DEVELOPMENT AND BENEFITS OF A LEED® PROJECT MANAGEMENT DATABASE

by

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This thesis is dedicated to my family for their encouragement and continued support throughout my entire education

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ABSTRACT

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DATABASE

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The U.S. Green Building Council is a non-profit community of industry leaders working to make green buildings available to everyone. The documentation process for achieving Leadership in Energy and Environmental Design (LEED®) certification is highly complex and more time-consuming than necessary with currently employed systems.

This thesis explains the need for development of a relational database as a means to increase the efficiency of the documentation process to meet LEED® requirements. This database will provide the construction project team a relational platform that guides the user through the LEED® administration and certification process. By developing a LEED® specific project management database, the process of collecting, organizing, and analyzing the required documentation will become more efficient. The primary purpose of this thesis is to

identify the need for, develop, and demonstrate the benefits of a LEED® specific project management database.

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LIST OF ACRONYMS

AIA	American Institute of Architects
ASCE	American Society of Civil Engineers
BIM	Building Information Modeling
BOK	Body of Knowledge
CUIRE	Center for Underground Infrastructure Research and Education
FPA	Facility Performance and Associates
LEED®	Leadership in Energy and Environmental Design
LEED® AP	LEED® Accredited Professional
MSDS	Materials Safety Data Sheet
ROM	Rough Order of Magnitude
SWOT	Strengths, Weaknesses, Opportunities, and Threats
USGBC	United States Green Building Council

CHAPTER 1

INTRODUCTION

1.1 ASCE Body of Knowledge (BOK)

The civil engineering profession recognizes the need for change in the way civil engineering is practiced in order to prepare for the future. To that end, in June 2006, the American Society of Civil Engineers (ASCE) convened a summit on the Future of Civil Engineering – 2025. At this gathering, civil engineers and other industry participants, including international representatives, articulated a global vision for the future of civil engineering. “The vision sees civil engineers as being entrusted by society as leaders in creating a sustainable world and enhancing the global quality of life” (ASCE BOK Committee, 2008).

One method used to contribute to sustainable development is through the Leadership in Energy and Environmental Design (LEED®) certification system. The United States has been involved in an active commitment to create and help promote sustainability. Specifically for the building industry, LEED® is the most commonly used rating system. The LEED® rating system is quite complex, and while its theories are already established, the process of achieving certification can be very time consuming for all entities involved.

The process of the development of the LEED® specific project management database illustrates that the ASCE BOK will be fulfilled by a combination of education and experience. Entry into the practice of civil engineering at the professional level requires fulfilling 24 outcomes to the appropriate levels of achievement. These outcomes are illustrated in APPENDIX A of this thesis and are the basis for the evaluation portion.

1.2 Objective of Thesis

The primary purpose of this thesis is to identify the need for, develop, and demonstrate the benefits of a LEED® specific project management database. The goal for preparation of the

database is to facilitate an efficient process for coordinating required documentation for a construction project to achieve LEED® certification.

The database will provide users with a platform to collect data, assign responsibilities, track credit status, and coordinate among various building trades, thus establishing an efficient LEED® documentation process.

1.3 Benefits of Research

Today, the most common method of LEED® document tracking uses Excel spreadsheets for management of LEED® specific projects. This research identifies the advantages of using Microsoft Access database in lieu of Excel spreadsheets.

The LEED® specific project database will serve as a key tool for entities managing LEED® projects, either as an owner, designer, consultant, general contractor, or LEED® administrator, by linking tasks and documents to credits. Explanation of the benefits to each of these entities is clarified in subsequent chapters.

To achieve each LEED® credit, specific tasks must be completed. Each task includes submitting documents relating to the respective credit. In major building projects, the details must be organized to avoid omissions.

The importance of this research becomes more visible when one considers that traditionally, firms dealing with architecture, engineering, and construction have practiced independently to fulfill compliance requirements, with each division being concerned only with its own section rather than the project as a whole. However, LEED® certification forces separate entities to work collaboratively in order to fulfill the LEED® compliance. This is an important aspect of the LEED® process since the participants must go through an additional fee-based certification and also the extra work of making sure the LEED® requirements are met.

This thesis will aid in creating a marketable program by identifying the necessity and benefits of such a database and the logic behind the database development. This database can be modified to accommodate other rating systems such as Portland's Earth Advantage,

Green Globes, or the California Green Builder Standards that have tasks associated with certification requirements.

1.4 Limitations of Research

The database does not actually teach the particulars of the theory behind LEED®, much as a project scheduling software does not teach the theory of scheduling. The database is designed for those who have a working knowledge of the LEED® process; it is designed to manage the required data and tasks necessary to achieve individual LEED® credits, not to outline the processes by which requirements are met.

The database does not take into account the design and construction cost to achieve each credit, only the actual LEED® administration costs. Incorporation of cost data is beyond the scope of this initial database platform due to the vast amount of materials, means, and methods available within the construction industry. However, future applications of this database will include linking to a third party construction estimating database.

1.5 Thesis Organization

The individual research objectives and scope outlined above provide the framework for this project. Following sections provide the rationale and reasons for developing a LEED® project management database. Figure 1-1 summarizes the research progression.

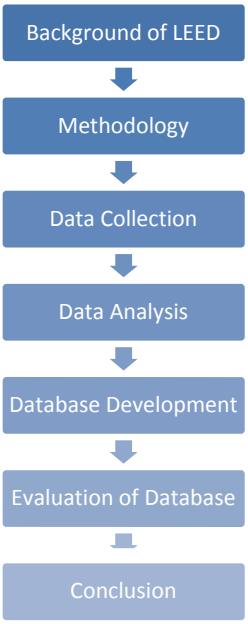

Figure 1-1 Organization of Research

1.6 Overview of LEED®

The U.S. Green Building Council (USGBC) is the nation's foremost coalition of leaders (see Figure 1-2) from throughout the building industry. Industry-led and consensus-driven, the USGBC is as diverse as the marketplace it serves. Membership includes building owners and end-users, real estate developers, facility managers, architects, designers, engineers, general contractors, subcontractors, product and building system manufacturers, government agencies, and nonprofits. Leaders from within each of these sectors participate in the development of the LEED® Rating Systems and the direction of the Council through volunteer service on USGBC's open committees. The LEED® rating systems were created in 1998 and have been continuously updated by the USGBC.

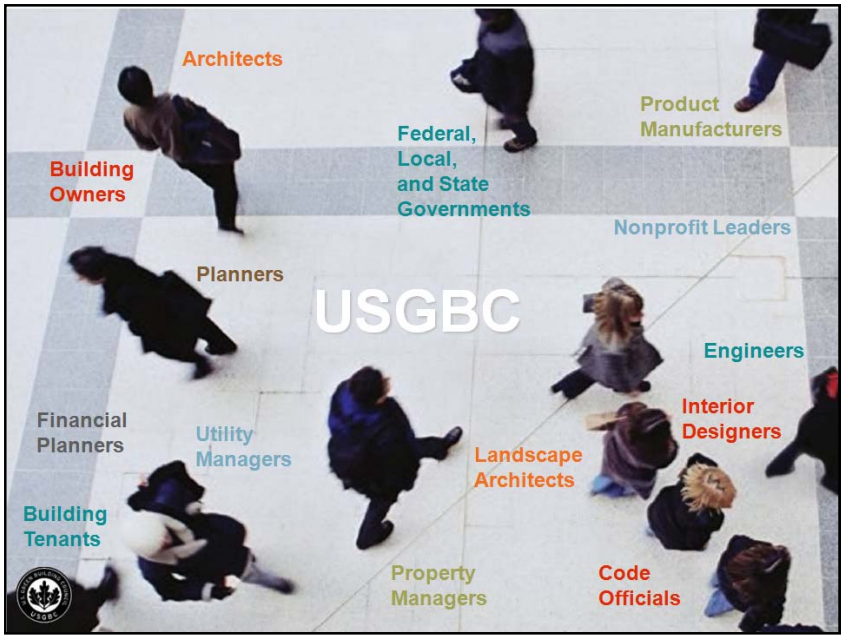

Figure 1-2 Leaders of Building Industry (USGBC, 2008)

Performance and sustainability are increasingly the focal points of current design, construction, and operation practices within the building industry. The USGBC is one of many agencies developing and promoting energy efficient and sustainable practices. The built environment, according to the USGBC, accounts for approximately one-third of all energy consumption, water, and material resources and generates similar proportions of pollution.

Figure 1-3 identifies the impacts that the U.S. building industry has on water, energy, and emissions. Similarly, Figure 1-4 identifies the energy, carbon, water, and waste savings that implementing green designs can provide. Credits established by LEED® seek to improve the efficiency of buildings by focusing on the areas shown in these figures.

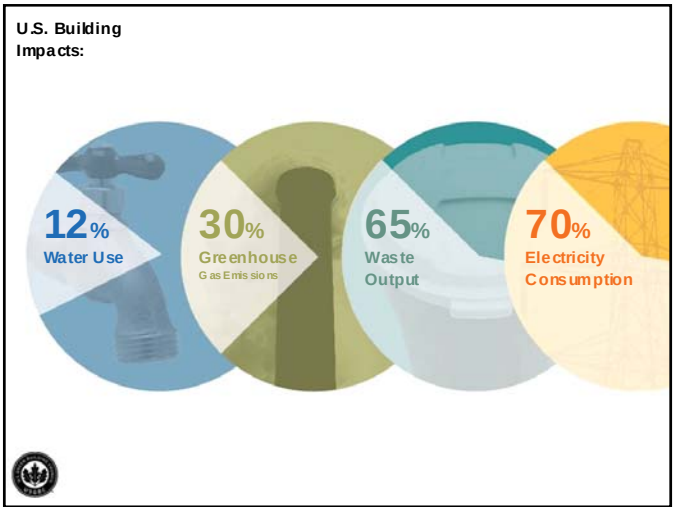

Figure 1-3 Building Impacts (USGBC, 2008)

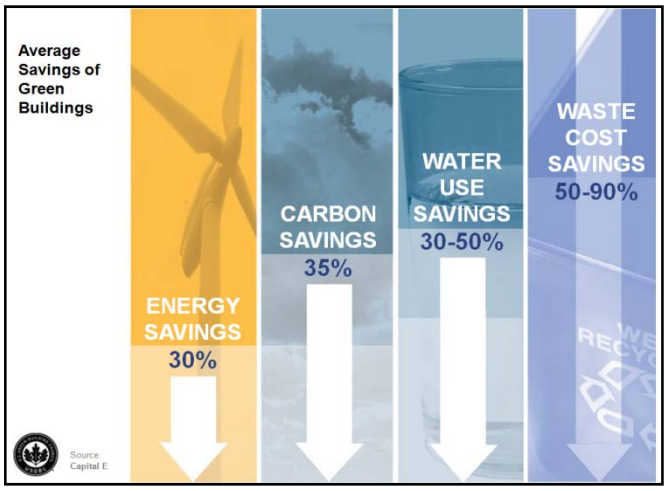

Figure 1-4 Projected Savings of High Performance Building (USGBC, 2008)

Currently, a number of rating systems are available to guide design and construction professionals through these relatively new "sustainable" concepts. In the United States, the USGBC's LEED® rating system is currently the most widely accepted.

According to the USGBC website (available at www.USGBC.org), "LEED® rating systems were developed by the USGBC to provide building owners and operators a framework to identify and implement sustainable design, construction, operation and maintenance

solutions." The USGBC states, "There are 35,000 projects participating in the LEED® system, comprising over 4.5 billion square feet of construction space in all 50 states and 91 countries." Further research indicates that LEED® is being established in the most highly populated countries, including India and China (Confederation of Indian Industry, 2007).

1.6.1 Project Scheduling with LEED®

Traditional construction emphasizes project schedules, code compliance, quality, and cost. Sustainable construction includes these same elements but also emphasizes performance, resource conservation, environmental degradation, occupant well-being, and social benefits as important factors for consideration. The fundamental principle behind LEED® is project integration. The USGBC emphasizes the importance of incorporating all parties involved in completing a project early to attain the greatest benefit from LEED®. The USGBC has published an Example LEED® Project Schedule for new construction (see Figure 1-5) to help project teams during their project development.

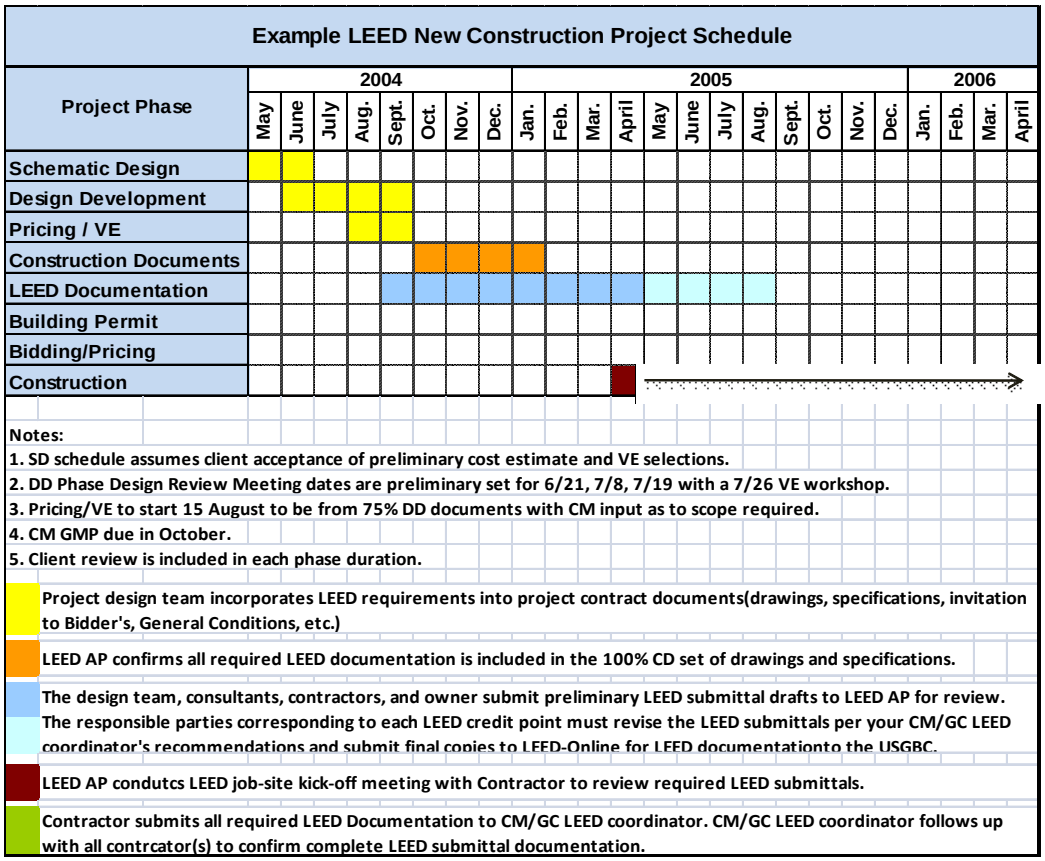

Figure 1-5 LEED® Documentation throughout the Building Process (USGBC, 2008)

Figure 1-5 loosely resembles a traditional approach toward project development and completion, i.e., design first, followed by construction as a second phase. The tinted blue bar in Figure 1-5 represents a substantial time period before construction, during which it is recommended that both the design and construction teams together review the construction documents for LEED® compliance. A LEED® accredited professional should nonetheless continuously oversee the project from inception to completion to assure obtaining a LEED® certified project.

1.6.2 Mandated cities

LEED® certification is required for government funded and/or commercial construction in 21 states and over 50 cities nationwide, including Dallas, Chicago, Los Angeles, and New York.

APPENDIX B lists cities identified by the American Institute of Architects (AIA) that have some type of LEED® mandated guidelines for new and/or existing construction (The American Institute of Architects, 2007).

1.7 Research Methodology

This section provides an overview of the methodology process. Each step of this process is explained in detail in subsequent chapters. The methodology for this thesis follows a workflow process found in Booth's book, *The Craft of Research.* Booth states, "Most everyday research begins not with finding a topic but with confronting a problem that has typically found you, a problem that left unresolved means trouble" (p. 49). The reason for stating this point is to clarify that an industry problem can indeed be solved by academic means. This workflow process (Figure 1-6) is divided into four succinct sections: Practical Problem, Research Question, Research Problem, and Research Answer (Booth et al, 1995).

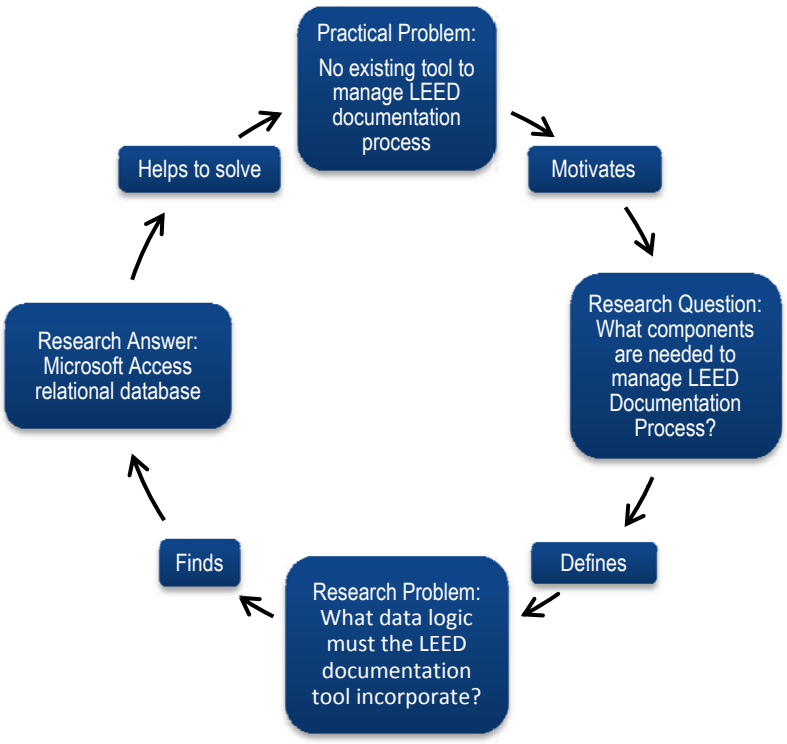

Figure 1-6 Methodology Process

As Figure 1-6 illustrates, the following subsections lead one through the workflow process by first identifying the Practical Problem for the research. The Practical Problem then in turns motivates the formulation of a Research Question, which then defines a Research Problem. The Research Problem is then addressed by finding the Research Answer, which in turn ultimately helps to solve the Practical Problem.

1.7.1 Practical Problem: No existing tool to manage LEED® documentation process

This claim comes from literature search and review of identifying barriers of the LEED® Certification process. The literature search (discussed in Chapter 2) identifies the practical problem and is the motivation to develop a research question.

1.7.2 Research Question: What components are needed to manage LEED® documentation process?

Evidence to support the research question is gathered by researching the LEED® Reference Manuals and by working through each of the LEED® credits. This research in turn identifies the required data, how and when to obtain this data, and both the direct and indirect entities responsible for the data. The data components are further addressed in the Chapter 3 Data Collection of this thesis.

1.7.3 Research Problem: What data logic must the LEED® documentation tool incorporate?

Evidence to support the Research Problem is discovered by conducting a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis of an existing LEED® documentation tracking system and a project management analysis of data from the LEED® Reference Guide. The results of the SWOT analysis in conjunction with the research identified in the Research Question will illustrate how to organize the collected data into logical relationships that will be used to develop the database.

1.7.4 Research Answer: Microsoft Access relational database

Evidence to support the Research Answer is obtained by evaluating the capabilities of Microsoft Excel spreadsheets versus Microsoft Access database. The data analysis concluded that a ‘relational’ database is best suited for the documentation process based on its ability to

incorporate multiple tables with methods that allow those tables to work together. The database allows the user to organize data gathered as a result of researching both the research question and research problem to develop tables, forms, queries, and reports.

1.8 Evaluate the Database Using Bloom's Taxonomy

Upon completion of the workflow process, an evaluation of the end product is conducted using Bloom's Taxonomy. Bloom's Taxonomy is used as a guide throughout the development of the database while simultaneously illustrating that the learning objectives (APPENDIX A) set forth in 2008 by the ASCE BOK are achieved. Bloom's Taxonomy is a hierarchy of learning objectives that represent increasingly sophisticated thought, from simple knowledge at the bottom to critical thinking at the top (Irish, 1999).

CHAPTER 2

LITERATURE SEARCH OF BARRIERS TO THE LEED® CERTIFICATION PROCESS

The literature search is used as evidence to support the claim of the *Practical Problem: No existing tool to adequately manage LEED® documentation process.*

Having gone through multiple revisions and improvements, the LEED® Rating System is well-established. Since its inception in 1998, the LEED® Rating System has been the focus of numerous technical papers and theses exploring and evaluating its benefits and shortcomings. Few queries, if any, have made an effort to identify and resolve the documentation and interdependency issues the LEED® System poses to the building industry.

The following literature reviews are used as supporting evidence that a LEED® specific documentation database is needed to promote synergy between the designers and contractors throughout the LEED® certification process. Each review is analyzed by Objective, Data and Methodology, and Results and Conclusions.

2.1 Literature Review #1

The first literature review is on *LEED® Documentation Process: Implementation Barriers for School Projects* by Madhulika N. Pise, a thesis submitted at Virginia Polytechnic Institute and State University (Pise, 2006).

2.1.1 Objectives

The applicable objectives of Pise's thesis are 1) to find the difficulties faced by the design team in the existing model of the documentation process for school projects and 2) identify suggested improvements in the LEED® documentation process (p. 5). Although Pise's research focuses on LEED® for schools, the documentation to achieve the credits of each rating system follows the same administrative process.

2.1.2 Data and Methodology

Pise's data selection criteria were limited to individuals within the building industry with certain knowledge of LEED®. "The participants required for this study were selected from the LEED® projects contact information on the USGBC website, people from the building industry known to the research advisor and list of school architects from online databases (p. 27). The target population included architects, green consultants, and engineers experienced in school projects who have knowledge concerning LEED®.

In Pise's thesis, two survey questionnaires (via telephone, face-to-face, and mail or e-mail) were designed to evaluate barriers to LEED® documentation. The first instrument was a "fixed-response questionnaire," such as a multiple-choice or true-false format. The second instrument of measurement was designed with a combination of standardized open-ended questions in an interview style approach (p. 30).

Each interview was first transcribed and then classified into data. Due to this type of subjective data, a quantifiable analysis was not applicable; therefore, Pise applied a qualitative analysis to the answers received from the participants. Pise systematically condensed the participants' responses into data that could be categorized. The data was then presented in an organized manner using tables relevant to the coding of each of the questions.

2.1.3 Results and Conclusions

Pise summarizes the research by identifying repeated comments of the participants. The relevant comments to support the claim of this thesis, that a LEED® documentation management database is needed in the industry, are as follows (p. 87-88):

- Contractors are unaware of LEED® documentation requirements and hesitant to carry out documentation
- Design teams have no experience and are not accustomed to the amount of paperwork required in LEED®
- The LEED® documentation is a time consuming process

- LEED® documentation process is expensive and not ideal for tight budget projects such as schools
- Several of the requirements for preparing LEED® submittals are ambiguous and not self-explanatory

After summarizing the questionnaire responses, Pise includes participant recommendations given during the interview. Contractors' comments support the claim that a LEED® documentation database is needed. Collectively, they recommended that the design team enlist the required LEED® documents in the master specifications and list penalties associated with them. This step requires preparation of a Materials Safety Data Sheet (MSDS), which lists the required information on materials, which should be given up-front to contractors, so they are aware of the type of information they have to collect from the manufacturers.

Contractors also recommended keeping a check on the contractors and their shop drawings at the beginning to avoid potential conflicts with LEED® requirements and reduce the need for changes later. To further reduce the design team's workload, product suppliers should also be provided with a list of documents to be included with the LEED® submittal.

Participants also recommended designing and documenting simultaneously, as documents may get lost during the course of the project if not documented in a timely manner. Documents provided in the LEED® submittal could be in terms of narrative writings, photographs, drawings, specifications, and minutes of meetings.

2.2 Literature Review #2

The second literature review is *Barriers to Certification for LEED® Registered Projects* by Bradly Thomas Johnson, submitted to the Department of Construction Management at Colorado State University (Johnson, 2005).

2.2.1 Objectives

The goal of this study is to understand some of the barriers to certification for LEED® registered projects (p. 18). The question addressed by Johnson's research project, "What are some of the encountered barriers for LEED® registered projects to become certified?" (p. 19)

applies explicitly to the claim that the industry needs a LEED® specific project management database.

2.2.2 Data and Methodology

Johnson collected data through surveys. The population for this study consisted exclusively of contact persons who worked on a LEED® registered (not necessarily achieving certification) project (p. 20).

Johnson clearly describes the survey methodology:

"This study is exploratory in nature and is mostly qualitative with limited quantitative analysis" (p. 24). The two types of questions that Johnson included in his survey were open-ended questions and Likert scale questions. Out of 184 surveys sent out to eligible contacts, Johnson received 43 completed surveys (p. 22).

2.2.3 Results and Conclusions

It was found that the "Costs of documentation /other indirect costs" were ranked the most costly, followed directly by "Team members lack of experience with LEED® certification" (p. 36). An additional relevant finding ranking in the top 10 in terms of barriers was "Poor team communication and education" (p. 37).

The three open ended questions that asked specifically about barriers to certification ranged from general to specific. The general question asked respondents to state "the most challenging difficulty or barrier encountered as part of the LEED® certification process." Two main barriers were identified from the responses to this general question.

Johnson reports the results of the open-ended questions as follows:

The most frequent barrier mentioned (16 respondents) was the difficulty of the documentation process for LEED® certification (p. 38). The second most frequently mentioned barrier (13 respondents) was the cost associated with certification, including direct certification fees, and the costs of green building practices and/or design (p. 38).

The third and fourth most frequently mentioned barriers were lack of project team education concerning the certification process and lack of communication and/or

misunderstanding with USGBC (7 and 6 respondents, respectively) (p. 38). Johnson asked respondents to identify external and internal barriers that affected certification. "The external barrier that was mentioned the most was a lack of awareness, education, or experience on the part of project personnel including contractors, owners, architects, engineers, subcontractors, and/or material suppliers. Two additional external barriers that were mentioned in Johnson's thesis:

1) The difficulty of documentation, and

2) Lack of commitment or buy-in from the project team" (p. 40)

The open-ended question that asked respondents how the LEED® certification process could be improved yielded one common suggestion. Respondents suggested that the USGBC improve the documentation process.

Several respondents gave suggestions for improving the documentation process. One suggestion was the development of a contractor's guide to LEED® . A practical guide to understanding the process and the documentation necessary for certification would be a helpful tool for all involved (p. 48).

2.3 Literature Review #3

The third literature review is *Leadership in Energy and Environmental Design and Higher Education: Planning for Documentation and Communication* at the University of South Carolina Living and Learning Center by Gina M. Cooper, submitted to the School of Environment at University of South Carolina (Cooper, 2002).

2.3.1 Objectives

The purpose of Cooper's thesis is "to review and analyze the process of planning, communicating, and documenting the LEED® certification process" (p. 1).

2.3.2 Data and Methodology

The data used came from two surveys developed with insights from an advisor and USGBC consultant. The surveys provided data from participants both having completed a LEED® certification process and those currently undergoing the LEED® certification process.

"The purpose of the surveys was to ascertain how the buildings were being used and how LEED® certification documentation is being handled" (p. 57).

The method of collecting the data was emailing the contact persons provided by the USGBC for 74 registered projects. Of the 74 issued surveys, 27 surveys were returned (p. 57). The results of Cooper's surveys are illustrated in 15 different charts.

2.3.3 Results and Conclusions

According to Cooper's charts of survey results, 46% of the respondents indicated that 'Yes' they would use a software program to coordinate documentation for LEED® certification. In the figure below, the chart "Challenges" identifies Paperwork as being the most challenging factor in the LEED® Certification process (p. 65).

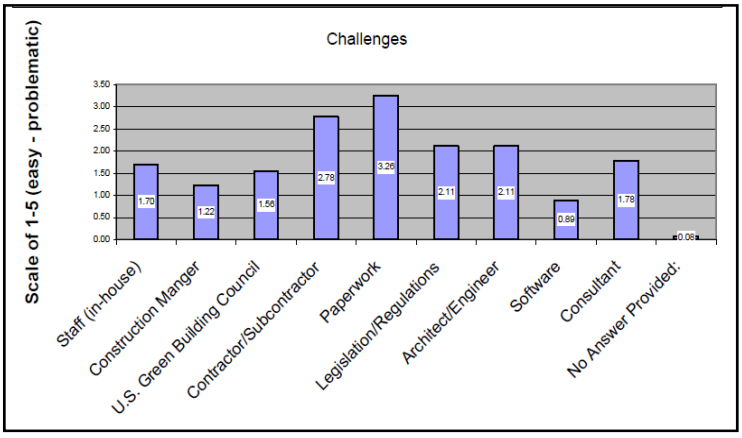

Figure 2-1 Challenges of LEED® Documentation Process (Cooper, 2002)

Since the certification process requires such detailed knowledge of the LEED® system, the survey respondents were asked to give their advice to others. Cooper quotes their responses:

"Start early, communicate often, and don't put off the documentation process" indicates the need for early preparation and for the various teams to work together. Another

recommended, “Be prepared to spend LOTS of time with the learning curve” (p. 78). Since LEED® is a relatively new system, few are experienced or knowledgeable enough to work through the rating system without neglecting any available credits.

One respondent suggested, “Perhaps experienced project teams would have a means to share or sell their planning templates via the USGBC website” (p. 80). Cooper stated in the results that “an average of 226 work hours is dedicated to documentation for a LEED® project” (p. 82).

2.4 Additional Supporting Literature

The following subsections are additional sources that support the need for development of a LEED® specific database. The supporting literature includes LEED® specific project administration and documentation costs, and project management tools.

2.4.1 LEED® Documentation

In “Ensuring the Sustainability of Sustainable Design - What Designers Need to Know About LEED®,” Jay Stein and Rachel Reiss provide specific facts from their surveys:

> Under LEED® Version 2.1, the USGBC requires building designers to submit records for each prerequisite and credit by using the LEED® Letter Template. The Letter Template prompts project teams to supply data as well as evidence of meeting each requirement. This documentation can be extensive. For example, Caroline Clevenger of Architectural Energy Corporation told us that the documentation she helped prepare for the Boulder Community Foothills Hospital in Boulder, Colorado, required five 3-inch-thick binders and one 1-inch-thick binder. The commissioning report for the facility took up hundreds of additional pages, so they submitted it on CD-ROM (p. 23). Some of the building designers we spoke with consider the LEED® documentation requirements to be too data-intensive. Others, including Timothy Moore, a design consultant and a LEED® Accredited Professional, claim that compiling LEED® certification documents requires virtually no additional work. He told us that a well designed,

high-performing building should already be recording this type of information. Swinerton Builders, a general contractor active in the Western U.S. and in business since 1888, is finding the LEED® documentation process to be instructive as to what it should have been doing all along (p. 24). Over time, we expect documentation-related costs to go down as innovators develop more efficient techniques. Here are a few tips we learned about while researching this report:

Use specially designed software. Several firms have recently developed software that streamlines project management and eases the pain of documentation. The USGBC is also developing its own Web-based tool and is moving toward a paperless system.

Improve designer teamwork. Peter Rumsey, an award-winning California design engineer, told us that if design teams think that creating LEED® documentation is a hassle, they probably aren't working together enough. He says that a disjointed design process will definitely make applying for a higher rating difficult and expensive (p. 25).

2.4.2 Use of a Database

In the 2004 book titled *Construction Jobsite Management*, William R. Mincks and Hal Johnston devote an entire chapter to Computerized Project Management. Within the objectives of this chapter, Mincks and Johnston state that "an integrated approach to training, standardization of software, and in-house coordination of computer services are needed to make project administration more efficient." Mincks and Johnston continue to define their objectives by stating that "A computerized system can avoid incomplete documentation caused by misfiled documents, incomplete documentation, or poor organization of project information" (p. 327). Mincks and Johnston describe various software utilization techniques and emphasize the use of databases to "store, group, and quickly retrieve data…Many spreadsheets can also perform many of the same functions as a database, but generally relational databases are

easier and more functional than spreadsheet databases" (p. 336). Mincks and Johnston also emphasize productivity by stating, "Productivity improvement is a prime objective of most construction companies" (p. 326).

2.4.3 Costs of Documentation

Several large corporations have performed independent studies on the cost of LEED® documentation. According to the US Department of Energy, the task of collecting and presenting documentation for a LEED® rating is significant and should be accounted for explicitly in the statement of work. Documentation costs an average of about $20,000 to $50,000, depending on the complexity of the project and how effectively the teams share documents. Efforts are currently underway to simplify project documentation requirements and thus reduce a portion of the cost (Federal Energy Management Program, 2004).

The USGBC found that for projects with budgets less than $5 million, the LEED® application and documentation process can be a significant proportion of the added costs. According to Nigel Howard, Vice President of the USGBC, "While LEED® documentation costs can be as low as $10,000 for an experienced team, this appears to be unusual. Most teams are working on their first LEED® project and report costs in the range of $30,000-$60,000" (USGBC, 2008).

2.5 Summary of Literature Review

The literature search identified evidence to support the claim of the Practical Problem that a LEED® specific documentation database is warranted in the building industry. The following recurring concepts are concluded from the literature search:

- In terms of this research, efficient communication is synonymous with effective documentation.
- Project teams' frequent communication breakdowns resulted in inefficient documentation.

- More efficient documentation/communication among the project team becomes predictable, thus, saving time, which ultimately saves management costs.

Based on these observations, the *Practical Problem (No existing tool to manage LEED® Documentation Process)* is identified and leads to further research and developing the *Research Problem: How to develop a tool to manage LEED® documentation process?* It is evident at this stage that in order for the LEED® documentation process to be fully completed, a LEED® specific documentation tool is needed.

CHAPTER 3

DATA COLLECTION

Having identified the need for a LEED® documentation management tool through the literature search, the next step is to identify and collect relevant data to identify the *Research Problem: What functions must be included in a tool to manage LEED® documentation process efficiently?* The answer to this question is found by analyzing the data the preceding studies identified as barriers to LEED® Certification.

The collected data comes from two sources. The first source, the LEED® Reference Manual (includes all Rating Systems for version two and version three), focuses on the data pertinent to credit completion. The second source, Existing LEED® Project Management System, identifies data necessary to track or manage the LEED® Administrative Process.

3.1 LEED® Reference Manuals and LEED® Credit Templates

Data is collected and identified by thoroughly reviewing the LEED® Reference Manuals. A listing of pertinent data common to credit completion includes:

- Rating Systems
- Tasks associated with credits
- Submittals needed
- External Resources
- Rating Systems
- Credits Available
- Standard associated with credits
- Design or Construction phase
- Internal Resources

The USGBC has developed individual rating systems to address the particulars of different project types. The ratings systems (both version two and version three) for LEED® are currently divided into the following five areas:

1. Commercial Interiors, CI
2. Core and Shell, C&S
3. New Construction, NC
4. Schools, Healthcare, Retail
5. Existing Buildings: Operation and Maintenance, EBOM

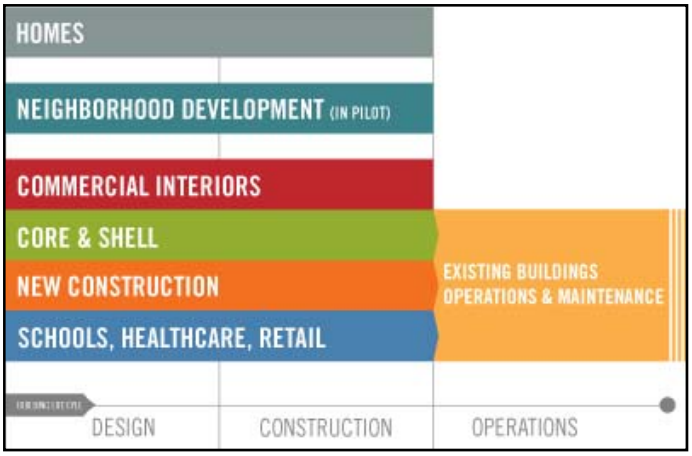

Figure 3-1 LEED® Rating Systems (USGBC, 2008)

Pilot programs were underway for LEED® for Homes and LEED® for Neighborhood Development; they are not applicable and are therefore not considered in this thesis. It is necessary to understand the variable criteria of different rating systems because when working on a project, the pertinent criteria for the applicable rating system are used throughout the duration of the project.

