the enhancement:

- Removed 2x2's	- \$180 x 7	
- Removed 2x4's	- \$160 x 6	
- New Reduced Output 2x4's	+ \$ 200 x 9	\$1,800 costs for new fixtures.

Net Enhancement Cost: -\$420

Propose Lighting Power Density: 0.759w/ft²



DATE: October 21, 2008

TO: Mayor and City Council

FROM: Director of Department of Development Services

SUBJECT: Proposed Green Building Ordinance for Private Development

RECOMMENDATION

That Council adopts the attached resolution finding the adoption of the attached ordinance is categorically exempt from the California Environmental Quality Act (CEQA), and introduces the attached ordinance related to green building standards for private development.

SUMMARY

Green building has moved to the forefront of public policy debate, especially given the concerns with the potentially catastrophic impacts of global climate change. The passage into law of Assembly Bill 32, which stipulates reduction of greenhouse gas emissions throughout California, the formation of a variety of green building rating systems, and adoption of mandatory green building standards by municipalities, such as Rohnert Park, San Jose, and San Francisco, are specific examples that show how such issues have become top policy priority. Incorporating green building into private developments will help ensure that projects use less energy, conserve water and natural resources, provide healthy indoor spaces, and reduce reliance on the automobile.

Staff is recommending that an established green building rating system for residential development that involves independent third party raters and is supported by both the Northern California Homebuilders Association and the Association of Bay Area Governments, called GreenPoint Rated, be required for new residential projects, and encouraged for more significant residential remodels and additions. Specifically, City staff is recommending that all new residential and mixed use projects be required to be GreenPoint Rated, and residential remodels and additions entailing more than 500 square feet be encouraged to become GreenPoint Rated, or incorporate as many green building checklist measures as possible. Acquiring GreenPoint Rating will ensure that green building measures are incorporated into new residential projects, and confirmed by a certified, independent third party rater.

For new non-residential private projects and non-residential additions and remodels consisting of more than 1,000 square feet, staff is recommending that projects incorporate measures from a checklist that emphasizes energy efficiency and water conservation, and that incorporation of such measures be verified by City of Hayward plan checkers and inspectors.

A matrix is included as Exhibit A that summarizes the basic provisions of the ordinance.

BACKGROUND

On September 16, the City Council adopted a green building ordinance for municipal projects that requires that such projects be LEED Silver Certified. The attached matrix (Exhibit A) also summarizes the general provisions of the Municipal Green Building Ordinance.

This report and recommended ordinance involve a green building ordinance for private developments. In response to goals to reduce impacts on the environment, the Council Sustainability Committee has recommended that the City Council adopt a green building ordinance for private developments that will require that green building measures be incorporated into new private development projects. The Committee also encouraged emphasizing water conservation and energy efficiency, especially related to new, larger projects. At a September 16 work session, the Council echoed such direction, and staff is proposing the attached draft ordinance in response.

What is Green Building?

Green building is a holistic approach that incorporates green building measures and techniques into construction. Green buildings are sited, designed, constructed, and operated to enhance the well-being of their occupants and support a healthy community and natural environment. In practical terms, green building is a "whole-systems" approach to building that includes:

- Designing for livable communities
- Using sun and site to the building's advantage for natural heating, cooling, and daylighting
- Landscaping with native, drought-resistant plants and water-efficient practices
- Building quality, durable structures
- Reducing and recycling construction and demolition waste
- Insulating well and ventilating appropriately
- Incorporating durable, salvaged, recycled, and sustainably harvested materials
- Using healthy products and building practices
- Using energy-efficient and water-saving appliances, fixtures and technologies

When implemented holistically, these strategies serve to preserve our environment for future generations by conserving natural resources and protecting air and water quality. They provide benefits for us today by increasing comfort and well-being, and helping to maintain healthy air quality. Finally, green building strategies reduce maintenance and replacement costs, reduce utility bills, and lower the cost of home ownership, while also increasing property and resale values.

What is the GreenPoint Rating System?

The GreenPoint Rating System is a system that may be used to ensure green building measures are incorporated into residential construction projects. Currently, there are three GreenPoint Rating systems, each with separate guidelines and checklists: New Home Construction (for single-family homes), Multi-Family (for multi-family units) and Existing Homes (for remodels and additions).

At the heart of the GreenPoint Rated program are Certified GreenPoint Raters--the people who evaluate each home to ensure it meets the program's standards for high performance. Build It Green, who oversees the GreenPoint Rated program (see discussion below), amends its GreenPoint Rating checklists and systems every three years, to reflect revisions in law (State's Green Building Ordinance and Title 24 Energy standards, etc.), and trends and practices in the building industry. Recent discussions with Build It Green staff indicate that although the checklist requirements will need to be increased to be in step with changes in the State's energy code, the specific amount that they will need to be changed has yet to be determined.

A GreenPoint Rated home is graded on five categories: energy efficiency, resource conservation, indoor air quality, water conservation, and community. If the home meets minimum point requirements in each category, and scores at least 50 points as verified by a Certified GreenPoint Rater, it earns the right to bear the GreenPoint Rated label. GreenPoint Rating also entails providing a numerical score, which allows buyers to evaluate and compare the environmental performance of different homes.

The GreenPoint Rating System is a system developed by Build It Green. Build It Green is a non-profit membership organization whose mission is to promote healthy, energy- and resource-efficient building practices in California. The organization works with mainstream stakeholders in the housing industry to accelerate the adoption of green building practices, and its short-term goal is to facilitate the greening of 10,000 housing units by the end of 2008. Earlier this year, the Homebuilders Association of Northern California endorsed Build It Green's GreenPoint Rating System. Also, on July 17, 2008, the Association of Bay Area Governments (ABAG) Executive Board endorsed GreenPoint Rated as a verification system for residential projects and encourages the rapid adoption of Green Building Programs by Bay Area cities and counties.

Build It Green also offers training courses and certification programs where interested parties can become certified GreenPoint raters. Build It Green's website currently shows that there are nearly 160 certified raters in the Bay Area, and with continued training, the number of certified raters will increase. Currently, one Hayward Building Division staff member is a New Home Certified Rater and two staff members are Certified Green Building Officials. Three Hayward Planning Division staff members are also Certified Green Building Officials. The higher certification level of a rater involves a week long training program through Build It Green. As budget and staff resources allow, additional staff rater training is anticipated, to allow staff to become familiar with the certification/rating process. Although it should be noted that obtaining GreenPoint rating involves verification that green building measures are incorporated by an independent, third party rater hired by the developer, City staff will continue to seek training to be familiar with the practices and techniques utilized in green building.

Fees to Build It Green cover the cost to review, process, quality assure the application, and final checklist. It also covers processing of the certificate for the homeowner. The application fee per project is \$400, the processing and certificate fee is \$100 per home or project, the certificate fee is \$10 for each additional certificate, and the pre-construction review is \$350 per project. The fees for conducting a home rating are negotiated directly between the GreenPoint Rater and client. While every project is unique, surveys show that basic rating fees (excluding consultation and travel) typically range from \$700 - \$1,500 for a new single-family home or \$3,750 - \$6,000 for a new 30-unit subdivision or multi-family project, and can be as high as \$5,000 for residential additions, associated with assessing existing conditions in the home. Also, additional initial costs for green building materials and products are incurred (see later discussion on this topic).

The current checklists for New Construction, Multi-Family Development, and Existing Homes are included as exhibits. Checklists and guidelines are revised periodically, such as the most current Multi-Family Guidelines, which were released in May of this year. Build It Green staff has indicated that the threshold to achieve 50 points will increase, to reflect improving technologies and new legislation. The attached ordinance does not specify specific checklist and guidelines versions, since the most current checklist and guidelines from Build It Green will be the ones in effect at time of permit application submittals. A summary of each checklist and checklist point thresholds that projects must meet to be GreenPoint Rated follows.

New Home (Single-Family) Construction (Exhibit B, checklist)

In order for a new home to be GreenPoint Rated, it must:

- earn a total of at least 50 points on the checklist;
- earn a minimum total of points for each category as noted: Energy (30 of possible 193), Indoor Air Quality/Health (5 of possible 51), Resources (6 of 103), and Water (9 of 71);
- meet three prerequisites: incorporate 50% construction waste diversion [Hayward's current practice is to ensure such diversion occurs, and for 2006, 65% diversion occurred, with a goal of reaching 75% diversion by 2010], exceed Title 24 energy standards by 15%, and incorporate Green Points checklist in blueprints; and
- have an independent third party certified rater verify that identified measures have been incorporated into the project.

The attached checklist shows how each checklist item, sorted by project component, applies to five categories. A proponent, once meeting the three prerequisites, may choose from a variety of checklist items, provided the minimum total of points for four categories as noted in the second bullet above, is achieved.

Multi-Family Construction (Exhibit C, checklist)

Although the new version of the Multi-Family Green Building Guidelines was adopted in May of this year, the accompanying checklist has not been released, but will be released in the near future. According to the Build It Green website, the revised Guidelines indicate that "measures have been thoroughly revised and updated to reflect the current state of the green building industry." A

minimum threshold of 50 points total will still be required in order for a project to be GreenPoint Rated.

According to the current checklist, in order for a multi-family project to be GreenPoint Rated, it must:

- earn a total of at least 50 points on the checklist;
- earn a minimum total of points for each category as noted: Community (6 of 60 possible), Energy (30 of possible 60), Indoor Air Quality/Health (5 of possible 24), Resources (6 of 64), and Water (3 of 38);
- meet four pre-requisites: incorporate 50% construction waste diversion, exceed Title 24 energy standards by 15%, have a 3-year subcontractor guarantee and 20-year manufacturer warranty for shingle roofing, and incorporate Green Points checklist in blueprints;
- have an independent third party certified rater verify that identified measures have been incorporated into the project.

The attached checklist shows how each checklist item, sorted by project component, applies to five categories. A proponent, once meeting the three prerequisites, may choose from a variety of checklist items, provided the minimum total of points for five categories is achieved, as noted in the second bullet above.

Existing Homes Construction (Exhibit D, checklist)

Build It Green began its GreenPoint Rating system for Existing Homes in July. Two rating levels are included as part of the system:

1. an *Elements* label for homes that meet basic requirements in four categories and are on track to make additional improvements over time (25 minimum points total required, with minimum thresholds for Energy Efficiency (8 of 86 points), Indoor Air Quality (2 of 42 points), Resource Conservation (2 of 75 points), and Water Conservation (4 of 38 points)), and
2. a *Whole House* label is awarded to homes to which comprehensive green improvements have been made (50 minimum points total required, with minimum thresholds for Energy Efficiency (20 of 86 points), Indoor Air Quality (5 of 42 points), Resource Conservation (6 of 75 points), and Water Conservation (8 of 38 points)).

Because remodeling projects vary so widely in scope, and because this is a new system that was just recently made available to the public, staff is recommending that remodel or addition projects entailing more than 500 square feet only be encouraged to be GreenPoint Rated at this time, or incorporate as many measures as possible. Also, as expressed by individuals involved in the pilot program for this system at a workshop attended by some of Building Division staff during the week of June 13, concerns have been expressed about the relative costs associated with obtaining GreenPoint Rating, given the time required of raters to assess basic components of existing homes in order to meet minimum thresholds.

Staff will assess the system over the next several months and plans to provide the Sustainability Committee and City Council with additional information in the future, which may lead to requiring construction on existing homes to be mandatory GreenPoint Rated. Build It Green recommends that GreenPoint Rating for Existing Homes be voluntary only at this time.

DISCUSSION

The Council Sustainability Committee and staff are recommending requiring mandatory green building standards for private projects. However, as discussed later, staff is also recommending that the provisions of the ordinance not become effective until July 1, 2009, to allow City staff and the development community a transition period to become familiar with the requirements and processes, and to allow sufficient time to process a request through the State to exceed State Building Code, and Energy Efficiency standards.

Proposed Private Green Building Ordinance (draft attached) -

Residential Construction –

As summarized in the attached matrix, staff is recommending using the GreenPoint Rating system for all residential projects that exceed 500 square feet in size. Certain exemptions are provided, such as for historical buildings, for typical maintenance and repair (e.g., reroofs, termite repair, etc.), for projects under \$50,000 whose proponents can demonstrate to the satisfaction of the Building Official an economic hardship (green building measures exceed 20% of construction costs), etc.

Non-residential Construction –

Previously, staff had recommended utilizing the Leadership in Energy and Environmental Design (LEED) checklist and requiring a minimum score of 20 points for non-residential projects. However, as indicated at the September 16 work session, after looking carefully at the LEED system in the context of a Green Building ordinance, staff identified some problems with using the checklist in its complete form. Given the fact that we are in the Bay Area -- a region with significant environmental regulations already in place -- many of the measures that an applicant could choose from the list are already be adequately covered by existing requirements. A green building checklist for non-residential private development should entail items that *are not* included in any current regulations in order to reduce confusion and have a more positive effect on the environment.

The LEED system was designed to depend on the aspiration of the building owner and facility manager to achieve a certain level of sustainability in their project. When applying LEED requirements from the side of an enforcement agency, this aspiration may not always be present in the process. Therefore, any green building measures the City requires will have to be verifiable, highly effective and relatively easy for the applicant to document. There are several items in the LEED program that do not meet these criteria.

