NCI CHARRETTE SYSTEM GUIDE FOR TRANSIT ORIENTED DEVELOPMENT

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Cover photo: Reconnecting America

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INTRODUCTION

In cities and regions across the country, people are increasingly leveraging public investment in transit to build sustainable, equitable communities. This development approach is commonly called transit oriented development (TOD). TOD is typically defined as more compact development within easy walking distance of transit stations (typically one half mile) that contains a mix of uses such as housing, jobs, shops, restaurants and entertainment. TOD is really about creating walkable, sustainable communities for people of all ages and incomes and providing more transportation and housing choices, such as townhomes, apartments, live-work spaces, and lofts. These communities support a lifestyle that is convenient, affordable and active, and create places where children can play and elders can age comfortably.

Contra Costa Transit Village designed by charrette

However, planning and building TOD can be complicated. It involves a large number of people and information variables. TODs propose to bring together an array of transit and transportation modes, a mix of land uses, housing, retail, community services, and public open space within close proximity. Adding to the development complexity, transit agencies, commonly, can only lease their land, creating a challenge for home ownership. In addition, proposed TODs are often located adjacent to or within existing neighborhoods, many of which are wary of potential disruptions related to traffic and potential gentrification and affordability issues. How can the sponsors of a TOD navigate this challenging gauntlet and create a project that positively transforms the community?

Many people still fear that broad collaboration only leads to endless meetings and long, expensive project time lines without anything ever getting built. How can collaboration be managed to create success for all stakeholders involved in the project process?

Increasingly, project leaders are realizing that the best way to achieve a successful built project is for all of the various parties involved in a TOD to work collaboratively. However, many people still fear that broad collaboration only leads to endless meetings and long, expensive project time lines without anything ever getting built. How can collaboration be managed to create success for all stakeholders involved in the project process?

This guide describes a proven solution and is written for anyone actively involved in a transit oriented development project. Its purpose is to show how everyone involved in a TOD project, from the project sponsor to the community-at-large, can work together to produce an exemplar project in a timely manner. It describes a step-by-step holistic, collaborative process that results in the adoption of a plan, leading to project implementation. This process, tailored herein for TOD projects, is called the NCI Charrette System™. Benefits of this process include that it saves time and money through compressed work sessions and short feedback loops and increases probability for implementation through an integrated team design approach that includes all decision makers. In this document we will present the NCI Charrette System™ for TOD phase-by-phase, show several TOD case studies that were designed using a charrette, and review a selection of high-tech planning tools that can be especially useful during charrettes.

Charrettes are different than other types of public design workshops. According to the National Charrette Institute (NCI), a charrette is a collaborative design event lasting five to seven days. A charrette fosters community ownership of a project by including stakeholders before the start of design and maintaining inclusion in the process going forward throughout the evolution of the plan for the TOD. During a charrette, a multidisciplinary charrette team consisting of consultants and sponsor staff produce a physical community plan and necessary policies. This is done in close consultation with the community through a series of feedback sessions. The goal

of the charrette is to create a feasible plan that will require minimal rework through approvals and implementation. This requires careful charrette preparation that assures that all the right data and all the right people are involved in the charrette feedback sessions. Key to the NCI Charrette System™ is the careful orchestration of a series of feedback/review sessions, or feedback loops, wherein all interested parties are involved at key decision-making points. Involvement in these feedback loops, accomplished through public meetings, workshops and open houses, promotes understanding, involvement and ownership of the TOD plan by all charrette participants.

Throughout this document we refer to a "project sponsor," meaning those who fund and manage the project. Typical transit oriented development project sponsors are one of, or a partnership among, the following: transit agencies, local planning agencies, regional planning agencies, developers, community-based organizations. In a typical project, the sponsor hires consultants to plan and run the process. More often than not, the lead consultant is a planning or architectural firm that contracts with a set of sub-consultants who provide expertise in such areas as stakeholder outreach, economics, transportation, and the environment.

WHAT ARE THE BIGGEST CHALLENGES TO USING A CHARRETTE?

Gaining and maintaining commitment to engage the whole community.

Long-term project success is dependent on gaining support from everyone involved- community members, staff, and elected officials. This requires a special effort that begins early and extends throughout the life of a project. Public involvement is commonly challenged by budget constraints, and is often the first task to undergo cuts. Charrettes have a solid track record, but only when all community viewpoints are present. It is crucial to resist the pressure to cut funding for this effort. Successful charrettes require a comprehensive public involvement plan to ensure the maximum support for the plan by all stakeholders.

Gaining the participation of elected officials and other decision makers.

Charrette projects build support every step of the way through early and frequent stakeholder involvement. Decision makers are key to the success of this process. People in executive level positions sometimes choose to maintain a political distance from a charrette. There are various strategies to engage these important individuals including peer-to-peer education. The same strategy holds as for other stakeholders in that they must see a potential "win" in order for them to make it a priority to participate. The

Community members working together at a charrette in Memphis, TN

Stakeholder Analysis described on page 12 is the first step toward identifying these wins and the strategies for engaging everyone who is key to project success.

Communicating the value of the multiple-day charrette.

The term "charrette" is commonly used to describe a variety of processes, many of them lasting only a few days or even hours. A NCI charrette involves the entire community and seeks to create a detailed, feasible plan complete with implementation strategies and actions. Based on decades of experience and case study research, NCI has found that this level of work cannot be accomplished in less than five days. It may take some education to assure that the project sponsor, primary stakeholders, and community members have a shared understanding of the process and purpose of the charrette. For more information about charrette education including training and resources, see www.charretteinstitute.org.

Describing the process when the term "charrette" is tainted.

In some circumstances it may wise use a term other than "charrette" to describe the process. Some communities have had unsatisfactory experiences with poor process, inaccurately called a charrette. In this case, in which the word is tainted, another term such as "public design workshop" should be used. Although the word "charrette" is usually a good marketing term that can grab people's interest, in some places it may also be a distraction. The term is less important than using the right process.

Coordinating the charrette with the official approval process.

Although the ideal is for a charrette and the formal approval process to happen together, they are usually separate processes. In this case it is important that the charrette address all design issues and key agreements that will be part of the official approval process. With these agreements, and with the community's support, the approval process should proceed smoothly.

Managing the inclusion of a developer in public agency sponsored charrettes.

There can be an advantage to including a prospective developer in a charrette. Developers bring a reality check for feasibility to the project. However it can be a sensitive issue for a public agency to include a developer. In the case in which the developer has been formally selected to do the project they should be full participants as members of the project team. Otherwise, prospective developers can take an advisory role. -

THE NCI CHARRETTE SYSTEM™ OVERVIEW

The NCI Charrette System™ is a three-phase, accelerated, collaborative project management process during which a multiple-day charrette is held as the central transformative event. It is a systemized yet flexible approach designed to assure that the right people and the right information are available at the key decision making moments in project planning. The three phases of the NCI Charrette System™ are (1) the Research, Education and Charrette Preparation phase, (2) the Charrette, and (3) the Plan Adoption phase.