Regardless of the rating system, the USGBC issues the same four possible certifications to LEED® projects. The USGBC certifications, in ascending order, are: Certified, Silver, Gold, and Platinum. Each rating system requires a different number of points to attain each certification level; moreover, with each updated version of the rating system issued, this point system is also modified. The points required by each version of the rating system to obtain each certification are identified in Table 3-1.

Table 3-1 LEED® Certification Levels

Rating System	Version	Certified	Silver	Gold	Platinum
Commercial Interiors	2.0	21 – 26	27 – 31	32 – 41	42 – 57
Commercial Interiors	3.0	40 – 49	50 – 59	60 – 79	80 +
Core and Shell	2.0	23 – 27	28 – 33	34 – 44	45 – 61
Core and Shell	3.0	40 – 49	50 – 59	60 – 79	80 +
New Construction	2.0	26 – 32	33 – 38	39 – 51	52 – 69
New Construction	3.0	40 – 49	50 – 59	60 – 79	80 +
Schools	2007	29 – 36	37 – 43	44 – 57	58 – 79
Schools	2009	40 – 49	50 – 59	60 – 79	80 +
Existing Buildings: Operation & Maintenance	2.0	34 – 42	43 – 50	51 – 67	68 – 92
Existing Buildings: Operation & Maintenance	3.0	40 – 49	50 – 59	60 – 79	80 +

3.1.1 Credits Available

The LEED® rating systems are composed of a collection of credits divided into five distinct areas of interest (Figure 3-2). The five key areas addressed by the USGBC in their LEED® program are:

1. Sustainable Site
2. Water Efficiency
3. Energy and Atmosphere
4. Materials and Resources
5. Indoor Environmental Quality

Each area of interest is assigned a different number of credits depending on the rating system selected. Each credit is also assigned a point value depending on its overall impact on the design. Within each rating system, certain credits, known as *prerequisites*, are awarded no point value and are required regardless of the certification level sought. Other credits present the opportunity to obtain additional points for demonstrating exemplary performance or innovative design approaches. A complete list of credits particular to each rating system and version is available for review in APPENDIX C.

The lead administrator must understand the areas covered by the rating systems as well as the credits pertinent to each area under each rating system in order to track the proper

documentation. Although most credits and their intent are consistent across the rating systems, some deviations do occur.

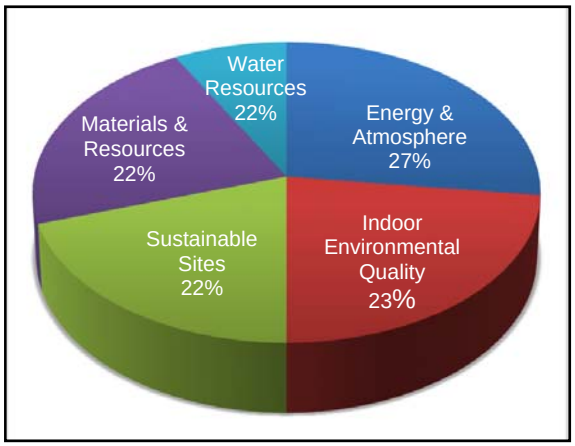

Figure 3-2 LEED® NC Rating System Areas (Adapted from USGBC, 2008)

3.1.2 Tasks Associated with Credits

There are five predominant tasks required by the LEED® Rating Systems to process and complete credits; these include:

- Collection of Data
- Photos and Narratives
- Reviews
- Plan Development
- Calculations and Modeling

A fundamental task associated with essentially all credits is the collection of data. All credits in one form or another require the collection and processing of product and/or project data. Closely related to this task are photographic documentation and narrative requirements addressed by certain credits. Unlike collection of data, which is predominantly concerned with product literature and technical specifications, photos and narratives are oriented towards clarification for credit compliance.

Another major task frequently encountered among the different credits involves reviews. Reviews are performed by the USGBC upon completion of a credit to check for

compliance with the requirements; reviews are also required during the design development, construction process, and operation phase of the project to ensure the expectations of the ratings systems are achieved. A number of credits also assign the task of developing various plans to be carried out at various points of the project. Calculations and modeling of project design constraints is also a reoccurring task among the credits in the rating systems. A complete list of tasks particular to each credit is available for review in APPENDIX CD.

3.1.3 Standard needed

The majority of credits in the LEED® rating systems correlate with design or regulatory standards. The reference manuals published by the USGBC do not detail the particulars of the referenced standards. It is necessary to develop an inventory of the referenced standards and regulations in the event that information needs to be clarified. A complete list of standards and regulations referenced in the LEED® rating systems is available for review in APPENDIX E.

3.1.4 Submittals

Within each rating system, individual credits dictate that various types of data be submitted as verification that set requirements have been achieved by the project. It is important to consider and track the types of submittals each credit requires to facilitate certification of the project. Submittal types include items such as shop drawings, product data, schedules, and reports.

Construction Specification Industry CSI publications, shows the 16 Division to contain over 400 entries of submittal types; the 50 Division contains over 6500 entries of submittal types and is 343 pages long. Therefore, those lists are not provided in this research but may be viewed at www.csinet.org/s_csi/docs/9400/9361.pdf (The Construction Specifications Institute, 2003).

3.1.5 Design/Construction Phase

All credits within the rating systems are categorized into two succinct phases: Design and Construction. Each credit can be reviewed for compliance within its individually assigned phase or the credits for a project can be reviewed cumulatively at the end. It is important to

consider the credit phase in order to monitor the status of the project during both the design and construction segments.

3.1.6 External Resources

External resources (contact information) are vital to credit completion. The integrated project team concept that sustainable development promotes is illustrated throughout credit completion. A list of external resources found in the rating systems provides direction as to what resources may be involved in achieving each particular credit. Both external and internal resources refer to the individuals involved in performing specific tasks within the project framework. Identifying the external resources relevant to each credit facilitate the compilation of data necessary to achieve each credit during the certification process. Similarly, identifying internal resources facilitates coordination among the LEED® project team, minimizing the duplication of effort and thus optimizing productivity. A list of external and internal resources is available for review in APPENDIX F and APPENDIX G, respectively.

By reviewing both the reference manuals and credit templates, all pertinent information for each credit is identified. Figure 3-3 below identifies the required documentation necessary for credit completion.

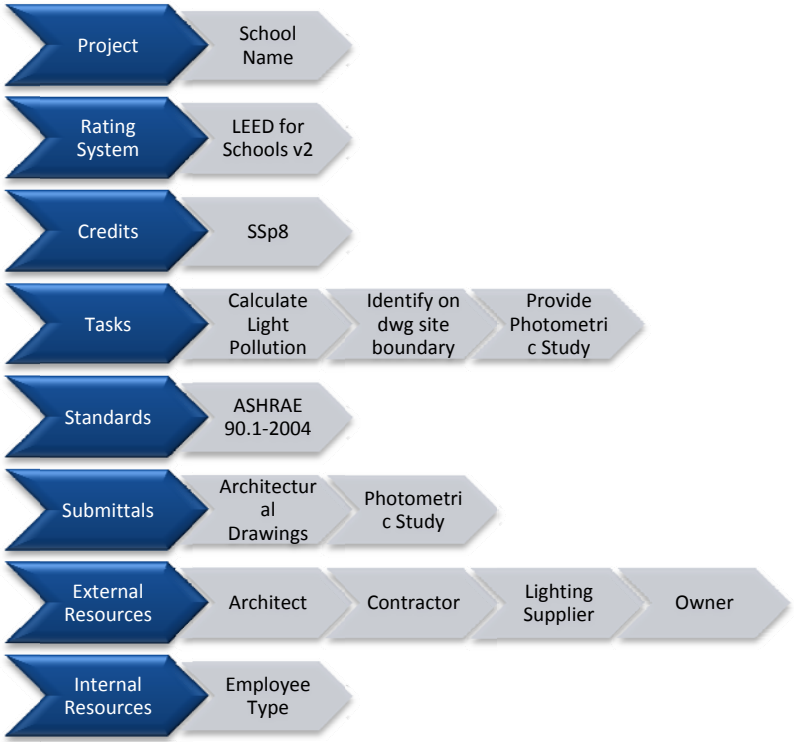

Figure 3-3 - Example Steps to Complete One Credit

3.2 Existing Project Tracking System

Existing spreadsheets were provided by a company that provides LEED® Administration services. The company presently manages or plays a key role in 130+ LEED® projects within the United States and Mexico. The data is arranged by tasks, projects, credits, etc. Using Excel Spreadsheets exclusively, the company tracks project progress, tasks completion, and document inventory. Copies of these spreadsheets are provided in APPENDIX H. Data elements collected from the existing spreadsheets that are not addressed in the LEED® Reference Guides and which correlate to managing projects with internal resources are as follows:

- Project ID
- Project Fee
- Date requested submittals from external resource
- Priority of project task
- Internal Resource tracking

In order to manage the LEED® Administration process, it is first necessary to identify the major data elements. Both the data elements indentified in the LEED® Reference Guides and in the existing project tracking system are necessary for successful LEED® Administration project management.

It is essential that all pertinent data to complete LEED® documentation requirements be identified in this data collection phase. Data collected from the LEED® Reference Manuals and Credit Templates establish the foundation for the database - the existing Excel Spreadsheet system further supports a need for a LEED® documentation management tool. A strong data foundation in turn facilitates the initial database development process. The data is thoroughly reviewed in Chapter 4 Analysis of Data, prior to the development of the database.

CHAPTER 4

ANALYSIS OF DATA

Evidence of the *Research Problem: Components needed to develop a tool to manage the LEED® documentation process* are determined by analyzing the collected data. Based on the analysis, the data is then organized into project management categories. The initial step in data analysis focuses on evaluating an existing industry used spreadsheet process. In order to identify relevant data from this existing process, a SWOT analysis is conducted.

Subsequently, the analysis will focus on organizing the data collected from the LEED® reference guides. The data collected from the reference guide was predominantly oriented toward the data necessary to adequately manage the documentation requirements for a LEED® project. The collected data is analyzed in a tiered step approach. Data elements are interrelated by the fact that one project has several credits. Each credit has several tasks, and each task has several required documents to complete the tasks.

Figure 4-1 depicts the structure behind the organization of the LEED® process for construction projects. The process follows the same ideology regardless of rating system, version, or certification level. A project will relate to only one rating system, have anywhere from 30 to 110 credits (depending upon rating system, version, and/or certification level seeking), and have approximately 2-15 tasks per credit. Each task then requires anywhere from 0 to 4 standards per task to be followed, 1-5 submittals to be reviewed and to identify necessary data, and a chain of external resources.

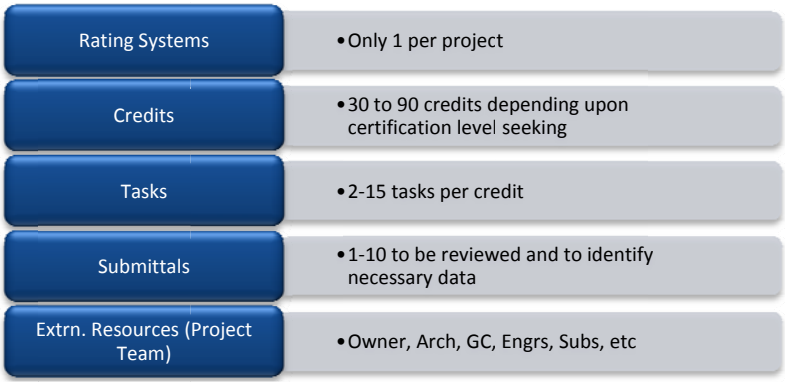

Figure 4-1 Hierarchy of LEED® Reference Data

Only a limited data analysis can be performed on the information gathered from the LEED® reference manuals beyond that depicted by Figure 4-1 and the paragraphs above. As an alternative, an analysis on identifying how the data elements can be managed is considered; this analysis is focused on scope, time, and budget. The first step focuses on establishing the LEED® Project Management Process' direction; such analysis propagates development of a scope. The second step takes into account the component of time, specifically project key dates, to evaluate the progression of a project. The third step considers time required to complete the LEED® documentation to establish budgetary constraints on LEED® documentation tasks and provide an idea of time and financial capital expected to be expanded in a project.

4.1 SWOT Analysis of Existing Documentation System

As discussed in Chapter 3 Data Collection, additional project documentation data was collected from an existing Excel based project management system used by a company in the industry. The strengths and shortcomings of the Excel project management system will be evaluated utilizing a SWOT analysis.

SWOT Analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a project. It involves specifying the

objective of the project and identifying the internal and external factors that are favorable and unfavorable to achieving that objective. The technique is credited to Albert Humphrey[1] (Armstrong, 1982)

- Strengths: attributes of the system that are helpful to achieving the objective.
- Weaknesses: attributes of the system that are harmful to achieving the objective.
- Opportunities: external conditions that are helpful to achieving the objective.
- Threats: external conditions which could do damage to the system's performance.

The objective of applying a SWOT (Figure 4-2) analysis to the existing system of spreadsheets is to identify elements to use in the development of a LEED® Project Management system.

Figure 4-2 SWOT of Existing System

[1] Chemical engineering at M.I.T. and an MBA at Harvard University. His work at the Stanford Research Institute produced a team method for planning which created SOFT analysis and this was developed into SWOT analysis. (Armstrong, 1982)

4.1.1 Strengths

The existing system provides valuable project data in terms of information necessary to track in managing a LEED® administrative process. The majority of strengths of the existing spreadsheet system, however, are attributed to the Excel software platform more so than the data content. The familiarity of Excel spreadsheets and the ability to store data easily are attributes that need to be accounted for in the development of the new system. Being able to identify data to be tracked is also a strength to carry to the new system.

4.1.2 Weaknesses

Similar to the strengths of the existing system a majority of the weakness are attributed to the software platform. The data being tracked lacks data integrity. For example, cells that are specified as a date value, will accept date in any format. This type of data entry prohibits reporting of data based on a date specified criteria. The lack of data integrity leads to data entry being dependent on the experience and knowledge of each user. Because the spreadsheets do not demand data integrity, the spreadsheets are most effectively utilized by a single user rather than being set-up for multiple users.

In the existing system (APPENDIX H), several data cells contain replicated information; however, the data cells are not linked. Since the cells are not linked, when one data cell is changed, the same data located in other spreadsheets of the same system are not automatically updated. For example, several spreadsheets list the project names, but if a correction is needed in the spelling, the other spreadsheets are not automatically updated. This proves that every user must be knowledgeable with every spreadsheet. By not linking the data, duplication of effort is required to keep the system in order. Due to this extra effort and the large amount of data in the LEED® administration process, management of the spreadsheets becomes cumbersome. Ideally, the identified weaknesses should be addressed as improvements to the existing spreadsheets or in the development of a new system.

4.1.3 Opportunities

The existing spreadsheet system is sufficient in capturing a vast amount of information in a logical manner; however, the opportunity to use this data to generate reports quickly is lacking. In order to generate accurate reports, linking or relating the data into common attributes is essential. For example, a data set containing all the projects may be grouped by rating system; location, key dates, or internal resources assigned to it; and so on as necessary.

Another key element not utilized in the existing spreadsheet system is the use of calculations. The number of hours an employee works on a specific task is recorded; however, no manipulation of this data is performed.

4.1.4 Threats

Threats to the existing system are common to all spreadsheets based programs that are used in lieu of properly developed databases. These threats include internal damage, i.e. unknowledgeable users, over-reliance of management for nice presentations, and the fact that the spreadsheets are not setup to be audited, if ever required.

The finding of the LEED® Reference Guide combined with the SWOT analysis is used to organize and develop a comprehensive solution to address LEED® project management. The major elements required to manage the LEED® administration process focus on *time*, *scope*, and *budget* to complete the documentation for each credit.

It is concluded that the existing spreadsheet system is cumbersome, not a multi-user tool, and was not planned for rapid growth. The existing system further supports a need for a LEED® project management tool. The data elements identified from the existing system that are not found in the LEED® reference Guide(s) are basic *project management* elements, which are further discussed in the subsequent section.

4.2 Project Management Analysis

In addition to analyzing an existing LEED® documentation system, analyzing how this type of system interrelates with project management components are also valuable in the

development of an effective LEED® administration tool. Figure 4-3 below illustrates the three key project management components *(scope, time and budget*) addressed in this section.

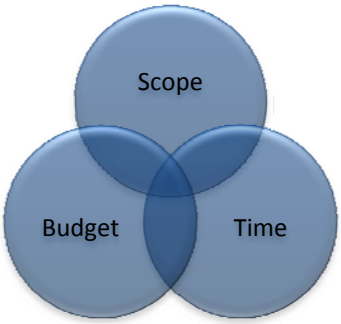

Figure 4-3 Project Management Components

4.2.1 Scope

It is necessary to establish an organizing element to the data collected in C*hapter* 2 and assemble the information into a cohesive project oriented compilation. The initial step in LEED® project management is focused on creating a scope of work based on the request for proposal or contract issued to the LEED® managing agent (LEED® Administrator). Based on the scope of work within the contract, the LEED® project manager can evaluate which credits the owner of a project is attempting to achieve. These attempted credits are thus necessary to track. Comparing the project contract to the available LEED® credits and identifying the credits to be attempted, eliminates the need to track credits not specific to a project.

Once the credits sought have been identified, roles and responsibilities can be assigned to internal resources within the project team. Similarly, external resources can be identified for each credit - as the obtaining of contract documents required to complete credit analysis depends solely on external resources.

Relevant standards, key dates, submittals required, and a list of task necessary to complete each credit can also be developed during the scope phase of the data analysis. Other pertinent information identified on the request for proposal or contract include the project owner, project type, project location and size, applicable rating system, and certification level

sought. The collection and processing of this data at the onset of a project is helpful to a project team in that the time and effort toward a project can now be directed toward completing credits instead of identifying and gathering such information as each new credit is addressed.

The fundamental concept behind developing a scope is to centralize reference information to avoid duplication of effort and improve productivity by diverting time spent on data collection to time spent processing this data. A useful managing tool for the LEED® management process should therefore account for centralized location to amass recurring data and focus the project team's effort toward processing and completion of credit information in lieu of identifying necessary data.

4.2.2 Time

Once the direction of a project has been set, the next major project management criteria to be addressed involves incorporating a time element to facilitate progress tracking. Within the *time* element, the necessary data to track are key dates, i.e. construction start, MEP (mechanical, electrical, plumbing) startups, roof installation, client turnover, etc. Tracking key dates is important to the LEED® administration management process in order to coordinate and schedule specific tasks for credit achievement.

In addition to tracking key dates, it is beneficial to assign a time allowance to each specific task per credit to provide the LEED® administrator a feel of how specific project components, and the project as a whole, will be completed. The underlying principle behind this criterion is based on the cumulative effect of discrete time elements. The summation of the total time allowed for each task leads to the total time allowed for each credit; this in turn leads to the total time allowed for each project (regarding the LEED® administration component – not the project construction). A useful management tool for the LEED® management process would look at incorporating fields for *Key Dates* and *Time* allowances for each task to enable efficient monitoring of the project.

4.2.3 Budget

A third component necessary to develop an effective LEED® project management tool addresses the project's budget. The budget in a sense is an extension of the time element discussed in the above *time* section and is particular to the management of the internal resources discussed previously. Equally as important as identifying the activities and information associated with achieving the completion of a project, a management system must also consider the organization and tracking of the resources within the company performing the work.

A useful management tool for the LEED® management process would look at tracking costs related to the time allocated by internal resources towards the completion of project specific tasks. Tracking time of the internal resources subsequently leads to the cost of the LEED® administration process as a whole. This is not to say that the LEED® management tool will substitute for accounting or cost control software. The LEED® management tool's primary function, after all, is to facilitate management; therefore, the software should incorporate a degree of interoperability between it and other resources used on a project. The software chosen for this management tool is described in the following chapter.

CHAPTER 5

DEVELOPMENT OF DATABASE

5.1 Defined Database Parameters

From the previous explanations of the collected data and the analysis of that data's function in project management, the software selected for an efficient project management tool is a database, an organized collection of data. In consideration of the sensitive nature of certain proprietary information, some details have been omitted in describing how the database is developed. This section provides a general overview of database development.

This thesis considered the Microsoft Access database management system (DBMS) to organize LEED® documentation and project management data. Microsoft Access was used as opposed to other DBMS such as FileMaker Pro, Oracle, or SQL Server primarily because it is accessible and easy to manipulate. Most businesses handle the Microsoft Office Suite, which includes Access, eliminating the need to purchase additional software to run the LEED® project management system. Using the fairly inexpensive Microsoft Office Suite provides a cost savings.

This database focuses on the project management aspects of the LEED® documentation and certification process for a project. The database is also developed using a "two people beyond" approach meaning that a LEED® Management system will be self explanatory not only for the immediate user, but for a trainee of the immediate user, and one more trainee beyond that, and so on as needed for company change and expansion. Due to the complexity and integrated nature of the data in LEED®, the development of this database is iterative. An initial "alpha" database is developed and assessed for operability. The identified elements are then incorporated into the "alpha" database for testing.

5.2 Database Development

5.2.1 Table Types

Tables comprise the fundamental building blocks of any database and are very similar to spreadsheets. Table Types are the foundation and operate behind the scenes of this database. The data for Table Types is compiled from the data elements identified in Chapter 3 Data Collection.

The Table Types are as follows:

- 16 or 50 CSI Division Submittals Types
- Contacts Types (External Resources)
- Credit Standards Types
- Credit Synergies Types
- Credits Employee Types
- Key Dates Types
- Tasks Types

5.2.2 Tables Combining Types (Queries)

Tables allow one to create the framework for storing information in a database. A database that only stores information does not utilize the full capabilities of the database. The real power of a database lies in its capabilities to answer more complex requests, or queries. Access queries provide the capability to combine data from multiple tables and place specific conditions on the data retrieved. The *table types* in the previous section are used in creating queries that relate the data fields into logical relationships. A listing of the relational tables from queries is as follows:

- Contacts
- Credits Standards
- Employees
- Projects Credits
- Internal Resources
- Project Submittal Types
- Credits Info
- Credits Synergies
- Projects
- Projects Credits Submittals
- Project Key Dates
- Project Tasks

5.2.3 Database Input Forms

Now, mechanisms are needed to place information into the tables. Microsoft Access provides two primary mechanisms to achieve this goal. The first method is to simply bring up

the table in a window by double-clicking on it and adding information to the bottom of it, just as one would add information to a spreadsheet.

The second manner of data entry is via forms. Access provides a user-friendly forms interface that allows users to enter information in a graphical form and have that information transparently passed to the database. The figures below provide examples of the form method of data entry. This method is less intimidating for the data entry operator but requires a little more work on the part of the database developer.

The following series of figures represent the user screens (which are the forms) that are used to capture project specific data. Fields that have a drop down arrow are predefined data elements provided by the tables. Entering data into the forms automatically updates the tables behind the scenes.

The initial form used to enter project specific information is the Project Information Form (Figure 5-1). This form is the primary project management tool.

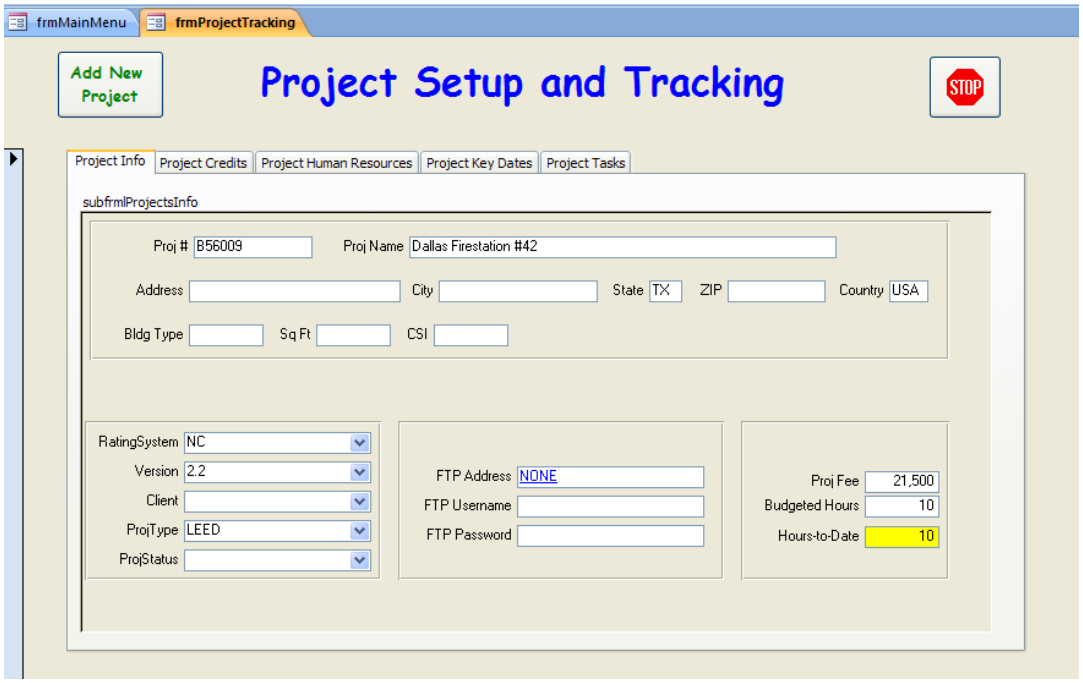

Figure 5-1 Project Information Form

Tracking internal resources with regards to time worked on each tasks is key to project management. This form (Figure 5-2) identifies tasks associated with each project; future development of this form is to link each task to specified credits.

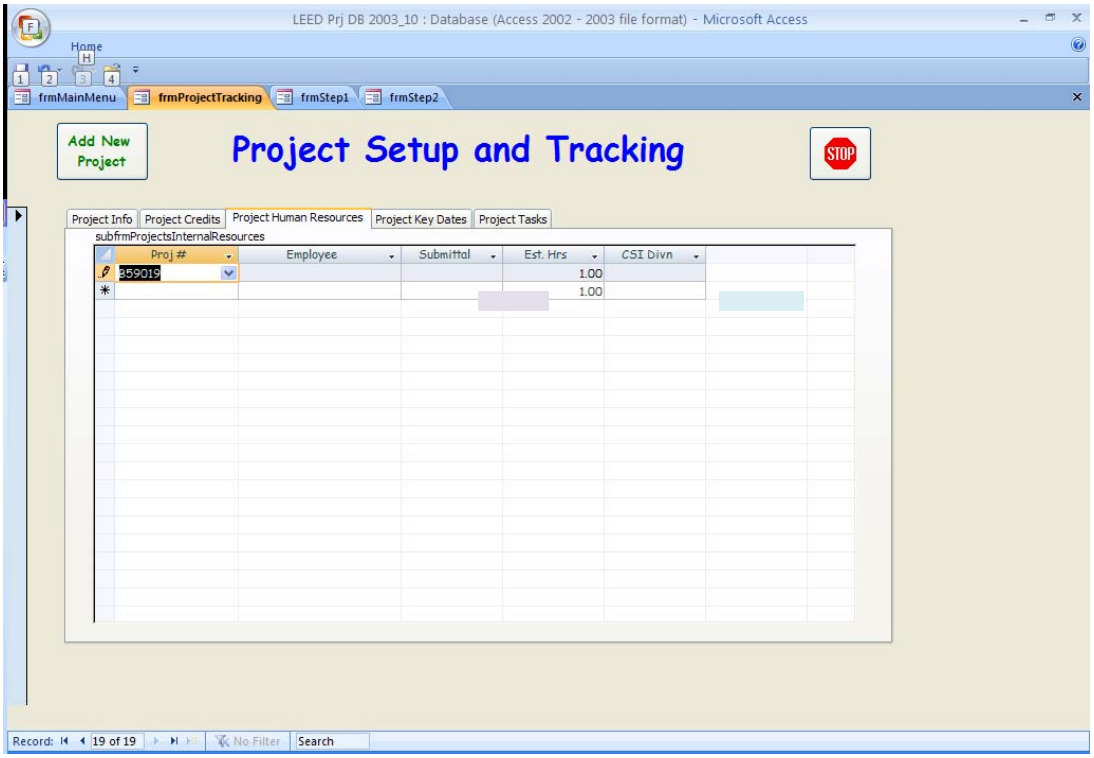

Figure 5-2 Project Internal Resources Form

This Project Task Form (Figure 5-3) is oriented towards the actual LEED® process. The list of tasks supplied is the tasks required to complete the credits for a LEED® project.

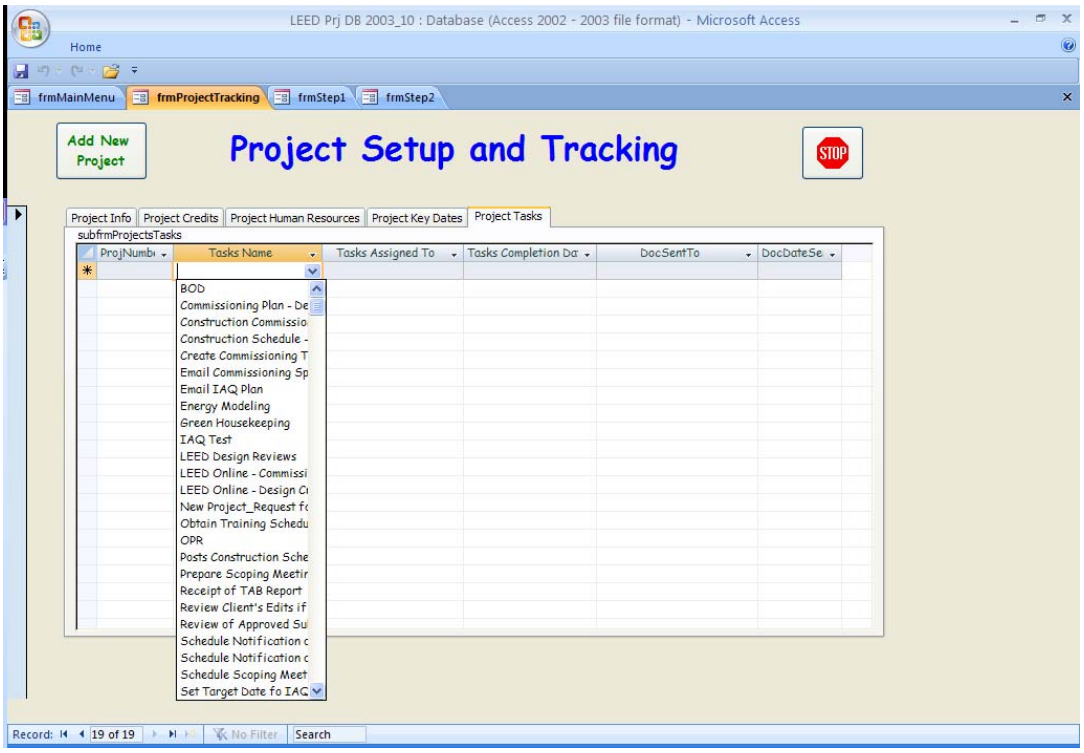

Figure 5-3 - Project Tasks Form

This Credits Form (Figure 5-4) is to house all the credits identified in the LEED® Reference Guides. Once populated, the credits will be available for use to assign applicable credits to projects and also when managing tasks assigned to internal resources.

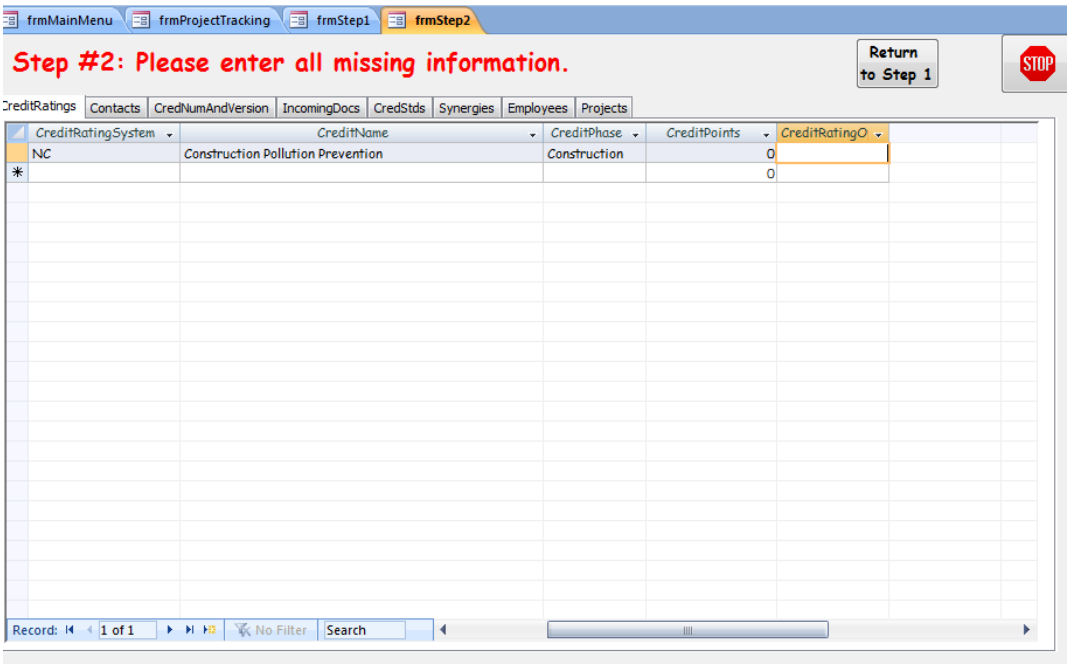

Figure 5-4 Credits Form

The form, Credits Standards (Figure 5-5), identifies which standards shall govern particular credits. This data is necessary in order to confirm that a particular credit follows the LEED® specified standard.

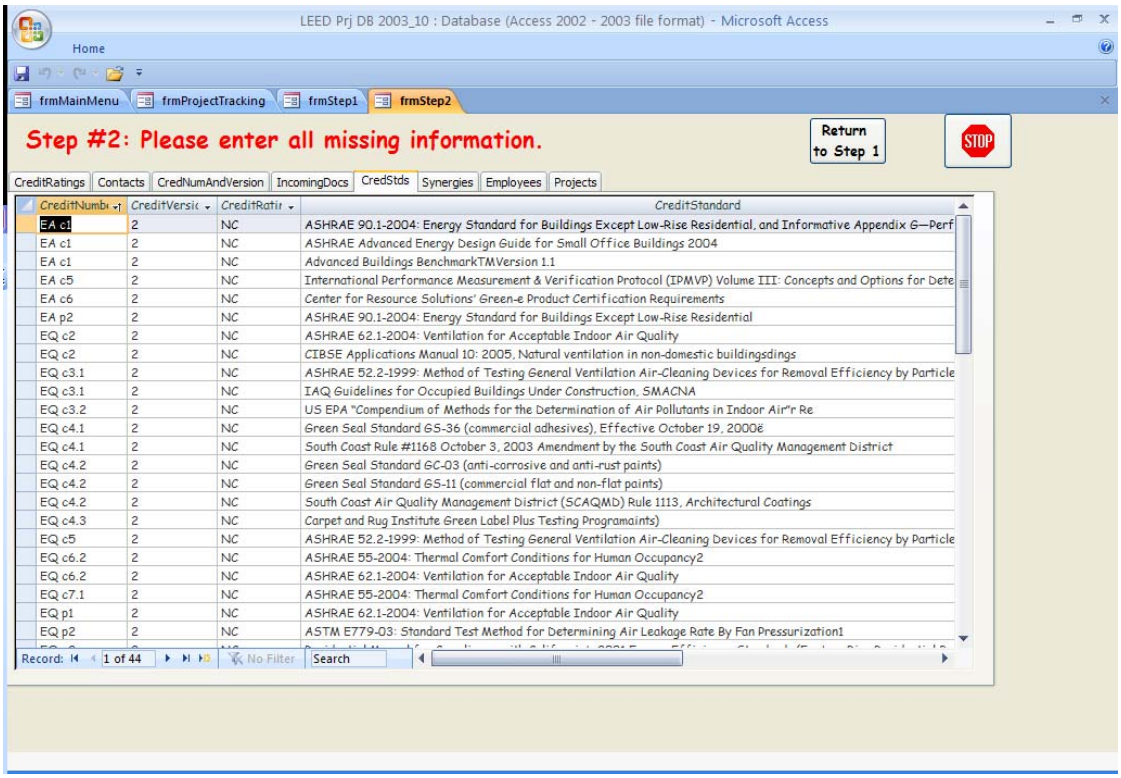

Figure 5-5 Credits Standards Form

Credit Synergies (Figure 5-6) are valuable to everyone on the design team by identifying interrelated elements of both design and construction. Credit synergies are often overlooked during the preliminary design stages. By incorporating this aspect of the database, it is hoped to aid in future projects at the schematic design phase.