Currently covered aspects of the LEED system:

Currently, the City already enforces a number of issues that have more or less equivalent counterparts in the LEED program. Some of these are covered by regional regulations and some are encompassed in Hayward's regulations and enforced by various City departments. Such regulations include:

- Construction demolition (covered by Bay Area Air Quality Management District and City's Public Works Department/Solid Waste Division)
- Recycling (Solid Waste Department)
- Stormwater management (covered by Bay Friendly Guidelines)
- Water Efficient Landscaping (covered by Bay Friendly Landscape Requirements)
- Basic Energy Efficiency (CA T-24 Energy Compliance)

Aspects of the LEED system that do not apply to our proposed use of the checklist:

Also, there are a number of measures in the LEED program that are not relevant in an enforcement context within a particular jurisdiction. These measures were designed to influence building owners to choose "greener" places to locate their projects. Since we already know that we will only be dealing with Hayward, the following measures should not be included in our checklist:

- Selecting sites with minimal environmental impact
- Choosing sites with access to public transit
- Choosing brownfield sites for re-development
- Selecting sites with access to public transportation

LEED measures which are extremely difficult to verify through the Planning and Building department review process:

- Material selections based on chemical content
- Material choices based on recycled content
- Maintaining portions of existing buildings for re-use
- Material selections based on local production
- Life-cycle cost assessment of materials

Remaining LEED measures that are enforceable, relevant and not currently covered by similar regulations:

There are LEED measures that provide valuable results and are easy to verify via the normal plan check and inspection process, which focus on energy efficiency and water conservation. The attached checklist (Exhibit E) would require incorporation of two measures into new commercial projects or additions/remodels encompassing more than 1,000 square feet. As with residential green building requirements, certain exemptions as specified in the ordinance would apply.

The first measure, related to energy efficiency, provides two options for a builder that would each result in a reduction of energy use from non-renewable resources, which are:

- Provide a solar photovoltaic system capable of supplying power for 15% of the lighting load; or
- Provide reduced lighting wattage per square foot by 15% below Title 24 requirements.

Tying the reduction in energy use to lighting allows verification of such measures during the plan check and inspection process, versus after project completion when energy use would not be known until the facility is in operation. Staff is recommending 15% percent reduction as an initial requirement as a reasonable standard, cognizant of costs to developers.

The second measure, related to water conservation, requires a reduction of indoor water use by 20% below baseline levels. Again, such standard allows verification during the plan check and inspection process. Typical ways to meet such reduction include use of waterless urinals and/or ultra low-flow toilets. Also, as with the energy efficiency measure, staff believes this reduction level is reasonable as an initial standard.

The City may wish to increase the standards, or add additional ones in the future, once the impacts to the development community are better known and technologies improve and State regulations change.

Requirements for Mandating Green Building Measures that Exceed State Standards

Current State law indicates that in order to mandate green building measures that exceed State Title 24 Energy Efficiency Standards, approval from the California Energy Commission is required. Such process entails filing a cost effectiveness study with the Commission that justifies such higher standards, which is a process that typically takes 6 to 9 months. Stopwaste.org is preparing such study that can be used by its member agencies. If mandated, the GreenPoint Rated and LEED Rating systems would require such filings and determinations. The new 2008 Title 24 Energy Standards by the Energy Commission is anticipated to be released in early summer of 2009. Under existing law, the Energy Commission will need to approve the standards proposed for residential development that exceed State energy standards prior to them becoming mandatory in July of next year.

Also, Assembly Bill 2939 (Hancock) which was supported by StopWaste.org and passed by the State legislature after being amended from its original version, was vetoed the Governor on September 30. The bill would have required municipalities that mandate exceeding the State's Green Building Standards Code to file certain findings with the Building Standards Commission related to environmental conditions, costs and affordability (versus previous bill language that related specifically to local climatic, geological or topographical conditions). Such process would have allowed Hayward to adopt green building standards that complement the California Green Building Standards Code. Due to the Governor's veto, the City will still need to file findings with, and receive approval from, the Buildings Standards Commission, which the City staff would do if the ordinance is adopted.

By delaying the effective date to July 1, 2009, whereby standards outlined in the ordinances would be mandatory, the City will have time to file a study with, and receive a decision from, the California Energy Commission, and to file findings with the Building Standards Commission.

Environmental Review -

As stated in the attached resolution, adoption of the ordinance would be categorically exempt from the California Environmental Quality Act (CEQA) per Section 15308 of the CEQA Guidelines – *Actions by Regulatory Agencies for Protection of the Environment*.

FISCAL AND ECONOMIC IMPACT

The fiscal impacts to the City and to builders associated with adoption of the proposed ordinance have not yet been fully measured, which is one of the major reasons for recommending that there be a voluntary time period before the green building ordinance provisions become mandatory.

Additional staff time that will be required for plan review and inspections associated with non-residential private developments are roughly estimated to be four to eight additional hours, on average, per project; though the staff time required will depend on the size, and scope of the project.

In terms of costs to the development community, rough costs associated with complying with the GreenPoint Rating system were identified earlier in this staff report. However, determining what additional costs, if any, would be borne associated with buying green building materials, is more difficult to do. For larger projects, the added cost of providing green materials is relatively small.

PUBLIC CONTACT

In April, a meeting was held to inform builders and developers in the Hayward community of the proposal to adopt a green building ordinance for private developments. There were three major concerns voiced by the participants: voluntary versus mandatory compliance, process and time added for plan review, and costs of compliance to developers, Hayward homeowners, and to the small builders.

As an outcome of that first April meeting, a group comprised of volunteer members of the development community, called the Green Building Review Committee, met in May and June. During those meetings, the Committee encouraged using Build It Green's GreenPoint Rating system if the City was inclined to use a green building system, opined that standards not be mandatory, encouraged using consistent standards in jurisdictions throughout the region, and supported staff's recommendation to not require compliance until July 1 of next calendar year. Members also expressed an opinion that density bonus and parking exceptions may not be sufficient incentive to encourage green building, and that other forms of market incentives should be investigated and researched, and that whatever ordinance the City determined to be appropriate should be well thought out, and consistent with the ordinances of other jurisdictions.

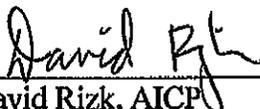
SCHEDULE/NEXT STEPS

Should the Council introduce the attached ordinance, it will be scheduled for adoption at the October 28 City Council meeting. As indicated in the ordinance, the date by which the provisions would be mandatory would be July 1, 2009.

In response to a desired emphasis on promoting renewable resource energy systems and efforts to develop a Climate Action Plan for Hayward, staff plans to present a report in the first quarter of calendar year 2009 to Council that will assess whether requiring additional measures above those in the attached ordinance are desirable. Staff would also have the Council Sustainability Committee, which has supported such emphasis, also review such information, and would also vet the information through the community review process. As part of that process, staff will also provide information related to financing of solar photovoltaic and similar systems.

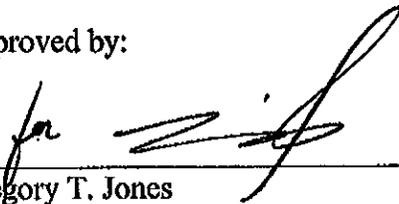
Anticipated approximate dates for such process would entail a Sustainability Committee in January, public meeting(s) in February/March, and a work session before the City Council in April.

Prepared by:



David Rizk, AICP
Director of Department of Development Services

Approved by:



Gregory T. Jones
City Manager

Attachments:

- Exhibit A: Matrix Summarizing Ordinance Provisions
 - Exhibit B: GreenPoint Rated Single-Family Checklist
 - Exhibit C: GreenPoint Rated Multi-Family Checklist
 - Exhibit D: GreenPoint Rated Existing Homes Checklist
 - Exhibit E: City of Hayward Non-Residential Private Development Green Building Checklist
- Draft Private Green Building Ordinance
Draft Resolution

**SUMMARY OF REQUIREMENTS OF RECOMMENDED
PRIVATE DEVELOPMENT GREEN BUILDING ORDINANCE**

Project Type	Green Building Ordinance Requirements
<p>New Single-Family Residential (detached and duplex units)</p>	<p>GreenPoint Rated Required (entails a third party rating/certification system that utilizes <i>Build It Green's</i> New Construction GreenPoint Checklist (currently 50 points minimum) for Single-Family Development)</p>
<p>New Multi-Family Residential and Mixed Use Development (more than two units per structure)</p>	<p>GreenPoint Rated Required (entails a third party rating/certification system that utilizes <i>Build It Green's</i> Multi-Family GreenPoint Checklist (currently 50 points minimum) for Multi-Family Development)</p>
<p>Residential Remodels and Additions (applicable to projects entailing more than 500 square feet)</p>	<p>GreenPoint Rated <u>Encouraged</u></p>
<p>New Non-Residential and Major Additions and Remodels (applicable to new building construction, and tenant improvements and additions entailing more than 1,000 square feet)</p>	<p>Incorporation of City of Hayward Checklist Items (entails in-house verification by City of Hayward staff)</p>

GreenPoint Rated Checklist: Single Family



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							
<input type="checkbox"/>	a. Protect Topsoil from Erosion and Reuse after Construction	0	1				1
<input type="checkbox"/>	b. Limit and Delineate Construction Footprint for Maximum Protection	0					1
<input type="checkbox"/>	2. Deconstruct Instead of Demolishing Existing Buildings On Site	0				3	
<input type="checkbox"/>	3. Recycle Job Site Construction Waste (Including Green Waste)						
<input type="checkbox"/>	a. Minimum 50% Waste Diversion by Weight (Recycling or Reuse) - Required	0				R	
<input type="checkbox"/>	b. Minimum 65% Diversion by Weight (Recycling or Reuse)	0				2	
<input type="checkbox"/>	c. Minimum 80% Diversion by Weight (Recycling or Reuse)	0				2	
<input type="checkbox"/>	4. Use Recycled Content Aggregate (Minimum 25%)						
<input type="checkbox"/>	a. Walkway and Driveway	0				1	
<input type="checkbox"/>	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							
<input type="checkbox"/>	a. Minimum 20% Flyash or Slag	0				1	
<input type="checkbox"/>	b. Minimum 25% Flyash or Slag	0				1	
<input type="checkbox"/>	2. Use Frost-Protected Shallow Foundation in Cold Areas (C.E.C. Climate Zone 16)	0				3	
<input type="checkbox"/>	3. Use Radon Resistant Construction	0			1		
[*Points automatically granted when project qualifies for measure J3: ES with IAQ]							
4. Design and Build Structural Pest Controls							
<input type="checkbox"/>	a. Install Termite Shields & Separate All Exterior Wood-to-Concrete Connections by Metal or Plastic Fasteners/Dividers	0				1	
[*Points automatically granted when project qualifies for measure J3: ES with IAQ]							
<input type="checkbox"/>	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							
<input type="checkbox"/>	a. No Invasive Species Listed by Cal-IPC Are Planted	0					1
<input type="checkbox"/>	b. No Plant Species Will Require Hedging	0				1	
<input type="checkbox"/>	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
<input type="checkbox"/> 2. Use Fire-Safe Landscaping Techniques	0	1				
3. Minimize Turf Areas In Landscape Installed by Builder						
<input type="checkbox"/> a. All Turf Will Have a Water Requirement Less than or Equal to Tall Fescue (< = 0.8 plant factor)	0					2
<input type="checkbox"/> b. Turf Shall Not Be Installed on Slopes Exceeding 10% or in Areas Less than 8 Feet Wide	0					2
<input type="checkbox"/> c. Turf is ≤33% of Landscaped Area (total 2 points)	0					2
<input type="checkbox"/> d. Turf is ≤10% of Landscaped Area (total 4 points)	0					2
<input type="checkbox"/> 4. Plant Shade Trees	0					3
<input type="checkbox"/> 5. Group Plants by Water Needs (Hydrozoning)	0					2
6. Install High-Efficiency Irrigation Systems						
<input type="checkbox"/> a. System Uses Only Low-Flow Drip, Bubblers, or Low-flow Sprinklers	0					2
<input type="checkbox"/> b. System Has Smart (Weather-Based) Controllers	0					3
<input type="checkbox"/> 7. Incorporate Two Inches of Compost In the Top 6 to 12 Inches of Soil	0					3
<input type="checkbox"/> 8. Mulch All Planting Beds to the Greater of 2 Inches or Local Water Ordinance Requirement	0					2
<input type="checkbox"/> 9. Use 50% Salvaged or Recycled-Content Materials for 50% of Non-Plant Landscape Elements	0				1	
<input type="checkbox"/> 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						
<input type="checkbox"/> a. Place Rafters and Studs at 24-Inch On Center Framing	0				1	
<input type="checkbox"/> b. Size Door and Window Headers for Load	0				1	
<input type="checkbox"/> c. Use Only Jack and Cripple Studs Required for Load	0				1	
2. Use Engineered Lumber						
<input type="checkbox"/> a. Beams and Headers	0				1	
<input type="checkbox"/> b. Insulated Engineered Headers	0	1				
<input type="checkbox"/> c. Wood I-Joists or Web Trusses for Floors	0				1	
<input type="checkbox"/> d. Wood I-Joists for Roof Rafters	0				1	
<input type="checkbox"/> e. Engineered or Finger-Jointed Studs for Vertical Applications	0				1	
<input type="checkbox"/> f. Oriented Strand Board for Subfloor	0				1	
<input type="checkbox"/> g. Oriented Strand Board for Wall and Roof Sheathing	0				1	
3. Use FSC-Certified Wood						
<input type="checkbox"/> a. Dimensional Lumber, Studs and Timber: Minimum 40%	0				2	
<input type="checkbox"/> b. Dimensional Lumber, Studs and Timber: Minimum 70%	0				2	
<input type="checkbox"/> c. Panel Products: Minimum 40%	0				1	
<input type="checkbox"/> d. Panel Products: Minimum 70%	0				1	
4. Use Solid Wall Systems (Includes SIPs, ICFs, & Any Non-Stick Frame Assembly)						
<input type="checkbox"/> a. Floors	0		2			2
<input type="checkbox"/> b. Walls	0		2			2
<input type="checkbox"/> 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]						
<input type="checkbox"/> a. Tightly Seal the Air Barrier between Garage and Living Area	0			1		
<input type="checkbox"/> b. Install Garage Exhaust Fan OR Build a Detached Garage	0			1		