PHASE 1: RESEARCH, EDUCATION AND CHARRETTE PREPARATION

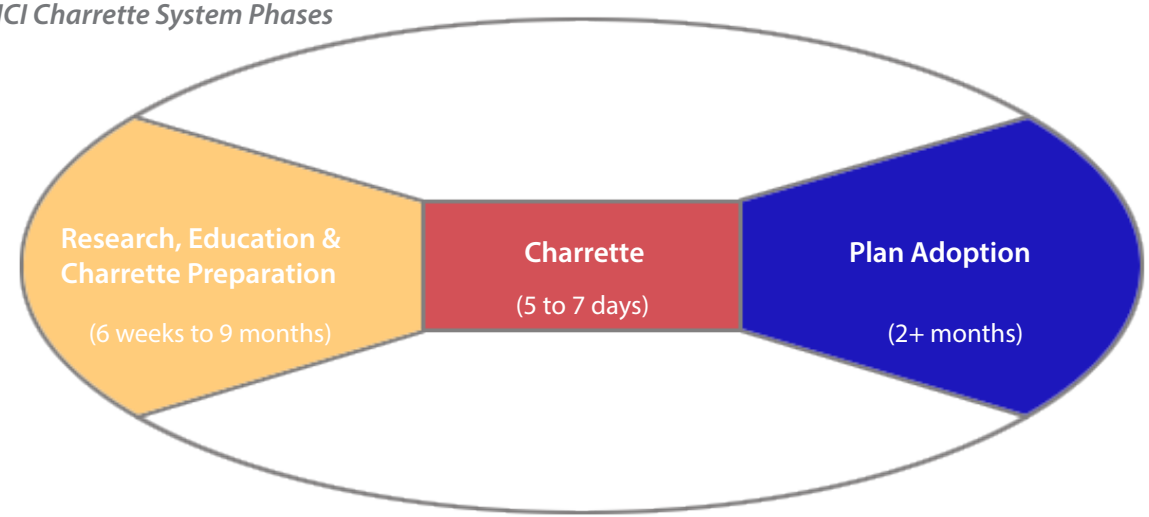
Phase one commences a project and can last anywhere from 6 weeks to 9 months on average, depending on the political and/or technical complexity of the project.

The goals of phase one are to:

- Gain a shared agreement between project sponsors regarding the project purpose and process
- Identify and involve agency and community viewpoints
- Gather necessary base data
- Create a positive political environment
- Complete charrette logistics preparation

Phase one consists of everything that must be done before a charrette begins. This work includes project assessment, organization, base data research and analysis, education, and logistical arrangements.

NCI Charrette System Phases



- **Project assessment** includes the identification of the guiding principles, project objectives, key stakeholders and charrette goals.
- **The organization tasks** are focused on the creation of a project roadmap that charts the main tasks, schedule and responsibilities for the entire project.
- **Base data tasks** assure that all relevant analysis and information is available to the team during the charrette. Any shortcoming in this area may compromise design accuracy that can result in costly rework and a waste of limited resources.
- **Education and outreach** assure that everyone involved in the project has a shared understanding of the project purpose and process. This begins with the core project team and extends to project partners and community members. Education also involves the sharing of values and needs of all stakeholders.
- **Charrette logistics** include all arrangements for the charrette team, the charrette venue, or studio, and charrette schedule activities.

PHASE 2: THE CHARRETTE

The charrette is the creative, transformative event of the NCI Charrette System™. It occurs after the completion of the Research, Education and Charrette Preparation phase. The goal of the charrette is to produce an exemplary,

feasible plan with minimal rework that benefits from the support of all stakeholders through its implementation. This support is facilitated by the ability of the charrette to transform the mindsets of all stakeholders. The charrette lasts between five and seven days. A multidisciplinary charrette team, consisting of consultants and sponsor staff, produces the plan. Stakeholders– meaning anyone who can approve, provide valuable information, promote, or block the project, as well as anyone directly affected by the outcomes– are involved through a series of short feedback loops or meetings. The relationship between the community and the charrette team is somewhat like the passenger to the taxi driver. The community is like the passenger who tells the experienced taxi driver where she wants to go. The taxi driver is trusted to know the best way to get there.

A NCI charrette makes the best use of people's time by involving them when their input will have the greatest impact. No one should feel left behind or undervalued.

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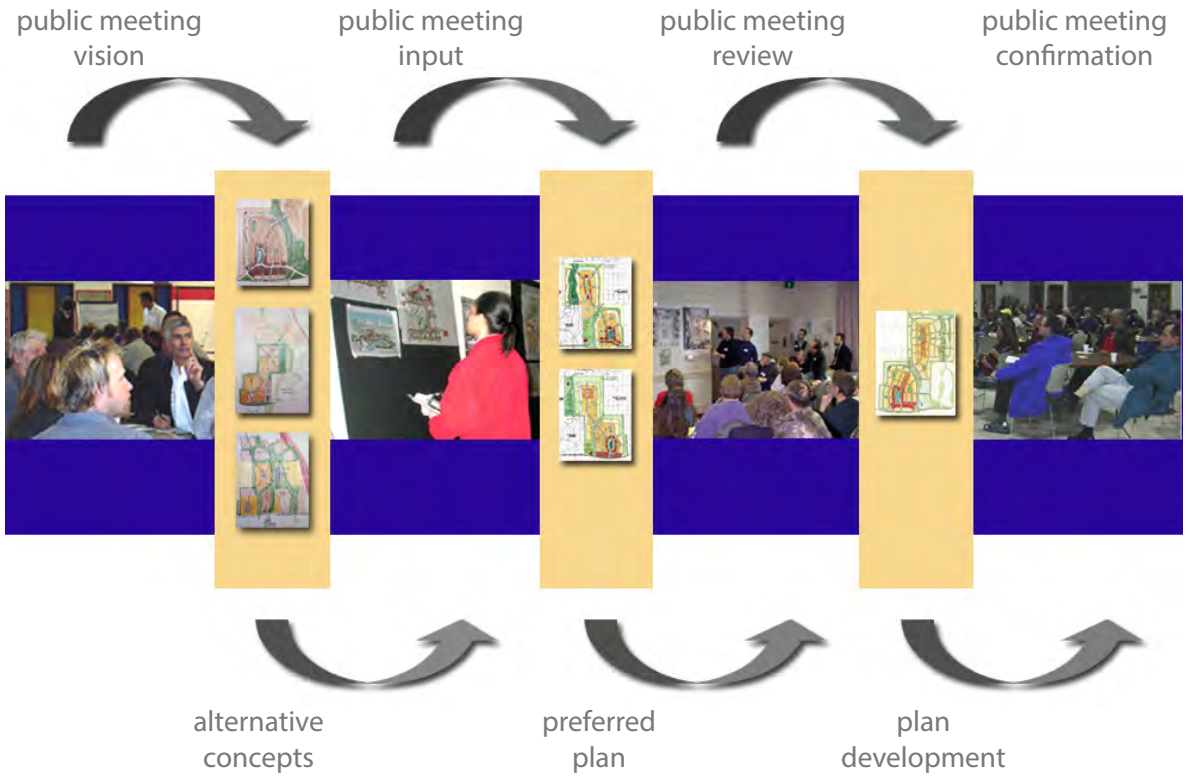
It is challenging to conduct a fully collaborative process and avoid a series of endless, tiring meetings. The NCI Charrette System™ makes the best use of people's time by involving them when their input will have the greatest impact.

Some people attend more meetings than others but all are consulted during open design review sessions at key decision moments. These review sessions are called feedback loops. These feedback loops provide the consultant team with the information necessary to create a feasible plan. Just as importantly, they allow stakeholders to become co-authors of the plan so that they are more likely to support and help implement it.