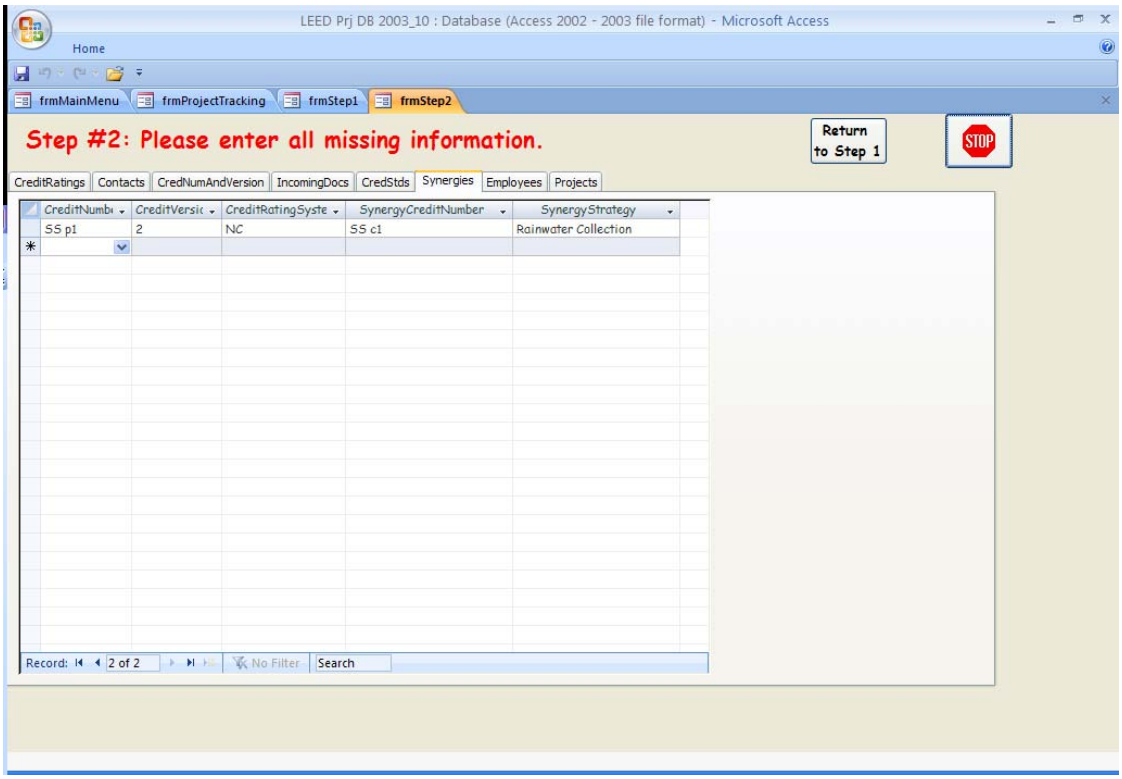

Figure 5-6 Credits Synergies Form

5.2.4 Reports

Reports provide the capability to quickly produce attractively formatted summaries of the data contained in one or more tables and/or queries. Through the use of wizards, database users can create reports in literally a matter of minutes. Reports from the database may be tailored to the project needs. The generation of reports illustrates the most efficient aspect of this relational database is compared to the existing spreadsheet system. The report in Figure 5-7 below was generated in less than one minute, while generating the same type of report using a spreadsheet takes considerable longer, and is not as accurate due to the lack of data integrity of each spreadsheet cell.

Figure 5-7 Example Project Assignments Reports

CHAPTER 6

EVALUATION OF DEVELOPMENT

The results of the analysis are illustrated and utilized as evidence to support the claim, *Research Answer: Microsoft Access Relational Database*, is the actual database. Such a database brings a level of standardization and acts to facilitate the coordination of documentation efforts. The database consists of 24 data tables and 21 input forms. The queries and reports are based on the user requests.

The database will then be evaluated by applying a case study using Bloom's Taxonomy. The purpose of using Bloom's Taxonomy is to demonstrate how an industry problem is solved via academic means. This illustrates the achievement of ASCEBOK's learning objectives. "Bloom's Taxonomy provides an appropriate framework for the definition of levels of achievement in the civil engineering BOK" (ASCE BOK Committee, 2008).

By developing a LEED® specific project management database, the process of collecting, organizing, and analyzing the required documentation will become more efficient. With more efficient documentation, communication among the project team becomes predictable, thus saving time, which ultimately reduces management cost.

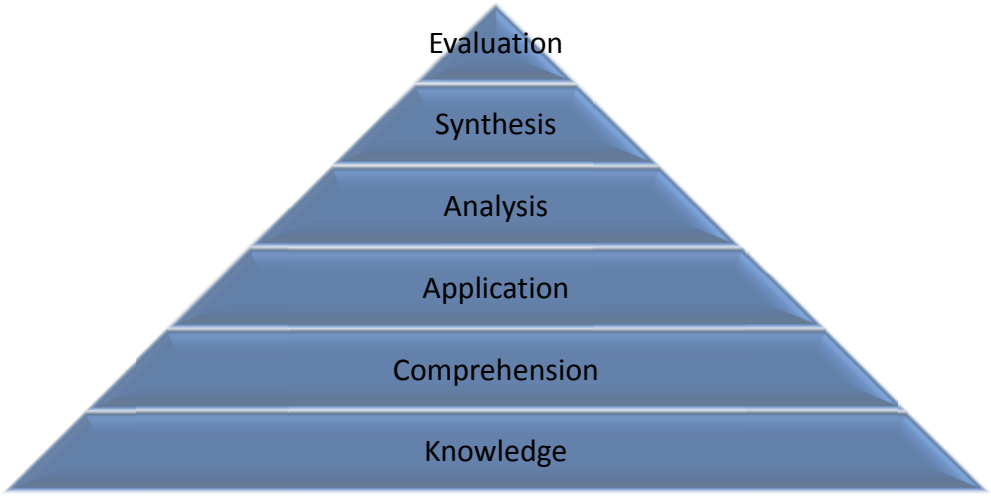

Figure 6-1 Bloom's Taxonomy Hierarchy

6.1 Knowledge

Knowledge is defined as the remembering of previously learned material. This may involve the recall of a wide range of material, from specific facts to complete theories, but all that is required in the bringing to mind of the appropriate information. Knowledge represents the lowest level of learning outcomes in the cognitive domain.

The fundamental question addressed at the knowledge level is: Does the database identify and recall the data from the LEED® Reference Manual needed for project management? This information is addressed by the relational database and will serve as the foundation for the comprehension level.

6.2 Comprehension

Comprehension is defined as the ability to grasp the meaning of material. This is shown by translating material from one form to another (words to numbers), by interpreting material (explaining or summarizing), and by estimating future trends (predicting consequences or effects). These learning outcomes go one step beyond simply remembering material and represent the lowest level of understanding.

The fundamental question addressed at the comprehension level is: Does the database organize the data identified in the knowledge level into proper relationships?

At this level, the user and program will correlate the interconnectivity of the different LEED® points and parties involved in the design/construction/operation of the project. At this level, the theory of a relational database development is utilized. The underlying aim of this level is to expose how most of the data is related.

6.3 Application

Application refers to the ability to use learned material in new and concrete situations. This may include the utilization of rules, methods, concepts, principles, laws, and theories. Learning outcomes in this area require a higher level of understanding than those under comprehension.

The fundamental question addressed at the application level is: Can the relationships identified in the comprehension level be applied to effectively manage a project?

The user will be able to apply the knowledge of the LEED® rating system and comprehension of the point's goals to illustrate to the owner, designer, and builder the LEED® process in a design charrette by the use of reports generated as needed. For example, a specific report may be generated for a project that identifies all credits being attempted, the tasks required to complete those credits, the submittals necessary to accomplish the tasks and finally the external resources relevant to the submittal.

6.4 Analysis

Analysis refers to the ability to break down material into its component parts so that its organizational structure may be understood. This may include analysis of the relationship between parts, and recognition of the organizational principles involved. Learning outcomes here represent a higher intellectual level than comprehension and application because it requires an understanding of both the content and the structural form of the material.

The fundamental question addressed at the analysis level is: How is the database output useful in project management? The output of the database generates reports quickly

and uniformly within seconds. These reports contain project specific data such as project ID, project name, internal resource, external contacts, budgeted time and scheduling key dates, etc.

6.4.1 Productivity

The manipulation of data into usable reports is more efficient in the newly developed database than the existing spreadsheet system. This is determined by the amount of time it takes to generate a report from the database (approximately 30 seconds) compared to the time it would take to generate the same report from the existing spreadsheets – which is an unknown at this time because the existing spreadsheets lack the data integrity and the appropriate data relationships.

6.5 Synthesis

Synthesis refers to the ability to put parts together to form a new whole. This may involve the production of a unique communication, a plan of operations (research proposal), or a set of abstract relations (scheme for classifying information). Learning outcomes in this area stress creative behaviors, with major emphasis on the formulation of new patterns or structure. Bloom defines synthesis as “the putting together of elements and parts so as to form a whole, to constitute a pattern or structure not clearly there before.”

Rather than posing a question at the synthesis level, a solution is proposed: a Microsoft Access Relational Database, to collect, organize, maintain, and utilize LEED® specific data for effective and efficient project management. The database actually enables a project manager to synthesize information into reports.

6.6 Evaluation

Evaluation is the ability to judge the value of material for a given purpose. The judgments are based on definite criteria. These may be internal criteria (organization) or external criteria (relevance to the purpose), and the student may deter mine the criteria or be given them. Learning outcomes in this area are highest in the cognitive hierarchy because they

contain elements of all the other categories, plus conscious value judgments based on clearly defined criteria.

Evaluation is placed last in the cognitive domain; however, because it is regarded as requiring to some extent all the other categories of behavior, it is not necessarily the last step in thinking or problem solving (p. 185) At this level the user and program would normally be able to efficiently process the previously collected data and assess how it can be taken to the next level, and determine the obstacles in gathering the data. However, this newly developed database has not been thoroughly tested.

Although this newly developed database has not been tested to a quantifiable extent, further expandability of the database has been identified. The subsequent section identifies areas of further research for the database.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

7.1 Conclusions

The building industry needs a LEED® database to connect the phases of development, the designer to contractor, and the data to the templates. In all project management, communication is a primary cause of delay. This tool is an electronic communication avenue.

This thesis concluded that the proposed LEED® specific project management database is necessary for the building industry. Such a database will facilitate the coordination of the required documentation for a project to achieve the sought LEED® certification. The database provides a platform on which to collect data, assign responsibilities, and track credit status, thus establishing a standardized LEED® documentation process.

By developing a LEED® specific project management database, the process of collecting, organizing, and analyzing the required documentation will become more efficient. With more efficient documentation, communication among the project team becomes predictable, thus, saving time, which ultimately saves management cost. It is also concluded that the proposed purpose, to provide more efficient documentation process and to facilitate project team integration, of the database is fulfilled.

7.2 Recommendations for Future Research

Further opportunities include:

- Implementing this database with Building Information Modeling (BIM). USGBC specifies that in the future, they intend to combine LEED® with BIM in order to increase user understanding and efficiency.

- Combining the database with a cost-estimating database to give a rough order of magnitude (ROM) cost of specific credits chosen for a project, and to show the changes in cost as credits are added or deleted from a project throughout the project timeline.
- Another opportunity is that the current database is specific to LEED® ; however, the lookup tables for the specific LEED® credits are easily expandable to include any rating system such CSU's Program for Environmental Responsibility, which uses Elements (example in APPENDIX I), very similar to credits (California State University, 2008).

APPENDIX A

ASCE BOK LEARNING OUTCOMES

Outcome Number and Title	*Level of Achievement*					
	1	*2*	*3*	*4*	*5*	*6*
	Knowledge	*Compre-hension*	*Application*	*Analysis*	*Synthesis*	*Evaluation*
Foundational						
1. Mathematics	**B**	**B**	**B**			
2. Natural sciences	**B**	**B**	**B**			
3. Humanities	**B**	**B**	**B**			
4. Social sciences	**B**	**B**	**B**			
Technical						
5. Materials science	**B**	**B**	**B**			
6. Mechanics	**B**	**B**	**B**	**B**		
7. Experiments	**B**	**B**	**B**	**B**	**M/30**	
8. Problem recognition and solving	**B**	**B**	**B**	**M/30**		
9. Design	**B**	**B**	**B**	**B**	**B**	**E**
10. Sustainability	**B**	**B**	**B**	**E**		
11. Contemp. issues & hist. perspectives	**B**	**B**	**B**	**E**		
12. Risk and uncertainty	**B**	**B**	**B**	**E**		
13. Project management	**B**	**B**	**B**	**E**		
14. Breadth in civil engineering areas	**B**	**B**	**B**	**B**		
15. Technical specialization	**B**	**M/30**	**M/30**	**M/30**	**M/30**	**E**
Professional						
16. Communication	**B**	**B**	**B**	**B**	**E**	
17. Public policy	**B**	**B**	**E**			
18. Business and public administration	**B**	**B**	**E**			
19. Globalization	**B**	**B**	**B**	**E**		
20. Leadership	**B**	**B**	**B**	**E**		
21. Teamwork	**B**	**B**	**B**	**E**		
22. Attitudes	**B**	**B**	**E**			
23. Lifelong learning	**B**	**B**	**B**	**E**	**E**	
24. Professional and ethical responsibility	**B**	**B**	**B**	**B**	**E**	**E**

Key:

B Portion of the BOK fulfilled through the bachelor's degree

M/30 Portion of the BOK fulfilled through the master's degree or equivalent (approximately 30 semester credits of acceptable graduate-level or upper-level undergraduate courses in a specialized technical area and/or professional practice area related to civil engineering)

E Portion of the BOK fulfilled through the prelicensure experience

various levels of achievement.

Key: L1 through **L6** refers to these levels of achievement:
Level 1 **(L1)** - Knowledge
Level 2 **(L2)** - Comprehension
Level 3 **(L3)** - Application
Level 4 **(L4)** - Analysis
Level 5 **(L5)** - Synthesis
Level 6 **(L6)** - Evaluation

Outcome number and title	To enter the practice of civil engineering at the professional level, an individual must be able to demonstrate this level of achievement.
	Foundational Outcomes
1 Mathematics	***Solve*** problems in mathematics through differential equations and ***apply*** this knowledge to the solution of engineering problems. **(L3)**
2 Natural sciences	***Solve*** problems in calculus-based physics, chemistry, and one additional area of natural science and ***apply*** this knowledge to the solution of engineering problems. **(L3)**
3 Humanities	***Demonstrate*** the importance of the humanities in the professional practice of engineering **(L3)**
4 Social sciences	***Demonstrate*** the incorporation of social sciences knowledge into the professional practice of engineering. **(L3)**
	Technical Outcomes
5 Materials science	**Use** knowledge of materials science to ***solve*** problems appropriate to civil engineering. **(L3)**
6 Mechanics	**Analyze** and solve problems in solid and fluid mechanics. **(L4)**
7 Experiments	***Specify*** an experiment to meet a need, conduct the experiment, and analyze and ***explain*** the resulting data. **(L5)**
8 Problem recognition and solving	***Formulate*** and solve an ill-defined engineering problem appropriate to civil engineering by ***selecting*** and applying appropriate techniques and tools. **(L4)**
9 Design	***Evaluate*** the design of a complex system, component, or process and ***assess*** compliance with customary standards of practice, user's and project's needs, and relevant constraints. **(L6)**
10 Sustainability	***Analyze*** systems of engineered works, whether traditional or emergent, for sustainable performance. **(L4)**
11 Contemporary issues and historical perspectives	***Analyze*** the impact of historical and contemporary issues on the identification, formulation, and solution of engineering problems and ***analyze*** the impact of engineering solutions on the economy, environment, political landscape, and society. **(L4)**

12 Risk and uncertainty	***Analyze*** the loading and capacity, and the effects of their respective uncertainties, for a well-defined design and ***illustrate*** the underlying probability of failure (or nonperformance) for a specified failure mode. **(L4)**
13 Project management	***Formulate*** documents to be incorporated into the project plan. **(L4)**
14 Breadth in civil engineering areas	***Analyze*** and solve well-defined engineering problems in at least four technical areas appropriate to civil engineering. **(L4)**
15 Technical specialization	***Evaluate*** the design of a complex system or process, or ***evaluate*** the validity of newly created knowledge or technologies in a traditional or emerging advanced specialized technical area appropriate to civil engineering. **(L6)**
Professional Outcomes	
16 Communication	***Plan, compose,*** and ***integrate*** the verbal, written, virtual, and graphical communication of a project to technical and non-technical audiences. **(L5)**
17 Public policy	***Apply*** public policy process techniques to simple public policy problems related to civil engineering works. **(L3)**
18 Business and public administration	***Apply*** business and public administration concepts and processes. **(L3)**
19 Globalization	***Analyze*** engineering works and services in order to function at a basic level in a global context. **(L4)**
20 Leadership	***Organize*** and ***direct*** the efforts of a group. **(L4)**
21 Teamwork	***Function*** effectively as a member of a multidisciplinary team. **(L4)**
22 Attitudes	***Demonstrate*** attitudes supportive of the professional practice of civil engineering. **(L3)**
23 Lifelong learning	***Plan*** and ***execute*** the acquisition of required expertise appropriate for professional practice. **(L5)**
24 Professional and ethical responsibility	***Justify*** a solution to an engineering problem based on professional and ethical standards and ***assess*** personal professional and ethical development. **(L6)**

APPENDIX B

US CITY AND STATE MANDATED LEED® PROGRAMS

City, State	Year Program Began	Applies to: 1–Municipal 2–Commercial 3–Multifamily 4–Single-Family	Web Site	Notes
Phoenix, Arizona	2005	1		Buildings must only be certifiable. The city has LEED-accredited engineers.
Scottsdale, Arizona	1998	1, 2, 3, 4	www.scottsdaleaz.gov/greenbuilding/	The city requires LEED Gold for munipal buildings and periodically updates its checklists to stay current with technology.
Tucson, Arizona	2005	1	In development	There is another landscape ordinance that addresses commercial buildings as well. There are several water-specific regulations. They also have an office of conservation and sustainable development.
Anaheim, California	2007	1, 2, 3, 4	www.anaheim.net (dept. of public utilities/ green connection	
Berkeley, California	2004	1, 2, 3, 4	www.cityofberkeley.info/sustainable/	The city is also looking into pushing its energy requirements beyond Title 24.
Burbank, California	2003	2, 3, 4	www.burbankca.org/building/bgreen.htm	It started as a voluntary program. The ratings are 3-tiered and focus more on getting developers to participate rather than worry about the level that is actually attained.
Carlsbad, California	2007	1		New program with plans to continue developing.
Chula Vista, California		4		
Fremont, California	2006	1	www.freemont.gov/Environment/GreenBuilding/default.htm	Applies to Municipal Buildings over 10,000 square feet. Alameda County also offers free consulting to developers shooting for certification.
Glendale, California	2007	2	www.ci.glendale.ca.us	LEED Silver, Gold, and Platinum buildings can earn density bonuses.
Irvine, California	2006	1, 2, 3, 4		Irvine has its own 100 pt. rating system for commercial and residential recognition.
La Mesa, California	2007	1		
Livermore, California	2006	1, 2, 3, 4	In development	The mandatory program will require 20 LEED points for commercial and 50 Build It Green Points for residential.
Long Beach, California	2006	1	www.longbeach.gov/plan/pb/apd/green/default.asp	The city is also looking into options for a policy regarding private development.
Los Angeles, California	2002	1	eng.lacity.org/projects/sdip/about_us.htm	The city has a sustainability task force.
Mission Viejo, California	2006	2, 3, 4	cityofmissionviejo.org/depts/cd/green_building/	The program is still in its pilot phase until 2008.
Novato, California	2005	4	www.ci.novato.ca.us/cd/forms/CDP047.htm	The policy is mandatory for new construction and requires 50 GreenPoints.
Oakland, California	2005	1, 2	sustainableoakland.com	Voluntary for commercial projects. The city has had a Sustainable Community Development initiative since 1998.

City, State	Year Program Began	Applies to: 1–Municipal 2–Commercial 3–Multifamily 4–Single-Family	Web Site	Notes
Palo Alto, California	2007	1		The city plans on growing the program, and is exploring mandatory points as an option.
Pasadena, California	2006	1, 2, 3	www.ci.pasadena.ca.us/permitcenter/greencity/building/gbprogram.asp	Public buildings, 25,000+ square feet commercial, and 4+ story residential projects are required to be LEED Certified. It is optional for other development.
Petaluma, California	2006	2, 3, 4	www.cityofpetaluma.net/cdd/big.index.html	The program is optional for all and there is a $500 per unit rebate incentive.
Pleasanton, California	2002	1, 2, 3, 4	www.ci.pleasanton.ca.us/business/planning/	The mandatory portions of the program were passed in 2006, before this it only applied to municipal buildings.
Redding, California	2005	4	www.reupower.com/energysvc/earth-adv.asp	The Earth Advantage program used Portland as its model. The city owns the electric company so many initiatives concern energy.
Richmond, California	2007	1		LEED Silver is required of municipal buildings. Any project receiving $300,000+ from the city must also earn Silver or 50 Build It Green points.
Riverside, California	2007	4		The program is brand new as of summer.
Sacramento, California	2004	1	www.cityofsacramento.org/generalservices/sustain/greengoals.htm	The city is also working on reducing fees for private solar generation.
San Buenaventura (Ventura), California	2006	1	www.ci.ventura.ca.us/GreenVentura/	Municipal buildings must be certifiable. The rest is voluntary using LEED and the California Green Builder standards. Voluntary projects are eligible for expedited permitting.
San Diego, California	2002	1, 2, 3	www.sandiego.gov/environmental-services/sustainable/index.shtml	San Diego's program comprises several ordinances requiring municipal buildings be LEED Silver and providing expedited planning incentives to commercial and multifamily developments.
San Francisco, California	1999	1, 2, 3	www.sfenvironment.org/our_programs/overview.html?ssi=8	The city is continuing to advance. This summer the Green Task Force recommended several changes, including mandatory standards.
San Jose, California	2001	1	www.sanjoseca.gov/esd/natural-energey-resources/greenbuilding.htm	The planning department promotes private green design but the municipal policy is the only one that is official.
San Leandro, California	2006	1		San Leandro builders also receive incentives from Alameda county.
San Rafael, California	2007	1, 2, 3, 4	In development	New mandatory program.
Santa Barbara, California	2006	1, 2, 3, 4	www.builtgreensb.org	The policies are voluntary for private development and permits can be fast tracked. There is also a solar recognition program to promote the use of solar energy.
Santa Clarita, California	2005	1		The city has a sustainable purchasing guide that covers almost all of the supplies the city buys.
Santa Cruz, California	2006	1, 2, 3, 4	www.ci.santa-cruz.ca.us/pl/building/green.html	Mandatory minimums combined with incentives.
Santa Monica, California	2000	1	greenbuildings.santa-monica.org	

City, State	Year Program Began	Applies to: 1–Municipal 2–Commercial 3–Multifamily 4–Single-Family	Web Site	Notes
Santa Rosa, California	2004	1, 4		The city is considering updates to the program to strengthen it and expand its scope.
Sunnyvale, California	2004	1, 2	sunnyvale.ca.gov/Departments/Community+Development/Planning+Division/Planning-Green+Buildings.htm	City buildings over 10,000 square feet are covered. The city offers a 5 percent floor area bonus to commercial developers.
Boulder, Colorado	1993	1, 4		The residential Green Points system they use is currently being updated again and will likely include commercial and multifamily housing.
Denver, Colorado	2005	1	www.greenprintdenver.org	Currently the program is a resolution but that is being strengthened this fall.
Fort Collins, Colorado	1998	1, 2	www.fcgov.com/opserv/pdf/green-bldg.pdf	It is a very flexible program, with different departments having different incentives. The city is currently working to tie everything together.
Stamford, Connecticut	2006	1	In development	The Sustainable Stamford program encourages private sustainable development.
Washington, D.C.	2007	1, 2		Large commercial buildings will be required to achieve at least a LEED Certified rating.
Gainesville, Florida	2002	1, 2	www.usgbc.org/ShowFile.aspx?DocumentID=1979	Florida cities are not allowed to amend the state building code at all due to weather in the state. Therefore, the city is working with the state to further coordinate their policy.
Lauderhill, Florida	2006	1, 2, 3, 4		Compliance is voluntary, but all applicable buildings must submit a statement identifying any green design components.
St. Petersburg, Florida	2006	2, 3, 4	www.stpete.org/development/developmentreview.htm	Sarasota county is very active in promoting green building. The city program is very informal but there is a very good relationship between developers, planners, and normal citizens.
Athens-Clarke County (balance), Georgia	2005	1	www.accplanning.com	In addition to the municipal policy the city has conservation subdivisions to develop better planned neighborhoods.
Atlanta, Georgia	2003	1	www.atlantaga.gov/client_resources/mayorsoffice/green%20initiative/green%20initiatives.pdf	The EarthCraft Homes program has also been in existence since 1999. Currently, the city is working to shed its reputation for sprawl by developing sustainable communities in addition to single-family buildings.
Honolulu CDP, Hawaii	2004	1, 2		Commercial, industrial, and hotel development can get a one year exemption on real property taxes.
Chicago, Illinois	2004	1, 3, 4	www.cityofchicago.org City Departments, Department of Environment	The success of separate programs is unique to the political culture of the city and the mayor.
Bloomington, Indiana	2007	1, 2, 3, 4	www.bloomington.in.gov\planning	The city offers bonus density to qualified projects and also has a Green Acres neighborhood program.
Bowie, Maryland	2003	1	www.cityofbowie.org/green/green.htm	The program is intentionally vague and does not specify LEED or another guideline. The goal is to promote flexible implementation and avoid focusing solely on points in the rating system.

City, State	Year Program Began	Applies to: 1–Municipal 2–Commercial 3–Multifamily 4–Single-Family	Web Site	Notes
Gaithersburg, Maryland	2003	1, 2	www.gaithersburgmd.gov/poi/default.asp?POI_ID=793&TOC=107;81;388;585;793;	The LEED checklist must be completed by all applicable development. Incentives to be certified include reduced permit fees and city rebates for LEED fees.
Boston, Massachusetts	2007	1, 2, 3	www.bostongreenbuilding.org	The program is written into the municipal code as Article 80. The city amended the LEED guidelines to include city specific points for features the community values.
Medford, Massachusetts	2005	1	www.medford.org/Pages/MedfordMA_Energy/FINAL_LAP.pdf	The city is also pursuing a wind power project.
Quincy, Massachusetts	2006	1		The city is working on updating older municipal buildings as well as greening new construction. There is a defacto commercial policy but the city didn't want to constrict it with a specific guideline. Developers present their project and itemize green features, then work with planners to improve.
Grand Rapids, Michigan	2005	1		The city is finding better economic arguments for green building and the planning department regularly promotes green design with commercial developers although a formal policy has not been developed.
Bloomington, Minnesota	2005	2, 3	www.ci.bloomington.mn.us/code/Code19_9.html#b19_29 see S[illegible]1.29 (g) (4) (F)	Section G-4-F in the code offers a floor area bonus for a specific zoning district. The city tried to promote mixed use development for more walkability.
Minneapolis, Minnesota	2006	1, 2		In addition to LEED, green development must be 35 percent above minimum state energy standards. Due to heating costs in the winter they are primarily concerned with energy efficiency and offer bonus density as an incentive.
St. Paul, Minnesota	2005	1, 2, 3, 4		The city uses Energy Star guidelines for residential. Large commercial structures must go through the Excel Energy program.
Kansas City, Missouri	2004	1	www.kcmo.org/manager/OEQ/cpp-progress.pdf	The city recently hired a sustainability manager and is currently working on removing barriers to green features within existing code to streamline the process before they worry about expanding the program.
Las Vegas, Nevada	2006	1, 4	www.sustainlasvegas.com (coming soon)	Las Vegas has established a green building fund to raise money from utility fees and provide grants to cover LEED costs.
Elizabeth, New Jersey	2002	3, 4		The city has a great Urban Enterprise Zone complete with mass transit. There is also an excellent grant program for low income housing. Over the past 15 years or so the downtown area has been completely revitalized.
Jersey City, New Jersey	2007	1		This policy is conceived as the first of many. They are looking into greening everything from roofs to parks to piers. The planning department also has latitude to work with tax abatements to incentivize green buildings.
Trenton, New Jersey	2004	2		Mayor Doug Palmer is the head of the Council of Mayors. Recently he has become more interested in green buildings and the city plans to become more of an example for other eastern cities to follow.

City, State	Year Program Began	Applies to: 1–Municipal 2–Commercial 3–Multifamily 4–Single-Family	Web Site	Notes
Albuquerque, New Mexico	2005	1		The city has a strategic plan to meet the 2030 Challenge with goals for each department. Recently the city began working with a Vancouver consultant to update and expand the green building program.
New York, New York	2005	1	www.nyc.gov/planyc	PlaNYC is a comprehensive sustainability plan with 10 goals and 170 specific initiatives to help meet them. Much of the plan revolves around renovating existing buildings, since about 85 percent of the buildings that will exist in 2030 have already been built.
Asheville, North Carolina	2007	1		This new program was passed as a first step with serious plans to expand it in the next year.
Wilmington, North Carolina	2005	2, 3, 4	www.stewardshipdev.com	Currently the Lower Cape Fear Stewardship Development Award Program is voluntary and only provides a building award as an incentive.
Winston-Salem, North Carolina	2006	2, 3	www.city of ws.org/Home/Departments/Planning/Legacy/Articles/LegacyToolkit	Winston-Salem is a Sierra Club Cool City. It is currently focused on mixed-use planning and walkability.
Cincinnati, Ohio	2006	2, 3, 4	www.cincinnati-oh.gov/cdap/pages/-16936-/	Cincinnati provides a property tax abatement for private developers. The city is also working with a developer to construct a 68 acre neighborhood to help gather data on pervious pavement and green roofs in particular.
Cuyahoga Falls, Ohio	2005	2, 3, 4		The city provides a density bonus for green development.
Hamilton, Ohio	2007	2, 3		For LEED projects the city amended the code to allow a density bonus and reduced landscaping requirements.
Eugene, Oregon	2006	1		There has also been an ongoing pilot project to expedite plan checks and provide consulting to developers. The city now has a few accredited staff members and are considering extending the pilot to more projects.
Portland, Oregon	2000	1, 2, 3, 4	www.portlandonline.com/osd	One of the few cities in the country to require new municipal buildings to be Gold rated. Numerous green building initiatives.
Philadelphia, Pennsylvania	2007	1	www.phila.gov/green/index.html	The city has maintained a sustainability commission which has recently recommended more transit-oriented development. The planning department is in the process of updating the zoning code as well.
Nashville-Davidson (balance), Tennessee	2007	1, 2, 3		Municipal buildings over 2000 square feet and $2 million must be LEED Certified. Other projects are offered density bonuses to meet the same standard.
Austin, Texas	1991	1, 2, 3, 4	www.ci.austin.tx.us/citymgr/default.htm	The program has been around so long it is just an accepted part of the building process. Planning and permitting have a lot of flexibility with what to offer developers depending on the part of the city they will be in.
Dallas, Texas	2003	1		Dallas has a pilot program that has partnered with Habitat for Humanity to develop green low income housing.

City, State	Year Program Began	Applies to: 1–Municipal 2–Commercial 3–Multifamily 4–Single-Family	Web Site	Notes
Flower Mound, Texas	2004	2, 3, 4	www.flower-mound.com/env_resources/envresources_greenbuilding.php	The program is purely voluntary and offers recognition to applicable buildings.
Frisco, Texas	2001	1, 2, 3, 4	www.friscotexas.gov/Projects_Programs/Green_Buidling/?id=155	Residential construction must meet Energy Star standards. Municipal construction must be LEED Silver and Commercial or multifamily buildings have a Frisco specific standard based on LEED.
Houston, Texas	2004	1, 2, 4	www.houstonpowertopoeple.com	The city places an emphasis on cooperation between developers and planners. The Quick Start program is designed to provide consultation and the Houston Hope program targets low income housing.
Plano, Texas	2006	1		In addition to the municipal LEED requirements, the city has an interdepartmental group to provide education and consultation for private construction.
San Antonio, Texas	2004	4	www.buildsagreen.org/BuildSAGreen/	The city works with Build San Antonio Green, a program similar to the residential policies in Madison and Atlanta, to recognize and market green housing.
Salt Lake City, Utah	2005	1, 2	slcgreen.com/pages/hpb.htm	Municipal buildings must be LEED Silver and buildings over 10,000 square feet receiving city funds must also be LEED Certified.
Arlington CDP, Virginia	2000	1, 2, 3	www.arlingtonva.us/Departments/EnvironmentalServices/epo/EnvironmentalServicesEpoGreenBuildings.aspx#ACinc	All site plan projects must submit a LEED Scorecard and employ a LEED-accredited professional. Certain projects are required to earn 26 points, failure to do so results in a $.03 per square feet fee that is used for green building education.
Chesapeake, Virginia	2007	1		The program is brand new and the next step will be to train municipal employees and conduct an energy audit of existing buildings.
Bellingham, Washington	2005	1		The King County program has expanded to include Bellingham as well. The city is working on a waterfront project as part of the LEED ND pilot.
Seattle, Washington	2000	1, 2, 3, 4	www.seattle.gov/environment	In addition to the requirements for city development, Seattle has a dizzying array of incentives for all kinds of sustainable features.
Shoreline, Washington	2007	1	www.cityofshoreline.com/cityhall.departments/planning/sustainable/index.cfm	Progress within the city has been somewhat hampered by concerns that municipal government may not be the best place for such action. They like to take cues from the state but recently they have begun to consider incentives as an appropriate action.
Madison, Wisconsin	1999	1, 4	www.cityofmadison.com Environment/default.htm	The driving principle behind the sustainable development is to earn payback on the investments within 10 years. There is more focus on partnerships as opposed to policies. They view education as the best incentive.
Milwaukee, Wisconsin	2007	1		The city recently created an office of sustainability and there is a lot of momentum to keep the program expanding.