Enter Project Name

Enter Project Name	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
<input type="checkbox"/> 6. Design Energy Heels on Trusses (75% of Attic Insulation Height at Outside Edge of Exterior Wall)	0		1			
<input type="checkbox"/> 7. Design Roof Trusses to Accommodate Ductwork	0		1			
<input type="checkbox"/> 8. Use Recycled-Content Steel Studs for 90% of Interior Wall Framing	0				1	
<input type="checkbox"/> 9. Thermal Mass Walls: 5/8-Inch Drywall on All Interior Walls or Walls Weighing more than 40 lb/cu.ft.	0		1			
<input type="checkbox"/> 10. Install Overhangs and Gutters						
<input type="checkbox"/> a. Minimum 16-Inch Overhangs and Gutters [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0				1	
<input type="checkbox"/> 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				
<input type="checkbox"/> 1. Use Recycled-Content (No Virgin Plastic) or FSC-Certified Wood Decking	0				2	
<input type="checkbox"/> 2. Install a Rain Screen Wall System	0				2	
<input type="checkbox"/> 3. Use Durable and Non-Combustible Siding Materials	0				1	
<input type="checkbox"/> 4. Use Durable and Non-Combustible Roofing Materials	0				2	
Total Points Available in Exterior Finish = 7		0				
F. INSULATION		Points Available Per Measure				
<input type="checkbox"/> 1. Install Insulation with 75% Recycled Content						
<input type="checkbox"/> a. Walls and Floors	0				1	
<input type="checkbox"/> b. Ceilings	0				1	
<input type="checkbox"/> 2. Install Insulation that is Low-Emitting (Certified Section 01350)						
<input type="checkbox"/> a. Walls and Floors	0			1		
<input type="checkbox"/> b. Ceilings	0			1		
<input type="checkbox"/> 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				
<input type="checkbox"/> 1. Distribute Domestic Hot Water Efficiently (Additive, Maximum 7 Points)						
<input type="checkbox"/> a. Insulate Hot Water Pipes from Water Heater to Kitchen	0		1			1
<input type="checkbox"/> b. Insulate All Hot Water Pipes	0		1			1
<input type="checkbox"/> c. Use Engineered Parallel Piping	0					1
<input type="checkbox"/> d. Use Engineered Parallel Piping with Demand Controlled Circulation Loop	0					1
<input type="checkbox"/> e. Use Structured Plumbing with Demand Controlled Circulation Loop	0		1			2
<input type="checkbox"/> f. Use Central Core Plumbing	0		1		1	1
<input type="checkbox"/> 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				
<input type="checkbox"/> 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			
<input type="checkbox"/> 2. Install Sealed Combustion Units [*Points automatically granted when project qualifies for measure J3: ES with IAQ]						
<input type="checkbox"/> a. Furnaces	0			2		
<input type="checkbox"/> b. Water Heaters	0			2		
<input type="checkbox"/> 3. Install Zoned, Hydronic Radiant Heating	0		1	1		

Enter Project Name

Enter Project Name	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
<input type="checkbox"/> 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]						
<input type="checkbox"/> a. Install HVAC Unit and Ductwork within Conditioned Space	0		3			
<input type="checkbox"/> b. Use Duct Mastic on All Duct Joints and Seams	0		1			
<input type="checkbox"/> c. Install Ductwork under Attic Insulation (Buried Ducts)	0		1			
<input type="checkbox"/> d. Pressure Relieve the Ductwork System	0		1			
<input type="checkbox"/> e. Protect Ducts during Construction and Clean All Ducts before Occupancy	0		1			
<input type="checkbox"/> 6. Install High Efficiency HVAC Filter (MERV 6+) [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0			1		
<input type="checkbox"/> 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]						
<input type="checkbox"/> a. Install ENERGY STAR Bathroom Fans Vented to the Outside	0			1		
<input type="checkbox"/> b. All Bathroom Fans Are on Timer or Humidistat	0			1		
<input type="checkbox"/> c. Install Kitchen Range Hood Vented to the Outside	0			1		
9. Install Mechanical Ventilation System for Cooling (Max. 4 Points)						
<input type="checkbox"/> a. Install ENERGY STAR Ceiling Fans & Light Kits in Living Areas & Bedrooms	0		1			
<input type="checkbox"/> b. Install Whole House Fan with Variable Speeds	0		1			
<input type="checkbox"/> c. Automatically Controlled Integrated System	0		2			
<input type="checkbox"/> d. Automatically Controlled Integrated System with Variable Speed Control	0		3			
10. Install Mechanical Fresh Air Ventilation System (Maximum 3 Points)						
<input type="checkbox"/> a. Any Whole House Ventilation System That Meets ASHRAE 62.2	0			2		
<input type="checkbox"/> 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		
<input type="checkbox"/> 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			
<input type="checkbox"/> 1. Pre-Plumb for Solar Hot Water Heating	0		4			
<input type="checkbox"/> 2. Install Solar Water Heating System	0		10			
<input type="checkbox"/> 3. Install Wiring Conduit for Future Photovoltaic Installation & Provide 200 ft ² of South-Facing Roof	0		2			
4. Install Photovoltaic (PV) Panels						
<input type="checkbox"/> a. 30% of electric needs OR 1.2 kW (total 6 points)	0		6			
<input type="checkbox"/> b. 60% of electric needs OR 2.4kW (total 12 points)	0		6			
<input type="checkbox"/> 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						
<input type="checkbox"/> a. House Passes Blower Door Test [*Points automatically granted when project qualifies for measure J3: ES with IAQ]	0		1			
<input type="checkbox"/> b. House Passes Combustion Safety Backdraft Test	0			1		

Enter Project Name

		Points Achieved	Community	Energy	IAQ/Health	Resources	Water
<input type="checkbox"/>	0% 2. Design and Build High Performance Homes - 15% above Title 24 - Required	0		≥30			
<input type="checkbox"/>	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

K. FINISHES

		Points Achieved	Points Available Per Measure				
<input type="checkbox"/>	1. Design Entryways to Reduce Tracked In Contaminants	0			1		
<input type="checkbox"/>	2. Use Low-VOC or Zero-VOC Paint (Maximum 3 Points)						
<input type="checkbox"/>	a. Low-VOC Interior Wall/Ceiling Paints (<50gpl VOCs (Flat) & <150gpl VOCs (Non-Flat))	0			1		
<input type="checkbox"/>	b. Zero-VOC: Interior Wall/Ceiling Paints (<5 gpl VOCs (Flat))	0			3		
<input type="checkbox"/>	3. Use Low VOC, Water-Based Wood Finishes (<250 gpl VOCs)	0			2		
<input type="checkbox"/>	4. Use Low-VOC Caulk and Construction Adhesives (<70 gpl VOCs) for All Adhesives	0			2		
<input type="checkbox"/>	5. Use Recycled-Content Paint	0				1	
<input type="checkbox"/>	6. Use Environmentally Preferable Materials for Interior Finish: A) FSC-Certified Wood, B) Reclaimed, C) Rapidly Renewable, D) Recycled-Content or E) Finger-Jointed						
<input type="checkbox"/>	a. Cabinets (50% Minimum)	0				1	
<input type="checkbox"/>	b. Interior Trim (50% Minimum)	0				1	
<input type="checkbox"/>	c. Shelving (50% Minimum)	0				1	
<input type="checkbox"/>	d. Doors (50% Minimum)	0				1	
<input type="checkbox"/>	e. Countertops (50% Minimum)	0				1	
<input type="checkbox"/>	7. Reduce Formaldehyde In Interior Finish (CA Section 01350)						
<input type="checkbox"/>	a. Subfloor & Stair Treads (90% Minimum)	0			1		
<input type="checkbox"/>	b. Cabinets & Countertops (90% Minimum)	0			1		
<input type="checkbox"/>	c. Interior Trim (90% Minimum)	0			1		
<input type="checkbox"/>	d. Shelving (90% Minimum)	0			1		
<input type="checkbox"/>	8. After Installation of Finishes, Test of Indoor Air Shows Formaldehyde Level <27ppb	0			3		

Total Available Points in Finishes = 21

L. FLOORING

		Points Achieved	Points Available Per Measure				
<input type="checkbox"/>	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.						
<input type="checkbox"/>	a. Minimum 15% of Floor Area	0				1	
<input type="checkbox"/>	b. Minimum 30% of Floor Area	0				1	
<input type="checkbox"/>	c. Minimum 50% of Floor Area	0				1	
<input type="checkbox"/>	d. Minimum 75% of Floor Area	0				1	
<input type="checkbox"/>	2. Thermal Mass Floors: Floor Covering Other than Carpet on 50% or More of Concrete Floors	0			1		
<input type="checkbox"/>	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

M. APPLIANCES AND LIGHTING

		Points Achieved	Points Available Per Measure				
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Enter Project Name

Enter Project Name	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
1. Install Water and Energy Efficient Dishwasher						
<input type="checkbox"/> a. ENERGY STAR (total 1 point)	0		1			
<input type="checkbox"/> 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						
<input type="checkbox"/> 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
<input type="checkbox"/> 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						
<input type="checkbox"/> a. ENERGY STAR Qualified & < 25 Cubic Feet Capacity	0		1			
<input type="checkbox"/> b. ENERGY STAR Qualified & < 20 Cubic Feet Capacity	0		1			
4. Install Built-In Recycling Center and Composting Center						
<input type="checkbox"/> a. Built-In Recycling Center	0				2	
<input type="checkbox"/> b. Built-In Composting Center	0				1	
Total Available Points in Appliances and Lighting = 12		0				
N. OTHER		Points Available Per Measure				
<input type="checkbox"/> 1. Incorporate GreenPoint Rated Checklist in Blueprints - Required	0				R	
<input type="checkbox"/> 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						
<input type="checkbox"/> a. Project is Located in a Built Urban Setting with Utilities in Place for Fifteen Years	0	1				1
<input type="checkbox"/> b. Development is Located within 1/2 Mile of a Major Transit Stop	0	2				
2. Cluster Homes & Keep Size in Check						
<input type="checkbox"/> a. Cluster Homes for Land Preservation	0	1				1
<input type="checkbox"/> b. Conserve Resources by Increasing Density (10 Units per Acre or Greater)	0	2				2
<input type="checkbox"/> c. Home Size Efficiency	0					9
<input type="checkbox"/> 3. Subdivision Layout & Orientation to Improve Natural Cooling and Passive Solar Attributes	0	3	7			
4. Design for Walking & Bicycling						
<input type="checkbox"/> a. Pedestrian Access to 5 or More Neighborhood Services within 1/2 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				
<input type="checkbox"/> b. Development is Connected with A Dedicated Pedestrian Pathway to Places of Recreational Interest within 1/4 mile	0	1				
<input type="checkbox"/> 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						
<input type="checkbox"/> a. All Home Front Entrances Have Views from the Inside to Outside Callers	0	1				
<input type="checkbox"/> b. All Home Front Entrances Can be Seen from the Street and/or from Other Front Doors	0	1				
<input type="checkbox"/> c. Orient Porches (min. 100sf) to Streets and Public Spaces	0	1				

Enter Project Name

Enter Project Name	Points Achieved	Community	Energy	IAQ/Health	Resources	Water
<input type="checkbox"/>						
6. Design for Diverse Households						
<input type="checkbox"/> a. All Homes Have at Least One Zero-Step Entrance	0	1				
<input type="checkbox"/> b. All Main Floor Interior Doors & Passageways Have a Minimum 32-inch Clear Passage Space	0	1				
<input type="checkbox"/> c. Locate at Least a Half-Bath on the Ground Floor with Blocking in Walls for Grab Bars	0	1				
<input type="checkbox"/> 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						
<input type="checkbox"/> 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				
<input type="checkbox"/> 2. Build on Designated brownfield site	0	3				
B. Foundation [*Points automatically granted when project qualifies for measure J3: ES with IAQ]						
<input type="checkbox"/> 1. Install a Foundation Drainage System	0				2	
<input type="checkbox"/> 2. Sealed and Moisture Controlled Crawlspace	0			2		
C. Landscaping						
<input type="checkbox"/> 1. Meets Bay-Friendly Landscape Program Requirement	0					4
<input type="checkbox"/> 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
<input type="checkbox"/> a. Less than 350 gallon capacity	0					1
<input type="checkbox"/> b. Greater than 350 gallon capacity	0					2
<input type="checkbox"/> 4. Assess Site Climate, Exposure, Topography, and Drainage	0					1
<input type="checkbox"/> 5. Perform a Soil Analysis	0					1
<input type="checkbox"/> 6. Irrigation System Uses Recycled Wastewater	0					1
<input type="checkbox"/> 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						
<input type="checkbox"/> a. Locate All Wood (Siding, Trim, Structure) At Least 12" Above Soil	0				1	
<input type="checkbox"/> 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		
<input type="checkbox"/>	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]						
3. Use FSC Certified Engineered Lumber (3 points maximum)						
<input type="checkbox"/> a. Beams and Headers	0				1	
<input type="checkbox"/> b. Insulated Engineered Headers	0				1	
<input type="checkbox"/> c. Wood I-Joists or Web Trusses for Floors	0				1	
<input type="checkbox"/> d. Wood I-Joists for Roof Rafters	0				1	
<input type="checkbox"/> e. Engineered or Finger-Jointed Studs for Vertical Applications	0				1	
<input type="checkbox"/> f. Roof Trusses: 100%	0				1	
4. FSC Certified Wood						
<input type="checkbox"/> a. Dimensional Lumber, Studs and Timber: 100%	0				2	
<input type="checkbox"/> b. Panel Products: 100%	0				2	
E. Exterior Finish						
<input type="checkbox"/> 1. Green Roofs (25% of roof area minimum)	0	1	1			
<input type="checkbox"/>						

Enter Project Name

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

Summary

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

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 30 points possible under Community category for projects 100,000 sq ft or less)
(Maximum 50 points possible under Community)*

Multifamily GreenPoint Checklist



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: Community (6), Energy (30), Indoor Air Quality/Health (5), Resources (6), and Water (3); and meet the prerequisites B.1.a (50% construction waste diversion), A.8 (exceed Title 24 requirements by 15%), C.10.a (3-year subcontractor guarantee and 20-year manufacturer warranty for shingle roofing), and F.1 (incorporate Green Points checklist in blueprints).

