



MARK-TO-MARKET PROGRAM

DRAFT GREEN GUIDE

Version 9, September 2008



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
OFFICE OF AFFORDABLE HOUSING PRESERVATION

MARK-TO-MARKET GREEN INITIATIVE
Draft Green Guide
Version 9 – September 2008

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I. Introduction

OAHP published the M2M Green Initiative Program Outline, “The Greening of the M2M Portfolio”, on the Resource Desk on July 26, 2007 (http://www.oahp.net/broadcasts/2007_0726.pdf). This document contains the guidelines to implement the Green Initiative. These guidelines are in draft form and may be revised from time to time as OAHP gains more experience with Green M2M restructuring plans.

Throughout these guidelines, OAHP uses “Traditional” to describe requirements in the existing M2M Program and “Green” as the requirements in the M2M Green Initiative.

II. Overview

The pilot initiative is intended to encourage owners and purchasers of affordable, multifamily properties to rehabilitate and operate their properties using sustainable Green Building principles. These principles comprise sustainability, energy and water efficiency, recycling, and indoor air quality, and incorporate the “Healthy Housing” approach pioneered by HUD.

Green rehabilitation practices should result in lower utility usage that reduces greenhouse gas emissions and reduces costs to the benefit of owners, HUD and residents. They should also result in other societal benefits, generally in the form of products, materials, and practices that are less harmful to the environment. When rehabilitation, repairs, and replacements are performed in a manner that meets both Green and Healthy Housing principles, owners and residents will benefit from lower utility costs (to the extent the cost savings are shared by the owner and residents), improved indoor air quality, lower risk of pest infestations, lower levels of allergens, and reduced risk of mold-related illness.

Owners who volunteer to participate in the M2M Green Initiative can receive the benefit of a reduced owner contribution to the rehabilitation needs (to as low as 3 percent) plus an increased Incentive Performance Fee (to as much as 50 percent more than a Traditional M2M Restructure). In exchange, the owners commit to a Green implementation of the first year rehabilitation needs, to make additional first year Green improvements recommended by the PAE, to commit for the life of the M2M Use Agreement to (a) a Green repair and replacement schedule; and (b) a Green Operating & Maintenance Plan (that includes a Resident Involvement, Outreach and Incentive Plan and an Integrated Pest Management Plan). See section III B.1. of these guidelines for more detail.

III. Eligibility

A. Identifying Properties

Both new M2M property referrals and existing pipeline properties undergoing M2M restructuring and not yet subject to an executed Restructuring Commitment, are eligible for the Green Initiative. Owner participation is voluntary. It is the owner’s choice between the terms of a Green or Traditional restructuring plan.

1. New M2M Referrals

Beginning November 15, 2007, all new properties referred to the M2M Program,



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including those that had previously been in the Program and that are reentering, are eligible for the Green Initiative. The PAE orders the Green Physical Condition Assessment report (GPCA) on all new and reentry Full Restructure properties and proceeds with the modeling of a Green and Traditional Restructure. The PAE will need to ensure that the owner is aware of the requirements to complete the GPCA and is prepared to support the contractor(s)' work. The PAE provides the terms of both the Green and Traditional restructuring plans for the owner to make an informed choice. Due to the strong possibility that an incoming Lite rent restructuring may convert to a Full debt restructuring, the PAE orders the GPCA on Lites also.

2. Existing M2M Pipeline

a. Restructuring Commitment Not Executed: All owners with properties currently in the M2M Program who have not yet executed a Restructuring Commitment are eligible for the Green Initiative. Owners may or may not want to explore a Green Restructure; it is voluntary. For OAHP, the decision requires addressing any potential HAP contract term issues and the potential feasibility of the Green Restructure.

(1)- To evaluate the conversion to processing a Green Restructure, the PAE considers the following questions:

- (i) Has the PCA been ordered? If not, the PAE can order a GPCA and begin processing a Green Restructure. If it has been ordered, then the PAE must consider the questions that follow.
- (ii) Does a Green Restructure appear feasible? The PAE completes the Initial Screen (see Attachment 1). If the results show that a Green Restructure is feasible, the PAE can proceed to addressing question (iii) below. If the results do not show feasibility, the PAE must receive direction from OAHP, as outlined in Attachment 1, before proceeding to question (iii) below.
- (iii) Can the Green Restructure be processed within the term of the existing Housing Assistance Payment (HAP) contract? If not, the PAE must either be able to recommend a HAP extension or the owner must agree to explore the Green Restructure while rents are marked to market.

(2)- If the restructuring can be converted from Traditional to Green, and the existing processing would be interrupted to order a GPCA, the PAE sends the owner the Green Initiative Overview Letter (using Attachment 2), and if the owner wants to explore the Green Restructure, the PAE:

- (i) orders the GPCA and proceeds with the modeling.
- (ii) submits a Form 2-15 waiver and a Form 2-16 Hold (for an automatic 60 days) using the standard procedures.

b. Restructuring Commitment Executed: OAHP will not seek to change the terms of existing executed Restructuring Commitments. OAHP may consider a case-specific waiver of these guidelines if an owner with an executed Restructuring



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Commitment wants to participate in the Green Initiative. In the waiver request, the owner should justify delaying the closing for the processing of a Green Restructure. OAHP's Deputy Assistant Secretary, or a named designee, has the authority to approve or reject the waiver request.

B. Establishing the Owner Requirements: Requirements and Incentives

OAHP provides the owner flexibility in accepting the full package of PAE-recommended Green improvements. The owner accepting the Green O&M Plan and more than 75 percent (of dollar amount) of the PAE's recommendations for rehab and the R4R schedule generally receives the full Green Initiative incentive package ("Level One"). The owner accepting the Green O&M Plan and between 50-75 percent (of dollar amount) generally receives lesser incentives ("Level Two"). The owner not accepting the Green O&M Plan and/or not accepting at least 50 percent (of dollar amount) of rehab and the R4R schedule receives the Traditional Restructure package.

1. Owner Requirements

In order to qualify for the Green Initiative incentives, the owner must agree to some Greening of the property beyond the baseline rehabilitation needs. The PAE recommends Green alternatives for the Green Restructure on a property-specific basis, using the PAE Green Recommendations Standard in the underwriting guidance (see section V.A. of these guidelines).

- a. Greening the Baseline Rehabilitation Needs (Year One): The GPCA report identifies property repairs and improvements that must be addressed in the first year through a rehabilitation escrow. Where applicable, it shows the costs for each line item in both the Traditional and Green contexts, and includes comments on the benefits (financial and otherwise) of the Green improvements. As with the Traditional Restructure, the PAE and owner discuss which rehabilitation items are required, and the PAE uses the PAE Green Recommendations Standard to develop the appropriate Green improvements.
- b. Greening Additional Replacements (Year One): In addition to the Green rehabilitation items, the PAE uses the PAE Green Recommendations Standard to develop the appropriate "fixed" and "variable" Green improvements (see section V.B.2 of these guidelines).
- c. Greening Repairs and Replacements (20 Year Schedule): The GPCA report presents the 20 year schedule of repairs and replacements in both the Traditional and Green contexts. In addition to the Green rehabilitation items and the additional Green replacements, the PAE models the Green Restructure to fund Green repairs and replacements over the 20 year schedule. The PAE and owner discuss the items and timing as in a Traditional Restructure, but once determined, the PAE uses the PAE Green Recommendations Standard to develop the appropriate Green improvements.
- d. Greening the Operating & Maintenance (O&M) Plan: In addition to the Green rehabilitation items, the additional Green replacements, and the Green repairs and replacements in the 20 year schedule, the owners develop for OAHP's approval a



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Green O&M Plan (see section V.C. of these guidelines) that has a term matching that in the M2M Use Agreement. The PAE and owner discuss the content of the Green O&M Plan, but it must contain each of the requirements detailed in section V.C. of these guidelines to “be Green” and to receive the maximum owner benefits in the Initiative.

The Green Repairs and Replacement Schedule and the Green Rehabilitation Schedule, from the Green Plug-Ins, and the Owner’s Green Commitments document are all attached to the Restructuring Commitment and recorded with the M2M Use Agreement.

2. Owner Incentives

The owner meeting Level One Green requirements (see section III.B. of these guidelines and the chart below) receives the following terms in a Green Restructure:

- a. Reduced Owner Contribution: OAHF classified Green improvements as Significant Additions and it reduces the owner’s contribution to the Green rehabilitation needs and the additional fixed and variable Green replacements from 20 percent to as low as 3 percent of the estimated costs plus contingency.
- b. Increased Incentive Performance Fee (IPF): OAHF increases the IPF to as much as 4.5% of EGI with a floor of \$150 per unit and ceiling of \$300 per unit. Payment of the IPF is contingent, in part, on operating the property in accordance with Green commitments (which are defined in the attachment to the Restructuring Commitment and M2M Use Agreement).

The owner meeting Level Two Green requirements (see section III.B. of these guidelines and the chart below) makes an owner contribution of 10 percent to Significant Additions and receives an IPF of up to 3.75% of EGI with a floor of \$150 per unit and ceiling of \$250 per unit (with the same contingencies as outlined above in III.B.2.b.).

3. Level One and Level Two Green Comparison

Type of Green Restructure	Green O&M Plan	Acceptance of PAE Recommended Rehab*	Acceptance of PAE Recommended R4R Schedule	Minimum Owner Contribution for Green Items	Maximum Incentive Performance Fee
Level One Green	Required	At least 75% of dollar amount	At least 75% of dollar amount	3%	50% more than Traditional
Level Two Green	Required	At least 50% of dollar amount	At least 50% of dollar amount	10%	25% more than Traditional

* Rehab including baseline, fixed, and variable items as described in these guidelines.



IV. Due Diligence

A. **Obtaining a Green Physical Condition Assessment (GPCA) Report**

The GPCA report includes three components: the Traditional PCA report required in the M2M Program with recommendations for which of the line items can be Greened (and a cost/benefit for each Green item), an Energy Audit, and an Integrated Pest Management (IPM) inspection. The scope of work and inspector/contractor qualifications are contained in Attachment 3 to these guidelines. The Traditional PCA contractor may complete all components for which they are qualified and may subcontract to qualified parties for the others. Regardless, the GPCA contractor must detail the cost of the GPCA report by each of its three components. In the event the PAE is unable to engage a GPCA contractor who will either complete or subcontract with others to complete all components of the GPCA, the PAE should contact the Preservation Office to discuss a waiver.

NOTE: For properties already undergoing a Traditional Restructure (see section III.A.2 of these guidelines) and for which a Traditional PCA Report has been ordered or is in hand, the PAE contacts the PCA contractor and discusses the most cost-effective way to upgrade the Traditional PCA Report to a GPCA Report.

1. **Scope of Work (see Attachment 3)**

- a. Comparison of Traditional and Green Repairs and Improvements: The scope of work includes the Traditional PCA scope for the year 1 rehabilitation needs, additional fixed and variable Green replacements, and the 20 year schedule of repairs, showing a line-by-line comparison of Traditional and Green materials and costs. In addition, the scope of work includes expected benefits from the Green improvements, both financial (simple payback and an early replacement analysis) and non-financial, and confirmation that the Green improvements meet or exceed local building codes for new construction (see section V.A.1.d.(1) of these guidelines for applicable Green components). OAHP requires its form of payback and early replacement analysis (Attachments 5A-5B); either the GPCA Contractor or the PAE can complete them, but if completed by the GPCA Contractor, the PAE must confirm completeness and accuracy.
- b. Energy Audit: The scope of work includes an energy audit that documents prudent energy opportunities at the property, the cost of the opportunities, the expected financial benefit from the opportunities, a simple payback and early replacement analysis, benchmarking energy usage of the property, identification of utility meters and what units/areas are serviced by each, and must document the sizing recommendations for the HVAC system and hot water heaters. OAHP requires its form of payback and early replacement analysis (Attachments 5A-5B); either the GPCA Contractor, Energy Auditor, or the PAE can complete them, but the PAE must confirm completeness and accuracy.
- c. Integrated Pest Management (IPM) Plan Inspection: The scope of work also includes an IPM Plan inspection, a description and evaluation of existing pest control policies and practices, a recommended course of action using IPM



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principles, and a handout on glue traps to be provided to residents. This inspection may reveal the need for additional repairs/site changes and/or modified pest control practices, and is required for development of the IPM Plan, which is a component of the Green O&M Plan (see section V.C.5. of these guidelines).

Any of the components of the scope of work may reveal critical repairs that must be addressed and corrected immediately, as the report is completed months before closing the Green Restructure (when presumably all the non-critical repairs and replacements are addressed in the first year's rehabilitation and later years' repairs and replacements). None of this guidance is intended to change the PAE's ability to negotiate for certain non-critical repairs to also be completed before closing.

2. Inspector Qualifications (see Attachment 3)

The contractor(s) certifies that it meets the minimum qualifications with each delivered GPCA report by including a self-certification or providing their qualifications within the report itself.

- a. GPCA Report Comparing Traditional and Green Requirements: The M2M Program qualifications contained in Appendix I of the M2M Operating Procedures Guide are still applicable. In addition, the inspector/ contractor
 - (1)- has the Leadership in Energy and Environmental Design Accredited Professional (LEED AP) designation, or its equivalent; and
 - (2)- agrees to complete 10 hours of education annually in a Green industry related field (OAHP has compiled a list of resources that would be suitable; owners and PAEs may submit others for consideration. These are available on HUD's website at <http://www.hud.gov/offices/hsg/omhar/paes/green/resource.cfm> and in Attachment 16 to these guidelines).
- b. Energy Audit: The auditor/ contractor is trained by RESNET or BPI training providers; or is a Certified Energy Manager (CEM); or a State equivalent certified energy auditor; or a professional architect or engineer certified to complete energy audits. When available, the RESNET certified Home Energy Rater or BPI certified Building Analyst, will also be acceptable qualifications.
- c. Integrated Pest Management (IPM) Plan Inspection: The inspector/ contractor is a pest management professional with a certification from QualityPro or QualityPro Green (OAHP expects to remove QualityPro from the list of acceptable certifications in the near future), or GreenShield, or EcoWise. The PAE can pursue a waiver request of this requirement if there are no certified inspectors/contractors acceptable to the PAE in the subject property area. In any waiver request, the PAE must include the qualifications of the recommended IPM inspector.

3. Portfolio Restructuring Agreement (PRA) Waiver and Invoice Processing

OAHP is not modifying the PRA for the Green Initiative while it is in its pilot stage. In the meantime, the PAE must obtain waivers from OAHP before ordering third



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party reports or incurring fees not allowed in the PRA.

The PAE solicits bids from potential PCA contractors and selects one or more using the existing procedures (including the requirement for the PAE to obtain three bids for services). The PAE submits the Form 2-15 OAHP Waiver Form(s) to obtain OAHP's prior approval for ordering GPCA Reports in excess of the PRA costs ceilings. The PAE obtains and records the costs of the GPCA Report by its individual components: PCA Report Comparing Traditional and Green Requirements, Energy Audit, and the Integrated Pest Management Plan Inspection. OAHP processes these waiver requests using existing procedures. Specifically:

- a. PCA Report Comparing Traditional and Green Requirements: The PAE submits a Form 2.15 Waiver for a PCA Report Comparing Traditional and Green Requirements that will result in the total amount for "Physical Condition Assessments" exceeding the maximum amount allowed in the PRA (see PRA, Section 9.2.2, Physical Condition Assessment). OAHP expects the cost to be in the range of \$5,000 - \$5,500 (\$1,000 – \$1,500 above the existing \$4,000 PRA ceiling). The PAE submits an invoice for reimbursement for the cost of this component of the GPCA Report under the line item titled "Physical Condition Assessment Reports" on Page 3 of Schedule A on the Form 2.14A, PAE Payment Invoice (Asset-Specific).
- b. Energy Audit: The PAE submits a Form 2.15 Waiver for an Energy Audit that will result in the total amount for "Use of Other Subcontractors" exceeding the maximum amount allowed in the PRA (see PRA, Section 9.2.7, Other Subcontractors). OAHP expects the cost to be in the range of \$2,500 - \$3,000. The PAE submits an invoice for reimbursement for the cost of this component of the GPCA Report under the line item titled "Use of Other Subcontractors" on Page 3 of Schedule A on the Form 2.14A, PAE Payment Invoice (Asset-Specific).
- c. Integrated Pest Management (IPM) Plan Inspection: The PAE submits a Form 2.15 Waiver for any Integrated Pest Management Plan (IPM) inspection that will result in the total amount for "Environmental Assessment" exceeding the maximum amount allowed in the PRA (see PRA, Section 9.2.4, Environmental Assessment). OAHP expects the cost to be in the range of \$1,250 - \$1,500. The PAE submits an invoice for reimbursement for the cost of this component of the GPCA Report under the line item titled "Environmental Assessment" on Page 3 of Schedule A on the Form 2.14A, PAE Payment Invoice (Asset-Specific).

PAEs are to contact the Green Team administrator (Carolyn Carpenter Porritt at OAHP Headquarters; by email at Carolyn.Carpenter.Porritt@HUD.gov) if they find that the cost of obtaining these reports exceeds the OAHP cost expectations outlined above.

B. Identifying Funding Support for the Green Improvements

OAHP provides a Green Funding Incentive Fee for PAEs and owners to recover some of their costs incurred to pursue all possible funding sources outside HUD that can be used



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to reduce the cost of the improvements in a Green Restructure. This cost reimbursement may be as large as \$5,000 depending on the success in obtaining additional funds.

1. Potential Funding Sources

There are a variety of sources that may have funding to support the cost of making Green improvements. These sources include: Federal, State, and Local governments; foundations/non-profits; utility companies; and appliance makers. There is a benefit to HUD and the owner if these outside funds are brought into the Green Restructure, by lowering overall costs. Funds provided through Low Income Housing Tax Credits, other income tax credits, HOME, and any other HUD-funded programs are excluded from the Green Funding Incentive Fee.

The Regulatory Agreement requires owners to pursue all discounts, rebates, refunds, etc. that are available to the property and to deposit those collections in the property Operating Account. Conversely, any energy-related income tax credit (Federal or State) that the individuals in the ownership may be entitled to through implementing Green improvements benefits those individuals in the ownership exclusively, as OAHP will not attempt to identify, monitor, or collect a portion of any such individual income tax credit.

2. Green Funding Incentive Fee

- a. Owner and PAE Benefit: The owner and PAE are encouraged to coordinate the pursuit of the potential funding sources. The Green Funding Incentive Fee is shared equally between the PAE and owner, and is intended to be a partial reimbursement of their costs, up to a maximum of \$5,000, for successfully securing outside funding for the Green Restructure.
- b. Calculation: OAHP allows an incentive fee of 10 percent of the funding received, not to exceed \$5,000, for outside funds that contribute to the cost of Green improvements. The fee is shared equally by the PAE and owner. The Green Restructure must close and the outside funds be used in the closing to earn the fee. No fee is earned if outside funds are not contributed to the Green Restructure.

- (1)- The PAE accounts for the owner's portion of the incentive fee as a reduction in the amount of the owner contribution in the Green Restructure.
- (2)- The PAE submits a Form 2-15 Waiver Form, after closing, for payment of its Green Funding incentive fee. The PAE may include the Green Incentive processing fee (see section VII.A.3. in these guidelines) on the same form as the incentive fee. OAHP processes the waiver using the existing procedures.

C. Obtaining the Utility Consumption Baseline

M2M Green transactions have additional analytical and monitoring requirements regarding utilities. One of OAHP's standing objectives in Green M2M transactions has been to track utility savings over time.



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1. Requirement for Utility Consumption Baseline

- a. Need for a Baseline. To track utility consumption over time, OAHP needs a consumption baseline against which to compare future consumption. OAHP expects the work to be performed by third parties. PAEs are responsible for coordinating the collecting, consolidating and normalizing (see below) utility usage baseline data. The baseline will be for a twelve month consumption period. The baseline measurement period should end prior to the issuance of the Restructuring Commitment, which will provide a baseline period ending near the M2M closing. OAHP approval of the completed baseline analysis will be a condition of closing.
- b. Objectives of Utility Consumption Baseline. The utility consumption baseline should be conducted in a manner that achieves these objectives:
 - (1)- Identification of the sources, costs and quantities of energy and water that a property consumes, as well as who pays (residents or property) for which portions of the energy and water consumed. Consumption data should be presented in both weather normalized and actual formats.
 - (2)- Assessment and identification of energy and water consumption for various end uses, (e.g. space heating, water heating, cooling, common area lighting and individual apartment energy and water consumption).
 - (3)- The analytical results and conclusions must be freely available, without charge, for use, for example by the PAE, property owners, HUD, state/city housing authorities and utility companies.

2. Draft Statement of Work for Utility Baseline

PAEs should use the draft statement of work (see Attachment 13) for establishing a baseline. OAHP has had discussions with third party contractors to assure that capacity exists and that fees can be obtained within acceptable limits. If PAEs are unable to locate companies using their network of sources, contact OAHP Headquarters for assistance.

3. Baseline Data Obtained From Utility Companies Based on Releases

- a. Need for Releases. Generally these third party contractors prefer to obtain information from utilities directly based on releases from owners and tenants (for tenant paid utilities). PAEs will need to obtain releases from the owner and, through the owner's management agent, from the tenants, to obtain an acceptable sample of prior usage. NOTE: OAHP requires consumption (i.e., usage) data not billing (i.e., cost) data.
- b. Need to Start Obtaining Releases Early. As a practical matter, PAEs should begin working with property management to begin gathering tenant releases early in the M2M process, perhaps at recertification, since it is difficult to get enough responses from tenants in a short period.



4. PAE Cost Reimbursement

Once OAHP approves the baseline analysis, OAHP will reimburse up to \$20.00 per meter with a minimum of \$500 per property. Before negotiating with a vendor, PAEs will need to identify the number of meters. Identification of the number of meters and units/areas to which they correspond is required in the Energy Audit component of the GPCA (see Attachment 3). The PAE submits a Form 2.15 Waiver for the utility cost analysis that will result in the total amount for “Use of Other Subcontractors” exceeding the maximum amount allowed in the Portfolio Restructuring Agreement (see PRA, Section 9.2.7, Other Subcontractors). OAHP estimates the cost to be in the range of \$10 to \$20 per meter. The PAE submits an invoice for reimbursement, showing the number of meters, under the line item titled “Use of Other Subcontractors” on Page 3 of Schedule A on the Form 2.14A, PAE Payment Invoice (Asset-Specific).

5. Requirement to Weather-Normalize the Baseline

To eliminate year-to-year consumption fluctuations based on weather patterns, and thereby have an accurate comparison year-to-year, the contractor will normalize utility usage for abnormal heating and/or cooling seasons using localized weather data. For example, if the baseline year had a warm winter and a cool summer, the utility analyst will adjust the actual baseline consumption upward when determining the weather-normalized consumption baseline. The baseline analysis report will contain both the weather-normalized baseline consumption and the raw (i.e., not adjusted for weather patterns) baseline consumption.

V. Underwriting Guidelines

A. Considering Green Recommendations and Decisions

1. PAE Green Recommendations Standard

OAHP established a standard to guide the PAE in developing its recommended Green improvements:

- a. In general, the PAE recommends the Green improvements or alternatives that are physically feasible and practicable, do not adversely impact other building systems, and provide improved marketability and tenant acceptance. The PAE starts with an approach to make the maximum Green improvement and then considers lesser improvements as dictated by the financial implications of the transaction.
- b. With regard to Green alternatives that produce utility savings, the PAE recommends alternatives that satisfy the non-functioning items payback test in Attachment 5-A or the early replacement test in Attachment 5-B. The exceptions to the payback test are
 - (1)- Energy-Star rated clothes washers, refrigerators, dishwashers, lighting fixtures, sliding glass doors, and windows that are readily



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available, which are to be recommended when these items need to be replaced, and

- (2)- low-cost items like toilet flappers and low-flow shower heads and faucet aerators, which are generally to be recommended in rehab, and
 - (3)- low-flow toilets that are replacing existing items that are old and use excessive amounts of water, which are generally recommended in rehab. For example, 1.6 gallon toilets were preceded by 3.5 gallon in the 1980's, 5.5 gallon in the 1960's, and 7 gallon in the 1950's).
- c. With respect to other Green alternatives (“non-utility savers”), the PAE recommends alternatives in response to existing conditions on which there is broad consensus about negative health effects, but that may not have a monetary payback quantifiable to the property. OAHP will determine reasonableness in its sole discretion. This guidance is not intended to override or extend existing HUD guidance with respect to mold or other environmental conditions.
- d. PAEs must determine if their recommendations, even if Green, can be categorized as Green in the Green Initiative. HUD must receive a benefit for extending the Green Initiative benefits (lower owner contribution and higher IPF) to the owner. If the Green Component will be installed regardless of the Green Initiative incentives (because of Code requirements or because there is no alternative), then the improvement is considered to be “Traditional” and not “Green”. However, the owner who goes beyond the requirements, in terms of the specifications of the improvement itself, or in installing it as an early replacement rather than at the end of its useful life, then the PAE may recommend that improvement be counted as “Green”. Sample scenarios follow:
- (1)- Building code for new construction requires the Green component. This is applicable to major Green components only; specifically, the HVAC system, roof, windows, appliances, and hot water heaters. The GPCA scope of work requires verification that the Green alternatives exceed the new construction code for the area. To be categorized as Green, the owner goes Greener than required by code and/or agrees to early replacement with the Green/code component. If the owner does only the Green required by the code for new construction, replaced at the end of the component's useful life, categorize as Traditional.
 - (2)- Funding source (e.g., tax credits) requires the Green component. The PAE must confirm the requirements of the funding source to confirm appropriate classification within the Green Initiative. To be categorized as Green, the owner goes Greener than required by the funding source. If the owner does only the Green required by the funding source, categorize as Traditional.
 - (3)- Owner has already selected the Green component (although not required to do so). Categorize as Green.



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- (4)- There are no Traditional alternatives; Green is the only option. To be categorized as Green, the owner goes Greener than the minimum that is available and/or agrees to early replacement with the minimum available Green component. If the owner does only the minimum Green available, replaced at the end of the component's useful life, categorize as Traditional.
- (5)- The Green alternative has no cost premium or costs less than the traditional alternative. Green does not always cost more. Categorize as Green.

2. Decision-Making Factors

The PAE should include consideration of the following factors in developing its Green recommendations:

- a. Additional upfront cost requirement
- b. Appropriately sized HVAC system and hot water heater
- c. Budget available for improvements
- d. Bulk-purchase opportunities
- e. Health benefits
- f. Impact of Green improvement on other building systems
- g. Installation issues (cost, complexity, coordination with other improvements, etc.)
- h. Maintenance costs
- i. Potential call-backs (correct operation, maintenance, etc.)
- j. Recycling value
- k. Remaining useful life
- l. Resident acceptance of Green improvements
- m. Other financial factors:
 - (1)- If the Green component is likely to require less (or more) maintenance than the Traditional component.
 - (2)- If the estimate of useful life of the Green component is more (or less) certain than for the Traditional component.
 - (3)- If the estimate of utility savings is especially reliable (or involves unusual levels of uncertainty).
 - (4)- If there is good reason to believe that local utility rates will accelerate faster than the rate of inflation (for example, information that the utility has applied for a significant rate increase, or there has been a significant rate increase since the analysis was done).



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- (5)- If the Green component would have recycling value at the end of its useful life, and the Traditional component would not (or vice versa).

Green investment decisions are intended to be situation-specific, are not intended to be formulaic, and are intended to balance financial and non-financial considerations. The PAE should also review Attachment 8 Green Advisory Guidance to assist it in considering different technical specifications of various Green improvements.

B. Developing the Plan for Green Improvements

The Green Initiative has a three-part eligibility requirement.

1. Green Baseline Rehabilitation Needs (Year One)

- a. Requirement: The PAE reviews the GPCA report and determines the recommended baseline rehabilitation needs (“baseline” means all those items that must be addressed in a rehab escrow for either a Traditional or Green Restructure). As with the Traditional Restructure, the PAE and owner reach a consensus on the required baseline needs.
- b. Analysis: The PAE analyzes the Green alternatives presented in the GPCA report (see Attachment 6) using the PAE Green Recommendations Standard (see section V.A. of these guidelines). This approach allows for property-specific considerations to be taken into account while still resulting in appropriate levels of Green improvements.
- c. Cost Verification: OAHP has always recommended that owners verify the proposed costs of rehabilitation with proposed contractors and vendors. In the Green implementation, confirming costs early on is even more important, because of evolving products, technologies, and processes; and not only for the first year rehabilitation schedule but also for the R4R schedule.
- d. Green Rehabilitation Escrow Deposit Agreement (Green REDA): See Attachment 7 for the form of the Green REDA used in the Green Restructure. It differs from the Traditional REDA primarily in that it provides instruction in the event a Green item (with an owner contribution of as low as 3 percent) is not implemented and an adjustment to the owner contribution is required, and it strongly recommends a more detailed description of required repairs and improvements. The PAE and owner must discuss the rehabilitation escrow administration fees during the underwriting of the Green Restructure and model the transaction accordingly.

2. Green Additional Rehabilitation (Also in Year One)

The PAE discusses its Green recommendations with the owner and determines the owner’s incentives as outlined in section III.B.2. of these guidelines. The PAE uses the advisory guidance contained in Attachment 8 to assist in developing its recommendations.

- a. Green Fixed Significant Additions: OAHP generally requires the following



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Green improvements in all Green Restructures:

- (1)- Energy-saving items recommended by the PAE and not included in the baseline rehabilitation. An example might be early replacement of inefficient (but functioning) appliances. Note: If any of the following items are replaced early, the replacements must have an ENERGY STAR rating if such rating is readily available - clothes washers, refrigerators, dishwashers, lighting fixtures, sliding glass doors, and windows.
- (2)- Water-saving items recommended by the PAE and not included in the baseline rehabilitation. The PAE applies the same cost-effectiveness criteria as for energy-saving early replacements. Note: Low-flow shower heads and faucet aerators are generally recommended in rehab as an early replacement. Likewise, low-flow toilets are recommended as an early replacement when the existing toilets are old and inefficient.
- (3)- Additional insulation recommended by the PAE. The GPCA contractor is required to examine the current insulation and provide a recommendation on whether additional insulation would be beneficial and can be cost justified.
- (4)- Utility consumption and temperature/humidity monitoring equipment acceptable to OAHP. The M2M underwriting will not include any additional operating expense or Reserve funds for maintenance of monitoring devices. Monitoring will be required for up to four years following the M2M closing. Accordingly, the devices should have a warranty of at least four years. If possible, select a single device that can be useful in monitoring temperature and humidity as well as utility consumption. The goal in device selection is to cost effectively conduct multiple monitoring activities while using the warranty to minimize site maintenance costs.
- (5)- Integrated Pest Management plan repairs such as sealing potential pest entry points at exterior and unit interiors, and changing landscaping to move termite-attracting materials away from foundations and to remove cover for rodents looking for entry to the building.
- (6)- Identified lighting replacements in common areas including property administrative offices, laundry and recreation rooms, parking lots, common walk ways and access corridors, should be made with ENERGY STAR labeled fixtures and lighting. LED light should be used for all exit signs.
- (7)- Identified window replacements should at a minimum be ENERGY STAR labeled, dual paned, insulated, and have high performance glazing appropriate for climate area and the building's wall-to-window ratio.
- (8)- Identified replacements of individual hot water heaters shall be appropriately sized for the units/ the property and be the most efficient that can be cost-justified for the property.