APPENDIX C

CREDITS WITHIN EACH RATING SYSTEM

LEED for Commercial Interiors v2.0
Registered Project Checklist

Project Name: _____

Project Address: _____

Yes	?	No		
0	0	0	**Project Totals** (Pre-Certification Estimates)	57 Points
			Certified: 21-26 points **Silver**: 27-31 points **Gold**: 32-41 points **Platinum**: 42-57 points	

Yes	?	No			
0	0	0	**Sustainable Sites**		7 Points
0	0	0	Credit 1	**Site Selection**	1 to 3
				Select a LEED Certified Building	3
				-OR- Locate the tenant space in a building with the following characteristics:	1 to 3
			Option 1A	**Brownfield Redevelopment**	1/2
			Option 1B	**Stormwater Management,** Rate and Quantity	1/2
			Option 1C	**Stormwater Management,** Treatment	1/2
			Option 1D	**Heat Island Reduction,** Non-Roof	1/2 to 1
			Option 1E	**Heat Island Reduction,** Roof	1/2
			Option 1F	**Light Pollution Reduction**	1/2
			Option 1G	**Water Efficient Irrigation,** Reduce by 50%	1/2
			Option 1H	**Water Efficient Irrigation,** No Potable Use or No Irrigation	1/2
			Option 1I	**Innovative Wastewater Technologies**	1/2
			Option 1J	**Water Use Reduction,** 20% Reduction	1/2
			Option 1K	**On-site Renewable Energy**	1/2 to 1
			Option 1L	**Other Quantifiable Environmental Performance**	1/2 to 3
			Credit 2	**Development Density and Community Connectivity**	1
			Credit 3.1	**Alternative Transportation,** Public Transportation	1
			Credit 3.2	**Alternative Transportation**, Bicycle Storage & Changing Rooms	1
			Credit 3.3	**Alternative Transportation**, Parking Availability	1

LEED for Commercial Interiors v2.0
Registered Project Checklist

Yes	?	No			
			Water Efficiency		**2 Points**
			Credit 1.1	**Water use Reduction**, 20% Reduction	1
			Credit 1.2	**Water use Reduction**, 30% Reduction	1

Yes	?	No			
0	0	0	**Energy & Atmosphere**		**12 Points**
Yes			Prereq 1	**Fundamental Commissioning**	Required
Yes			Prereq 2	**Minimum Energy Performance**	Required
Yes			Prereq 3	**CFC Reduction in HVAC&R Equipment**	Required
				***NOTE for EAc1**: All LEED for Commercial Interiors projects registered after June 26th, 2007 are required to achieve at least two (2) points under EAc1. Projects may earn two (2) points from achieving any combination of the 4 sub-credits under EAc1.	
			Credit 1.1	**Optimize Energy Performance,** Lighting Power	1 to 3
			⊞ Option A	Reduce lighting power density to 15% below the standard	1
			⊞ Option B	Reduce lighting power density to 25% below the standard	2
			⊞ Option C	Reduce lighting power density to 35% below the standard	3
			Credit 1.2	**Optimize Energy Performance,** Lighting Controls	1
0	0	0	Credit 1.3	**Optimize Energy Performance,** HVAC	1 to 2
			Option A	Equipment Efficiency and Zoning & Controls	1 to 2
			Option B	Reduce Design Energy Cost	1 to 2
			Credit 1.4	**Optimize Energy Performance,** Equipment & Appliances	1 to 2
			⊞ Option A	70% of ENERGY STAR eligible equipment ENERGY STAR rated	1
			⊞ Option B	90% of ENERGY STAR eligible equipment ENERGY STAR rated	2
			Credit 2	**Enhanced Commissioning**	1
0	0	0	Credit 3	**Energy Use, Measurement & Payment Accountability**	1 to 2
			Case A	Projects with area less than 75% of total building area	1 to 2
			Case B	Projects with area 75% or more of total building area	2
			Credit 4	**Green Power**	1

LEED for Commercial Interiors v2.0
Registered Project Checklist

Yes	?	No			
			Materials & Resources		**14 Points**
Yes			Prereq 1	**Storage and Collection of Recyclables**	Required
			Credit 1.1	**Tenant Space,** Long Term Commitment	1
			Credit 1.2	**Building Reuse,** Maintain 40% of Interior Non-Structural Components	1
			Credit 1.3	**Building Reuse,** Maintain 60% of Interior Non-Structural Components	1
			Credit 2.1	**Construction Waste Management,** Divert 50% From Landfill	1
			Credit 2.2	**Construction Waste Management,** Divert 75% From Landfill	1
			Credit 3.1	**Resource Reuse**, 5%	1
			Credit 3.2	**Resource Reuse**, 10%	1
			Credit 3.3	**Resource Reuse,** 30% Furniture and Furnishings	1
			Credit 4.1	**Recycled Content**, 10% (post-consumer + 1/2 pre-consumer)	1
			Credit 4.2	**Recycled Content**, 20% (post-consumer + 1/2 pre-consumer)	1
			Credit 5.1	**Regional Materials**, 20% Manufactured Regionally	1
			Credit 5.2	**Regional Materials**, 10% Extracted and Manufactured Regionally	1
			Credit 6	**Rapidly Renewable Materials**	1
			Credit 7	**Certified Wood**	1

LEED for Commercial Interiors v2.0
Registered Project Checklist

Yes	?	No	Indoor Environmental Quality	17 Points
Yes			Prereq 1 **Minimum IAQ Performance**	Required
Yes			Prereq 2 **Environmental Tobacco Smoke (ETS) Control**	Required
			Credit 1 **Outside Air Delivery Monitoring**	1
			Credit 2 **Increased Ventilation**	1
			Credit 3.1 **Construction IAQ Management Plan**, During Construction	1
			Credit 3.2 **Construction IAQ Management Plan**, Before Occupancy	1
			Credit 4.1 **Low-Emitting Materials**, Adhesives and Sealants	1
			Credit 4.2 **Low-Emitting Materials**, Paints and Coatings	1
			Credit 4.3 **Low-Emitting Materials**, Carpet Systems	1
			Credit 4.4 **Low-Emitting Materials**, Composite Wood and Laminate Adhesives	1
			Credit 4.5 **Low-Emitting Materials**, Systems Furniture and Seating	1
			Credit 5 **Indoor Chemical and Pollutant Source Control**	1
			Credit 6.1 **Controllability of Systems**, Lighting	1
			Credit 6.2 **Controllability of Systems**, Temperature and Ventilation	1
			Credit 7.1 **Thermal Comfort**, Compliance	1
			Credit 7.2 **Thermal Comfort**, Monitoring	1
			Credit 8.1 **Daylight & Views**, Daylight 75% of Spaces	1
			Credit 8.2 **Daylight & Views**, Daylight 90% of Spaces	1
			Credit 8.3 **Daylight & Views**, Views for 90% of Seated Spaces	1

Yes	?	No	Innovation & Design Process	5 Points
			Credit 1.1 **Innovation in Design:** Provide Specific Title	1
			Credit 1.2 **Innovation in Design:** Provide Specific Title	1
			Credit 1.3 **Innovation in Design:** Provide Specific Title	1
			Credit 1.4 **Innovation in Design:** Provide Specific Title	1
			Credit 2 **LEED® Accredited Professional**	1

LEED for Schools 2007
Registered Project Checklist

Project Name: _____

Project Address: _____

Yes	?	No		
			Project Totals (Pre-Certification Estimates)	79 Points
			Certified: 29-36 points **Silver**: 37-43 points **Gold**: 44-57 points **Platinum**: 58-79 points	

Yes	?	No			
			Sustainable Sites		16 Points
Yes			Prereq 1	**Construction Activity Pollution Prevention**	Required
Yes			Prereq 2	**Environmental Site Assessment**	Required
			Credit 1	**Site Selection**	1
			Credit 2	**Development Density & Community Connectivity**	1
			Credit 3	**Brownfield Redevelopment**	1
			Credit 4.1	**Alternative Transportation**, Public Transportation	1
			Credit 4.2	**Alternative Transportation**, Bicycle Use	1
			Credit 4.3	**Alternative Transportation**, Low-Emitting & Fuel Efficient Vehicles	1
			Credit 4.4	**Alternative Transportation**, Parking Capacity	1
			Credit 5.1	**Site Development**, Protect or Restore Habitat	1
			Credit 5.2	**Site Development**, Maximize Open Space	1
			Credit 6.1	**Stormwater Design**, Quantity Control	1
			Credit 6.2	**Stormwater Design**, Quality Control	1
			Credit 7.1	**Heat Island Effect**, Non-Roof	1
			Credit 7.2	**Heat Island Effect**, Roof	1
			Credit 8	**Light Pollution Reduction**	1
			Credit 9	**Site Master Plan**	1
			Credit 10	**Joint Use of Facilities**	1

LEED for Schools 2007
Registered Project Checklist

Yes	?	No			
			Water Efficiency		**7 Points**
			Credit 1.1	**Water Efficient Landscaping**, Reduce by 50%	1
			Credit 1.2	**Water Efficient Landscaping**, No Potable Use or No Irrigation	1
			Credit 2	**Innovative Wastewater Technologies**	1
			Credit 3	**Water Use Reduction**	1 to 3
			⊞ Credit 3.1	20% Reduction	1
			⊞ Credit 3.2	30% Reduction	2
			⊞ Credit 3.3	40% Reduction	3
			Credit 4	**Process Water Use Reduction**, 20% Reduction	1

Yes	?	No			
			Energy & Atmosphere		**17 Points**
Yes			Prereq 1	**Fundamental Commissioning of the Building Energy Systems**	Required
Yes			Prereq 2	**Minimum Energy Performance**	Required
Yes			Prereq 3	**Fundamental Refrigerant Management**	Required

***Note for EAc1:** All LEED for Schools projects registered after June 26, 2007 are required to achieve at least two (2) points.

			Credit 1	**Optimize Energy Performance**	2 to 10
			⊞ Credit 1.2	14% New Buildings / 7% Existing Building Renovations	2
			⊞ Credit 1.3	17.5% New Buildings / 10.5% Existing Building Renovations	3
			⊞ Credit 1.4	21% New Buildings / 14% Existing Building Renovations	4
			⊞ Credit 1.5	24.5% New Buildings / 17.5% Existing Building Renovations	5
			⊞ Credit 1.6	28% New Buildings / 21% Existing Building Renovations	6
			⊞ Credit 1.7	31.5% New Buildings / 24.5% Existing Building Renovations	7
			⊞ Credit 1.8	35% New Buildings / 28% Existing Building Renovations	8
			⊞ Credit 1.9	38.5% New Buildings / 31.5% Existing Building Renovations	9
			⊞ Credit 1.10	42% New Buildings / 35% Existing Building Renovations	10
			Credit 2	**On-Site Renewable Energy**	1 to 3
			⊞ Credit 2.1	2.5% Renewable Energy	1
			⊞ Credit 2.2	7.5% Renewable Energy	2
			⊞ Credit 2.3	12.5% Renewable Energy	3
			Credit 3	**Enhanced Commissioning**	1
			Credit 4	**Enhanced Refrigerant Management**	1
			Credit 5	**Measurement & Verification**	1
			Credit 6	**Green Power**	1

LEED for Schools 2007
Registered Project Checklist

Yes	?	No	Materials & Resources	13 Points

Yes					
			Prereq 1	**Storage & Collection of Recyclables**	Required
			Credit 1.1	**Building Reuse,** Maintain 75% of Existing Walls, Floors & Roof	1
			Credit 1.2	**Building Reuse,** Maintain 95% of Existing Walls, Floors & Roof	1
			Credit 1.3	**Building Reuse,** Maintain 50% of Interior Non-Structural Elements	1
			Credit 2.1	**Construction Waste Management**, Divert 50% from Disposal	1
			Credit 2.2	**Construction Waste Management**, Divert 75% from Disposal	1
			Credit 3.1	**Materials Reuse**, 5%	1
			Credit 3.2	**Materials Reuse**, 10%	1
			Credit 4.1	**Recycled Content**, 10% (post-consumer + 1/2 pre-consumer)	1
			Credit 4.2	**Recycled Content**, 20% (post-consumer + 1/2 pre-consumer)	1
			Credit 5.1	**Regional Materials**, 10% Extracted, Processed & Manufactured	1
			Credit 5.2	**Regional Materials**, 20% Extracted, Processed & Manufactured	1
			Credit 6	**Rapidly Renewable Materials**	1
			Credit 7	**Certified Wood**	1

LEED for Schools 2007
Registered Project Checklist

Yes	?	No	Indoor Environmental Quality		20 Points
Yes			Prereq 1	**Minimum IAQ Performance**	Required
Yes			Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required
Yes			Prereq 3	**Minimum Acoustical Performance**	Required
			Credit 1	**Outdoor Air Delivery Monitoring**	1
			Credit 2	**Increased Ventilation**	1
			Credit 3.1	**Construction IAQ Management Plan,** During Construction	1
			Credit 3.2	**Construction IAQ Management Plan**, Before Occupancy	1
			Credit 4	**Low-Emiiting Materials**	1 to 4
			Credit 5	**Indoor Chemical & Pollutant Source Control**	1
			Credit 6.1	**Controllability of Systems**, Lighting	1
			Credit 6.2	**Controllability of Systems**, Thermal Comfort	1
			Credit 7.1	**Thermal Comfort,** Design	1
			Credit 7.2	**Thermal Comfort,** Verification	1
			Credit 8.1	**Daylight & Views,** Daylight 75% of Spaces	1 to 3
				✚ 75% of classrooms (Required for either points below)	1
				✚ 90% of classrooms	2
				✚ 75% of other spaces	3
			Credit 8.2	**Daylight & Views,** Views for 90% of Spaces	1
			Credit 9	**Enhanced Acoustical Performance,** 40 dBA / RC level of 32	1
				Enhanced Acoustical Performance, 35 dBA / RC level of 27	1
			Credit 10	**Mold Prevention**	1

Yes	?	No	Innovation & Design Process		6 Points
			Credit 1.1	**Innovation in Design:** Provide Specific Title	1
			Credit 1.2	**Innovation in Design:** Provide Specific Title	1
			Credit 1.3	**Innovation in Design:** Provide Specific Title	1
			Credit 1.4	**Innovation in Design:** Provide Specific Title	1
			Credit 2	**LEED® Accredited Professional**	1
			Credit 3	**School as a Teaching Tool**	1

LEED 2009 for Schools New Construction and Major Renovations
Project Scorecard

Project Name:
Project Address:

Yes	?	No			
			SUSTAINABLE SITES		**24 Points**
Y			Prereq 1	Construction Activity Pollution Prevention	Required
Y			Prereq 2	Environmental Site Assessment	Required
			Credit 1	Site Selection	1
			Credit 2	Development Density and Community Connectivity	4
			Credit 3	Brownfield Redevelopment	1
			Credit 4.1	Alternative Transportation - Public Transportation Access	4
			Credit 4.2	Alternative Transportation - Bicycle Storage and Changing Rooms	1
			Credit 4.3	Alternative Transportation - Low-Emitting and Fuel-Efficient Vehicles	2
			Credit 4.4	Alternative Transportation - Parking Capacity	2
			Credit 5.1	Site Development - Protect or Restore Habitat	1
			Credit 5.2	Site Development - Maximize Open Space	1
			Credit 6.1	Stormwater Design - Quantity Control	1
			Credit 6.2	Stormwater Design - Quality Control	1
			Credit 7.1	Heat Island Effect - Nonroof	1
			Credit 7.2	Heat Island Effect - Roof	1
			Credit 8	Light Pollution Reduction	1
			Credit 9	Site Master Plan	1
			Credit 10	Joint Use of Facilities	1

Yes	?	No			
			WATER EFFICIENCY		**11 Points**
Y			Prereq 1	Water Use Reduction	Required
			Credit 1	Water Efficient Landscaping	2 to 4
				50% Reduction	2
				No Potable Water Use or Irrigation	4
			Credit 2	Innovative Wastewater Technologies	2
			Credit 3	Water Use Reduction	2 to 4
				30% Reduction	2
				35% Reduction	3
				40% Reduction	4
			Credit 4	Process Water Use Reduction	1

Yes	?	No			
			ENERGY & ATMOSPHERE		**33 Points**
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	Required
Y			Prereq 2	Minimum Energy Performance	Required
Y			Prereq 3	Fundamental Refrigerant Management	Required
			Credit 1	Optimize Energy Performance	1 to 19
				Improve by 12% for New Buildings or 8% for Existing Building Renovations	1
				Improve by 14% for New Buildings or 10% for Existing Building Renovations	2
				Improve by 16% for New Buildings or 12% for Existing Building Renovations	3
				Improve by 18% for New Buildings or 14% for Existing Building Renovations	4
				Improve by 20% for New Buildings or 16% for Existing Building Renovations	5
				Improve by 22% for New Buildings or 18% for Existing Building Renovations	6
				Improve by 24% for New Buildings or 20% for Existing Building Renovations	7
				Improve by 26% for New Buildings or 22% for Existing Building Renovations	8
				Improve by 28% for New Buildings or 24% for Existing Building Renovations	9
				Improve by 30% for New Buildings or 26% for Existing Building Renovations	10
				Improve by 32% for New Buildings or 28% for Existing Building Renovations	11
				Improve by 34% for New Buildings or 30% for Existing Building Renovations	12
				Improve by 36% for New Buildings or 32% for Existing Building Renovations	13
				Improve by 38% for New Buildings or 34% for Existing Building Renovations	14
				Improve by 40% for New Buildings or 36% for Existing Building Renovations	15
				Improve by 42% for New Buildings or 38% for Existing Building Renovations	16
				Improve by 44% for New Buildings or 40% for Existing Building Renovations	17
				Improve by 46% for New Buildings or 42% for Existing Building Renovations	18
				Improve by 48%+ for New Buildings or 44%+ for Existing Building Renovations	19
			Credit 2	On-Site Renewable Energy	1 to 7
				1% Renewable Energy	1
				3% Renewable Energy	2
				5% Renewable Energy	3
				7% Renewable Energy	4
				9% Renewable Energy	5
				11% Renewable Energy	6
				13% Renewable Energy	7
			Credit 3	Enhanced Commissioning	2
			Credit 4	Enhanced Refrigerant Management	1
			Credit 5	Measurement and Verification	2
			Credit 6	Green Power	2

LEED 2009 for Schools New Construction and Major Renovations
Project Scorecard

Project Name:
Project Address:

Yes	?	No			
			MATERIALS & RESOURCES		**13 Points**
Y			Prereq 1	Storage and Collection of Recyclables	Required
			Credit 1.1	Building Reuse - Maintain Existing Walls, Floors and Roof	1 to 2
				Reuse 75%	1
				Reuse 95%	2
			Credit 1.2	Building Reuse - Maintain Interior Non-Structural Elements	1
			Credit 2	Construction Waste Management	1 to 2
				50% Recycled or Salvaged	1
				75% Recycled or Salvaged	2
			Credit 3	Materials Reuse	1 to 2
				5% Reuse	1
				10% Reuse	2
			Credit 4	Recycled Content	1 to 2
				10% of Content	1
				20% of Content	2
			Credit 5	Regional Materials	1 to 2
				10% of Materials	1
				20% of Materials	2
			Credit 6	Rapidly Renewable Materials	1
			Credit 7	Certified Wood	1

Yes	?	No			
			INDOOR ENVIROMENTAL QUALITY		**19 Points**
Y			Prereq 1	Minimum Indoor Air Quality Performance	Required
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
Y			Prereq 3	Minimum Acoustical Performance	Required
			Credit 1	Outdoor Air Delivery Monitoring	1
			Credit 2	Increased Ventilation	1
			Credit 3.1	Construction Indoor Air Quality Management Plan - During Construction	1
			Credit 3.2	Construction Indoor Air Quality Management Plan - Before Occupancy	1
			Credit 4	Low-Emitting Materials	Up to 4
				4.1 - Adhesives & Sealants	1
				4.2 - Paints & Coatings	1
				4.3 - Flooring Systems	1
				4.4 - Composite Wood & Agrifiber Products	1
				4.5 - Furniture & Furnishings	1
				4.6 - Ceiling & Wall Systems	1
			Credit 5	Indoor Chemical and Pollutant Source Control	1
			Credit 6.1	Controllability of Systems - Lighting	1
			Credit 6.2	Controllability of Systems - Thermal Comfort	1
			Credit 7.1	Thermal Comfort - Design	1
			Credit 7.2	Thermal Comfort - Verification	1
			Credit 8.1	Daylight and Views	1 to 3
				75% of classrooms	1
				90% of classrooms	2
				75% of other spaces	2 to 3
			Credit 8.2	Daylight and Views - Views	1
			Credit 9	Enhanced Acoustical Performance	1
			Credit 10	Mold Prevention	1

Yes	?	No			
			INNOVATION IN DESIGN		**6 Points**
			Credit 1	Innovation in Design	1 to 4
				Innovation or Exemplary Performance	1
				Innovation or Exemplary Performance	1
				Innovation or Exemplary Performance	1
				Innovation	1
			Credit 2	LEED® Accredited Professional	1
			Credit 3	School as a Teaching Tool	1

Yes	?	No			
			REGIONAL PRIORITY		**4 Points**
			Credit 1	Regional Priority	1 to 4
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1

Yes	?	No		
			PROJECT TOTALS (Certification Estimates)	**110 Points**

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points

LEED for Existing Buildings: Operations & Maintenance
Registered Project Checklist

Project Name: _____

Project Address: _____

Yes	?	No	Project Totals (Pre-Certification Estimates)	92 Points
			Certified: 34-42 points **Silver**: 43-50 points **Gold**: 51-67 points **Platinum**: 68-92 points	

Yes	?	No	Sustainable Sites	12 Points
			Credit 1 **LEED Certified Design and Construction**	1
			Credit 2 **Building Exterior and Hardscape Management Plan**	1
			Credit 3 **Integrated Pest Mgmt, Erosion Control, and Landscape Mgmt Plan**	1
			Credit 4 **Alternative Commuting Transportation**	1 to 4
			⊞ Credit 4.1 10% Reduction	1
			⊞ Credit 4.2 25% Reduction	2
			⊞ Credit 4.3 50% Reduction	3
			⊞ Credit 4.4 75% Reduction or greater	4
			Credit 5 **Reduced Site Disturbance**, Protect or Restore Open Space	1
			Credit 6 **Stormwater Management**	1
			Credit 7.1 **Heat Island Reduction**, Non-Roof	1
			Credit 7.2 **Heat Island Reduction**, Roof	1
			Credit 8 **Light Pollution Reduction**	1

LEED for Existing Buildings: Operations & Maintenance
Registered Project Checklist

Yes	?	No				
			Water Efficiency			**10 Points**
Yes			Prereq 1		**Minimum Indoor Plumbing Fixture & Fitting Efficiency**	Required
			Credit 1.1		**Water Performance Measurement**, Whole Building Metering	1
			Credit 1.2		**Water Performance Measurement**, Submetering	1
			Credit 2		**Additional Indoor Plumbing Fixture and Fitting Efficiency**	1 to 3
				+	Credit 2.1 10% Reduction	1
				+	Credit 2.2 20% Reduction	2
				+	Credit 2.3 30% Reduction	3
			Credit 3		**Water Efficient Landscaping**	1 to 3
				+	Credit 3.1 50% Reduction	1
				+	Credit 3.2 75% Reduction	2
				+	Credit 3.3 100% Reduction	3
			Credit 4.1		**Cooling Tower Water Mgmt**, Chemical Management	1
			Credit 4.2		**Cooling Tower Water Mgmt**, Non-Potable Water Source Use	1

LEED for Existing Buildings: Operations & Maintenance
Registered Project Checklist

Yes	?	No	Energy & Atmosphere	30 Points
Yes			Prereq 1 **Energy Efficiency Best Management Practices**	Required
Yes			Prereq 1 **Minimum Energy Efficiency Performance**	Required
Yes			Prereq 1 **Refrigerant Management,** Ozone Protection	Required

***NOTE for EAc1**: All LEED for Existing Building projects registered after June 26th, 2007 are required to achieve at least two (2) points under EAc1.

			Credit 1	**Optimize Energy Efficiency Performance**	1 to 15
				ENERGY STAR Rating: 65 / Alternative Score: 15% Above Nat'l Average	Required
			Credit 1.1	ENERGY STAR 67 / Alternative Score: 17% Above Average	1
			Credit 1.2	ENERGY STAR 69 / Alternative Score: 19% Above Average	2
			Credit 1.3	ENERGY STAR 71 / Alternative Score: 21% Above Average	3
			Credit 1.4	ENERGY STAR 73 / Alternative Score: 23% Above Average	4
			Credit 1.5	ENERGY STAR 75 / Alternative Score: 25% Above Average	5
			Credit 1.6	ENERGY STAR 77 / Alternative Score: 27% Above Average	6
			Credit 1.7	ENERGY STAR 79 / Alternative Score: 29% Above Average	7
			Credit 1.8	ENERGY STAR 81 / Alternative Score: 31% Above Average	8
			Credit 1.9	ENERGY STAR 83 / Alternative Score: 33% Above Average	9
			Credit 1.10	ENERGY STAR 85 / Alternative Score: 35% Above Average	10
			Credit 1.11	ENERGY STAR 87 / Alternative Score: 37% Above Average	11
			Credit 1.12	ENERGY STAR 89 / Alternative Score: 39% Above Average	12
			Credit 1.13	ENERGY STAR 91 / Alternative Score: 41% Above Average	13
			Credit 1.14	ENERGY STAR 93 / Alternative Score: 43% Above Average	14
			Credit 1.15	ENERGY STAR 95+ / Alternative Score: 45%+ Above Average	15

LEED for Existing Buildings: Operations & Maintenance
Registered Project Checklist

Energy & Atmosphere, continued

Existing Building Commissioning

Credit 2.1	**Investigation and Analysis**	2
Credit 2.2	**Implementation**	2
Credit 2.3	**Ongoing Commissioning**	2

Performance Measurement

Credit 3.1	**Building Automation System**	1
Credit 3.2-3.3	**System Level Metering**	1 to 2
+ Credit 3.2	40% Metered	1
+ Credit 3.3	80% Metered	2

Other

Credit 4	**Renewable Energy**	1 to 4
+ Credit 4.1	On-site 3% / Off-site 25%	1
+ Credit 4.2	On-site 6% / Off-site 50%	2
+ Credit 4.3	On-site 9% / Off-site 75%	3
+ Credit 4.4	On-site 12% / Off-site 100%	4
Credit 5	**Refrigerant Management**	1
Credit 6	**Emissions Reduction Reporting**	1

LEED for Existing Buildings: Operations & Maintenance
Registered Project Checklist

Yes	?	No			
			Materials & Resources		**14 Points**
Yes			Prereq 1	**Sustainable Puchasing Policy**	Required
Yes			Prereq 2	**Solid Waste Management Policy**	Required
			Sustainable Purchasing		
			Credit 1	**Ongoing Consumables**	1 to 3
			⊞ Credit 1.1	40% of Purchases	1
			⊞ Credit 1.2	60% of Purchases	2
			⊞ Credit 1.3	80% of Purchases	3
			Credit 2.1	**Durable Goods,** Electric	1
			Credit 2.2	**Durable Goods,** Furniture	1
			Credit 3	**Facility Alterations and Additions**	1
			Credit 4	**Reduced Mercury in Lamps**	1 to 2
			⊞ Credit 4.1	90 pg/lum-hr	1
			⊞ Credit 4.2	70 pg/lum-hr	2
			Credit 5	**Food**	1
			Solid Waste Management		
			Credit 6	**Waste Stream Audit**	1
			Credit 7	**Ongoing Consumables**	1 to 2
			⊞ Credit 7.1	50% Waste Diversion	1
			⊞ Credit 7.2	70% Waste Diversion	2
			Credit 8	**Durable Goods**	1
			Credit 9	**Facility Alterations and Additions**	1

LEED for Existing Buildings: Operations & Maintenance
Registered Project Checklist

Yes	?	No			
			Indoor Environmental Quality		**19 Points**
Yes			Prereq 1	**Outdoor Air Introduction and Exhaust Systems**	Required
Yes			Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required
Yes			Prereq 3	**Green Cleaning Policy**	Required
			IAQ Best Management Practices		
			Credit 1.1	**IAQ Management Program**	1
			Credit 1.2	**Outdoor Air Delivery Monitoring**	1
			Credit 1.3	**Increased Ventilation**	1
			Credit 1.4	**Reduce Particulates in Air Distribution**	1
			Credit 1.5	**Facility Alterations and Additions**	1
			Occupant Comfort		
			Credit 2.1	**Occupant Survey**	1
			Credit 2.2	**Occupant Controlled Lighting**	1
			Credit 2.3	**Thermal Comfort Monitoring**	1
			Credit 2.4-2.5	**Daylight and Views**	1 to 2
			⊞ Credit 2.4	50% Daylight / 45% Views	1
			⊞ Credit 2.5	75% Daylight / 90% Views	2
			Green Cleaning		
			Credit 3.1	**High Performance Cleaning Program**	1
			Credit 3.2-3.3	**Custodial Effectiveness Assessment**	1 to 2
			⊞ Credit 3.2	Score of ≤ 3	1
			⊞ Credit 3.3	Score of ≤ 2	2
			Credit 3.4 -3.6	**Sustainable Cleaning Products and Materials**	1 to 3
			⊞ Credit 3.4	30% of Purchases	1
			⊞ Credit 3.5	60% of Purchases	2
			⊞ Credit 3.6	90% of Purchases	3
			Credit 3.7	**Sustainable Cleaning Equipment**	1
			Credit 3.8	**Entryway Systems**	1
			Credit 3.9	**Indoor Integrated Pest Management**	1

LEED for Existing Buildings: Operations & Maintenance
Registered Project Checklist

Yes	?	No	Innovation in Operations	7 Points
			Credit 1.1 **Innovation in Operations:** Provide Specific Title	1
			Credit 1.2 **Innovation in Operations:** Provide Specific Title	1
			Credit 1.3 **Innovation in Operations:** Provide Specific Title	1
			Credit 1.4 **Innovation in Operations:** Provide Specific Title	1
			Credit 2 **LEED® Accredited Professional**	1
			Credit 3 **Documenting Sustainable Building Cost Impacts**	2

LEED 2009 for New Construction and Major Renovation
Project Scorecard

Project Name:
Project Address:

Yes	?	No			
			SUSTAINABLE SITES		**26 Points**
Y			Prereq 1	Construction Activity Pollution Prevention	Required
			Credit 1	Site Selection	1
			Credit 2	Development Density and Community Connectivity	5
			Credit 3	Brownfield Redevelopment	1
			Credit 4.1	Alternative Transportation - Public Transportation Access	6
			Credit 4.2	Alternative Transportation - Bicycle Storage and Changing Rooms	1
			Credit 4.3	Alternative Transportation - Low-Emitting and Fuel-Efficient Vehicles	3
			Credit 4.4	Alternative Transportation - Parking Capacity	2
			Credit 5.1	Site Development - Protect or Restore Habitat	1
			Credit 5.2	Site Development - Maximize Open Space	1
			Credit 6.1	Stormwater Design - Quantity Control	1
			Credit 6.2	Stormwater Design - Quality Control	1
			Credit 7.1	Heat Island Effect - Nonroof	1
			Credit 7.2	Heat Island Effect - Roof	1
			Credit 8	Light Pollution Reduction	1
Yes	?	No			
			WATER EFFICIENCY		**10 Points**
					4
Y			Prereq 1	Water Use Reduction	Required
			Credit 1	Water Efficient Landscaping	2 to 4
				Reduce by 50%	2
				No Potable Water Use or Irrigation	4
			Credit 2	Innovative Wastewater Technologies	2
			Credit 3	Water Use Reduction	2 to 4
				Reduce by 30%	2
				Reduce by 35%	3
				Reduce by 40%	4
			ENERGY & ATMOSPHERE		**35 Points**
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	Required
Y			Prereq 2	Minimum Energy Performance	Required
Y			Prereq 3	Fundamental Refrigerant Management	Required
			Credit 1	Optimize Energy Performance	1 to 19
				Improve by 12% for New Buildings or 8% for Existing Building Renovations	1
				Improve by 14% for New Buildings or 10% for Existing Building Renovations	2
				Improve by 16% for New Buildings or 12% for Existing Building Renovations	3
				Improve by 18% for New Buildings or 14% for Existing Building Renovations	4
				Improve by 20% for New Buildings or 16% for Existing Building Renovations	5
				Improve by 22% for New Buildings or 18% for Existing Building Renovations	6
				Improve by 24% for New Buildings or 20% for Existing Building Renovations	7
				Improve by 26% for New Buildings or 22% for Existing Building Renovations	8
				Improve by 28% for New Buildings or 24% for Existing Building Renovations	9
				Improve by 30% for New Buildings or 26% for Existing Building Renovations	10
				Improve by 32% for New Buildings or 28% for Existing Building Renovations	11
				Improve by 34% for New Buildings or 30% for Existing Building Renovations	12
				Improve by 36% for New Buildings or 32% for Existing Building Renovations	13
				Improve by 38% for New Buildings or 34% for Existing Building Renovations	14
				Improve by 40% for New Buildings or 36% for Existing Building Renovations	15
				Improve by 42% for New Buildings or 38% for Existing Building Renovations	16
				Improve by 44% for New Buildings or 40% for Existing Building Renovations	17
				Improve by 46% for New Buildings or 42% for Existing Building Renovations	18
				Improve by 48%+ for New Buildings or 44%+ for Existing Building Renovations	19
			Credit 2	On-Site Renewable Energy	1 to 7
				1% Renewable Energy	1
				3% Renewable Energy	2
				5% Renewable Energy	3
				7% Renewable Energy	4
				9% Renewable Energy	5
				11% Renewable Energy	6
				13% Renewable Energy	7
			Credit 3	Enhanced Commissioning	2
			Credit 4	Enhanced Refrigerant Management	2
			Credit 5	Measurement and Verification	3
			Credit 6	Green Power	2

LEED 2009 for New Construction and Major Renovation
Project Scorecard

Project Name:
Project Address:

Yes	?	No			
	2		**MATERIALS & RESOURCES**		**14 Points**
Y			Prereq 1	Storage and Collection of Recyclables	Required
			Credit 1.1	Building Reuse - Maintain Existing Walls, Floors and Roof	1 to 3
				Reuse 55%	1
				Reuse 75%	2
				Reuse 95%	3
			Credit 1.2	Building Reuse - Maintain Interior Nonstructural Elements	1
	2		Credit 2	Construction Waste Management	1 to 2
				50% Recycled or Salvaged	1
				75% Recycled or Salvaged	2
			Credit 3	Materials Reuse	1 to 2
				Reuse 5%	1
				Reuse 10%	2
			Credit 4	Recycled Content	1 to 2
				10% of Content	1
				20% of Content	2
			Credit 5	Regional Materials	1 to 2
				10% of Materials	1
				20% of Materials	2
			Credit 6	Rapidly Renewable Materials	1
			Credit 7	Certified Wood	1

Yes	?	No			
			INDOOR ENVIRONMENTAL QUALITY		**15 Points**
Y			Prereq 1	Minimum Indoor Air Quality Performance	Required
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
			Credit 1	Outdoor Air Delivery Monitoring	1
			Credit 2	Increased Ventilation	1
			Credit 3.1	Construction Indoor Air Quality Management Plan - During Construction	1
			Credit 3.2	Construction Indoor Air Quality Management Plan - Before Occupancy	1
			Credit 4.1	Low-Emitting Materials - Adhesives and Sealants	1
			Credit 4.2	Low-Emitting Materials - Paints and Coatings	1
			Credit 4.3	Low-Emitting Materials - Flooring Systems	1
			Credit 4.4	Low-Emitting Materials - Composite Wood and Agrifiber Products	1
			Credit 5	Indoor Chemical and Pollutant Source Control	1
			Credit 6.1	Controllability of Systems - Lighting	1
			Credit 6.2	Controllability of Systems - Thermal Comfort	1
			Credit 7.1	Thermal Comfort - Design	1
			Credit 7.2	Thermal Comfort - Verification	1
			Credit 8.1	Daylight and Views - Daylight	1
			Credit 8.2	Daylight and Views - Views	1

Yes	?	No			
			INNOVATION IN DESIGN		**6 Points**
			Credit 1	Innovation in Design	1 to 5
				Innovation or Exemplary Performance	1
				Innovation or Exemplary Performance	1
				Innovation or Exemplary Performance	1
				Innovation	1
				Innovation	1
			Credit 2	LEED® Accredited Professional	1

Yes	?	No			
			REGIONAL PRIORITY		**4 Points**
			Credit 1	Regional Priority	1 to 4
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1

Yes	?	No		
	?		**PROJECT TOTALS (Certification Estimates)**	**110 Points**

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points

LEED for New Construction v2.1
Registered Project Checklist

Project Name:
Project Address:

Yes	?	No			
			Sustainable Sites		**14 Points**
Y			Prereq 1	**Erosion & Sedimentation Control**	Required
			Credit 1	**Site Selection**	1
			Credit 2	**Development Density**	1
			Credit 3	**Brownfield Redevelopment**	1
			Credit 4.1	**Alternative Transportation**, Public Transportation Access	1
			Credit 4.2	**Alternative Transportation**, Bicycle Storage & Changing Rooms	1
			Credit 4.3	**Alternative Transportation**, Alternative Fuel Vehicles	1
			Credit 4.4	**Alternative Transportation**, Parking Capacity and Carpooling	1
			Credit 5.1	**Reduced Site Disturbance**, Protect or Restore Open Space	1
			Credit 5.2	**Reduced Site Disturbance**, Development Footprint	1
			Credit 6.1	**Stormwater Management**, Rate and Quantity	1
			Credit 6.2	**Stormwater Management**, Treatment	1
			Credit 7.1	**Landscape & Exterior Design to Reduce Heat Islands**, Non-Roof	1
			Credit 7.2	**Landscape & Exterior Design to Reduce Heat Islands**, Roof	1
			Credit 8	**Light Pollution Reduction**	1

Yes	?	No			
			Water Efficiency		**5 Points**
			Credit 1.1	**Water Efficient Landscaping**, Reduce by 50%	1
			Credit 1.2	**Water Efficient Landscaping**, No Potable Use or No Irrigation	1
			Credit 2	**Innovative Wastewater Technologies**	1
			Credit 3.1	**Water Use Reduction**, 20% Reduction	1
			Credit 3.2	**Water Use Reduction**, 30% Reduction	1