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.

The green building practices listed below are described in greater detail in the Multifamily Green Building Guidelines, available at www.builditgreen.org/greenpoint-rated/guidelines

Current Point Total	0
---------------------	---

0	0	0	0	0

Enter Total Conditioned Floor Area of the Project:
 Enter Total Non-Residential Floor Area of Project:
 Percent of Project Dedicated to Residential Use

10,000
100%

ENTER PROJECT NAME	Community	Energy	IAQ/Health	Resources	Water
	Possible Points				
A. PLANNING & DESIGN					
1. Infill Sites					
<input type="checkbox"/>	1				
<input type="checkbox"/>				1	
<input type="checkbox"/>	10				
<input type="checkbox"/>	1				
<input type="checkbox"/>	1				
f. Site has Pedestrian Access Within 1/2 Mile to Neighborhood Services (1 Pt for 5 Or More, 2 Pts for 10 Or More):					
<input type="checkbox"/> 1) Bank					
<input checked="" type="checkbox"/> 2) Place of Worship					
<input type="checkbox"/> 3) Full Scale Grocery/Supermarket					
<input type="checkbox"/> 4) Day Care					
<input checked="" type="checkbox"/> 5) Cleaners					
<input type="checkbox"/> 6) Fire Station					
<input type="checkbox"/> 7) Hair Care					
<input checked="" type="checkbox"/> 8) Hardware					
<input type="checkbox"/> 9) Laundry					
<input type="checkbox"/> 10) Library	2				
<input type="checkbox"/> 11) Medical/Dental					
<input type="checkbox"/> 12) Senior Care Facility					
<input type="checkbox"/> 13) Public Park					
<input type="checkbox"/> 14) Pharmacy					
<input type="checkbox"/> 15) Post Office					
<input type="checkbox"/> 16) Restaurant					
<input type="checkbox"/> 17) School					
<input type="checkbox"/> 18) After School Programs					
<input type="checkbox"/> 19) Commercial Office					
<input type="checkbox"/> 20) Community Center					
<input type="checkbox"/> 21) Theater/Entertainment					
<input type="checkbox"/> 22) Convenience Store Where Meat & Produce are Sold.					
g. Proximity to Public Transit					
Development is Located Within:					
<input type="checkbox"/>	1				
<input type="checkbox"/>	1				
<input type="checkbox"/>	1				
h. Reduced Parking Capacity:					
<input type="checkbox"/>	1				
<input type="checkbox"/>	1				
2. Mixed-Use Developments					
<input type="checkbox"/>	1				
<input type="checkbox"/>	1				
3. Building Placement & Orientation					
<input type="checkbox"/>	1				
4. Design for Walking & Bicycling					
<input type="checkbox"/>	1				
<input type="checkbox"/>	1				
<input type="checkbox"/>	1				
<input type="checkbox"/>	1				
5. Social Gathering Places					
<input type="checkbox"/>	1				
<input type="checkbox"/>	1				
6. Design for Safety and Natural Surveillance					
<input type="checkbox"/>					

ENTER PROJECT NAME

		Community	Energy	IAQ/Health	Resources	Water
<input type="checkbox"/>	a. All Main Entrances to the Building and Site are Prominent and Visible from the Street	1				
<input type="checkbox"/>	b. Residence Entries Have Views to Callers (Windows or Double Peep Holes) & Can Be Seen By Neighbors	1				
7. Landscaping						
<input checked="" type="checkbox"/>	Check here if the landscape area is <10% of the total site area. Projects with <10% landscape area can only check up to 3 boxes in this section.					
<input type="checkbox"/>	a. No Plant Species will Require Shearing				1	
<input type="checkbox"/>	b. No plantings are Listed on the Invasive Plant Inventory by the California Invasive Plant Council				1	
<input type="checkbox"/>	c. Specify Drought-tolerant California Natives, Mediterranean or Other Appropriate Species					1
<input type="checkbox"/>	d. Create Drought Resistant Soils:					
<input type="checkbox"/>	i. Mulch All Planting Beds to a Depth of 2 Inches or Greater as Per Local Ordinance					1
<input type="checkbox"/>	ii. Amend with 1 Inch of Compost or as per Soil Analysis to Reach 3.5% Soil Organic Matter					1
<input type="checkbox"/>	e. Design & Install High-Efficiency Irrigation System					
<input type="checkbox"/>	i. Specify Smart (Weather-Based) Irrigation Controllers					1
<input type="checkbox"/>	ii. Specify Drip, Bubblers or Low-Flow Sprinklers					1
<input type="checkbox"/>	f. Group Plants by Water Needs (Hydrozones) in Planting Plans & Identify Hydrozones on Irrigation Plans					1
<input type="checkbox"/>	g. Minimize Turf in Landscape Installed by Builder					
<input type="checkbox"/>	i. Do Not Specify Turf on Slopes Exceeding 10% or in Areas Less Than 8 Feet Wide					1
<input type="checkbox"/>	ii. Less Than 33% of All Landscaped Area is Specified as Turf AND All Turf has Water Requirement <= To Tall Fescue					1
8. Building Performance Exceeds Title 24 by at least 15%-Required						
Enter the Percent Above title 24 for Residential and Non-Residential Portions of the Project.						
<input checked="" type="checkbox"/>	a. Residences: 2 Points for Every 1% Above T24		0			
<input checked="" type="checkbox"/>	b. Non-Residential Spaces: 2 Points for Every 1% Above T24					
9. Cool Site						
<input type="checkbox"/>	a. At least 30% of the Site Includes Cool Site Techniques	1				
10. Adaptable Buildings						
<input type="checkbox"/>	a. Include Universal Design Principles in Units					
<input type="checkbox"/>	50% of Units	1				
<input type="checkbox"/>	80% of Units	1				
<input type="checkbox"/>	b. Live/Work Units include A Dedicated Commercial Entrance	1				
11. Affordability						
<input type="checkbox"/>	a. A Percentage of Units are Dedicated to Households Making 80% or Less of AMI					
<input type="checkbox"/>	10% of All Units	1				
<input type="checkbox"/>	20%	1				
<input type="checkbox"/>	30%	1				
<input type="checkbox"/>	50% or More	1				
<input type="checkbox"/>	b. Development Includes Multiple Bedroom Units (At least 1 Unit with 3BR or More at or Less Than 80% AMI)	2				

B. SITESWORK		Possible Points				
1. Construction & Demolition Waste Management						
Divert a Portion of all Construction & Demolition Waste:						
<input type="checkbox"/>	a. Required: Divert 50%				R	
<input type="checkbox"/>	b. Divert 65%				2	
<input type="checkbox"/>	c. Divert 80% or more				2	
2. Construction Material Efficiencies						
<input type="checkbox"/>	a. Lumber is Delivered Pre-Cut from Supplier (80% or More of Total Board Feet)				1	
<input type="checkbox"/>	b. Components of the Project Are Pre-Assembled Off-Site & Delivered to the Project					
<input type="checkbox"/>	25% of Total Square Footage				2	
<input type="checkbox"/>	50% of Total Square Footage				2	
<input type="checkbox"/>	75% of Total Square Footage or More				2	
3. Construction Indoor Air Quality (IAQ) Management Plan						
<input type="checkbox"/>	a. An IAQ Management Plan is Written & Followed for the Project				2	

C. STRUCTURE		Possible Points				
1. Recycled Aggregate						
<input type="checkbox"/>	a. Minimum 25% Recycled Aggregate (Crushed Concrete) for Fill, Backfill & Other Uses				1	
2. Recycled Flyash in Concrete						
<input type="checkbox"/>	a. Flyash or Slag is Used to Displace a Portion of Portland Cement in Concrete					
<input type="checkbox"/>	20%				1	
<input type="checkbox"/>	30% or More				1	

ENTER PROJECT NAME		Community	Energy	IAQ/Health	Resources	Water
<input type="checkbox"/>	3. FSC-Certified Wood for Framing Lumber					
	a. FSC-Certified Wood for a Percentage of All Dimensional Studs:					
<input type="checkbox"/>	40%				2	
<input type="checkbox"/>	70%				2	
	b. FSC-Certified Panel Products for a Percentage of All Sheathing (OSB & Plywood):					
<input type="checkbox"/>	40%				1	
<input type="checkbox"/>	70%				1	
	4. Engineered Lumber or Steel Studs, Joists, Headers & Beams					
<input type="checkbox"/>	a. 90% or More of All Floor & Ceiling Joists				1	
<input type="checkbox"/>	b. 90% or More of All Studs				2	
<input type="checkbox"/>	c. 90% or More of All Headers & Beams				2	
	5. Optimal Value Engineering Framing					
<input type="checkbox"/>	a. Studs at 24" Centers on Top Floor Exterior Walls &/or All Interior Walls				1	
<input type="checkbox"/>	b. Door & Window Headers Sized for Load				1	
<input type="checkbox"/>	c. Use Only Jack & Cripple Studs Required for Load				1	
	6. Steel Framing					
<input type="checkbox"/>	a. Mitigate Thermal Bridging by Installing Exterior Insulation (At Least 1-Inch of Rigid Foam)		2			
	7. Structural Insulated Panels (SIPs) Or Other Solid Wall Systems					
	a. SIPs Or Other Solid Wall Systems are Used for 80% of All:					
<input type="checkbox"/>	Floors		2		2	
<input type="checkbox"/>	Walls		2		2	
<input type="checkbox"/>	Roofs		2		2	
	8. Raised Heel Roof Trusses					
<input type="checkbox"/>	a. 75% of All Roof Trusses Have Raised Heels		1			
	9. Insulation					
<input type="checkbox"/>	a. All Ceiling, Wall & Floor Insulation is 01350 Certified OR Contains No Added Formaldehyde			1		
<input type="checkbox"/>	b. All Ceiling, Wall & Floor Insulation Has a Recycled Content of 75% or More				1	
	10. Durable Roofing Options					
<input type="checkbox"/>	a. Required: No Shingle Roofing OR All Shingle Roofing Has 3-Yr Subcontractor Guarantee & 20-Yr Manufacturer Warranty				R	
<input type="checkbox"/>	b. All Sloped Roofing Materials Carry a 40-Year Manufacturer Warranty				1	
	11. Moisture Shedding & Mold Avoidance					
<input type="checkbox"/>	a. Building(s) Include a Definitive Drainage Plane Under Siding				4	
<input type="checkbox"/>	b. ENERGY STAR Bathroom Fans are Supplied in All Bathrooms, Are Exhausted to the Outdoors & Are Equipped with Control				1	
<input type="checkbox"/>	c. A Minimum of 80% of Kitchen Range Hoods Are Vented to the Exterior			1		
	12. Green Roofs					
	a. A Portion of the Low-Slope Roof Area is Covered By A Vegetated or "Green" Roof					
<input type="checkbox"/>	25%	2				2
<input type="checkbox"/>	50% or More	2				2

D. SYSTEMS		Possible Points				
	1. Passive Solar Heating					
<input type="checkbox"/>	a. Orientation: At Least 40% of the Units Face Directly South		2			
<input type="checkbox"/>	b. Shading On All South-Facing Windows Allow Sunlight to Penetrate in Winter, Not in Summer		1			
<input type="checkbox"/>	c. Thermal Mass: At Least 50% of the Floor Area Directly Behind South-Facing Windows is Massive		2			
	2. Radiant Hydronic Space Heating					
<input type="checkbox"/>	a. Install Radiant Hydronic Space Heating for IAQ purposes (No Forced Air) in All Residences			2		
	3. Solar Water Heating					
<input type="checkbox"/>	a. Pre-Plumb for Solar Hot Water		1			
<input type="checkbox"/>	b. Install Solar Hot Water System for Preheating DHW		4			
	4. Air Conditioning with Advanced Refrigerants					
<input type="checkbox"/>	a. Install Air Conditioning with Non-HCFC Refrigerants	1				
	5. Advanced Ventilation Practices					
	Perform the Following Practices in Residences:					
<input type="checkbox"/>	a. Infiltration Testing by a C-HERS Rater for Envelope Sealing & Reduced Infiltration		2			
<input type="checkbox"/>	b. Operable Windows or Skylights Are Placed To Induce Cross Ventilation (At Least One Room In 80% of Units)		1	1		
<input type="checkbox"/>	c. Ceiling Fans in Every Bedroom & Living Room OR Whole House Fan is Used		1			
	6. Garage Ventilation					
<input type="checkbox"/>	a. Garage Ventilation Fans Are Controlled by Carbon Monoxide Sensors (Passive Ventilation Does Not Count)			1		