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- (9)- Identified replacements of heating and cooling equipment should be appropriately sized for the units/ the property in accordance with instructions in these guidelines.
 - (10)- Identified replacement of central heating and cooling systems; all joints in the air distribution system shall be sealed with duct mastic or approved equivalent.
- b. Green Variable Significant Additions: OAHF requires the PAE use the following guidelines to consider such other Green rehabilitation items as may be appropriate for the property:
- (1)- Kitchen and bath exhaust, using ENERGY STAR-rated exhaust fans, vented to the outside (or ENERGY STAR exhaust fan that runs continuously or on a timer) – generally recommended if feasible at reasonable cost.
 - (2)- Carbon monoxide alarm on each occupied floor of the property, near the bedroom, when there is combustion in the unit – generally recommended if feasible at reasonable cost.
 - (3)- Low or no volatile organic compound (VOC) materials for any rehabilitation involving paint, primers, adhesives, caulk, and sealants – generally recommended.
 - (4)- Replacement of carpet with a smooth and cleanable surface – generally recommended only if (i) the owner concurs and either (ii) the carpet to be replaced has reached the end of its useful life or (iii) there is a sound economic or health justification for early replacement of carpet that has not reached the end of its useful life.
 - (5)- Low VOC carpet – if the carpet is being replaced with new carpet, generally recommended.
 - (6)- Rubber walk-off mats at unit entries – generally recommended.
 - (7)- Rubber stair treads – generally recommended if feasible at reasonable cost.
 - (8)- Cementitious (e.g., Hardie board) siding in lieu of alternative materials – if the siding warrants replacement, generally recommended only if the owner concurs.
 - (9)- Upfront changes to facilitate household waste recycling – generally recommended if feasible at reasonable cost considering the property configuration and the local recycling options.
 - (10)- Green management of construction / rehabilitation debris – generally recommended.
 - (11)- Combined Heat and Power (CHP) system – if the owner concurs, feasibility to be considered and if the property appears suitable, using the HUD Feasibility Screening Software (see Attachment 9); further pursuit is recommended when the indicated payback period is less than ten years.
 - (12)- Identified roofing systems replacements – generally recommended only if (i) the owner concurs and either (ii) the roof to be replaced has



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reached the end of its useful life or (iii) there is a sound economic justification for early replacement.

- (13)- Incorporate landscaping that uses water efficiently, assists in moderating building temperatures and reducing the heat island effect, and protects water and air quality – consider if feasible at reasonable cost and if owner concurs.
- (14)- ENERGY STAR qualified thermostats – consider if owner concurs (if recommended, ensure the Resident Involvement, Outreach and Incentive Plan includes sufficient training on proper use of the thermostats).
- (15)- Air and thermal barriers (including ducts) should be continuous and complete – consider improvements if feasible at reasonable cost and if owner concurs.

3. Green Repairs and Replacements for Term of M2M Use Agreement

- a. Reserve For Replacements Schedule Requirement: The PAE recommendations for Green implementation, on a line-by-line basis, are incorporated into the R4R Schedule, using the Traditional Estimated Useful Life tables (unless there is evidence to support a shorter or longer life for a Green-recommended item).
- b. Analysis: The PAE includes the increased cost (if any) of the Green implementation in the required post-M2M reserve deposit. In developing its recommendations, the PAE uses the PAE Green Recommendations Standard (see section V.A. of these guidelines).
- c. Compliance: The owner’s commitment to the Green implementation is documented in the Green Operating and Maintenance Plan. HUD may determine compliance through [use of a revised Form 9250 that contains an owner certification¹, or by requiring an owner certification be provided with each request for withdrawal, or through the owner’s annual certification, or by a revised process for Green R4R withdrawals whereby OAHP reviews and concurs with the owner’s request]. HUD may consider lack of compliance as a management finding, thereby resulting in the placement of a flag in the Active Partners Performance System (APPS), suspension of Capital Recovery Payments, and forfeiture of Incentive Performance Fees.

4. ENERGY STAR Products

- a. ENERGY STAR Quantity Quotes: The U.S. Department of Energy developed ENERGY STAR Quantity Quotes (<http://www.quantityquotes.net/>) to make it easy to comparison shop for energy-efficient products. With this fast and simple

¹ Proposed language pending: “Owner’s Certification: I certify that the items requested for reimbursement on Form HUD-9250, Funds Authorization, have been approved in the Green Reserve for Replacement plan incorporated in the Restructuring Commitment executed by the owner and the Department of Housing and Urban Development. I also certify that this request for reimbursement complies with HUD’s regulations, directives, and other requirements and that prior reimbursement for these items has not been sought nor received. Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties (18 U.S.C. Sections 1001, 1010, 1012; 31 U.S.C. Sections 3729, 3802.”



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tool, multifamily property owners can easily locate available ENERGY STAR qualified products, make contact with suppliers, and negotiate discounted prices. ENERGY STAR Quantity Quotes was formerly known as the ENERGY STAR Online Bulk Purchasing Tool.

- b. Available ENERGY STAR Products: The ENERGY STAR label can be found on 30 different categories of products, including: light bulbs, light fixtures, clothes washers, dehumidifiers, dishwashers, refrigerators, windows, sliding glass doors, and room air conditioners.

C. Developing the Green Operating and Maintenance Plan

OAHP requires a Green O&M Plan for all Green Restructures to be prepared in the prescribed format included in Attachment 17. The requirements include each of the following items:

1. Green R4R Certification

The owner agrees in the Green O&M Plan to certify and/or document compliance with the required Green implementation detailed in the R4R Schedule.

2. Green Commitment for Life of the M2M Use Agreement

The owner's Green commitments are contained in a document that will be attached to the Restructuring Agreement and made to be an addendum to the M2M Use Agreement (and recorded with it). See Attachment 10 for the form of this document.

3. Green Operations and Green Maintenance Commitment

The owner agrees in the Green O&M Plan to take reasonable steps to select cleaning products and materials that are biodegradable and contain low or no volatile organic compounds, and to employ maintenance practices that use a materially lower use of chemicals thought to be harmful to humans and where practicable, that use more recycling (including construction debris removal).

4. Resident Involvement, Outreach, and Incentive Plan

- a. Involvement and Outreach: The owner agrees to produce a plan, acceptable to OAHP, for involving residents in determining Green improvements and training them on prudent operation of the Green property and the benefits of doing so.
- b. Incentives: The plan also includes resident incentives acceptable to OAHP. Generally, incentives should make improvements in the property that benefit tenants, and should not take the form of direct incentives that may create issues with tenant income certifications. OAHP plans to collect best practices to provide to PAEs and the owner community.

5. Integrated Pest Management Plan

The IPM inspection completed for the GPCA Report initiates the IPM planning process. The PAE reviews that IPM portion of the GPCA report, prepares its



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recommendation, and underwrites the estimated costs of implementation. OAHP expects the owner to generally adhere to these principles:

- a. Periodic exterior inspection: identify and seal pest entry points.
- b. Interior unit inspection: look for evidence of roaches, mice, and other pests, and if evidence is found, identify and seal pest entry points and notify the pest control firm.
- c. IPM principles: incorporate IPM principles into third party pest control firm contract and/or into internal property management practices, as applicable, including:
 - (1)- The problem or pest is identified before taking action.
 - (2)- Vegetation, shrubs and wood mulch should be kept far enough away from structures to avoid attracting termites and to remove cover for rodents looking to enter the building.
 - (3)- Cracks and crevices in walls, floors and pavement are either filled or eliminated.
 - (4)- Garbage cans and dumpsters are cleaned regularly.
 - (5)- Litter is collected and disposed of properly at least once a week.
 - (6)- If fertilizers are used, they should be applied several times (e.g., spring, summer, fall) during the year, rather than one heavy application.
 - (7)- If pesticides are necessary, use spot treatments rather than area-wide applications. In choosing among pesticides likely to be effective: (i) For roaches, prioritize baits, growth regulators, and boric acid as the primary pesticides. Focus on housekeeping issues and on avoiding introducing roaches during move-in; (ii) in general, give priority to the lowest-toxicity pesticide; and (iii) in general, avoid the use of spray applicators and fogging applicators.
 - (8)- Interior water leaks should be fixed as identified by inspectors or property management staff, or as reported by tenants.

6. Monitoring Requirements and Plan Development

- a. Temperature and Humidity Test Protocol: In order to track the effect of the Green improvements on temperature and humidity, OAHP requires the following:
 - (1)- Required Monitoring: Temperature and relative humidity are significant indicators of indoor air quality and for avoiding mold problems. Therefore, the owner will implement a testing program in all units for temperature and relative humidity in a sampling of the units, following the protocol contained in Attachment 11. Also see the instructions at section V.B.2.a.(4) of these guidelines.
 - (2)- Required Accessibility and Cooperation: In addition to temperature and relative humidity, there are other indicators of environmental quality, including volatile organic compounds (VOCs), respirable particulate matter, and other analytes, the study of which are important to the research community. OAHP requires the owner to allow access to the property and to otherwise cooperate with a limited number of



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researchers who are approved by HUD; in considering research proposals, HUD will require reasonable efforts to minimize adverse impacts on the owner, manager, and tenants.

- b. **Energy and Water Usage Monitoring:** The M2M underwriting will not include any additional operating expense or Reserve funds for maintenance of monitoring devices. Monitoring will be required for up to four years following the M2M closing (generally meaning three years following the completion of rehab). Accordingly, the devices should have a warranty of at least four years. Also see the instructions at section V.B.2.a.(4) in these guidelines. In order to track the effect of the Green improvements on utility consumption, OAHP requires monitoring of the utility usage. The PAE generally recommends monitoring consumption at all units, but there are circumstances that dictate a sampling of the units, meters or monitoring at an aggregate level. Such circumstances include:
- (1)- If the cost of utility consumption monitoring each unit does not allow for sufficient funding to make additional Green improvements at the property that would otherwise be recommended. For example, if the underwriter has to choose between installing Energy Star appliances and monitoring each unit, choose the appliances and develop a sampling plan for utilities.
 - (2)- If the expected utility savings are minimal. There is not a rule of thumb available, but OAHP has seen some examples where there were limited opportunities to make Green improvements and therefore, the underwriting contained little expected savings. In such cases, it is reasonable to invest less in the costs of utility consumption monitoring.
 - (3)- If each unit cannot practically be monitored, such as may be the case at a property that uses oil or propane for heating or has a central boiler.
- c. **Reporting to HUD:** OAHP requires that consumption data be reported to HUD. OAHP intends on wireless reporting, in a standard format, and OAHP is considering quarterly reporting.
- d. **Plan Development:** OAHP has outlined an interim plan to develop property-specific solutions, which involves the PAE, owner and/or management agent, PAE's vendor, and OAHP Green Team representatives working together to find a cost-effective plan that achieves OAHP's objectives.
- (1)- **GPCA Contractor Completes the *Utilities Data Sheet* questionnaire (Attachment 18).** This questionnaire is necessary for a utility consumption monitoring vendor to develop a proposal for the subject property. The questionnaire is completed as part of the GPCA (see scope of work in Attachment 3). The PAE should share the completed questionnaire with the owner and management agent and encourage them to confirm the answers.

NOTE: For properties that have already been inspected by the GPCA contractor, the PAE must obtain the questionnaire from the owner or management agent. This is most likely best pursued with



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the owner following the “early look” Green Reality Check and once the owner has seen the benefits of, and has committed to moving forward with, a Green Restructure.

- (2)- PAE Selects Vendor. After the “early look” Green Reality Check and once the PAE and owner have discussed a Green Restructure, the PAE should select its vendor. The PAE provides the completed *Utilities Data Sheet* to the vendor and requests a proposal that will achieve OAHP’s monitoring objectives. The goal is to develop an acceptable monitoring plan for the property and have those costs in the model and documentation that the PAE submits for the Green Reality Check prior to submission of the full plan for OAHP transaction review.
- (3)- PAE Receives Proposal and Requests Monitoring Team Review. When the PAE has received the vendor’s proposal, the PAE forwards it to the m2mgreen@hud.gov mailbox, which is the trigger for OAHP to assemble the monitoring team. OAHP’s representative will notify the team and request the PAE arrange a conference call with the vendor and owner and/or management agent, at which time the PAE and OAHP team are expected to develop a conclusion as to the merits of the vendor’s proposal and/or discuss options. Following that call, the PAE and OAHP team determine next steps, generally either accepting the proposal or asking the vendor for specific modifications. The PAE and OAHP team stay engaged until an acceptable plan has been received and that is the plan the PAE uses in its Green Restructuring Plan. The PAE should describe the Interim Plan in its Green Transmittal Memo and the owner should describe it in the Green O&M Plan.

OAHP will undertake this property-specific approach to utility consumption monitoring plans until such time as its experience warrants a different approach.

7. Green Property Management Certification

- a. Overview: At least one member of the property management staff (either working on site or a direct supervisor of such staff) must complete and maintain a certification in a Green building industry program offered by a nationally recognized organization. Examples include LEED, EarthCraft, Green Advantage, NeighborWorks, and National Affordable Housing Management Association/ National Apartment Association (program in development). OAHP will provide a partial list of resources on its Green website and on the Resource Desk.
- b. Requirement: See Attachment 16 to these guidelines for instructions on initial and ongoing training required on specified topics, delivery methods, allowable property expenses, staff turnover, compliance, approval process, note to accountants, and the Initial Accepted Providers.



D. Incorporating the Owner Incentives

1. Owner Contribution to Green Rehabilitation Costs

The PAE initiates the modeling of the Green Restructure classifying all rehabilitation costs as either Green, generally requiring a 3 percent owner contribution (Level One Green) or 10 percent (Level Two Green) as Significant Additions, or Traditional, requiring a 20 percent owner contribution. The PAE recommends a larger owner contribution toward Green items in the following situations:

- a. Components Cannot be Categorized as Green: Section V.A.1.d of these guidelines provides guidance on when Green Components cannot be categorized as such in the Green Initiative. The PAE generally recommends the standard 20 percent owner contribution for these items.
- b. Owner's Rejection of the Full Green Implementation: OAHP provides some flexibility to the owner in accepting the Green implementation recommended by the PAE. The impact of the owner not accepting the PAE's recommendations is described in section III.B.2 and 3 of these guidelines.

2. Incentive Performance Fee Increase

The owner who closed a Green Restructure and complies with the Green O&M Plan's requirements, can earn an increased IPF that is up to 50 percent greater than the Traditional IPF. The amount of the IPF is up to 4.5% of Effective Gross Income (EGI) with a floor of \$150 per unit and ceiling of \$300 per unit. The PAE recommends a smaller IPF increase if the owner does not accept all the Green R4R items (see section III.B.2. of these guidelines).

E. Completing the Draft Restructuring Plan

1. Market Rents, Exception Rents and Limitations on Green Improvements

For properties in the existing pipeline and that have already been modeled, there are limitations on the Green improvements.

- a. Traditional Restructure at Market Rents: If the Traditional Restructure is feasible using market rents, then the draft Green Restructure must also use market rents. The PAE adjusts the recommended Green improvements to achieve this objective.
- b. Traditional Restructure at Exception Rents: If the Traditional Restructure is feasible using Exception Rents, then the draft Green Restructure may also use Exception Rents. Generally, the draft Green Restructure will not rely on rents more than 10 percent higher than in the Traditional Restructure and cannot require the use of Exception Rents greater than 120% FMR. The PAE adjusts the recommended Green improvements to achieve this objective.
- c. Traditional Restructure at Exception Rents Above 120 Percent FMR: If the Traditional Restructure is feasible and approvable using Exception Rents above 120 percent FMR, then the draft Green Restructure may also use Exception Rents above 120 percent FMR, provided OAHP has the authority and chooses to use it



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to do so. Generally, the draft Green Restructure will not rely on rents more than 10 percent higher than in the Traditional Restructure. The PAE adjusts the recommended Green improvements to achieve this objective.

2. Operating Expenses

- a. Cost Reductions: The PAE includes a conservative estimate of utility savings in the draft Green Restructure.
 - (1)- Property paid utilities - The PAE underwrites 50 percent of the expected savings from Green Components, including any significant items that do not require a supporting payback analysis (see section V.A.1.b. of these guidelines).
 - (2)- Tenant paid utilities - The PAE does not underwrite any projected savings in tenant-paid utilities. Savings realized in tenant paid utilities will be calculated on actual post-rehab utility consumption. Where there are tenant paid utilities, the Restructuring Commitment requires the owner to use the monitored consumption data to more easily fulfill the existing requirement that the owner assure that the tenant utility allowance is accurate. Because energy improvements affecting tenant paid utilities are expected to be completed in the M2M rehab period, the standard commitment for an owner will be to recommend a revised tenant utility allowance to the HUD field office based on monitored consumption data for the twelve month period following completion of the M2M rehab. Using this approach, the data will reflect the M2M improvements.
- b. Cost Increases: The PAE includes a generous estimate of certain Green improvements that may increase operating costs, such as the IPM plan, Green cleaning products and materials, recycling, etc. Generally, this estimate is 150% of the historical costs of those affected line items.

3. Modeling Green Additional Funds Transactions

PAEs model Green Additional Funds transactions (AFTs) consistent with other non-Green AFTs. The outcome is that the AFT will result in no greater costs to HUD and if possible will improve the financial outcome for HUD. PAEs should model AFTs as follows:

- a. Develop the Green Restructure transaction (the Green Baseline).
- b. Lock down the claim amount and the rent amount.
- c. Complete the AFT modeling, in accordance with existing AFT requirements, including:
 - (1)- allow no increase in the claim,
 - (2)- allow no increase in rents,
 - (3)- allow no decrease in NPV of the MRN-CRN payments,
 - (4)- allow no decrease in savings to HUD, and
 - (5)- eliminate or reduce exception rents to the extent possible.



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Within these constraints, OAHP encourages owners to pursue additional Green options in the AFT.

4. Other M2M Program Guidelines and Processes Apply

Unless specifically modified in this Draft Green Guide, the PAE must comply with all other M2M Program policies and procedures.

In all M2M restructures, the PAE is expected to understand current utility rates, recent rate changes, and the potential for future rate changes. This is even more critical in the Green Restructure, in particular in justifying payback analyses and underwriting reduced operating expenses. The Energy Auditor obtains the necessary utility rate information to complete the energy audit portion of the GPCA. The PAE must research utility rate changes, update the utility rate information and update the related analyses when the Green Restructure is presented to OAHP for approval. If necessary due to the passage of time, the PAE must further update utility rate information if closing is delayed.

VI. OAHP Approval Process

A. Up-Front OAHP Review of the PAE's Recommended Green Improvements Prior to Discussion With Owner (Temporary Requirement)

1. Requirement

At the outset of the Green Initiative, PAEs will discuss their recommended Green improvements with OAHP prior to a discussion with the owner. This is intended to refine the guidelines on recommending Green improvements. OAHP will cancel this requirement when it believes the guidelines are sufficiently refined.

2. Procedure

The PAE notifies their OAHP Debt Restructuring Specialist (DRS) when it has a recommended Green improvement plan, both for rehabilitation (including baseline, fixed, and variable items) and over the life of the R4R schedule. The DRS emails the following documentation to m2mgreen@hud.gov: Green Transmittal Memo (see Attachment 14), GPCA, Green Plug-Ins, Payback Analysis and model. The Green Team administrator obtains a Green Reality Check (GRC) from among OAHP's resources, and schedules a meeting/conference call with the PAE, DRS, available OAHP Green Team members, and other Preservation Office staff as required by the Preservation Office Director.

At the meeting/conference call, the PAE presents their recommendations and supporting justification for them. The participants explore their questions and offer comments. Any direction to the PAE comes from the OAHP Deputy Assistant Secretary or a named designee.



B. Obtaining the Green Reality Check Prior to Submission of Green Restructuring Plan (Ongoing Requirement)

1. Requirement

OAHP requires a Green Reality Check (see Attachment 12) to ensure consistent application of these guidelines. Prior to presentation of the Green Restructure to the appropriate OAHP delegated authority for approval, a Green Reality Check is completed, using the existing procedures employed for Section 236 Restructure and Additional Funds reality checks. The Green Reality Check is then provided to the OAHP Green Team for review and approval.

The owner's Green O&M Plan is processed separately from the Green Reality Check. The owner can produce a better Green O&M Plan after the terms of the Green Restructure are approved by OAHP and accepted by the owner. Once the transaction is approved, the owner should diligently pursue completion of its draft Green O&M Plan and submit it to the PAE for review. The draft Green O&M Plan is to be provided to OAHP for its review and approval as soon after transaction approval as is practical, but in any event, thirty days or more before the anticipated closing date.

2. OAHP Green Team Membership

The members of the OAHP Green Team include the OAHP Deputy Assistant Secretary, Associate Deputy Assistant Secretary, Preservation Office directors, staff involved in the development of the M2M Program Green Initiative, and representatives from OAHP's financial advisory team. The OAHP Green Team meeting to review and approve the Green Reality Check is chaired by the OAHP Deputy Assistant Secretary or a named designee, and the Green Team administrator records the team's decisions.

3. Procedure

- a. Step 1, PAE Notifies OAHP of Need for Green Reality Check: When the complete submission is ready for transaction review and approval, the PAE notifies the DRS. The DRS emails the following documents to m2mgreen@hud.gov: Green Transmittal Memo (highlighting changes if previously reviewed by the Green Team), PAE response if there was a prior Green Reality Check, GPCA, Green Plug-Ins, Payback Analysis, and underwriting model.
- b. Step 2, Green Team Administrator Notifies Team: The Green Team administrator obtains a Green Reality Check from among OAHP's resources; then forwards it and the PAE's materials to all the Green Team members and advises them the Green Reality Check will be considered at the next regularly scheduled meeting.
- c. Step 3, Green Team Provides Green Reality Check: The Green Team chair convenes the Green Team meeting with available Green Team members. The PAE is expected to be available for these meetings, at least in the formative stages of the Green Initiative. The Green Team reviews only the Green implementation, not the merits of the restructuring plan, and reviews and approves the Green



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Reality Check subject to review and approval of the Green O&M Plan.

- d. Step 4, Green Team Administrator Notifies PAE: The Green Team administrator emails the approved Green Reality Check to the PAE, with copies to the DRS, Preservation Office Deputy Director, and Preservation Office Director. Upon satisfactorily addressing the findings in the Green Reality Check, the Green Team administrator advises the parties that OAHP can proceed with the full transaction review.
- e. Step 5, PAE Provides Owner's Draft Green O&M Plan: When the PAE has accepted the owner's draft Green O&M Plan, it emails the draft plan as outlined in Step 1.
- f. Step 6, OAHP Representative Completes Review: The assigned OAHP representative obtains a review of the draft Green O&M Plan from among OAHP's resources and schedules a conference call to discuss questions with the OAHP reviewer, owner, management agent, DRS, PAE, Preservation Office director, and HUD Project Manager.
- g. Step 7, Green Team Review: When the assigned OAHP representative is satisfied with the draft Green O&M Plan, or the owner's revisions to it, the Green Team convenes and completes its review (as in Step 3 above).
- h. Step 8, OAHP Representative Notifies PAE: Similar to Step 4 above, the assigned OAHP representative emails the approved review of the owner's draft Green O&M Plan to the PAE, with copies to the DRS, Preservation Office deputy director, and Preservation Office director. Upon satisfactorily addressing the findings in the review, the assigned OAHP representative advises the parties that the Green O&M Plan pre-condition to closing has been satisfied.

C. Obtaining an Update to a Stale Green Reality Check (Ongoing Requirement)

1. Requirement

OAHP requires a Green Reality Check (see Attachment 12) be completed at least 120 days before closing. When the PAE is planning closing and the Green Reality Check will be more than 120 days old on the closing date, the PAE will request an update. In addition, the Preservation Office Director may request an update at any time and may find the comparative table in the Green Addendum to the Full Transaction Review (see Attachment 15) that identifies the significance of changes useful in making that decision.

2. Procedure

The PAE, DRS, Green Team administrator, and Green Team follow the same procedures as detailed in section VI.B.3. of these guidelines.

D. Approving the Green Restructure

OAHP uses the same procedures and delegated authorities for approving Green Restructures as for Traditional Restructures. The OAHP underwriter ensures the



submission includes the Green Reality Check before commencing the review; and ensures the comments in the Green Reality Check have been addressed in the Green Restructure before completing the review.

E. Completing the Utility Consumption Baseline Report

At about the time the Restructuring Commitment is issued, the PAE should engage the GPCA contractor or utility consumption vendor to complete the utility consumption baseline report. See detailed instructions at section IV.C. of these guidelines.

VII. Administrative Matters

A. Establishing PAE Green Processing Incentive Fees

1. Certification Requirement

- a. Requirement: At least one member of the PAE staff must complete and maintain a certification program in the Green building industry offered by a nationally recognized organization. Examples include LEED or equivalent. The PAE will maintain a current Exhibit 3, Key Personnel to the Portfolio Restructuring Agreement to identify the staff having the required certification.
- b. Authorized Staff: The requirement can be met by having one of the PAE's teaming partner's staff members receive the necessary certification.
- c. Cost Reimbursement: OAHP will reimburse the PAE for its out of pocket costs incurred in obtaining one certification up to a maximum of \$1,000.

2. Tenant and Onsite Property Management Consultation

Some Green building publications include the best practice of including tenants and onsite property management staff, and perhaps the PAE and GPCA Contractor, in a meeting with the owner to identify the best Green implementation for the subject property.

The Green Restructure requires all the same tenant interaction and consultation as is required in the Traditional Restructure (e.g., First and Second Tenant meetings). In addition, OAHP highly recommends these meetings be used to ensure that tenants and onsite property management staff are aware of the Green Restructure plan:

- a. **Tenants** – If the Green Restructure is processed following the Second Tenant Meeting (generally applicable to the existing pipeline properties), the PAE should strongly consider conducting another tenant meeting to explain the aspects of the Green Restructure.
- b. **Onsite Property Management** – If the Green Restructure is processed before the Second Tenant Meeting (generally applicable to the new property referrals), the PAE should strongly consider conducting an introductory Green meeting with onsite property management while the PAE is there conducting the First (or if already held, the Second) Tenant Meeting.



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3. Amount, Applicability and Invoicing of the Green Incentive Processing Fee

- a. For projects accepted by the PAE prior to March 1, 2008:
- (1)- The PAE will earn \$4,000 for OAHP's issuance of the Green Reality Check that precedes submission of the Restructuring Plan to OAHP for review. This may include one or two Green Reality Checks depending on whether the "early look" was completed. PAEs can invoice for this fee when invoicing for the plan approval base fee. The PAE uses the Form 2.14A and records the fee on the line item titled "Incentive Fees, Full Debt Restructurings, item i), Use of Outside Financial Resources." A copy of OAHP's e-mail transmitting the results of the Green Reality Check must be attached to the invoice as supporting documentation along with all other required documentation.
 - (2)- The PAE will earn \$2,000 if OAHP executes a Restructuring Commitment (RC) for a project that qualifies as a Green Restructure, either Level One or Two. This incentive fee can be invoiced upon OAHP's execution of the Green RC. The PAE uses the Form 2.14A and records the fee on the line item titled "Incentive Fees, Full Debt Restructurings, item i), Use of Outside Financial Resources." A copy of the first page and the signature page of the Green RC must be attached to the invoice as supporting documentation along with all other required documentation.
- b. For projects accepted by the PAE on March 1, 2008 or after:
- (1)- The PAE will earn \$3,500 for OAHP's issuance of the Green Reality Check that precedes submission of the Restructuring Plan to OAHP for review. This may include one or two Green Reality Checks depending on whether the "early look" was completed. PAEs can invoice for this fee when invoicing for the plan approval base fee. The PAE uses the Form 2.14A and records the fee on the line item titled "Incentive Fees, Full Debt Restructurings, item i), Use of Outside Financial Resources." A copy of OAHP's e-mail transmitting the results of the Green Reality Check must be attached to the invoice as supporting documentation along with all other required documentation.
 - (2)- The PAE will earn \$1,500 if OAHP executes a Restructuring Commitment (RC) for a project that qualifies as a Green Restructure, either Level One or Two. This incentive fee can be invoiced upon OAHP's execution of the Green RC. The PAE uses the Form 2.14A and records the fee on the line item titled "Incentive Fees, Full Debt Restructurings, item i), Use of Outside Financial Resources." A copy of the first page and the signature page of the Green RC, as well as the first page of Exhibit H, Owner's Green Commitments, must be attached to the invoice as supporting documentation along with all other required documentation.
- c. For all projects, regardless of the PAE acceptance date, the PAE will earn a \$1,500 Green Closing Incentive Fee upon closing a Green Restructure, either



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Level One or Two. This fee includes all processing necessary to close the transaction including any required submissions for updated Green Reality Checks. The PAE uses the Form 2.14A and records the fee on the line item titled “Incentive Fees, Full Debt Restructurings, item i), Use of Outside Financial Resources.”

4. Other Incentive Fees

The incentive processing fee for an OAHP-approved Green Restructure is in addition to other incentive fees the PAE is entitled to in the Portfolio Restructuring Agreement.

B. Impacting Existing PAE Incentive Fees (PRA: Section 10.3 and Exhibit 5)

OAHP generally expects that the existing Portfolio Restructuring Agreement (PRA) timeframes are appropriate for processing Green Restructures. Since the first few transactions may require more time, OAHP will entertain time waivers using the existing procedures.

In order to be eligible for any of the existing PAE incentive fees (due diligence completion, OAHP execution of the Restructuring Commitment, and closing), the PAE must meet all the requirements as defined in Article 1, Definitions, of the PRA. If the PAE can demonstrate that a delay that resulted in a missed incentive fee was caused solely by the Green Initiative requirements, OAHP will entertain a waiver. OAHP does not expect that waiver requests would continue to be made after the PAE completes its first few transactions and the Initiative matures.

Attachments (see separate files)

The most recent version of each of the attachments can be found on the OAHP Resource Desk.

1- Initial Screen Instructions

See file: GI Draft Green Guide Att 1 Initial Screen v?.doc

Optional Green Screen spreadsheet tool also available (GI Draft Green Guide Green Screen v?.xls)

2- Green Initiative Overview Letter

See file: GI Draft Green Guide Att 2 Owner Letter v?.doc

3- GPCA Scope of Work and Inspector Qualifications

(and Exhibits 1-IPM Inspection Report, 2-Effective IPM Checklist and 3-Using Glue Traps)

See file: GI Draft Green Guide Att 3 PCA v?.doc

See file: GI Draft Green Guide Att 3 Ex 1 IPM Insp v?.doc

See file: GI Draft Green Guide Att 3 Ex 2 IPM Cklist v?.doc

See file: GI Draft Green Guide Att 3 Ex 3 Using Glue Traps v?.doc

4-A Green Rehab Plug-In

4-B Green R4R Plug-In

See file: GI Draft Green Guide Att 4A-B Green Plug Ins v?.doc



5-A: Payback Analysis Tool

5-B: Early Replacements Analysis Tool

See file: GI Draft Green Guide Att 5A-B Payback Analysis v?.xls

Optional Utility Impact Analysis tool also available (Green – Utility Impact Analysis Tool v?.xls)

6- GPCA Addendum

See file: GI Draft Green Guide Att 6 PCA Addendum Blank v?.xls

See file: GI Draft Green Guide Att 6 PCA Addendum Sample v?.xls

7- Green Rehabilitation Deposit Escrow Agreement

See file: GI Draft Green Guide Att 7 REDA v?.doc

8- Green Advisory Guidance

See file: GI Draft Green Guide Att 8 F-V Advisory v?.doc

9- Combined Heat & Power Checklist

See file: GI Draft Green Guide Att 9 CHP Checklist v?.doc

10- Owner's Green Commitments

See file: GI Draft Green Guide Att 10 Green Commit v?.doc

11- Indoor Environmental Quality Test Protocol

See file: GI Draft Green Guide Att 11 IEQ v?.xls

12- Green Reality Check

See file: GI Draft Green Guide Att 12 Green Reality v?.doc

13- Utility Consumption Baseline Scope of Work

(and Exhibit 1, Utility Baseline Data Collection)

See file: GI Draft Green Guide Att 13 Util Base SOW v?.doc

See file: GI Draft Green Guide Att 13 Ex 1 Util Datafile v?.xls

14- Green Transmittal Memo

See file: GI Draft Green Guide Att 14 Green Trans Memo v?.doc

15- Green Addendum to the Full Transaction Review

See file: GI Draft Green Guide Att 15 FTR Green v?.doc

16- Green Property Management Certification

See file: GI Draft Green Guide Att 16 Green PM Cert v?.doc

17- Green Operating & Maintenance Plan Template

See file: GI Draft Green Guide Att 17 GO-M Plan Template v?.doc



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18- Utilities Data Sheet

See file: GI Draft Green Guide Att 18 Utilities Data Sheet v?.doc

Attachment 1: Initial Screen Instructions

Overview

Unless the owner indicates unwillingness to consider a Green restructure¹, PAEs will perform the Initial Screen for each existing pipeline transactions for which:

- A PCA has already been modeled; and
- OAHP has not yet executed a Restructuring Commitment.