Yes	?	No			
			Energy & Atmosphere		**17 Points**
Y			Prereq 1	**Fundamental Building Systems Commissioning**	Required
Y			Prereq 2	**Minimum Energy Performance**	Required
Y			Prereq 3	**CFC Reduction in HVAC&R Equipment**	Required
			Credit 1	**Optimize Energy Performance**	1 to 10
				15% New Buildings or 5% Existing Building Renovations	1
				20% New Buildings or 10% Existing Building Renovations	2
				25% New Buildings or 15% Existing Building Renovations	3
				30% New Buildings or 20% Existing Building Renovations	4
				35% New Buildings or 25% Existing Building Renovations	5
				40% New Buildings or 30% Existing Building Renovations	6
				45% New Buildings or 35% Existing Building Renovations	7
				50% New Buildings or 40% Existing Building Renovations	8
				55% New Buildings or 45% Existing Building Renovations	9
				60% New Buildings or 50% Existing Building Renovations	10
			Credit 2.1	**Renewable Energy**, 5%	1
			Credit 2.2	**Renewable Energy**, 10%	1
			Credit 2.3	**Renewable Energy**, 20%	1
			Credit 3	**Additional Commissioning**	1
			Credit 4	**Ozone Depletion**	1
			Credit 5	**Measurement & Verification**	1
			Credit 6	**Green Power**	1

Yes	?	No			
			Materials & Resources		13 Points
Y			Prereq 1	**Storage & Collection of Recyclables**	Required
			Credit 1.1	**Building Reuse**, Maintain 75% of Existing Shell	1
			Credit 1.2	**Building Reuse**, Maintain 100% of Shell	1
			Credit 1.3	**Building Reuse**, Maintain 100% Shell & 50% Non-Shell	1
			Credit 2.1	**Construction Waste Management**, Divert 50%	1
			Credit 2.2	**Construction Waste Management**, Divert 75%	1
			Credit 3.1	**Resource Reuse**, Specify 5%	1
			Credit 3.2	**Resource Reuse**, Specify 10%	1
			Credit 4.1	**Recycled Content**, Specify 5% (post-consumer + ½ post-industrial)	1
			Credit 4.2	**Recycled Content**, Specify 10% (post-consumer + ½ post-industrial)	1
			Credit 5.1	**Local/Regional Materials**, 20% Manufactured Locally	1
			Credit 5.2	**Local/Regional Materials**, of 20% Above, 50% Harvested Locally	1
			Credit 6	**Rapidly Renewable Materials**	1
			Credit 7	**Certified Wood**	1

Yes	?	No			
			Indoor Environmental Quality		15 Points
Y			Prereq	**Minimum IAQ Performance**	Required
Y			Prereq 2	**Environmental Tobacco Smoke** (ETS) **Control**	Required
			Credit 1	**Carbon Dioxide** (CO_2) **Monitoring**	1
			Credit 2	**Ventilation Effectiveness**	1
			Credit 3.1	**Construction IAQ Management Plan**, During Construction	1
			Credit 3.2	**Construction IAQ Management Plan**, Before Occupancy	1
			Credit 4.1	**Low-Emitting Materials**, Adhesives & Sealants	1
			Credit 4.2	**Low-Emitting Materials**, Paints	1
			Credit 4.3	**Low-Emitting Materials**, Carpet	1
			Credit 4.4	**Low-Emitting Materials**, Composite Wood & Agrifiber	1
			Credit 5	**Indoor Chemical & Pollutant Source Control**	1
			Credit 6.1	**Controllability of Systems**, Perimeter	1
			Credit 6.2	**Controllability of Systems**, Non-Perimeter	1
			Credit 7.1	**Thermal Comfort**, Comply with ASHRAE 55-1992	1
			Credit 7.2	**Thermal Comfort**, Permanent Monitoring System	1
			Credit 8.1	**Daylight & Views**, Daylight 75% of Spaces	1
			Credit 8.2	**Daylight & Views**, Views for 90% of Spaces	1

Yes	?	No			
			Innovation & Design Process		5 Points
			Credit 1.1	**Innovation in Design**: Provide Specific Title	1
			Credit 1.2	**Innovation in Design**: Provide Specific Title	1
			Credit 1.3	**Innovation in Design**: Provide Specific Title	1
			Credit 1.4	**Innovation in Design**: Provide Specific Title	1
			Credit 2	**LEED™ Accredited Professional**	1

Yes	?	No		
			Project Totals (pre-certification estimates)	69 Points

Certified: 26-32 points, **Silver:** 33-38 points, **Gold:** 39-51 points, **Platinum:** 52-69 points

LEED 2009 for E isting Buildings: Operations & Maintenance
Project Scorecard

Project Name:
Project Address:

Yes	?	No			
0	0	0	**SUSTAINABLE SITES**		**26 Points**
			Credit 1	LEED Certified Design and Construction	4
			Credit 2	Building E terior and Hardscape Management Plan	1
			Credit 3	Integrated Pest Management Erosion Control and Landscape Management Plan	1
			Credit 4	Alternative Commuting Transportation	3 to 1
				Reduce by 10%	3
				Reduce by 13.75%	4
				Reduce by 17.5%	5
				Reduce by 21.25%	6
				Reduce by 25%	7
				Reduce by 31.25%	8
				Reduce by 37.5%	9
				Reduce by 43.75%	10
				Reduce by 50%	11
				Reduce by 56.25%	12
				Reduce by 62.5%	13
				Reduce by 68.75%	14
				Reduce by 75%	15
			Credit 5	Site Development - Protect or Restore Open Habitat	1
			Credit 6	Stormwater Quantity Control	1
			Credit 7.1	Heat Island Reduction - Nonroof	1
			Credit 7.2	Heat Island Reduction - Roof	1
			Credit 8	Light Pollution Reduction	1

Yes	?	No			
0	0	0	**WATER EFFICIENCY**		**14 Points**
Y			Prereq 1	Minimum Indoor Plumbing Fi ture and Fitting Efficiency	Required
0			Credit 1	Water Performance Measurement	1 to 2
				Whole building metering	1
				Submetering	2
			Credit 2	Additional Indoor Plumbing Fi ture and Fitting Efficiency	1 to
				Reduce by 10%	1
				Reduce by 15%	2
				Reduce by 20%	3
				Reduce by 25%	4
				Reduce by 30%	5
			Credit 3	Water Efficient Landscaping	1 to
				Reduce by 50%	1
				Reduce by 62.5%	2
				Reduce by 75%	3
				Reduce by 87.5%	4
				Reduce by 100%	5
			Credit 4	Cooling Tower Water Management	1 to 2
				Chemical Management	1
				Non-Potable Water Source Use	1

Yes	?	No			
0	0	0	**ENERGY & ATMOSPHERE**		**3 Points**
Y			Prereq 1	Energy Efficiency Best Management Practices - Planning, Documentation, and Opportunity Assessment	Required
Y			Prereq 2	Minimum Energy Efficiency Performance	Required
Y			Prereq 3	Fundamental Refrigerant Management	Required
			Credit 1	Optimize Energy Efficiency Performance	1 to 1
				ENERGY STAR Rating of 71 or 21st Percentile Above National Median	1
				ENERGY STAR Rating of 73 or 23rd Percentile Above National Median	2
				ENERGY STAR Rating of 74 or 24th Percentile Above National Median	3
				ENERGY STAR Rating of 75 or 25th Percentile Above National Median	4
				ENERGY STAR Rating of 76 or 26th Percentile Above National Median	5
				ENERGY STAR Rating of 77 or 27th Percentile Above National Median	6
				ENERGY STAR Rating of 78 or 28th Percentile Above National Median	7
				ENERGY STAR Rating of 79 or 29th Percentile Above National Median	8
				ENERGY STAR Rating of 80 or 30th Percentile Above National Median	9
				ENERGY STAR Rating of 81 or 31st Percentile Above National Median	10
				ENERGY STAR Rating of 82 or 32nd Percentile Above National Median	11
				ENERGY STAR Rating of 83 or 33rd Percentile Above National Median	12
				ENERGY STAR Rating of 85 or 35th Percentile Above National Median	13
				ENERGY STAR Rating of 87 or 37th Percentile Above National Median	14
				ENERGY STAR Rating of 89 or 39th Percentile Above National Median	15
				ENERGY STAR Rating of 91 or 41st Percentile Above National Median	16
				ENERGY STAR Rating of 93 or 43rd Percentile Above National Median	17
				ENERGY STAR Rating of 95+ or 45th+ Percentile Above National Median	18
			Credit 2.1	E isting Building Commissioning - Investigation and Analysis	2
			Credit 2.2	E isting Building Commissioning - Implementation	2
			Credit 2.3	E isting Building Commissioning - Ongoing Commissioning	2
			Credit 3.1	Performance Measurement - Building Automation System	1
			Credit 3.2	Performance Measurement - System-Level Metering	1 to 2
				40% Metered	1
				80% Metered	2
			Credit 4	On-site and Off-site Renewable Energy	1 to 6
				3% On-site or 25% Off-site Renewable Energy	1
				4.5% On-site or 37.5% Off-site Renewable Energy	2
				6% On-site or 50% Off-site Renewable Energy	3
				7.5% On-site or 62.5% Off-site Renewable Energy	4
				9% On-site or 75% Off-site Renewable Energy	5
				12% On-site or 100% Off-site Renewable Energy	6
			Credit 5	Enhanced Refrigerant Management	1
			Credit 6	Emissions Reduction Reporting	1

Yes	?	No			
0	0	0	**MATERIALS & RESOURCES**		**10 Points**
Y			Prereq 1	Sustainable Purchasing Policy	Required
Y			Prereq 2	Solid Waste Management Policy	Required
			Credit 1	Sustainable Purchasing - Ongoing Consumables	1
			Credit 2	Sustainable Purchasing - Durable Goods	1 to 2
				40% of Electric	1
				40% of Furniture	1
			Credit 3	Sustainable Purchasing - Facility Alterations and Additions	1
			Credit 4	Sustainable Purchasing - Reduced Mercury in Lamps	1
			Credit 5	Sustainable Purchasing - Food	1
			Credit 6	Solid Waste Management - Waste Stream Audit	1
			Credit 7	Solid Waste Management - Ongoing Consumables	1
			Credit 8	Solid Waste Management - Durable Goods	1
			Credit 9	Solid Waste Management - Facility Alterations and Additions	1

Yes	?	No			
0	0	0	**INDOOR ENVIRONMENTAL QUALITY**		**1 Points**
Y			Prereq 1	Minimum Indoor Air Quality Performance	Required
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
Y			Prereq 3	Green Cleaning Policy	Required
			Credit 1.1	Indoor Air Quality Best Management Practices - Indoor Air Quality Management Program	1
			Credit 1.2	Indoor Air Quality Best Management Practices - Outdoor Air Delivery Monitoring	1
			Credit 1.3	Indoor Air Quality Best Management Practices - Increased Ventilation	1
			Credit 1.4	Indoor Air Quality Best Management Practices - Reduce Particulates in Air Distribution	1
			Credit 1.5	Indoor Air Quality Best Management Practices - Indoor Air Quality Management for Facility Al	1
			Credit 2.1	Occupant Comfort - Occupant Survey	1
			Credit 2.2	Controllability of Systems - Lighting	1
			Credit 2.3	Occupant Comfort - Thermal Comfort Monitoring	1
			Credit 2.4	Daylight and Views	1
			Credit 3.1	Green Cleaning - High-Performance Cleaning Program	1
			Credit 3.2	Green Cleaning - Custodial Effectiveness Assessment	1
			Credit 3.3	Green Cleaning - Purchase of Sustainable Cleaning Products and Materials	1
			Credit 3.4	Green Cleaning - Sustainable Cleaning Equipment	1
			Credit 3.5	Green Cleaning - Indoor Chemical and Pollutant Source Control	1
			Credit 3.6	Green Cleaning - Indoor Integrated Pest Management	1

Yes	?	No			
0	0	0	**INNOVATION IN DESIGN**		**6 Points**
			Credit 1	Innovation in Operations	1 to 4
				Innovation or Exemplary Performance	1
				Innovation or Exemplary Performance	1
				Innovation or Exemplary Performance	1
				Innovation	1
			Credit 2	LEED® Accredited Professional	1
			Credit 3	Documenting Sustainable Building Cost Impacts	1

Yes	?	No			
0	0	0	**REGIONAL PRIORITY**		**4 Points**
			Credit 1	Regional Priority	1 to 4
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1

Yes	?	No		
0	0	0	**PROJECT TOTALS (Certification Estimates)**	**110 Points**

Certified 40-49 points Silver 50-59 points Gold 60-79 points Platinum 80+ points

LEED for Existing Buildings v2.0
Registered Building Checklist

Project Name:
Project Address:

Yes	?	No			
			Sustainable Sites		**14 Points**
Y			Prereq 1	**Erosion & Sedimentation Control**	Required
Y			Prereq 2	**Age of Building**	Required
			Credit 1.1	**Plan for Green Site & Building Exterior Management** 4 specific actions	1
			Credit 1.2	**Plan for Green Site & Building Exterior Management** 8 specific actions	1
			Credit 2	**High Development Density Building & Area**	1
			Credit 3.1	**Alternative Transportation** -Public Transportation Access	1
			Credit 3.2	**Alternative Transportation** -Bicycle Storage & Changing Rooms	1
			Credit 3.3	**Alternative Transportation** Alternative Fuel Vehicle:	1
			Credit 3.4	**Alternative Transportation** -Car Pooling & Telecommuting	1
			Credit 4.1	**Reduced Site Disturbance** -Protect or Restore Open Space (50% of site area)	1
			Credit 4.2	**Reduced Site Disturbance** -Protect or Restore Open Space (75% of site area)	1
			Credit 5.1	**Stormwater Management** - 25% Rate and Quantity Reduction	1
			Credit 5.2	**Stormwater Management** - 50% Rate and Quantity Reduction	1
			Credit 6.1	**Heat Island Reduction** -Non-Roof	1
			Credit 6.2	**Heat Island Reduction** -Roof	1
			Credit 7	**Light Pollution Reduction**	1

Yes	?	No			
			Water Efficiency		**5 Points**
Y			Prereq 1	**Minimum Water Efficiency**	Required
Y			Prereq 2	**Discharge Water Compliance**	Required
			Credit 1.1	**Water Efficient Landscaping** -Reduce Potable Water Use by 50%	1
			Credit 1.2	**Water Efficient Landscaping**- Reduce Potable Water Use by 95%	1
			Credit 2	**Innovative Wastewater Technologies**	1
			Credit 3.1	**Water Use Reduction** - 10% Reduction	1
			Credit 3.2	**Water Use Reduction** - 20% Reduction	1

Yes	?	No			
			Energy & Atmosphere		**23 Points**
Y			Prereq 1	**Existing Building Commissioning**	Required
Y			Prereq 2	**Minimum Energy Performance** - Energy Star 60	Required
Y			Prereq 3	**Ozone Protection**	Required
			*Note for EAc1: All LEED for Existing Buildings projects registered after June 26th, 2007 are required to achieve at least two (2) points under EAc1.		
			Credit 1	**Optimize Energy Performance**	1 to 10
				Energy Star Rating - 63	1
				Energy Star Rating - 67	2
				Energy Star Rating - 71	3
				Energy Star Rating - 75	4
				Energy Star Rating - 79	5
				Energy Star Rating - 83	6
				Energy Star Rating - 87	7
				Energy Star Rating - 91	8
				Energy Star Rating - 95	9
				Energy Star Rating - 99	10
			Credit 2.1	**Renewable Energy** - On-site 3% / Off-site 15%	1
			Credit 2.2	**Renewable Energy** - On-site 6% / Off-site 30%	1
			Credit 2.3	**Renewable Energy** - On-site 9% / Off-site 45%	1
			Credit 2.4	**Renewable Energy** - On-site 12% / Off-site 60%	1
			Credit 3.1	**Building Operation & Maintenance** -Staff Education	1
			Credit 3.2	**Building Operation & Maintenance** -Building Systems Maintenance	1
			Credit 3.3	**Building Operation & Maintenance** -Building Systems Monitoring	1

			Credit 4	**Additional Ozone Protectior**	1
			Credit 5.1	**Performance Measurement -**Enhanced Metering (4 specific actions)	1
			Credit 5.2	**Performance Measurement -**Enhanced Metering (8 specific actions)	1
			Credit 5.3	**Performance Measurement -**Enhanced Metering (12 specific actions)	1
			Credit 5.4	**Performance Measurement**- Emission Reduction Reporting	1
			Credit 6	**Documenting Sustainable Building Cost Impacts**	1

Yes	?	No	Materials & Resources	16 Points
Y			Prereq 1.1 **Source Reduction & Waste Managemen** - Waste Stream Audit	Required
Y			Prereq 1.2 **Source Reduction & Waste Management** Storage & Collection	Required
Y			Prereq 2 **Toxic Material Source Reduction** Reduced Mercury in Light Bulbs	Required
			Credit 1.1 **Construction, Demolition & Renovation Waste Management** Divert 50%	1
			Credit 1.2 **Construction, Demolition & Renovation Waste Management** Divert 75%	1
			Credit 2.1 **Optimize Use of Alternative Materials**- 10% of Total Purchases	1
			Credit 2.2 **Optimize Use of Alternative Materials**- 20% of Total Purchases	1
			Credit 2.3 **Optimize Use of Alternative Materials**- 30% of Total Purchases	1
			Credit 2.4 **Optimize Use of Alternative Materials**- 40% of Total Purchases	1
			Credit 2.5 **Optimize Use of Alternative Materials**- 50% of Total Purchases	1
			Credit 3.1 **Optimize Use of IAQ Compliant Product**- 45% of Annual Purchases	1
			Credit 3.2 **Optimize Use of IAQ Compliant Product**- 90% of Annual Purchases	1
			Credit 4.1 **Sustainable Cleaning Products & Materials**- 30% of Annual Purchases	1
			Credit 4.2 **Sustainable Cleaning Products & Materials**- 60% of Annual Purchases	1
			Credit 4.3 **Sustainable Cleaning Products & Materials**- 90% of Annual Purchases	1
			Credit 5.1 **Occupant Recycling**- Recycle 30% of the Total Waste Stream	1
			Credit 5.2 **Occupant Recycling**- Recycle 40% of the Total Waste Stream	1
			Credit 5.3 **Occupant Recycling**- Recycle 50% of the Total Waste Stream	1
			Credit 6 **Additional Toxic Material Source Reduction**- Reduced Mercury in Light Bulbs	1

Yes	?	No	Indoor Environmental Quality	22 Points
Y			Prereq 1 **Outside Air Introduction & Exhaust Systems**	Required
Y			Prereq 2 **Environmental Tobacco Smoke (ETS Control**	Required
Y			Prereq 3 **Asbestos Removal or Encapsulation**	Required
Y			Prereq 4 **PCB Removal**	Required
			Credit 1 **Outside Air Delivery Monitoring**	1
			Credit 2 **Increased Ventilation**	1
			Credit 3 **Construction IAQ Management Plan**	1
			Credit 4.1 **Documenting Productivity Impacts**- Absenteeism & Healthcare Cost Impacts	1
			Credit 4.2 **Documenting Productivity Impacts**- Other Productivity Impacts	1
			Credit 5.1 **Indoor Chemical & Pollutant Source Control**- Reduce Particulates in Air System	1
			Credit 5.2 **Indoor Chemical & Pollutant Source Control**- Isolation of High Volume Copy/Print/Fa	1
			Credit 6.1 **Controllability of Systems** - Lighting	1
			Credit 6.2 **Controllability of Systems** - Temperature & Ventilation	1
			Credit 7.1 **Thermal Comfort** - Compliance	1
			Credit 7.2 **Thermal Comfort** - Permanent Monitoring System	1
			Credit 8.1 **Daylight & Views** - Daylight for 50% of Spaces	1
			Credit 8.2 **Daylight & Views** - Daylight for 75% of Spaces	1
			Credit 8.3 **Daylight & Views** - Views for 45% of Spaces	1
			Credit 8.4 **Daylight & Views** - Views for 90% of Spaces	1
			Credit 9 **Contemporary IAQ Practice**	1
			Credit 10.1 **Green Cleaning**- Entryway Systems	1
			Credit 10.2 **Green Cleaning**- Isolation of Janitorial Closets	1
			Credit 10.3 **Green Cleaning**- Low Environmental Impact Cleaning Policy	1
			Credit 10.4 **Green Cleaning**- Low Environmental Impact Pest Management Policy	1
			Credit 10.5 **Green Cleaning**- Low Environmental Impact Pest Management Policy	1
			Credit 10.6 **Green Cleaning**- Low Environmental Impact Cleaning Equipment Policy	1

Yes	?	No	Innovation & Design Process	5 Points
			Credit 1.1 **Innovation in Upgrades, Operation & Maintenance**	1
			Credit 1.2 **Innovation in Upgrades, Operation & Maintenance**	1
			Credit 1.3 **Innovation in Upgrades, Operation & Maintenance**	1
			Credit 1.4 **Innovation in Upgrades, Operation & Maintenance**	1
			Credit 2 **LEED™ Accredited Professional**	1

Yes	?	No	Project Totals (pre-certification estimates)	85 Points

Certified: 32-39 points, **Silver:** 40-7 points, **Gold:** 48-63 points, **Platinum:** 64-85

LEED 2009 for Core and Shell Development
Project Scorecard

Project Name:
Project Address:

Yes	?	No			
			SUSTAINABLE SITES		**28 Points**
Y			Prereq 1	Construction Activity Pollution Prevention	Required
			Credit 1	Site Selection	1
			Credit 2	Development Density and Community Connectivity	5
			Credit 3	Brownfield Redevelopment	1
			Credit 4.1	Alternative Transportation - Public Transportation Access	6
			Credit 4.2	Alternative Transportation - Bicycle Storage and Changing Rooms	2
			Credit 4.3	Alternative Transportation - Low-Emitting and Fuel-Efficient Vehicles	3
			Credit 4.4	Alternative Transportation - Parking Capacity	2
			Credit 5.1	Site Development - Protect or Restore Habitat	1
			Credit 5.2	Site Development - Maximize Open Space	1
			Credit 6.1	Stormwater Design - Quantity Control	1
			Credit 6.2	Stormwater Design - Quality Control	1
			Credit 7.1	Heat Island Effect - Nonroof	1
			Credit 7.2	Heat Island Effect - Roof	1
			Credit 8	Light Pollution Reduction	1
			Credit 9	Tenant Design and Construction Guidelines	1

Yes	?	No			
			WATER EFFICIENCY		**10 Points**
Y			Prereq 1	Water Use Reduction	Required
			Credit 1	Water Efficient Landscaping	2 to 4
				Reduce by 50%	2
				No Potable Water Use or Irrigation	4
			Credit 2	Innovative Wastewater Technologies	2
			Credit 3	Water Use Reduction	2 to 4
				Reduce by 30%	2
				Reduce by 35%	3
				Reduce by 40%	4

Yes	?	No			
			ENERGY & ATMOSPHERE		**37 Points**
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	Required
Y			Prereq 2	Minimum Energy Performance	Required
Y			Prereq 3	Fundamental Refrigerant Management	Required
			Credit 1	Optimize Energy Performance	3 to 21
				Improve by 12% for New Buildings or 8% for Existing Building Renovations	3
				Improve by 14% for New Buildings or 10% for Existing Building Renovations	4
				Improve by 16% for New Buildings or 12% for Existing Building Renovations	5
				Improve by 18% for New Buildings or 14% for Existing Building Renovations	6
				Improve by 20% for New Buildings or 16% for Existing Building Renovations	7
				Improve by 22% for New Buildings or 18% for Existing Building Renovations	8
				Improve by 24% for New Buildings or 20% for Existing Building Renovations	9
				Improve by 26% for New Buildings or 22% for Existing Building Renovations	10
				Improve by 28% for New Buildings or 24% for Existing Building Renovations	11
				Improve by 30% for New Buildings or 26% for Existing Building Renovations	12
				Improve by 32% for New Buildings or 28% for Existing Building Renovations	13
				Improve by 34% for New Buildings or 30% for Existing Building Renovations	14
				Improve by 36% for New Buildings or 32% for Existing Building Renovations	15
				Improve by 38% for New Buildings or 34% for Existing Building Renovations	16
				Improve by 40% for New Buildings or 36% for Existing Building Renovations	17
				Improve by 42% for New Buildings or 38% for Existing Building Renovations	18
				Improve by 44% for New Buildings or 40% for Existing Building Renovations	19
				Improve by 46% for New Buildings or 42% for Existing Building Renovations	20
				Improve by 48%+ for New Buildings or 44%+ for Existing Building Renovations	21
			Credit 2	On-Site Renewable Energy	4
			Credit 3	Enhanced Commissioning	2
			Credit 4	Enhanced Refrigerant Management	2
			Credit 5.1	Measurement and Verification - Base Building	3
			Credit 5.2	Measurement and Verification - Tenant Submetering	3
			Credit 6	Green Power	2

LEED 2009 for Core and Shell Development
Project Scorecard

Project Name:
Project Address:

Yes	?	No			
			MATERIALS & RESOURCES		**13 Points**
Y			Prereq 1	Storage and Collection of Recyclables	Required
			Credit 1	Building Reuse - Maintain Existing Walls, Floors & Roof	1 to 5
				Reuse 25%	1
				Reuse 33%	2
				Reuse 42%	3
				Reuse 50%	4
				Reuse 75%	5
			Credit 2	Construction Waste Management	1 to 2
				50% Recycled or Salvaged	1
				75% Recycled or Salvaged	2
			Credit 3	Materials Reuse	1
			Credit 4	Recycled Content	1 to 2
				10% of Content	1
				20% of Content	2
			Credit 5	Regional Materials	1 to 2
				10% of Materials	1
				20% of Materials	2
			Credit 6	Certified Wood	1

Yes	?	No			
			INDOOR ENVIRONMENTAL QUALITY		**12 Points**
Y			Prereq 1	Minimum Indoor Air Quality Performance	Required
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
			Credit 1	Outdoor Air Delivery Monitoring	1
			Credit 2	Increased Ventilation	1
			Credit 3	Construction Indoor Air Quality Management Plan - During Construction	1
			Credit 4.1	Low-Emitting Materials - Adhesives and Sealants	1
			Credit 4.2	Low-Emitting Materials - Paints and Coatings	1
			Credit 4.3	Low-Emitting Materials - Flooring Systems	1
			Credit 4.4	Low-Emitting Materials - Composite Wood and Agrifiber Products	1
			Credit 5	Indoor Chemical and Pollutant Source Control	1
			Credit 6	Controllability of Systems - Thermal Comfort	1
			Credit 7	Thermal Comfort - Design	1
			Credit 8.1	Daylight & Views - Daylight	1
			Credit 8.2	Daylight & Views - Views	1

Yes	?	No			
			INNOVATION IN DESIGN		**6 Points**
			Credit 1	Innovation in Design	1 to 5
				Innovation or Exemplary Performance	1
				Innovation or Exemplary Performance	1
				Innovation or Exemplary Performance	1
				Innovation	1
				Innovation	1
			Credit 2	LEED® Accredited Professional	1

Yes	?	No			
			REGIONAL PRIORITY		**4 Points**
			Credit 1	Regional Priority	1 to 4
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1

Yes	?	No		
			PROJECT TOTALS (Certification Estimates)	**110 Points**

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points

LEED for Core and Shell v2.0
Registered Project Checklist

Project Name: _____

Project Address: _____

Yes	?	No		
0	0		**Project Totals** (Pre-Certification Estimates)	69 Points
			Certified: 23-27 points **Silver**: 28-33 points **Gold**: 34-44 points **Platinum**: 45-61 points	

Yes	?	No		
			Sustainable Sites	15 Points
Yes				
			Prereq 1 **Construction Activity Pollution Prevention**	Required
			Credit 1 **Site Selection**	1
			Credit 2 **Development Density & Community Connectivity**	1
			Credit 3 **Brownfield Redevelopment**	1
			Credit 4.1 **Alternative Transportation**, Public Transportation	1
			Credit 4.2 **Alternative Transportation**, Bicycle Storage & Changing Rooms	1
			Credit 4.3 **Alternative Transportation**, Low-Emitting & Fuel Efficient Vehicles	1
			Credit 4.4 **Alternative Transportation**, Parking Capacity	1
			Credit 5.1 **Site Development**, Protect or Restore Habitat	1
			Credit 5.2 **Site Development**, Maximize Open Space	1
			Credit 6.1 **Stormwater Design**, Quantity Control	1
			Credit 6.2 **Stormwater Design**, Quality Control	1
			Credit 7.1 **Heat Island Effect**, Non-Roof	1
			Credit 7.2 **Heat Island Effect**, Roof	1
			Credit 8 **Light Pollution Reduction**	1
			Credit 9 **Tenant Design & Construction Guidelines**	1

Yes	?	No		
			Water Efficiency	5 Points
			Credit 1.1 **Water Efficient Landscaping**, Reduce by 50%	1
			Credit 1.2 **Water Efficient Landscaping**, No Potable Use or No Irrigation	1
			Credit 2 **Innovative Wastewater Technologies**	1
			Credit 3.1 **Water Use Reduction**, 20% Reduction	1
			Credit 3.2 **Water Use Reduction**, 30% Reduction	1

LEED for Core and Shell v2.0
Registered Project Checklist

Yes	?	No	Energy & Atmosphere	14 Points
Yes			Prereq 1 **Fundamental Commissioning of the Building Energy Systems**	Required
Yes			Prereq 2 **Minimum Energy Performance**	Required
Yes			Prereq 3 **Fundamental Refrigerant Management**	Required

***Note for EAc1:** All LEED for Core and Shell projects registered after June 26, 2007 are required to achieve at least two (2) points.

			Credit 1 **Optimize Energy Performance**	1 to 8
			✚ Credit 1.1 10.5% New Buildings / 3.5% Existing Building Renovations	1
			✚ Credit 1.2 14% New Buildings / 7% Existing Building Renovations	2
			✚ Credit 1.3 17.5% New Buildings / 10.5% Existing Building Renovations	3
			✚ Credit 1.4 21% New Buildings / 14% Existing Building Renovations	4
			✚ Credit 1.5 24.5% New Buildings / 17.5% Existing Building Renovations	5
			✚ Credit 1.6 28% New Buildings / 21% Existing Building Renovations	6
			✚ Credit 1.7 31.5% New Buildings / 24.5% Existing Building Renovations	7
			✚ Credit 1.8 35% New Buildings / 28% Existing Building Renovations	8
			Credit 2 **On-Site Renewable Energy**	1
			Credit 3 **Enhanced Commissioning**	1
			Credit 4 **Enhanced Refrigerant Management**	1
			Credit 5.1 **Measurement & Verification** - Base Building	1
			Credit 5.2 **Measurement & Verification** - Tenant Sub-metering	1
			Credit 6 **Green Power**	1

LEED for Core and Shell v2.0
Registered Project Checklist

Yes	?	No			
			Materials & Resources		**11 Points**
Yes			Prereq 1	**Storage & Collection of Recyclables**	Required
			Credit 1.1	**Building Reuse,** Maintain 25% of Existing Walls, Floors & Roof	1
			Credit 1.2	**Building Reuse,** Maintain 50% of Existing Walls, Floors & Roof	1
			Credit 1.3	**Building Reuse,** Maintain 75% of Interior Non-Structural Elements	1
			Credit 2.1	**Construction Waste Management**, Divert 50% from Disposal	1
			Credit 2.2	**Construction Waste Management**, Divert 75% from Disposal	1
			Credit 3	**Materials Reuse**, 1%	1
			Credit 4.1	**Recycled Content**, 10% (post-consumer + 1/2 pre-consumer)	1
			Credit 4.2	**Recycled Content**, 20% (post-consumer + 1/2 pre-consumer)	1
			Credit 5.1	**Regional Materials**, 10% Extracted, Processed & Manufactured	1
			Credit 5.2	**Regional Materials**, 20% Extracted, Processed & Manufactured	1
			Credit 6	**Certified Wood**	1

Yes	?	No			
0	0		**Indoor Environmental Quality**		**11 Points**
Yes			Prereq 1	**Minimum IAQ Performance**	Required
Yes			Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required
			Credit 1	**Outdoor Air Delivery Monitoring**	1
			Credit 2	**Increased Ventilation**	1
			Credit 3	**Construction IAQ Management Plan,** During Construction	1
			Credit 4.1	**Low-Emitting Materials**, Adhesives & Sealants	1
			Credit 4.2	**Low-Emitting Materials**, Paints & Coatings	1
			Credit 4.3	**Low-Emitting Materials**, Carpet Systems	1
			Credit 4.4	**Low-Emitting Materials**, Composite Wood & Agrifiber Products	1
			Credit 5	**Indoor Chemical & Pollutant Source Control**	1
			Credit 6	**Controllability of Systems**, Thermal Comfort	1
			Credit 7	**Thermal Comfort,** Design	1
			Credit 8.1	**Daylight & Views,** Daylight 75% of Spaces	1
			Credit 8.2	**Daylight & Views,** Views for 90% of Spaces	1

***Note for EQc4.1-4.4:** Project teams will receive 1 point for achievement of 2 credits, 2 points for achievement of 3 credits, or 3 points for achievement of 4 credits among EQc4.1, EQc4.2, EQc4.3 and EQc4.4.