A charrette has at least three feedback loops. The experience of many charrette practitioners has shown that this is the minimum number of interactions necessary to take a group of

NCI Charrette Work Cycles



stakeholders through a complete design process. The first feedback loop is to review a large group of alternatives, the second is to review a preferred plan, and the third is to review the fully developed and tested plan. It takes at least this much interaction with people to gain their input and support for a plan.

A key reason that a charrette needs to be at least five days is to accommodate the three feedback loops. Five plus days are also required to accommodate both the scheduled and the ad hoc meetings with the large number of stakeholders common to TOD. Finally, the complexities involved in designing TOD require extra time.

Note: a full description of the NCI charrette is included in the following section.

PHASE 3: PLAN ADOPTION

The goal of the plan adoption phase is to document the entire project process, test and revise the charrette plan, and guide the plan through any required adoption processes. This can be a very volatile period for a project. After a charrette, it is easy for a project team to take their attention off of the project because the charrette seemed to go so well and/or they have to attend to other projects that have been neglected during the charrette. A period of post-charrette "dead-air" is an invitation for others who may oppose the project to dominate the discussion, often with false information. The activities for this phase are partially aimed at avoiding "post-charrette meltdown" that can occur either because of feasibility issues and/or because of political opposition. Tasks during this phase include stakeholder communication, charrette product review and refinement and stakeholder/community review. It is therefore advisable to hold at least one follow-up public meeting during the post-charrette phase.

WHY USE THE NCI CHARRETTE SYSTEM FOR TOD?

1. - Charrettes promote broad, consistent participation
2. - The NCI Charrette System™ is well-suited for complex TOD projects
3. - The NCI Charrette System™ guards against project failure

Charrettes promote broad, consistent, and meaningful participation

A key to project success using the NCI Charrette System™ is giving people a reason to participate in pre-charrette and charrette meetings. There are two parts to a successful public meeting process. The first is to convince people that it is worth their while to come to a meeting. The second part is delivering on your promise by making the meeting meaningful and important enough for them to come to more meetings.

The first part begins with an understanding of participants' underlying issues. This understanding is developed during the stakeholder analysis as part of project assessment, step one of the first phase of the NCI Charrette System™ (see page 10). It is then during the

Once people experience a charrette hands-on session or pin-up review they realize that this is not planning (or meeting) as usual.

stakeholder outreach and engagement effort, months before the charrette that concerns about participation are addressed and interest in meeting attendance and participation is fostered.

For public meetings to be successful they must be well-planned and facilitated. Once people participate in a charrette hands-on session or pin-up review they realize that this is not planning (or meeting) as usual. The process demonstrates a value for people's participation by asking what matters to them BEFORE starting the design process, and then by involving them in the evolution of that design. This process can change people's perception of how a public meeting can work. Through a charrette, people learn the interrelated workings of transit oriented development, such as the connection between street design, building design and placement, and walkability. It is during charrette feedback loops that people may begin to change their perception of potential project outcomes and therefore their position on the project. All of these factors add up to an event that fosters and maintains participation.

One of the first tasks in a charrette project process is for community members to create a vision for the TOD plan. This vision is an expression of values and needs. The resulting plan addresses

these vision elements thereby establishing a meaningful connection between community needs and the planning effort.

Pre-charrette project assessment tools are designed to uncover issues present in which people are suspicious of the process either due to a fear of losing power or because they see a better way to achieve their personal goal. These issues are addressed though interviews and meetings and perhaps conflict resolution intervention. The goal is to help people see that the charrette process creates a safe environment for them to participate.

The NCI Charrette System™ is well-suited for complex projects like TODs

TODs often have a complex political and stakeholder context. There are commonly multiple project partners including transit agencies, state, local and possibly federal transportation departments, local planning agencies, metropolitan planning organizations and developers. Multiple partners, each with their own agendas and policies, require extra resources to manage as they work toward shared agreements. TODs also come with an involved set of community advocates each with their own, often-conflicting, agendas.

The NCI Charrette System™ Stakeholder Analysis identifies all key stakeholders along with a strategy for how and when they are involved. Special pre-charrette information sessions and stakeholder interviews and meetings are conducted to resolve any critical issues such as conflicts between commuters and neighborhood members or even between government agencies.

TOD also presents particularly complex design problems. Perhaps no other type of project involves so many modes of transportation including rail, bus, walking, cycling and others. This intersection of transportation modes presents planners with a large set of often conflicting and overlapping programs and needs that interface with design and development. It is for this reason that TOD charrettes are staffed by a multidisciplinary team that typically includes engineers, designers, planners, economists, environmentalists and others.

Charrettes transform community opposition to support

Charrettes facilitate project implementation leading to economic development

Charrettes solutions are rooted in feasibility. Every TOD charrette should have an economic development expert on the consultant team to assure that the plan supports an economic development strategy.

Charrettes are especially effective for site-specific development proposals

Projects that involve current development proposals are especially appropriate for charrettes. Charrettes bring together a multi-disciplinary team necessary to study the detailed aspects of site development.

The NCI Charrette System™ guards against project failure

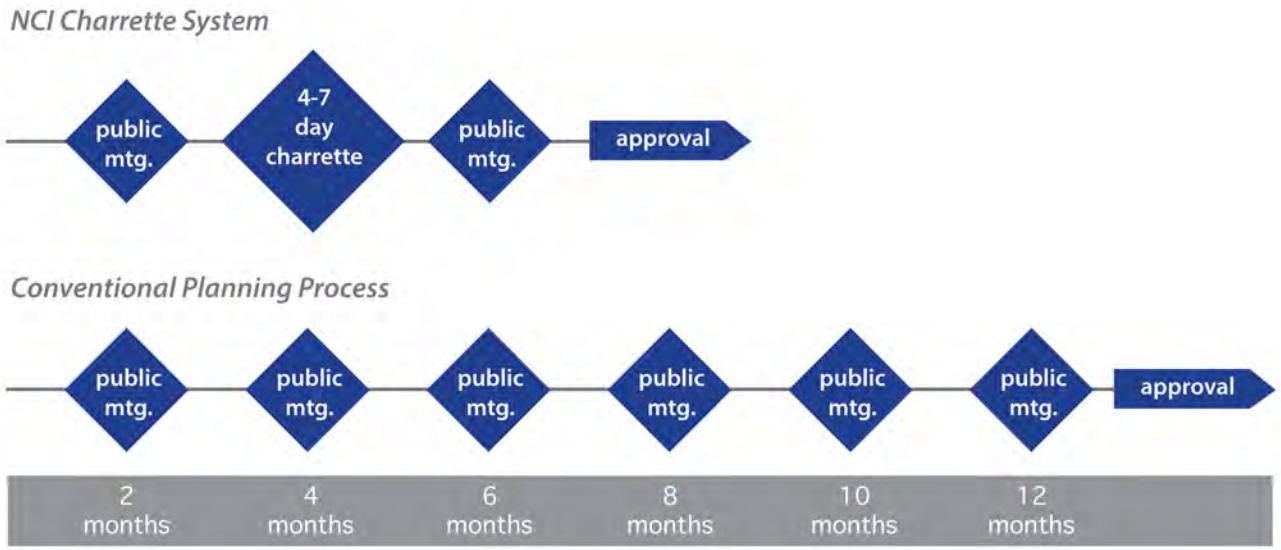
The most common reasons projects fail are:

- an unclear project mission
- lack of commitment or resources for community outreach -
- poor data
- lengthy project time lines

In the case of an unclear project mission, often the project sponsor does not have, and/or does not communicate, a clear project mission, guiding principles and desired outcomes. This absence of leadership and clarity of purpose will cause stress on the project process. Team member relations and communication can become dysfunctional

and create opportunities for stakeholders/ community members to undermine the planning process and the project. During a NCI Charrette System™ project, the project sponsor and partners co-author a set of guiding principles, objectives, and performance measures (e.g. return on investment, transportation mode splits, and housing mix) that sets a unified team approach with a clear project purpose to keep the project on track.

