EXECUTIVE SUMMARY

TITLE: PLACE Redevelopment Concept for McGarvey Site

RECOMMENDED ACTION: No action at this time. The purpose of this item is for the Council to discuss the PLACE Development proposal and provide feedback and direction to Staff.

POLICY CONSIDERATION: Does the Council desire staff to further pursue the PLACE project with the developer?

SUMMARY: PLACE, a non-profit developer, has contacted the City to propose building a mixed-income, mixed-use, creative community that includes an anaerobic digester on site. The mission of PLACE is “to build a sustainable, just, and inspiring world, one community at a time.” PLACE is working with the owner of the McGarvey property for a project in St. Louis Park that would include an anaerobic digester to convert organic waste to energy. PLACE has developed several projects, including net-zero energy communities (produces enough, or more energy than consumes), with their most recent being the WAV Community in Ventura, CA. This is the first development they have pursued that would include a digester. The proposed PLACE Community concept includes approximately 200 housing units, which would include a mix of market-rate and affordable units, cooperative space, live-work units, and a mix of retail, commercial and/or office.

PLACE is proposing to have the digester operating in May, 2014 and to break ground on the mixed-use development in 2015. If the Council is interested in this project, PLACE would continue working with Staff through the City Process, including neighborhood engagement, while pursuing all other necessary permits and approvals.

FINANCIAL OR BUDGET CONSIDERATION: None at this time. There is the potential to consider TIF financing or other public/private funding strategies if the project moves forward.

VISION CONSIDERATION:
1. St. Louis Park is committed to being a leader in environmental stewardship. We will increase environmental consciousness and responsibility in all areas of city business.
2. St. Louis Park is committed to providing a well-maintained and diverse housing stock.
3. St. Louis Park is committed to promoting and integrating arts, culture and community aesthetics in all City initiatives, including implementation where appropriate.

SUPPORTING DOCUMENTS: PLACE Development Summary Sheet
E-Generation Primer
Anaerobic Digester Examples

Prepared by: Ryan Kelley, Associate Planner
Reviewed by: Meg McMonigal, Planning and Zoning Supervisor
Michele Schnitker, Housing Supervisor
Approved by: Tom Harmening, City Manager
DISCUSSION

PLACE is proposing a sustainable, transit-oriented development at the site of the former McGarvey Coffee Plant. The full development would offer live/work suites, retail space, a variety of housing types including owner-occupied and rental across a range of price points, and is anticipated to be built to LEED Platinum standards. A component of achieving a LEED rating is the incorporation of an anaerobic digester to produce energy on-site.

ANAEROBIC DIGESTION:
Anaerobic digestion is a process in which organic matter is decomposed in an oxygen-free environment generating compost, methane and carbon dioxide. These gases are captured to produce heat, steam or marketable energy. There are a variety of systems employed throughout the world that use anaerobic digestion to produce energy and/or fertilizer.

The most common use of digesters is on farms and at landfills. Both of these settings have large amounts of waste that is used to generate power for on-site consumption, or that is sold back into the larger power-grid. In these scenarios, there is usually very little concern over any odor, noise, or traffic issues that can be associated with a digester.

PLACE has filed a patent for an anaerobic digester that can operate at a scale appropriate for a residential community and urban environment, and that they believe addresses the concerns with odor and the outputs from the digestion process. The digester, as proposed by PLACE, is a completely enclosed container, approximately the size of a shipping container.

PROJECT BACKGROUND
PLACE is proposing to install the entire digestion process inside the McGarvey building, including a small addition that would allow trucks to drive in one side the building, unload the organics, and drive out the other side of the building, removing the need for any trucks backing up and the associated noises. PLACE estimates that there would be a maximum of six trucks per day delivering organics to the site. There may be an estimated two trucks per week that take away any additional compost produced from the digestion process. The building design also includes a negative-pressure building, the enclosed digestion processing units, charcoal air scrubbers, and an exhaust system that captures any gas by-product and diverts it to a greenhouse to use for on-site food production, all as odor-controlling measures and waste-harnessing methods.

PLACE has responded to an RFP issued by Hennepin County to be the County’s organics collection site. Their submittal is contingent on the ability to locate the digester in St. Louis Park. The timeline for the digester component of the project is extremely tight due to Hennepin County’s timeline. The County wants a site to be able to accept its organics beginning May 15, 2014. If the selected applicant cannot accept organics at that time, they must have a plan in place for collecting the material until the applicant’s site is operational.