LEED for Core and Shell v2.0
Registered Project Checklist

Yes	?	No			
			Innovation & Design Process		**5 Points**
			Credit 1.1	**Innovation in Design:** Provide Specific Title	1
			Credit 1.2	**Innovation in Design:** Provide Specific Title	1
			Credit 1.3	**Innovation in Design:** Provide Specific Title	1
			Credit 1.4	**Innovation in Design:** Provide Specific Title	1
			Credit 2	**LEED® Accredited Professional**	1

LEED 2009 for Commercial Interiors
Project Scorecard

Project Name:
Project Address:

Yes	?	No			
0	0	0	**SUSTAINABLE SITES**		**21 Points**
			Credit 1	Site Selection	1 to
				Option 1: Select a LEED Certified Building	5
				OR Option 2: Locate in a Building That Meets:	Up to 5
				Path 1: Brownfield Redevelopment	1
				Path 2: Stormwater Design - Quantity Control	1
				Path 3: Stormwater Design - Quality Control	1
				Path 4: Heat Island Effect - Nonroof	1
				Path 5: Heat-Island Effect - Roof	1
				Path 6: Light Pollution Reduction	1
				Path 7: Water Efficient Landscaping -Reduce by 50%	2
				Path 8: Water Efficient Landscaping - No Potable Water Use or Irrigation	2
				Path 9: Innovative Wastewater Technologies	2
				Path 10: Water Use Reduction: 30% reduction	1
				Path 11: On-site Renewable Energy	2
				Path 12: Other Quantifiable Environmental Performance	1
			Credit 2	Development Density and Community Connectivity	6
			Credit 3.1	Alternative Transportation - Public Transportation Access	6
			Credit 3.2	Alternative Transportation - Bicycle Storage and Changing Rooms	2
			Credit 3.3	Alternative Transportation - Parking Availability	2

Yes	?	No			
0	0	0	**WATER EFFICIENCY**		**11 Points**
Y			Prereq 1	Water Use Reduction	Required
			Credit 1	Water Use Reduction	6 to 11
				30% Reduction	6
				35% Reduction	8
				40% Reduction	11

0	0	0	**ENERGY & ATMOSPHERE**		**37 Points**
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	Required
Y			Prereq 2	Minimum Energy Performance	Required
Y			Prereq 3	Fundamental Refrigerant Management	Required
			Credit 1.1	Optimize Energy Performance - Lighting Power	1 to
				15% Reduction	1
				20% Reduction	2
				25% Reduction	3
				30% Reduction	4
				35% Reduction	5
			Credit 1.2	Optimize Energy Performance - Lighting Controls	1 to 3
				Daylight Controls for Daylit Areas	1
				Daylight Controls for 50% of the Lighting Load	1
				Occupancy Sensors for 75% of the Connected Lighting Load	1
			Credit 1.3	Optimize Energy Performance - HVAC	to 10
				Equipment Efficiency	5
				Zoning Controls	5
				OR	
				Reduce Design Energy Cost and 15% Improvement	5
				Reduce Design Energy Cost and 30% Improvement	10
			Credit 1.4	Optimize Energy Performance - Equipment and Appliances	1 to 4
				70% ENERGY STAR	1
				77% ENERGY STAR	2
				84% ENERGY STAR	3
				90% ENERGY STAR	4
			Credit 2	Enhanced Commissioning	
			Credit 3	Measurement and Verification	2 to
				Install Sub-Metering Equipment	2
				Tenant Pays for Energy	3
				OR	
				Metering, Measurement and Payment Accountability	5
			Credit 4	Green Power	

Yes	?	No			
0	0	0	**MATERIALS & RESOURCES**		**14 Points**
Y			Prereq 1	Storage and Collection of Recyclables	Required
			Credit 1.1	Tenant Space - Long-Term Commitment	1
			Credit 1.2	Building Reuse - Maintain Interior Nonstructural Components	1 to 2
				40% Reuse	1
				60% Reuse	2
			Credit 2	Construction Waste Management	1 to 2
				Divert 50% from Disposal	1
				Divert 75% from Disposal	2
			Credit 3.1	Materials Reuse	1 to 2
				5% Reuse	1
				10% Reuse	2
			Credit 3.2	Materials Reuse - Furniture and Furnishings	1
			Credit 4	Recycled Content	1 to 2
				10% of Content	1
				20% of Content	2
			Credit 5	Regional Materials	1 to 2
				20% of Materials Manufactured	1
				20% of Materials Manufactured and 10% Extracted	2
			Credit 6	Rapidly Renewable Materials	1
			Credit 7	Certified Wood	1
Yes	?	No			
0	0	0	**INDOOR ENVIRONMENTAL QUALITY**		**17 Points**
Y			Prereq 1	Minimum Indoor Air Quality Performance	Required
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
			Credit 1	Outdoor Air Delivery Monitoring	1
			Credit 2	Increased Ventilation	1
			Credit 3.1	Construction Indoor Air Quality Management Plan - During Construction	1
			Credit 3.2	Construction Indoor Air Quality Management Plan - Before Occupancy	1
			Credit 4.1	Low-Emitting Materials - Adhesives and Sealants	1
			Credit 4.2	Low-Emitting Materials - Paints and Coatings	1
			Credit 4.3	Low-Emitting Materials - Flooring Systems	1
			Credit 4.4	Low-Emitting Materials - Composite Wood and Agrifiber Products	1
			Credit 4.5	Low-Emitting Materials - Systems Furniture and Seating	1
			Credit 5	Indoor Chemical and Pollutant Source Control	1
			Credit 6.1	Controllability of Systems - Lighting	1
			Credit 6.2	Controllability of Systems - Thermal Comfort	1
			Credit 7.1	Thermal Comfort - Design	1
			Credit 7.2	Thermal Comfort - Verification	1
			Credit 8.1	Daylight and Views - Daylight	1 to 2
				75% of Spaces	1
				90% of Spaces	2
			Credit 8.2	Daylight and Views - Views for Seated Spaces	1
Yes	?	No			
0	0	0	**INNOVATION IN DESIGN**		**6 Points**
			Credit 1	Innovation in Design	1 to
				Innovation or Exemplary Performance	1
				Innovation or Exemplary Performance	1
				Innovation or Exemplary Performance	1
				Innovation	1
				Innovation	1
			Credit 2	LEED® Accredited Professional	1
Yes	?	No			
0	0	0	**REGIONAL PRIORITY**		**4 Points**
			Credit 1	Regional Priority	1 to 4
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
				Regionally Defined Credit Achieved	1
Yes	?	No			
0	0	0	**PROJECT TOTALS (Certification Estimates)**		**110 Points**

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points

APPENDIX D

TASKS LIST

Verify Contract Signed	Verify Contract Entered in Filemaker
Verify Contract Entered in PM Database	Verify Contract Budgeted Tasks Time
Verify Systems Manual Complete for Commissioned Systems	Verify LEED® Online Access to Credits
Verify Systems Manual Initiate at Project Start Up	Verify Managers View Construction Schedule
Review Client Edits - BOD	Review Client Edits - OPR
Review LEED® Technical - Design Docs	Review LEED® Technical - Construction Docs
Review LEED® Templates - Design Phase	Review LEED® Templates - Construction Phase
Review Technical - Design Docs	Review Technical - Construction Docs
Review Approved Submittals	Request New Project Documents
Request Construction Schedule	Request Contact Info for Entire Project Team
Request O&M Data for All Equipment	Request Warranties for All Equipment
Reports Inspection	Reports Commissioning Issues
Schedule Scoping Meeting	Schedule IAQ Test
Schedule Key Dates	Schedule 10 Month Building Review
Schedule Verify of GC Training	Schedule Tab Report
Observation & Verification Equipment - Initial Checkout	Observation & Verification Equipment - Start-Up
Observation & Verification Equipment - Test & Balance	Observation & Verification HVAC Test & Balance
Develop BOD Document	Develop Commissioning Checklist
Develop Commissioning Field Book	Develop Commissioning Plan - Const Phase
Develop Commissioning Report	Develop Commissioning Specs
Develop Design Intent - MEP Systems	Develop Energy Model (EQc1)
Develop Equipment Status Log	Develop Green Housekeeping Plan
Develop IAQ Plan	Develop LEED® Charrette
Develop Measurement & Verification Plans	Develop OPR Document
Develop Scoping Meeting Handouts	Develop Sequence of Operation
Develop Thermal Comfort Survey & Plan (EQc7.2)	Develop Training Plan
Develop Executive Summary	LEED® Online Enter Key Data

APPENDIX E

LIST OF CREDIT STANDARDS

- Advanced Buildings Benchmark Version 1.1
- ASHRAE 52.2-1999: Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size
- ASHRAE 55-2004: Thermal Comfort Conditions for Human Occupancy2
- ASHRAE 62.1-2004: Ventilation for Acceptable Indoor Air Quality
- ASHRAE 90.1-2004: Energy Standard for Buildings Except Low-Rise Residential
- ASHRAE 90.1-2004: Energy Standard for Buildings Except Low-Rise Residential – Lighting, Section 9 (without amendments)
- ASHRAE 90.1-2004: Energy Standard for Buildings Except Low-Rise Residential, and Informative Appendix G—Performance Rating Method
- ASHRAE Advanced Energy Design Guide for Small Office Buildings 2004
- ASTM C1371-04: Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers
- ASTM C1549-04: Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer
- ASTM E1903-97 Phase II Environmental Site Assessment
- ASTM E1918-97: Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field
- ASTM E408-71(1996) e1: Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques
- ASTM E779-03: Standard Test Method for Determining Air Leakage Rate By Fan Pressurization1
- ASTM E903-96: Standard Test Method for Solar Absorbance, Reflectance, and Transmittance of Materials Using Integrating Spheres
- ASTM Standard E1980-01—Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces
- Carpet and Rug Institute Green Label Plus Testing Program
- Center for Resource Solutions' Green-e Product Certification Requirements
- CIBSE Applications Manual 10: 2005, Natural ventilation in non-domestic buildings
- Definition of Wetlands in the U.S. Code of Federal Regulations (40 CFR, Parts 230-233, 22)
- Endangered Species Lists (U.S. Fish & Wildlife Service Threatened & Endangered Species; National Marine Fisheries Endangered Marine Species)
- Energy Policy Act (EPAct) of 1992
- EPA Brownfields Definition (EPA Sustainable Redevelopment of Brownfields Program)
- Federal Emergency Management Agency (FEMA) 100-Year Flood Definition
- Forest Stewardship Council's Principles and Criteria
- Green Seal Standard GC-03 (anti-corrosive and anti-rust paints)
- Green Seal Standard GS-11 (commercial flat and non-flat paints)
- Green Seal Standard GS-36 (commercial adhesives), Effective October 19, 2000ë
- Guidance Specifying Management Measures for Sources of Non-Point Pollution in Coastal Waters, January 1993 (U.S.EPA 840B92002)
- IAQ Guidelines for Occupied Buildings Under Construction, SMACNA
- International Performance Measurement & Verification Protocol (IPMVP) Volume III: Concepts and Options for Determining Energy Savings in New Construction, April 2003
- Residential Manual for Compliance with California's 2001 Energy Efficiency Standards (For Low Rise Residential Buildings), Chapter 4
- South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings
- South Coast Rule #1168 October 3, 2003 Amendment by the South Coast Air Quality Management District
- Storm Water Management for Construction Activities, Chap. 3 (U.S.EPA 832R92005)
- U.S. Department of Agriculture Definition of Prime Agricultural Land (U.S. Code of Federal Regulations 7CFR657.5)
- US EPA "Compendium of Methods for the Determination of Air Pollutants in Indoor Air"

APPENDIX F

EXTERNAL RESOURCES

External Resources
Architect - Project Manager
Contractor - Controls
Contractor - Electrical
Contractor - Fire Protection
Contractor - Mechanical
Contractor - Plumbing
Contractor - Security
CxA - Process Manager
CxA (Commissioning Authority)
Engineer - Electrical
Engineer - Mechanical
Engineer - Plumbing
GC - Project Engineer
GC - Site Superintendent
GC - Superintendent
Owner - Project Manager
Owner - Property Manager

APPENDIX G

INTERNAL RESOURCES

JobName
Commissioning Authority
Commissioning Tech
Energy Engineer
Field Technician
LEED® Process Manager
P.E.
Project Coordinator
Project Engineer
Project Engineer - Senior
Project Manager

APPENDIX H

EXISTING LEED® PROCESS SPREADSHEETS

COMPLETED DESIGN PHASE DOCUMENTS

						Key Dates											Construction Phase													
Seq	Project	Client	LEED Rating System	Proj #	Project Coordinator	Construction Start	Install Duct Date	Client Turnover Date	OPR/ BOD	Com&IAQ Specs	Comm Plan	Des.Rev DD	Optional Energy Model	Des. Rev. CD	Optional Thermal Comfort or Green House	LEED Online Des Crdt	Com Mtgs	Submittal Rev	Inspections	Recom. Manual	Systems Manual	Training Plan	Com. Report	10 Mo. Review	Optional M&V Plan	Optional IAQ Test	Optional Smoke Door Test	Optional Total Building Commissioning	LEED Online Con Crdt	Status or Next Steps
23	1900 McKinney Apartments - LEED		NC2.1	B56003			2008	2008	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.		Comp.	Comp.	N/A	N/A	DONE!	
78	ADESA Project LEED Auto Auction	GCO Architects	NC2.2	B58018	Jim		02/02/09	08/15/09	09/18/08	09/18/08	12/01/08	12/01/08	Uploaded	N/A	TC & CH	DONE!	Comp.	Comp.	Comp.								N/A	N/A		07/30/09: Functional on Gas Heaters
5	Arcadia Lib - LEED	VAI Architects	NC2.1	23043			Submitted 2006	Submitted 2006	Comp.	Comp.	Comp.	Comp.	N/A	Comp.			Comp.	Comp.	Comp.	NA	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A		
113	Arlington Airport Terminal LEED	PGAL	NC2.2	B59013	Gab	09/21/09		12/10/10	4/1/2009 by client	07/14/09			N/A	-	CH		No Construction Phase Contract as of 09/05/09									N/A	N/A	N/A		
71	Blue Cross/Blue Shield LEED Office Building		NC2.2	B58019	Jim		02/01/09	12/09/09	Comp.	Comp.	11/20/09	N/A	N/A	1/8/09	N/A	DONE!	Comp.	Comp.	Comp.						N/A		N/A	N/A		
90	Boone Residence LEED	Boone	CI 2.0	B58038			01/01/09	08/01/09	09/29/08	10/10/08	10/14/08		N/A		TC		N/A			N/A					N/A		N/A	N/A		
124	Carpenter Park Recreation Center	F&S	N/A	B59029																										
88	Cassity Math and Science	Building Solutions	NC2.2	B58036	Ten	06/01/09			04/23/09	Comp.	04/29/09	05/26/09	N/A	05/26/09	N/A	DONE!									N/A		N/A	N/A		
125	Caterpillar-Seguin, TX - Assembly		NC2.2	B59022	Gab	04/06/09	10/05/09	03/29/10		07/29/09			Started		TC										Yes	Yes	N/A	N/A		
56	Christ United Methodist LEED - Plano Church		NC2.2	B58004	Jim		06/09/09		Comp.	Comp.	Comp.	07/02/09	N/A	07/02/09	TC & CH	DONE!											N/A	N/A		
87	Cigna Point LEED	Corgan Assoc	NC2.2	B58047	Gab			09/05/09	12/18/08	11/25/08	01/26/09	N/A	N/A	01/13/09	Done: TC	DONE!	01/30/09	Comp.							N/A		N/A	N/A		
120	Comerica - Camp Bowie FTW		NC	B59018	Gab								N/A		N/A										N/A	N/A	N/A	N/A		
127	Comerica - Forest Ln & Webb	CBRE	NC2.2	FB59028	Gab					07/27/09																				
114	Comerica Branch Bank Austin LEE	CBRE	NC 2.2	B59010	Gab	04/13/09	7/15/2009	10/1/2009	Wants us to adjust Ft Worth version	4/9 reuse Larry's set	03/06/09	03/09/09	N/A	03/09/09	TC & CH										N/A		N/A	N/A		
100	Comerica Branch Bank Richardson LEED	CBRE	NC 2.2	B58050	Gab				02/11/09		03/09/09	03/09/09	N/A	03/09/09	N/A										N/A	N/A	N/A	N/A		
36	Coppell Senior Center - LEED NC 2.2 City of Coppell / City Senior and Community Center	ProForma Architects	NC2.2	B57011	Jim		May-09		Comp.	Comp.	5/27/2007 & 2/25/09	N/A	Peter Working	02/23/09	CH		Comp.	Comp.									N/A	N/A		
130	Dashland Condos - Miami, TX	Fairfield Development	N/A	FC59025	Muslim	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
104	Dallas Executive Airport - LEED	City of Dallas	Special Project	B59004	Ten						05/05/09				N/A					N/A					N/A	N/A	N/A	N/A		
27	Dallas Fire Station #35 - Dallas Fire Station	Michael Johnson Architects	NC2.2	B57002			2008	2008	Comp.	Comp.	Comp.	Comp.	Upload parcel	Comp.	Cm H?	DONE!	Comp.	Comp.	Comp.						?	N/A	N/A	N/A	DONE!	
26	Dallas Fire Station #42 - LEED Dallas Fire Station	Bernbaum Magadini	NC2.2	B56009	Ten		2008	2008	Comp.	Comp.	Comp.		N/A				Comp.	Comp.	Comp.						N/A	Comp.	N/A	N/A		
24	Dallas Homeless Center -LEED -	Camargo Copeland	NC2.2	B56006			2008	2008	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.						N/A	N/A	N/A	N/A		
12	Dallas Water -LEED	VAI Architects	NC2.1	24064			2006	2006	Comp.	Comp.	Comp.	Comp.	N/A	Comp.			Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A	N/A		
126	Dean A. McGee Eye Institute LEED	Building Solutions	NC	B59023	Ten	04/02/07	07/14/09	06/14/10	07/14/09			07/14/09	Started		N/A		08/10/09								N/A		N/A	N/A		
73	Dobson Floors LEED Retail Store		NC2.2	B58021	Gab		03/23/09	05/15/09	Comp.	Comp.	03/06/09	N/A	N/A	03/06/09	CH	DONE!	03/11/09	Comp.	Comp.	07/22/09	07/22/09	Comp.	Comp.		N/A	N/A	N/A	N/A		
13	DPD CM-Comms	CCA	N/A	24084			2006	2006	N/A	N/A		N/A	N/A	Comp.			Comp.	Comp.	Comp.	N/A	N/A	N/A	Comp.	N/A	N/A	N/A	N/A	N/A		
58	Eastfield College Classrooms	Rogers' O'brien	N/A	B57026					N/A	N/A	10/29/08		N/A				N/A	Comp.	Comp.			N/A		N/A	N/A	N/A	N/A	N/A		
79	Eldridge III Office LEED Office Bldg		NC2.2	B58026	Jim				N/A	N/A	02/09/09	01/07/09	N/A	N/A	N/A	DONE!									N/A	N/A	N/A	N/A		
101	Fairfield - Arlington LEED	Chase Hospitality	NC 2.2	B59001	Gab							06/04/09	N/A	06/04/09											N/A		N/A	N/A		
77	Family Housing Community Center LEED Community Center		NC2.2	B58024	Jim				10/17/08	10/17/08	02/25/09	N/A	N/A	03/02/09	TC										N/A		N/A	N/A		
44	Fort Worth/NPD6 Police Station-LEED - Municipal Police Station	Perkins & Will	NC2.2	B57017	Jim	February-09			Comp.	Comp.	Comp.	05/26/09	10/16/08	07/21/09	N/A	DONE!											N/A	N/A		
105	Frank Kent Honda - FW LEED Comm	Stephenson Arch	NC2.2	B59020	Ten					07/31/09			N/A		CH		Comp.	Comp.									N/A	N/A		
8	Frisco Police LEED	CGO Architects	NC2.1	23155			2007	2007	Comp.	Comp.	Comp.	Comp.	N/A	Comp.			Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A	N/A		
4	Frisco Serv Ctr - LEED	CGO Architects	NC2.1	23024			Submitted 2005	Submitted 2005	Comp.	Comp.	Comp.	Comp.	N/A	Comp.			Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A		
7	FriscoCityHall-LEED	CGO Architects	NC2.1	23154			2007	2007	Comp.	Comp.	Comp.	Comp.	N/A	Comp.			Comp.	Comp.	Comp.			Comp.			N/A		N/A	N/A		
129	Gencore, LLC Phase I Building	Gencore, LLC	NC	FB59024	Ten	10/29/09				07/14/09			N/A		N/A										N/A	N/A	N/A	N/A		07/14/09: Basic Commissioning Only
131	General Datatech Facility	General Datatech, LP	NC3.0	FB59026	Gab					07/27/09																				
52	Good Shepherd Library	Good Shepherd	NC2.2	B57020	Ten		03/30/09	06/15/09	OPH Comp	Comp.	11/13/08	1/12/09	12/08/08 White Check	N/A	TC done 9.26 & CH ?	DONE!	10/29/08	Comp.	Comp.						N/A	06/22/09	N/A	N/A		
86	GPL Service Center LEED	City of Garland	NC2.2	B58031	Jim	12/29/08	04/01/09	01/11/10	10/17/08	10/17/08	06/30/09	07/06/09	Started	07/06/09	Done:CH & TC	DONE!											N/A	N/A		
74	Greenhill School LEED EB O&M Private School		EB O&M	B58022	Ten	07/27/09																					N/A	N/A		
58	Haynes & Boone Office Lease	Gensler	CI2.0	B58035					11/11/08	11/11/08	11/5/08	N/A	N/A	N/A	Thermal Comfort 11.10	DONE!	Comp.	11/06/08	Comp.						N/A		N/A	N/A	DONE!	
92	Hilton Garden Hotel, KS		Energy Model	B58040			Hold	Hold	N/A	N/A	N/A	N/A	Yes	N/A	N/A	DONE!	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
83	I-20 Bldg 2 Beckleymeade LEED	Trammell Crow	NC2.2	B58008					Comp.	Comp.	Comp.	Comp.		Comp.	N/A										12/24/08		N/A	N/A		

COMPLETED DESIGN PHASE DOCUMENTS

						Key Dates											Construction Phase												
Seq	Project	Client	LEED Rating System	Proj #	Project Coordinator	Construction Start	Install Duct Date	Client Turnover Date	OPR/ BOD	Com&IAQ Specs	Comm Plan	Des.Rev DD	Optional Energy Model	Des. Rev. CD	Optional Thermal Comfort or Green House	LEED Online Des Crdt	Com Mtgs	Submittal Rev	Inspections	Recom. Manual	Systems Manual	Training Plan	Com. Report	10 Mo. Review	Optional M&V Plan	Optional IAQ Test	Optional Smoke Door Test	Optional Total Building Commissioning	LEED Online Con Crdt	Status or Next Steps
63	I-20 Lakeshouses LLEO	Trammell Crow / CBRE	NC2.2	058008					Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	DONE!	Comp.	Comp.	Comp.						N/A	N/A	N/A	N/A		
115	ILSI RECYCLING FACILITY Mckinney LEED	Mycon	NC 2.2	058011	Jim	12/17/08	06/01/09	07/31/09	06/24/09	No IAQ Spec	06/22/09	N/A	N/A	N/A	N/A		N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A	N/A		
116	Irving Conversion Center		NC 2.2	058014	Teri								N/A		N/A										N/A	N/A	N/A	N/A		
98	Lochwood Library LLEO	MEP Consulting Engineers	NC 2.2	058048	Jim				06/24/09	Comp.	02/24/09	N/A	N/A		N/A	DONE!	03/13/09	Comp.							N/A	N/A	N/A	N/A		
14	Marlin Comms	Haliff Associates	N/A	24103			2005	2005	N/A	N/A	Comp.	N/A	N/A	N/A			N/A	N/A	Comp.	N/A	N/A	N/A	Comp.	N/A	N/A	N/A	N/A	N/A		
97	Marriott Denton LEED	Chase Hospitality	NC 2.2	058043 & A	Teri				12/10/08	No spec book on job - addendum	02/12/09	N/A	N/A	02/13/09	Done: TC & CH	DONE!									N/A		N/A	N/A		
41	MCC Classroom-LLEO - Com Col Classroom Bldg	CGO Architects	NC 2.2	057015	Jim			April-09	Comp.	Comp.	10/06/08	02/06/09	N/A	N/A	CH	DONE!	Comp.	Comp.	Comp.						N/A	Comp.	N/A	N/A		
42	MCC Science-LLEO - Com Col Classroom Bldg	CGO Architects	NC2.2	057030	Cab		MEP Start Up Week of Nov 24th 08, Final Commission Jun 09	MEP Start Up Week of Nov 24th 08, Final Commission Jun 09	Comp.	Comp.	10/27/08	Comp.	N/A	Comp.	CH	DONE!	10/28/08	Comp.							N/A	Comp.	N/A	N/A		
82	MCCEmergency Services TrgCtr		NC2.2	058009	Teri		April-09	August-09	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	CH		Comp.									N/A	N/A	N/A		
118	MISD Midway ISD Admin in Building		NC2.2	059017	Teri				07/02/09				HOLD		HOLD										N/A	HOLD	N/A	N/A		
106	Metal 6 near Texas Speedway			059008	Peter				04/28/09	03/20/09	03/01/09		07/21/09		CH & TC													N/A		
123	PepsiCo - Legacy Ct		CI 2.0	059021	Peter	04/20/09	05/18/09	09/18/09					N/A		N/A										N/A	Yes	N/A	N/A		
31	Plano Environmental Center LLEO - City Educational Building	CGO Architects	NC2.2	056013				Ten Lynn req on 2/5/09 from Gary @ Otp	Comp.	Comp.	Comp.	Comp.	N/A	N/A	CH												N/A	N/A		
55	Pleasant Grove Library LEED Dallas Library	Hidell & Associates	NC2.2	058003	Jim	September-09			Comp.	Comp.	Comp.	06/15/09	N/A	06/15/09													N/A	N/A		
84	Proyecto Legania LEED	PGAL	CS3.2.0	058034	Cab					Comp.	03/23/09	04/15/09	05/05/09	04/15/09														N/A		
	Saxon Mortgage			C		NA	NA	NA	NA	NA	NA	NA		NA	NA															
89	SeconMedical MOB LLEO	GSR - Andrade	CS 2.0	058037	Cab	Spring 09		Sept/Oct 09	11/25/08	11/25/08	02/02/09	N/A	07/17/09	01/28/09	N/A	DONE!	11/04/08									N/A	N/A	N/A	N/A		
109	Spears Engineering Bldg INSPEC LLEO			C79003		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	07/30/09	N/A	N/A	
107	Springhill Suites Chase LLEO		NC 2.2	059005	Jim					03/31/09	07/29/09	05/18/09	N/A	05/18/09	CH												N/A	N/A		
81	St Alcuin School LLEO School addition		Sch 2.1	058028	Teri		04/20/09	08/15/09	Comp.	Comp.	02/25/09	12/02/08	N/A	N/A	TC 12 8.08	DONE!	02/18/09	Comp.							N/A		N/A	N/A		
94	SWA General Use Bldg LLEO Admin	Camargo Copeland	NC 2.2	058044 &A	Jim	10/15/08	06/10/09	08/03/09	10/16/08	10/16/08	01/19/09	01/08/09	N/A	N/A	Done TC	DONE!	04/02/09	01/08/09							N/A		N/A	N/A		
133	TAMU	Perkins & Will			Peter																									
61	Thomson Tax and Accounting LLEO	Cersier	NC2.2	058007		06/16/08	07/16/08	11/28/08	Comp.	Comp.	Comp.	Comp	Comp.	N/A	TC & CH	DONE!	Comp.									N/A	N/A	N/A	N/A		
128	Tyler Museum of Art		NC2.2	058049	Teri	08/01/10		05/01/12	Comm Agent creates	Comm Agent creates	Comm Agent creates	Comm Agent creates	Yes	Comm Agent creates			Comm Agent Creates	Comm Agent Creates	Comm Agent Creates	Comm Agent Creates	Comm Agent Creates	Comm Agent Creates	Comm Agent Creates	Comm Agent Creates	Comm Agent Creates	Comm Agent Creates	?	N/A	N/A		
99	Tyler Tech LLEO		CS 2.0	058042	Teri	05/18/09	06/02/09	October-09	10/17/08	10/17/08	11/11/08	N/A	N/A	N/A	N/A		07/30/09											N/A	N/A		
111	Ursuline Music Hall LLEO		Schools v2	059009	Teri	04/30/09	08/03/09	09/18/09	05/26/09	03/13/09	07/08/09	05/13/09	04/22/09	05/13/09	N/A	DONE!	07/02/09	Comp.							N/A		N/A	N/A		LQ3.1
39	Ursuline Science Bldg - LLEO Ursuline Academy School Science Bldg		Sch2.1	057033	Teri			08/26/09	11/05/08	11/05/08	10/27/08	N/A	Comp.	1/19/09	Done: TC & CH *To do*		10/29/08	Comp.									N/A	N/A		
95	UTD Math Eng Ctr Commis -ned LEED	Addison & Peterson	NC 2.2	058043	Jim	10/15/08	04/28/09	06/01/10	N/A	02/09/09	03/19/09	N/A	N/A	03/10/09	N/A		04/01/09	03/10/09				N/A			N/A	N/A	N/A	N/A		
64	Caterpillar-Waco LEED	GSR - Andrade	NC2.2	058010			12/23/08	01/13/09	Comp.	Comp.	02/03/09	Comp	Comp.	N/A	TC:done & CH:cert, has to edit	DONE!	Comp.	Comp.	Comp.	N/A	03/25/09	03/25/09	Comp.		N/A	Comp.	N/A	N/A	DONE!	Submitted
72	Dallas Logistics Hub LEED - Two warehouses		CS	058020					Comp.	Comp.	N/A	N/A	N/A	N/A	N/A	DONE!	Comp.	Comp.	Comp.	11/24/08	11/24/08	Comp.	Comp.	N/A	Comp.	N/A	N/A	N/A	DONE!	Submitted
45	Dallas Theo. Res. - LEED - Residence Hall	Hill & Wilkinson	NC2.2	057024					Comp.	Comp.	Comp.	N/A	Comp.	N/A		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.		Comp.	Comp.	N/A	N/A	DONE!	Submitted
80	Emst&Young @ Victory Park LEED Office Lease		CI 2.0	058027	Jim				07/17/08	07/17/08	01/13/08	10/28/08	N/A	N/A	TC	DONE!	Comp.	Comp.	Comp.	07/21/09	07/21/09	Comp.	Comp.		N/A	07/07/09	N/A	N/A	DONE!	Submitted
19	FrescoConCtr- LEED	GGO Architects	NC2.1	24039			Comp 2006	Comp 2006	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A	DONE!	Submitted
51	Cersier Office Lease, Offices	Cersier	CS2.0	057029			2008	2008	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A	DONE!	Submitted
35	Lake Vista VII - LEED CS- Office Building	Haliff Associates	CS2.0	058001					Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.						N/A	N/A	N/A	N/A	DONE!	Submitted
85	Luminant Academy LEED	Future Energy Holdings	CI 2.0	058035					comp.	11/10/08	10/02/08	N/A	N/A	N/A	TC	DONE!	N/A	N/A	Comp.	04/10/09	04/10/09	Comp.	04/10/09		N/A	Comp.	N/A	N/A	DONE!	Submitted
57	Park Lane Condo/Retail	PM Realty Group	NC2.2	058060					Comp.	Comp.	Comp.	Comp	Comp.	N/A	Done TC	DONE!	Comp.	Comp.	Comp.								Yes	N/A	DONE!	Submitted
98	Pioneer 360 Warehouses LEED	ING	CS 2.0	058048					11/11/08	11/11/08	11/24/09	Comp.	N/A	N/A	N/A	DONE!	N/A	N/A	Comp.	N/A	02/12/09	N/A	02/12/09	N/A	N/A	N/A	N/A	N/A	DONE!	Submitted
76	San Juan Learning Center LEED College Classroom		NC2.2	058016	Jim				only put on S drive do not send to client	Comp.	12/05/08	N/A	N/A	12/01/08	TC & GH	DONE!	Comp.	Comp.	Comp.	07/23/09	07/23/09	Comp.	Comp.		N/A	N/A	N/A	N/A		Submitted
67	Tennyson Place LEED	Cromaztzky Dupree Associates	CS2.0	058051					Comp.	Comp.	Comp.	Comp	12/09/08: White Check	Comp.	N/A	DONE!	Comp.	Comp.	Comp.	N/A	N/A	Comp.	Comp.	Comp.		N/A	N/A	N/A	DONE!	Submitted
28	Waco Chamber of Commerce-LEED-Office Building	CGO Architects	NC2.2	058015			2008	2008	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.			Comp.	N/A	N/A	DONE!	Submitted

COMPLETED DESIGN PHASE DOCUMENTS

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19	Walnut Hill Library - LEED		NC2.2	25176			2007	2007	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	7/23/09	Comp.	Comp.		N/A	N/A	N/A	N/A	DONE!	Submitted
	9301 Largo-West Largo, MO			C79011																					N/A	N/A	N/A	N/A		
93	Bank of America Loss Prevention Ctr	Addison, Whiting, Turner	BofA Guideline s	056041				12/01/08	10/17/08	10/17/08	10/27/08	N/A	11/25/08; Started	N/A	N/A	DONE!	N/A	01/08/09	Comp.	N/A	01/30/09	N/A	01/30/09	N/A	N/A	N/A	N/A	N/A	DONE!	
103	Baylor MOB - McKinney LEED	Dale Caffey		059003	Peter	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4/9/2009	N/A	N/A	DONE!	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
47	Bovis Lease Proj	Bovis Lend Lease	CI 2.0	057025			2008	2008	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A	DONE!	Certified GOLD
30	Clark Residence - Private Residence	Bernbaum Magadini	N/A	N/A			2008	2008	N/A	N/A	N/A	N/A	Comp.	N/A			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
60	Comerica Branch Bank Ft Worth LEED	CBRE	NC2.2	058012			10/21/08	11/14/08	Comp.	Comp.	Comp.	Comp	N/A	Comp	GH	DONE!	Comp.	Comp.	Comp.	January-09	January-09	Comp.	Comp.		N/A	N/A	N/A	N/A	DONE!	Certified
3	Dallas Police HQ - LEED	Centex / 3DI	NC2.1				Cert Gold	Cert Gold	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A	N/A	N/A	DONE!	Certified Gold
18	Dallas South Central Police Facility LEED	Perkins & Will	NC2.2	25186			2007	2007	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.		DONE!	Comp.	Comp.				Comp.			N/A	Comp.	N/A	N/A	DONE!	Certified Gold
15	DalHWServCtr-LEED	GGO Architects	NC2.1	24111			2008	2008	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A	DONE!	Certified Gold
33	Fireman's Fund Lease - LEED CI -Office Lease	Gensler	CI 2.0	057003					Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A	DONE!	Certified Silver
59	Francisco Medrano Middle School	GSR - Andrade	NC-School	058006					Comp.	Comp.	Comp.	Comp	N/A	Comp	TC & GH	DONE!	Comp.	Comp.	Comp.	January-09	January-09	Comp.	Comp.		N/A	N/A	N/A	N/A	DONE!	Certified Silver
1A	Haiff McAllen - LEED	Haiff Associates		24087			Deleted	Deleted	Comp.	Comp.	Comp.	deleted	N/A	deleted																
16	HamptonIlLib-LEED	GGO Architects	NC2.1	24112			2007	2007	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A	DONE!	Certified
17	Hector Garcia LEED	DISD	NC2.1	25117			2007	2007	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A	N/A	N/A	DONE!	Certified
20	HUNT Office Building LEED		CI2.0	26001			2007-2008	2007-2008	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.			Comp.	N/A	N/A	DONE!	Certified Silver
110	IEWC Plano LEED	Sandra Heffernan		C79004		First IAQ wk of 3/16	2ond test target 4/15	3rd test target 5/15	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	05/15/09	N/A		
9	LancasterL Lib-LEED	MPP Architects	NC2.1	24010			2007	2007	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	# 1	Comp	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A	DONE!	Certified Silver 2006
121	Mancos Library-Colorado		CS3.2	C79006		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DONE!	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	06/18/09	N/A	DONE!	
2	McCommas- LEED	City of Dallas	NC2.0				Cert-Silver 2004	Cert-Silver 2004	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A	DONE!	Certified Silver 2004
8	McKinney Office - LEED	West World Holdings	CS2.0	23123			Cert-Platinum 2007	Cert-Platinum 2007	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A	DONE!	Certified 2007
34	Pioneer Parkway Wrhs LEED CS- Warehouse	Haiff Associates	CS2.0	057010					Comp.	Comp.	Comp.	Comp.		Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A	N/A	N/A	DONE!	Certified Silver
132	Ronald McDonald House - Energy Model ONLY	Hill & Wilkinson		059027	Gab	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Comp.	N/A	N/A	DONE!	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
1	Sabre-LEED	Sabre	NC2.0				Cert-Silver 2002	Cert-Silver 2002	Comp.	Comp.	Comp.	Comp.		Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A	DONE!	Certified Silver 2002
69	Stewart Lease LEED Stewart Automotive		NC2.2	058017			11/30/08	11/30/08	08/23/08	08/23/08	11/07/08	Comp	N/A	N/A	TC & GH	DONE!	08/23/08	Comp.	Comp.	Comp.	N/A	Comp.	Comp.	Comp.		N/A	Comp.	N/A	DONE!	Certified Gold
37	SHW Group Offices - LEED CI- Office Lease	SHW Group	CI2.0	057032			2007	2007	Comp.	Comp.	Comp.	Comp.	N/A	Comp.			Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A		
11	Timberglen Lib- LEED	PBA	NC2.1	24058			2007	2007	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A	DONE!	Certified Gold
38	Toyota - Caldwell Auto Dealership		NC2.2	057013			2008	2008	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	Comp.	N/A	N/A	DONE!	Certified Gold
29	Toyota of Rockwall - LEED-Auto Dealership	Ratliff / Gensler	NC 2.2	057001			2008	2008	Comp.	Comp.	Comp.	Comp.	N/A	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A	DONE!	Certified Gold
1AA	Westlake Twn Hall - LEED	Westlake		23094			Deleted	Deleted	Comp.	Comp.	Comp.	Comp.	N/A	Comp.			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	YES	N/A	N/A		
21	Wilcox Office Bldg - LEED		CS2.0	056010			2008	2008	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.		DONE!	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A	N/A	N/A	DONE!	Certified Gold
49	Toyota Oakland, Gensler, dealership		NC2.2	057026					Comp.	Comp.	Comp.		N/A				Comp.	Comp.									N/A	N/A		HOLD
108	Atmos Energy LEED			059006	Jim	07/08/09 LS: Project client still looking for site. ON HOLD				03/20/09			Yes		CH & TC - 5/18/09					N/A						N/A	N/A		HOLD
40	Custer Bridges-LEED, C&S Resd	CFF Architects	C&S 2.0	057014			2008	2008	Cancel	Cancel	Cancel	Cancel	N/A	Cancel			Cancel	Cancel	Cancel	Cancel	Cancel	Cancel	Cancel	Cancel	Cancel	Cancel	N/A	N/A		HOLD
91	Denton Public Safety LEED	PGAL	NC 2.2	058039	Jim	HOLD - See Notes			10/07/08	10/07/08	12/12/08	12/01/08	N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		07/06/09: LS - Per Ted Blakeberly 07/02/09 - Job on HOLD - Hopefully will re-bid later this year.
122	DWU Dewing Facility - Southside WWT Oper Bldg. LEED Comm	MHPM	NC2.2	059007	Jim					06/04/09	04/09/09	07/20/09	07/01/09	05/29/09	TC Upload 6/1, CH OPEN	DONE!									N/A	N/A	N/A	N/A		HOLD 07/24/09 Per Rachel
119	Frisco Market Center		CS 2.0	059016	Gab	06/30/09	09/01/09	12/01/09	06/08/09	No IAQ	06/01/09	06/01/09	Gab started 6/1/09	N/A											N/A	N/A	N/A	N/A		HOLD
43	Greenwood Building - LEED - Spec Office	GGO Architects	NC2.2	057016					Comp.	Comp.	Comp.	HOLD	N/A	HOLD	HOLD		HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD			N/A	N/A		HOLD
102	Honda of Burleson LEED	CFF Architects	NC 2.2	059002		07/08/09 LS: Job on HOLD per Liz @ CFF			02/11/09	02/11/09			Yes		GH												N/A	N/A		07/08/09 LS: Job on hold per Liz @ CFF.
82	Honda of Rockwall LEED	CFF Architects	NC2.2	058033	Teri				09/23/08	09/23/08	10/10/08	12/02/08	N/A	N/A	GH												N/A	N/A		02/17/09 LS: Per Rosario @ CFF, project on HOLD indefinitely.
112	Park Lane Condo/Retail - HLine & Edison	PM Realty Group	NC 2.2	059012	Peter	07/14/09: Project on HOLD. Check back later in August.				07/29/09					TC & GH					05/11/09	N/A	05/11/09	05/11/09		04/08/09	04/08/09	N/A	N/A		HOLD
22	Rowlett Fire Station #2 - LEED		NC2.2	056012			2007	2007	Comp.	Comp.	Comp.	HOLD	Partial	HOLD			HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	N/A	N/A		HOLD