The purpose of the Initial Screen is to evaluate the likelihood that Greening the transaction could cause any of the following adverse results:

- A. Causing a market rent restructure to convert to an exception rent restructure; or
- B. Causing an exception rent restructure (below 120% of FMRs) to require exception rents above 120% of FMRs; or
- C. Causing an exception rent restructure to require a rent increase exceeding 10%.

If the Initial Screen indicates that one of these results may occur, OAHP may decide not to investigate a Green transaction; alternatively, OAHP may decide to investigate a Green transaction, but may impose conditions (such as not incurring exception rents, or limiting the increase in exception rents).

The Initial Screen makes a specific set of changes to the existing (“baseline”) UW Model as described below.

Procedure

1. **Preparation.** Start with the current UW model for the transaction.
 - a. Make a note of the following items from the baseline model:
 - i. 20 year R4R ending balance per unit [Reserves 20 Year page, cell D30].
 - ii. Cushion (2nd Loan Pro Forma page, cell K135).
 - b. Save the UW model under a new name.
2. **Add 10% Green Premium to 20 Year R4R Costs.** [PCA 20 Year Needs Schedule page]
 - a. Make sure row 49 is blank.²
 - b. In B49, enter “Green Premium”.
 - c. In column E49 (year one), enter =SUM(E10:E48)*10%.
 - d. Copy the formula from E49 into F49:X49 (years 2-20).
3. **IDRR Up 10%.** [Reserves 20 Year Schedule page] Increase the amount in cell I9 (IDRR) by 10%.
4. **Adjust R4R Deposit.** [Reserves 20 Year page] In this step, you will adjust the R4R deposit to arrive at an ending 20 year R4R balance that is 110% of the baseline amount.

¹ For example, the owner may have a timing deadline, or it may not be possible to extend the HAP, and the owner is not willing to continue Green exploration at market rents.

² If not blank, combine two or more line items / rows above so that the “pre-Green” total is unchanged.

- a. Calculate 110% of the baseline 20 year ending balance per unit (see 1.a.i above).
 - b. Adjust the R4R deposit (I10), using \$100 increments, until the 20 year ending balance per unit (D30) is at least 110% of the baseline amount.
5. **Green Half of the Baseline Rehab.** [Rehab Escrow Needs page] In this step, you will convert 50% of the baseline rehab items to Green Significant Additions.
- a. Make sure rows 30, 35 and 36 are blank.³
 - b. In B30, enter “Transfer to Green SAs”.
 - c. In E30, enter = (-50%)*sum(E7:E29).
 - d. In B35, enter “Green SAs from Baseline Incl. Premium”
 - e. In E35, enter = (-1)*E30
6. **Add 10% Green Premium to Green Significant Additions.** [Rehab Escrow Needs page]
- a. Verify the Owner Contributions (I20 and I21); normally will be 3% and 20%
 - b. In E35, change (-1) to (-110%).
 - c. The formula in E35 will now read =(-110%)*E30
7. **Increase Green Significant Additions by \$2500 per Unit.**
- a. In B36, enter “Additional Green SAs”
 - b. In E36, enter = 2500 * StartInputPage!K9
8. **Re-Compute the CRP.** [Equity Return page] Hard-enter the amount from D13 in D14 (PAE selected CRP for Year One) to reduce the CRP as appropriate. This may require several iterations (that is, D13 may change in response to your change to D14)
- a. Note – if the owner must contribute 40% toward payables with no CRP, take that into account when computing the new CRP.
 - b. Note – if this is an additional funds transaction with LIHTCs, the baseline CRP will be zero, and the CRP should remain as zero.
9. **Increase IPF by 50%.** [Equity Return page] For example, if the baseline IPF is 2.60%, the revised IPF will be 3.90%.
- a. In F23 (PAE selected IPF percentage), enter =F21*150%.
 - b. Note – this will trigger red flags in G21 and K24. Ignore these red flags.
 - c. Verify that Calculated IPF (row 27) and PAE Determined IPF (row 28) are the same.
10. **Determine Whether the Market Rent Baseline Has Converted to Exception Rents.** If the baseline transaction is a market rent restructure (GPR Compare H18 is not ‘5’), and the sources and uses are now out of balance (red flag in DS&L I20 / S&U C30), then follow these steps:
- a. Write down the out of balance amount; this is the gap that would need to be filled with additional funds, in order to avoid exception rents.
 - b. [GPR Compare page] Set H18 to 5, using the drop down menu.
 - c. [GPR Compare page] If H21 is 6 (User Defined Scenario), make sure the User Defined gross potential (N30 and N31) match the Exception Rent gross potential (L30 and L31).
 - d. [DS&L Page] Press the radio button at the top left titled ‘Restore New 1st Default Calculation’

³ If not blank, combine two or more line items / rows above so that the “pre-Green” total is unchanged.

- e. Follow the instructions in step 12 “Exception Rent Restructure Only: Match Baseline Cushion”
11. **Market Rent Restructure Only: Match Baseline Cushion.** If the Greened transaction is a market rent restructure, follow these steps to achieve a cushion that at least matches the baseline:
 - a. Note the baseline cushion (see step 1.a.ii).
 - b. [2nd Loan Pro Forma page] Note the current cushion (in the italicized text starting at D128, and in K135).
 - c. [DS&L page] Adjust the DSCR in cell F19, in increments of 0.01 (without going below 1.20), until the cushion at least matches the baseline. If the cushion is low, increase the DSCR; if the cushion is high, decrease the DSCR.
 12. **Exception Rent Restructure Only: Match Baseline Cushion.** If the Greened transaction is an exception rent restructure, follow these steps to achieve a cushion that at least matches the baseline:
 - a. [Exception Rent page] Set C19 to zero. Notice the amount by which sources and uses are out of balance.
 - b. Set C19 to the out of balance amount, rounded up to the nearest \$100. If the out of balance red flag continues to appear, adjust upward in \$100 increments until the red flag disappears.
 - c. Adjust D49 (PAE's conclusion for exception rents) in \$100 increments until both of the following occur:
 - i. There is no red flag in G51 indicating DSCR below 1.20
 - ii. The cushion (message starting in G50) at least matches the baseline.
 13. **Re-Size the MRN Interest Rate.** [DS&L page] Assume AFR is 5.00%.
 - a. Adjust F38 in accordance with M2M policy (minimum 1.00%, maximum 5.00%, start at 1%, increase in 0.50% increments, do not increase if doing so will cause M39 to exceed 80%).
 - b. Note – if this is an additional funds transaction with 9% LIHTCs and an ad hoc model change to allow compound interest at the AFR, do not adjust the MRN interest rate.
 14. **Verify that IPF is Covered.** [2nd Loan Pro Forma page] Make sure the first year IPF (D60) is the same as Equity Return D28. If not, increase the cushion as discussed above (increase DSCR for market rent restructures, increase exception rents for exception rent restructures) until the IPF is at least covered.
 15. **Record the Results.**
 - a. Save the baseline and Green models in case they are needed for future review.
 - b. Record the following, for both baseline and Green:
 - i. PPC as % of UPB.
 - ii. Whether exception rents were required.
 1. If so, record the sources and uses out-of-balance amount at market rents (see 10a above).
 - iii. If exception rents were required in either scenario
 1. Exception rents as a % of FMR
 2. Exception rents as a % of market.
 - iv. Savings per unit.
 - c. Share the results with your DRS.

Next Steps

If the Initial Screen results in one of the three adverse outcomes noted in the Overview section (see below), the DRS sends the results to the Preservation Office Director and Green Team Administrator (Carolyn Carpenter Porritt). The Green Team will be engaged and it will make a determination as to whether a Green Restructure can be justified. The PAE cannot pursue a Green Restructure in such instances without approval from the Green Team.

Otherwise, the PAE can provide the Green Initiative Overview Letter to the owner, and upon the owner's agreement to explore a Green Restructure, the PAE can order the Green PCA.

Attachment 2: Green Initiative Overview Letter

Dear Owner:

The purpose of this letter is to introduce to you the Mark-to-Market (M2M) Green Initiative offered by the Department of Housing and Urban Development's Office of Assisted Housing Preservation (OAHP). OAHP has developed this option for owners in response to the need to address increasing energy costs and to identify environmentally and health conscious alternatives in the housing market. Across the country we see Green building principles supported by foundations, cities, non-profits and pioneering entrepreneurs. Participation in the Green Initiative is voluntary and, depending on levels of rent required in the M2M program, may not be appropriate for all M2M properties.

The Green Initiative offers incentives not available in the traditional Mark-to-Market program while imposing additional requirements. Since the impact of the Green requirements and incentives on any transaction are property specific, OAHP cannot predict the exact effects of the Green analysis and requirements on any particular property. Set forth below is an overview of the Green Initiative.

Overview:

The Green Initiative offers owners two significant incentives:

1. A reduced contribution to rehabilitation costs, from 20% down to as low as 3%, and
2. An increased Incentive Performance Fee, as much as 50% greater than is available in a traditional M2M restructure.

In exchange, the Green Initiative has four primary requirements:

1. Use Green approaches for the required rehabilitation at the property; acceptance of 75% or more of the dollar amount of recommendations by the Participating Administrative Entity (PAE) for the property ensures lowest owner contribution,
2. Undertake additional Green rehabilitation at the property (see attached list of Fixed and Alternate rehabilitation items),
3. Use Green approaches for the Reserve for Replacements schedule at the property; acceptance of 75% or more of the dollar amount of recommendations suitable for the property ensures largest Incentive Performance Fee, and
4. Develop and comply with a Green Operating and Maintenance Plan for the life of the M2M Use Agreement.

The requirements and incentives are discussed more fully below.

Requirements:

Enhanced Rehabilitation Requirements

The traditional restructure includes a physical condition assessment (PCA) that establishes immediate rehabilitation needs and estimates funding needs for the ongoing Reserve for Replacement (R4R). The Green Initiative restructure will include both a traditional assessment, and a Green version which will set out a Green approach to rehabilitation and an Energy Audit. The Energy Audit may result in recommendations for additional physical changes necessary to conform to GI initiative principles. The analysis will consider modifying the R4R to provide for Green replacements, as appropriate.

Enhanced Operational Requirements

Owners will have to agree to a Green Operating and Maintenance Plan that includes a Resident Involvement, Outreach and Incentive Plan, an Integrated Pest Management Plan (a plan to reduce the use of pesticides), an ongoing requirement for Green Reserve for Replacement usage, and use of Green products and materials in routine maintenance. In addition, owners will have to implement, for a sample of units, an ongoing testing program for air temperature and relative humidity. For research purposes, owners will agree to allow access to the property by researchers authorized by the Department to test other indicators of air quality such as volatile organic compounds, particulate matter and other analytes. Finally, owners will be required to monitor energy and water use as compared to a pre-restructure baseline and periodically report the data.

Incentives:

Potential Incentives Related to Rehabilitation

OAHP considers Green improvements to qualify as “Significant Additions”, unless existing properties are already required to upgrade by local code. As such, the contribution by owners toward certain costs will be reduced below the typical 20% requirement for non-Green approaches in traditional restructures. This may result in a 3% owner contribution for Green items, if the owner accepts a threshold of 75 % or more of the dollar amount of Green recommendations suitable for the property and if the transaction is approvable at resulting rents. If the owner accepts more than 50% of the dollar amount of recommendations but less than 75% of changes, the required owner contribution toward Green items may be reduced to 10% for Green items.

Potential Incentives Related to Operation

Because owners and managers are being asked to undertake a larger role in operating a Green M2M property, OAHP is authorizing up to a 50% increase in the Incentive Performance Fee (IPF) for owners. (NOTE: Owners may choose to pay a portion of this contingent performance based fee to the management agent). The maximum IPF for Green restructures is 4.5% of Effective Gross Income (EGI) with a floor of \$150 per unit and a ceiling of \$300 per unit. The maximum IPF requires acceptance of 75% or more of

the PAE recommendations for Green R4R alternatives. As with the owner contribution, an IPF higher than the traditional level, but lower than this maximum may be authorized if more than 50% but less than 75% of the dollar amount of Green R4R recommendations suitable for the property are accepted by the owner. To qualify for the increased IPF, in addition to traditional M2M requirements, owners must also: 1) have at least one member of the property management staff who has completed a recognized Green building industry certification program, and 2) operate the property in accordance with the Green Operating and Maintenance Plan for the life of the M2M Use Agreement.

Further Considerations:

We understand that applying the Green Initiative to transactions in process may delay completion, and that some owners will not participate because of urgent time considerations. Similarly, OAHP may choose not to offer the Green Initiative to owners who have not cooperated to date and have thereby delayed the traditional restructure. Further, some properties may not qualify for the Green Initiative at the end of the analysis because, for that property, the changes required for the Green Initiative result in increased rents in relation to market rents that may not be acceptable to OAHP. That being said, since the major burden and the costs of the analysis rest with OAHP and not on the owner, we hope and expect that this Green Initiative will encourage and enable M2M owners to participate in the program.

Sincerely,

Theodore K. Toon
Deputy Assistant Secretary
Office of Affordable Housing Preservation

Attachment 3: Green Physical Condition Assessment Statement of Work and Contractor Qualifications

Overview:

The Green Physical Condition Assessment (GPCA) report has three parts:

Part 1: PCA Report Comparing Traditional and Green Requirements – It is the traditional PCA that identifies repairs necessary in the first year following restructuring and the repairs and replacements during the next 20 years; it only offers “traditional” and “green” components that meet local building code and it clearly identifies if “green” components exceed local building code requirements; it estimates costs using both “traditional” and “green” principles; and it provides comments on the benefits (financial and otherwise) of the green alternative.

Part 2: Energy Audit – It documents prudent energy-related improvements to the property, the cost of the improvements, and a simple financial payback analysis. It also provides information on the utilities serving the property through completion of a questionnaire in a form provided by HUD.

Part 3: Integrated Pest Management Plan Inspection – The inspection may reveal the need for additional repairs and/or site changes that are to be included in the first year rehabilitation needs. It includes an evaluation of existing pest control practices and procedures. It is also required for development of the IPM Plan, a required component of the Green Operating & Maintenance Plan, which is required in the Green Initiative.

The GPCA Contractor may complete any of the components for which it has the necessary qualifications; otherwise, the contractor may subcontract to others who have the necessary qualifications.

PART 1. GPCA REPORT COMPARING TRADITIONAL AND GREEN REQUIREMENTS

1. Qualifications: The contractor must

- A. Be trained to evaluate building systems, health, and safety conditions, and physical and structural conditions, and to provide cost estimates for maintaining, rehabilitating, or improving deficiencies, using both traditional and Green principles. Must also have environmental expertise, as inspection will include environmental issues as well. Must have any required licenses.

- B. Have the designation of Leadership in Energy and Environmental Design Accredited Professional (LEED AP), in either the United States Green Building Council's LEED New Construction and Major Renovation or the LEED Existing Building Maintenance and Operations examination tracks, or an equivalent designation.
- C. Complete 10-hours of education annually, beginning in calendar year 2008, in the areas Green Building, Sustainability, Energy Efficiency, or Indoor Air Quality.
- D. Have acceptably completed written evaluation reports for similar types of multifamily rental housing projects in similar physical condition and age in the subject market or in similar areas, preferably including two (2) or more buildings that were receiving Section 8 or some other type of housing assistance when the report was prepared.
- E. Not be under suspension or debarment by HUD, or involved as a defendant in criminal or civil action with HUD.
- F. Produce reports that are well regarded in the marketplace in terms of content, timeliness and responsiveness. The contractor should have this personal experience, not just the company.
- G. Have the capacity to complete the project inspection and prepare the report in a time frame acceptable to the Participating Administrative Entity (PAE).

2. Statement of Work: The contractor shall

- A. Perform a Physical Condition Assessment (PCA) for each asset specified by the PAE and report the findings.
 - (i) The report shall be prepared according to the Fannie Mae document: "Physical Needs Assessment Guidance to the Property Evaluator" (Attachment A), except as modified herein.
 - (ii) The report shall include color photographs and a detailed narrative describing the property's exterior and interior physical elements and condition, including architectural and structural components, and mechanical systems.
 - (iii) The Inspector will consult HUD Asset Management, Real Estate Assessment Center (REAC) and mortgagee (if available) files.
 - (iv) The Contractor shall conduct site inspections of a minimum of 25% of all units. Units shall be randomly sampled while taking into consideration occupied and unoccupied units and the unit size mix, i.e. one bedrooms, two-bedrooms, etc. If a significant number of units are found to be in poor condition, the PAE may require that additional units be inspected. The Contractor may also determine that additional units and/or common areas require inspection to fully achieve the objective of considering green building principles, and if so, must coordinate the parameters of the inspection with the PAE.

- (v) The report shall include:
- a. **Critical items:** Identify in detail, and report immediately to property management and the PAE, any repair item(s) that represents an immediate threat to health and safety.
 - b. **Repair/Rehab items (Short Term Physical Needs):** Identify and estimate the cost of the repairs, replacements, and significant deferred and other maintenance items that will need to be addressed within 12 months of closing (do not include items that are not broken but may need replacement in the near future).
 - c. **Market Comparable Improvements:** After discussion with the PAE and the PAE's appraiser, the inspector may include repairs or improvements that are necessary for marketability in the list of Repair/Rehab needs. The repairs/improvements identified should be those necessary for the project to retain its original market position as an affordable project in a decent, safe and sanitary condition (recognizing any evolution of standards appropriate for such a project). The project should be able to compete in the non-subsidized market on the basis of rents rather than amenities. Where a range of options exists, the least costly options for repair or rehabilitation should be chosen, when both capital and operating costs are taken into consideration.
 - d. **Long-term Physical Needs/Reserve Items:** Identify and provide an estimate of the major maintenance and replacement items that are required to maintain the project's physical integrity over the next **twenty (20) years**. (Note that the *Fannie Mae Guidance to the Property Evaluator* only requires an 18-year assessment maximum).
 - e. **Environmental Concerns:** The report shall provide a description of directly observed potential on-site environmental hazards and include a completed Environmental Restrictions Checklist (Form 4.4).
 - f. **Green Building Principles:** An objective of the report is to identify all opportunities to improve energy efficiency, maximize water efficiency, use re-used and recycled materials where practical, safeguard the indoor environmental quality of the property, and remove/ re-use replaced materials and construction debris appropriately. The items identified in the Green PCA Addendum should be specifically considered, but the Contractor is required to look beyond those items and identify any other opportunities to achieve the stated objective. **The Contractor is expected to consider the most promising types of improvements being used generally in applicable green buildings, to identify all alternatives considered, to provide a justification for the green alternative recommended and a brief explanation of why the non-selected alternatives are less appropriate for the subject property.** As noted in the Green PCA Addendum, each line item must identify the:

- (1) costs of the traditional repair/replacement to meet local building code and the alternative using green building principles, without consideration for the \$10,000 threshold identified in paragraph 1.g below;
 - (2) cost difference between the traditional and green approaches, expressed in both dollars and as a percentage;
 - (3) category of expected benefits, i.e., Energy, Water, Health, Environment;
 - (4) expected benefits of the green alternative, both financial and non-financial; and
 - (5) (for the HVAC system, roof, windows, appliances, and hot water heaters only) whether the recommended Green improvement is required by the local building code for new construction, and if so, whether it meets or exceeds it (NOTE: OAHF classifies improvements as “green” only when they exceed local building code for new construction or there is financial justification to make early replacements).
- (vi) The report shall identify any physical deficiencies as a result of:
- a. a visual survey;
 - b. a review of any pertinent documentation; and
 - c. interviews with the property owner, management staff, tenants, interested local community groups and government officials, to the extent possible.
- (vii) The report shall provide a cost-benefit analysis of any individual repair or improvement costing more than \$10,000 per work item that represents an upgrade to current elements or that could be considered to reduce the operating expenses. (For example, individual utility metering, extra insulation, thermopane windows, water savers on showers and toilets, automatic setback thermostats, and durable siding.) Compare the cost of the item with the long-term impact on rent and expenses, taking into account the remaining useful life of building systems, as needed. The Contractor should coordinate with the underwriter and appraiser on this analysis, as needed. (Note: This analysis does not apply to items proposed to address accessibility issues, discussed below.)
- (viii) The report shall explain how the project will meet the requirements for accessibility to persons with disabilities, to the extent applicable. (See Attachment B, Accessibility Law Compliance Chart, for specific guidance.) Paragraph 2-40 of HUD Handbook 4350.3 (change 24 issued 1-19-93) requires owners to develop a transition plan that identifies physical obstacles that limit accessibility and describes methods to make the project accessible. The contractor shall include items in the transition plan in the list of repairs.

- (ix) If requested by the PAE, the contractor shall take part in discussions with the owner, tenants, or other interested parties, including neighborhood associations, members of local government, and representatives from the public housing authority, including attendance at a meeting to solicit oral and written comments to be incorporated into the GPCA. The contractor shall assist the PAE in evaluating and responding to tenant and local community comments concerning the physical condition of the project and recommended repairs.
- (x) The contractor shall act as an independent third-party on behalf of the PAE to review the completeness and accuracy of any GPCA submitted by the owner.
- (xi) The contractor shall provide the PAE with weekly status reports (upon request) during the preparation phase to track and monitor the progress.

B. The GPCA report should also include the following subcomponents:

- (i) Acknowledgements (who prepared report, the preparer's qualifications or a certification that the preparer meets the qualifications required in Part 1.1, when report was prepared, who received report, and when report was reviewed).
- (ii) Appendices (color photographs, site plans, maps, etc.).

C. In addition, the contractor shall:

- (i) Recommend any additional professional reports needed, for example, to determine the presence or degree of structural defects, or to complete additional investigation into an environmental issue. The PAE will be responsible for obtaining such reports.
- (ii) If the services of a subcontractor were secured to inspect the property and complete the report, the contractor shall review the inspection for quality, consistency, and agreed upon format and conformance with these requirements.
- (iii) If requested by the PAE, attend a formal kick-off meeting to clarify the requirements and scope of the work to be performed.

3. Deliverables

- A. A draft report shall be submitted to the PAE for review prior to completion of the final report.
- B. The final report shall be completed in the number of originals and copies requested by the PAE or its designee.

PART 2. ENERGY AUDIT

1. Qualifications: The contractor must:

- A. Be certified to complete building energy audits by RESNET or BPI (or their training providers), or be a Certified Energy Manager (CEM), or be a State equivalent certified energy auditor, or be a professional architect, or be a registered professional engineer, or be a RESNET certified Home Energy Rater or BPI Certified Building Analyst.
- B. Agree to pursue the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) sustainability certification program, within 12 months of it being available.
- C. Not be under suspension or debarment by HUD, or involved as a defendant in criminal or civil action with HUD.
- D. Produce reports that are well regarded in the marketplace in terms of content, timeliness and responsiveness. The contractor should have this personal experience, not just the company.
- E. Have the capacity to complete the project inspection and prepare the report in a time frame acceptable to the Participating Administrative Entity (PAE).

2. Statement of Work

- A. An energy audit identifies how energy is used in a facility.
 - (i) Data is collected on energy use and costs and a physical inspection of the property and energy-related equipment is performed.
 - (ii) The physical inspection reviews equipment and space conditions, past maintenance schedules, remaining useful life, and system performance, along with building envelope characteristics and conditions.
 - (iii) Physical inspection may also consider indicators of performance issues such as leaking or foiled heat exchangers, high humidity, poor space temperature control, and comfort concerns.
- B. An energy audit analyzes utility costs of the existing property. Utility data is trended and benchmarked against similar properties with like heating and cooling requirements, and used to provide estimates of energy savings that may be gained by implementing cost effective conservation measures.
- C. An energy audit provides a prioritized list of recommended cost-effective energy efficiency improvements to reduce energy costs.
 - (i) Cost-effective energy efficiency improvements are energy measures whose estimated energy savings exceed the installed cost of the energy measure over the measure's useful life.

- (ii) Recommendations are based on engineering and economic analysis and consider factors such as operating hours, equipment efficiency, and building and occupant energy demand characteristics.
 - (iii) Costs are generally developed through industry norms or available historical project information.
- D. Unless prevented by physical obstructions, insulation in attics, walls, flooring and heating and cooling ducts should, at a minimum, be upgraded to current building code.
- E. In addition, the energy audit includes a recommendation on whether additional insulation, or caulking and sealing, is a cost-justified expenditure.
- F. An energy audit report includes the following:
 - (i) Current energy usage and costs (kilowatt-hour, therms, utility cost).
 - (ii) Description of metering of utilities, including number of meters for each source.
 - (iii) Evidence that the Contractor used the Air Conditioning Contractors of America (ACCA) Manual J guide or another recognized methodology to size the recommended heating and cooling systems. The sizing shall consider other energy-related improvements being made to the property, including additional insulation, energy-efficient windows, etc. The PAE may request the Contractor prepare several calculations based on possible improvements or may contact the Contractor subsequent to the completion of the initial calculation and ask for a revision based on a specific set of improvements.

Exception: There is one exception to the requirement to complete a calculation to appropriately size the heating and cooling systems; that being when the existing units are already the smallest available and there are no known property management or tenant complaints indicating that the existing systems may be inadequate. To justify this exception, the Contractor must inquire of the site property management and of any tenants encountered during the inspection of units, and not receive comments that would cause the Contractor to question the adequacy of the existing systems.

- (iv) Evidence that the contractor inspected the ductwork for leakage and recommended and priced appropriate repairs. OAHF's objective is to identify energy-saving opportunities and is relying on the contractor's professional judgment as to the extent of inspection, testing, cleaning and repair that is warranted for the specific property. Given the property age, OAHF assumes the ducts leak. If the ducts are accessible, the contractor is to conduct a visual inspection and make recommendations for repair of any loose/ broken connections or other leaks. If the ducts are not accessible, the contractor is to provide an opinion on the likely cost-benefit analysis of repairing the ducts and the approach recommended to do so (including use of an aerosol-based product).

- (v) Completed Utilities Data Sheet questionnaire, in the form of Exhibit 4 to this Attachment 3.
 - (vi) Prioritized list of recommended energy efficiency improvements. At a minimum, in evaluating recommended improvements, the contractor evaluates and comments on:
 - a. Wall, ceiling and basement (if applicable) insulation
 - b. Exterior doors – weather stripping, insulation characteristics
 - c. Windows – weather-stripping, caulking, air conditioning sleeves
 - d. HVAC – age, size and rated efficiency of units, age and type of thermostat
 - e. DHW – age, size and rated efficiency of units, insulation, temperature setting and set-backs
 - f. Water – flow rate of shower and faucets, hot water temp at tap, hot water pipe insulation
 - g. Ventilation – kitchen and bath ventilation (inside or outside)
 - h. Apartment lighting, over-lighted conditions, conversion to CFL fixtures
 - i. Lobby, common area, corridor – exterior doors (see above), lighting (sufficiency/excess, conversion to CFL fixtures, LED exit light and automatic control potential)
 - j. Exterior lighting (including parking area)- number, type, illumination levels and efficiency, conversion potential, automatic controls
 - k. Central Plant Boilers/Hot water - efficiency, age, potential for combined heat and power (CHP), set backs
 - l. Laundry Area – leased or owned, number and type of appliances, age, efficiency rating
 - m. Other commercial or office space – same evaluation as other space
 - n. Possibility of cost effective change in fuel/ heating system type
 - o. Evaluation of rate options, if any, with the utility companies for different site uses, e.g., residential/commercial rates, peak load management rates.
 - (vii) Installed cost estimates for recommended energy efficiency measures.
 - (viii) Expected useful life of recommended energy measures.
 - (ix) Annual energy saving estimates (consumption and cost reductions).
 - (x) Simple payback period in years for each recommended measures.
 - (xi) Potential savings in water consumption expenses that are associated with energy improvements.
- G. If requested by the PAE, the contractor shall take part in discussions with the owner, tenants, or other interested parties, including neighborhood associations, members of local government, and representatives from the public housing authority, including attendance at a meeting to solicit oral and written comments to be incorporated into the GPCA. The contractor shall assist the PAE in evaluating and responding to tenant and

local community comments concerning the physical condition of the project and recommended repairs.

- H. The contractor shall act as an independent third-party on behalf of the PAE to review the completeness and accuracy of any GPCA submitted by the owner.
- I. The contractor shall provide the PAE with weekly status reports (upon request) during the preparation phase to track and monitor the progress.
- J. The GPCA report should also include acknowledgments (who prepared report, the preparer's qualifications or a certification that the preparer meets the qualifications required in Part 2.1, when report was prepared, who received report and when report was reviewed).
- K. In addition to the above, the contractor shall:
 - (i) Recommend any additional professional reports needed (including, for example air infiltration tests for energy loss and ventilation needs, blower door tests, duct blasting, etc.). The PAE will be responsible for obtaining such reports.
 - (ii) If the services of a subcontractor were secured to perform the GPCA, the Contractor shall review the inspection for quality, consistency and agreed upon format and conformance with the report requirements.
 - (iii) If requested by the PAE, attend a formal kick-off meeting to clarify the requirements and scope of the work to be performed.

3. Deliverables

- A. A draft report shall be submitted to the PAE for review prior to completion of the final report.
- B. The final report shall be completed in the number of originals and copies requested by the PAE or its designee.

PART 3. INTEGRATED PEST MANAGEMENT INSPECTION

1. Qualifications: A contractor must

- A. Be certified by QualityPro (or the preferred QualityPro Green), GreenShield, or EcoWise.
- B. Be trained to evaluate and treat the interior and exterior of multifamily structures for pest infestations, in accordance with Integrated Pest Management standards.
- C. Have the work performed by an individual who is licensed or certified by the state for residential pest control or be QualityPro certified and who has produced reports of this

nature that are well regarded in the marketplace in terms of content, timeliness and responsiveness.

- D. Not be under suspension or debarment by HUD, or involved as a defendant in criminal or civil action with HUD.
- E. Have the capacity to complete the project inspection and prepare the report in a time frame acceptable to the Participating Administrative Entity (PAE).