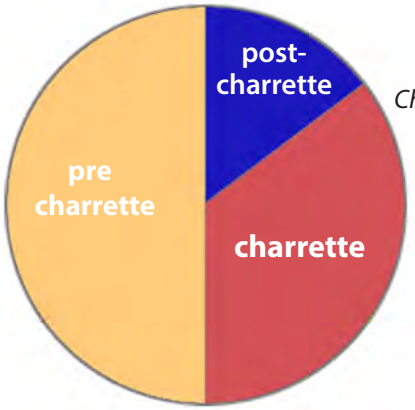
Community involvement and support is a requirement for project success, particularly for large complex projects. The NCI Charrette System™ uses a broad definition of "stakeholders" that includes all decision-makers, people with valuable information (usually technical), people affected by the outcome, and potential supporters, as well as potential blockers. If these stakeholders are not brought into the process early, the project may risk a fatal design flaw and/or the likelihood of some people blocking its adoption. When people do not trust that their input will have an impact on the outcome, they may resort to tactics designed to obstruct the process. Project sponsors must devote the necessary resources for conducting effective outreach and relationship building. Key stakeholders must be identified early on and a plan created for their inclusion throughout the project process. It is especially important to attend to those historically left out of the process- the under-served and disenfranchised populations, not forgetting the young and the old.



Charrette save time and money when compared to conventional endless meetings

Another factor that can lead to project failure is incomplete or flawed base data research. While this is a seemingly obvious part of any project management process, it is often overlooked for lack of time or resources. It is not uncommon for a project team to assume that existing data is correct and sufficient when actually it may be outdated or lacking in detail. Design that is based on incomplete or incorrect data requires rework, costing time, money, and trust in the process by stakeholder at large. Data must be collected and verified prior to the start of the design process for a fully informed, and therefore implementable, plan to emerge.

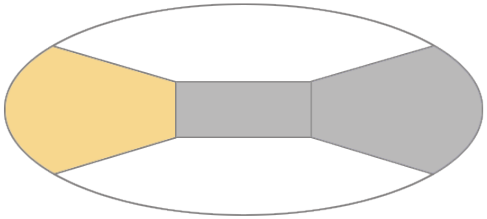
Finally, the passage of time works against project success. TOD projects particularly often take a number of years to build, during which time new players, from elected or appointed officials to community members, become involved as leadership changes. However, they often lack an understanding of the project and its history. In the worst cases, this leads to restarting a project from scratch. When projects take a long time to implement they can simply lose momentum and the support they once had. During a typical planning process people can become fatigued with seemingly endless numbers of meetings held over months or years, loose faith in the process and become disinterested in the project. The NCI Charrette System™ shortens project time lines by reducing rework and through the use of the accelerated charrette event itself.



Typical NCI Charrette System™ projects allocate 50% of the project budget for research, education, and charrette preparation

HOW MUCH DO CHARRETTES COST?

The charrette event cannot be separated from preparation and implementation phases for the total project. Therefore, it is not possible to budget for a charrette in isolation. The cost is completely dependent on project scale and complexity, how much preparation work has to be done, available resources, data collection, studies to be completed, and the scale of stakeholder outreach and engagement. TOD projects tend to require significant existing conditions and base data research. This pre-charrette work can consume up to half of a project budget. The multiple-day charrette itself can cost anywhere between a quarter and a third of the budget to complete the TOD plan, excluding engineering and construction. A key step in establishing the project budget is to first plan the project process using the NCI Charrette System™ assessment and organization exercises during the Project Start-up Intensive (page 10). In particular, the Charrette Purpose and Products and Charrette System Roadmap, which define the project deliverables and scope of work, provide the information necessary to conduct a reasonable estimate of the project budget.



Charrette System Phase 1:
Research, Education and Charrette Preparation

CHARRETTE SYSTEM PHASE 1: RESEARCH, EDUCATION AND CHARRETTE PREPARATION

1.1 Project Assessment and Organization

Step One: Project Assessment

How do you know if a charrette is the right process for your project?

Despite their effectiveness for TODs, charrettes are not necessarily the optimal approach for every project. Before deciding to proceed with a charrette, the project sponsor should conduct a review of financial, political and technical opportunities and challenges. The following are important questions to consider in deciding if a charrette is the best process for your project:

Does the project represent a complex design problem requiring the viewpoints of multiple technical specialists?

Complex design problems require the collaboration of multiple disciplines. The charrette creates a generalist approach out of a group of specialists and is very well-suited to address complex technical and design problems. If the project is quite small and the design problem is straightforward without complexities, a charrette will not likely be necessary.

Does the project involve a large set of diverse stakeholders with divergent views?

Charrettes are well suited to deal with complex political environments. However the following two questions are key in determining the political feasibility of moving forward with any collaborative process.

- **Will the key stakeholders participate in the process and the charrette fully and in good faith?** A common reason for charrette failure is that people who are central to project success refuse to participate. A key part of the stakeholder outreach and engagement process is to meet with these people to gain their commitment to participate. Parties that are a world apart on issues (that may be unrelated to the charrette) may not be willing to participate. It may be impossible for them to focus on the charrette project until the issues are resolved. This may require a separate consensus building or conflict resolution processes prior to launching into a charrette.

- **Are there political and/or relationship issues that must be resolved before a charrette can begin?** An effective way to achieve clarity on these questions is to have small group or one-on-one conversations with people who represent the complete set of viewpoints within the community. The size of this group varies with the project but a good rule of thumb is between 15 and 30 people. A good test to see if you are reaching the right people is to ask each person if there is anyone else you should be talking to. Following the interviews, the sponsor can decide if there are any required informational events, personal outreach efforts, or meetings to assure full participation in the charrette.

Will the project budget support the resources necessary to prepare for and conduct a charrette?

It is crucial to consider the project budget when deciding whether or not to use a charrette. In addition to the charrette event, there must be sufficient budget to conduct stakeholder outreach and education along with the base data gathering required before the start of a charrette.

Step Two: Project Start-up Intensive

Once it is determined that a charrette is the correct approach, project assessment and organization can begin. The NCI Charrette System™ begins with a "project start-up intensive" meeting, during which the following project assessment and organizations exercises are completed: Guiding Principles, Objectives and Performance Measures, Stakeholder Identification and Analysis, Charrette Purpose and Products, and the Charrette System Roadmap. The purpose of this meeting is to assure a solid basis for project success by gaining a set of shared agreements between the project sponsor, partners, and consultants, creating a collaborative team approach that will carry the project through

the myriad of challenges toward implementation.

Who attends the project start-up intensive?

The project start-up intensive is a meeting or series of meetings with the TOD project team: the project sponsor(s), lead consultants, and partnering agencies. For example, the project sponsor might be the regional planning agency, in partnership with the city development commission, the regional transportation agency, and the local government housing authority. Also in attendance would be the lead consultant, including team members representing the specialties of planning, urban design, transportation, development, etc. Either the project sponsor's staff or consultant typically facilitates the meeting.