COMPLETED DESIGN PHASE DOCUMENTS

						Key Dates											Construction Phase													
Seq	Project	Client	LEED Rating System	Proj #	Project Coordinator	Construction Start	Install Duct Date	Client Turnover Date	OPR/ BOD	Com&IAQ Specs	Comm Plan	Des.Rev DD	Optional Energy Model	Des. Rev. CD	Optional Thermal Comfort or Green House	LEED Online Des Crdt	Com Mtgs	Submittal Rev	Inspections	Recom. Manual	Systems Manual	Training Plan	Com. Report	10 Mo. Review	Optional M&V Plan	Optional IAQ Test	Optional Smoke Door Test	Optional Total Building Commissioning	LEED Online Con Crdt	Status or Next Steps
32	Santa Fe College Student Center -LEED - College Student Center	Overland Partners	NC2.2	057026					Comp.	Comp.	Comp.	HOLD	N/A	HOLD			HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	N/A	N/A		HOLD
66	Santa Fe Judicial Complex - LEED	Gerald Martin CM	NC2.2	058014	Gap				Comp.	Comp.	03/04/09	01/07/09	N/A	N/A	TC & CH					N/A						N/A	N/A	N/A		07/29/09 LS: Per Robert @ Gerald Martin, project on HOLD until Sept / Oct 09
117	Scarbrough Business Park Austin		CS 2.0	059015			On Hold as of 4/16/09	On hold	On hold	On hold	On hold	On hold	On hold	On hold	N/A	On hold									ON HOLD	N/A	N/A	N/A		HOLD
65	Sewell Infinity - Fort Worth - LEED - Sewell Automotive		NC2.2	058011		10/03/08	10/31/08	11/25/08	11/17/07	Comp.	11/18/08	N/A	N/A	N/A	TC 01/27/09															HOLD
48	Torre Reforma 180, Office Building	PCAL	NC2.2	057027					Comp.	Comp.	Comp.		N/A												N/A	N/A	N/A	N/A		HOLD
78	Toyota - Alamo - LEED Auto Dealership		NC2.2	058025					09/08/08	09/08/08	On hold until Spring 09		N/A												N/A		N/A	N/A		HOLD
46	Victory Block D Hotel/Office/Condo	BOKA Powell	NC2.2	057023			2010	2010	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD			HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	N/A	N/A		HOLD
88	Burleson High School #2 - LEED	Shaw Arch	nc2.2	058013			Cancel	Cancel	Comp.	Comp.	Comp.	cancel	NA	Cancel	Cancel		Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	N/A	N/A		Cancelled
54	Chrysler Pasadena, Chrysler Dealership	CDI Douglas Pye Architects	NC 2.2	057031			Hold	Hold	Comp.	Comp.	Comp.	HOLD	12th White Check	HOLD						N/A							N/A	N/A		Cancelled
53	Renaissance Conf Ctr,Hotel Conf Ctr	Runyon Architects	NC2.2	057021			Hold	Hold	Comp.	Comp.	Comp.	HOLD	NA	HOLD			10.29.08										N/A	N/A		Cancelled
75	West Point Center - LEED - Houston Office Building		CS& 2.0	058023			Terl req Robert/Cade nce 2/2		01/20/09	Comp.	12/11/08	N/A	02/06/09 Started, no upload	01/16/09	N/A	DONE?	Comp.			N/A					N/A	N/A	N/A	N/A		Cancelled
				TOTALS																										

Note: LEED projects are also commissioning projects

Color Key
- Complete
- Submitted
- HOLD
- Cancelled

COMPLETED DESIGN PHASE DOCUMENTS

			Park Lane	GSES	SWA	Res Inn Denton	TMA
				NC 2.2	NC 2.2	NC 2.2	NC 2.2
			Construction Review	Construction	Construction	Design Review	Design
SS p1	c	Construction Activity Pollution Prevention					
SS c1	d	Site Selection		DONE!			
SS c2	d	Development Density and Community Connectivity			To Do		To Do
SS c3	d	Brownfield Development					
SS c4.1	d	Alternative Transportation: Public Transportation Access			DONE!		Upload Only
SS c4.2	d	Alternative Transportation: Bicycle Storage & Changing Rooms					Upload Only
SS c4.3	d	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles					Upload Only
SS c4.4	d	Alternative Transportation: Parking Capacity					
SS c5.1	c	Site Development: Protect or Restore Habitat					
SS c5.2	d	Site Development: Maximize Open Space		DONE!			
SS c6.1	d	Stormwater Design: Quantity Control					
SS c6.2	d	Stormwater Design: Quality Control					
SS c7.1	c	Heat Island Effect: Non-Roof		To Do			
SS c7.2	d	Heat Island Effect: Roof		DONE!			
SS c8	d	Light Pollution Reduction		DONE!	Order Photometric		
WE c1.1	d	Water Efficient Landscaping: Reduce by 50%					
WE c1.2	d	Water Efficient Landscaping: No Potable Water Use or No Irrigation					
WE c2	d	Innovative Wastewater Technologies					
WE c3.1	d	Water Use Reduction: 20% Reduction					
WE 3.2	d	Water Use Reduction: 30% Reduction					
EA p1	c	Fundamental Commisioning of the bldg. Energy Systems	DONE!	To Do	To Do	To Do	
EA p2	d	Minimum Energy Performance	Begun	DONE!	To Do		To Do
EA p3	d	Fundamental Refrigerant Management		DONE!			
EA c1	d	Optimize Energy Performance	Begun	DONE!			To Do
EA 2.1	d	On Site Renewable Energy: 2.5%					

COMPLETED DESIGN PHASE DOCUMENTS

			Park Lane	GSES	SWA	Res Inn Denton	TMA
EA c3	c	Enhanced Commissioning	DONE!	To Do	To Do	To Do	
EA c4	d	Enhanced Refrigerant Management		DONE!			
EA c5	c	Measurement and Verification	To Do	To Do			
EA c6	d	Green Power		To Do			Upload Only
MR p1	d	Storage and Collection of Recycables					
MR c1.1	c	Bldg. Reuse: Maintain 75% of Existing Walls, Floors and Roof					
MR c1.2	c	Bldg. Reuse: Maintain 95% of Existing Walls, Floors and Roof					
MR c1.3	c	Bldg. Reuse: Maintain 50% of Interior Non-structural Elements					
MR c2.1	c	Constuction Waste Management: Divert 50% from Disposal					
MR c2.2	c	Constuction Waste Management: Divert 75% from Disposal					
MR c3.1	c	Materials Reuse: 5%					
MR c3.2	c	Materials Reuse: 10%					
MR c4.1	c	Recycle Content: 10% (post consumer + 1/2 preconsumer)					
MR c4.2	c	Recycle Content: 20% (post consumer+ 1/2 preconsumer)					
MR c5.1	c	Regional Materials: 10% Extracted, Processed and Manufactured Regionally					
MR c5.2	c	Regional Materials: 20% Extracted, Processed and Manufactured Regionally					
MR c6	c	Rapidly Renewable Materials					
MR c7	c	Certified Wood					
EQ p1	d	Minimum IAQ Performance					
EQ p2	d	Environmental Tobacco Smoke (ETS) Control	Write Policy		Write Policy	Write Policy	
EQ c1	d	Outdoor Air Delivery Monitoring					
EQ c2	d	Increased Ventilation					
EQ c3.1	c	Construction IAQ Management Plan: During Construction		To Do			
EQ c3.2	c	Construction IAQ Management Plan: Before Ocupancy	To Do	To Do	To Do	To Do	
EQ c4.1	c	Low Emitting Materials: Adhesives and Sealants					

COMPLETED DESIGN PHASE DOCUMENTS

			Park Lane	GSES	SWA	Res Inn Denton	TMA
EQ c4.2	c	Low Emitting Materials: Paints and Coatings					
EQ c4.3	c	Low Emitting Materials: Carpet Systems					
EQ c4.4	c	Low Emitting Materials: Composite Woods & Agrifiber Products					
EQ c5	d	Indoor Chemical & Pollutant Source Control		DONE!			
EQ c6.1	d	Controllability of Systems: Lighting					
EQ c6.2	d	Controllability of Systems: Thermal Comfort					
EQ c7.1	d	Thermal Comfort: Design					
EQ c7.2	d	Thermal Comfort: Verification	DONE!	DONE!	DONE!	DONE!	DONE!
EQ c8.1	d	Daylight & Views: Daylight 75% of Spaces		To Do			
EQ c8.2	d	Daylight & Views: Daylight 90% of Spaces		To Do			
EQ c9	d	Enhanced Acoustical Performance					
EQ c10	d	Mold Prevention		DONE!			
ID c1.1 to c1.4		Innovation in Design Program, Targets:					
Up to 4 points	d	Green Housekeeping					To Do
	d	Alternative Transportation: Pulic Access			To Do		
	d						
	d						
ID 2	c	LEED Accredited Professional			DONE!	DONE!	Begun

COMPLETED DESIGN PHASE DOCUMENTS

Priority or Action Required	Rating System	LEED Admin	Project Phase	Project Name	EQ c5 d Indoor Chemical	EQ c7.2 d Thermal Comfort Verif	ID d Green House Keeping	ID d Total Bldg Commissioning	EA p2 d Min Energy	EA c1 d Opt Energy	EA p1 c Fund Comm	EA c3 c Enhance Comm	EA c5 c M & V	EA c5.1 c Tenan Sub Meter	EQ c3.1 c During Construct	EQ c3.2 c IAQ Before Occup	NOTES
Request Credit Reassign	NC 2.2	Inspec Allen	Construction	**1900 McKinney**		Owner will not do this credit	To Do			DONE!	Mark as Complete	To Do	DONE!		Begun	Begun	Grn House: Cust has plan ask Inspec who inputs to online?
Request Credit Reassign	NC 2.2	GOO Jenny	Construction	**Adesa**		DONE!	To Do			DONE!	To Do	To Do				To Do	Ask Jenny about if not copy of modified cotnract. 1/10 - EQ 7.2 was the old version but design credits were under review
A	NC 2.2	Brian	Construction	**Blue Cross Blue Shield**		DONE!					DONE!	To Do			To Do	To Do	
Request Credit Reassign	CI 2	Clint	Construction	**Boone Residence**		To Do		To Do			To Do	To Do				To Do	Believe error on Clint's part ask to correct, also do they want me to upload AP cert?
Systems Manuals	NC 2.2	Gensler Jose	Construction Review	**Caldwell Toyota**							DONE!	DONE!				To Do	→ Field work done on IAQ
Request Exec Contract	School 2	Bldg Sol Layne	Design	**Casady**							To Do	To Do					
A	NC 2.2	Syed	Construction Review	**Caterpillar**		DONE!	Waiting on Client			DONE!	DONE!	DONE!	To Do			DONE!	3/4/09 Not pursuing EAC5
Request Credit Reassign	NC 2.2	Richard	Construction	**Cigna Pointe**		DONE!	Client HOLD				To Do	To Do				To Do	1/12 GH is on hold don't think that they need for ID
A	NC 2.2	Comerica	Construction Review	**Comerica Ft Worth**		Owner will not do this credit	To Do				To Do	To Do				To Do	ONLY WANT CERT for PR reasons so.. (1) Do they want enh comm? (2) IAQ? (3) Grn House
C	NC 2.2	Comerica	Design	**Comerica Richardson**		Owner will not do this credit	To Do			To Do	To Do	To Do	To Do			To Do	
Request Credit Reassign	NC 2.2	Jeff	Design Review	**Coppell Senior**			To Do			To Do	To Do	To Do	To Do			To Do	Jerry ran energy model some time ago but value eng - eng to rerun. Not sure if they have panel set up to accommodate M&V
Request Credit Reassign	NC 2.2		Design Review	**Dallas Fire Station 35**			To Do			DONE!	DONE!	DONE!	To Do			DONE!	Ask inspect about Grn House. M&V is there the right panel set up - "Not attempted" online
	NC 2.2		Design Review	**Dallas Fire Station 42**							To Do	To Do				To Do	Purple= ask Tom at PSA if he wants us to do.
	NC 2.2		Design Review	**Dallas Theo - Single Student Housing**													AET = Environ Advisor, SEE LEED Point Track spreadsheet
Request Access	NC 2.2			**Denton Public Safety**							To Do	To Do					12/26 Audit of contract only - did not have access to Leed Online, DO NOT DO SYSTEMS MANUALS
	NC 2.2	WARE		**Dobson Floors**		To Do	To Do				To Do	To Do				To Do	2/25 credits in red asked Michael at Ware if they want us to do
	CI 2		Design Review	**E & Y**		To Do					To Do	To Do				To Do	Don't want to pay for banks ask Debbi Fuller to see if they want to do
	CS 2	Gensler Houston	Design Review	**Eldridge III**							DONE!	To Do	To Do				Doing enhanced commiss only ask about reds. M& V are they setting up panel to do?
			Construction	**Fire Station 35**							To Do	To Do					
			Construction	**Fire Station 42**							To Do	To Do				To Do	
				Ft Worth NPD6					To Do	To Do	To Do	To Do	To Do				Ask Peter if he did Energy Model.
Request Credit Reassign	NC 2.2	Inspec Mike	Design	**Garland Utility Services Bldg**		DONE!	Client for Edit			DONE!	To Do	To Do	To Do			To Do	In construction, ask Doug- if he still wants us to do Grn house & M&V, no on energy model
Request Credit Reassign	CI 2	Gensler Ashlee	Design Review	**Haynes and Boone**		DONE!					To Do	To Do				To Do	IAQ field work has begun
	NC 2.2		Design Review	**Homeless Center - The Bridge**							To Do	To Do				Begun	IAQ don't know if it will be possible
Request Credit Reassign	NC 2.2	Gensler Jose		**Honda of Rockwall**			To Do				To Do	To Do	To Do			To Do	12/26 Audit of contract only - did not have access to Leed Online
	NC 2.2	GFF		**Honda of Burleson**			To Do				To Do	To Do	To Do			To Do	2/25 No scoresheet in LEED online as yet
	CS 2		Design	**I-20 Bldg 2 / TC DFW 1-20 II**							To Do	To Do	To Do		Begun		Purple = not in contract except plan, but in leed online
	NC 2.2			**IESI Recycling Facility McKinney**							To Do						
Request Access	NC 2.2			**Lockwood Library**							To Do	To Do					12/26 Audit of contract only - did not have access to Leed Online
Request Credit Reassign	CI 2		Construction	**Luminant (TXU Luminant)**							To Do	To Do					No comm agent assigned in LEED online
	NC 2.2	GOO Jenny	Design	**MCC Classroom**			To Do				To Do	To Do	To Do		To Do	To Do	

COMPLETED DESIGN PHASE DOCUMENTS

					EQ c5	EQ c7.2	ID	ID	EA p2	EA c1	EA p1	EA c3	EA c5	EA c5.1	EQ c3.1	EQ c3.2	
					d	d	d	d	d	d	c	c	c	c	c	c	
Priority or Action Required	Rating System	LEED Admin	Project Phase	Project Name	Indoor Chemical	Thermal Comfort Verif	Green House Keeping	Total Bldg Commissioning	Min Energy	Opt Energy	Fund Comm	Enhance Comm	M & V	Tenan Sub Meter	During Construct	IAQ Before Occup	NOTES
	NC 2.2	GOO Jenny	Design	**MCC Emergency Svcs**			To Do				To Do	To Do	To Do		To Do	To Do	12/26 Contract file is out
	NC 2.2	GOO Jenny	Design	**MCC Science**			To Do				To Do	To Do	To Do				
	School 2		Appeal	**Medrano**							To Do						Ask LEED AP if they want these other credits done
	NC 2.2	GOO Jenny	Design	**Piano Envrionmental**	To Do		To Do				To Do	To Do	To Do		To Do	To Do	
Request Access	CS 2			**Projecto Legaria**													Have not pulled file
Request Credit Reassign	NC 2.2	Inspec Allen		**San Juan College**		To Do	To Do				To Do	To Do	To Do				1/12 GH is ID 1.3
Request Credit Reassign	NC 2.2		Design	**Santa Fe County Judicial Complex, County Court**		To Do	To Do				To Do	To Do	To Do				
	CS 2	Syed	Design	**Seton Hays Medical**					To Do		To Do	To Do	To Do				
	School 2	Jacquelyn	Design	**St Alcuin**		DONE!					To Do	To Do	To Do			To Do	
	CS 2	Inspec Allen	Design Review	**Tennyson Place**						DONE!	To Do	To Do	To Do				
	NC 2.2	Gensler Ashlee	Design	**Thomson Tax**		To Do	Client Hold			Begun	To Do	To Do				To Do	2/9 Ashlee said that GH is on hold until they know if project needs it
Request Credit Reassign	NC 2.2	Gensler Rick	Design Review	**Toyota Alamo**			To Do				To Do	To Do					Red = In contract not in LEED online
	NC 2.2		Construction	**Toyota Oakland**		To Do	To Do				To Do	To Do	To Do				Are we doing Total Bldg Comms - on contract
Request Credit Reassign	CS 2	Bill Howse	Design	**Tyler Tech**													No Comm Agent - says not attempted - call Bill, plus is he calling us HVAC Engineer? Systems Manuals - see contract
Request Access				**United Methodist Christ Church**							To Do						
	School 2	~~Bldg Sol~~ Layne	Design	**Ursuline - French Family**		DONE!	To Do		Jerry Review	Begun	To Do	To Do	To Do		To Do	To Do	Are we doing Total Bldg Comms - on contract
		~~Bldg Sol~~ Layne		**Ursuline - Music Hall**													For Mx V will need energy model data form in EA templates
Request Access				**UTD Math Eng Center**							To Do	To Do					Jerry asked for the contract on 10/20, did he receive an answer?
	NC 2.2		Design	**Walnut Hill**							To Do	To Do				To Do	Couldn't find contract file
Request Exec Contract	CS 2	Inspec Allen	Design	**West Pointe Center**						To Do	To Do	To Do	To Do				Is there a signed contract?
	CS 2		Construction Review	**Wilcox**			DONE!				DONE!	DONE!					Red = did we do or is there a HVAC Eng that did thesee credits?

COMPLETED DESIGN PHASE DOCUMENTS

Key to LEED Credit Upload Status:

	In contract but not assigned to AET in LEED online
	Not in contract…but assigned to AET in LEED online
	"To Do" = No upload started
	"To Do" = No upload started & A priority
Begun	Partial upload of required docs (same as white check in LEED online)
	Jerry to review
Done	Upload Complete &/or Awarded

COMPLETED DESIGN PHASE DOCUMENTS

				EQ c5	EQ c7.2	ID	ID	EA p2	EA c1	EA p1	EA c3	EA c5	EA c5.1	EQ c3.1	EQ c3.2	
				d	d	d	d	d	d	c	c	c	c	c	c	
Rating System	LEED Admin	Project Phase	Project Name	Indoor Chemical	Thermal Comfort Verif	Green House Keeping	Total Bldg Commissioning	Min Energy	Opt Energy	Fund Comm	Enhance Comm	M & V	M & V - Tenan Sub Meter	IAQ During Construct	IAQ Before Occup	NOTES
CI 2		Construction Review	**Hunt**							AWARDED	AWARDED				AWARDED	
CS 2		Design	**I-20 Bldg 2 / TC DFW 1-20 II**							Upload Only	Upload Only	DONE!		Upload Only		2/25 Orange Comm Credits checked white only on LEED online - why?
CS 2	Syed	Design Review	**Lake Vista**							DONE!	DONE!	DONE!	DONE!			
CS 2	Syed	Construction Review	**Pioneer Parkway & 161**							DONE!	DONE!	DONE!				2/25 under 2cnd review for construction - silver
CS 2		Construction	**Pioneer Parkway & 360**							DONE!	To Do					2/20 - Lee to give me access to enhanced comm
NC 2.2		Design Review	**Sewell Lexus Ft Worth**		DONE!	To Do				DONE!	DONE!	NA		DONE!	DONE!	1/10 - EQ 7.2 was the old version but design credits were under review
CS 2		Construction Review	**Wilcox**			DONE!				DONE!	DONE!					Red = did we do or is there a HVAC Eng that did thesee credits?

COMPLETED DESIGN PHASE DOCUMENTS

#	Project	Project Coordinator / Engineer	Field Engineer	Status/ Next Steps
1	Arlington Exec Airport	Gab	David	Get design schedule
2	Caterpillar - Seguin	Gab	David	EM done, Wait on "go ahead" on project
3	Cigna Point	Gab	Brad	Commiss in progress, IAQ Test next
4	Comerica Austin	Gab	Muslim	LEED online to match conract
5	Comerica Camp Bowie	Gab	David	Design Review
6	Comerica Richardson	Gab	Andrew	OPR/ BOD
7	Dobson Floors	Gab	Andrew	Deliver Systems Manual
8	Frisco Market Center	Gab	Andrew	Wait on "go ahead" on project
9	General Datatech	Gab	Brad	EM
10	Marriott Fairfield Arlington	Gab	David	Design Review
11	MCC Science	Gab	David	LEED online & Sys Manual
12	Projecto Lagaria	Gab	Muslim	Construction Schedule
13	Santa Fe Court House	Gab	Muslim	Wait on "go ahead" on project
14	Seton Medical	Gab	Muslim	Scoping Meeting
#	**Project**	**Project Coordinator / Engineer**	**Field Engineer**	**Status/ Next Steps**
1	Adesa	Jim	Brad	Systems Manual
2	Atmos	Jim	Andrew	Wait on "go ahead" on project
3	Blue Cross Blue Shield	Jim	Andrew	Comm In progresss
4	Christ United Meth Church	Jim	Brad	Scoping Meeting

COMPLETED DESIGN PHASE DOCUMENTS

#	Project	Project Coordinator / Engineer	Field Engineer	Status/ Next Steps
1	Hi Line & Edison	Peter	Muslim	Aug- Ping "go ahead"
2	Motel 6	Peter	David	Scoping Meeting
3	Pepsico Legacy	Peter	Andrew	Commiss
5	Coppell Senior Living	Jim	Brad	Comm In progresss, GHP
6	Dallas Water (southside/ solids ops bldg)	Jim	Brad	Wait on "go ahead" on project
7	Denton Public Safety	Jim	Brad	Wait on "go ahead" on project
8	E & Y	Jim	Andrew	Complete
9	Eldridge III	Jim	Muslim	Jerry to direct on next steps
10	Family Center Ft Hood	Jim	David	Design Review - in progresss
11	Fort Worth NPD6	Jim	David	Scoping Meeting
12	Garland Utility Services	Jim	Andrew	Scoping Meeting
13	IESI Facility McKinney	Jim	Andrew	Comm In progresss
14	Lockwood Library	Jim	David	Comm In progresss
15	Marriott Springhill	Jim	Andrew	Scoping Meeting
16	MCC Classroom	Jim	David	Systems Manual & GHP
17	Pleasant Grove Pub Lib	Jim	Brad	Aug- Ping "go ahead"
18	San Juan College	Jim	Muslim	Deliver Systems Manual
19	SWA	Jim	Muslim	Comm In progresss, LEED Design Submittal
20	UTD Math Science	Jim	Andrew	Scoping Meeting & Get Submittals

COMPLETED DESIGN PHASE DOCUMENTS

#	Project	Project Coordinator / Engineer	Field Engineer	Status/ Next Steps
1	Casady	Teri	Muslim	Scoping Meeting
2	Dean McGee Eye	Teri	Muslim	EM in progress
3	Executive Airport	Teri	Brad	Comm in progress
4	Firestation 42	Teri	Brad	LEED online & Sys Manual
5	Frank Kent Honda	Teri	Brad	Design Review
6	Gencore LLC Phase I Building	Teri	Muslim	Collect Docs & Project Timelines
7	Good Shepherd	Teri	Brad	LEED online & Sys Manual
8	Greenhill	Teri	Jerry	Strategy Meeting
9	Honda of Rockwall	Teri	David	Wait on "go ahead" on project
10	Irving Convention Center	Teri	David	Collect Docs & Design Review
11	Marriott Res Inn	Teri	Brad	EM Review &LEED Design Sub
12	MCC Emergency	Teri	David	LEED online & Sys Manual
13	MISD	Teri	David	Design Review & Check on EM Contract
14	Saint Alcuin	Teri	Andrew	Comm in Progress, Date for IAQ
15	Tyler Museum of Art	Teri	Muslim	LEED Design Review
16	Tyler Tech	Teri	Muslim	Comm in Progress & Collect Revised Submittals
17	Ursuline Math & Science	Teri	Andrew	Comm, IAQ Test
18	Ursuline Music	Teri	Andrew	Comm in progress

COMPLETED DESIGN PHASE DOCUMENTS

#	Project	Project Coordinator / Engineer	Field Engineer	Status/ Next Steps
1	Atmos	Jim	Andrew	Wait on "go ahead" on project
2	Blue Cross Blue Shield	Jim	Andrew	Comm In progresss
3	Comerica Richardson	Gab	Andrew	OPR/ BOD
4	Dobson Floors	Gab	Andrew	Deliver Systems Manual
5	E & Y	Jim	Andrew	Complete
6	Frisco Market Center	Gab	Andrew	Wait on "go ahead" on project
7	Garland Utility Services	Jim	Andrew	Scoping Meeting
8	IESI Facility McKinney	Jim	Andrew	Comm In progresss
9	Marriott Springhill	Jim	Andrew	Scoping Meeting
10	Pepsico Legacy	Peter	Andrew	Commiss
11	Saint Alcuin	Teri	Andrew	Comm in Progress, Date for IAQ
12	Ursuline Math & Science	Teri	Andrew	Comm, IAQ Test
13	Ursuline Music	Teri	Andrew	Comm in progress
14	UTD Math Science	Jim	Andrew	Scoping Meeting & Get Submittals

#	Project	Project Coordinator / Engineer	Field Engineer	Status/ Next Steps
1	Adesa	Jim	Brad	Systems Manual
2	Christ United Meth Church	Jim	Brad	Scoping Meeting
3	Cigna Point	Gab	Brad	Commiss in progress, IAQ Test next
4	Coppell Senior Living	Jim	Brad	Comm In progresss, GHP

COMPLETED DESIGN PHASE DOCUMENTS

5	Dallas Water (southside/ solids ops bldg)	Jim	Brad	Wait on "go ahead" on project
6	Denton Public Safety	Jim	Brad	Wait on "go ahead" on project
7	Executive Airport	Teri	Brad	Comm in progress
8	Firestation 42	Teri	Brad	LEED online & Sys Manual
9	Frank Kent Honda	Teri	Brad	Design Review
10	General Datatech	Gab	Brad	EM
11	Good Shepherd	Teri	Brad	LEED online & Sys Manual
12	Marriott Res Inn	Teri	Brad	EM Review &LEED Design Sub
13	Pleasant Grove Pub Lib	Jim	Brad	Aug- Ping "go ahead"
#	**Project**	**Project Coordinator / Engineer**	**Field Engineer**	**Status/ Next Steps**
1	Arlington Exec Airport	Gab	David	Get design schedule
2	Caterpillar - Seguin	Gab	David	EM done, Wait on "go ahead" on project
3	Comerica Camp Bowie	Gab	David	Design Review
4	Family Center Ft Hood	Jim	David	Design Review - in progresss
5	Fort Worth NPD6	Jim	David	Scoping Meeting
6	Honda of Rockwall	Teri	David	Wait on "go ahead" on project
7	Irving Convention Center	Teri	David	Collect Docs & Design Review
8	Lockwood Library	Jim	David	Comm In progresss
9	Marriott Fairfield Arlington	Gab	David	Design Review
10	MCC Classroom	Jim	David	Systems Manual & GHP
11	MCC Emergency	Teri	David	LEED online & Sys Manual
12	MCC Science	Gab	David	LEED online & Sys Manual

COMPLETED DESIGN PHASE DOCUMENTS

13	MISD	Teri	David	Design Review & Check on EM Contract
14	Motel 6	Peter	David	Scoping Meeting
#	**Project**	**Project Coordinator / Engineer**	**Field Engineer**	**Status/ Next Steps**
1	Greenhill	Teri	Jerry	Strategy Meeting
#	**Project**	**Project Coordinator / Engineer**	**Field Engineer**	**Status/ Next Steps**
1	Casady	Teri	Muslim	Scoping Meeting
2	Comerica Austin	Gab	Muslim	LEED online to match conract
3	Dean McGee Eye	Teri	Muslim	EM in progress
4	Eldridge III	Jim	Muslim	Jerry to direct on next steps
5	Gencore LLC Phase I Building	Teri	Muslim	Collect Docs & Project Timelines
6	Hi Line & Edison	Peter	Muslim	Aug- Ping "go ahead"
7	Projecto Lagaria	Gab	Muslim	Construction Schedule
8	San Juan College	Jim	Muslim	Deliver Systems Manual
9	Santa Fe Court House	Gab	Muslim	Wait on "go ahead" on project
10	Seton Medical	Gab	Muslim	Scoping Meeting
11	SWA	Jim	Muslim	Comm In progresss, LEED Design Submittal
12	Tyler Museum of Art	Teri	Muslim	LEED Design Review
13	Tyler Tech	Teri	Muslim	Comm in Progress & Collect Revised Submittals

COMPLETED DESIGN PHASE DOCUMENTS

Priority	PROJECT -Client	LEED Rating System	Proj#	Engineer	Energy Model	Update	Other Notes
1	**Seton Medical Bldg**			Peter			
2	**Frisco Market Ctr**			Gab			
3	**Southside WWT Oper Bldg. LEED Comm MHPM**		B	Peter	Started 5/1		
Open	**Motel 6 near Texas Speedway**		B	Peter	3/9/2009	4/3 - 50% done	3/16 waiting on new Mechanical drawings
	Fort Hood Family Housing				Started 2/9		Still want us to do Energy Model since change of AP
	Good Shepherd			Peter?			
	Caterpillar Seguin			Gab			
	Dean McGee Eye						
Open	**Fairfield - Arlington LEED Admin Chase Hospitality**	NC 2.2	B59001	Gab			Peter Request drawings and specs from Arch
Open	**Honda of Bursleson LEED GFF**	NC 2.2	B59002				Peter Request drawings and specs from Arch
	Frank Kent Honda						
Open	**Projecto Lagaria**			Gab	$39,937		
Open	**Atmos Energy LEED**		B59006				Peter Request drawings and specs from Arch
Complete	**West Point Center LEED - Houston Office Building**	C&S 2.0	B58023	Gabby	LEED online 4/.17/09		
Complete	**SWA General Use Bldg LEED Admin CamargoCopeland**	NC 2.2	B58044 &A	Peter	LEED online 4/.17/09		

COMPLETED DESIGN PHASE DOCUMENTS

Complete	**Ursuline Music Hall LEED**			Peter	LEED online 4/22/09		Please complete before 4/23 (FTP site has 100% Drawings)
Complete	**Ursuline Science LEED**			Peter	LEED online 6/1/ 09		Reveiwer Answer
Complete	**Baylor MOB - McKinney LEED Dale Caffey**		B59003	Peter	Upload 4/9/09		Do we have LEED online access?
Complete	**GPL Service Center LEED City of Garland**	NC2.2	B58031	Done	LEED online 3/18/09		

COMPLETED DESIGN PHASE DOCUMENTS

	COMPLETED REVIEWS, Comm Plans and Status Reports:											
Priority	Project	Engineer	Field Engineer	Construction Meetings Day/ Time	Project Mech Start up Date	Design Review	Date to Jerry to Check	Design Review?	Construct Review?	Construction Comm Plan on S Drive	NOTES	Hours Worked Tracking
	Adesa	Jim	Brad			11/24/08	12/01/08	NA	X	12/10/2008		
	Blue Cross Blue Shield	Jim	Andrew		NOW	01/08/09	1/16/2009	NA	X	11/20/2008		
	Caterpillar	NA	David			NA	NA	NA	NA	2/3/2009		
	Cigna Point	Gab	Brad			1/9/2009	1/13/2009	NA	X	1/26/2009		
	Comerica Austin	Gab	Muslim			3/9/2009	3/9/2009	NA	X	3/9/2009		
	Comerica Richardson	Gab	Andrew			3/9/2009	3/9/2009	NA	X	3/9/2009		
	Coppell Senior Living	Gab	Brad				2/23/2009	NA	X	2/20/2009	Jerry also did review 9/5/07	
	Denton Public Safety	Jim	Brad			11/24/08	12/01/08	NA	X	12/12/2008		
	Dobson Floors	Gab	Andrew	Scope mtg: 3/11 at 8am		3/6/2009	3/6/2009	NA	X	3/6/2009		
	E & Y	Jerry	Andrew		NOW	10/28/08	10/28/08	NA	X	1/13/2009		
	Eldridge III	Jim	Muslim			12/30/08	01/07/09	NA	X	3/9/2009	**Please do Comm Plan by 3/6**	
	Executive Airport		Brad									
	Family Center Ft Hood	Jim	David			2/18/2009	3/2/2009	X	NA	2/28/2009	2/28 Asked Arch for 100% not produced Jim will complete off of 95% drawings'	
	Firestation 42		Brad									
	Good Shepherd	Jim	Brad			12/30/08	01/06/09	NA	X	11/13/2008		
	Honda of Rockwall	Gab	David			12/3/2008	12/3/2008	NA	X	10/10/2008		
	Marriott Res Inn	Jim	Brad			2/11/2009	2/12/2009	NA	X	2/12/2009	Specs are on drawing, LEED specs will be separate but are still being written.	
	MCC Classroom	Jim	David			2/6/2009	2/6/2009	NA	X	10/6/2008	Mech Review Only needed	
	MCC Emergency	Teri	David	Scope mtg: 2/23 at 11am		NA	NA	NA	X	12/2/2008 updated by Teri Lynn 3/17/09	Drawings on S drive	
	MCC Science	Gab	David		Equip start up March 9th &TAB June	NA	NA	NA	X	9/16/2008, Updated by Teri Lynn 3/30	Drawings on S drive	
	Saint Alcuin	Teri	Brad	Tues at 10 Am		12/2/2008	12/2/2008	Y		2/25/2009	**Please do Comm Plan by 3/6**	1rst Day comm plan 4hrs/
	San Juan College	Jim	Muslim			11/24/08	12/01/08	NA	X	12/5/2008		
	Santa Fe Court House	Gab	Muslim			12/30/08	01/07/09	NA	X	3/5/2009		
	Seton Medical	Gab	Muslim			1/28/2009	1/30/2009	NA	X	2/2/2009		
	SWA	Gab	Muslim			1/8/2009	1/16/2009	NA	X	1/19/2009		
	Ursuline	Teri	Andrew			12/30/08	01/06/09	NA	X	10/15/2008		
	UTD Math Science	Jim	Andrew			2/27/2009	3/10/2009	NA	X	3/19/2009		Terry tried new process w/ status report adding drawing page numbers took 6 hrs.
	West Pointe	Jim	Muslim			1/8/2009	1/16/2009	NA	X	12/11/2008		