2. Statement of Work: A contractor shall

- A. Perform an Integrated Pest Management Inspection (IPMI), provide the property manager and each tenant information on glue traps, and prepare an IPMI report for each asset specified by the PAE and report the findings. Exhibit 1 is the form for reporting the glue trap findings and inspection results; Exhibit 2 is the more extensive form of reporting the existing pest control strategies and practices, noting deficiencies, and recording recommendations using IPM principles; and Exhibit 3 is the handout on glue traps to be shared with the property manager and all tenants.
- B. **[NOTE - The following instructions assume the contractor will make two visits to the property: interviewing property management about existing pest control practices and placing the glue traps during the first visit, retrieving the glue traps and conducting the necessary unit and property inspections during the second visit. The PAE has the authority to modify the instructions to require only one visit by the Contractor in those situations where the PAE believes the onsite property management can place the glue traps correctly and provide the glue trap handout to the tenants.]**

Conduct the first onsite visit/inspection to:

- (i) Obtain an understanding of the configuration of buildings.
 - (ii) Obtain an understanding of the existing pest control practices.
 - (iii) Review the "Using Glue Traps" handout (Exhibit 3) with the property manager and provide it to each tenant or leave it in each unit where glue traps are placed.
 - (iv) Place the glue traps (to assess cockroach infestation) within each unit and common areas such as laundry rooms, storage rooms, and interior trash handling areas.
 - (v) Advise the property manager that the contractor will retrieve the glue traps and set a date certain for that follow-up visit/inspection.
- C. Conduct the second onsite visit/inspection to:

- (i) Collect the glue traps from each unit, observe conditions in the units, and include in the report a unit-by-unit summary of the glue trap findings.
 - (ii) Review the findings from the glue traps to help determine which units should be inspected. The contractor then shall conduct site inspections of a minimum of 25% of all units. Unless otherwise guided by the glue trap findings, units shall be randomly sampled while taking into consideration occupied and unoccupied units and the unit size mix, i.e. one bedroom, two-bedrooms, etc. If a significant number of units are found to have infestations not reflected in the glue trap findings, the PAE may require that additional units be inspected at the time the glue traps are collected.
 - (iii) Inspect the exterior of building(s) for all areas where the envelope has been penetrated and all points of ingress/egress, looking for any entry points for pests. If identified, the contractor must determine all corrective measures, both immediately and long-term.
 - (iv) Inspect the trash disposal, laundry and storage areas for evidence of infestations.
- D. Prepare a report according to the outline provided in Exhibit 1 to this Attachment 3, that:
- (i) Identifies any pest infestations as a result of glue trap findings, a visual survey, a review of any pertinent documentation related to past infestations and pest control measures, or interviews with the property owner, management staff, and tenants.
 - (ii) Includes color photographs and a detailed narrative describing the property's pest infestation, if any, and provide a corrective course of action for each infestation, and if needed, specific actions for serious infestations within individual units.
 - (iii) Includes a Glue Trap Summary, which identifies in detail the quantity and variety of pest trapped, and any obvious general areas/floors/structures with significant infestations (e.g., if a cluster of adjacent apartments appear to have a more severe infestation when compared to the overall building). Identify groups of infested units as High, Moderate, or Low infestation and detail corrective measures for each.
 - (iv) Details an immediate course of action, which identifies and estimates the cost of the measures required to address the pest infestations for each identified group (see prior paragraph) and an continuing course of action for using IPM principles at the property.
- E. Prepare a report according to the outline provided in Exhibit 2 to this Attachment 3 that:
- (i) Documents the existing pest control strategies, practices, and outcomes.
 - (ii) Evaluates the existing pest control strategies and practices.

- (iii) Identifies the deficiencies in the existing pest control strategies and practices.
 - (iv) Recommends practices consistent with IPM principles that will achieve better outcomes.
- F. If requested by the PAE, the contractor shall take part in discussions with the owner, tenants, or other interested parties, including neighborhood associations, members of local government, and representatives from the public housing authority, including attendance at a meeting to solicit oral and written comments to be incorporated into the GPCA. The contractor shall assist the PAE in evaluating and responding to tenant and local community comments concerning the physical condition of the project and recommended repairs.
- G. The contractor shall act as an independent third-party on behalf of the PAE to review the completeness and accuracy of any GPCA submitted by the owner.
- H. The contractor shall provide the PAE with weekly status reports (upon request) during the preparation phase to track and monitor the progress.
- I. The GPCA report should also include the following subcomponents:
- (i) Acknowledgements (who conducted the inspection and prepared the reports, the preparer's qualifications or a certification that the preparer meets the qualifications required in Part 3.1, when report was prepared, who received report, and when report was reviewed).
 - (ii) Appendices (color photographs, site plans, maps, etc.).
- J. In addition, the contractor shall:
- (i) Recommend any additional professional reports needed, for example, to determine the presence or degree of structural defects, or to complete additional investigation into an environmental issue. The PAE will be responsible for obtaining such reports.
 - (ii) If the services of a subcontractor were secured to inspect the property and complete the report, the contractor shall review the inspection for quality, consistency, and agreed upon format and conformance with these requirements.
 - (iii) If requested by the PAE, attend a formal kick-off meeting to clarify the requirements and scope of the work to be performed.

3. Deliverables

- A. A draft report shall be submitted to the PAE for review prior to completion of the final report.

- B. The final report shall be completed in the number of originals and copies requested by the PAE or its designee.

In addition to the inspection of the units, we inspected the interior and exterior areas of the property for evidence of infestations in the trash disposal areas, laundry facilities, storage areas and any other common area where water and/or food storage is present. Additionally, we inspected all areas where the envelope has been penetrated and all points of ingress/egress for any entry points for pests. Below are our findings for these areas, with a status (high, moderate, low, none) noted, and comments for corrective measures, both immediate and long-term. (Lengthen the table as needed to reflect all areas inspected)

Area	Comments	Status

Based on the above findings, interviews with the property managers, maintenance staff, and tenants, and the review of all documentation made available to us regarding past Pest Control effort we conclude the following course of action is required: (The Green Physical Condition Assessment Scope of Work requires, at Part 3.2.D.(iv), “[the report details]... an immediate course of action, which identifies and estimates the cost of the measures required to address the pest infestations for each identified group (see prior paragraph) and an continuing course of action for using IPM principles at the property”). **(IPM Inspector - add detailed comments below for the units and the common areas including the recommendations from Exhibit 2)**

Sincerely,

(Name of IPM Contractor)

Member of (QualityPro, EcoWise, GreenShield, or other certification program)

OAHP M2M Green Initiative
Effective Integrated Pest Management for Affordable Housing
Exhibit 2 to Attachment 3, Green Physical Condition Assessment Scope of Work and Contractor Qualifications

Essential Elements of Effective IPM (per HUD May 27, 2007 Guidance)	Status at Development (checkmark all that are present)	Comment on Existing Strategies and Deficiencies; Make Recommendations
<p>1. Communicate Policies Communicate ownership/ management's IPM policies and procedures to:</p> <ul style="list-style-type: none"> • All building occupants • Administrative staff • Maintenance personnel • Contractors. 	<p>? Written pest control policy in place.</p> <p>? Policy communicated to:</p> <ul style="list-style-type: none"> ? Staff. ? Resident services. ? Maintenance staff. ? Renovation/rehabilitation staff/contractors. ? Pest control services. <p>? Policy communicated to residents.</p>	
<p>2. Identify Problem Pests Identify pests and environmental conditions that limit the spread of pests.</p>	<p>? Policy described strategy to address pests:</p> <ul style="list-style-type: none"> ? Rats. ? Mice. ? Cockroaches. ? Bedbugs. ? Other pests: _____ <p>_____</p> <p>? Policy described strategy to address environmental conditions:</p> <ul style="list-style-type: none"> ? Water damage and effective cleanup. ? Housekeeping and maintenance within the apartment units. 	

OAHP M2M Green Initiative
Effective Integrated Pest Management for Affordable Housing
Exhibit 2 to Attachment 3, Green Physical Condition Assessment Scope of Work and Contractor Qualifications

Essential Elements of Effective IPM (per HUD May 27, 2007 Guidance)	Status at Development (checkmark all that are present)	Comment on Existing Strategies and Deficiencies; Make Recommendations
<p>3. Monitor and Track Establish an ongoing monitoring and record keeping system for:</p> <ul style="list-style-type: none"> • Regular sampling and assessment of pests • Surveillance techniques • Remedial actions taken • Assessment of program effectiveness. 	<ul style="list-style-type: none"> ? Pest control complaints: <ul style="list-style-type: none"> ? Maintained accurate, up-to-date, and accessible tracking reports maintained. ? Recorded in electronic format. ? Analyzed regularly for timeliness, recurrent problems and other trends. ? Action taken based on analysis of complaints. ? Ongoing and regular monitoring of trash handling areas and common areas: <ul style="list-style-type: none"> ? Visual monitoring. ? Glue trap monitoring. ? Ongoing and regular inspection of exterior areas. ? Result of visual monitoring and glue trap monitoring recorded and tracked. ? Annual inspection of each resident for housekeeping and maintenance concerns. ? Annual summary of results of complaint and monitoring analysis. 	
<p>4. Set Thresholds for Action Determine, with involvement of residents:</p> <ul style="list-style-type: none"> • Pest population levels – by species – that will be tolerated • Thresholds at which pest populations warrant action. 	<ul style="list-style-type: none"> ? Zero tolerance set for priority pests: rats, mice, cockroaches, and bedbugs. ? Residents and staff aware of zero tolerance policy. ? Tolerances set for other pests such as ants and spiders. 	

OAHP M2M Green Initiative
Effective Integrated Pest Management for Affordable Housing
Exhibit 2 to Attachment 3, Green Physical Condition Assessment Scope of Work and Contractor Qualifications

Essential Elements of Effective IPM (per HUD May 27, 2007 Guidance)	Status at Development (checkmark all that are present)	Comment on Existing Strategies and Deficiencies; Make Recommendations
<p>5. Improve Non-Pesticide Methods Improve:</p> <ul style="list-style-type: none"> • Mechanical pest management methods • Sanitation • Waste management • Natural control agents. 	<ul style="list-style-type: none"> ? Regular and ongoing cleaning of [Frequency] ? Interior trash handling areas [_____] ? Exterior trash handling areas [_____] ? Laundry rooms [_____] ? Storage areas [_____] ? Regular removal of interior trash [_____] ? Confirm dumpsters <ul style="list-style-type: none"> ? Are of adequate size ? Are in good repair ? Have tightly fitting lids ? Are located at least 25 feet from building ? Show no signs of overflow problems. 	
<p>6. Prevent Pest Entry and Movement</p> <ul style="list-style-type: none"> • Monitor and maintain structures and grounds including <ul style="list-style-type: none"> ○ Sealing cracks ○ Eliminating moisture intrusion and accumulation • Add physical barriers to pest entry and movement. 	<ul style="list-style-type: none"> ? Exterior holes greater than ¼” sealed. ? Cracks in walls, foundation and floor sealed. ? Sewer traps filled with water. ? Screens in place on opened windows and doors in warm weather. ? Door sweeps in good working condition. ? Materials damaged by water quickly repaired or replaced. ? Cause of water damage corrected. 	

OAHP M2M Green Initiative
Effective Integrated Pest Management for Affordable Housing
Exhibit 2 to Attachment 3, Green Physical Condition Assessment Scope of Work and Contractor Qualifications

Essential Elements of Effective IPM (per HUD May 27, 2007 Guidance)	Status at Development (checkmark all that are present)	Comment on Existing Strategies and Deficiencies; Make Recommendations
<p>7. Educate Residents and Update Leases</p> <ul style="list-style-type: none"> • Develop an outreach/educational program • Ensure that leases reflect residents' responsibilities for: <ul style="list-style-type: none"> ○ Proper housekeeping ○ Reporting presence of pests, leaks, and mold. 	<ul style="list-style-type: none"> ? Resident leases set specific requirements for: <ul style="list-style-type: none"> ? Housekeeping, sanitation, and trash storage. ? Reporting of pests, leaks, and mold. ? Educational materials on pest control and pesticide use provided to residents. ? New residents expressly told that they are responsible for proper housekeeping and reporting presence of pests, leaks, and mold. ? Units inspected within one month after moving in. ? Residents regularly reminded of responsibilities. ? Resident told to notify resident services before using any pesticides spray or fogger. 	
<p>8. Enforce Lease</p> <p>Enforce lease provisions regarding resident responsibilities such as:</p> <ul style="list-style-type: none"> • Housekeeping • Sanitation • Trash removal and storage. 	<ul style="list-style-type: none"> ? Pest control services and maintenance alerting resident services to housekeeping, sanitation and trash problems on an identified, established schedule. ? Resident services addressing residents with housekeeping problems through education. ? Residents with ongoing or unresolved housekeeping, sanitation or trash problems addressed through enforcement of lease. 	

OAHP M2M Green Initiative
Effective Integrated Pest Management for Affordable Housing
Exhibit 2 to Attachment 3, Green Physical Condition Assessment Scope of Work and Contractor Qualifications

Essential Elements of Effective IPM (per HUD May 27, 2007 Guidance)	Status at Development (checkmark all that are present)	Comment on Existing Strategies and Deficiencies; Make Recommendations
<p>9. Use Pesticides Only When Necessary Use pesticides only when necessary, with preference for products that, while producing the desired level of effectiveness, pose the least harm to human health and the environment, and, as appropriate, notifying PHA management before application.</p>	<p>? Snap traps used for mice. ? Rodenticides only used in tamper-resistant plastic boxes. ? No sprays or foggers used by staff, contractors, or residents without written, advance approval of property manager. ? Boric acid and baits used at unit turnover.</p>	
<p>10. Post Signs Provide and post 'Pesticide Use Notification' signs or other warnings.</p>	<p>? Program in place to notify residents and staff of pesticide use. ? Signs used to notify residents and staff in advance of pesticide application (if for other than bait stations). ? Residents notified after units treated. ? Residents notified after common areas treated.</p>	
<p>11. Summary</p>	<p>? How many of the ten Essential Elements of Effective IPM listed in this chart are:</p> <p>- Fully addressed? _____</p> <p>- Partially addressed? _____</p> <p>- Missing entirely? _____</p>	

USING GLUE TRAPS

(from the National Center for Healthy Housing)

Cockroaches don't like the light. They prefer the dark. When you see one, the infestation is probably serious. There may be thousands more hidden. Cockroach glue traps left out overnight in the right places are a better way to identify a problem.

Cockroach glue traps are a strip of cardboard with glue on it. The glue traps come in many shapes and styles. The two most basic types come in a triangle or a flattened tube.



Photo Courtesy of January Jones
Cockroaches on Glue Traps.

They can also be a small, open-face, tray of glue. Avoid these traps since pets and, sometimes, a curious child can get the trap stuck on them. If a mouse gets stuck, it will most likely die after hours of squeaking. People in the area will not be happy. Leave the tray of glue to the professionals.

Please note that glue traps are only useful to monitor for cockroaches. They will not eliminate the cockroaches since only adult cockroaches are likely to be caught.

Setting up the Trap: Each brand is different. Read the instructions. Practice on a few to get it right. Make sure you write the date and location on the trap. Once cockroaches are on the trap, it will be difficult to label. Generally:

- Mark date and location on trap;
- Fold it in the proper shape to get the angles right;
- Open it back up;
- Remove paper that covers glue;
- Fold it into shape using glue to hold it.

You may want to use gloves to avoid getting the glue on your fingers. If you do get glue on you, use a good grease removing detergent such as hand dishwashing soap to get it off. It is not dangerous but it sure is sticky.

Placing the Trap: Cockroaches run along corners. Place the traps in the corner of two walls so the cockroach running along the wall will go through it. Put the trap in places with food, heat and moisture, especially where you see frass (cockroach debris, especially feces). Cockroaches leave it wherever they go.

Kitchen

- On the floor by the refrigerator
- On the floor by the oven
- In the pantry behind the food
- Under sink



Photo courtesy of Changlu Wang, Purdue University
Cockroach Glue Trap along refrigerator

Bathroom

- Behind toilet
- Alongside refrigerator
- In towel closet



Photo courtesy of Changlu Wang, Purdue University
Cockroach Glue Trap along baseboard in bathroom

Basement

- Under sink
- By washer or dryer



Photo courtesy of Philip Smith, West Virginia Dept. of Agriculture
Cockroach Glue Trap along baseboard in kitchen

Other areas

- Behind bed
- Under couch

FOR THE PEST MANAGEMENT PROFESSIONAL

Checking / Collecting the Trap: Make it part of your routine to check the traps for cockroaches. If you find a cockroach in a trap, remove the trap, replace it with a new one, and put the old one in a zip lock bag. You may want to use tongs to pick it up since the cockroaches may be alive.

Write down as clearly as you can where the trap was located on the bag or on paper that you put in the bag. Seal the bag.

It is important to save the trap and its location information. The pest management professional (PMP) needs it to identify the type of cockroach and more quickly find the location of the infestation.

OAHP M2M Green Initiative

Utilities Data Sheet

Exhibit 4 to Attachment 3, Green Physical Condition Assessment Scope of Work and Contractor Qualifications

<p>Property Name: Location: Property contact for this information Name: Phone: Email:</p>

In addition to mandatory temperature and humidity monitoring, utility usage monitoring is required in Green properties. The goal of this data sheet is to have potentially relevant information available for discussions with vendors. If some buildings/units differ from others, answer separately for those buildings/units and identify how many units/buildings are in each group. Commercial space can be laundry facilities, or other leased store or office space.

1. Water

- a. Identify the provider of water to the property. If gray water or well water is used for some purposes, describe.
- b. How is the water usage measured (if so)? Does metering separate residential and property/commercial use?
- c. Are there separate meters at the unit level?
- d. Is there a single water intake for each unit with unit specific water heaters?
- e. Where are the water meters physically located?

2. Electric

- a. What entity provides electric to the property? If there are any site generating activities to supplement (wind, solar) describe.
- b. What is the meter configuration? (How many covering what usage?)
- c. Where are the electric meters physically located?
- d. Are property and residential unit use separately metered?
- e. Are there unit level electric meters or unit level breaker boxes?
- f. Where are the electric meters physically located?

3. Heating fuel

- a. How is the property heated? (forced air furnace, boiler, electric baseboard, heat pump, etc.)
- b. What is the heat source? (gas, propane, oil, purchased steam, electric)
- c. Are there individual heating units for each unit?
- d. Are there individual meters for the heating fuel?
- e. Are there separate heat sources for common areas/commercial areas?
- f. Are all units/areas heated the same way?
- g. Is the heating included in a utility paid by the tenant via a separate meter (e.g., electric)?
- h. If the heating fuel is metered, where are the meters?

4. Additional Utility Use Questions

- a. Are stoves electric or gas?
- b. If there are unit clothes dryers, are they electric or gas?
- c. Are water heaters electric or gas?
- d. Are there individual unit water heaters?
- e. Are there other unusual utility sources or uses?

Green Plug-In Worksheets for Rehab and Reserves - General Instructions to Underwriters

Green Plug-Ins are Green Initiative requirements and are included in Green UW models submitted to OAHP.

Worksheet: Rehab and R4R Summary Economics

This worksheet provides a summary of the items that have been entered into the two following worksheets and calculates the percentage of green rehab and reserves recommendations that have been accepted by the owner.

The owner's contribution for rehab will be 3% if the owner accepts (on a monetary basis) at least 75% of the PAE's green recommendations for both rehab and reserves; the contribution will be 10% if the owner accepts at least 50% for both rehab and reserves; the contribution is otherwise 20%. The amounts in the yellow highlighted cells should be transferred to the underwriting model.

Worksheet: Rehab - Traditional Greened

The first plug-in addresses Green decisions affecting rehab and significant additions. This worksheet should list every traditional (baseline) rehab escrow item. That is, each rehab and significant addition item that the PAE would recommend if this were a Traditional restructure.

Items that are Greened are classified as significant additions, without regard to whether the component is physically an 'addition'. Green Significant Additions will have an owner contribution percentage of 3%, 10% or 20% depending on the owner's level of participation in the Green Initiative.

Items at the top of the sheet are those that are included in the Traditional PCA rehab / significant additions. Items at the bottom of the sheet are Green items that are identified in the Green PCA. The PAE will include all of Green items identified in the Green PCA in the plug-in, whether or not the PAE will be recommending each item. Additional comments and guidance are provided at the bottom of the worksheet.

Worksheet: Rehab - Green SAs

On the second worksheet, the PAE will include those Green items identified in the Green PCA and which they are recommending the owner accept. All additional green improvements listed here will be treated as Significant Additions in terms of owner contribution, with amount of owner contribution being determined based on the owner's level of participation in the Green Initiative.

Indicate whether each item is Fixed or Variable (col C); indicate whether each item was Accepted or Declined by the owner (col H). Additional comments and guidance are provided at the bottom of the worksheet.

Worksheet: Trad vs Green R4R

The last worksheet provides a format to compare the traditional recommendation with the green recommendation and should include each line item that was considered. Include each line item that is identified in the Green PCA, whether or not the PAE recommends including that item in the actual R4R schedule. Additional comments and guidance are provided at the bottom of the worksheet.

RC and UA Exhibits

When this template is completed, use the buttons atop this worksheet to display and print the six exhibits to accompany the Restructuring Commitment and Use Agreement (3 exhibits per document).

Traditional vs. Green Rehab Breakdown - Addendum to M2M Underwriting Model

Version 7.1

Summary of Green Rehab and Replacements

[Insert Property Name on Rehab and R4R Summary Economics Worksheet]

0 Units

Summary of PAE Recommendations and Owner Acceptance

	PAE Proposed		Owner Accepted		Percentage Accepted	
	\$	#	\$	#	\$	#
20 Year Schedule	\$0	0	\$0	0	0%	0%
Traditional Rehab Greened	\$0	0	\$0	0	0%	0%
Green Significant Additions	\$0	0	\$0	0	0%	0%
Total Rehab	\$0	0	\$0	0	0%	0%

Summary of determinations to be transferred to the Rehab Escrow Needs Worksheet of the M2M underwriting model

\$0	Total Rehab
\$0	Significant Additions in Baseline
\$0	Green Significant Additions Not in Baseline
20.00%	Determined owner contribution rate for rehab (not including significant additions), M2M model cell I21
0.00%	Blended owner contribution rate for significant additions (as underwritten), M2M model cell I20

Traditional vs. Green R4R Breakdown - Addendum to M2M Underwriting Model

Version 7.1

Summary of Options and Decisions: Traditional and Green R4R

[Insert Property Name on Rehab and R4R Summary Economics Worksheet]

0 Units

Alternative	Item Description	Unit of Measurement	Unit Cost	Quantity	First Repl in Year #	Useful Life	# of Repls In 20 Yrs	20 Year Cost	Comments
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is		Choice?	Owner selection is	Choice?				

Traditional vs. Green R4R Breakdown - Addendum to M2M Underwriting Model

Version 7.1

Summary of Options and Decisions: Traditional and Green R4R

[Insert Property Name on Rehab and R4R Summary Economics Worksheet]

0 Units

Alternative	Item Description	Unit of Measurement	Unit Cost	Quantity	First Repl in Year #	Useful Life	# of Repls In 20 Yrs	20 Year Cost	Comments
	PAE recommendation is	Choice?	Owner selection is		Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is	Choice?	Owner selection is		Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is	Choice?	Owner selection is		Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is	Choice?	Owner selection is		Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is	Choice?	Owner selection is		Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is	Choice?	Owner selection is		Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is	Choice?	Owner selection is		Choice?				
Traditional									
Green		0.00	0.00						
	PAE recommendation is	Choice?	Owner selection is		Choice?				

0 Total Line items

\$0 PAE Green
 \$0 Owner Green
 0.0% Acceptance
 \$0 20 Yr Cost

0 items
 0 items
 0.0% Acceptance
 \$0 per unit

\$0 per unit per year

Instructions to Underwriter:

This worksheet should include each line item that was considered. That is, if it appears in the PCA, or if the PAE intends to recommend it, it should appear here. Include each line item that is identified in the Green PCA, whether or not the PAE recommends including that item in the actual R4R schedule.

Note -- comments on the Traditional and Green lines should describe relevant aspects of the option. Comments on the Recommendation line should address factors relevant to the PAE and owner decisions.

Payback Analyses Underwriting Tool -- Attachment 5 to the Draft Green Guide (Version 9)

Note: Generally, blue text cells require user input; black text cells are static.

Green PCAs must include two types of payback analyses, for Green items that produce savings in utilities.

Green Premium Sheet (Optional) -- if you use this, complete it first, then use the Green and Traditional unit costs in the various payback analyses.

Payback Analysis for Replacement At End of Useful Life

The first analysis calculates the payback period for a Green versus Traditional replacement, when the existing component has reached the end of its useful life. Generally, OAHP expects PAEs to recommend Green replacement when the indicated payback period is equal to or less than the benchmark payback period in the table below (corresponds to an Internal Rate of Return between 5% and 6%, for a typical 15 year useful life item).

Savings Analysis for Early Replacement

The second analysis compares the utility savings from early replacement of a functioning component with a Green component, and compares those savings to the value of the component's remaining useful life. Generally, OAHP expects PAEs to recommend early Green replacement when the utility savings are at least 1.5 times the value of the remaining useful life.

Exceptions

Replacement at end of useful life is presumed to be financially reasonable for the following Energy Star components: clothes washers, refrigerators, dishwashers, lighting fixtures, and windows; and accordingly no payback analysis is required. However, if early replacement is proposed, financial analysis is required, and an Energy Star rated product is also required.

EUL	Benchmark
5	4 years
6	5 years
7	5 years
8	6 years
9	7 years
10	7 years
11	8 years
12	8 years
13	9 years
14	9 years
15	10 years
16	10 years
17	10 years
18	11 years
19	11 years
20	12 years
25	13 years
30	14 years
35	15 years
40	15 years
45	16 years
50	16 years

Attachment 5: Payback and Early Replacements Analysis Tool (Version 9)

Summary of Green Premiums

[Insert Property Name on Refrigerator Worksheet]

Building System	Est'd Traditional Cost	Est'd Green Cost	Green Premium \$	Green Premium %	Comments	Comments on Utility Savings
Lighting & Fans (Materials and Labor)						
Ceiling Fan [Describe]	\$0	\$0	\$0	0%	[source of cost data, specifications]	[comment on utility savings]
Labor	\$0	\$0	\$0	0%		
Apartment Lighting	\$0	\$0	\$0	0%	[source of cost data, specifications]	[comment on utility savings]
Labor	\$0	\$0	\$0	0%		
Appliances (assume installed by staff)						
Dishwasher [Describe]	\$0	\$0	\$0	0%	[source of cost data, specifications]	[comment on utility savings]
Refrigerator [Describe]	\$0	\$0	\$0	0%	[source of cost data, specifications]	[comment on utility savings]
HVAC (Includes Labor by Contractor)						
Gas furnace [Describe]	\$0	\$0	\$0	0%	[source of cost data, specifications]	
EnergyStar T-Stat	\$0	\$0	\$0	0%	[source of cost data, specifications]	[comment on utility savings]
A/C [Describe]	\$0	\$0	\$0	0%	[source of cost data, specifications]	
Hot Water Heaters (Includes Labor by Contractor)						
DHW [Describe]	\$0	\$0	\$0	0%	[source of cost data, specifications]	[comment on utility savings]
Windows (Includes Labor by Contractor)						
Window (Price per Unit)	\$0	\$0	\$0	0%	[source of cost data, specifications]	[comment on utility savings]
Labor (Price per Unit)	\$0	\$0	\$0	0%		
Interior Repaint (Includes Labor by Contractor)						
Green Paint [Describe]	\$0	\$0	\$0	0%	[source of cost data, specifications]	
Labor	\$0	\$0	\$0	0%		

Attachment 5: Payback and Early Replacements Analysis Tool (Version 9)
[Insert Property Name on Refrigerator Worksheet]

Item: **Refrigerator** **15** year EUL **10** yr payback
 Note: Input cost of Green and Traditional Refrigerators on the 'Premium' Worksheet

5A: Replacement At End of Useful Life

	Traditional Alternative	[insert description]		
	Green Alternative	[insert description]		

Analysis:	Green	Traditional	Differential	
Initial Cost	\$0	\$0	\$0	
Annual Energy Usage	0	0	0	KWH
Rate per KWH	\$0.000	\$0.000	\$0.00	per year
Payback period			<input type="text" value=""/>	years

Note -- [indicate source of rate data]
 Note -- [indicate source of usage data for green and non-green]

5B: Early Replacement of NEWER Refrigerators

	Existing In-Place	[insert description]		
	Green Alternative	[insert description]		

Analysis:	Green	Existing	Differential	
Initial Cost of existing item		\$0		
Useful life		15		
Current age		0		
Remaining life		15		
Remaining cost		\$0	\$0	
Annual Energy Usage	0	0	0	KWH
Rate per KWH (note 1)	\$0.000	\$0.000	\$0.00	per year
Savings over remaining life			\$0.00	
Payback ratio			<input type="text" value="0.0"/>	: 1

Note -- [indicate source of usage data for existing]

5B: Early Replacement of OLDER Refrigerators

	Existing In-Place	[insert description]		
	Green Alternative	[insert description]		

Analysis:	Green	Existing	Differential	
Initial Cost of existing item		\$0		
Useful life		15		
Current age		0		
Remaining life		15		
Remaining cost		\$0	\$0	
Annual Energy Usage	0	0	0	KWH
Rate per KWH (note 1)	\$0.000	\$0.000	\$0.00	per year
Savings over remaining life			\$0.00	
Payback ratio			<input type="text" value="0.0"/>	: 1

Note -- [indicate source of usage data for existing]

In general, OAHF discourages early replacement unless the payback ratio (as calculated above) is **1.5** or better. PAEs may propose items with lower payback ratios if there are advantages that outweigh the disadvantage of lower payback ratio.

Attachment 5: Payback and Early Replacements Analysis Tool (Version 9)
[Insert Property Name on Refrigerator Worksheet]

Item: **Air Conditioner** 15 year EUL 10 yr payback
 Note: Input cost of Green and Traditional A/C on the 'Premium' Worksheet

5A: Replacement At End of Useful Life

	Traditional Alternative	[insert description]	
	Green Alternative	[insert description]	

Analysis:		Green	Traditional	Differential
Initial Cost		\$0	\$0	\$0
Annual Energy Usage		0	0	0 KWH
Rate per KWH		\$0.000	\$0.000	\$0.00 per year
Payback period				<input style="width: 50px;" type="text" value=""/>

Note -- [\[indicate source of rate data\]](#)
 Note -- [\[indicate source of usage data for green and non-green\]](#)

5B: Early Replacement with [\[describe\]](#)

	Existing In-Place	[insert description]	
	Green Alternative	[insert description]	

Analysis:		Green	Existing	Differential
Initial Cost of existing item			\$0	
Useful life			15	
Current age			0	
Remaining life			15	
Remaining cost			\$0	\$0
Annual Energy Usage		0	0	0 KWH
Rate per KWH (note 2)		\$0.000	\$0.000	\$0.00 per year
Savings over remaining life				\$0.00
Payback ratio				<input style="width: 50px;" type="text" value="0.0"/> : 1

Note -- [\[indicate source of usage data for existing\]](#)

5B: Early Replacement with [\[describe\]](#)

	Existing In-Place	[insert description]	
	Green Alternative	[insert description]	

Analysis:		Green	Existing	Differential
Initial Cost of existing item			\$0	
Useful life			15	
Current age			0	
Remaining life			15	
Remaining cost			\$0	\$0
Annual Energy Usage		0	0	0 KWH
Rate per KWH (note 2)		\$0.000	\$0.000	\$0.00 per year
Savings over remaining life				\$0.00
Payback ratio				<input style="width: 50px;" type="text" value="0.0"/> : 1

Note -- [\[indicate source of usage data for existing\]](#)

In general, OAHP discourages early replacement unless the payback ratio (as calculated above) is **1.5** or better. PAEs may propose items with lower payback ratios if there are advantages that outweigh the disadvantage of lower payback ratio.

Attachment 5: Payback and Early Replacements Analysis Tool (Version 9)
[Insert Property Name on Refrigerator Worksheet]

Item: **[type of] Roof**

20 year EUL

12 yr payback

Note: Use only for straight comparison between products of equal useful life.