ENTER PROJECT NAME

	Community	Energy	IAQ/Health	Resources	Water
<input type="checkbox"/> 7. Low-Mercury Lamps					
<input type="checkbox"/> a. Low-Mercury Products Are Installed Wherever Linear Fluorescent Lamps Are Used				1	
<input type="checkbox"/> b. Low-Mercury Products Are Installed Wherever Compact Fluorescent Lamps Are Used				2	
<input type="checkbox"/> 8. Light Pollution Reduction					
<input type="checkbox"/> a. Exterior Luminaires Emit No Light Above Horizontal OR Are Dark Sky Certified	1				
<input type="checkbox"/> b. Control Light Trespass Onto Neighboring Areas Through Appropriate Fixture Selection & Placement	1				
<input type="checkbox"/> 9. Onsite Electricity Generation					
<input type="checkbox"/> a. Pre-Wire for Photovoltaics & Plan for Space (Clear Areas on Roof & in Mechanical Room)				1	
<input type="checkbox"/> b. Install Photovoltaics to Offset a Percent of the Project's Total Estimated Electricity Demand					
<input type="checkbox"/> 10%	2	2			
<input type="checkbox"/> 20%	2	2			
<input type="checkbox"/> 30% or more	2	2			
<input type="checkbox"/> c. Educational Display is Provided in a Viewable Public Area	1				
<input type="checkbox"/> 10. Elevators					
<input type="checkbox"/> a. Gearless Elevators Are Installed		1			
<input type="checkbox"/> 11. ENERGY STAR® Appliances					
<input type="checkbox"/> a. Install ENERGY STAR Refrigerators in All Locations					
<input type="checkbox"/> Install ENERGY STAR-Qualified and <25cuft		1			
<input type="checkbox"/> Install ENERGY STAR-Qualified and <20cuft		1			
<input type="checkbox"/> b. Install ENERGY STAR Dishwashers in All Locations					
<input type="checkbox"/> All Dishwashers Are ENERGY STAR-qualified		1			
<input type="checkbox"/> Residential-grade Dishwashers Use No More than 6.5 Gallons Per Cycle		1			1
<input type="checkbox"/> c. Install ENERGY STAR Clothes Washers in All Locations		1			2
<input type="checkbox"/> d. Install Ventless Natural Gas Clothes Dryers in Residences			1		
<input type="checkbox"/> 12. Central Laundry					
<input type="checkbox"/> a. Central Laundry Facilities Are Provided for All Occupants				1	
<input type="checkbox"/> 13. Water-Efficient Fixtures					
<input type="checkbox"/> a. All Showerheads Use 2.0 Gallons Per Minute (gpm) or Less		1			1
<input type="checkbox"/> b. High-Efficiency Toilets Use 1.28 gpf or Less or Are Dual Flush					
<input type="checkbox"/> In All Residences					3
<input type="checkbox"/> In All Non-Residential Areas					3
<input type="checkbox"/> c. Install High Efficiency Urinals (0.5 gpf or less) or No-Water Urinals Wherever Urinals Are Specified:					
<input type="checkbox"/> Average flush rate is 0.5 gallons per flush or less					1
<input type="checkbox"/> Average flush rate is 0.1 gallons per flush or less					1
<input type="checkbox"/> d. Flow Limiters Or Flow Control Valves Are Installed on All Faucets					
<input type="checkbox"/> Residences: Kitchen - 2.0 gpm or less		1			1
<input type="checkbox"/> Non-Residential Areas: Kitchen - 2.0 gpm or less		0			0
<input type="checkbox"/> Residences: Bathroom Faucets- 1.5 gpm or less		1			1
<input type="checkbox"/> Non-Residential Areas: Bathroom Faucets - 1.5 gpm or less		0			0
<input type="checkbox"/> e. Non-Residential Areas: Install Pre-Rinse Spray Valves in Commercial Kitchens - 1.6 gpm or less					1
<input type="checkbox"/> 14. Source Water Efficiency					
<input type="checkbox"/> a. Use Recycled Water for Landscape Irrigation or to Flush Toilets/Urinals					2
<input type="checkbox"/> b. Use Captured Rainwater for Landscape Irrigation or to Flush 5% of Toilets &/or Urinals					4
<input type="checkbox"/> c. Water is Submetered for Each Residential Unit & Non-Residential Tenant					4

E. FINISHES AND FURNISHINGS		Possible Points			
<input type="checkbox"/> 1. Construction Indoor Air Quality Management					
<input type="checkbox"/> a. Perform a 2-Week Whole Building Flush-Out Prior to Occupancy			1		
<input type="checkbox"/> 2. Entryways					
<input type="checkbox"/> a. Provide Permanent Walk-Off Mats and Shoe Storage at All Home Entrances			1		
<input type="checkbox"/> b. Permanent Walk-Off Systems Are Provided at All Main Building Entrances & In Common Areas			1		
<input type="checkbox"/> 3. Recycling & Waste Collection					
<input type="checkbox"/> a. Residences: Provide Built-In Recycling Center in Each Unit					2

ENTER PROJECT NAME

Community	Energy	IAQ/Health	Resources	Water
-----------	--------	------------	-----------	-------

4. Use Low/No-VOC Paints & Coatings

a. Low-VOC Interior Paints (<50 gpl VOCs (Flat) and <150 gpl VOCs (Non-Flat))

In All Residences

In All Non-Residential Areas:

b. Zero-VOC: Interior Paints (<5 gpl VOCs (Flat))

In All Residences

In All Non-Residential Areas:

c. Wood Coatings Meet the Green Seal Standards for Low-VOCs

In All Residences

In All Non-Residential Areas:

d. Wood Stains Meet the Green Seal Standards for Low-VOCs

In All Residences

In All Non-Residential Areas:

5. Use Recycled Content Exterior Paint

a. Use Recycled Content Paint on 50% of All Exteriors

6. Low-VOC Construction Adhesives

a. Use Low-VOC Construction Adhesives (<70 gpl VOCs) for All Adhesives

7. Environmentally Preferable Materials for Interior Finish

Use Environmentally Preferable Materials for Interior Finish: A) FSC-Certified Wood, B) Reclaimed Lumber, C) Rapidly Renewable D) Recycled-Content or E) Finger-Jointed

a. Residences: At Least 50% of Each Material:

i. Cabinets

ii. Interior Trim

iii. Shelving

iv. Doors

v. Countertops

b. Non-Residential Areas: At Least 50% of Each Material:

i. Cabinets

ii. Interior Trim

iii. Shelving

iv. Doors

v. Countertops

8. Reduce Formaldehyde in Interior Finish Materials

Reduce Formaldehyde in Interior Finish Materials (Section 01350) for At Least 50% of Each Material Below:

a. Residences:

i. Cabinets

ii. Interior Trim

iii. Shelving

iv. Subfloor

b. Non-Residential Areas:

i. Cabinets

ii. Interior Trim

iii. Shelving

iv. Subfloor

9. Environmentally Preferable Flooring

Use Environmentally Preferable Flooring: A) FSC-Certified or Reclaimed Wood, B) Rapidly Renewable Flooring Materials, C) Recycled-Content Ceramic Tiles, D) Exposed Concrete as Finished Floor or E) Recycled-Content Carpet. Note: Flooring Adhesives Must Have <50 gpl VOCs.

a. Residences:

i. Minimum 15% of Floor Area

ii. Minimum 30% of Floor Area

iii. Minimum 50% of Floor Area

iv. Minimum 75% of Floor Area

b. Non-Residential Areas:

i. Minimum 15% of Floor Area

ii. Minimum 30% of Floor Area

iii. Minimum 50% of Floor Area

iv. Minimum 75% of Floor Area

10. Low-Emitting Flooring

a. Residences: Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)

		1		
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ENTER PROJECT NAME

	Community	Energy	IAQ/Health	Resources	Water
<input type="checkbox"/> b. Non-Residential Areas: Flooring Meets Section 01350 or CRI Green Label Plus Requirements (50% Minimum)			0		
11. Durable Cabinets Install Durable Cabinets in All:					
<input type="checkbox"/> a. Residences				1	
<input type="checkbox"/> b. Non-Residential Areas				0	
12. Furniture & Outdoor Play Structures					
<input type="checkbox"/> a. Play Structures & Surfaces Have an Overall Average Recycled Content Greater Than 20%				1	
<input type="checkbox"/> b. Environmentally Preferable Exterior Site Furnishings				1	
<input type="checkbox"/> c. At Least 25% of All newly Supplied Interior Furniture has Environmentally Preferable Attributes			1		
13. Vandalism Deterrence					
<input type="checkbox"/> a. Project Includes Vandalism Resistant Finishes and Strategies	1				

F. OTHER		Possible Points				
<input checked="" type="checkbox"/>	1. Incorporate GreenPoint Checklist in Blueprints a. <i>Required:</i> Incorporate GreenPoint Checklist in Blueprints	Y				
<input type="checkbox"/>	2. Operations & Maintenance Manuals a. Provide O&M Manual to Building Maintenance Staff		1			
<input type="checkbox"/>	b. Provide O&M Manual to Occupants		1			1
<input type="checkbox"/>	3. Transit Options a. Residents Are Offered Free or Discounted Transit Passes	2				
<input type="checkbox"/>	4. Educational Signage a. Educational Signage Highlighting & Explaining the Project's Green Features is Included	1				
<input type="checkbox"/>	5. Vandalism Management Plan a. Project Includes a Vandalism Management Plan for Dealing with Disturbances Post-Occupancy	1				
6. Innovation: List innovative measures that meet the green building objectives of the Multifamily Guidelines. Enter up to a 4 Points in each category. Points will be evaluated by local jurisdiction or GreenPoint rater.						
0	Innovation in Community: Enter up to 4 Points at left. Enter description here					
0	Innovation in Energy: Enter up to 4 Points at left. Enter description here					
0	Innovation in IAQ/Health: Enter up to 4 Points at left. Enter description here					
0	Innovation in Resources: Enter up to 4 Points at left. Enter description here					
0	Innovation in Water: Enter up to 4 Points at left. Enter description here					

Summary

Points Achieved from Specific Categories	0	0	0	0	0
Current Point Total	0				

Project has not yet met the recommended minimum requirements

- Total Project Score of At Least 50 Points
- Minimum points in specific categories: Community (6), Energy (30), IAQ/Health (5), Resources (6), Water (3)
- Required measures B.1a, C.10a, and/or F.1a

GreenPoint Rated Existing Home Checklist



Build It Green
Smart Solutions From The Ground Up

The GreenPoint Rated checklist tracks green features incorporated into the home. This checklist is used to track projects seeking a Whole House or Elements Rating using the GreenPoint Rated Existing Home Rating System. The minimum requirements for a green home seeking the Whole House Rating are listed in the project summary at the end of this checklist. Selected measures can be awarded points allocated by the percentage of presence of the measure in the home. Not all measures are available for allocation. The measure or practice must be found in at least 10% of the home to earn points.