During the project start-up intensive, TOD project team members develop a shared agreement on the project purpose, scope and process using the following five exercises. These agreements describe the basic terms of the project that define the schedule and budget. In completing this work, the project team lays the foundation for a shared team approach wherein everyone shares and supports the project process.

Project Start-up Intensive Exercise One: Guiding Principles

The meeting begins at the biggest picture level of work, focusing on the Guiding Principles, which represent core values that guide decision making throughout the planning and implementation of a project. Guiding Principles keep the project team and charrette participants on task, are used to resolve conflicts of opinion and help avoid costly rework and unnecessary effort that stems from following tangents to the core purpose of the project. Ideally, Guiding Principles are written in a way that decisions can be tested against them. Sometimes a community has a set of Guiding Principles embedded in their comprehensive or general plan. But, it should not be taken for granted that everyone understands, owns or even knows these principles. In this case, content from the comprehensive plan can serve as a starting point for this exercise.

The Guiding Principles Exercise can be conducted with any person or group whose support is crucial to the project. At minimum, it is necessary that the TOD project team agree on guiding principles. Once crafted, the principles can be taken out to other groups and to the community-at-large to verify, modify and take ownership of them.

Exercise Instructions:

Each person begins by writing four or five principles, one on each sticky note. The first person finished writing quietly posts his/her stickies on the wall in a horizontal row. The next person follows by placing any stickies vertically below any sticky with similar principles. Any new ideas are added to the top row. After everyone has completed their exercise, the facilitator starts reviewing the longest column, which has the most common ideas. The group writes a Guiding Principle for each column. A good way for the group to work toward the level of guiding principle is to ask "why." For instance, why is it important that the TOD have a mix of land uses? Asking why takes the conversation to the principle level.

Example Guiding Principles:

- The project will create a seamless pedestrian and cycling greenway connection to the region
- The project will provide housing choices for a variety of age and income groups
- The project will provide a destination place to serve the surrounding neighborhoods -

Project Start-up Intensive Exercise Two: Objectives and Performance Measures

Using the Objectives and Performance Measures Exercise, the TOD project team creates a shared agreement on a set of clear, specific, measurable, and achievable objectives for the project. These objectives are directly derived from the Guiding Principles. Establishing a set of measurable objectives helps make the charrette process more open and builds trust between public and private parties. A goal of this exercise is for the team and eventually all stakeholders to understand and own the Objectives and Performance Measures. The Objectives and Performance Measures ultimately find their way to the charrette where they serve as a set of metrics or indicators that are used by the charrette team to qualify and quantify the performance of alternative plan concepts. It therefore becomes an invaluable document for validating the charrette decision-making process and explaining it to those who enter the process at a later date. As with the Guiding Principles, the Objectives and Measures, following their initial development in the project start-up intensive meeting, are taken out for validation by other stakeholder groups and eventually the community.

Example Objectives and Measures:

Objective	Measure
Improve pedestrian, bicycle and vehicular safety, especially in relation to pedestrian/vehicle interactions	• Traffic speeds • Pedestrian crossing distances
Treat storm water on site	• Acreage of natural filtering area
Provide for affordable housing	• Housing prices as percent of median income
Economic feasibility	• Project proforma, ROI (return on investment)
Provide easy, safe access to the regional trail system	• Number of connections to trail • Number of dwelling units and jobs within 1/4-mile walk of transit station

Exercise Instructions:

The group first creates a list of categories such as transportation, environment, housing, economics, market, etc. Using these categories as a reference, each participant writes down at least four or five objectives. Each person should write at least one objective outside of his/her specialty. The facilitator then works with the group to create a matrix of objectives along with each performance measure. *See example table above.*

Project Start-up Intensive Exercise Three: Stakeholder Identification and Analysis

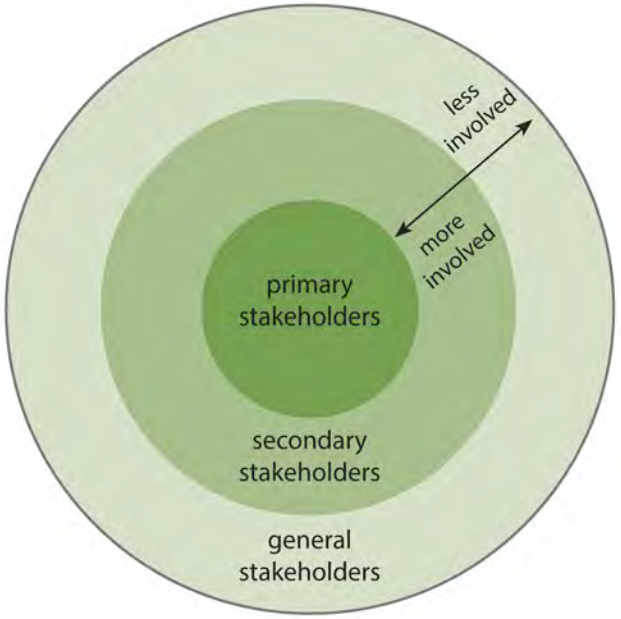
The primary purpose of the Stakeholder Analysis is for the project team to arrive at a shared agreement on the commitment and approach to stakeholder involvement. It is important to address this early on and resolve any differences of opinion about who will be involved and how. The Stakeholder Analysis describes an initial plan for engaging key people and organizations, with special attention to achieving environmental justice and social equity.

The analysis must address the inclusion of low income and minority individuals and underrepresented communities/groups that are too often left out of community planning processes. Gaining the participation of these stakeholders is not always easy. They need a safe process that is worth their time- meaning that they can participate without fear of losing power. It is worth their time if they perceive that they can have an impact on the outcome. It is also worth their time when the process is well designed to minimize rework, as opposed to the "endless meetings" process.

NCI defines "stakeholder" in the broadest terms. The NCI Charrette System™ identifies three circles of stakeholder involvement. The primary stakeholders are in the inner circle and attend the most meetings. Secondary and general stakeholders attend progressively fewer meetings. While these categories do roughly indicate the amount of involvement, they must not become an elite hierarchy. In order to make the best use of people's expertise and time, some will attend more meetings than others. The point however, is that all stakeholders are involved at the moments of key decisions, such as the analysis of alternative concepts and review of the preferred plan. Everyone should feel satisfied with their level of involvement and trust that their input can have an impact on the outcome.

The level of involvement by community groups varies with each project. The NCI Charrette System™ assures that all stakeholders, especially community groups, are involved at key decision points. The working group model, described on page 18, also assures that community representatives are included in a key advisory role.

Stakeholder levels of involvement



All are involved at key decision points

Example Stakeholder Levels:

Stakeholder Level	Example Positions	Suggested Involvement
Primary	Project sponsor, local planning agency, transit agency, regional or metropolitan planning agency, lead consultants, transportation agencies, local development commission, public health agency, designated developers, community groups.	Pre-charrette organizational meetings, interviews, all public meetings, invited design reviews during the charrette
Secondary	Non-governmental organizations: neighborhood groups, housing authority, environmental advocates, non-profit housing agencies, faith-based, social service agencies, chamber of commerce, schools (kids!).	Pre-charrette interview, presentations at their regular meetings, all public events, charrette studio drop-ins and possible design reviews during the charrette
General	Community members	All public events, charrette studio drop-ins

Note that the example positions can change depending on the project. For example, in one project a community group may be at the primary level because of their position as a co-sponsor. In another project, the community group may be in the secondary or advisory position. For example, in one project a neighborhood group may be at the primary level because they are a co-sponsor. In another project they may be in more of a advisory position at the secondary level.