5A: Replacement At End of Useful Life

Traditional Alternative **[insert description]**
 Green Alternative **[insert description]**

Analysis:	Green	Traditional	Differential	
Initial Cost	\$0	\$0	\$0	
Annual Energy Usage	0	0	0	KWH
Rate per KWH (note 1)	\$0.000	\$0.000	\$0	per year
Payback period			<input type="text" value=""/>	years

Note -- **[indicate source of rate data]**

Note -- **[indicate source of usage data for green and non-green].**

5B: Early Replacement

Existing In-Place **[insert description]**
 Green Alternative **[insert description]**

Analysis:	Green	Existing	Differential	
Initial Cost of existing item		\$0		
Useful life		0		
Current age		0		
Remaining life		0		
Remaining cost		\$0	\$0	
Annual Energy Usage	0	0	0	KWH
Rate per KWH (note 1)	\$0.000	\$0.000	\$0	per year
Savings over remaining life			\$0	
Payback ratio			<input type="text" value="0.0"/>	: 1

In general, OAHP discourages early replacement unless the payback ratio (as calculated above) is **1.5** or better. PAEs may propose items with lower payback ratios if there are advantages that outweigh the disadvantage of lower payback ratio.

Attachment 5: Payback and Early Replacements Analysis Tool (Version 9)
[Insert Property Name on Refrigerator Worksheet]

Item: **[Gas] [x gal.] Hot Water Heater** **13** year EUL 9 yr payback
 Note: *Input cost of Green and Traditional Hot Water Heaters on the 'Premium' Worksheet*

5A: Replacement At End of Useful Life

	Traditional Alternative	[insert description]		
	Green Alternative	[insert description]		

Analysis:	Green	Traditional	Differential	
Initial Cost	\$0	\$0	\$0	
Annual Energy Usage	0	0	0	therms/KWh
Rate per therm or KWh	\$0.000	\$0.000	\$0.00	per year
Payback period			<input type="text" value=""/>	years

Note -- [indicate source of rate data]
 Note -- [indicate source of usage data for green and non-green]

5B: Early Replacement of OLDER DHW units

	Existing In-Place	[insert description]		
	Green Alternative	[insert description]		

Analysis:	Green	Existing	Differential	
Initial Cost of existing item		\$0		
Useful life		0		
Current age		0		
Remaining life		0		
Remaining cost		\$0	\$0	
Annual Energy Usage	0	0	0	therms/KWh
Rate per therm or KWh	\$0.000	\$0.000	\$0.00	per year
Savings over remaining life			\$0.00	
Payback ratio			<input type="text" value="0.0"/>	: 1

Note -- [indicate source of usage data for existing]

5B: Early Replacement of NEWER DHW Units

	Existing In-Place	[insert description]		
	Green Alternative	[insert description]		

Analysis:	Green	Existing	Differential	
Initial Cost of existing item		\$0		
Useful life		0		
Current age		0		
Remaining life		0		
Remaining cost		\$0	\$0	
Annual Energy Usage	0	0	0	therms/KWh
Rate per therm (note 1)	\$0.000	\$0.000	\$0.00	per year
Savings over remaining life			\$0.00	
Payback ratio			<input type="text" value="0.0"/>	: 1

Note -- [indicate source of usage data for existing]

In general, OAHP discourages early replacement unless the payback ratio (as calculated above) is **1.5** or better. PAEs may propose items with lower payback ratios if there are advantages that outweigh the disadvantage of lower payback ratio.

Attachment 5: Payback and Early Replacements Analysis Tool (Version 9)
[Insert Property Name on Refrigerator Worksheet]

Item: **[Gas] Furnace** **25** year EUL 13 yr payback

Note: Input cost of Green and Non-Green Furnaces on the 'Premium' Worksheet

5A: Replacement At End of Useful Life

	Traditional Alternative	[insert description]		
	Green Alternative	[insert description]		

Analysis:		Green	Traditional	Differential	
	Initial Cost	\$0	\$0	\$0	
	Annual Energy Usage	0	0	0	therms/KWh
	Rate per therm or KWh	\$0.000	\$0.000	\$0.00	per year
	Payback period			<input type="text" value=""/>	years

Note -- [\[indicate source of rate data\]](#)
 Note -- [\[indicate source of usage data for green and non-green\]](#)

5B: Early Replacement

	Existing In-Place	[insert description]		
	Green Alternative	[insert description]		

Analysis:		Green	Existing	Differential	
	Initial Cost of existing item		\$0		
	Useful life		0		
	Current age		0		
	Remaining life		0		
	Remaining cost		\$0	\$0	
	Annual Energy Usage	0	0	0	therms/KWh
	Rate per therm or KWh	\$0.000	\$0.000	\$0.00	per year
	Savings over remaining life			\$0.00	
	Payback ratio			<input type="text" value="0.0"/>	: 1

Note -- [\[indicate source of usage data for existing\]](#)

In general, OAHF discourages early replacement unless the payback ratio (as calculated above) is **1.5** or better. PAEs may propose items with lower payback ratios if there are advantages that outweigh the disadvantage of lower payback ratio.

Attachment 5: Payback and Early Replacements Analysis Tool (Version 9)
[Insert Property Name on Refrigerator Worksheet]

Item: **Windows** **30** year EUL 14 yr payback

Note: Input cost of materials and labor for Green and Traditional Windows on the 'Premium' Worksheet

5A: Replacement At End of Useful Life

	Traditional Alternative	[insert description]	
	Green Alternative	[insert description]	

Analysis:	Green	Traditional	Differential
Initial Cost Per Unit	\$0	\$0	\$0
Estimated Savings PUPA			\$0
Payback period			<input type="text" value=""/> years

Note -- [indicate source of savings estimate for Green vs. Non-Green windows]

5B: Early Replacement

	Non-Green Alternative	Single-pane	
	Green Alternative	EnergyStar	

Analysis:	Green	Existing	Differential
Initial Cost Per Unit		\$0	
Useful life		0	
Current age		0	
Remaining life		0	
Remaining cost		\$0	\$0
Estimated Savings/YR			\$0.00 per year
Savings over remaining life			\$0.00
Payback ratio			<input type="text" value="0.0"/> : 1

Note -- [indicate source of savings estimate for higher cost windows vs. EXISTING windows]

In general, OAHF discourages early replacement unless the payback ratio (as calculated above) is **1.5** or better. PAEs may propose items with lower payback ratios if there are advantages that outweigh the disadvantage of lower payback ratio.

**Attachment 6, Version 8, Draft Green Guide
Green PCA Addendum**

This workbook is an alternative format for the Green PCA Addendum that is a required part of the Green PCA. It provides a summary of the PCA contractor's analysis of traditional and green upgrades, including cost analysis results. It has been enhanced to provide more detailed guidance for PCA contractors as they prepare the data for the Green PCAs and to help ensure that all necessary information is provided to the PAE for completion of the Underwriting Model plug-ins.

The workbook contains three worksheets:

- 1) Utility Savers - Green Items With Utility-Saving Potential
- 2) Other Green Items - Green Items With Health / Environmental Benefits
- 3) No Green Alternative - Items Having No Green Alternative

INSTRUCTIONS --

- 1) The property name and location should be entered on the first worksheet - Utility Savers. This information will automatically be carried over to the other two worksheets.
- 2) Main category headings (dark green shading) should not be modified by the PCA Provider on the first two worksheets (Utility Savers and Other Green Items). These items may be modified on the third worksheet (Items Having No Green Alternative) to better fit with the PCA contractor's report.
- 3) Line numbers and Sub-category descriptions (light green shading) should be customized by the PCA provider.
- 4) Utility Savers - All items that require a cost analysis should be included on this worksheet. Remaining useful life and Early Replacement/Payback results should be included in the worksheet.
- 5) Other Green Items -- All items that have a green alternative but do not require a cost analysis should be included on this worksheet. Costs may represent per item costs, per unit costs or total costs; type of cost should be identified in corresponding cell.
- 6) No Green Alternative - Items that have no green alternative should be entered on the last worksheet.

Attachment 6, Version 8, Draft Green Guide
Green PCA Addendum (Green Items With Utility-Saving Potential)
[\[Insert Property Name on Utility Savers Worksheet\]](#)
[\[Insert Property Location on Utility Savers Worksheet\]](#)

Item #	Existing Quantity	Existing / Traditional / Green	Item Description	Unit Cost	Remaining Useful Life	Early Replacement / Payback
--------	-------------------	--------------------------------	------------------	-----------	-----------------------	-----------------------------

HVAC SYSTEMS

x.x	EnergyStar Thermostats					
	68	Existing	Varies		Varies	
		Traditional	Standard thermostat	\$20	15	
		Green	EnergyStar	\$35	15	

Discuss ...

x.x	Gas-Fired Furnaces						
	40	Existing	68% Efficiency	\$1,000	5	1.3	early replacement ratio (Traditional)
	28	Existing	60% Efficiency	\$800	10	1.7	early replacement ratio (Traditional)
		Traditional	80% Efficiency	\$1,200	25		
		Green	90% Efficiency, direct vent, sealed combustion	N/A	25	N/A	year payback period (vs. Traditional)

Green alternative is not feasible because of installation issues; accordingly all early replacement calculations were for the Traditional alternative

x.x	Air Conditioning (Split System)						
	40	Existing	8 SEER	\$1,000	5	1.3	early replacement ratio (Green)
	28	Existing	10 SEER	\$800	10	1.7	early replacement ratio (Green)
		Traditional	13 SEER	\$1,500	15		
		Green	14 SEER / EnergyStar	\$1,700	15	8.2	year payback period (vs. Traditional)

The Green alternative passes the OAHF payback test; early replacement calculations assume the Green alternative

DOMESTIC HOT WATER SYSTEMS

x.x	Gas-Fired Individual Hot Water Heaters						
	68	Existing	Varies (typically .55 ER)	\$300	Varies	0.8	early replacement ratio (Traditional)
		Traditional	.59 ER	\$375	13		
		Green	.63 ER, direct vent, sealed combustion	\$475	13	13.1	year payback period (vs. Traditional)

Green PCA Addendum (Green Items With Utility-Saving Potential)

[Insert Property Name on Utility Savers Worksheet]

[Insert Property Location on Utility Savers Worksheet]

Item #	Existing Quantity	Existing / Traditional / Green	Item Description	Unit Cost	Remaining Useful Life	Early Replacement / Payback
Green alternative is not feasible because of installation issues; accordingly the early replacement calculation was for the Traditional alternative						

APPLIANCES

x.x	Refrigerators						
	30	Existing	15 CF, top freezer, 900 KWH rated	\$325	5	1.7	early replacement ratio (Green)
	38	Existing	15 CF, top freezer, 800 KWH rated	\$350	10	1.4	early replacement ratio (Green)
		Traditional	N/A				
		Green	15 CF, top freezer, 400 KWH rated	\$480	15	N/A	

Green initiative requires EnergyStar

x.x	Ranges						
	68	Existing	Original	N/A	5	N/A	
		Traditional	Lowes model xxxx	\$400	25	N/A	
		Green	N/A	N/A	N/A	N/A	

No Green alternative identified

WATER SAVING DEVICES

x.x	Low Flow Shower Heads (no cost justification required for Green Initiative)						
	112	Green	[describe]	\$15	10	N/A	

1 per 1BR, 2 per 2BR, 2 per 3BR = 112 total quantity

x.x	Low Flow Aerators (no cost justification required for Green Initiative)						
	180	Green	[describe]	\$8	5	N/A	

2 per 1BR, 3 per 2BR, 3 per 3BR = 180 total quantity

x.x	Low Flush Toilets (no cost justification required for Green Initiative)						
	112	Green	[describe]	\$225	30	N/A	

Green PCA Addendum (Green Items With Utility-Saving Potential)

[Insert Property Name on Utility Savers Worksheet]

[Insert Property Location on Utility Savers Worksheet]

Item #	Existing Quantity	Existing / Traditional / Green	Item Description	Unit Cost	Remaining Useful Life	Early Replacement / Payback
1 per 1BR, 2 per 2BR, 2 per 3BR = 112 total quantity						

WINDOWS

x.x	Window Replacement					
200	Existing	Single pane	\$150	5	12.0	early replacement ratio (Green)
	Traditional	Dual-pane, insulated	\$250	35		
	Green	EnergyStar	\$250	35	N/A	year payback period (vs. Traditional)

2 per 1BR, 3 per 2BR, 4 per 3BR = 200 total quantity. No cost premium for EnergyStar.

ROOFING

x.x	Roof Replacement					
21 bldgs	Existing	Asphalt shingles	\$113,000	15	0.5	early replacement ratio (Green)
5 bldgs	Existing	Asphalt shingles	\$27,000	5	0.5	early replacement ratio (Green)
	Traditional	Asphalt shingles	\$140,000	20		
	Green	Install reflective crimped metal roofing	\$215,600	30	See note	year payback period (vs. Traditional)

Modified payback analysis, taking into account longer useful life, indicates that the Green alternative may be financially favorable.

LIGHTING

x.x	Exterior Lighting					
	Traditional	Pole-mounted fixtures	\$15,000	total		
	Green	Dark-Sky Friendly Fixtures	\$20,000	total		

Discuss ...

x.x	Common Area Lighting					
71	Green	Energy Star Fixtures	\$100	each	\$7,100	total cost

Replace existing fixtures with Energy Star fixtures (60 bldg common areas, 4 leasing office, 4 community room, 2 restrooms, 1 maint shop)

x.x	In-Unit Lighting					
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Green PCA Addendum (Green Items With Utility-Saving Potential)

[Insert Property Name on Utility Savers Worksheet]

[Insert Property Location on Utility Savers Worksheet]

Item #	Existing Quantity	Existing / Traditional / Green	Item Description	Unit Cost	Remaining Useful Life	Early Replacement / Payback
	612	Existing	Standard fixtures		10	
		Traditional	Standard fixtures	\$18,360	30	
		Green	Energy Star Fixtures	\$30,600	30	
Average 9 fixtures per unit						
OTHER						
x.x						
		Traditional				
		Green				
Discuss ...						

Attachment 6, Version 8, Draft Green Guide
Green PCA Addendum (Green Items With Health / Environmental Benefits)
[Insert Property Name on Utility Savers Worksheet]
[Insert Property Location on Utility Savers Worksheet]

ADDITIONAL INSULATION

x.x Additional Insulation in Ceilings

Discuss ...

x.x Other Additional Insulation

Discuss ...

MONITORING EQUIPMENT

x.x Utility Monitoring Equipment

17	Green	[describe]	\$1,000	each	15	year useful life
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[reasons why recommend monitoring in 25% of units, ...]

x.x Temperature / Humidity Monitoring Equipment

68	Green	HoBo model xxx	\$55	each	15	year useful life
1	Green	HoBo data logger	\$295	each	15	year useful life
1	Green	HoBo software	\$99	each	15	year useful life

[reasons why recommend monitoring in 100% of units, ...]

x.x INTEGRATED PEST MANAGEMENT CHANGES

Discuss each recommendation (location, what to do, rationale, likely cost, ...)

x.x KITCHEN EXHAUST IMPROVEMENTS

68	Green	[describe kitchen alternative]	x	per unit	x	year useful life
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Discuss feasibility of venting to outside, likely cost, ...

x.x BATH EXHAUST IMPROVEMENTS

112	Green	[describe bath alternative]	x	per unit	x	year useful life
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1 per 1BR, 2 per 2BR, 2 per 3BR = 112 total quantity

Green PCA Addendum (Green Items With Health / Environmental Benefits)

[Insert Property Name on Utility Savers Worksheet]

[Insert Property Location on Utility Savers Worksheet]

x.x CARBON MONOXIDE ALARM						
	68	Green	[describe]		x per unit	x year useful life

Discuss ...

LOW VOC PAINT, SEALANTS AND OTHER MATERIALS						
x.x Interior Repainting						
	68	Traditional	Standard paint material	\$216	per unit	7 year useful life
	68	Green	Low VOC paint material	\$288	per unit	7 year useful life

Discuss ...

x.x Kitchen Cabinets						
	68	Existing	Wood cabinets			6 years useful life remaining
		Traditional	Wood cabinets	\$1,200	per unit	25 year useful life
		Green	Cabinets with low VOC boxes	\$1,500	per unit	25 year useful life

Discuss ...

FLOORING						
x.x Areas Currently Carpeted						
	3778 SY	Existing	Standard carpet	\$26	per sq yard	7 year useful life
		Traditional	Standard carpet	\$26	per sq yard	7 year useful life
		Green	Low VOC carpet	\$29	per sq yard	7 year useful life
		Green	Linoleum	\$65	per sq yard	15 year useful life
		Green	Bamboo	\$90	per sq yard	30 year useful life

Discuss ...

RUBBER WALK-OFF MATS AND STAIR TREADS						
x.x Rubber Walk-Off Mats						
	68	Green	[describe]	\$12	per unit	5 year useful life

Discuss ...

x.x Rubber Stair Treads						
	N/A	Green	N/A	N/A	per unit	N/A year useful life

Green PCA Addendum (Green Items With Health / Environmental Benefits)

[Insert Property Name on Utility Savers Worksheet]

[Insert Property Location on Utility Savers Worksheet]

No stairs

SIDING REPLACEMENT

x.x	Exterior Siding					
68	Existing	Wood siding				6 year useful life remaining
	Traditional	Vinyl siding	\$1,400	per unit		30 year useful life
	Green	Cementitious / HardyPlank	\$1,610	per unit		30 year useful life
	Green	Paint cementitious siding	\$350	per unit		8 year useful life
	Green	Add insulation below new siding (either vinyl or HardyPlank)	\$1,000	per unit		30 year useful life

If wood siding is retained, repairs will be necessary. If wood siding is replaced, additional insulation could be applied before applying the replacement siding. If replacement siding is cementitious, initial and ongoing painting will be required. [Describe potential energy savings for

RECYCLING

x.x Changes to Facilitate Tenant Recycling of Household Wastes

Discuss ...

x.x Green Management of Rehab Debris

Discuss ...

COMBINED HEAT AND POWER (CHP)

This property is not a good candidate, according to the criteria in the Green Implementation Guidelines. The property has individual HVAC and DHW units, is individually metered, and is in a low electricity cost area.

LANDSCAPING CHANGES FOR WATER EFFICIENCY

Discuss ...

AIR AND THERMAL SEALING

x.x Add Storm Doors

Add storm doors @ \$400 per unit x 68 = \$27,200, for improved air-sealing. Will need to be replaced at 8 year intervals.

x.x Other Air / Thermal Sealing

Green PCA Addendum (Green Items With Health / Environmental Benefits)

[Insert Property Name on Utility Savers Worksheet]

[Insert Property Location on Utility Savers Worksheet]

Discuss ...							
OTHER							
x.x							
Discuss ...							

Project Name:
City, State:
New FHA #:
Old FHA#:

GREEN INITIATIVE REHABILITATION ESCROW DEPOSIT AGREEMENT

Notes to PAEs (remove prior to issuance):

- Text shown in **green** represents information to be provided by the PAE
- Text shown in **yellow** represents guidance to PAEs
- No colored text should remain in the agreement as issued

THIS REHABILITATION ESCROW DEPOSIT AGREEMENT (the "Agreement") is made, as of **date of the M2M closing**, by and among **name of ownership entity**, a **[name of state] [limited / general partnership / corporation]** (the "Owner"), **name of escrow administrator**, a **name of state corporation** (the "Escrow Administrator"), **name of PAE**, **[a name of state corporation] / [describe state / local governmental entity]** (the Mark-to-Market Participating Administrative Entity or "PAE"), and **Preservation Office Director name**, acting on behalf of the DEPUTY ASSISTANT SECRETARY OF THE OFFICE OF AFFORDABLE HOUSING PRESERVATION (the "Deputy Assistant Secretary") and the SECRETARY OF HOUSING AND URBAN DEVELOPMENT (the "Secretary"), WASHINGTON, D.C.

RECITALS:

- A. **Real Property, Project and Property.** The Owner is the owner of **all of / a leasehold interest in** that certain real property located in the **City / Town / Village** of **name of town**, in the County of **county**, in the **State / Commonwealth** of **state** (the "Real Property"), on which is constructed a certain rental apartment project known as **name of property**, **formerly** **if new 1st mortgage is non FHA** FHA Project No. **number** (the "Project" and, together with the Real Property, the "Property").
- B. **Restructuring Commitment.** In connection with, as a condition to and in consideration for the Owner's participation in the Mark-to-Market Program, as authorized by the Multifamily Assisted Housing Reform and Affordability Act of 1997, title V Pub. L. 105-65 (approved on 10/27/97), as amended, 42 U.S.C. 1437fnote (MAHRA) the Owner and the Secretary have entered into that certain Restructuring Commitment dated **date of RC**, as amended through the date hereof (the "Restructuring Commitment"), pursuant to which the parties have agreed, among other things, that the Owner shall cause certain repairs and/or improvements to be made to the Project which shall be funded by depositing into escrow certain funds pursuant to the Restructuring Commitment and as more particularly set forth in this Agreement.

NOW, THEREFORE, in consideration of the foregoing premises, the sum of Ten Dollars (\$10.00) in hand paid, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, for themselves and for their respective successors and assigns, hereby agree as follows:

1. **Incorporation of Recitals and Restructuring Commitment.** The foregoing recitals are hereby incorporated by reference as if fully set forth herein. The Restructuring Commitment is hereby incorporated by reference as if fully set forth herein.
2. **Actions of the Deputy Assistant Secretary and Secretary.** Any action or decision under this Agreement that may or must be taken or made by the Deputy Assistant Secretary or Secretary may be taken or made by any duly authorized representative of the Deputy Assistant Secretary or Secretary.
3. **Repairs.** The repairs and/or improvements to be made to the Project (the “Repairs”), to be funded under this Agreement, are set forth in Exhibit A attached hereto and hereby made a part hereof. Exhibit A comprises the complete list and scope of repairs to be made under this Agreement.
4. **Escrow Administrator and Escrow Account.**
 - A. **Escrow Administrator.** The Escrow Administrator shall administer, in accordance with the Agreement, the deposits described pursuant to the Agreement (the “Funds”). The Escrow Administrator may not delegate or assign any of its duties under the Agreement to any third party other than as provided herein with respect to the Engineer, except with the advance written permission of the Deputy Assistant Secretary.
 - B. **Escrow Account.** The Funds shall be held in an interest-bearing escrow account (the “Escrow Account”) as provided herein.
 - C. **Management of Funds.** The Escrow Administrator shall, in accordance with this Agreement, hold, invest and disburse the Funds. PAE must select one of the following, depending on whether the REA elects to follow either HUD or Ginnie Mae investment procedures:
 - i. (If applicable) The Escrow Administrator agrees that pending disbursements, the Funds shall be invested pursuant to the terms and conditions of Ginnie Mae 5500.3 Rev.1, and any revisions thereto.
 - ii. (If applicable) The Escrow Administrator agrees that pending disbursements, the Funds shall be invested solely in obligations of, or fully guaranteed as to principal by, the United States of America.
 - iii. (If applicable) The Escrow Administrator agrees that, pending disbursements, the funds shall be invested in a demand, savings, or money market account in a Federally insured bank, savings and loan or credit union, and that at all times when the Funds exceed \$ 100,000 Administrator shall maintain evidence, updated not less than quarterly, that the depository institution meets or exceeds minimally acceptable ratings standards published by Ginnie Mae for depositories of custodial escrow accounts.

Any and all interest earned on the Funds shall be added to and made a part of the Funds held in the Escrow Account. The Owner shall provide its tax identification number to the PAE and Escrow Administrator, and the Owner’s tax identification number will be used for reporting of any interest earned on the Funds.

- D. **Secretary's Security Interest.** To secure the Owner's obligations under this Agreement, the Owner hereby grants a security interest in the Funds to the Secretary. PAE selects one of the following, depending on whether the REA can establish the account in the name of the Secretary of HUD (the preferred method) or in the name of the REA as Agent for the Secretary or will use a Deposit Control Agreement. (To perfect such security interest, the Escrow Account shall be titled in the name of the Secretary); (To perfect such security interest, the Escrow Account shall be titled in the name of the Escrow Administrator as Agent for the Secretary of the U.S. Department of Housing and Urban Development for the benefit of [name of property]); (To perfect such security interest, the parties will execute a Deposit Control Agreement in a form acceptable to the Deputy Assistant Secretary) OR (The Escrow Administrator certifies that the Escrow Account will be titled in accordance with the terms and conditions of Ginnie Mae 5500.3 Rev.1, and any revisions thereto).
5. **Deposits into Escrow For Repairs.** The parties hereto agree that the following amounts shall be deposited to the Escrow Account as provided below: Generally, the escrow will be funded at 110% (or higher percentage determined by the PAE) of the estimated cost of the repairs; see also OPG Section 4-10.E. Generally, 20% of the total will be funded by the owner (unless 'significant additions' or "Green repairs" are involved), with the balance funded from the new 1st mortgage. If there is no takeout 1st mortgage, typically the owner will have to fund the entire amount.
- A. **Owner Contribution.** The sum of [owner amount], to be deposited by the Owner on or before the date of the Mark-to-Market closing (the "Closing Date").
- B. **Additional Owner Contribution.** If at any time, the Escrow Administrator determines, in its sole and absolute discretion, that the remaining Funds may be insufficient to complete the remaining Repairs, the Escrow Administrator may require the Owner, and the Owner hereby agrees, to deposit in the Escrow Account, such additional amounts as the Escrow Administrator may determine, in its sole and absolute discretion. The Owner shall deposit to the Escrow Account such additional funds as required by the Escrow Administrator within ten (10) days of the Escrow Administrator's written request for such additional funds. Until the Owner deposits such additional amounts, the Escrow Administrator may, in its sole and absolute discretion and notwithstanding any other provisions of the Agreement, withhold its approval for the release of Funds from the Escrow Account.
- C. **New Loan Proceeds.** The sum of [amount from takeout loan], to be deposited on the Closing Date, representing that portion of the proceeds from a new first mortgage loan that are intended for repairs and/or rehabilitation.
- D. **If applicable. Describe other funds if any.**
- E. **Escrow Account Balance.** All funds deposited into the Escrow Account from every source, including accrued interest pursuant to Paragraph 4(C), become part of the

Funds, and without regard to their original source are considered available for release to pay for the cost of Repairs, additional repairs if approved by the Deputy Assistant Secretary, or shall become Surplus Funds, as discussed in Paragraph 9.B., pursuant to all other relevant terms and conditions contained herein.

- F. **If applicable. Additional Source of Funds Outside of this Agreement (Additional Funds, HOME Grants, etc).** The Repairs required by this Agreement may coincide with additional rehabilitation or improvements, **IN THE AMOUNT OF**, which will be funded by **NAME OF SOURCE**. The additional rehabilitation is secondary to the Escrow Account Repairs. Accordingly, any repairs or improvements outside this Agreement shall be scheduled so as to not interfere or impede completion of the Escrow Account Repairs within the prescribed time frame.

6. **Administration and Inspection.**

- A. **Fees.** On the Closing Date an Escrow Administrator Fee in the amount of **amount** shall be paid to the Escrow Administrator, by or at the direction of the PAE and Deputy Assistant Secretary. **This fee may not include interest earned on the Funds. This fee includes any amounts needed to pay the Engineer. This fee is listed as "Rehab Escrow Admin Costs" on the Sources & Uses page of the Underwriting Model. Neither fee may include interest earned on the Funds.** The Escrow Administrator agrees to perform all of its duties hereunder (including engaging and paying the Engineer) in exchange for the Escrow Administrator Fee.
- B. **Inspections.**
- i. All inspections shall be made by an inspector who has been selected by the Escrow Administrator. The inspector must meet the qualification requirements specified for Physical Condition Assessment Contractors in **Appendix I of the Mark-to-Market Operating Procedures Guide** (the "Engineer"), or other alternative qualification requirements issued in writing by the Deputy Assistant Secretary.
 - ii. Except as expressly provided otherwise herein, no Funds shall be released from the Escrow Account until and unless:
 - a. the Engineer has performed an inspection and certified to the Escrow Administrator that the Repairs for which payment is sought have been completed in accordance with Exhibit A to the satisfaction of the Engineer; and
 - b. all other conditions for release have been satisfied.
 - iii. **OPTIONAL. If desired, for Repair items requiring in-process inspections.** The following Repair items will require one or more periodic inspections prior to completion: **describe.**
 - iv. **OPTIONAL. If desired, for Repair items that can be paid without pre-inspection (e.g., the PAE may decide that replacement of appliances can be reimbursed without the need for an on-site inspection in advance of reimbursement). Also can be used to provide for a pre-completion**

installment payment (e.g., to cover cost of materials). The Escrow Administrator may approve payment for the following Repair items prior to inspection, based upon receipt of the following evidence, satisfactory to the Escrow Administrator: describe. For post-completion / pre-inspection payments, generally should require evidence of completion, evidence of installation in the project, and evidence of payment. Should provide for inspection on the next regularly scheduled inspection visit. This allows for fewer inspection trips but still assures that the Repairs were completed. For pre-completion installment payments, should specify timing and amount of the payment, and documentation required before payment will be made.

- C. The Escrow Administrator agrees to pay all fees and costs of the Engineer, from sources other than the Escrow Account.

7. **Owner's Agreement to Complete Repairs.** The Owner represents and warrants that the amounts set forth in paragraph 5 above are adequate to complete the Repairs. The Owner further covenants and agrees as follows:

- A. **Agreements With Contractors.** To submit to the Escrow Administrator, on or before date, proposed binding agreements for the Repairs, approved by the PAE and be no more than six months old prior to Closing. Select one of the following, depending on whether IOI contractors will not (item i) or may (item ii) be allowed.
 - i. **If applicable.** The Owner shall not enter into agreements with any contractors, materialmen, and/or suppliers ("Contractors") that have any "Identity Of Interest" with the Owner (as that term may be defined from time to time by the Deputy Assistant Secretary), hereinafter "Identity Of Interest Contractors".
 - ii. **If applicable.** If any proposed contractors, materialmen, and/or suppliers ("Contractors") have any "Identity Of Interest" with the Owner (as that term may be defined from time to time by the Deputy Assistant Secretary), any fees paid to such parties must be reasonable, as determined by the Escrow Administrator after consulting with the PAE and Deputy Assistant Secretary, not in excess of fees that would be charged by non-identity of interest Contractors for the same or similar work. For example, the Escrow Administrator could require two or three non-IOI (arms-length) bids. Also, Escrow Administrators should feel free to reject any IOI proposals with costs that exceed the line-item estimates provided by the PAE (and agreed to by the owner as part of the Restructuring Plan).
- B. **Completion of Repairs.** To complete the Repairs as set forth in Exhibit A, attached hereto and made a part hereof, to the satisfaction of the Engineer. All Repairs shall be done in a good and workmanlike manner, in strict conformity with the drawings and/or specifications contained in Exhibit A, shall be subject to written approval of the Deputy Assistant Secretary, shall be completed free and clear of any mechanics' liens and encumbrances, and shall be made strictly in accordance with all applicable ordinances and statutes and in accordance with the requirements of all regulatory

authorities and any rating or inspection organization, bureau, association or office having jurisdiction over the Project.