Enter Label: **Whole House**

Points Achieved:

The green building practices listed below are described in the GreenPoint Rated Existing Home Rating Manual and the Home Remodeling 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.
GreenPoint Rated Existing Home Checklist version 1.0

Project Name	Points Achieved	Possible Points				
		Community	Energy	IAQ/Health	Resources	Water
AA. COMMUNITY						
1. Infill Site						
a. Home is Located in a Built Urban Setting with Utilities in Place for Fifteen Years		1		1		
b. Home is Located within 1/2 Mile of a Major Transit Stop		2				
2. Compact Development & House Size						
a. Density of 10 Units per Acre or Greater		2		2		
b. Home Size Efficiency (points awarded based on home size)				1-10		
3. Pedestrian and Bicycle Access/ Alternative Transportation						
a. Site has Pedestrian Access Within 1/2 Mile of neighborhood services:						
TIER 1: 1) Day Care 2) Community Center 3) Public Park						
4) Drug Store 5) Restaurant 6) School						
7) Library 8) Farmer's Market 9) After School Programs						
10) Convenience Store Where Meat & Produce are Sold						
TIER 2: 1) Bank 2) Place of Worship 3) Laundry/Cleaners						
4) Hardware 5) Theater/Entertainment 6) Fitness/Gym						
7) Post Office 8) Senior Care Facility 9) Medical/Dental						
10) Hair Care 11) Commercial Office of Major Employer 12) Full Supermarket						
5 Services Listed Above (Tier 2 Services count as 1/2 Service Value)		1				
10 Services Listed Above (Tier 2 Services count as 1/2 Service Value)		1				
b. Access to A Dedicated Pedestrian Pathway to Places of Recreational Interest within 1/2 Mile		1				
c. At Least Two of the Following Traffic-Calming Strategies Installed within 1/4 mile: 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		1				
4. Safety & Social Gathering						
a. Front Entrance Has Views from the Inside to Outside Callers		1				
b. Front Entrance Can be Seen from the Street and/or from Other Front Doors		1				
c. Porch (min. 100sf) Oriented to Streets and Public Spaces		1				
5. Diverse Households						
a. Home Has at Least One Zero-Step Entrance		1				
b. All Main Floor Interior Doors & Passageways Have a Min. 32-Inch Clear Passage Space		1				
c. Home includes at Least a Half-Bath on the Ground Floor with Blocking for Grab Bars		1				
d. Lot Includes Full-Function Independent Rental Unit		1				
Total Points Available in Community = 29						
A. SITE						
1. Protect Existing Topsoil from Erosion and Reuse after Construction						
		1				1
2. Recycle Construction and Demolition Waste						
a. Recycle All Cardboard, Concrete, Asphalt and Metals (Required for both Whole House and Elements, If Applicable)				R		
b. Deconstruct for Reuse the Following Items (Enter Number of Points, up to 2 points) 1) Appliances, 2) Brick, tile, masonry, 3) Cabinetry, 4) Countertops, 5) Doors, 6) Fixtures (plumbing, lighting, etc), 7) Sinks/Tubs, 8) Toilets (1.6 only), 9) Windows, 10) Wood - (2x4, flooring, form boards)				2		
c. Recycle 25% C&D Waste Excluding All Cardboard, Concrete, Asphalt and Metals				2		
3. Construction IAQ Management Plan						
			2			
Total Points Available in Site = 8						
B. FOUNDATION						
1. Replace Portland Cement In Concrete with Recycled Flyash or Slag						
a. Minimum 20% Flyash and/or Slag Content				1		
b. Minimum 30% Flyash and/or Slag Content				1		
2. Moisture Source Verification and Correction (Required for Whole House)						
			R	R		
3. Retrofit Crawl Space to Control Moisture						
a. Control Ground Moisture with Vapor Barrier			2			
b. Foundation Drainage System				2		
4. Pest Inspection and Correction						
				1		
5. Design and Build Structural Pest Controls						
a. Install Termite Shields & Separate All Exterior Wood-to-Concrete Connections by Metal or Plastic Fasteners/Dividers				1		

Project Name

Points Achieved	Community	Energy	IAQ/Health	Resources	Water
				1	
Total Points Available in Foundation = 10					
C. LANDSCAPE					
Possible Points					
Is the landscape area is <15% of the total site area? (only 3 points available in this section for projects with <15% landscape area)					
1. Resource-Efficient Landscapes					
a. No Invasive Species Listed by Cal-IPC Are Planted					
				1	
b. No Plant Species Require Shearing					
			1		
c. 50% of Plants Are California Natives or Mediterranean Climate Species					
					3
2. Fire-Safe Landscaping Techniques					
3. Minimal Turf Areas					
a. Turf Not Installed on Slopes Exceeding 10% or in Areas Less than 8 Feet Wide					
					2
b. Turf is <33% of Landscaped Area					
					2
c. Turf is <10% of Landscaped Area or eliminated					
					2
4. Shade Trees Planted					
	1				1
5. Plants Grouped by Water Needs (Hydrozoning)					
					2
6. High-Efficiency Irrigation Systems Installed					
a. System Uses Only Low-Flow Drip, Bubblers, or Low-flow Sprinklers					
					2
b. System Has Smart Controllers					
					3
7. Compost and Recycle Garden Trimmings on Site					
					1
8. Mulch in All Planting Beds to the Greater of 2 Inches or Local Water Ordinance Requirement					
					2
9. Use Salvaged or Recycled-Content Materials for 50% of Non-Plant Landscape Elements					
				1	
10. Light Pollution Reduced by Shielding Fixtures and Directing Light Downward					
	1				
11. Rain Water Harvesting System (1 point for <350 gallons, 2 points for > 350 gallons)					
a. ≤ 350 gallons					
					1
b. > 350 gallons					
					1
12. Soil Amended with Compost					
	1		1		
Total Points Available in Landscape = 31					
D. STRUCTURAL FRAME & BUILDING ENVELOPE					
Possible Points					
1. Optimal Value Engineering					
a. Place Rafters & Studs at 24-Inch On Center Framing					
				1	
b. Size Door & Window Headers for Load					
				1	
c. Use Only Jack & Cripple Studs Required for Load					
				1	
2. Use Engineered Lumber					
a. Engineered Beams & Headers					
				1	
b. Insulated Engineered Headers					
	1				
c. Wood I-Joists or Web Trusses for Floors					
				1	
d. Wood I-Joists for Roof Rafters					
				1	
e. Engineered or Finger-Jointed Studs for Vertical Applications					
				1	
f. Oriented Strand Board for Subfloor					
				1	
g. Oriented Strand Board Wall and Roof Sheathing					
				1	
3. FSC Certified Wood					
a. Dimensional Lumber, Studs, and Timber: Minimum 40%					
				2	
b. Dimensional Lumber, Studs, and Timber: Minimum 70%					
				2	
c. Panel Products: Minimum 40%					
				1	
d. Panel Products: Minimum 70%					
				1	
4. Solid Wall Systems (includes SIPs, ICFs, & Any Non-Stick Frame Assembly)					
a. Floors					
	2			2	
b. Walls					
	2			2	
c. Roofs					
	2			2	
5. Reduce Pollution Entering the Home from the Garage					
a. Tightly Seal the Air Barrier between Garage and Living Area					
			1		
b. Install Garage Exhaust Fan OR Have a Detached Garage					
			1		
6. Energy Heels on Roof Trusses (75% of Attic Insulation Height at Outside Edge of Exterior Wall)					
	1				
7. Overhangs and Gutters					
a. Minimum 16-Inch Overhangs and Gutters					
				1	
b. Minimum 24-Inch Overhangs and Gutters					
	1				
8. Retrofit/ Upgrade Structure for Lateral Load Reinforcement for Wind or Seismic					
a. Partial Lateral Load Reinforcement Upgrades/ Retrofits					
				2	
b. Lateral Load Reinforcement Upgrades/ Retrofits for Entire home					
				1	
9. Sound Exterior Assemblies (Required for Whole House)					
		R			R
Total Points Available in Structural Frame & Building Envelope = 36					
E. EXTERIOR FINISH					
Possible Points					
1. Recycled-Content (No Virgin Plastic) or FSC-Certified Wood Decking					
				2	
2. Rain Screen Wall System Installed					
				2	
3. Durable & Noncombustible Siding Materials					
				1	
4. Durable & Fire-Resistant Roofing Materials					
				2	
Total Points Available in Exterior Finish = 7					
F. INSULATION					
Possible Points					
1. Insulation with 75% Recycled Content					
a. Walls and Floors					
				1	
b. Ceilings					
				1	
2. Low-Emitting Insulation (Certified CA Section 01350)					
a. Walls and Floors					
			1		
b. Ceilings					
			1		
3. Inspect Quality of Insulation Installation before Applying Drywall					
	1		1		

Project Name

Points Achieved
 Community
 Energy
 IAQ/Health
 Resources
 Water

Total Points Available in Insulation = 5

G. PLUMBING

Possible Points

1. Distribute Domestic Hot Water Efficiently					
a. Insulate All Accessible Hot Water Pipes	1				1
b. Locate Water Heater Within 12' Of All Water Fixtures, as measured in plan	1				1
c. Install On-Demand Circulation Control Pump	1				1
2. High-Efficiency Toilets (Dual-Flush or ≤ 1.28 gpf)				1	2
3. Water Efficient Fixtures					
a. All Fixtures Meet Federal Energy Policy Act (Toilets: 1.6 gpf, Sinks: 2.2 gpm, Showers: 2.5 gpm) (Required For Whole House)					R
b. High-Efficiency Showerheads Use ≤ 2.0 gpm at 80 psi					1
c. Bathrooms Faucets Use ≤ 1.5 gpm					1
4. Plumbing System Integrity and No Plumbing Leaks (Required for Whole House and Elements)					R

Total Points Available in Plumbing = 13

H. HEATING, VENTILATION & AIR CONDITIONING

Possible Points

1. General HVAC Equipment Verification and Correction					
a. Visual Survey of Installation of HVAC Equipment (Required for both Whole House and Elements)	R				
b. Conduct Diagnostic Testing to Evaluate System	2				
c. Conduct Flow Hood Test and Assess Delivery of Air	1				
d. Air Conditioning Compressor Operates Properly and Refrigerant Charge is Optimal	1				
2. Design and Install HVAC System to ACCA Manuals J, D and S	4				
3. Sealed Combustion Units					
a. Furnaces			2		
b. Water heaters			2		
4. Zoned, Hydronic Radiant Heating		1	1		
5. High Efficiency Air Conditioning Air conditioning with Environmentally Responsible Refrigerants	1				
6. Effective Ductwork Installation					
a. New Ductwork and HVAC unit Installed Within Conditioned Space	1				
b. Duct Mastic Used on All Ducts, Joints and Seams	1				
c. Ductwork Installed under Attic Insulation (Buried Ducts)	1				
d. Ductwork System is Pressure Relieved	1				
7. High Efficiency HVAC Filter (MERV 6+)			1		
8. No Fireplace OR Sealed Gas Fireplaces with Efficiency Rating ≥80% using CSA			1		
9. Effective Exhaust Systems Installed in Bathrooms and Kitchens					
a. ENERGY STAR Bathroom Fans Vented to the Outside			1		
b. All Bathroom Fans are on Timer or Humidistat			1		
c. Kitchen Range Hood Vented to the Outside			1		
10. Mechanical Ventilation System for Cooling Installed					
a. ENERGY STAR Ceiling Fans & Light Kits in Living Areas & Bedrooms	1				
b. Whole House Fan	1				
11. Mechanical Ventilation for Fresh Air Installed					
a. Any Whole House Ventilation System (that meets ASHRAE 62.2)	1	2			
b. Install Air-to-Air Heat Exchanger (that meets ASHRAE 62.2)	1	2			
12. Carbon Monoxide					
a. Carbon Monoxide Testing and Correction (Required for Whole House)				R	
b. Carbon Monoxide Alarm(s) Installed				1	
13. Combustion Safety Backdraft Test (Required for Whole House)					R

Total Points Available in Heating, Ventilation and Air Conditioning = 33

I. RENEWABLE ENERGY

Possible Points

1. Solar Water Heating System					4
2. Photovoltaic (PV) System that offsets electric energy use by:					
a. 30% of electric needs OR 1.2 kW					6
b. 60% of electric needs OR 2.4kW					6
c. 90% of electric needs OR 3.6 kW					6

Total Points Available in Renewable Energy = 22

J. BUILDING PERFORMANCE

Possible Points

1. Energy Survey and Education (Includes blower door test) (Required for Elements)					R
2. Energy Upgrades (Available for Elements Rating Only. Two points minimum required, maximum 6 points)					R
TIER 1: Practices in Tier 1 Are Worth Full Value (1 point)					
a) Attic Insulation up to or Exceeding Current Code					1
b) Crawl Space Insulation up to or Exceeding Current Code					1
c) Wall Insulation up to or Exceeding Current Code					1
d) High Efficiency Furnace (90% AFUE Minimum)					1
e) Seal Ducts and Duct Leakage is <15%					1
f) 14 SEER, 11.5 EER Air Conditioning Unit (in climate zones 2,4,8-15)					1
g) House Passes Blower Door Test With ≤0.5 ACH or a 50% Improvement					1
TIER 2: Practices in Tier 2 Are Worth Half Value (0.5 points)					
h) High Efficiency Water Heater ≥.62EF					0.5
i) Radiant Barrier in Attic					0.5
j) Windows Upgraded to Current Code Requirements, Which are Typically Dual Pane					0.5
k) Duct Insulation to Code					0.5
l) Programmable Thermostat					0.5
m) 14 SEER, 11.5 EER Air Conditioning unit (in climate zones 1,3,5,6,7,16)					0.5
3. Energy Budget for Home Based on Year					
a. Meet Energy Budget for Home Based on Year (Includes Blower Door Test) (Required for Whole House)					10