There are two phases to the PLACE proposal, due to site acquisition opportunities and the Hennepin County contract. Phase One is to get the digester operational in the existing McGarvey building. This phase includes minor renovation of the existing McGarvey building, the addition of a truck bay, a green house on a portion of the roof, landscaping and other minor site changes and would take place in Quarter 1 of 2014. Phase Two includes the full mixed-use development which would include a reconfiguration of the McGarvey site, possible demolition of all or part of
the existing McGarvey building, and the construction of a new building. PLACE is also interested in the potential opportunity of incorporating the EDA parcel to the west into their development for this phase. PLACE anticipates breaking ground on Phase Two in 2015.

**LAND USE:**
The McGarvey site is currently guided as Business Park in the Comprehensive Plan and is zoned I-G General Industrial. The property was originally proposed for rezoning to BP-Business Park, however as development proposals have come forward, the City Council direction has to been to hold off on changing the zoning at this time. A Comprehensive Plan Amendment would be required for either phase of the development.

The mixed-use component of the PLACE Community proposal can be handled currently through the City’s Mixed-use Zoning District and the PUD process. The digester is the more challenging use to determine. Staff has determined that the most appropriate land use definition for the digester in the existing Code would be Manufacturing/processing. Manufacturing/processing is permitted in the I-G General Industrial Zoning District. Staff finds that the digester may be permitted in the I-G District, and will need to conduct further research on how to appropriately designate the land use and zoning for the site if the project moves forward with the digester and mixed-used development.
About PLACE

PLACE is a nonprofit developer specializing in sustainable communities for the arts and economic development. PLACE collaborates with communities to develop places that improve the lives of residents and the surrounding neighborhood, protect and restore the natural environment, and lower government burden. We are passionate about taking on the interconnected challenges of affordable living, education, economic development, access to arts and culture, food, health, energy, and more.

The History

Chris Velasco, President and Executive Director of PLACE, cofounded the organization with Elizabeth Bowling in 2005 to bring together the arts, environmental stewardship, and social justice. Prior to starting PLACE, Chris was Vice President of Artspace, where he helped grow the organization into the world’s leading developer for the arts. After working for thirteen years building arts communities for public benefit, Chris wanted to expand those efforts consistent with his commitment to sustainability and community empowerment.

PLACE became the vehicle to develop mixed-use, mixed-income projects that are both restorative to the environment and strengthening to the community. Through a community-driven, ethically rigorous process, the PLACE Team strives to develop new models for urban neighborhoods that demonstrate radical innovation in environmental, economic, and cultural design.

Experience

To date, the PLACE organization has created over $1 billion in completed projects, ranging from adaptive reuse of historical buildings to cutting-edge new construction. More importantly, our communities and their residents have created a ripple effect of long-term public benefit that far exceeds the dollar value of the buildings.
Project Description

PLACE seeks to develop a roughly 2-acre site in St. Louis Park, Minnesota into a sustainable, transit-oriented community. The site is located adjacent to a major pedestrian and bike trail. It is also next to the pending Southwest Light Rail Line.

The first phase of this project, a renewable energy facility known as E-Generation, will be completed by May of 2014. The second phase, the sustainable village, will be powered by E-Generation and will break ground in 2015, making it the world's first sustainable community powered by garbage.

The village will offer live/work suites for creatives (artists, scientists, technologists and inventors), and retail space for creative businesses, including coffee houses, galleries, cafes, wine bars and design firms that will draw foot traffic and contribute to the vitality of the neighborhood.

A variety of housing types—both ownership and rental—will be available for households across the income spectrum. The entire village will be built to the highest standards of environmental design (LEED Platinum), and will achieve net zero energy. With the community involved in every aspect of development, our St. Louis Park village will create jobs, set a new standard for sustainability, support small businesses, and provide healthy affordable homes for people.

The first community powered by garbage

E-Generation™

E-Generation is PLACE’s patent-pending process for creating renewable energy for our communities. It combines a portfolio of renewable energy technologies — such as wind, solar and geothermal — with a micro, anaerobic digestion technology. With anaerobic digestion, we can convert organic waste into bio gas, which can then be used to generate electricity, a virtuous cycle: community life generates garbage, which generates energy, which goes on to generate more community life, and so on. The process is silent, odorless, non-intrusive, and is designed to operate in a dense urban environment. At the end of this process, the garbage has become a Class A liquid fertilizer, which we can use to grow food for the community through onsite gardens and greenhouses, and also sell to organic local farms for use on their crops.
ANAEROBIC DIGESTION

PLACE’s E-Generation process successfully converts organics into renewable energy through a process of breakdown by thermophilic (52-55°C) microbes in an anaerobic environment. The modular system is designed as shipping containers shipped to the site ready to operate. The facility will be capable of processing 15,000 tons of organics per year. Organics are dropped off at the facility into a closed container. From there, the organics cycle through the automatic system in 21 days, yielding a total breakdown of the original volume by over 95%. The resulting biogas will generate renewable energy twenty-four hours a day, three hundred sixty-five days a year.

