Memorandum

To: Thurston County Green Development Stakeholders

From: Tony Kantas, Resource Stewardship

Date: March 3, 2010

Subject: Potential Green Development Incentives & Potential Electric Vehicle Charging Guidelines/Standards

Potential Green Development Incentives
At the February 3, 2010 meeting, the Green Development Stakeholders gave staff direction to research the possibilities and implications of the county adopting a policy that recognizes the Built Green and LEED programs with the director authorizing other programs that may arise if certain criteria are met. Also, if the builder chooses to build to a certain threshold of the certificate program, the policy would require the county to provide the possible following incentives:

1. The county recording some sort of document indicating the structure is “Green” and to what level of green through the certificate program. The document would then be received by all future property owners through the title report.
2. Assign the green project a case manager within the department who is responsible for ensuring a facilitated review and inspection process, helping to address any code obstacles that arise, and communicating with project teams on possible solutions that may arise. This may require some sort of pre-submission conference with the applicant, plans examiner, and building inspector.
3. The county to develop a policy & procedure for innovative techniques used by an applicant.

Attachment “A” to this memo illustrates a flow chart which serves to demonstrate how a green building and development project could potentially be reviewed. Attachment “B” demonstrates how the county could identify a green development project through a master application when submitted at the permit assistance counter. A master application is currently required for all building and development applications including structural remodels.
Recording Green Development Projects with the Thurston County Auditor

One of the incentives the stakeholders group wanted to explore is to have Resource Stewardship record a document with the Auditor that demonstrates a property and/or building has been reviewed and constructed in accordance with a green certification program (i.e. LEED, Built Green, etc). This would provide education to the property owners and future owners of the green aspects of the construction and the necessary maintenance requirements.

The Auditor recording fee schedule includes a $62 fee for the first page and a $1 fee for each additional page. The fee schedule includes "Exceptions" to the first page for certain types of recordings. Staff is in the process of researching how this type of recording could be considered an exception in order to reduce the cost of the recording.

Things to possibly include in the recording:
1. Cover Sheet meeting Auditor margin requirements. Top three inches, sides and bottom one inch. Subsequent pages require a one inch from all sides. The cover sheet should also include:
   A. Document Title, Name and level of Certificate Program, Assessor’s Tax Parcel Number, Site address, builder name, third party reviewer name, and an abbreviated legal.
2. Certification Checklist indicating the green features of the structure with the peer reviewer’s signature.
3. Maintenance requirements to ensure the green feature is maintained (i.e. energy features, rain garden, planted native vegetation, etc).
4. An approved site plan that delineates all exterior green features (i.e. rain garden, planted native vegetation, building envelopes, etc).

Other things to consider associated to recording a green development project:
1. Adopt a Resource Stewardship policy that clarifies the process.
2. Work with Assessor to include “Green Built Structure” as an attribute to their property detail descriptions.
3. Amend applications to include green development to inform staff that application is considered green (Attachment B).
4. Include a green development checkbox in the county permit computer program (Amanda). This will allow the county to perform a query to find green development in a data base.
5. The county to use a different color file folder to identify green projects.

If the policy is to allow the Resource Stewardship Director to authorize other green certification programs other than Built Green and LEED, the stakeholders group should establish minimum criteria to recognize the said certificate program or provide language that puts the burden on the applicant to compare and contrast their program to the Built Green and LEED programs.

Green Project Case Manager

Once a green project is submitted to the Permit Assistance Counter (PAC), the Permit Technician will assign a case manager to the project. The case manager will ensure a facilitated review of the application and guide the project from point “A” to point “B” in a way that
demonstrates efficiency and cost savings to the applicant. Tasks of the case manager could potentially be the following:

1. Email all reviewers within three (3) days of application submittal to notify them of the green project and that it should be reviewed as prompt as possible.
2. If questions arise in the review of the application, the reviewer will contact the case manager without delay, so the case manager can contact the applicant with the required information. This allows the applicant to have a single county point-of-contact and thereby reduce confusion as to who the applicant needs to talk to regarding the status of their application.
3. Ensure assigned green projects streamline the permitting process as much as possible.
4. Route all subsequent submittals.
5. Obtain and review applicable comments from others.
7. Coordinate with other agencies and incorporate their comments on projects.