The Stakeholder Exercise:

During the project start-up intensive meeting, the project team creates an initial list of stakeholders who must be involved to assure project success. The group identifies the relevant stakeholders, appropriate involvement for each, and a strategy for getting them to participate in the process. This is a very valuable exercise for testing the group's values in regard to collaboration. The process of creating the stakeholder list requires that the group come to agreement on who is involved and when. It is important early on to uncover any differences in opinions on the level of involvement for one particular person or group. When left unresolved, these differences have the potential to create political problems later on. A clarifying question to ask when the group does not agree on the inclusion of a stakeholder is "do you run the risk of substantial rework if their involvement is delayed?" If the answer is yes then it is wise to bring them in early and often.

A full discussion on conducting stakeholder outreach and engagement is contained on page 17.

Exercise Instructions:

See example Stakeholder Analysis chart (on page 14). First, under the guidance of the meeting facilitator, the TOD project team creates a list of stakeholder viewpoints essential to a holistic process. They then identify the people who best represent each viewpoint and additionally list the people who must be involved because of their special relationship to the project. The group identifies the issues that are important to each person and the viewpoint they represent and then works to establish what constitutes "a win" for each person/group to be involved in the charrette. The win describes an underlying need such as neighborhood safety or local services. The win will become central to the stakeholder outreach and engagement effort. Communication of the wins can be the enticement to get new faces at the meetings. The last two columns describe the outreach strategy and the degree to which people may participate in the charrette.

Make sure that your Stakeholder Analysis includes the following categories of people:

1. **Decision makers.** If decisions are being made in any given meeting, decision makers need to be present. Decision makers might be agency and departmental managers or local elected officials who approve plans, zoning and public finance. They might be the head of the transit agency that approves a project on transit agency owned land or a developer who may decide on financing for a project.

2. **Those historically left out of the public process.** Hard to reach populations are often "under the radar" and underrepresented in community planning, yet they are often significantly impacted by

planning decisions. These groups must be identified from the outset and special effort made to get them involved.

3. **Those directly affected by the outcome.** Anyone whose property or business is affected should be involved throughout the project process. Those living or working within the project area should also be represented.

4. - **Those who may provide valuable information for the project.** This group usually includes people who are experts in their field. Look to the planning and architecture departments of local colleges and universities for help. Be sure to check if any academic studies have been conducted in the area lately and if so add them to the collection of project base data.

5. **Those who have the power to promote the project.** Supporters too often sit on the sidelines. Stories of successful projects usually include the active participation of one or several project champions. Supporters might be the elected officials or a business association such as the local chamber of commerce.

6. - **Those with the power to block the project.** If there is any hope of gaining the support of opponents, it is better to bring them into the process earlier rather than later.

Example Stakeholder Analysis:

Viewpoint	Person	Affiliation	Issues	Win	Outreach Strategy	Charrette Participation
Elected Official	Lucinda Wallis	Capital County	25 years of controversy, with nothing to show. Wallis is the project "champion".	A plan and codes agreed upon by the developer, and the neighborhood. A bullet-proof public process. A national exemplar project.	Email, phone	Daily team meetings
Elected Official	Henry Robinson	Capital County	Concern about project costs. Interested in a non-controversial outcome.	A project that can be approved supported by neighbors.	Email, phone	Public meetings
Neighbor-hood Activists	Kathy Snodgras, Kris Tal, Terry Jensen	Mid-town Neighbor-hood Association	Deep distrust of City Council and staff. Traffic, visual impacts, property values, safety.	Minimal traffic impacts, maximum housing, low buildings across from neighborhood, pedestrian access, local retail only, no increase in transit parking.	Emails, letters	Separate meeting
Neighboring Commercial Owners	Katrina Moss	Hollywood Boosters	Workers have limited local services.	Compatible uses with existing business, amenities for office workers, traffic management.	Emails, letters	Separate meeting
Developer	Tom Bates, Dick Bernard	Big Sky Development	Last development proposal failed.	Economic and market feasible plan.	Email, phone	Daily team meetings and reviews
Non-profit housing developer	Don Johnson	Upward Housing	Neighborhood opposition	Certainty in the approval process	Emails, phone	Public meetings

Project Start-up Intensive Exercise Four:
Charrette Purpose and Products

During the project start-up intensive meeting, the TOD project team defines the central purpose of the charrette and then list the charrette products. This exercise confirms the team's shared understanding of the process. There may be different ideas in the room about what the charrette should accomplish. Is the charrette purpose to arrive at a vision with implementation plans left for later, or will the charrette address in-depth engineering, financial and political aspects? A seamless team approach for the duration of a project requires that all members of the core project team have a shared understanding of the purpose of the charrette. Once the charrette purpose is decided the team can then move on to create the list of products or deliverables created *during* the charrette.

Exercise Instructions:

The meeting facilitator directs the project team to develop the elements of the charrette purpose. For example, what is the largest charrette product? Is it a master plan or specific plan? Also, what level of work will be accomplished at the charrette?

Example Charrette Purpose Statement:

"The purpose of the charrette is to create a feasible TOD master plan that is supported by the community. The charrette results should provide draft versions of all elements required for the master plan including urban design, transportation, environmental and economics."

Once the group defines the charrette purpose statement, it moves on to create a preliminary list of charrette products organized by category, referring to the Objectives and Performance Measures. They then determine what products must be produced in order to conduct the performance measurements.

Example Charrette Products List:

Product Category	Product Example
Transportation	• Transit system plan • Traffic impact draft analysis • Street sections • Multi-modal circulation and access plan • Commute patterns • Parking plan
Environmental	• Solar studies • Hydrology plan • Wildlife corridor plan • Community health assessment • Brownfields and contamination
Civil	• Storm water management plan • Grading plan
Landscape Architecture	• Parks, open space and trails plan • Park study designs
Urban Design	• Illustrative master plan • Renderings • Detailed special area site plan studies • Building types
Regulatory	• Regulating or zoning plan • Housing plan • Form-based code elements • Enabling legislation language
Economics	• Real estate market conditions • Economic and market feasibility plan • Parcel size and value • Fiscal impact analysis • Project proforma
Social	• Population and household demographics • Social and community resource mapping • Health impact assessment • Major destinations map