- C. **Completion By Date Certain.** To complete the Repairs no later than **date generally not to exceed 12 months after closing**, and otherwise in accordance with any timelines specified in Exhibit A (collectively, the “Schedule”).
 - D. **Extension of Schedule Requires Consent of the Parties.** That the Schedule or any part thereof may be extended only with the prior written consent of all parties to the Agreement. The Deputy Assistant Secretary shall bear the sole authority for approval or denial of extension requests.
 - E. **Modification of Repairs List Requires Consent of the Parties.** That Exhibit A may be modified only with the prior written consent of all parties to the Agreement. The Deputy Assistant Secretary shall bear the sole authority for approval or denial of modifications to Exhibit A.
 - F. **Owner Responsible for Permits and Approvals.** That the Owner has obtained or will obtain and pay for, prior to commencement of any Repairs, all necessary permits and approvals from all agencies or authorities as necessary for the commencement and completion of the Repairs.
 - G. **Owner Responsible for Cost of Repairs.** To pay all costs necessary for completion of the Repairs without regard to the sufficiency of Funds in the Escrow Account.
8. **Green Environmental Repairs.** **If not applicable, the paragraph heading shall remain but is to be marked “Not Applicable” and omit the remainder of the paragraph.** The Owner has agreed to complete certain Repairs, as outlined in Exhibit A, utilizing products, building materials, installation methods and/or specifications that conform with “Green” environmental standards. “Green” repairs are identified as such in the attached Exhibit A.
- A. The Restructuring Commitment provided for a reduction in the Owner’s statutory 20% capital contribution to **3% or 10%** for qualifying “Green” Significant Additions. If the Owner is subsequently unable or unwilling, or otherwise fails to complete the “Green” rehab to the satisfaction of the Rehabilitation Escrow Administrator, Owner agrees to remit the remainder of the statutory capital contribution (**10% or 17%** of the original capital cost estimate as listed in Exhibit A) pursuant to the direction of the Secretary for each such incomplete “Green” rehab item.
 - B. To ensure compliance and replacement with like products in future years, the Owner will be required to submit a certification to the Project Manager with each Replacement Reserve request, that the products, building materials, and installation methods utilized to replace Green components continue to meet Green standards.
9. **Withdrawals from Escrow Account.**

- A. **Timing of Applications for Withdrawals.** The Owner may make written applications to the Escrow Administrator for withdrawals of Funds from the Escrow Account no more frequently than once in each calendar month. Each application shall be made at least **number**¹ business days prior to the date the withdrawal is desired.
- B. **Amount Withdrawn.** The Owner shall be entitled to only such amounts as may be approved in writing by the Escrow Administrator in accordance with the provisions hereof.
- C. **Events of Default.** Upon receipt of notice of the occurrence of an Event of Default (defined below), the Escrow Administrator shall issue no further approvals for disbursements of Funds, and the Escrow Administrator shall make no further withdrawals, until and unless so instructed by the Deputy Assistant Secretary.
- D. **Owner's Request for Withdrawal.** At such times as the Owner requests a withdrawal, the Owner shall furnish to the Escrow Administrator:
- i. If requested by the Escrow Administrator, with the Owner's first request for withdrawal, and at the Owner's sole cost and expense, evidence satisfactory to the Escrow Administrator that the lien waivers to be submitted pursuant to this Agreement shall be enforceable on their terms. The Escrow Administrator may rely on a combination of legal opinions, title updates or title insurance endorsements in order to confirm the foregoing. **OAHP expects that Escrow Administrators will not need this unless they have not recently administered an escrow in the same jurisdiction.**
 - ii. A request signed by the Owner seeking disbursement from the Escrow Account of specified amounts for designated Contractors.
 - iii. Owner's signed statement that no Event of Default has occurred, and that no event that, with the passage of time, the giving of notice, or both, will constitute an Event of Default, has occurred.
 - iv. Owner's sworn statement. Each such statement shall list, for each contract and in total, the amount paid to date, amount currently requested, and remaining balance. Each such statement shall include a listing of the various contracts entered into by the Owner and setting forth the names of Contractors, their addresses, type of work or materials to be furnished, and amounts of the contracts, and identifying any Identity Of Interest Contractors.
 - v. Supporting waivers, affidavits, releases of liens and material waivers (if applicable) for Repairs made and/or materials provided since the last withdrawal

¹ Time frame needs to allow time to order the inspection, complete the inspection, receive the inspection report, review and cure deficiencies, and approve and issue checks. Experienced PAEs advise that this process routinely takes twenty to thirty days.

and paid for from funds other than the Escrow Account.

- vi. From each Contractor, an acknowledgment of payment and release of lien for work performed and/or materials provided since the date of the prior withdrawal of Funds. Such acknowledgement and release shall be prepared in the form required by local lien laws and shall cover all work done, labor performed and materials (including equipment and fixtures) furnished for the Project. In addition, if the filing, in the public records of the county in which the Project is located, of this Agreement and/or the construction contracts or subcontracts under which the Repairs are to be completed will relieve the Project from mechanics' and materialmen's liens, the Owner shall cause such instrument(s) to be so filed and certified copies evidencing such filing to be provided to the Escrow Administrator prior to any request for disbursement of Funds from the Escrow Account.

E. Withdrawals.

- i. Except as otherwise expressly provided herein, withdrawals for Repairs shall not be made from the Escrow unless such Repairs have been inspected in accordance with this Agreement and the Escrow Administrator shall have obtained a lien release from the party receiving the funds covering all work and materials through the date of payment.
- ii. The Funds shall be withdrawn from the Escrow Account based on the actual invoices of Contractors for materials and equipment or services actually provided, less a ten percent (10%) holdback (the "Holdback Amount").
- iii. The Holdback Amount shall be held in the Escrow Account until all of the Repairs have been completed to the satisfaction of the Escrow Administrator pursuant to the terms of this Agreement and either:
 - a. the Escrow Administrator has received final and enforceable lien waivers from all parties who supplied materials or labor pursuant to this Agreement; or
 - b. the time for the filing of any liens resulting from the Repairs has passed and no liens or notices thereof have been filed. The Escrow Administrator may rely on a combination of legal opinions, title updates or title insurance endorsements (to be provided by the Owner at the Owner's sole cost and expense) in order to confirm the foregoing.
- iv. The Escrow Administrator shall make all checks issued on the Escrow Account payable as follows:
 - a. To the Owner, but only if the Owner has provided to the Escrow Administrator acceptable proof that the Owner has paid the respective

Contractor to whom payment is due.

- b. Otherwise, jointly to the Owner and the respective Contractor to whom payment is due.
 - v. If the Owner fails to submit a request for withdrawal, satisfactory to the Escrow Administrator, within forty-five (45) days after the corresponding Repairs have been inspected by the Engineer; or the Owner fails to submit a request for release of the Holdback Amount, satisfactory to the Escrow Administrator, within forty-five (45) days after completion of the Repairs, then the Escrow Administrator shall, within ten (10) calendar days after receipt of notice from the Deputy Assistant Secretary or Secretary, pay all Funds held in the Escrow Account as directed by the Deputy Assistant Secretary or Secretary, which may result in the Funds being applied as a principal reduction on the HUD-held Mortgage Restructuring Note or Contingent Repayment Note, or deposited to the HUD Special Miscellaneous Income Account if HUD does not hold a Mortgage Restructuring Note or Contingent Repayment Note.
- F. **Notice of Default.** Upon written notice by any party to the Agreement to the Escrow Administrator of an Event of Default, the Escrow Administrator shall authorize no further disbursements from the Escrow Account unless so instructed by the Deputy Assistant Secretary.

10. **Deficit or Surplus Escrow Funds.**

- A. **Deficit Funds.** If the cost of completing the Repairs exceeds the amount available in the Escrow Account, the Owner must complete the Repairs using funds from non-project sources.
- B. **Surplus Funds.** If, after the Repairs are completed and paid for, Funds remain in the Escrow Account, the Escrow Administrator shall cause such funds to be remitted as directed by the Secretary in writing, typically as a principal reduction on the Mortgage Restructuring Note held by HUD. If HUD does not hold a Mortgage Restructuring Note, but does hold a Contingent Repayment Note, the funds will be applied to that note as a principal reduction. If HUD does not hold either a Mortgage Restructuring Note or a Contingent Repayment Note, the funds will be paid to HUD's Miscellaneous Income account. No Surplus Funds may be disbursed to the owner or to the project operating account. Generally the OAHF office will decide how surplus funds will be applied. No surplus funds may be disbursed to the owner or to the project operating account, because generally HUD has indirectly paid for all rehab escrow funds, either through a larger claim or through Capital Recovery Payments.
- C. **Event of Default.** If, after the Repairs are completed and paid for, Funds remain in the Escrow Account, and if an Event of Default has occurred, or Default Remedies were imposed pursuant to HUD guidance, the Escrow Administrator shall cause any

such Surplus Funds to be remitted to HUD, for application to the Mortgage Restructuring Note, Contingent Repayment Note, FHA Miscellaneous Income account, or as otherwise determined by the Deputy Assistant Secretary.

11. **Right of Entry.** The Escrow Administrator, the Engineer, the Deputy Assistant Secretary, and their agents shall, at any and all reasonable times, have the right to enter the Project to inspect all Repairs done, materials, equipment and fixtures furnished, installed or stored in or about the Real Property, and to inspect all books, subcontracts and records of the Owner whether or not located at the Project.
12. **Events of Default.** It shall be deemed a default by the Owner under this Agreement (“Event of Default”) if:
 - A. **Owner Stops Work.** The Owner abandons, ceases, or otherwise allows or suffers work thereon to stop prior to completion for a period of more than **number²** consecutive calendar days, without the written concurrence of the Escrow Administrator; or
 - B. **Failure to Complete.** The Owner fails to complete or prosecute the Repairs continually and in good faith in a workmanlike manner and in accordance with the Schedule; or
 - C. **Liens or Encumbrances.** The Owner allows or suffers a mechanic's or materialman's lien or other encumbrance to be filed against the Project (unless such mechanic's lien is removed of record or its payment is otherwise assured to the satisfaction of the Escrow Administrator within thirty (30) days after filing); or
 - D. **Material Misrepresentation.** The Owner makes a material misrepresentation to one or more parties to the Agreement; otherwise fails to comply with the terms of this Agreement; or is in default, beyond any applicable cure period, under any agreement between the Owner and the Deputy Assistant Secretary and/or the Secretary executed pursuant to the Restructuring Commitment.
13. **Remedies Upon An Event of Default.**
 - A. **If there is an insured or HUD Held 1st mortgage. Property is Subject to an FHA-Insured or HUD-Held First Mortgage Regulatory Agreement.** Any Event of Default hereunder shall constitute a failure to maintain the Property consistent with the requirements of the Regulatory Agreement between the Owner and Deputy Assistant Secretary on behalf of the Secretary executed pursuant to the Restructuring Commitment.
 - B. **If there is a project based HAP. Property is Subject to a Project-Based Section 8 HAP Contract.** Any Event of Default hereunder shall constitute a failure to maintain

² Insert appropriate time period, based on type and extent of repairs.

the Property consistent with the requirements of any Section 8 Housing Assistance Payments Contract between the Owner and the Secretary.

- C. **Property is Subject to a Mortgage Restructuring Note.** Any Event of Default hereunder shall constitute a failure to materially comply with requirements of the Multifamily Assisted Housing Reform and Affordability Act of 1997, and shall be deemed to be a default under the documents that evidence or secure the Mortgage Restructuring Note between the Owner and the Deputy Assistant Secretary on behalf of the Secretary executed pursuant to the Restructuring Commitment.
- D. **If there is a CRN. Property is Subject to a Contingent Repayment Note.** Any Event of Default hereunder shall constitute a failure to materially comply with requirements of the Multifamily Assisted Housing Reform and Affordability Act of 1997, and shall be deemed to be a default under the documents that evidence or secure the Contingent Repayment Note between the Owner and the Deputy Assistant Secretary on behalf of the Secretary executed pursuant to the Restructuring Commitment.
- E. **Notice From the Deputy Assistant Secretary or Secretary.** If the Deputy Assistant Secretary or Secretary so requests in writing, the Escrow Administrator shall, within ten (10) calendar days after receipt of notice from the Deputy Assistant Secretary/Secretary, pay all Funds held in the Escrow Account as directed by the Deputy Assistant Secretary or Secretary.
- F. **Completion of Repairs After an Event of Default.** If an Event of Default occurs, the Secretary shall have the right, but not the obligation, to proceed to complete said work in accordance with the Drawings and Specifications, if applicable, and pay the cost thereof from the Funds tendered to it by the Escrow Administrator. For this purpose the Owner hereby irrevocably authorizes and empowers the Secretary to do and perform for it, the said Owner and in its name, place and stead, with full powers of substitution, all matters and things which the Secretary shall in its sole judgment deem necessary and proper to be done to effectuate the completion of the said repairs and/or rehabilitation in accordance with Exhibit A, and to apply the Funds to the payment of debts contracted or incurred for work done or for materials furnished therefor, or either, in and about said work and for all expenses, costs and charges in connection therewith, and this power of attorney shall be the Secretary's full and sufficient authority, and the orders given and signed by the Secretary as attorney-in-fact for the Owner shall be good and sufficient vouchers for all payments made by virtue thereof. Further, in such event the Owner hereby irrevocably authorizes and empowers the Secretary to enter into and upon the said Project and take charge thereof together with all materials and appliances thereunto belonging, and in the name of the Owner, as attorney-in-fact, to call upon and require the several Contractors for work to be done and for materials to be furnished in and about the completion of said improvements to proceed to complete the said improvements in accordance with Exhibit A, and to do whatsoever in the Secretary's judgment shall be necessary to be done to secure the completion of the said improvements according to

Exhibit A. The Secretary shall in no event be responsible for the completion of the said work beyond the expenditure of the sum herewith deposited and if said sum is insufficient for such purpose the Secretary shall be under no obligation to proceed further or to demand or obtain additional sums from the Owner. This power of attorney is granted with full power of substitution and the Owner hereby specifically agrees that all powers granted to the Secretary hereunder may be assigned by it to the Deputy Assistant Secretary or to the PAE. The PAE would not be obligated to accept this assignment, or to step in and complete repairs, unless the Secretary and the PAE agreed on the terms (including compensation) under which the PAE would carry out that work.

- G. **Remedies Cumulative and Concurrent.** The rights and remedies of the Secretary as provided in this Agreement shall be cumulative and concurrent with any other right or remedy the Secretary may have under this Agreement or otherwise, and may be pursued separately, successively or together against the Owner at the sole discretion of the Secretary, and may be exercised as often as occasion therefore shall arise. The failure to exercise any such right or remedy shall in no event be construed as a waiver or release thereof.

14. **Obligations and Liability of Escrow Administrator.**

- A. The Escrow Administrator shall not be required to take any action hereunder without compensation or indemnity provided with respect to such action.
- B. The Escrow Administrator shall be entitled to request the advice of the PAE, and/or Deputy Assistant Secretary with respect to any matter or issue arising hereunder concerning which the Escrow Administrator is required to make final determination and the Escrow Administrator shall not be required to take any action hereunder before receiving such advice in writing.
- C. The Escrow Administrator shall be entitled to rely on the authenticity, truth and accuracy of all documents transmitted to it in connection with the performance of its duties hereunder and shall not be required to undertake any independent due diligence to determine such authenticity, truth or accuracy.
- D. The Escrow Administrator shall have no liability for the performance of its duties hereunder except with regard to its own negligence or default.
- E. The Escrow Administrator must not fail to process any Owner's request, including but not limited to inspection and reimbursement, in a timely manner unless directed by the Deputy Assistant Secretary and subject to paragraph 8.E.v. and 8.F.
- F. The Escrow Administrator will provide a monthly online accounting of the progress of work completed, Funds disbursed, and owner's plans for completing the work, utilizing the OAHP Resource Desk or such other means as directed by the Deputy Assistant Secretary, and, as called upon, direct communication with OAHP.

- G. Upon completion of the work, acceptance of the final inspection, and reimbursement of the last invoice, the Escrow Administrator will follow OAHP's procedures for closing out the escrow account.
 - H. Upon closing of the Rehab Escrow Account, the Escrow Administrator will retain all file materials for two years (the "Retention Period") after the date the escrow closed, in a manner as outlined in OAHP's procedures. At expiration of the retention period, the Escrow Administrator will dispose of the file as outlined in OAHP's procedures or as otherwise directed by the Deputy Assistant Secretary.
15. **Instructions From the Deputy Assistant Secretary Final.** In the event of any dispute regarding the terms of the Agreement, the Escrow Administrator shall be entitled to rely upon any written instructions provided by the Deputy Assistant Secretary notwithstanding receipt of contradictory instructions from any other party.
16. **Amendment.** This Agreement may not be modified except by an instrument in writing executed by each of the parties hereto.
17. **Controlling Provisions.** This Agreement shall be governed by all applicable federal laws, the laws of the state in which the Project is located, and all applicable regulations. In the event of a conflict between the terms and conditions of this Agreement and applicable law or regulations, the applicable law or regulations shall control.
18. **Severability.** Notwithstanding anything herein contained, if any one or more of the provisions of this Agreement shall for any reason whatsoever be held to be illegal, invalid or unenforceable in any respect, such illegality, invalidity or unenforceability shall not affect any other provision of this Agreement, but this Agreement shall be construed as if such illegal, invalid or unenforceable provision had never been contained herein.
19. **Counterparts.** This Agreement may be executed in any number of counterparts, all of which counterparts shall be construed together and shall constitute but one agreement.
20. **Successors and Assigns.** This Agreement shall be binding upon and inure to the benefit of the successors and permitted assigns of the parties. The Deputy Assistant Secretary and the Secretary may assign any or all of their rights and responsibilities under this Agreement. The other parties to this Agreement may not assign this Agreement unless the Secretary has given prior written approval.
21. **No Third Party Beneficiaries.** The parties agree that there are no third party beneficiaries of the Agreement.
22. **Notice to the Parties.** The parties agree that correct address and email information appears below. The parties further agree to notify the remaining parties in the event of a change in the address or email information. The parties further agree that effective notice may be provided to a party by posting a written correspondence in the U.S Mail to the address listed

below or as updated.

OWNER:

Name of ownership entity
a name of state limited/general partnership or corporation

Address:

Email Address:

REHABILITATION ESCROW ADMINSTRATOR (“REA”)

Name of ownership entity
a name of state limited/general partnership or corporation

Address:

Email Address:

PARTICIPATING ADMINISTRATIVE ENTITY (“PAE”)

Name of ownership entity
a name of state limited/general partnership or corporation

Address:

Email Address:

PRESERVATION OFFICE DIRECTOR

Name:

Address:

Email Address:

REHABILITATION ESCROW ADMINISTRATION MANAGER

Name:

Address:

Email Address:

IN WITNESS WHEREOF, the parties hereto have caused this Rehabilitation Escrow Deposit Agreement to be executed and made effective as of the date first above written.

WITNESS:

OWNER:

Name of ownership entity
a name of state limited/general partnership or corporation

By: _____

Name: _____

Title: _____

WITNESS:

ESCROW ADMINISTRATOR:

Name of Escrow Administrator
a name of state corporation

By: _____

Name: _____

Title: _____

WITNESS:

DEPUTY ASSISTANT SECRETARY OF OFFICE OF AFFORDABLE HOUSING PRESERVATION:

By: _____

Name: name of Preservation Office Director

Title: Preservation Office Director

Authorized Agent

WITNESS:

PARTICIPATING ADMINISTRATIVE ENTITY:

a Name of PAE
name of state corporation or [describe state or local governmental entity]

By: _____

Name: _____

Title: _____

EXHIBIT A

INSERT THE NEW EXHIBIT A - EXCEL SPREADSHEET

DETAILED SCHEDULE OF REPAIRS

List Repair items, and estimated costs, in sufficient detail to identify exactly what work is to be done. Experienced PAEs recommend listing cost, contingency, and portion contributed by the owner for each line item, because this helps the Escrow Administrator understand the transaction.

Suggest attaching an Exhibit B, the PCA/PNA pages that outlines and explains the Rehab work, where it's located, why it is to be done, etc., when the PCA/PNA pages are detailed enough to aid in the administration of the work.

Attach appropriate specifications, drawings and other supporting information. Use Column E for providing the detailed specifications, materials, installation techniques, etc that may apply to complex rehabilitation, such as Green Technology, LBP Abatement, or just extensive rehabilitation. It is highly recommended that the detailed description also include unit numbers, or building numbers, or specific descriptions of the location of the repairs such that an inspector can immediately locate and inspect same. If maps or drawings will be attached, number them appropriately and reference them in Exhibit A.

Include any additional provisions regarding schedule and timeline. Experienced PAEs recommend asking the owner to propose a timeline, by repair item, showing when inspections will be needed and when draw requests are anticipated to be sent. After approval by the PAE, this timeline can be included in this Exhibit A.

Specify how many draws are anticipated, and at what points inspections and draws are anticipated to occur. PAEs should make owners aware that it will not be possible to increase the number of inspections and draws after the rehab escrow agreement has been executed. OAHP suggests that it is generally reasonable to provide for only one draw for escrows of \$10,000 or less, and that it is generally reasonable to require that draws be for amounts of at least \$10,000. Note also that the Agreement prohibits more than one draw per month.

Show the total for repairs and total for contingency. The sum of these should agree with the amounts in paragraph 5.

If this is an additional funds transaction, identify all Repairs that are required by OAHP (for example, items not functional on the date of the PCA, and market-comparable upgrades necessary to support OAHP's market rent determination). The purpose is to enable the Escrow Administrator to distinguish between these OAHP-required Repairs and other Repairs included at the request of additional funds providers or included voluntarily by the Owner.

ATTACHMENT 8: GREEN ADVISORY GUIDANCE (For Green Fixed and Variable Significant Additions)

PAEs are encouraged to consider this advisory guidance when developing the recommendations for Green Fixed and Variable Significant Additions.

FIXED

1. **Shower Heads and High-Efficiency Toilets:** Consider a maximum 2.5 gallons per minute for shower heads. Consider high efficiency toilets (1.3 gallons per flush). Source: EPA's Watersense program (www.watersense.gov).
2. **Insulation:** For identified insulation upgrades and improvements, consider formaldehyde-free fiberglass batt insulation or 100% borate-based cellulose insulation (avoid ammonium sulfate-based products); install so that there are no gaps, voids, wind intrusion or compression of the insulation. The insulation and the air barrier (e.g. sheetrock) should be continuous and aligned. Consider insulation levels that meet or exceed IECC 2006 required R-values.
3. **Water Heaters:** Consider hot water heaters with a minimum Energy Factor of 0.61 or a water heater with an EF of 0.58 with an insulating blanket of R12. Source: EnergyStar web site.

VARIABLE

4. **Kitchen and Bath Exhausts:** Consider adequate ventilation by meeting minimum requirements in sections 4-7 of ASHRAE 62.1-2004.
5. **Flooring (other than carpet):** Consider natural linoleum for resilient flooring. Instead of conventional hardwood flooring, consider Forest Stewardship Council (FSC) certified, reclaimed or engineered wood, cork, or bamboo. Consider installing as a glueless floating floor or glue with a low- or no-VOC adhesive. Consider factory-applied finishes, or seal with a low- VOC product.
6. **Flooring (carpet):** In common areas, consider commercial-grade carpet with recycled content and low VOC emissions. In residential units, consider natural fiber carpet or recycled-content synthetic fiber carpet. If a carpet underlay is needed, consider a high recycled-content product with low VOC emissions.
7. **Roof:** Consider roofing materials that are durable, lasting 40-50 years that minimizes rooftop temperatures. For low-slope or flat-roof buildings located in urban areas or where air conditioning is necessary, cool roofing materials should be considered. Cool roof materials typically have a reflectance greater than 0.75 and emittance greater than 0.70. (An exception is concrete and clay tile roofing materials, where reflectance must be greater than 0.75, and emittance must be greater than 0.40, to qualify as 'cool roof' materials).

8. **Cabinet Boxes:** Consider medium-density fiberboard (MDF) with no added urea formaldehyde, or exterior grade plywood and totally seal all edges. For cabinet faces, consider solid wood, preferably reclaimed, reused or FSC-certified. Otherwise, consider seal the edges of the cabinets.
9. **Trim:** generally recommended if feasible at reasonable cost and if owner concurs; consider composite material with no added urea formaldehyde, consider recycled plastic or FSC-certified wood. Consider durable wainscoting, chair rails, and corner guards to protect walls from damage and to reduce maintenance requirements.
10. **Air and Thermal Barriers:** Consider the following advisory guidance -
 - a. Attic hatches should be weatherstripped and insulated with foam or fiberglass batts.
 - b. Any penetrations should be sealed and air pathways from the attic to conditioned spaces should be blocked.
 - c. Shared walls and ceilings between attached garages and living spaces should be sealed.
 - d. Consider using interior gypsum board, exterior sheathing, or both as a continuous air flow retarder. Exterior stucco may also serve as an air flow retarder.
 - e. Caulk around window and door woodwork, sealing where the frame meets the wall and all other joints in the window woodwork with a clear sealant.
 - f. Seal around all ceiling fixtures, heat registers, medicine cabinet, bath tub, kitchen cabinets, drain and water pipes where they enter the wall in the kitchen and bath, and any other interior or exterior wall penetrations.
 - g. Weatherstrip windows and doors.
 - h. Install storm windows on all single-glazed windows.
 - i. Insulate ducts located in unconditioned spaces to at least R-6.
 - j. Seal ducts so that duct leakage to outdoors is = 4 CFM per 100 square feet.
11. **Blinds and Window Coverings:** Interior blinds or window coverings with exterior shading for all windows— either awnings or trees to block solar gain; consider exterior shading near windows, particularly east and west facing.
12. **Refrigerants:** Zero use of CFC-based refrigerants in new base building HVAC&R systems— recommended to reduce ozone depletion. When reusing existing base building HVAC equipment, consider completing a comprehensive CFC phase-out conversion prior to project completion.
13. **Buy Local:** Consider locally & regionally (less than 500 miles) manufactured, harvested, or assembled products to reduce transportation impact and improve local markets.
14. **Reclaimed/Reused Materials:** Consider using reclaimed & reused materials or materials with recycled content whenever possible, such as brick, framing lumber, recycled concrete and aggregates, recycled gypsum board, and fly ash concrete.

ATTACHMENT 9: COMBINED HEAT AND POWER (CHP) OVERVIEW

From the U.S. Environmental Protection Agency (www.epa.gov/chp)

What is CHP?

[Combined heat and power \(CHP\)](#), also known as cogeneration, is an efficient, clean, and reliable approach to generating power and thermal energy from a single fuel source. By installing a CHP system designed to meet the thermal and electrical base loads of a multifamily property, CHP can greatly increase the facility's operational efficiency and decrease energy costs. At the same time, CHP reduces the emission of greenhouse gases, which contribute to global climate change.

CHP is not a single technology, but an **integrated energy system** that can be modified depending upon the needs of the energy end user. It provides:

- **Onsite generation** of electrical and/or mechanical power.
- **Waste-heat recovery** for heating, cooling, dehumidification, or process applications.
- **Seamless system integration** for a variety of technologies, thermal applications, and fuel types into existing building infrastructure.

What is the process to determine if a property is suitable for CHP?

(<http://www.epa.gov/chp/project-development/index.html>)

Stage 1: Qualification

Goal: Determine whether CHP is worth considering at a candidate facility (see page 2)

Timeframe: 30 mins

Cost: none

Stage 2: Level 1 Feasibility Analysis

Goal: Identify project goals and potential barriers. Quantify technical and economic opportunities while minimizing time and effort. Use the attached "Calculating Preliminary Feasibility for Installing Combined Heat and Power in an Apartment Building".

Timeframe: 1-4 weeks

Cost: \$0 to \$5,000

Stage 3: Level 2 Feasibility Analysis

Goal: Optimize CHP system design, including capacity, thermal application, and operation. Determine final CHP system pricing and return on investment.

Timeframe: 1-4 months

Cost: \$0 to \$10,000

Stage 4: Procurement

Goal: Build an operational CHP system according to specifications, on schedule, and within budget.

Timeframe: 3-12 months

Cost: \$2,000 to \$4,000 per kilowatt installed

Stage 5: Operations and Maintenance

Goal: Maintain a CHP system that provides expected energy savings and reduces emissions by running reliably and efficiently.

Timeframe: Ongoing

Cost: \$0.015/kilowatt-hour (kWh) - \$0.02/kWh for maintenance, depending on type of equipment and operations and maintenance (O&M) procurement approach; possible cost for energy consultant to negotiate fuel purchase, depending on system size and in-house capabilities.

COMBINED HEAT AND POWER (CHP) CHECKLIST

- 1. Does your building have an existing central plant and master metering?
- 2. Does your property contain 80 or more multifamily apartments?
- 3. Do you pay more than \$.07/ kilowatt-hour on average for electricity (including generation, transmission, and distribution)?
- 4. Is your facility located in a deregulated electricity market?
- 5. Does your facility operate for more than 5,000 hours/year?
- 6. Do you have thermal loads throughout the year (including steam, hot water, chilled water, hot air, etc.)?
- 7. Do you expect to replace, upgrade, or retrofit central plant equipment within the next 3-5 years?

If you checked at least the first three boxes, your property may be suitable for a CHP system. Consider completing the HUD Feasibility Screening software (available at [http://eber.ed.ornl.gov/HUD CHP guide version 2d](http://eber.ed.ornl.gov/HUD_CHP_guide_version_2d)). If the payback is under 10 years, recommend considering a second level, more detailed feasibility analysis.



CALCULATING PRELIMINARY FEASIBILITY FOR INSTALLING COMBINED HEAT AND POWER IN AN APARTMENT BUILDING

The U.S. Department of Housing and Urban Development (HUD), the Department of Energy (DOE) Oak Ridge National Laboratory and the eight DOE Regional Application Centers have an initiative to promote the use of combined heat and power (CHP) in apartment buildings. The average efficiency of the fossil-fueled central power generating plants in the U.S. is around 33% and has remained virtually unchanged for 40 years. This means that two-thirds of the energy in the fuel is lost as heat. CHP systems generate electricity at the apartment building, recycle waste heat and convert it to useful energy. They can achieve overall efficiencies higher than 80% without transmission losses. The value of that heat is what drives the economics for using CHP.

CHP can significantly reduce a multi-family building's annual energy costs. Instead of buying all the building's electricity from a utility and separately purchasing fuel for its heating (mechanical) equipment, most—or even all—of the electricity and heat can be produced for less money by a small power plant in the building operating at a higher combined efficiency. CHP can help relieve grid congestion and can improve the environment by reducing emissions. The recent ICPP report recognized CHP as “one of the leading responses to climate change currently commercially available”.

The type of CHP system commonly installed in multi-family housing uses a package that contains a gas-fired reciprocating engine (a refined version of that found in a car or truck), or a microturbine, that drives a generator to produce electricity. The heat (thermal energy) produced by this process is recovered and used to produce hot water or steam for space heating, to operate an absorption chiller or power a desiccant (drying) machine, instead of being exhausted.

For the May 17 HUD webcast summary of HUD promotion of CHP, go to: <http://www.hud.gov/webcasts/archives/envirhealth.cfm> and bring up Part 2; CHP begins at after the 51 minute point and runs about 20 minutes. For more technical information see: "CHP Technologies"

**http://www.eere.energy.gov/de/chp/chp_technologies/tech_status.html
www.epa.gov/chp**

For a list of DOE Regional Application Centers see:

http://www.eere.energy.gov/de/chp/chp_applications/chp_application_centers.html

The initiative has provided two guides to CHP in multifamily housing that are on the HUD website at: <http://www.hud.gov/offices/cpd/library/energy/index.cfm>

-CHP Guide #1: “Q&A on Combined Heat and Power for Multifamily Housing” explains the basics of CHP for apartment building owners.

-CHP Guide #2: “Feasibility Screening for Combined Heat and Power in Multifamily Housing” describes EPA’s preliminary screening tool and the computer software prepared by the Oak Ridge National Laboratory for completing worksheets in the Guide. ORNL has expanded the scope of the software to consider cooling and space heating, in addition to the original analysis of the potential based on use of domestic hot water. Please use Version 2d of the expanded software (with different sample data from 2c); both are available at:

http://eber.ed.ornl.gov/HUD_CHP_guide_version_2d

The Help file in **Version 2** contains detailed explanations of who should use it, what it does, and how to use it. It explains menu commands that enable you to print “Results” and save the screen information in a Word file. There also is detailed information about the types of equipment used, e.g. reciprocating engines and microturbines.