Project Name

Project Name	Points Achieved	Community				
		Energy	IAQ/Health	Resources	Water	
b. Energy Budget Compared to Current Code (Enter Number of Points)		1+				
4. Comprehensive Utility Bill Analysis		1				
Total Points Available in Building Performance = 31+						
K. FINISHES		Possible Points				
1. Entryways Designed to Reduce Tracked In Contaminants			1			
2. Low/No-VOC Paint						
a. Low-VOC Interior Wall/Ceiling Paints (<50 gpl VOCs regardless of sheen)			1			
b. Zero-VOC: Interior Wall/Ceiling Paints (<5 gpl VOCs (flat))			2			
3. Coatings Meet SCAQMD Rule 1113 for Low VOCs			2			
4. Low-VOC Caulks & Construction Adhesives (Meet SCAQMD Rule 1168)			2			
6. Recycled-Content Paint On All Exteriors				1		
6. Environmentally Preferable Materials for Interior Finish: A) FSC Certified Wood B) Reclaimed Materials C) Rapidly Renewable D) Recycled-Content E) Finger-Jointed or F) Local						
a. Cabinets				1		
b. Interior Trim				1		
c. Shelving				1		
d. Doors				1		
e. Countertops				1		
7. Formaldehyde Reduced In Interior Finish (CA Section 01350)						
a. Subfloor & Stair Treads				1		
b. Cabinets & Countertops				1		
c. Interior Trim				1		
d. Shelving				1		
8. After Installation of Finishes, Test of Indoor Air Shows Formaldehyde Level <27ppb			3			
Total Points Available in Finishes = 22						
L. FLOORING		Possible Points				
1. 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 and sealer must meet SCAQMD Rule 113.				4		
2. Thermal Mass Floors		1				
3. Flooring Meets CA Section 01350 or CRI Green Label Plus Requirements			2			
Total Points Available in Flooring = 7						
M. APPLIANCES AND LIGHTING		Possible Points				
1. Water and Energy Efficient Dishwasher Installed						
a. ENERGY STAR (Available for Elements Rating Only)		1				
b. Dishwasher Uses No More Than 6.5 Gallons/Cycle					1	
2. ENERGY STAR Clothes Washing Machine with Water Factor of 6 or Less						
a. Meets CEE Tier 2 Requirements (Modified Energy Factor 2.0, Water Factor 6.0)		1			2	
b. Meets CEE Tier 3 Requirements (Modified Energy Factor 2.2, Water Factor 4.5)					2	
3. ENERGY STAR Refrigerator Installed						
a. ENERGY STAR Qualified & < 25 cu.ft. Capacity (Available for Elements Only)		1				
b. ENERGY STAR Qualified & < 20 cu.ft. Capacity (Available for Elements Only)		1				
4. Built-In Recycling & Composting Center						
a. Built-In Recycling Center				2		
b. Built-In Composting Center				1		
5. Electrical Verification (Required for Whole House)		R				
6. Electrical Assessment and Inspection of Entire Home		2				
7. Energy Efficient Lighting		1				
8. Low-Mercury Fluorescent Lighting Installed (lamps, bulbs)						
a. Low-Mercury Products Are Installed Whenever Linear Fluorescent Lamps Are Used or Replaced				1		
b. Low-Mercury Products Are Installed Whenever Compact Fluorescent Lamps Are Used or Replaced				2		
9. Lighting Controls Installed		1				
Total Points Available in Appliances and Lighting = 19						
N. OTHER		Possible Points				
1. Incorporate GreenPoint Checklist in Blueprints Or Distribute Checklist (Required for Whole House and Elements)		R				
2. Develop Homeowner Manual of Green Features/Benefits		1				1
3. Hazardous Waste Testing						
a. Lead Testing Interior, Exterior and Soil			1			
b. Asbestos Testing and Remediation			1			
4. Gas Shut Off Valve (motion/ non-motion)			1	1		
5. Innovation: List innovative measures that meet green building objectives. Points will be assessed by Build It Green and the GreenPoint Rated.						
Innovation in Community: Enter description here						
Innovation in Energy: Enter description here						
Innovation in IAQ/Health: Enter description here						
Innovation in Resources: Enter description here						
Innovation in Water: Enter description here						
Total Points Available in Innovation = 6+						
Summary						
Total Available Points	224+	22	86	41	75	37
Minimum Points Required (Whole House)	60		20	5	6	8
Minimum Points Required (Elements)	25		8	2	2	4
Total Points Achieved						

Project Name

Points Achieved	Community	Energy	IAQ/Health	Resources	Water
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Project has not yet met the recommended minimum requirements for GreenPoint Rated Whole House:

- Total Project Score of At Least 50 Points
- Required measures:
 - A2a: Recycle All Cardboard, Concrete and Metals
 - B2: Moisture Source Inspection and Correction
 - D9: Sound Exterior Assemblies
 - G3a: All Fixtures Meet Federal Energy Policy Act
 - G4: Plumbing System Integrity and No Plumbing Leaks
 - H1a: Visual Evaluation of Installation of HVAC Equipment
 - H12a: Carbon Monoxide Testing and Correction
 - H13: Combustion Safety Backdraft Test
 - J3a: Meet Energy Budget for Home Based on Year
 - M6: Electrical Integrity
 - N1: Incorporate GreenPoint Checklist in Blueprints and Planning
- Minimum points in specific categories:
 - Energy (20 points)
 - IAQ/Health (5 points)
 - Resources (6 points)
 - Water (8 points)

**City of Hayward Green Building Checklist
for Private Non-Residential Development**
Applies to all non-residential projects that exceed 1,000 square feet

Energy Efficiency

- Energy Measure 1:**
Provide an on-site photovoltaic system capable of supplying power for 15% of the lighting load.
- Energy Measure 2 (alternate):**
Reduce lighting wattage per square foot by 15% below T-24 requirements.

Background: Energy Measure 1

According to the U.S. Department of Energy, buildings use about 68% of the electricity generated in the country on an annual basis. The California Energy Commission estimates that about one third of the energy used in commercial buildings is dedicated to lighting. This makes commercial lighting one of the single biggest energy users nationally. Reducing lighting power demand is an essential step in making buildings "green".

The California Energy Commission establishes the maximum allowed lighting power for commercial buildings and the city enforces this through the T-24 energy report. All designers and contractors are familiar with the process of calculating the allowed lighting power for a project.

This measure is based on *LEED Energy and Atmosphere Credit 2*. In the LEED system the renewable energy percentage is based on the total electricity demand of the building. In our version of the measure it is based only on the lighting demand since this figure has to be established as part of the normal permit process.

For certain projects solar panel installation will not be practical. For this reason we have included an alternate method of compliance. By reducing the amount of installed lighting, the project can achieve the same savings. This can work well for projects that do not have lighting needs that are near the limit set by T-24 requirements.

Design Process:

Measure 1: The design team should complete the T-24 energy report as they would normally do for any project. Based on the allowed wattage per square foot as determined by the T-24 calculations, provide a photovoltaic system that is sized to meet 15% of the allowed lighting power. For example: a 5000 square foot grocery store has an allowed lighting power of 1.6 watts/square foot. This will allow a maximum of 8,000 watts for the store. The PV system, in this case, will need to be capable of providing at least 1,200 watts (15% of 8,000).

Measure 2 (alternate): This alternate measure can be used if a PV system proves to be too costly or not practical. The lighting designer will need to determine the *allowed lighting power* for the space and then install 15% less. Using the same example above, a 5,000 square foot grocery store will be allowed 8,000 watts of lighting power under T-24. The installed lighting under this option will need to be a maximum of 4,250 watts (a 15% reduction).

References:

- LEED EA Credit 2
- California Energy Commission
- California Green Building Code

Water Conservation

- Water Measure 1:**
Reduce indoor water use by 20% below baseline

Background: Water Measure 1

Reducing water use in commercial buildings is relatively easy to achieve. Technologies such as waterless urinals*, occupant sensors and ultra low-flow toilets are available and provide instant savings. This measure is based on the LEED Water Efficiency Credit 2. In the LEED system additional credit is given for a 30% reduction as well. For the Hayward ordinance it will probably be sufficient to start with a 20% reduction initially and see if a higher threshold is appropriate at a later time.

***Waterless Urinals:** These units utilize a trap insert filled with a sealant liquid instead of water. The lighter-than-water sealant floats on top of the urine collected in the U-bend, preventing odors from being released into the air. Although the cartridge and sealant must be periodically replaced, the system saves anywhere between 15,000 and 45,000 gallons of water per urinal per year.

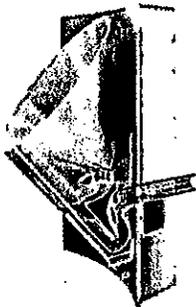
Design Process:

Water Conservation Measure 1:

The design team will need to determine the baseline use for the building per the California Plumbing and Building Codes as they would for any project. They will then need to calculate the total daily usage based on minimum code requirements. Through the specification of water efficient fixtures, a 20% reduction in total water use below the baseline will need to be proven.

References:

- 2007 California Plumbing Code
- LEED Reference Manual
- LEED WE Credit 2 (20% reduction below baseline)



Example of a waterless urinal

DRAFT

ORDINANCE NO. _____

Wre
10/15/08

AN ORDINANCE ADDING ARTICLE 22 TO CHAPTER 10 OF THE HAYWARD MUNICIPAL CODE ESTABLISHING GREEN BUILDING REQUIREMENTS FOR PRIVATE DEVELOPMENT

Section 1. Purpose. The purpose of this Article is to promote the health, safety and welfare of Hayward residents, workers and visitors by minimizing the use and waste of energy, water and other natural resources in the construction and operation of the City's building stock and by providing a healthy indoor environment.

The green building practices required by this Article will encourage resource conservation, reduce waste generated by construction projects, increase energy efficiency and promote the health and productivity of residents, workers, and visitors of the City.

Section 2. Findings. The City Council of the City of Hayward hereby finds that:

- a. The design, construction, and maintenance of buildings and structures within the City can have a significant impact on the City's environmental sustainability, resource usage, energy efficiency, waste management, and the health and productivity of residents, workers, and visitors.
- b. Green building design, construction, and operation can have a significant, positive effect on resource conservation, energy efficiency, waste and pollution generation, and the health and productivity of a building's occupants over the life of the building.
- c. Green building benefits are spread throughout the systems and features of the building. Green buildings can include, among other things, the use of certified sustainable wood products; extensive use of high-recycled-content products; recycling of waste that occurs during deconstruction, demolition, and construction; orientation and design of a building to reduce the demand on the heating, ventilating, and air conditioning systems; the use of heating, ventilating, and air conditioning systems that provide energy efficiency and improved indoor air quality; enhancement of indoor air quality by selection and use of construction materials that do not emit chemicals that are toxic or irritating to building occupants; the use of water conserving methods and equipment; and installation of alternative energy methods for supplemental energy production.

- d. In recent years, green building design, construction and operational techniques have become increasingly widespread. Many homeowners, businesses, and building professionals have voluntarily sought to incorporate green building techniques into their projects. A number of local and national systems have been developed to serve as guides to green building practices. Requiring commercial and new residential projects to incorporate green building measures is appropriate to help achieve the public health and welfare benefits of green building.

Section 3. The City of Hayward's Municipal Code is hereby amended to add Article 22 to Chapter 10 as follows:

"GREEN BUILDING REQUIREMENTS FOR PRIVATE DEVELOPMENT

SECTION 10- 22.100 TITLE. This Article shall be known and may be cited as the Private Development Green Building Ordinance of the City of Hayward.

SECTION 10-22.110 DEFINITIONS. For the purposes of this Article, certain terms are defined as follows:

- a. "Applicant" means any individual, firm, Limited Liability Company, association, partnership, political subdivision, government agency, industry, public or private corporation or any other entity that applies to the City of Hayward for permit(s) to construct a Project subject to the provisions of this Article.
- b. "Build It Green" is a non-profit membership organization which developed the GreenPoint Rating Systems for Residential and Mixed Use occupancies in order to promote sustainable buildings.
- c. "City" means the City of Hayward.
- d. "Commercial" means any building or space used for retail, industrial, office or other non-residential use.
- e. "Covered Project" means any privately funded construction project consisting of new construction, additions or remodels over 500 square feet for residential projects or 1,000 square feet for commercial projects, for which an application for a building permit is received after July 1, 2009.

- f. **“Green building”** means a whole systems approach to the design, construction, and operation of buildings and structures that helps mitigate the environmental, economic, and social impacts of construction, demolition and renovation. Green building practices recognize the relationship between natural and built environments and seek to minimize the use of energy, water, and other natural resources and provide a healthy, productive indoor environment.
- g. **“GreenPoint Rated”** is a third party rating system for homes based on a set of green building measures incorporated from Build It Green’s Green Building Guidelines and used to evaluate a home’s environmental performance. City staff shall maintain the most recent version of Build It Green’s GreenPoint Rated Checklists for Single Family, Multi-Family and Existing Homes and Residential Green Building Guidelines for New Home Construction, Home Remodeling and Multifamily Green Building.
- h. **“Historical Building”** means any structure or collection of structures deemed of importance to the history, architecture or culture of an area by an appropriate local or state governmental jurisdiction, pursuant to Section 18955 of the California Health and Safety Code and Section 8-201 of the 2007 California Historical Building Code, Title 24, Part 8.
- i. **“LEED™”** and **“LEED™ Checklist”** mean the Leadership in Energy and Environmental Design rating system, certification methodology, and checklist used by the United States Green Building Council (USGBC). City staff shall maintain the most recent version of the LEED™ Rating system at all times.
- j. **“Multi-family Residential Building”** means a single residential building that has more than two dwelling units.
- k. **“Mixed-Use”** means a building with residential and commercial uses.

SECTION 10- 22.120 APPLICATION AND EXEMPTIONS.

The provisions of this Article apply to private residential or commercial construction for which a building permit application is received on or after July 1, 2009, with the following exemptions:

- a. **Historical Buildings**, as defined by this Article.

- b. Permits issued only for foundation repair, re-roofing, repair of fire damage, work required by termite reports, upgrades for accessibility , or other items of building or structural maintenance, as determined by the Building Official.
- c. Hardship exemptions may be granted by the Building Official for projects valued at less than \$50,000 where the Project Applicant can demonstrate the cost of complete compliance will exceed 20.0% of construction costs. In these cases, the applicant may limit compliance to 20.0% of the cost of the project.
- d. Exemptions or partial exemptions may be granted by the City Council for other projects where it can be demonstrated that complete compliance is not possible due to unusual building circumstances. This exemption is for other than economic considerations.