Project Start-up Intensive Step Exercise:
Charrette System Roadmap

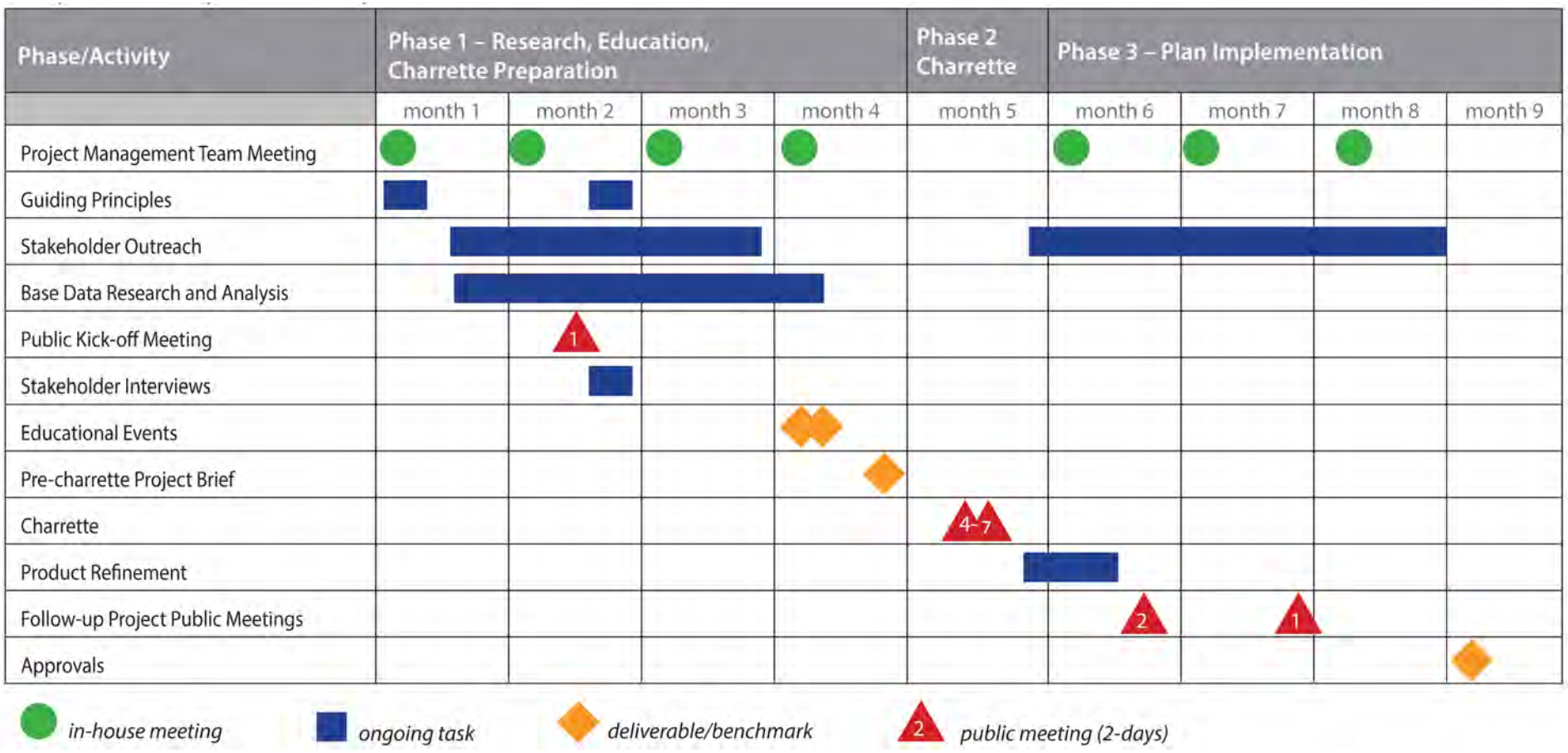
The final task during the project start-up intensive is the drafting of the Charrette System Roadmap, a chart that identifies the critical path activities over the course of a project. The Guiding Principles, Objectives and Performance Measures, Stakeholder Analysis and Charrette Purpose and Products provide the content for the organizational, outreach, education, data gathering and analysis, logistical tasks, deliverables, and events that drive the entire project schedule.

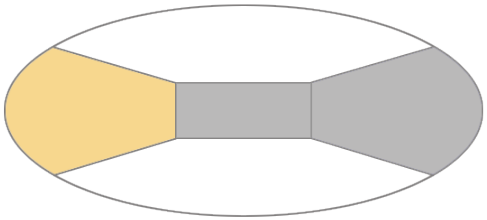
An important purpose of this exercise is to assure that the project team has a shared understanding of the project process and timing. There is no better way to accomplish this understanding than for this group to co-author the Charrette System Roadmap.

Exercise Instructions:

The group facilitator leads the team through the completion of the roadmap wall chart, first listing each phase, activity and deliverable and then working out the time line for each in relation to the others. This exercise is also an excellent way to determine when the team will be ready to conduct the charrette, based on the time line for what must be completed beforehand.

Example Charrette System Road Map:





Charrette System Phase 1:
Research, Education and Charrette Preparation

1.2 Stakeholder Outreach and Engagement

After the completion of project assessment and organization in the project start-up intensive meeting(s), the public involvement process can begin. A public involvement specialist who is a member of the local agency staff, a consultant firm, local non-profit organization, or university typically leads the outreach and engagement effort. In all cases, this person must have a practical, on-the-ground understanding of the community's politics. An effective plan must dig deep into the community, going beyond the usual e-mail lists and official representatives. There must be an effort to identify and engage with the unofficial leaders who are not necessarily visible but who none-the-less have influence within the community. For example, the 85-year-old woman who sits on her porch all day chatting with her neighbors may never have attended a meeting but could be the unofficial neighborhood leader.

The Stakeholder Analysis completed during the project start-up intensive charts the initial outreach process. It must however be viewed as only a starting point. During the outreach and engagement process new information about known and previously unknown stakeholders will emerge. The assumptions contained within the Stakeholder Analysis must be continually checked against incoming information.

A central goal of this effort is to show people that it is worth their time to participate in the project, especially the public meetings and the charrette. The "win" described in the Stakeholder Analysis is an attempt to describe the underlying need for each stakeholder. What is a win for them to participate? In communicating with stakeholders it is important to describe what is in it for them. For some this may mean simply that they are able to contribute to the betterment of their neighborhood. Others may have specific need such as a safe route to school.

Unfortunately, many people will not make it a priority to become involved unless they perceive that the project will in some way make things worse for them. There are other reasons why people may resist being involved. Some may be concerned that their attendance will be taken as support and that they may actually lose power to oppose what they don't like. Others may believe that there are other ways that they can achieve their goals. Having early knowledge that these sentiments are present in a community will allow the TOD project team to reach out to wary individual and groups. A strategy should be developed to engage them in some way to assure them that the charrette is a safe, transparent and inclusive process wherein their participation can have an impact.

Don't forget the kids!
Children often know more about the special places and paths in their neighborhoods than adults, and local schools are often willing to help involve their students in a charrette. Involvement techniques include workshops, art projects, and photo exercises. A presentation by a group of children can be one of the most profound moments of a charrette. Seek out teachers especially in middle-schools who may want to make the charrette a class projects. Involving children may also encourage their parents to attend public meetings. In some cases the children may play the role of interpreter for family members. The inclusion of children humanizes the event, tempers adult behavior and provides good ideas.

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A complete community involvement program includes both broad ranging and targeted outreach techniques.

Broad ranging outreach techniques:

- Posters and ads at transit stations
- Newsletter announcements in local
- Publications
- Public signs/announcements
- Project website that is interactive and allows people to submit comments and ask questions -

Targeted outreach methods:

- Social media to generate interest in the process
- Phone calls to individual stakeholders
- A comprehensive e-mail contact list
- One-on-one meetings with stakeholders
- Confidential Interviews
- Mailings

Reaching and engaging underrepresented populations:

Under-served populations such as low income and underrepresented minority groups require special attention to assure involvement. These groups may not see the need to participate or may even see a risk in participation. The outreach method varies for each community but common approaches include working with faith-based leaders and/or community advocacy groups and social organizations that have working relationships with these populations. It is often required that the first meeting be held in their location in order to make it convenient for broad attendance. Another method includes conducting door-to-door surveys.