DIGESTER UNITS
Each digester unit is manufactured to exacting German standards in San Jose, California. The size has been engineered as a half-size shipping container and is stackable.

100 KW ICE CHP GENERATOR
PLACE will use a technique known as cogeneration to achieve very high rates of performance and efficiency. Waste heat made during electricity generation will be fed back into the system to heat and cool the building.

SCALABLE, MODULAR SYSTEM
PLACE’s E-Generation process is modular and scalable. The installation will not be permanent, and the facility can be relocated.
PLACE has partnered with Siemens, a global leader in the engineering and manufacture of intelligent systems and controls to create this project. Siemens and place will finance and the develop the project. MS&R Architects and Mortenson Construction will serve as the building team. The Project Team has the experience and financial strength to succeed.

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<thead>
<tr>
<th>VITAL STATISTICS</th>
<th>POWERED BY NATURE</th>
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<tbody>
<tr>
<td>Project Sponsors</td>
<td>PLACE, a 501(C)3 public benefit organization, Siemens a global company founded in 1847</td>
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<tr>
<td>Project Architects</td>
<td>MS&amp;R Architects</td>
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<tr>
<td>General Contractor</td>
<td>Mortenson Construction</td>
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<tr>
<td>Location</td>
<td>5725 Highway 7 Service Road</td>
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<tr>
<td>Property Size</td>
<td>75,000 square feet</td>
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<tr>
<td>Building Size</td>
<td>1 story, 16,000 square feet (Phase 1)</td>
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<tr>
<td>Space Needs</td>
<td>15,000 sf for E-Generation</td>
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<td>Total Construction Cost</td>
<td>Approximately $3 million</td>
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<td>Proximity to Mass Transit</td>
<td>Within 1 blocks of new Southwest Corridor light rail line</td>
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<td>Proposed Phase II</td>
<td>Live/work apartments, affordable and luxury; makers’ space, commercial/retail space</td>
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<td>Proposed Schedule</td>
<td>Preparing for a May, 2014 opening (Phase 1)</td>
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<td>Phase II Ground Breaking in 2015</td>
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Case Study

SEaB digester installation at the University of Southampton Science Park, May 2012

The University of Southampton Science Park (USSP) is set in 45 acres of landscaped grounds, representing an impressive base for research and business.

The science park takes advantage of the energy harvesting potential of food and organic waste, which, to date, has been an untapped resource. Electricity and heat generated from the biogas production is used within the business park offices and research and development laboratories on site.

The science park supports a wide range of organizations in 400,000 square feet of mixed single and multi tenant buildings. Over 900 individuals work for 75 organizations.

Also on site is the Chilworth Manor luxury hotel and conference centre, based in a large Edwardian house. It is the perfect venue for entertaining important visitors and is an excellent venue for conferences and training events, offering the highest standards of service and residential accommodation for visitors. The hotel contains 80 bedrooms, 11 conference rooms and runs 2 kitchens. The hotel is recovering food waste from general waste.
Case Study:

Valorga Anaerobic Digesters

Anaerobic bacterial processes operate in an enclosed, oxygen-free environment. In addition to producing compost, such processes generate methane and carbon dioxide in an enclosed container, thereby providing an opportunity to capture these gasses and use them productively, either for process heat, for steam, or for marketable excess electricity.

"Processes such as anaerobic digestion and composting offer the only biological route for recycling matter and nutrients from the organic fraction of MSW," contends Herman Miller, president of Environmental Developers Inc. of Stockton, CA. "However, composting is an energy-consuming process requiring 50 to 75 kilowatt-hours of electricity per ton of MSW input. Conversely, anaerobic digestion is a net energy-producing process, with around 75 to 150 kilowatt-hours of electricity created per ton of MSW input."

Anaerobic digestion in this country appears to have been limited largely to applications involving animal waste or organic industrial waste. There has been little or no use of anaerobic digestion to compost MSW. In Europe, however, the use of anaerobic digesters to process organic MSW is becoming relatively common. Not surprisingly, therefore, some European suppliers of anaerobic digestion systems have been eyeing the US market.

All in all, the Valorga system appears to have eliminated the odor problem completely. Indeed, the facility in Freiberg, Germany, towers over an immediately adjacent Burger King restaurant and provides a powerful visual symbol for this system in particular and for the in-vessel composting industry as a whole. In-vessel systems cannot compete on cost grounds with traditional open-turned windrow MSW composting. However, dust, health, sludge disposal, vermin, and odor concerns affect the formula significantly at urban or suburban sites. In many cases, these factors can make in-vessel systems preferable; occasionally they might well make in-vessel systems mandatory.