Utility Information:

	Electricity			Natural Gas		Fuel #2	
	kWh	kW	\$	()therms ()CCF	\$	quantity ()gallons	\$
Jan							
Feb							
Mar							
Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Annual Total			\$		\$		\$
Average Cost	xxxxxx	xxxxxx	\$	xxxxxx	\$	xxxxxx	\$

Building Information:

Name of Contact _____ Telephone # _____
Email address _____
Name of development _____
Year constructed _____ # floors _____ # dwelling units _____ #
residents _____
Square footage to be heated _____ and/or cooled _____

Electric Rate Schedule Data

a. name of electric utility _____
b. name of electric rate _____
c. energy charge _____ /kWh
d. demand charge _____ /kW per month
e. standby or supplemental demand charge _____ /kW per month
f. fuel adjustment charge from most recent bill _____ /kWh

Natural Gas Rate Schedule Data

a. name of gas utility _____
b. name of gas rate _____
c. gas cost per unit of consumption _____
d. units of consumption () per million Btu (MMBtu)
() per therm
() per decatherm
() per hundred cubic feet (CCF)
() per thousand cubic feet (MCF)

Buildings with 80 or more units with access to natural gas may be appropriate. If you would like to consider, please access the software, enter the data, save and print the Results. You can then fax the files to HUD at the number listed below

We will review your data with help from the DOE Regional Application Centers and provide follow-up comments.

The analysis performed by this program is adequate for a coarse screening to let building operators know whether or not they should consider CHP more seriously. Encouraging results are only a prelude to a more rigorous analysis to be performed by engineering professionals using much more detailed information on building heating and electricity loads and CHP equipment.

Please send comments and suggestions on the use of this material. Thank you for your interest.

Robert Groberg, Senior Energy Management Officer
Office of Environment and Energy,
US Department of Housing and Urban Development
451 7th Street SW
Washington DC 20410
robert.groberg@hud.gov Phone: (202) 402-4642 Fax: (202) 708-3363

Attachment 10: Owner's Green Commitments

M2M Green Initiative Draft Green Guide

PAE instructions are in highlighted text. The following Green Commitments are attached to the Restructuring Commitment (as Exhibit H) and to the M2M Use Agreement (as Exhibit D).

1. **Green Initiative; Definitions.** The Owner and the Secretary acknowledge that the Owner has elected to participate in the M2M Green Initiative, pursuant to which the Owner has Green Commitments (as such term is hereinafter defined) to rehabilitate and operate the property in a manner that minimizes utility usage, reduces impact on the environment, and furthers occupant health.
 - A. **Green Component.** A “Green Component” is one that is not mandated by applicable codes or ordinances and has one or more of the following attributes, when compared with the comparable component that would normally be used by owners of similar properties in the same market area who have not made a Green Commitment:
 - i. Materially lower electric / heating fuel / water consumption.
 - ii. Materially lower emissions of chemicals thought to be harmful to humans.
 - iii. Materially longer useful life.
 - iv. Materially more biodegradable.
 - v. Materially more easily recycled.
 - vi. Materially lower use of raw materials/materially more recycled content.
 - B. **Green Rehabilitation.** “Green Rehabilitation” is rehabilitation that conforms to the Green Commitments generally, conforms to the Traditional vs. Green Comparison for Rehab and Significant Additions attached hereto as Exhibit A specifically **NOTE that this is Exhibit H-1 to the Green Restructuring Commitment and Exhibit D-1 to the Green Use Agreement**, and that has adopted Green Operation and practices for managing construction debris that are considered less harmful to the environment.
 - C. **Green Operation.** “Green Operation” is operation that conforms to the Green Commitments generally, conforms to the Traditional vs. Green Comparison for R4R attached hereto as Exhibit B specifically **NOTE that this is Exhibit H-2 to the Green Restructuring Commitment and Exhibit D-2 to the Green Use Agreement**, that uses Green Components where prudent and appropriate for operations and replacements, and that uses materially lower use of chemicals thought to be harmful to humans for cleaning and maintenance.
 - D. **Green Commitments.** The “Green Commitments” are the commitments of the Owner documented herein.
2. **Green Maintenance Commitment.** Owner agrees to take all reasonable steps, to use materials and practices that are broadly recognized as being practical, feasible and less harmful to the residents and the environment, to follow Green Operation in the operation of the Property, including cleaning, maintenance, and replacement tasks, and to generally select and make best efforts to use cleaning and maintenance products that are Green Components.
3. **Green Rehabilitation.** Owner has reviewed the Traditional vs. Green Comparison for Rehab and Significant Additions attached here to as Exhibit A **NOTE that this is Exhibit H-1 to the Green Restructuring Commitment and Exhibit D-1 to the Green Use Agreement**. Owner

agrees that such Exhibit accurately reflects Owner's agreements for rehabilitation and significant additions, to be completed generally within twelve months after the Closing Date and otherwise as required in the executed Rehabilitation Escrow Deposit Agreement (attached as Exhibit C) **NOTE that this is Exhibit A to the Green Restructuring Commitment and Exhibit D-3 to the Green Use Agreement.** With respect to the rehabilitation designated as Green Components, Owner further agrees to follow Green Rehabilitation in carrying out such activities, and to document its compliance with this requirement.

4. **Green Implementation of Replacements.** Owner has reviewed the Traditional vs. Green Comparison for R4R attached here to as Exhibit B **NOTE that this is Exhibit H-2 to the Green Restructuring Commitment and Exhibit D-2 to the Green Use Agreement.** Owner agrees that such Exhibit accurately reflects Owner's agreements for replacements. With respect to the replacements designated as Green Components, Owner agrees to replace various components with items broadly recognized as Green Components at such times as the useful lives of the existing components have expired. Owner agrees to document its compliance with this requirement. Owner further agrees to provide a copy of each request for reimbursement from the Reserves for Replacement Account (including supporting documentation) to an office designated by the Secretary for monitoring the Owner's compliance with the Green Commitments.
5. **Regulatory Agreement Acknowledgement.** The Owner acknowledges the existing Regulatory Agreement requirement to secure for the benefit of the project all available discounts, rebates, commissions and other savings, which includes securing for the benefit of the project any such benefits that are attributable to Green improvements.
6. **Resident Involvement, Outreach and Incentive Plan.** Owner shall operate the Project in accordance with the Resident Involvement, Outreach and Incentive Plan, as approved by the Secretary. The Plan shall address the owner's plans for involving, training and incentivizing tenants in the prudent operation of a Project that benefits from having Green Components installed and that follows Green Operation. In developing the Plan, the Owner may rely on guidance from national organizations with a mission for improving the indoor environmental quality and incorporating energy and water saving components in their housing.
7. **Integrated Pest Management.** Owner shall ensure that pest management activities are generally undertaken in accordance with Integrated Pest Management principles:
 - a. Periodic exterior inspection: identify and seal pest entry points.
 - b. Interior unit inspection: look for evidence of roaches, mice, and other pests, and if evidence is found, identify and seal pest entry points and notify the pest control firm.
 - c. IPM principles: incorporate IPM principles into third party pest control firm contract and/or into internal property management practices, as applicable, including:
 - (1)- The problem or pest is identified before taking action.
 - (2)- Vegetation, shrubs and wood mulch should be kept far enough away from structures to avoid attracting termites and to remove cover for rodents looking to enter the building.

- (3)- Cracks and crevices in walls, floors and pavement are either filled or eliminated.
 - (4)- Garbage cans and dumpsters are cleaned regularly.
 - (5)- Litter is collected and disposed of properly at least once a week.
 - (6)- If fertilizers are used, they should be applied several times (e.g., spring, summer, fall) during the year, rather than one heavy application.
 - (7)- If pesticides are necessary, use spot treatments rather than area-wide applications. In choosing among pesticides likely to be effective: (i) For roaches, prioritize baits, growth regulators, and boric acid as the primary pesticides. Focus on housekeeping issues and on avoiding introducing roaches during move-in; (ii) in general, give priority to the lowest-toxicity pesticide; and (iii) in general, avoid the use of spray applicators and fogging applicators.
 - (8)- Interior water leaks should be fixed as identified by inspectors or property management staff, or as reported by tenants.
8. **Indoor Environmental Quality Monitoring.** Owner agrees that the Mark-to-Market restructuring plan incorporates the costs of purchasing, operating and maintaining devices to monitor and report temperature and relative humidity at the Project. Owner shall install devices to monitor and report temperature and relative humidity at the Project, for a period of three years after completion of the rehabilitation required in the Rehabilitation Escrow Deposit Agreement, pursuant to protocols that the Secretary provided prior to closing the Mark-to-Market restructuring (in the event the protocols are not provided, the funding for this requirement is included in the Rehabilitation Escrow, to be used when the Secretary provides the protocols). Owner may continue the monitoring beyond this time requirement at the Owner's discretion.
9. **Energy and Water Usage Monitoring.** Owner agrees that the Mark-to-Market restructuring plan incorporates the costs of monitoring and reporting energy and water usage at the Project, for a period of three years after completion of the rehabilitation required in the Rehabilitation Escrow Deposit Agreement, pursuant to protocols that the Secretary provides prior to closing the Mark-to-Market restructuring. Owner may continue the monitoring beyond this time requirement at the Owner's discretion.
10. **Tenant Paid Energy and Water Use Monitoring.** **Insert 'Not Applicable' if there will be no utility allowance following the Mark-to-Market Closing Date** The owner's commitment to monitor energy and water usage (paragraph 9) provides data that can be used to fulfill the owner's existing and ongoing obligation to properly size the tenant utility allowance. Twelve months after completing the required rehabilitation, the owner shall provide to the HUD field office project manager (or other designee) a request for re-determination of the utility allowance following existing HUD guidelines and including all available monitoring data for tenant usage for the most recent twelve months at the property. This data will be used to revise the tenant utility allowance, if necessary, to reflect actual utility usage post-rehabilitation. Utility usage will thereafter be reviewed periodically in the same manner in order to fulfill owner's obligation to ensure that the utility allowance is properly sized.

11. **Cooperation with Green Research Projects.** Owner agrees that, if so requested by the Secretary, Owner will cooperate with research projects approved by the Secretary. Owner will provide to researchers all of the following:
 - A. Access to the Project at reasonable times of the day and for reasonable amounts of time.
 - B. Access to Project information held by or under the control of the Owner and its agents and affiliates that is available to the Secretary.
 - C. Access to resident information only as specifically authorized by the Secretary.
 - D. The opportunity to interact with tenants of the Project at reasonable times of the day and for reasonable amounts of time, and as agreed to by the tenants.
 - E. In approving researchers, the Secretary shall impose requirements to minimize administrative and other burdens on Owner, managing agent, and tenants of the Project.

12. **Property Management Staff to Maintain Green Certification.** Owner shall ensure that at least one representative of the property management (working on site or a direct supervisor of such staff) maintains a Green certification as prescribed by the Secretary in Exhibit D attached hereto **NOTE that this is Exhibit H-3 to the Green Restructuring Commitment and Exhibit D-4 to the Green Use Agreement.** Owner further agrees to document its compliance with this requirement.

13. **Duration of Owner's Green Commitments.** Owner agrees that the Green Commitments shall extend for the duration of the Use Agreement to which the Green Commitments are attached, referenced in, and made a part of.

14. **Enforcement of Owner's Green Commitments.** Owner agrees to comply with the Green Commitments contained herein and, without limiting any other rights or remedies available to HUD, a breach of such agreement shall be deemed to be a failure to satisfy the Incentive Performance Fee Conditions, set forth and defined in the Regulatory Agreement, a violation of the terms and conditions of the Use Agreement and, generally, a failure by Owner to comply with the requirements of MAHRA and the MAHRA Restructuring Loan.

Exhibits

- A. Traditional vs. Green Comparison for Rehab and Significant Additions
Exhibit H-1 to the Green Restructuring Commitment and Exhibit D-1 to the M2M Use Agreement
- B. Traditional vs. Green Comparison for R4R
Exhibit H-2 to the Green Restructuring Commitment and Exhibit D-2 to the M2M Use Agreement
- C. **Mark this as "N/A" if there is no Green REDA (but note that the Green REDA is required for rehab in the Green Initiative).** **Green Rehabilitation Escrow Deposit Agreement Exhibit A to the Green Restructuring Commitment and Exhibit D-3 to the Green M2M Use Agreement.**

D. Green Property Management Certification Requirements

Exhibit H-3 to the Green Restructuring Commitment and Exhibit D-4 to the Green Use Agreement

EXHIBIT A: Traditional vs. Green Comparison for Rehab and Significant Additions

Insert Green Plug-In for Rehab here

EXHIBIT B: TRADITIONAL VS GREEN RESERVES FOR REPLACEMENT

Insert Green Plug-Ins for R4R here

EXHIBIT C: GREEN REHABILITATION ESCROW DEPOSIT AGREEMENT

Insert Green REDA here or include this exhibit as "N/A" if not applicable

EXHIBIT D: GREEN PROPERTY MANAGEMENT CERTIFICATION REQUIREMENTS

Initial and Ongoing Requirements

Initial. Within six months after the M2M Green Initiative closing, the property owner must provide evidence to OAHP that an individual in property management (on-site staff, on-site lead maintenance person, or their direct supervisor) has completed a minimum of 16 hours of training in the required topics and from an accepted provider. Each of the following topics must be covered in the training, with a cumulative total of at least 8 hours in these areas:

- (1) Green Building Principles and Practices Overview
- (2) Energy Efficiency
- (3) Water Efficiency
- (4) Integrated Pest Management
- (5) Indoor Air Quality
- (6) Green Operations and Maintenance

Other topics that may be included in the 16-hour requirement include:

- (7) Green Site Landscaping, Xeriscape, Composting, etc.
- (8) Green Building Systems
- (9) Alternative Energy Sources (Solar, Wind, Geothermal, Combined Heat and Power, Co-generation)
- (10) Energy Star (including indoor and outdoor lighting) and WaterSense Programs
- (11) Recycling and Waste Reduction
- (12) Resident Green Education

Ongoing. In addition, a minimum total of four hours per year of continuing education in any of the above 12 topics is required.

Delivery Methods

All training must be delivered by a provider accepted by OAHP. The initial and ongoing training can be instructor-led classes, on-line courses, training seminars, association or industry training sessions, college or university courses, or other widely-recognized training or any combination of these. Property owners/ managers may contract with accepted providers to deliver training to the on-site staff, on-site lead maintenance person, or their direct supervisor.

Allowable Property Expenses

The HUD field office may approve this training for one on-site person as an eligible property expense. Additional expenses are allowed only in the event of staff turnover (see below). OAHP encourages treatment as an eligible property expense for on-site staff who work exclusively at the site of the subject green property. OAHP does not support treatment as an eligible property expense for supervisors who are not on-site at the subject green property.

Property owners/ managers should be diligent in pursuing cost-efficient training options, recognizing

travel expenses, and should first look for local resources and online options.

Staff Turnover

If the person with the green property management training or certification leaves the property owner's / manager's employ, the owner has up to 90 days to replace the person with a person who meets the requirements (or train another employee to the required 16-hour level) and provide evidence to OAHP. The OAHP Green Team (or a subset working group) will review, approve and oversee compliance.

Compliance

Failure to comply with the requirements will result in a loss of the full IPF until such time as the owner is in compliance.

Approval Process

Prior to Closing the Green Restructure. If the training is completed prior to closing, and is from an accepted provider (see the attachment for the initial list and OAHP's website for the current list), the PAE or OAHP Debt Restructuring Specialist (DRS) can approve the submitted documentation for the employee. If the training provider is not on the accepted list, then OAHP's Green Team (or a subset working group) will review information on the provider, and approve it if appropriate. Owners may wish to have OAHP's approval before completing the training. Once approved, OAHP's accepted list will be amended to include the "new" provider. When the requisite hours are completed, the owner would present documentation to OAHP showing completion of those approved courses.

Within Six Months after Closing the Green Restructure. Owners who need to complete some or all of the training requirement post-closing should follow the same process through the DRS (not the PAE) who can approve it for providers on the "accepted list" and who will seek Green Team approval for new providers. Once approved, the DRS will notify the HUD project manager and OAHP's Post-Closing Portfolio Manager that the requirement has been fulfilled.

Note to Accountants

Until the compliance portion of the HUD audit can be revised to include this item, owner's accountants will need to discuss fulfillment (initial and ongoing) of this requirement in a note to the financial statement.

Attachment: Initial Accepted Green Property Management Training Providers

ATTACHMENT 1 TO EXHIBIT D
Initial Accepted Green Property Management Training Providers

PROVIDER	WEBSITE
American Institute of Architects (AIA)	www.aia.org
Association for Energy Affordability (AEA)	www.aeanyc.org
Build It Green	www.builditgreen.org
Building Education Center	www.bldgeductr.org
Building Performance Institute	www.bpi.org
Daylighting Collaborative	www.daylighting.org
Global Green	www.globalgreen.org
Green Advantage	www.greenadvantage.org
Institute for Professional and Executive Development	www.ipedinc.net
National Center for Healthy Housing	www.healthyhomestraining.org
NeighborWorks	www.nw.org
Northwest Energy Efficiency Council (NEEC)	www.neec.org
Southface	www.southface.org
U.S. Green Building Council	www.usgbc.org

There are many other programs, certifications, and training resources that will be acceptable. Property owners/managers are encouraged to seek OAHP approval of such alternatives prior to undertaking the training. Send the request to the PAE who will submit it for Green Team review through OAHP's Resource Desk.

Attachment 11: Indoor Environmental Quality Test Protocol

The M2M Green Initiative will result in many green elements being implemented in affordable housing projects undergoing rehab. Many of these elements are expected to result in improved indoor environmental quality, which will be beneficial to building occupants.

Background:

While indoor environmental quality (IEQ) and its health effects has been a hot topic for several years and there are many testing devices available in the marketplace, this is a relatively new field and there are not well-developed testing protocols and standards for testing many of the IEQ elements. Due to the cost and complexity associated with testing IEQ, the common approach to dealing with IEQ is to take steps widely accepted as improving IEQ rather than rely on testing. According to EPA's website:

<http://www.epa.gov/iaq/pubs/insidest.html>

“For pollutants other than radon, measurements are most appropriate when there are either health symptoms or signs of poor ventilation and specific sources or pollutants have been identified as possible causes of indoor air quality problems. Testing for many pollutants can be expensive.

The energy saving components of Green affordable housing could in some cases result in “tighter” building envelopes, which in the absence of other measures could result in lower IEQ. Offsetting this, several green elements that may be implemented can result in lower levels of particular contaminants, thus improving IEQ. Even if the building envelope is unchanged by the rehab, independent variables can easily confound IEQ testing results; thus, tracking improvements in IEQ would be difficult due to the lack of control conditions independent of the greening.

It is expected, however, that the research community will want to take advantage of access to significant data gathering opportunities related to the implementation of Green elements in affordable housing units. As a condition of participation in the M2M Green Initiative, building owners should agree to fully cooperate with any such research endeavors sanctioned by HUD. Such research efforts are likely to focus on measuring indoor air quality indicators, such as volatile organic compounds (VOC's), and respirable particulate matter. Research efforts, in order to account for confounders (e.g., resident smoking, open windows) may involve tenant participation by collecting questionnaire and observational data and by enrolling a sufficiently large number of participants to lessen the impact of individual behaviors. Any such research efforts will be of modest scope, and would be subject to technical review by HUD staff prior to any request for the participation of the building owner and tenants.

Because of its significance as an indicator of indoor environmental quality as well as its importance with respect to avoiding mold problems, building owners will be expected to implement a testing program relating to temperature and relative humidity in some of the rental units, in accordance with the following protocols.

Temperature and Relative Humidity Testing Procedures:

Testing will occur until such time as HUD determines that it is no longer needed. Testing is recommended in 100% of the units. Common areas should also be tested as appropriate.

For each unit, a testing device should be placed in the unit in a location that will allow for the free flow of air, and that is not on an exterior wall, typically near the thermostat. The device should be programmed to report its data with an identifier that is the building address and unit number. It is recommended that the HoBo U10-003 Data Logger or an equivalent device be used. The Data Logger should be programmed upon installation to take measurements once each hour. The specified Data Logger costs \$59.00 per unit, although significant discounts may apply with larger orders.

After a period of three months from installation of the measurement device, data should be downloaded using one of two methods.

- It is recommended that the HoBo U Shuttle (U-DT-1) be used to offload the data accumulated in the Data Logger for the previous 3 months. Once the data is offloaded, the measurement device should be reset, to ensure sufficient available memory for the next 3 months of data collection. The HoBo U Shuttle can handle up to 64 units worth of data at a time, so if more units are being tested, the Shuttle will need to be cleared before additional data can be collected. The HoBo U Shuttle costs \$249.00 per unit.
- Alternatively, a laptop computer can be used to offload the data from the Data Logger. This method is less convenient but depending on labor costs, potentially more cost effective to do.

The data should be offloaded for at least 3 years at 90 day intervals. If the U Shuttle is used for data offloading, the data should then be downloaded into a laptop computer, using HoBoWare Pro software. If the data is downloaded directly to a laptop computer, the computer should be equipped with the HoBoWare Pro software. The software costs \$99.00. Once the data is offloaded and is stored in a laptop equipped with the HoBoWare Pro software, the data should be saved as a file, and the file should be sent to a designated party at HUD.

The outputs of the HoBoWare Pro software include graphs, and other useful information. Building owners should be able to track with units are experiencing inappropriately high moisture content, which can lead to proliferation of mold. The occupants of units with significantly abnormal temperature and humidity readings may benefit from HVAC inspections, or perhaps tenant training on best practices for temperature and humidity control.

Memo

DATE

TO OAHP Green Review Team

FROM The OAHP FA Team

SUBJECT Green Reality Check --

Project Namexx,
 Locationxx MD
 Total Units and % §8
 FHA Number.....
 PAE.....
 PO.....Washington / Chicago
 DRS:
 UW Model Reviewed (version 4.xx)
 Green Plug-Ins Reviewed.....

Market Rent Restructure?Yes, PPC is xx% of the UPB
 Exception Rents?.....Yes, at xxx% of FMR and xxx% of market

Green PCA:

Date of Green PCA.....
 PCA Contractor.....
 Energy Auditor.....
 IPM Inspector.....

PAE Recommendations:

Include in Green Initiative?Yes
 Owner Contribution Rate10% (for Additional Green Significant Additions)
 IPF Increase?50% (above normal IPF)

You requested that we review the Green PCA, UW model, the Green plug-ins, and the proposed Green O&M Plan to determine whether Green Initiative guidelines were followed in this transaction. This reality check was assigned **when**.

PAE's Green Recommendations and Owner's Acceptance

The Green plug-ins for Rehab / Significant Additions, and for 20 Year R4R, are attached.

The PAE indicated that it was **not** necessary to adjust the scope of the Green recommendations in order to avoid the use of **exception rents** / exception rents above 120% of FMRs.

For Rehab / Significant Additions, the PAE proposed Greening **xx** of **xx** baseline items, and proposed **xx** additional Green items (**xx** Fixed and **xx** Variable). The owner accepted **xx.x%** of the PAE's Green recommendations (by cost).

For the 20 Year R4R Needs, the PAE proposed Greening **xx** of **xx** baseline items, and proposed **xx** additional Green items. The owner accepted **xx.x%** of the PAE's Green recommendations (by cost).

See the following section for specifics of the proposed Green O&M Plan.

Based on the preceding, the PAE recommends **not** including the transaction in the Green Initiative. The PAE recommends a **10%** owner contribution rate for the additional Green Significant Additions. The PAE recommends a **50%** increase in the IPF.

Proposed Green O&M Plan

Description of Component	Included?	Comment
Greening the R4R		Owner acceptance is xx%
IPM Commitment		
Tenant Outreach Commitment		
Tenant Incentives Plan		
Green Materials & Practices		
Other		
Other		

Note – the preceding table will be expanded as the Green O&M requirements are more fully developed.

Traditional vs. Green -- Baseline Rehab

Description of Baseline Rehab Item	PAE Recommends Green?	Owner Accepts ?	Comment
Other			

NOTE: Baseline rehab items that are Greened become Additional Green Significant Additions.

Traditional vs. Green -- Baseline Significant Additions

Description of Baseline Significant Addition Item	PAE Recommends Green?	Owner Accepts ?	Comment
Other			

Traditional vs Green – Electric / Gas Saving Items (These are FIXED)

Item Description	Green Premium \$ Per Unit	%	Payback Period (Years)	PAE Recommends?	Owner Accepts?
A/C SEER 14					
A/C SEER 16					
Gas Furnace					
DHW					
Addl insulation					
Windows					
Sliding gl. Doors					
Reflective roof					
CFL bulbs					
Fluor. Fixtures					
Refrigerators					
Dishwashers					
Dryers					
Re-caulk					
Foam backers					
Storm doors					
Monitoring equip.					
Other					
Other					

Traditional vs Green – Water Saving Items (These are FIXED)

Item Description	Green Premium \$ Per Unit	%	Payback Period (Years)	PAE Recommends?	Owner Accepts?
Shower heads					
Faucet aerators					
Toilets					
Landscaping					
Monitoring equip.					
Other					
Other					

Other FIXED Requirements Including IPM

Item Description	Cost Per Unit	PAE Recommends?	Owner Accepts?
Exterior pest entry points			
Interior pest entry points			
Landscaping			
Other			

VARIABLE Requirements

Item Description	Cost Per Unit	PAE Recommends?	Owner Accepts?
Other			

Findings

The following is an attempt to list the possible findings; the list will be expanded as policies and guidelines are more fully developed. The reviewer would simply delete those that are not applicable. The 'x' at the beginning is the reviewer's cue that she hasn't yet considered this one.

1. **x Green PCA Deficiencies.** The Green PCA appears to be deficient in the following respects:
 - a. **No Energy Audit.** Xxx.
 - b. **No IPM Inspection.** Xxx.
 - c. **Required Line Item Missing from Green PCA Addendum.** The template Green PCA Addendum lists the following items that were not addressed in the Green PCA:
 - i. **Item.**
 - ii. **Item.**
 - d. **Required Payback Calculation Missing.** The required payback calculation was missing for the following items that involve potential electricity, gas or water / sewer savings:
 - i. **NOTE to reviewers – if the recommendation is for an Energy Star item, no payback calculation is required (Guidelines V.A.1.b.2).**
 - ii. **Item.**
 - iii. **Item.**
 - e. **Other.** Xxx.

2. **x PAE Recommendations Not Adequately Supported.** For the following items, the PAE's recommendation does not have adequate support in the materials we reviewed:
 - a. **Energy Star Replacements Not Recommended.** Energy Star replacements are available for the following items, the PAE did not recommend the Energy Star item, but no reason was given: **get list of items from Energy Star web site.**
 - b. **Item Description.** What was recommended, why does it appear inadequately supported, suggestions for strengthening
3. **x Payback Calculations: Early Replacement.** The following payback calculations appear not to support the PAE's recommendation:
 - a. **Item Description.** Whose calculation was it / why is it a problem
4. **x Owner Acceptance Not Adequately Documented.** For the following items, the owner's acceptance / non-acceptance of the PAE's Green recommendation was not documented in the materials we reviewed:
 - a. **What.** Xxx
 - b. **What.** Xxx
5. **x Green O&M Plan Issues.** The PAE and PO should consider the following aspects of the proposed Green O&M Plan:
 - a. **What.** Xxx
 - b. **What.** Xxx
 - c. **What.** Xxx
6. **x Other Factors for OAHP to Consider.** Based on our review, we recommend that OAHP consider the following:
 - a. **What.** Why.
7. **x Other.** What.
8. **x Other.** What.
9. **x Other.** What.

If you have any questions regarding this review, please contact **reviewer / contact info.**

ATTACHMENT 13: Utility Consumption Baseline Draft Scope of Work

Overview: The goal of this statement of work is to establish pre-M2M twelve month normalized heating, cooling, lighting, and other electric and water usage (not cost) by property. The baseline should be constructed so as to allow useful analytical comparison with similar data from the post-M2M monitored usage¹.

Baseline Period: The PAE will establish a twelve-month baseline period, generally ending just prior to issuance of the Restructuring Commitment. The twelve month period covered should be recent and similar for each utility.

Baseline Data Collection: The result will be to understand and document what types of utilities are used, from what sources, how they are used and in what amounts they are used. Information on how utilities are used will come from the PAE through the Energy Audit. In order to establish the baseline, the contractor will receive releases from the PAE so that the contractor can obtain consumption data directly from each utility provider.

- For each property paid utility, the releases will be executed by the owner and obtained from the owner by the PAE.
- For tenant paid utilities, the releases will be executed by tenants, obtained from the tenants by the management agent, and obtained from the management agent by the PAE. Releases will be requested from tenants who have been in residence 12 months or more. PAEs and the management agent will begin the process of requesting tenant releases early in the M2M restructuring process, for example at tenant re-certifications, so that a sufficient number of releases will be in hand when the contractor is engaged to determine the baseline.
- For non-metered fuel sources, such as propane or heating oil, the PAE will obtain releases from the owner to obtain 14 months of billing history from the supplier(s), or if suppliers are not willing/capable of providing histories, the PAE will obtain copies of bills from the owner.

Data Ownership: All energy usage data and analysis is the property of HUD/OAHP. OAHP may request data transfer specifying a commonly commercially used data format such as an email transmission of a Microsoft Excel worksheet in a format specified by OAHP.

¹ Cost issues will also likely be of interest. Comparison of usage with baseline will likely not be one to one, since monitoring devices can be at a lower level than current metering. For example, water may be monitored at the unit level, but currently metered at the building level. Future water use may be monitored separately between owner use (lawn irrigation) and individual tenant use. The individual tenant uses and the owner use would need to be aggregated to compare against the baseline master meter amount.

Baseline Report Construct:

A Narrative Report Containing at a minimum-

1. Project identifier (REMS ID, property name, property location, name of PAE, name of contractor, owner contact information, management agent contact information)
2. For all utilities associated with the property:
 - identify vendors/sources,
 - identify use for residential: heat, hot water, lighting, a/c,
 - identify use (generally on separate meters) for non-residential: common/exterior lighting, laundry, office, maintenance shop, commercial (some projects have commercial leases)
 - identify how the utility is used, for example, central steam boiler, forced air furnaces, heat pumps, window type air conditioners, central air, electric baseboard heat, common area lighting (incandescent or fluorescent, other) exterior lighting (type of lighting device).
 - identify party responsible for payment, owner or tenant
 - note any non-metered fuel source usage such as heating oil or propane
 - note any observed anomalies regarding rate structure, metering, on-site generating via solar panels, wind turbines, etc.
 - To the extent possible and applicable, estimate the commercial and non-residential portion of the use versus the residential use.
3. Summary of actual consumption (usage) during the baseline period.
 - a. For metered utilities paid by the owner, attach detail by meter, with each meter identified to a unit address/building/group of addresses. If there are fixed cost billings from the utility, for street lights for example, use a separate entry.
 - b. For metered utilities paid by tenants, attach detail by unit, discuss the adequacy of the sample, and document how the estimate of twelve month baseline consumption was reached.
 - c. For non-metered fuel sources such as heating oil or propane, attach detail for 14 months of consumption, and document how the estimate of twelve month baseline consumption was reached.
 - d. Aggregate all residential uses, all non-residential uses and all commercial uses, by utility or source (note estimates as needed)
4. Adjust the summary actual consumption (usage) to produce weather-normalized summary consumption (usage) for the twelve month baseline period. Use appropriate localized weather pattern data. Document the weather-normalization calculation. Note that OAHP requires both raw and weather-normalized data.

5. Adjust usage for occupancy below 90 % (obtain occupancy information from PAE) by estimating additional use for occupied units. This may affect some utilities, like water or electric, more than others, for example if heat is centrally provided. If an adjustment for occupancy is made, provide three sets of summary data: raw data, data normalized for weather only, and data normalized for both weather and occupancy.
6. Establish an optional pro-forma adjustment factor to the baseline for cases where the M2M transaction involves changes in services provided at the property, most frequently the addition of air conditioning. If requested, supply estimate of utility consumption for the added service.
7. Supply selected data from the report to OAHP in Microsoft Excel, in the format required by OAHP (see Exhibit 1). The PAE will supply this Excel format to the contractor.