Innovative Building Technique Data Base
If a builder uses an innovative building technique through a green certification program that is not ordinarily used and the builder is required to demonstrate how the technique meets or exceeds the intent of the code, the county would provide the technique and supporting documents on the county website, arranged by topic. Once accepted by the Plans Examiner all the supporting documents would be scanned and categorized into a database that would be assessable through the county website. The new entry would be emailed to all the plans examiners and building inspectors to educate them on the new technique.

The purpose of the data base is to eliminate the need for an applicant to repeatedly demonstrate how an innovative green building technique meets or exceeds the building code. The database is also intended to notify and educate building inspectors and other county staff of the technique and to reduce confusion that may occur during the inspection process. Further benefits would be provided to the builder through the database by giving them different green building ideas that have already been accepted by the local building review process.

Potential Electric Vehicle Charging Infrastructure Standards
A requirement of the grant funding this project is to draft energy efficiency codes that seek the greatest possible reduction in green house gases. Transportation is the No. 1 source of green house gases within Washington State. In conjunction with the rapid rise in the cost of fuel, electric vehicles are a clear indicator of changing consumer preferences and industry direction. As major automotive manufactures plan to launch plug-in electric vehicles, the future of transportation is being propelled by a fundamental shift to cleaner and more efficient electric drive systems. For this reason, the stakeholders group should consider standards/guidelines in preparation to this shift of ways of transportation.

Attachment “C” is a recent amendment to the City of Seattle Electric Code. Attachment “D” is a cost estimating worksheet that was provided in the Electric Vehicle Charging Infrastructure Deployment Guidelines for The Greater Seattle Area, January 2010. The worksheet is based upon a remodel to provide the needed infrastructure to charge a vehicle. It can be assumed the
price would be noticeably less if new residential construction provided for the future installation of electric vehicle charging outlets, as required by the City of Seattle in their electric code. Thurston County does not administer an electric code, but could potentially administer the requirements similar to Seattle through the parking standards of the zoning ordinances.

**Data regarding electric car charging infrastructure:**

- Green house gas reduction
- Lower cost to install during new construction rather than later through a remodel.
- The lowest cost installation generally is the location closest to the electrical supply breaker because it minimizes the conduit run to the charger.
- The society of Automotive Engineers (SAE) has agreed that all vehicles produced by automakers in the United States will conform to a single design called the J1772 Standard.
- Level 2 240 Volt AC is typically the “primary” and “preferred” method for the Electric Vehicle Supply Equipment both for private and publicly available facilities and specifies a single phase branch circuit with typical voltage rating from 220 - 240 volts AC.
- If the garage is built with the conduit or raceway already installed from the panel to the garage, the task is greatly simplified.
- Different sitting requirements may need to be considered for carports, detached garages, multi-family dwellings, and commercial uses. The considerations must include areas prone to flooding, precipitation, lighting, vandalism, and temperature extremes.
- LEED provides credits for installing electric vehicle charging stations and suggests certain percentages of parking be devoted to alternative fuel vehicles.
- The equipment installation is required to follow the rules of the National Electric Code.
- The standard cord length is 25-feet.
- Potentially increases the property marketability.
Potential Green Project Submittal & Review Process

Green project submitted at permit assistance counter (PAC)
- Master Application will indicate the name of program and what level of program (i.e. Built Green 4 star, Built Green 5 Star, LEED Silver, LEED Gold)
- The permit tech will indicate that the project is green in the permit system (Amanda) and assign a case manager.
- A complete green project must include certification checklist with peer reviewer signature.