COMPLETED DESIGN PHASE DOCUMENTS

Priority	Project	Engineer	Field Engineer	Construction Meetings Day/ Time	Project Mech Start up Date	Date Needed	Design Review	Date Check With Field Eng Completed	BOD & OPR	Status Report	Commissioning Plan	NOTES
1	Projecto Lagaria	Gab	Muslim			24-Apr	4/29/2009		Done by Alejandro?	4/14/2009	3/23/2009	
2	Dallas Water (southside/ solids ops bldg)	Gab	Brad			TBD						drawings and specs on S drive
3	Frisco Market Center	Gab	Andrew			TBD						Hard copy and S drive
4	Marriott Fairfield Arlington	Gab	David			TBD						4/17 no drawings or specs rec'vd
Priority	**Project**	**Engineer**	**Field Engineer**	**Construction Meetings Day/ Time**	**Project Mech Start up Date**	**Date Needed**	**Design Review**	**Date Check With Field Eng Completed**	**BOD & OPR**	**Status Report**	**Commissioning Plan**	**NOTES**
1	Marriott Springhill	Jim	Andrew				4/9/2009			4/22/2009	4/22/2009	
2	Garland Utility Services	Jim	Andrew				4/16/2009		10/20/2008	4/24/2009	4/23/2009	Design Drawings Only
3	Fort Worth NPD6	Jim	David				4/30/2009		Review old & update if necessary	4/28/2009	4/29/2009	
4	Lockwood Library	Jim	David								2/24/2009 & 4/1/09	MEP on S Drive
5	Pleasant Grove Pub Lib	Jim										
Priority	**Project**	**Engineer**	**Field Engineer**	**Construction Meetings Day/ Time**	**Project Mech Start up Date**	**Date Needed**	**Design Review**	**Date Check With Field Eng Completed**	**BOD & OPR**	**Status Report**	**Commissioning Plan**	**NOTES**
1	Casady	Teri	Muslim						4/23/2009			
2	Ursuline Music	Teri	Andrew									
3	Tyler Tech	Teri	Muslim						NA	X	11/11/2008	Drawings on S drive
Priority	**Project**	**Engineer**	**Field Engineer**	**Construction Meetings Day/ Time**	**Project Mech Start up Date**	**Date Needed**	**Design Review**	**Date Check With Field Eng Completed**	**BOD & OPR**	**Status Report**	**Commissioning Plan**	**NOTES**
1	Motel 6	Peter	David						4/28/2009	4/30/2009	5/1/2009	
2	Christ United Meth Church	Peter	Brad									S Drive

COMPLETED DESIGN PHASE DOCUMENTS

Priority	Project	Assembled By	Date	Binder Version	S Drive Version	Notes
1	Eastfield College					
2	Sewell Lexus					2/2 waiting on Venture
3	Caterpillar	Jason	1/7/2009			2/2 David waiting on a few punch items and TAB report
4	Comerca Ft Worth					2/2 waiting on Turner
5	Medrano					
6	Heights at Park Lane					2/2 get update from Peter
7	Walnut Hill					1/5/09 Started Manual
8	Homeless Center					
9	1900 McKinney	Jason	1/7/2009			2/2 get update from Peter
10	Haynes & Boone					2/2 Waiting on TAB report for both core & tennan
11	San Juan College					
12	MCC Classroom					2/2 Our TAB team scheduled for 2/9
13	Fire Station 35					
14	Thompson Tax					
	Completed					
Done	BOA	Terry	1/20/2009	2 Copies delivered to Kevin on 1/30 & 2/6	1/30/2009	

COMPLETED DESIGN PHASE DOCUMENTS

Done	Dallas Logistics Hub	Christina	11/24/2008 - Revised with new form on 5/7/2009	5/7/2009 - Back of Christinas desk	5/7/2009	Christina re-assembled the binder to the new version of Commissioning Report.
Done	Fireman's Fund Insurance	Christina	2/10/2009 - Revised with new form.5/7/2009			Christina re-assembled the binder to the new version of Commissioning Report.
Done	Pioneer 360	Terry	2/19/2009	3 Copies ready to deliver to John Clinton	2/19/2009	
Done	Hector Garcia	Terry	2/9/2009	Andrew delivered 2/11/09	2/11/2009	
Done	Toyota Caldwell - Arkansas	Christina/Ter	2/24/2009	Chrisitina delivered to Jerry on 2/24/09	2/20/2009	
Done	Luminant - TXU	Christina	3/9/2009	Christina gave to Terry to look at;3/9/2009	3/9/2009	
Done	Waco chamber of commerece	Christina	3/9/2009	Chrisitina delivered to Jerry on 3/9/2009	3/9/2009	
Done	Toyota of Rockwall	Christina	Revised with new form 5/7/2009	5/7/2009 - Back of Christinas desk	5/7/2009	Christina re-assembled the binder to the new version of Commissioning Report.
	Jobs Coming Up					
	Adesa					

COMPLETED DESIGN PHASE DOCUMENTS

	Blue Cross Blue Shield					
	Cigna Point					
	Comerica Richardson					
	Dallas So Central					
	Denton Public Safety					
	E & Y					
	Eldridge III					
	Fire Station 42					
	Garland Utility Services					
	Good Shepherd					
	Lockwood Library					
	Marriott Res Inn					
	MCC Emergency					April TAB
	MCC Science					March TAB
	San Jose Court House					
	Seton Medical					
	SWA					
	The Boone Residence					
	Ursuline					
	West Pointe					

COMPLETED DESIGN PHASE DOCUMENTS

Priority	Project	Assembled By	Date	Binder Version	S Drive Version	Notes
1	1900 McKinney	Lela				Started 08/03/09
5	ADESA					
7	Blue Cross Blue Shield					
	Casady Math & Science					
	Caterpillar Sequin					
	Christ United Methodist					
6	Cigna Point					
	Comerica Austin					
	Comerica Camp Bowie					
	Comerica Forest & Webb					
	Comerica Richardson					
8	Coppell Senior Ctr					
13	Dallas Executive Airport					
	Dallas Fire Station # 35					
4	Dallas Fire Station # 42					
	Dallas Homeless					
	Dean McGee					
3	Easfield College					
	Eldridge III Office					
	Fairfield Arlington					
	Fort Worth NPD6					
	Frank Kent Honda					
	Frisco City Hall					
	Ft Hood Family Housing					
	Gencore					
	General Datatech					
14	Good Shepherd					
	GPL Service Center					
	Greenhill School					
	Haynes & Boone					

COMPLETED DESIGN PHASE DOCUMENTS

	I 20 Building 2 Beckleymeade					
	I 20 Ewarehouses					
9	IESI Facility McKinney					
	Irving Convention Center					
10	Lockwood Library					
	Marriott Denton					
2	MCC Classrooms					
15	MCC Emergency					
	MCC Science					
	Midway ISD					
	Motel 6					
12	Pepsico					
	Plano Environmental					
	Pleasant Grove Library					
	Projecto Legaria					
	Seton Medical					
	Springhill Suites					
16	St Alcuin School					
11	SWA General Use Bldg					
	Thompson Tax					
17	Tyler Tech					
18	Ursuline Music Hall					
	Ursuline Science Bldg					
	UTD Math Eng Ctr					

Detailed List of Submittals

#	PROJECT -Client	AET Proj#	LEED Type	SQ FT	REC. DD-50% Drawings Dated	REC. 100% Drawings Dated	REC. Specifications Dated	REC. Submittals Dated	Construction Schedule	Commissioning Binder	O & M Manuals	Other	NOTES - Status
23	1900 McKinney - LEED Inspec Private Appartment Building	B56003	NC	572,381	11/11/05, 8/13/07	10/17/07, 3/2/2008	6/15/2006		Construction Complete				in construction
70	ADESA Project LEED GGO Arch	B58018	NC2.2	5,515,101		Uploaded MEP 2/10/09	S drive and MEP on drawings	Teri Lynn req on 4/7/09 from Jenny @ GGO	12/8/2008 on S drive			FTP Instructions on S Drive	Teri emailed Jenny asking about ID credit for Green Hosekeeping
113	Arlington Airport Terminal LEED City of Dallas	B59013	NC 2.2			07/08/09 LS: Project status update request email to Alejandro / Marisela (PGAL).			7/15/2009				
108	Atmos Energy Plano LEED Comm Turcotte	B59006	NC2.2			07/08/09 LS: Per Ashlee (Gensler) client still looking for construction site. Will update soon.							ON HOLD
103	Baylor MOB - McKinney LEED Dale Caffey	B59003											
71	Blue Cross/Blue Shield LEED Kohl Development	B58019	NC2.2		6/22/2006	12/7/2007, 12/14/2007 (2x), Mech SDM 2/08 & M 9/13/07	12/14/07 (2x), 2/21/08 - Tenant Improve (2x)	S Drive	on S drive as of 3/11/09				in construction
90	Boone Residence LEED Condo	B58038	CI2.0		6/18/2008	6/18/2008	On drawings	Teri Lynn req on 2/9/09 from Clint @ MaxArch	Yes - S drive				
124	Carpenter Park Recreation Center	B59029	N/A										
88	Casady- Math Bldgs Building Solutions	B59036	NC 2.2		04.09.09	07.31.09 S Drive		asked Layne 4/6/09	2/17/2009				
64	Caterpillar - Waco LEED GSR-ANDRADE	B58010	NC2.2		3/7/2008	Printed and on S Drive	Printed and on S drive	HVAC 11.5.08, need elec & plumb	Construction Complete			FTP instructions on S drive, Construction Schedule 9.19.08	1.13.09 Checklists from subs
125	Caterpillar -Seguin LEED GSR-ANDRADE	B59022	NC2.2		6.4.09 Permit and FTP		6.4.09 Permit & FTP		Dated 07/16/09, Recd 08/05/09				
56	Christ United Methodist LEED Plano Church	B58004	NC2.2		02/12/08	08/29/08	06/02/08	07/07/09 LS: Email request to Mike / Calvin . Again 07/17/09. Per Calvin/Mike, should received week of 07/20/09.	07/07/09 LS: Email request to Mike / Calvin . Again 07/17/09. Per Calvin/Mike, should received week of 07/20/09.			FTP instructions on S drive	in design
87	Cigna Point LEED Corgan Assoc	B58047	NC 2.2			11/3/2008	6.23.08						
78	Comerica-Camp Bowie FTW	B59018	NC2.2		07/07/09 LS: Follow up with Jon (Little) for update 08/07/09.	07/07/09 LS: Follow up with Jon (Little) for update 08/07/09.	07/07/09 LS: Follow up with Jon (Little) for update 08/07/09.	07/07/09 LS: Follow up with Jon (Little) for update 08/07/09.	07/07/09 LS: Follow up with Jon (Little) for update 08/07/09.				
60	**Comerica Branch Bank-Fort Worth LEED**	**B58012**	**NC2.2**	**COMPLETE**	**COMPLETE**	**4/2/2008**	**5/2/2007**	**HVAC 1/20/2009**	**Job is almost complete**			**S Drive: "VRV Energy Calculator"**	**11/14/2008 (mech startup 3rd wk of Oct)**
114	Comerica Branch Bank-Austin LEED	B59010	NC2.2		02/18/09	04/15/09	01/16/09	07/29/09	07/06/09				07/07/09: In Construction 20%
100	Comerica Branch Bank-Richardson LEED	58050	NC2.2	3,162	1.15.09	2/11/2009	2/11/2009	07/06/09 and on S drive	7/2/2009				
127	Comerica Branch Bank - Forest & Webb	FB59028	NC2.2										

Detailed List of Submittals

#	PROJECT -Client	AET Proj#	LEED Type	SQ FT	REC. DD-50% Drawings Dated	REC. 100% Drawings Dated	REC. Specifications Dated	REC. Submittals Dated	Construction Schedule	Commissioning Binder	O & M Manuals	Other	NOTES - Status
36	**Coppell Senior Center - LEED NC 2.2 City of Coppell / ProForma Architects City Senior and Community Center**	B57011	NC2.2		5/2/2007	9/7/2007	8/10/2007	Teri Lynn req const sch & LEED Online access on 2/9/09 from Jeff @ Proforma				LEED (Various Credit Data)	in construction
130	**Dadeland Condos - Miami FL - Fairfield Development LP**	FC59025	N/A										
104	**Dallas Executive Airport City of Dallas**	B59004				S Drive	3/1/2004 also check TAB- Addendum No.1*4/9/04	4/3/2009 /	Construction Complete - We are Cleaning Up the prior Commissioning	5/5/2009			
27	**Dallas Fire Station #35- LEED Michael Johnson Architects Dallas Fire Station**	B57002	NC2.2		Elec Drawing & Schedule: March 2007, Glass	9/25/2008	Req 10/15 & 10/28	Feb-08	Req 10/15 & 10/28		Muslim	Systems Manual - Jim	in construction
26	**Dallas Fire Station #42 - LEED BernbaumMagadini Dallas Fire Station**	B56009	NC		2/28/2007, 2/28/07	6/1/2007	5/10/07, 5/19/07	8/1/2008	10/12/2008		7/14/2009		in construction
105	**DWU Dewater Facility - Southside WWT Oper Bldg. LEED Comm MHPM**	B59020			Bid Set 4/24/09		Bid Set 4/24/09						
	DaVinci School Cunningham Arch LEED		NC2.2		1/27/2009		1/27/2009						
126	**Dean A. McGee Eye Institute LEED**	B59023	NC 2.2			4/4/2007	4/2/2007	08/03/09	07/28/09				
91	**Denton Public Safety LEED City Police Facility**	B58039	NC2.0			12.10.08	12.10.08	07/06/09: LS - Per Ted Blackerby 07/02/09 - Job on HOLD. Hopefully will re-bid later this year.	07/06/09: LS - Per Ted Blackerby 07/02/09 - Job on HOLD. Hopefully will re-bid later this year.				ON HOLD
73	**Dobson Floors LEED Dobson Floors**	B58021	NC2.2		6/30/2008	12.08.08	8/31/2008	Teri Lynn req const sch & LEED Online access on 2/3/09 from Michael @ Ware					in design
79	**Eldridge III Office Bldg LEED Office Building**	B58026	C&S2.0	327,600	4/25/2008	5/15/2008 & Copy of MEP on S Drive	2/1/2008	Fire Protection, Mech, BAS, Domesitic HW	Fire 12.22.08				in construction
80	**Ernst & Young Office Lease LEED Office Lease**	B58027	CI2.0		7/11/08 7/14/08	10/27/08, 10/6/08 & S drive & 12.12.08	10/27/08 and on S drive	rec'd partial 2/24/09	12.31.08			FTP Instructions on S Drive	in design
	Fairfield Arlington \ LEED	B59001			3/14/2009								
77	**Family Housing Community Center Ft Hood LEED Community Center**	B58024	NC2.2		95% 7/28/08	2/12/09 (full set & 1/2 set)	95% 7/28/08, 100% 2/12/09	07/07/09 - Terry requested from Mark @ Stephen Marks. 07/17/09 LS: Follow up email to Terry.	07/07/09 - Terry requested from Mark @ Stephen Marks. 07/17/09 LS: Follow up email to Terry.				in design
33	**Firemans Fund Lease - LEED CI Gensler Office Lease**	B57003	CI 2.0	124,000	3/23/04, 5/25/07	6/26/07, 6/29/07	5/8/2007	6/28/2007	Construction Complete	TAB: 12/26/07			Silver Awarded
44	**Fort Worth NPD6 Police Station- LEED - Perkins and Will Municipal Police Station**	B57017	NC2.2		8/24/07, 12/3/07	10/10/2008	Design 1/11/2007, Construct 10/10/08	Teri Lynn req const sch & LEED Online access on 4/7/09 from Kipp @ Perkins (3/12 recv'd Roof top submittal & water fixtures)				Energy Modeling Data	in construction
59	**Francisco Medrano Middle School LEED GSR-Andrade Middle School**	B58006	NC-School	169,167	12/4/2006	11/15/2007	12/04/06, 1/10/07, 2/21/07		Construction Complete	2/22/2008			in construction
105	**Frank Kent Honda**	B59020	NC2.2		07/31/09 LS: Requested docs from Jim Stephenson	07/31/09 LS: Requested docs from Jim Stephenson	07/31/09 LS: Requested docs from Jim Stephenson	07/31/09 LS: Requested docs from Jim Stephenson	07/31/09 LS: Requested docs from Jim Stephenson	07/31/09 LS: Requested docs from Jim Stephenson	07/31/09 LS: Requested docs from Jim Stephenson	07/31/09 LS: Requested docs from Jim Stephenson	

Detailed List of Submittals

#	PROJECT -Client	AET Proj#	LEED Type	SQ FT	REC. DD-50% Drawings Dated	REC. 100% Drawings Dated	REC. Specifications Dated	REC. Submittals Dated	Construction Schedule	Commissioning Binder	O & M Manuals	Other	NOTES - Status
7	Frisco City Hall-LEED- GGO Architects Municipal City Hall	23154	NC2.1	150,955		8/24/2004		11/24/2004	Construction Complete	8/29/2005			being submitted
10	Frisco Conf Ctr- LEED- GGO Arch Frisco Convention Center	24039	NC2.1				10/20/03, 2/26/04		Construction Complete	Com: 5/12/05 ReCom: 10/10/05 TAB: Nov 2006			being submitted
76	Frisco Market Center	B59016				4/17/2009	4/20/2009						
8	Frisco Police LEED - GGO Architects Police HQ and Jail Facility	23155	NC2.1			2/10/2005	2/10/2005	2/13/2006	Construction Complete	9/27/2007			being submitted
	Frisco Public Works								Construction Complete	Com: Jan 2004		TAB Report Jan 2005, LEED Docs	
4	Frisco Serv Ctr-LEED - GGO Architects City Maintenance Facility	23024	NC2.1						Construction Complete				Submitted
131	General Datatech Facility	FB59026	NC3.0			06/30/09: Cubby & S Drive	06/30/09: Cubby & S Drive						
51	Gensler Offices LEED Gensler Office Lease	B57029	CI2.0			1/14/2008	1/11/2007	Apr-04	Construction Complete				completed
129	Gencore LLC Phase I Building - LEED Gencore LLC	FB59024	NC		Expected Available: 07/17/09	Expected Available: CD 09/24/09	Expected Available: CD 09/24/09						07/14/09: Request for docs.
52	Good Shepherd Library LEED Good Shepherd School School Building	B57020	NC2.2	20,184	6/23/2008	6/23/2008, 8/27/08, PF on 11.14.08	8/27/2008 and 7/18/08	8/27/2008	On S drive			OPR, FTP Instructions on S Drive	in design
86	GPL Service Center LEED Utility Service Center (GARLAND, BLDG 217)	B58031	NC2.2		1/14/2008, Code set 10.24.08	10/24/2008	10.24.08, 2/22/2008	7/6/09 Jared H&W will have to us w/in 1 week	7/1/2009				
74	Greenhill School LEED EB Building Solutions	B58022	EB O&M										prelim
58	Haynes and Boone at Victory Park LEED Gensler Office Finish Out	B58005	CI2.0			3/18/2008	3/18/2008	S Drive 11.7.08					in design
17	Hector Garcia LEED - DMJM/DISD Dallas School	25117	NC	176,379	3/1/2005	11/28/2005	Mar 2005, April 2005, 8/31/06	9/1/05, 10/3/05, 2/16/06, 3/14/06		Commissionin g & Recommission g Binders			Cert Silver 2008
92	Hilton Gardens Kansas Energy Modeling	B58040	Energy Model						Job on Hold				
82	Honda of Rockwall LEED GFF	B58033	NC 2.2		8/27/2008, 10/7/08	1/9/09 Adendum 1/23/08	8/18/2008	07/17/09 LS: Per Ricardo, project is on hold indefinatley.	07/17/09 LS: Per Ricardo, project is on hold indefinatley.				ON HOLD
	Honda of Burleson LEED GFF	B59002	NC2.2					07/08/09 LS: Per Liz @ GFF, job on hold. Will notify when resumes.	07/08/09 LS: Per Liz @ GFF, job on hold. Will notify when resumes.				ON HOLD
63	I-20 Warehouses LEED Trammell Crow	B58008	NC2.2										in design
115	IESI Recycling Facility McKinney LEED MYCON	B59011	NC 2.2	27,703		1.12.09 Arch & MEP, 2.2.09 Civil	S Drive	HVAC, Plumbing, Lighting 6/22/09	On S Drive	YES			in construction
116	Irving Convention Center MEP Engineers LEED	B59014	NC2.2			01/29/09 & Revisions 02/11/09 & 03/11/09							

Detailed List of Submittals

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35	Lake Vista VII - LEED CS Halff Ofice Building	B58001	CS2.0	237,600			Docs in White Box	4/16/2009 -CT	Construction Complete			Docs in White Box	in construction
96	Lockwood Library LEED MEP Consulting Engineers	B58046	NC 2.2			MEP 12.8 on S drive JQ Req full set MS&R 5/20/09	MEP 12.8 on S Drive JQ Req full set MS&R 5/20/09	3/13/09 Mech & BAS & Lite &FP & P					in construction
80	Mancos Library-Colorado	C79006	CS32.2										
97	Marriott Denton LEED Admin Chase Hospitality	B58045 & 45A	NC 2.2			9/15/2008 - Hard copy & on S Drive	On drawings						
41	MCC Classroom Bldg -LEED GGO Architects Community College Classroom Bldg	B57015	NC 2.2	80,000	7/30/2007	7/30/2007 and on S drive	S drive	complete 1/20/09	11.19.08	YES			in construction
62	MCC Emergency Services Tng Ctr. LEED GGO Architects Junior College Building	B58009	NC2.2			2/12/08 and on S drive	S drive	Terry rec'd 2/24/09	Check in file & w/ Lisa, David and Muslim				in construction
42	MCC Science Bldg -LEED GGO Architects Community College Classroom Bldg	B57030	NC2.2	115,000		9/27/07 and on S Drive	S drive	Received 07/28/09 - LS	Yes in file and S drive		Received 07/28/09 - LS	Construction Schedule 9/30/08	in construction
77	Midway ISD Admin Building	B59017	NC2.2			07/09/09 LS: Per Aubrey (Huckabee) still in design phase. Project out for bid Oct / Nov 09.	07/09/09 LS: Per Aubrey (Huckabee) still in design phase. Project out for bid Oct / Nov 09.	07/09/09 LS: Per Aubrey (Huckabee) still in design phase. Project out for bid Oct / Nov 09.	07/09/09 LS: Per Aubrey (Huckabee) still in design phase. Project out for bid Oct / Nov 09.				in design
106	Motel 6 Energy Model	B59008				11/10/2008	11/10/2008						
49	Oakland Toyota LEED Gensler Auto Dealership	B57028	NC2.2		11/15/2007	2/15/08, 5/7/08	2/15/2008		On Hold			LEED OPR, BOD, LEED Credit Check List	in construction
57	Park Lane Condo/Retail LEED PM Realty Group Condo and retail building	B58000	NC2.2	861,789		2/6/2007 and S drive	11/6/2006		Construction Complete			CD w/ Const Drw, Constructors Pics March 2008	in construction
112	Park Lane Condo/Retail Hi Line & Edison LEED PM Realty Group Condo and retail building	B59012	NC 2.2			07/29/09 LS: Project on HOLD. Follow up later in August 09							
123	PepsiCo - Legacy CI	B59021	CI 2.0			4/24/2009	4/24/2009	Received 07/03/09 From FTP. 07/21/09: Received remainder	7/21/2009				
98	Pioneer 360 Warehouses LEED ING	B58048	CS 2.0			2.27.08	11.26.08 & 12.2.08	11.11 gas unit heater	Yes - S drive				
34	Pioneer Parkway Wrhs - LEED CS Halff Warehouse	B58027	CS 2.0	600,000		2/2/2007	3/3/2008	2/2/2007	Construction Complete				completed
31	Plano Environmental Center LEED GGO Architects City Educational Building	B56013	NC2.2		09.28.08	07.31.09 S Drive	10/24/08 & 03/10/09	6/1/07, 12/7/06	Teri Lynn req on 2/5/09 from Gary @ Olp				in construction
55	Pleasant Grove Library LEED Hidell & Associates Dallas Library	B58003	NC2.2			5/1/2009, 1/15/2008	5/1/2009, 2/13/2008	2/13/08, 9/15/08	On Hold				in construction
84	Projecto Legaria LEED Office Building	B58034	C&S 2.0										
132	Ronald McDonald House - Hill & Wilkinson	B59027				Recd 06/17/09	Recd 06/17/09	Recd 06/17/09					
76	San Juan College Learning Center LEED San Jaun College	B58016	NC2.2			FTP and S drive	FTP and S Drive	teri req 2/11/09 from Aaron @ Hidell	On S drive			FTP and S Drive	in design

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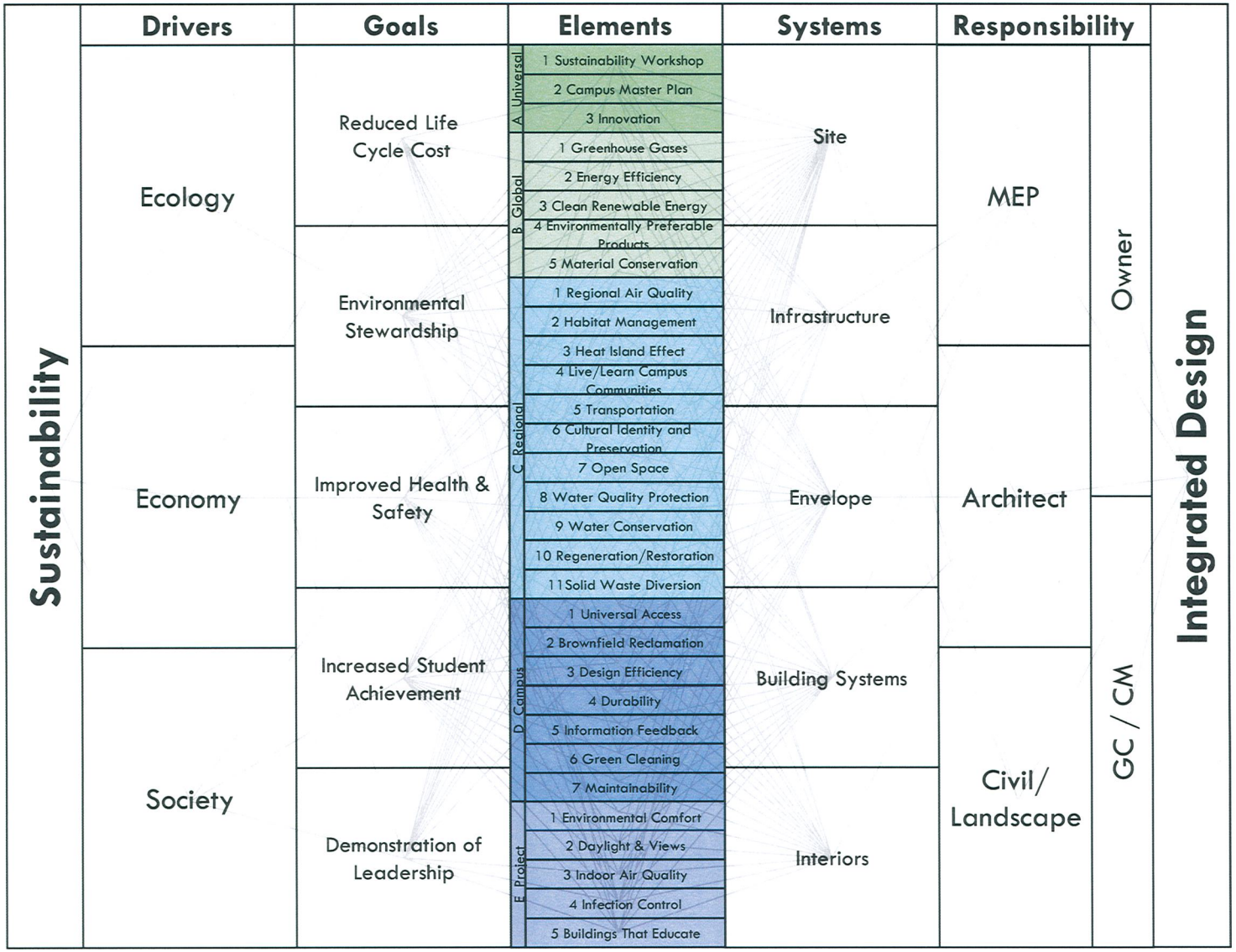
66	Santa Fe Judicial Complex LEED Gerald Madtin CM	B58014	NC2.2		Have 95% set	6/10/2008	6/10/2008	Received 08/03/09	07/20/09 LS: Per Robert (Gerald Martin) construction on hold until Oct / Nov 09				in construction
	Scarbrough Business Park Austin		CS 2.0		Aug-08		7/1/2008						
89	Seton Hays Medical LEED Medical Office Bluilding	B58037	CI2.0	103,037	7/18/2008	8/19/2008	7/18/2008, 8/19/08	07/07/09 LS: Email to Syed (GSR) to follow up. 07/17/09 LS: Follow up eamil	07/07/09 LS: Email to Syed (GSR) to follow up. 07/17/09 LS: Follow up eamil				
66	Sewell Infinity - Fort Worth LEED Sewell Automotive	B58011	NC2.2										in design
107	Springhill Chase Hospitality LEED	B59005	NC 2.2		2/16/2009	MEP	March 24,2009						
105	Southside Wasterwater Treatment Plan MHPM LEED	B59007											
81	St Alcuin School LEED School Addition	B58028	SCH2.1			6/10/2008	6/10/2008	Terry req scanned copies from by 3/13 Jacquelyn	rec 2/9/09				in design
	State Farm Insurance										O & M Manuals		
94	SWA Gen Use Bldg 1 - LEED Admin Camargo Copeland	B58044	NC 2.2			9/28/2008		Partial 1/21/09 see detail list	1.19.09				
133	TAMU - Perkins & Will												
67	Tennyson Place - Plano LEED Gerald Martin CM	B58051	NC2.2	103,861		4/7/2008	Rec April 23 09	Mech 4/28/09					in design
61	Thompson Tax and Accounting LEED Gensler Building Remodel	B58007	NC2.2			3/24/08, 6/06/08, 6/11/08	On drawings	6 Phase Project see detail sheet	April 2009 - Phase I complete has 5 other phases				in construction
48	Torre Reforma 180 LEED PGAL Arch. Office Building	B57027	NC2.2										in design
78	Toyota - Alamo , San Antonio LEED Auto Dealership	B58025	NC2.2	84,506	10/17/08 and S Drive	S Drive and FTP	S Drive and FTP		March 2009 - On Hold			FTP Instructions on S Drive	in design
	Tyler Museum of Art	B58049	NC 2.2		Dated 06.29.09 Hard copy & S Drive		Dated 06.29.09 Hard Copy & S Drive		Estimated Construction Start Aug 2010				
99	Tyler Tech	B58042	CS 2.0			S Drive and FTP	On drawings	Req 11.11.08				FTP Instructions on S Drive	
112	Ursuline Music Hall -LEED Ursuline Academy School Sceince Center	B59009				S Drive3/16/09 and FTP	S Drive 3/13/09 and FTP	Received 07/08/09	Received 07/08/09				In Construction
39	Ursuline Science Building -LEED Ursuline Academy School Sceince Center	C77018	Sch2.1			3/28/2008	5/7/2008	2/12/07, 4/5/07	2/3/2009			FTP Instructions on S Drive	construction
95	UTD Math Eng Ctr Commis -not LEED A&P	B58043				S Drive and FTP	S Drive and FTP	07/07/09 LS: Email to Chad (AP) for update. 07/17/09 LS: Follow up email.	7/17/2009				
75	West Pointe Center LEED Gromatzky Dupree	B58023	C&S2.0	170,631	3/26/2008	MEP 5/20/08, S drive 6/23/08	Terry req on 3/16Teri Lynn req on 2/2/09 from Robert (Cadence) & Allen						in design
	9301 Largo-West Largo, MD	C79011											
	PepsiCo	B59021				5/22/2009	5/22/2009						

Detailed List of Submittals

Category	Description	Blue Cross	GSES	Eldridge III	Caterpillar	E & Y	Haynes & Boone	MCC Classroom	MCC Emergency	Santa Fe	SWA	Thompson Tax Phase 1
Building	Roofing		10/20/2008									
Controls	Building Controls System		11.18.08	12.22.08								
Controls	HVAC Controls and Sequience of Operations	12.22.08			1.28.09 Trane							
Controls	Controls		11/10/2008			2/24/09 Johnson						
Fire	Fire Alarms			12.22.08								
Fire	Fire Protection								2/24/2009 (2 booklets)			
Lighting	Misc Lighting		1.20.09									
Lighting	Lighting Controls					Two submittals 2/24/09	s drive 11/7/08		2/24/2009			
Materials	Paints		1.20.09									
Materials	Entrance Mats		1.20.09									
Mechanical	HVAC/ General Mechanics (Usually in Binder)				1/28/09 Trane	2/24/09 Venture	2/24/09 TD	1/20/09 Two Binders	2/24/2009			Venture 1/26/09
Mechanical	Air Handling Units	12.22.08								12/15/2008		
Mechanical	Air Terminal Units	12.22.08		12.22.08								
Mechanical	Certrifugal Water Chillers	12.22.08										
Mechanical	Cooling Towers	12.22.08		12.22.08								
Mechanical	Exhaust and Vent Set Fans	12.22.08	12.30.08	12.22.08								
Mechanical	Fan Coil Units	12.22.08										
Mechanical	HVAC Purmps	12.22.08		12.22.08								
Mechanical	Heat Pumps								2/24/2009			
Mechanical	Motor Controllers/ Starters	12.22.08		12.22.08								
Mechanical	Roof Top Units	12.22.08	12.2.08									
Mechanical	VAV/ FPB/ OAV Control and room Schedule	12.22.08	12.2.08 & 12.30.08									
Mechanical	Variable Frequency Drives	12.22.08										
Mechanical	Split System		10.17.08	12.22.08								
Mechanical	Duct Work		12.30.08	12.22.08		2/24/09 Venture						
Mechanical	Unit Heaters			12.22.08								
Mechanical	Air Distribution Device			12.22.08								
Mechanical	Heaters, Electric		12.30.08									
Mechanical	Dampers		12.30.08									
Mechanical	Filters		1.20.09									
Mechanical	HVAC Accessories					2/24/09 Venture						
Openings	Door Hardware									12/28/2008		
Plumb	Plumbing Fixtures		12.3.08	12.22.08		2/24/09 Kitchen Faucet	S drive 11/7/08	1/20/ 09 S drive	2/24/2009		1/21/2009	
Plumb	Water Heaters						2/24/2009 TD					
Security												
Security	Secuirty					2/24/09 Zone Leakage					S drive 2/18/09	
TAB	TAB Report					2/24/ 09 from Campos						AET 1/26/09

APPENDIX I

EXAMPLE OF SUSTAINABLE ELEMENTS


Sustainability
Drivers
Goals
Elements
Systems
Responsibility
Integrated Design
Ecology
Economy
Society
Reduced Life Cycle Cost
Environmental Stewardship
Improved Health & Safety
Increased Student Achievement
Demonstration of Leadership
A Universal
1 Sustainability Workshop
2 Campus Master Plan
3 Innovation
B Global
1 Greenhouse Gases
2 Energy Efficiency
3 Clean Renewable Energy
4 Environmentally Preferable Products
5 Material Conservation
C Regional
1 Regional Air Quality
2 Habitat Management
3 Heat Island Effect
4 Live/Learn Campus Communities
5 Transportation
6 Cultural Identity and Preservation
7 Open Space
8 Water Quality Protection
9 Water Conservation
10 Regeneration/Restoration
11Solid Waste Diversion
D Campus
1 Universal Access
2 Brownfield Reclamation
3 Design Efficiency
4 Durability
5 Information Feedback
6 Green Cleaning
7 Maintainability
E Project
1 Environmental Comfort
2 Daylight & Views
3 Indoor Air Quality
4 Infection Control
5 Buildings That Educate
Site
Infrastructure
Envelope
Building Systems
Interiors
MEP
Architect
Civil/ Landscape
Owner
GC / CM

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BIOGRAPHICAL INFORMATION

Teri Lynn Schmig education graduated with a B.S. in Civil and Environmental Engineering and a Minor in from University of Texas at Arlington in May 2007. In August of 2009, she earned a M.S. in Civil Engineering with an emphasis in Construction Management.

Teri Lynn is the owner of Star Enterprises LLC, a specialty construction supply company in the DFW area. She is also a contractor for Facility Performance Associates and Building Solutions Inc. as an LEED® analyst and project coordinator.

Teri Lynn worked as a contract project engineer from April 2007 to June 2008 with Manhattan Construction Company on The Cowboys Stadium in Arlington, Texas. Her position gained her the knowledge of the miscellaneous metal division which has led her to start her own NTCRCA certified Women Business Enterprise (WBE) company. Her company is also in the certification process for Historically Underutilized Business (HUB) and Small Business Administration (SBA) certifications.

Teri Lynn has received the Leadership Excellence Scholarship, the Construction Research Center Scholarship, and the Rain for Rent Scholarship. She has served as student officer in North American Society of Trenchless Technology (President 2007/2008), Engineers Without Borders (President 2006/2007), Institution of Transportation Engineers (President 2006/2007), Toastmasters International Public Speaking Organization (Secretary 2007/2008), North Texas Trail Runners Association, and holds a 2nd Degree Blackbelt in Taekwondo.