SEE EXHIBIT 1 FOR THE EXCEL FILE

Attachment 13 Utility Consumption Baseline Scope of Work

Exhibit 1, Utility Impact Analysis - Green Initiative

Utility Impact Analysis Tool

This sheet was originally created for training purposes, to support the Green estimates for owner-paid and tenant-paid utilities. PAEs have requested OAHP share this tool, so that it can be applied to the underwriting of Green Initiative transactions. PAEs are not required to submit such an analysis but should feel free to use this or a similar format if they find it helpful in underwriting and explaining Green transactions.

INSTRUCTIONS --

Note: Cells containing blue text are intended to be completed by the underwriter, cells containing black text are generally intended to remain static, or to be calculated automatically. The PAE should modify and manipulate the formulas and format of this tool to fit the nature of their data on potential utility savings. This tool is provided as a basis for modification, and is not intended to suit all circumstances.

(1) Link this spreadsheet to the underwriting model: To do this, select 'Edit' from the top menu bar, then select 'Links' from the drop-down list. Highlight the option 'Link to Underwriting Model.xls' from the list, then click 'Change Source'. Then, find and select your underwriting model.

-- OR --

(1) Insert the 'Utility Analysis' worksheet from this spreadsheet into the model in which you are doing green underwriting.

(2) Complete the worksheet by inputting the various blue-text cells.

(3) Tie the resulting determinations (both tenant-utility allowance and owner-paid utility expenses) into the green underwriting model. These determinations are denoted by cells with yellow backgrounds.

Exhibit 1, Utility Impact Analysis - Green Initiative

Some Utilities are Tenant-Paid

Property: Property Name

68 Units

Note: Cells with **BLACK** text should not require user input; cells with **BLUE** text always require user input; cells with **GREEN** text have default formulas, which can be overridden as needed.

Utility-Consuming System	Type of System	Owner Paid				Tenant Paid			
		Gas	Electric	Water and Sewer	Other	Gas	Electric	Water and Sewer	Other
Domestic hot water	Indiv., gas	Yes							
Heat	Indiv., gas	Yes							
Air conditioning	Indiv., elec.					Yes			
Cooking	Gas	Yes					Yes		
Lights							Yes		
Cold water and sewer				Yes					

Notes Regarding Utility Allowance Underwriting:

Impact on Tenant Utility Allowance	0BR	1BR	2BR	3BR	4BR	Total	
Number of Units	0	32	26	10	0	68	
Current Tenant Utility Allowance	\$0	\$33	\$47	\$53	\$0	\$2,808	\$41.29 weighted average
Projected Tenant Utility Allowance	\$0	\$33	\$47	\$53	\$0	\$2,808	\$41.29 weighted average
Projected total increase (decrease)	0	0.0%	0.0%	0.0%	0	0.0%	

Underwritten Percentage of Projected Cost Savings for **Tenant-Paid** Utilities: (underwritten savings = this percent of estimated savings)

Impact on Owner-Paid Utilities	Typ. Hist. Trended	Projected (Before Green Utility Cost Savings)	Per Unit Per Year	Per Unit Per Month	Estimated % Impact	Projected (Green)	Green Increase (Decrease)
Fuel Oil/Coal	\$0	\$0	\$0	\$0.00	0.0%	\$0	N/A
Fuel for Domestic Hot Water	\$0	\$0	\$0	\$0.00	0.0%	\$0	N/A
Electricity (Light & Misc. Power)	\$5,620	\$0	\$0	\$0.00	0.0%	\$0	N/A
Water	\$39,216	\$0	\$0	\$0.00	0.0%	\$0	N/A
Gas	\$703	\$0	\$0	\$0.00	0.0%	\$0	N/A
Sewer	\$0	\$0	\$0	\$0.00	0.0%	\$0	N/A
Other Utils	\$0	\$0	\$0	\$0.00	0.0%	\$0	N/A
Total Utilities Exps.:	\$45,539	\$0	\$0	\$0.00		\$0	N/A

Underwritten Percentage of Projected Cost Savings for **Property-Paid** Utilities: (underwritten savings = this percent of estimated savings)

Notes Regarding Underwriting of Owner-Paid Utilities:

Estimated Impact on Utility Costs	C/A Electric	C/A Gas	Water / Sewer	In-Unit Electric	In-Unit Gas	Other	Savings Estimate
	Owner Pd	Owner Pd	Owner Pd	Tenant Pd	Owner Pd	Owner Pd	
Roofing	0.0%			0.0%			\$0.00 PUPA savings on cooling
Insulation	0.0%	0.0%		0.0%			Estimate from Green energy audit
Siding	0.0%	0.0%		0.0%			Estimate from Green energy audit
Windows	0.0%	0.0%		0.0%	0.0%		\$0.00 PUPA (assume 50% cooling, 50% heating)
Higher Efficiency Water Heaters		0.0%			0.0%		\$0.00 PUPA savings on gas
Higher Efficiency Refrigerators				0.0%			\$0.00 PUPA savings on electricity
Higher Efficiency Furnace (Gas)		0.0%			0.0%		\$0.00 PUPA savings on gas
Higher Efficiency Furnace (Elec.)							
Higher Efficiency A/C	0.0%			0.0%			\$0.00 PUPA savings on electricity
Higher Efficiency Lighting	0.0%			0.0%			\$0.00 PUPA savings on electricity
Water Saver Shower Heads			0.0%				Assume XX% savings. Assume showers are XX% of total water usage.
Water Saving Faucet Aerators			0.0%				Assume XX% savings. Assume faucets are XX% of total water usage.
Low-Flow Toilets			0.0%				Assume XX% savings. Assume toilets are XX% of total water usage.
Total Impact	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Impact Underwritten on Project-Paid	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Impact Underwritten on Tenant-Paid			0.0%	0.0%	0.0%	0.0%	
Contribution to Tenant Utility Allowance			0.0%	100.0%	0.0%		0% 100%
Allocable Share of Aggregate Utility Allowance			\$0.00	\$2,808.00	\$0.00		\$2,808.00
Weighted Impact on Tenant Utility Allowance							0.0%

1. Property Identity

Property Name
City, ST
PAE or PO
DRS
PO or UW

2. Overview

Please list and discuss the factors considered in developing this Green restructuring that are outside the recommendations in the Green PCA. For example: (a) If the transaction could not afford all recommended Green improvements, how were the possibilities prioritized? (b) If items that did not meet the payback test were recommended, how were those justified? Include information and considerations which are central to your decisions in how to approach this transaction.

3. Additional Sources of Funds for Green Improvements. Describe efforts planned, in process, or completed (whether successfully or unsuccessfully) to pursue or acquire funds from other sources for Green improvements:

4. Green O&M Plan

Refer to the Draft Green Guide, V.C., for the Green O&M Plan requirements.

4A. Owner has submitted Green O&M Plan Yes..... No

If yes, plan addresses the following:

- Green R4R Certification
- Green M2M U/A Commitment
- Resident Involvement and Incentive Plan
- IPM Plan
- IEQ Protocol
- Energy and Water Monitoring
- General operations and property maintenance

4B. Owner has not submitted Green O&M Plan: If the Plan (or a draft plan) has not been submitted, please comment on the discussion of the key elements above with the owner and what progress has been made toward completing a draft Plan.

4C. Property-specific items to be addressed in the Green O&M Plan: Comment here on items such as caulking, foam backers behind switch plates and outlet covers, etc.

5. Owner's Acceptance of the Green Restructuring

5A. PO/PAE has presented Green restructuring proposal to owner..... Yes..... No

If yes, select below:

- Owner has accepted >75% of PAE/PO's Green rehab and reserve recommendations
- Owner has accepted 50-75% of PAE/PO's Green rehab and reserve recommendations
- Owner has accepted <50% of PAE/PO's Green rehab and reserve recommendations

5B. PO/PAE has not presented Green restructuring proposal to owner: Comment here on your understanding of the owner's interest in pursuing a Green transaction and what you know about any preferences for structuring the transaction.

6. Greening the Rehab and Reserves

Refer to the Draft Green Guide, V.B.2. Consider early replacements, replacement at the end of the estimated useful life (EUL) with higher efficiency or healthier alternatives, or other Green aspects of the proposal.

6A. Early Replacements: List and discuss elements of the rehab which are based on the economics of early replacement.

6B. Green Alternatives or Additions: List and discuss elements of the rehab in which a Green item has been added to the scope (in place of or in addition to elements of the traditional rehab).

6C. Green Reserves: Discuss how the 20-year replacement strategy has incorporated Green elements.

7. Additional Considerations

Please list and discuss any additional considerations related to this Green restructuring that will be useful to the reviewer in understanding the transaction.

Full Transaction Review – Addendum for Green Initiative Transactions

The Green Reality Check (GRC) provides detailed analysis of Green Initiative requirements and how they affect the transaction. This addendum must be completed by the Transaction Reviewer for a Green Initiative transaction. It and the GRC(s) must accompany the Full Transaction Review when submitted for approval by OAHP. The addendum verifies that the GRC is current, and covers certain other key items, including a brief narrative on impacts while minimizing redundancy with the GRC. Refer to the transaction review for additional information.

Date this addendum completed..... MM/DD/YY
 Property name.....
 Transaction reviewer.....
 1st reality check completed by.....
 Date 1st reality check completed..... MM/DD/YY
 2nd reality check completed by (if app.).....
 Date 2nd reality check completed (if app.)..... MM/DD/YY
 Days between this addendum and most recent reality check XXX

Property Subject to a Green-Screen and
 greening results in ER or ER >120% of FMR OK Not OK

Requirement for a New Reality Check

Reviewer recommends and PD concurs; require new Check?..... Yes No
 >120 days since last reality check (above); require new Check?..... Yes No

Comparative Values

Value	From Reality Check	From Current Model
Weighted Avg. Rent		
Rehab Escrow Amount		
Owner Contribution Amount		
IPF Amount		
20 year total PCA needs (uninflated)		
PPC		
New 1st		
Savings/Loss		

Narrative (Briefly discuss and summarize aspects related to Green Initiative, including (a) nature of baseline, (b) green elements, (c) impact on rehab and reserves, (d) impact on overall underwriting, (e) owner economics.)

[Begin narrative here...]

Attach this document to the completed Full Transaction Review. Submit most recent reality check with approval package.



Exhibit: Accepted Green Property Management Training Providers

This exhibit is an update to that provided with Attachment 16 to the Draft Green Guide (Green Property Management Certification Requirements).

PROVIDER	WEBSITE
American Institute of Architects (AIA)	www.aia.org
Association for Energy Affordability (AEA)	www.aeanyc.org
Build It Green	www.builditgreen.org
Building Education Center	www.bldgeductr.org
Building Performance Institute	www.bpi.org
Daylighting Collaborative	www.daylighting.org
Global Green	www.globalgreen.org
Green Advantage	www.greenadvantage.org
Institute for Professional and Executive Development	www.ipedinc.net
National Affordable Housing Management Association (NAHMA) and its affiliated AHMAs (Green Credential for Property Management – GCPM)	www.nahma.org
National Apartment Association (NAA) and its affiliated associations (Green Credential for Property Management – GCPM)	www.naahq.org
National Center for Healthy Housing	www.healthyhomestraining.org
NeighborWorks	www.nw.org
Northwest Energy Efficiency Council (NEEC)	www.neec.org
Southface	www.southface.org
U.S. Green Building Council	www.usgbc.org

There are many other programs, certifications, and training resources that will be acceptable. Property owners/managers are encouraged to seek OAHP approval of such alternatives prior to undertaking the training. Send the request to the PAE who will submit it for Green Team review through OAHP's Resource Desk.

**ATTACHMENT 17
GREEN OPERATING & MAINTENANCE PLAN
(GO&M Plan)**



Property: _____

Physical Address: _____

City, State, Zip: _____

REMS ID: _____ **Date of this GO&M Plan:** 01/01/01

Owner (Legal Name): _____
Contact Person: _____
Phone: <u>111-111-1111</u> Email: _____
Management Agent: _____
Contact Person: _____
Phone: <u>111-111-1111</u> Email: _____

1. Introduction

The Owner and the Secretary acknowledge that the Owner has elected to participate in the Mark-to-Market Green Initiative, pursuant to which the Owner has entered into Green Commitments (as such term is defined in the document titled "Owner's Green Commitments") to rehabilitate and operate the Project in a manner that minimizes utility usage, furthers occupant health, and minimizes impact on the environment. Owner acknowledges that this Green Operating & Maintenance Plan ("GO&M Plan") is a material consideration in the Project's eligibility for the Mark-to-Market Green Initiative and in the Owner's eligibility for various incentives in connection therewith.

The Owner provides this GO&M Plan to show how it plans to fulfill the obligations required in the Owner's Green Commitments for the life of the Mark-to-Market Use Agreement. This GO&M Plan becomes a key component in HUD's oversight and in determining the Owner's compliance with its obligation.

2. Instructions

- A. Owners are required to use this form, as it may be revised from time to time, to provide the Project's GO&M Plan for HUD review and approval.
- B. Definitions used in the GO&M Plan can be found in this Plan at section 3, Green Definitions.
- C. For each topic, HUD's requirements are stated in plain text, instructions to the Owner are stated in *italicized text*, and instructions to the PAE are stated in yellow highlighted text.
- D. This form is intended to support the Owner's Green Commitments document that is executed at the closing of the Mark-to-Market restructuring and is attached to the Restructuring Commitment and attached to and recorded with the Mark-to-Market Use Agreement.
- E. Owners are required to present an update to the GO&M Plan on the occurrence of any of these events:
 - i. Request by HUD (not to occur more frequently than annually except if again prompted by any of the events listed in this section).
 - ii. Change in ownership.
 - iii. Change in management agent.
 - iv. Change in pest control operator.
 - v. Change in circumstances that cause the Owner to request a modification of the approved GO&M Plan.
- F. HUD may request a one-time orientation call with the owner, management agent staff, HUD field office project manager and others as may be identified, to review the contents of this GO&M Plan. The owner agrees to cooperate with such request.

3. Definitions

- A. **Green Component Defined.** A "Green Component" is one that is not mandated by applicable codes or ordinances, is consistent with the Reserve for Replacements schedule agreed to in the Mark-to-Market restructuring, and has one or more of the following attributes, when compared with the comparable component that would normally be used by Owners of similar properties in the same market area who have not made a Green Commitment:
 - i. Materially lower electric / natural gas / heating fuel/ water/ other utility consumption.
 - ii. Materially lower emissions of chemicals thought to be harmful to humans.
 - iii. Materially longer useful life.
 - iv. Materially more biodegradable.

- v. Materially more easily recycled.
- vi. Materially lower use of raw materials/ materially more recycled content.
- vii. Materially less miles to transport materials to the Project.

B. **Green Operation Defined.** “Green Operation” is operation that conforms to the Green Commitments generally, conforms to the Traditional vs. Green Comparison for R4R attached hereto as Exhibit B specifically, that uses Green Components where prudent and appropriate for operations and replacements, and that uses products for cleaning and maintenance with a materially lower use of chemicals thought to be harmful to humans.

4. Green Rehabilitation

Requirement: Owner has reviewed the Traditional vs. Green Comparison for Rehab and Significant Additions attached here to as Exhibit A. Owner agrees that such Exhibit accurately reflects Owner’s agreements for rehabilitation and significant additions, to be completed by **insert Rehabilitation Escrow Deposit Agreement expiration date** and otherwise as required in the executed Rehabilitation Escrow Deposit Agreement. With respect to the rehabilitation designated as Green Components, Owner further agrees to follow Green Rehabilitation in carrying out such activities, and to document its compliance with this requirement.

5. Green Implementation of Replacements

Requirement: Owner has reviewed the Traditional vs. Green Comparison for R4R attached here to as Exhibit B. Owner agrees that such Exhibit accurately reflects Owner’s agreements for replacements. With respect to the replacements designated as Green Components, Owner agrees to replace various components with items broadly recognized as Green Components at such times as the useful lives of the existing components have expired. Owner agrees to document its compliance with this requirement. Owner further agrees to provide a copy of each request for reimbursement from the Reserves for Replacement Account (including supporting documentation) to an office designated by the Secretary for monitoring the Owner’s compliance with the Green Commitments.

6. Green Maintenance

Requirement: Owner agrees to take all reasonable steps, to use materials and practices that are broadly recognized as being practical, feasible and less harmful to the residents and the environment, to follow Green Operation in the operation of the Project, including cleaning, maintenance, and replacement tasks, and to generally select and make best efforts to use cleaning and maintenance products that are Green Components.

The following narrative describes how the Owner will meet the Green Maintenance requirement. For example, the Owner should consider how to use appropriate practices to install and maintain Green Components (and train on-site staff and tenants, as applicable, in the use of the new Green Components). The Owner should also consider how best to optimize the use of air quality compliant products, materials and practices, and where practicable, use appropriate types of caulking, adhesives and sealants; use appropriate types of paints and coatings that contain no or less volatile organic compounds when compared to comparable products used by Projects not participating in the Mark-to-Market Green Initiative; implement a toxic material source reduction program, as necessary, for proper disposal of mercury contained in light bulbs and compact fluorescent lights; maintain carbon monoxide alarms; use appropriate types of refrigerants for cooling systems, if applicable, that use a product less harmful to the environment; dispose of construction debris and component replacement using both recycling and other methods that reduce the addition to landfills; and with respect to all practices, train existing and new staff in selection and use of appropriate products and practices.

7. Discounts, Rebates, Commissions and Other Savings

Requirement: The Owner acknowledges the existing Regulatory Agreement requirement to secure for the benefit of the Project all reasonably available discounts, rebates, commissions and other savings, which includes securing for the benefit of the Project any such benefits that are attributable to Green improvements. The Owner agrees to periodically review programs for cost savings that may be available through the likely Federal, State and Local resources, Green Component manufacturers and utility companies, and to pursue those that the Owner determines are beneficial to the Project.

8. Resident Involvement, Outreach and Incentive Plan

Requirement: Owner shall operate the Project in accordance with the Resident Involvement, Outreach and Incentive Plan, as approved by the Secretary. The Plan shall address the owner's plans for involving, training and incentivizing tenants in the prudent operation of a Project that benefits from having Green Components installed and that follows Green Operation. In developing the Plan, the Owner may rely on guidance from national organizations with a mission for improving the indoor environmental quality and incorporating energy and water saving components in their housing.

The following narrative addresses the Owner's plans for orienting residents to the Green Operation of the Project, seeking input on existing and future Green Operations, and incentivizing residents to promote Green Operations. For example, the Owner should consider its plans for existing residents upon conversion to a Green Project and upon the move-in of new residents in the future. The Owner should also evaluate each area where residents can have an impact on Green Operations and identify incentives (e.g., recognizing top energy savers and water savers,, improving the community facilities, extending hours of the Neighborhood Network Center, offering more or expanding existing job training programs) to reward the desired conduct. The areas might include, for example, energy-saving items, water-saving items, recycling, carpooling, public transportation, compact fluorescent lighting (CFL) replacement programs, Green Welcome Package, Green Orientation Session, etc. The Owner's plan should show how the training will be sustained over the life of the Mark-to-Market Use Agreement.

(Resident Involvement, Outreach and Incentive Plan continued):

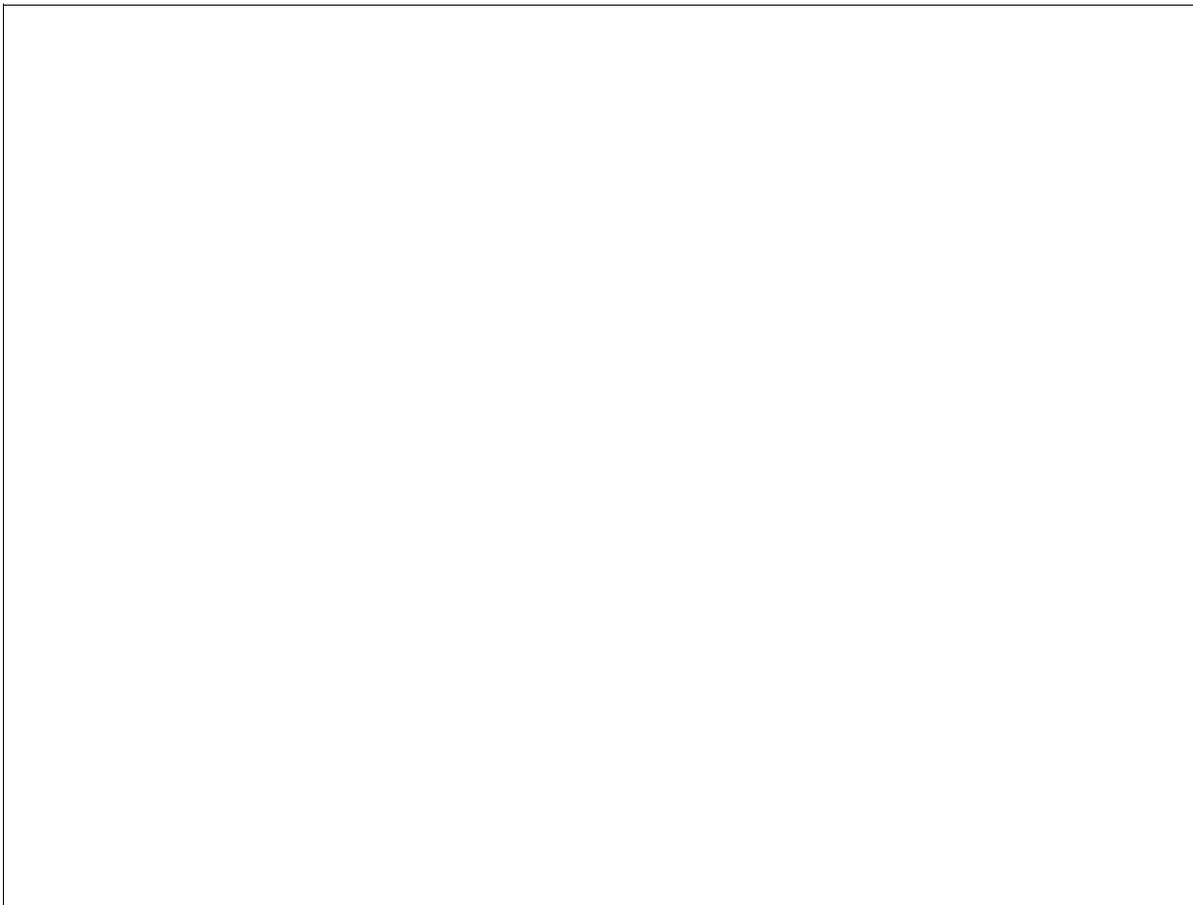
9. Integrated Pest Management Plan

Requirement: Owner shall ensure that pest management activities are undertaken in accordance with the Secretary's requirements for an Integrated Pest Management Plan, as documented in the Mark-to-Market Program's existing guidance as it may be amended from time to time. OAHP expects the Owner to generally adhere to these principles (from Draft Green Guide, Version 9, paragraph V.C.5):

- a. “Periodic exterior inspection: identify and seal pest entry points.
- b. Interior unit inspection: look for evidence of roaches, mice, and other pests, and if evidence is found, identify and seal pest entry points and notify the pest control firm.
- c. IPM principles: incorporate IPM principles into third party pest control firm contract and/or into internal property management practices, as applicable, including:
 - (1)- The problem or pest is identified before taking action.
 - (2)- Vegetation, shrubs and wood mulch should be kept far enough away from structures to avoid attracting termites and to remove cover for rodents looking to enter the building.
 - (3)- Cracks and crevices in walls, floors and pavement are either filled or eliminated.
 - (4)- Garbage cans and dumpsters are cleaned regularly.
 - (5)- Litter is collected and disposed of properly at least once a week.

- (6)- If fertilizers are used, they should be applied several times (e.g., spring, summer, fall) during the year, rather than one heavy application.
- (7)- If pesticides are necessary, use spot treatments rather than area-wide applications. In choosing among pesticides likely to be effective: (i) For roaches, prioritize baits, growth regulators, and boric acid as the primary pesticides. Focus on housekeeping issues and on avoiding introducing roaches during move-in; (ii) in general, give priority to the lowest-toxicity pesticide; and (iii) in general, avoid the use of spray applicators and fogging applicators.
- (8)- Interior water leaks should be fixed as identified by inspectors or property management staff, or as reported by residents.”

The following narrative evidences the Owner’s commitment to establish and maintain an Integrated Pest Management Plan, a copy of which is attached as Exhibit C. For example, the Owner should confirm that the selected pest control operator is experienced in IPM principles and practices, that the IPM Plan will be adopted at the Project, and that on-site staff and residents will be trained upon conversion to an IPM Plan and upon the move-in of new residents and change of staff in the future.



10. Temperature and Relative Humidity Monitoring

Requirement: Owner agrees that the Mark-to-Market restructuring plan incorporates the costs of purchasing, operating and maintaining devices to monitor and report temperature and relative humidity at the Project. Owner shall install devices to monitor and report temperature and relative humidity at the Project, for a period of three years after completion of the rehabilitation required in the Rehabilitation Escrow Deposit Agreement, pursuant to protocols that the Secretary provided prior to closing the Mark-to-Market restructuring (in the event the protocols are not provided, the funding for this requirement is included in the Rehabilitation Escrow, to be used when the Secretary provides the protocols). Owner may continue the monitoring beyond this time requirement at the Owner's discretion; HUD may continue the monitoring at its expense.

The following narrative describes the Owner's plans for installing and operating devices in apartments that will monitor temperature and relative humidity and transmitting it wirelessly to HUD in a format, on a frequency and according to the technical specifications provided by OAHP prior to closing. The narrative should include the type, number, and location of devices to be installed.

11. Energy and Water Usage Monitoring

Requirement: Owner agrees that the Mark-to-Market restructuring plan incorporates the costs of monitoring and reporting energy and water usage at the Project, for a period of three years after completion of the rehabilitation required in the Rehabilitation Escrow Deposit Agreement, pursuant to protocols that the Secretary provides prior to closing the Mark-to-Market restructuring. Owner may continue the monitoring beyond this time requirement at the Owner's discretion; HUD may continue the monitoring at its expense.

The following narrative describes the Owner's plans for installing and operating devices that will monitor utility consumption and transmitting it wirelessly to HUD in a format, on a frequency and according to the technical specifications provided by OAHP prior to closing. The narrative should include the type, number, and location of devices to be installed.

12. Resident Paid Energy and Water Consumption

Requirement: Insert 'Not Applicable' if there will be no utility allowance following the **Mark-to-Market Closing Date**. The owner's commitment to monitor energy and water usage provides data that can be used to fulfill the owner's existing and ongoing obligation to properly size the tenant utility allowance. Twelve months after completing the required rehabilitation, the owner shall provide to the HUD field office project manager (or other designee) a request for re-determination of the utility allowance following existing HUD guidelines and including all available monitoring data for tenant usage for the most recent twelve months at the Project. This data will be used to revise the tenant utility allowance, if necessary, to reflect actual utility usage post-rehabilitation. Utility usage will thereafter be reviewed periodically in the same manner in order to fulfill owner's obligation to ensure that the utility allowance is properly sized.

13. Green Property Management Certification

Requirement: Owner shall ensure that at least one representative of the property management (working on site or a direct supervisor of such staff) maintains a Green certification as prescribed by the Secretary in Exhibit D attached hereto. Owner further agrees to document its compliance with this requirement and provide evidence of compliance to HUD annually.

The following narrative includes the Owner's plan to achieve initial compliance with the requirement and acknowledges the obligation to maintain compliance for the life of the Mark-to-Market Use Agreement.

14. Green Research Project Cooperation

Requirement: Through the Mark-to-Market Green Initiative, HUD and the Owner are taking steps at the Project to reduce utility usage, further occupant health, and be less harmful to the environment. It is important to measure results; HUD has required, and the Owner has agreed, to measure utility consumption, temperature and humidity for a specific period of time to obtain tangible, meaningful data about savings and improvements at the Project. The research community may also be interested in obtaining other data from the Project, such as air quality measurements or resident health surveys, in order to validate other benefits to the tenants.

Owner agrees that, if so requested by the Secretary, Owner will cooperate with research projects approved by the Secretary. Owner will provide to researchers all of the following if requested by the Secretary to do so:

- A. Access to the Project at reasonable times of the day and for reasonable amounts of time.
- B. Access to Project information held by or under the control of the Owner and its agents and affiliates that is available to the Secretary.
- C. Access to resident information only as specifically authorized by the Secretary.
- D. The opportunity to interact with tenants of the Project at reasonable times of the day and for reasonable amounts of time, and as agreed to by the tenants.
- E. In approving researchers, the Secretary shall impose such requirements as the Secretary deems appropriate to minimize administrative and other burdens on Owner, managing agent, and residents of the Project.

Submitted by: _____ Date: _____
(Owner representative's name printed)

Signature: _____
(Owner representative's signature)

GREEN OPERATING AND MAINTENANCE PLAN

EXHIBIT A, DESCRIPTION OF REQUIRED REHABILITATION

Attach Exhibit A to the Rehabilitation Escrow Deposit Agreement, the Plug-In Significant Additions and the Plug-In Rehab pages here

GREEN OPERATING AND MAINTENANCE PLAN
EXHIBIT B, RESERVE FOR REPLACEMENTS SCHEDULE

**Attach the 20-year schedule and Plug-In R4R page(s) here, noting the
Green Components
accepted for implementation by the Owner.**

GREEN OPERATING AND MAINTENANCE PLAN
EXHIBIT C, INTEGRATED PEST MANAGEMENT PLAN

Attach the IPM Plan here.

GREEN OPERATING AND MAINTENANCE PLAN
EXHIBIT D, GREEN PROPERTY MANAGEMENT CERTIFICATION
REQUIREMENTS

Attach the current version of the requirements here.



ATTACHMENT 18

UTILITIES DATA SHEET

Property Name:
Location:
Property contact for this information
Name:
Phone:
Email:

In addition to mandatory temperature and humidity monitoring, utility usage monitoring is required in Green properties. The goal of this data sheet is to have potentially relevant information available for discussions with vendors. If some buildings/units differ from others, answer separately for those buildings/units and identify how many units/buildings are in each group. Commercial space can be laundry facilities, or other leased store or office space.

1. Water

- a. Identify the provider of water to the property. If gray water or well water is used for some purposes, describe.
- b. How is the water usage measured (if so)? Does metering separate residential and property/commercial use?
- c. Are there separate meters at the unit level?
- d. Is there a single water intake for each unit with unit specific water heaters?
- e. Where are the water meters physically located?

2. Electric

- a. What entity provides electric to the property? If there are any site generating activities to supplement (wind, solar) describe.
- b. What is the meter configuration? (How many covering what usage?)
- c. Where are the electric meters physically located?
- d. Are property and residential unit use separately metered?
- e. Are there unit level electric meters or unit level breaker boxes?
- f. Where are the electric meters physically located?

3. Heating fuel

- a. How is the property heated? (forced air furnace, boiler, electric baseboard, heat pump, etc.)
- b. What is the heat source? (gas, propane, oil, purchased steam, electric)
- c. Are there individual heating units for each unit?
- d. Are there individual meters for the heating fuel?
- e. Are there separate heat sources for common areas/commercial areas?
- f. Are all units/areas heated the same way?
- g. Is the heating included in a utility paid by the tenant via a separate meter (e.g., electric)?
- h. If the heating fuel is metered, where are the meters?

4. Additional Utility Use Questions

- a. Are stoves electric or gas?
- b. If there are unit clothes dryers, are they electric or gas?
- c. Are water heaters electric or gas?
- d. Are there individual unit water heaters?
- e. Are there other unusual utility sources or uses?