If there are questions or clarification requested by a reviewer, the reviewer would then notify the case manager and the case manager would contact the applicant and/or designee with the question. The applicant would then submit the requested info to the case manager and then the info would be routed to the reviewer.

If the proposal includes an innovative building technique and the applicant was required to prove how the technique meets or exceeds the code, the plans examiner would then scan the submitted science and all relevant submitted info into a county database. The new entry link would then be emailed to all plans examiners and building inspectors to educate them on the technique.

Once the permit is approved by all review departments, the case manager will record documentation demonstrating the green project with the Thurston County Auditor. Also, send notification to the Assessor to add green development as an attribute of the property.
** MASTER APPLICATION **

** STAFF USE ONLY **

** DATE STAMP **

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** LABEL **

** PLEASE NOTE:**

** ALL APPLICATIONS AND SITE PLANS MUST BE COMPLETED IN BLACK OR BLUE INK ONLY **

Intake by: ______________________

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The Master Application is required for all projects and shall accompany a project-specific supplemental application(s). The Master Application may not be submitted alone. Check the appropriate box for each supplemental application being submitted with this Master Application.

- [ ] Green Certification Program

** Type of Project **

(choose all that apply):

- Building:
  - [ ] Residential (form SA001)
  - [ ] Non-Residential (form SA002)
  - [ ] Non-Residential Hood & Duct (form SA003)
  - [ ] Non-Residential Sign (form SA004)
  - [ ] Manufactured Home Placement (form SA005)
  - [ ] Minor Permit (form SA006)
    - (Mechanical/Plumbing/Fire/Re-roof/Re-siding/Demo)
  - [ ] Adult Family Home Inspection (form SA007)
  - [ ] Fire Code Permit (form SA008 – SA012)

- Roads:
  - [ ] Encroachment Permit (form SA013)
  - [ ] Construction Permit (form SA014)
  - [ ] Variance (form SA015)
  - [ ] Scoping Review Request (form SA015a)
  - [ ] Access Permit (form SA015b)

- Environmental Health:
  - [ ] On-Site Sewage System (form SA016)
  - [ ] On-Site Sewage System Abandonment (form SA017)
  - [ ] On-Site Sewage Evaluation (form SA018)
  - [ ] Water System Design (Group B or 2 Party) (form SA019)
  - [ ] Well Site (form SA020)

** PROJECT DESCRIPTION:**

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Revised 1-10

Form No. MA001
Seattle Electrical Code

2008 Amendments

Electric Vehicle Outlets

In 2008, the City of Seattle changed its electrical code to require that new residential construction provide for the future installation of electric vehicle charging outlets. Essentially, panels will be sized to accommodate future circuit breakers and a location designated for the charging outlet.

The requirement section is printed below. Other relevant information is contained elsewhere in the Seattle electrical code.

V. Electric Vehicle Supply Equipment Locations
625.27 Requirements for Future Installation of Outlets.
To facilitate future installation of electric vehicle outlets in residential occupancies, the following shall (emphasis added) be provided:
(1) Space shall be reserved in the electrical service equipment for installation of an overcurrent protective device to serve electric vehicle charging system branch circuits.
(2) A location shall be designated, together with the required working clearances, for the electric vehicle charging system panelboard.
FPN No. 1: See also 220.57, Electrical Vehicle Outlets, for calculating demand loads.
FPN No. 2: Consideration of the location of the future electric vehicle outlets is recommended when designating a location for the electric vehicle outlet panelboard.
FPN No 3: Residential occupancies are defined in Chapter 3 of the Seattle Building Code.
8. Cost Estimating

This section provides a cost estimate worksheet and sample costs for residential, commercial fleet and public scenarios. The material and labor costs provided here are for general information purposes only and should not be used for actual planning purposes.

A. Residential Cost Worksheet

Referring to Figure 4-1 for a Residential EVSE installation, Table 8-1 provides a generic Cost Table Worksheet that can be used as a guideline residential installations. As noted in Section 4, some homes may require a service panel upgrade but the following table assumes they do not.

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