SECTION 10-22.130 ALTERNATIVE GREEN BUILDING REQUIREMENTS.

The following green building requirements shall apply to all Projects subject to this Article. Wherever reference is made to the Hayward Green Checklist or Green Point Rated systems, a comparable equivalent rating system may be used if the Building Official finds the proposed alternate method is satisfactory and complies with the intent of this Article. The applicable requirements are those in effect at the time a complete application for the Project is submitted to the Building or Planning Division.

SECTION 10 -22.140 STANDARDS FOR COMPLIANCE.

a. **Multi-Family Residential and Mixed-Use Buildings.**

Effective July 1, 2009, Applicants for new Multi-Family Residential Covered Projects, prior to obtaining a Certificate of Occupancy, shall submit documentation demonstrating the building(s) has/have been GreenPoint Rated. This requirement shall also apply to Mixed-Use Covered Projects.

b. **New Single Family Dwellings (includes Detached Single Family Dwellings, Duplexes and Townhouses of two dwelling units or less per building.)**

Effective July 1, 2009, Applicants for new Single Family Covered Projects prior to obtaining a Certificate of Occupancy, shall submit documentation demonstrating the building(s) has/have been GreenPoint Rated.

c. Residential Additions/Remodels Greater Than 500 Square Feet.

Effective July 1, 2009, Applicants for residential Covered Projects consisting of remodels and/or additions greater than 500 square feet to existing residential single family or multi-family dwellings, shall submit, with their permit application, the GreenPoint Rated Existing Homes Checklist. The Applicant shall indicate on the plans and checklist if any of the items on the checklist have been incorporated into the project. Applicants are encouraged to have their projects GreenPoint Rated, or to incorporate items from the checklist; however, only completing the list and submitting it is mandatory.

d. Commercial Covered Projects.

Effective July 1, 2009, Applicants for new Commercial Covered projects, shall submit with their permit application, the City of Hayward checklist for Private Non-Residential Development. The plans shall clearly show where each item has been incorporated into the project. The plan review, to be conducted by City staff, shall verify the incorporation of checklist items into the plans. The building inspection process, to be conducted by City staff, shall verify the inclusion of these items in the construction. A Certificate of Occupancy shall not be issued until the incorporation of the checklist items is verified by City staff. The Certificate of Occupancy shall state that the project complies with the City's Private Development Green Building Ordinance.

SECTION 22.150 PROMULGATION OF IMPLEMENTING REGULATIONS.

The City Manager shall promulgate any rules and regulations necessary or appropriate to achieve compliance with the requirements of this Article. The initial rules and regulations shall be promulgated after securing and reviewing comments from affected City departments.”

Section 4. Severance. Should any part of this ordinance be declared by a final decision by a court or tribunal of competent jurisdiction to be unconstitutional, invalid, or beyond the authority of the City, such decision shall not affect the validity of the remainder of this ordinance, which shall continue in full force and effect, provided that the remainder of the ordinance, absent the unexcised portion, can be reasonably interpreted to give effect to the intentions of the City Council.

Section 5. Annual Review. The City Council shall review this ordinance annually to determine whether it needs to be updated because of new legislation enacted by the State or new standards developed by applicable organizations, such as StopWaste.org, Build It Green, and LEED (Leadership in Energy and Environmental Design). The Building Official shall annually report to the City Manager, the number and types of projects built under this ordinance.

Section 6. In accordance with the provisions of Section 620 of the City Charter, this ordinance shall become effective thirty days after adoption.

INTRODUCED at a regular meeting of the City Council of the City of Hayward, held the ____ day of _____, 2008, by Council Member _____.

ADOPTED at a regular meeting of the City Council of the City of Hayward held the ____ day of _____, 2008, by the following votes of members of said City Council.

AYES: COUNCIL MEMBERS:
MAYOR:

NOES: COUNCIL MEMBERS:

ATTEST: COUNCIL MEMBERS:

ABSENT: COUNCIL MEMBERS:

APPROVED: _____
Mayor of the City of Hayward

DATE: _____

ATTEST: _____
City Clerk of the City of Hayward

APPROVED AS TO FORM:

City Attorney of the City of Hayward

DRAFT

ORDINANCE NO. _____

me
11/21/08

AN ORDINANCE ADDING ARTICLE 22 TO CHAPTER 10 OF
THE HAYWARD MUNICIPAL CODE ESTABLISHING
GREEN BUILDING REQUIREMENTS FOR PRIVATE
DEVELOPMENT

THE CITY COUNCIL OF THE CITY OF HAYWARD DOES ORDAIN AS FOLLOWS:

Section 1. Purpose. The purpose of this Article is to promote the health, safety and welfare of Hayward residents, workers and visitors by minimizing the use and waste of energy, water and other natural resources in the construction and operation of the City's building stock and by providing a healthy indoor environment.

The green building practices required by this Article will encourage resource conservation, reduce waste generated by construction projects, increase energy efficiency and promote the health and productivity of residents, workers, and visitors of the City.

Section 2. Findings. The City Council of the City of Hayward hereby finds that:

- a. The design, construction, and maintenance of buildings and structures within the City can have a significant impact on the City's environmental sustainability, resource usage, energy efficiency, waste management, and the health and productivity of residents, workers, and visitors.
- b. Green building design, construction, and operation can have a significant, positive effect on resource conservation, energy efficiency, waste and pollution generation, and the health and productivity of a building's occupants over the life of the building.
- c. Green building benefits are spread throughout the systems and features of the building. Green buildings can include, among other things, the use of certified sustainable wood products; extensive use of high-recycled-content products; recycling of waste that occurs during deconstruction, demolition, and construction; orientation and design of a building to reduce the demand on the heating, ventilating, and air conditioning systems; the use of heating, ventilating,

and air conditioning systems that provide energy efficiency and improved indoor air quality; enhancement of indoor air quality by selection and use of construction materials that do not emit chemicals that are toxic or irritating to building occupants; the use of water conserving methods and equipment; and installation of alternative energy methods for supplemental energy production.

- d. In recent years, green building design, construction and operational techniques have become increasingly widespread. Many homeowners, businesses, and building professionals have voluntarily sought to incorporate green building techniques into their projects. A number of local and national systems have been developed to serve as guides to green building practices. Requiring commercial and new residential projects to incorporate green building measures is appropriate to help achieve the public health and welfare benefits of green building.

Section 3. The City of Hayward’s Municipal Code is hereby amended to add Article 22 to Chapter 10 as follows:

“GREEN BUILDING REQUIREMENTS FOR PRIVATE DEVELOPMENT

SECTION 10- 22.100 TITLE. This Article shall be known and may be cited as the Private Development Green Building Ordinance of the City of Hayward.

SECTION 10-22.110 DEFINITIONS. For the purposes of this Article, certain terms are defined as follows:

- a. “Applicant” means any individual, firm, Limited Liability Company, association, partnership, political subdivision, government agency, industry, public or private corporation or any other entity that applies to the City of Hayward for permit(s) to construct a Project subject to the provisions of this Article.
- b. “Build It Green” is a non-profit membership organization which developed the GreenPoint Rating Systems for Residential and Mixed Use occupancies in order to promote sustainable buildings.
- c. “City” means the City of Hayward.
- d. “Commercial” means any building or space used for retail, industrial, office or

other non-residential use.

- e. “Covered Project” means any privately funded construction project, excepted as otherwise provided herein, for which an application for a building permit is received after August July 1, 2009, or after the date the California Energy Commission and California Building Standards Commission approve green building standards required by this Article, whichever date is later, consisting of:
 - i. new construction, additions or remodels over 500 square feet for residential projects, or
 - ii. new construction, additions or remodels 1,000 square feet for commercial projects entailing 1,000 square feet or more of new or remodeled Commercial space;~~for which an application for a building permit is received after July 1, 2009.~~
- f. “Green building” means a whole systems approach to the design, construction, and operation of buildings and structures that helps mitigate the environmental, economic, and social impacts of construction, demolition and renovation. Green building practices recognize the relationship between natural and built environments and seek to minimize the use of energy, water, and other natural resources and provide a healthy, productive indoor environment.
- g. “GreenPoint Rated” is a third party rating system for homes based on a set of green building measures incorporated from Build It Green’s Green Building Guidelines and used to evaluate a home’s environmental performance. City staff shall maintain the most recent version of Build It Green’s GreenPoint Rated Checklists for Single Family, Multi-Family and Existing Homes and Residential Green Building Guidelines for New Home Construction, Home Remodeling and Multifamily Green Building.
- h. “Historical Building” means any structure or collection of structures deemed of importance to the history, architecture or culture of an area by an appropriate local or state governmental jurisdiction, pursuant to Section 18955 of the California Health and Safety Code and Section 8-201 of the 2007 California Historical Building Code, Title 24, Part 8.
- i. “LEED™” and “LEED™ Checklist” mean the Leadership in Energy and Environmental Design rating system, certification methodology, and checklist

used by the United States Green Building Council (USGBC). City staff shall maintain the most recent version of the LEED™ Rating system at all times.

- j. “Multi-family Residential Building” means a single residential building that has more than two dwelling units.
- k. “Mixed-Use” means a building with residential and commercial uses.

SECTION 10- 22.120 APPLICATION AND EXEMPTIONS.

The provisions of this Article apply to Covered Projects~~private residential or commercial construction for which a building permit application is received on or after July 1, 2009~~, with the following exemptions or exceptions:

- a. Historical Buildings, as defined by this Article.
- b. Permits issued only for foundation repair, re-roofing, repair of fire damage, work required by termite reports, upgrades for accessibility , or other items of building or structural maintenance, as determined by the Building Official.
- c. Hardship exemptions may be granted by the Building Official for projects valued at less than \$50,000 where the Project Applicant can demonstrate the cost of complete compliance will exceed 20.0% of construction costs. In these cases, the applicant may limit compliance to 20.0% of the cost of the project.
- d. Exemptions or partial exemptions may be granted by the City Council for other projects where it can be demonstrated that complete compliance is not possible due to unusual building circumstances. This exemption is for other than economic considerations.
- e. Projects for which a Vesting Tentative Map has been approved by January 1, 2009.
- f. Projects subject to an approved Development Agreement approved by January 1, 2009, but without a Vesting Tentative Map, shall comply with the requirements of this Article if a building permit application is received on or after January July 1, 2011.

SECTION 10-22.130 ALTERNATIVE GREEN BUILDING REQUIREMENTS.

The following green building requirements shall apply to all Covered Projects subject to this Article. Wherever reference is made to the Hayward ~~cGreen Checklist~~ or Green Point Rated systems, a comparable equivalent rating system may be used if the Building Official finds the proposed alternate method is satisfactory and complies with the intent of this Article. The applicable ~~requirements systems~~ are those in effect at the time a complete application for the Project is submitted to the Building or Planning Division.

SECTION 10 -22.140 STANDARDS FOR COMPLIANCE.

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~~Prior to August 1, 2009 to that date,~~ in order to promote familiarity with green building standards, application submittals for such Projects shall include the applicable GreenPoint Rated Checklist, and shall note which measures from that Checklist will be incorporated into the Project. applicants are encouraged to have their projects GreenPoint Rated, or to incorporate items, if any, from the checklist; however, only completing the list and submitting it is mandatory. For such projects that are GreenPoint Rated, the Certificate of Occupancy shall state that the project complies with the City's Private Development Green Building Ordinance.

~~These~~ requirements shall also apply to Mixed-Use Covered Projects.

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Prior to to August 1, 2009, applicants are encouraged to incorporate measures from the City of Hayward Checklist for Private Non-Residential Development into their projects. For such projects that incorporate such measures, the Certificate of Occupancy shall state that the project complies with the City's Private Development Green Building Ordinance.

SECTION 22.150 PROMULGATION OF IMPLEMENTING REGULATIONS.

The City Manager shall promulgate any rules and regulations necessary or appropriate to achieve compliance with the requirements of this Article. The initial rules and regulations shall be promulgated after securing and reviewing comments from affected City departments.²

Section 4. Severance. Should any part of this ordinance be declared by a final decision by a court or tribunal of competent jurisdiction to be unconstitutional, invalid, or beyond the authority of the City, such decision shall not affect the validity of the remainder of this ordinance, which shall continue in full force and effect, provided that the remainder of the ordinance, absent the unexcised portion, can be reasonably interpreted to give effect to the intentions of the City Council.

Section 5. Annual Review. The City Council shall review this ordinance at least annually to determine whether it needs to be updated because of new legislation enacted by the State or new standards developed by applicable organizations, such as StopWaste.org, Build It Green, and LEED (Leadership in Energy and Environmental Design). The Building Official shall annually report to the City Manager; the number and types of projects built under this ordinance.

Section 6. In accordance with the provisions of Section 620 of the City Charter, this ordinance shall become effective thirty days after adoption.

INTRODUCED at a regular meeting of the City Council of the City of Hayward,
held the _____ day of _____, 2008, by Council
Member _____.

ADOPTED at a regular meeting of the City Council of the City of Hayward held
the _____ day of _____, 2008, by the following votes of members of said City
Council.

AYES: COUNCIL MEMBERS:
MAYOR:

NOES: COUNCIL MEMBERS:

ATTEST: COUNCIL MEMBERS:

ABSENT: COUNCIL MEMBERS:

APPROVED: _____
Mayor of the City of Hayward

DATE: _____

ATTEST: _____
City Clerk of the City of Hayward

APPROVED AS TO FORM:

City Attorney of the City of Hayward