Project working groups:

A project working group is another way to effectively engage the community. The job of a working group is to recruit members of the community to attend the public meetings and for the working group to attend the public meetings themselves, assuring the presence of a well-informed, diverse set of participants. This working group is comprised of community members representing all crucial viewpoints such as business, housing, environment, pedestrian and bicycle advocates, faith-based organizations and other interests. This group should also have representation from different geographic areas. Minority and under-served groups must be represented. These working group members gather to work on behalf of the project. They should commit to attend educational sessions and recruit other community members to attend public meetings and the charrette. *Note: beware of politically appointed groups. They do not always truly represent the community.*

Pre-charrette educational events:

It is usually a good idea to hold one or a series of educational events before a charrette. TODs are complex projects and it can take time to properly inform a community about the various subjects they need to understand to be informed participants in the planning process. These educational events can reduce the learning curve and assure a more informed group of participants at the charrette. TOD educational events may include lectures or workshops that

The Use of Social Media for Community Outreach

Opportunities

- Allows organizations to broadcast real-time updates on events, programs, meetings
- Supports rapid dissemination of information; good for outreach -
- Enables two-way dialogue between organizers & stakeholders, and between community members -
- Can be cost-effective and widely accessible

Challenges

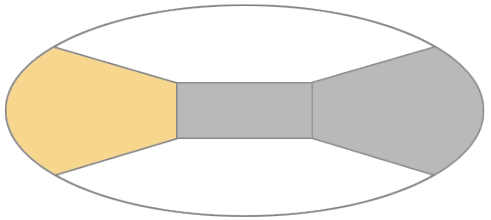
- Better for dissemination of information, not brainstorming or discussion
- Potential problems with digital divide (not accessible to all)
- Not a replacement for face-to-face communication
- Must be carefully managed as part of a holistic communications strategy -

provide information on the nuances of transit in a planning and development project, and provide information on access to housing choices, jobs, education and services from transit. They can also highlight the value of mixed-income communities and equity, and address issues such as crime and displacement related to transit and TOD. TOD projects should endeavor to engage the public on their turf. It is essential that meetings are easily accessible and when necessary held in a neutral location. Project team members should avoid jargon and technical speak when working directly with community members.

Social media and web-based participation tools:
Social media sites such as Facebook and Twitter can be effective tools to gain interest in a project and to inform people. Use twitter to cultivate people and meeting places over time and develop a following. Social media tools may not reach all populations so they should be considered to be one part of a comprehensive outreach plan that includes the aforementioned methods. A primary goal for using these tools should be to get more people to the meetings. Once people have participated in a meeting, then web-based participation tools can be used to continue the conversation. Don't let the technology distract you from the central strategy of public involvement- the development of relationships. You need to talk to the blogger just as you would the editorial board of the newspaper. People without computer access are advised to come to the meetings or to the sponsors office to access information contained on the website.

Project website:
A project website should be created with its own URL address. This allows the project to have its own presence apart from any governmental site. A website is the primary tool by which the project team establishes itself as the go-to source for all information about the project. Following is a list of typical website content elements:

- Project description including sponsor, partners, consultant team, project purpose statement
- What is TOD?
- TOD zoning (if applicable), design principles
- Project process description, schedules, meetings, decision/approvals process -
- Base data reports and research links
- Charrette schedule
- Previous local plans
- Press page, links to press coverage
- Discussion page
- Links to Facebook, Twitter pages for the project -
- FAQs
- Project contacts for questions



Charrette System Phase 1:
Research, Education and Charrette Preparation

1.3 Base Data Research and Analysis

Base Data Research and Analysis is conducted concurrent with the stakeholder outreach as directed by the Charrette System Roadmap. During the charrette, the charrette team needs a complete set of accurate base data and studies in order to complete the charrette products and design the project to the level of detail required to assure feasibility. There should never be a time when a team member says something like, "If we only knew exactly where the electrical utility corridor was located then we could precisely plan the location of the main boulevard," or "If we only knew exactly where the street rights-of-way and property lines were we could determine if the sidewalk will be wide enough for outdoor dining."

Members of a charrette team should be experts on all base data concerning their areas of specialty. Each specialty on the team is responsible for completing, at minimum, an existing conditions analysis prior to the charrette that serves as a guiding document for the charrette team. In addition to the usual site base data, TOD base data may include bus line

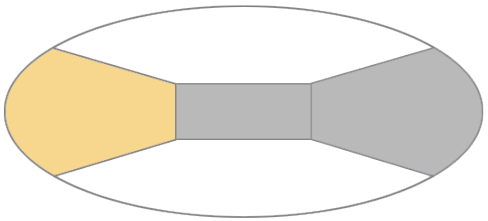
schedules, transit ridership, the relationship of the project station area to the transit corridor and the system, property ownership, local traffic analysis, as well as project market analysis indicating the housing and retail potential for the site.

High tech tools can provide valuable capacity to the base data research and analysis task. For a complete discussion and examples of these tools see the high-tech planning tools section of this guide, beginning on page 47.

In a charrette, a transparent, public flow of information is paramount. It is therefore the responsibility of the charrette team to make sure that the community is given access to all of the base data. At a minimum, all project information, proceedings and research should be posted on the project website. Pre-charrette educational meetings are also a way to present and discuss base data. This is especially true for politically sensitive projects in which there is a history of mistrust between the community and government agencies. In these situations, any action that can possibly be perceived as a "back room deal" can undermine community trust in the process and throw a charrette off course. A transparent decision making process and the posting of all base data and analysis documents are fundamental to a trustful public process.

Typical TOD Project Base Data :

- Bus line schedules
- Transit ridership
- Property ownership map
- Local traffic analysis
- Project housing and market analysis
- Parking utilization
- Market analysis
- Zoning and standards
- Community demographics

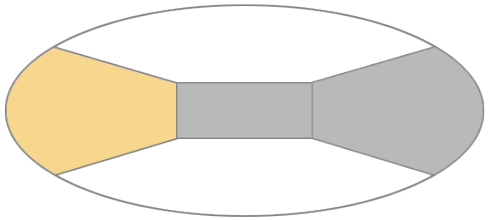


Charrette System Phase 1:
Research, Education and Charrette Preparation

1.4 Consultant Team Formation

The charrette team is the core group of planners, designers, engineers, economists, and others working virtually uninterrupted in the charrette studio, taking a project from a cold start to a preferred plan in a matter of days. Decisions about whom to include on the charrette team can mean the difference between success and failure of a charrette. These talented professionals must be chosen for their ability to solve the design problems and complete the required charrette products and documents through an interactive team process in a public setting. The team is most often composed of consultants but may also include members of the sponsor's staff, such as public agency engineers and planners. The team must include economic and market specialists practiced in TOD projects. TOD real estate development expertise is especially valuable as TODs have a unique market component. The TOD consultant team must include specialists in transit and traffic with an emphasis on expertise in multi-modal transportation engineering.

The charrette team is commonly chosen and contracted through a publicly offered request for qualifications or proposals (RFQ or RFP). In developing the list of required specialties, the project sponsor refers to the charrette purpose and product list and the required base data research. See the Contra Costa Centre Transit Village case study (page 35) for an example in which community members were part of the consultant selection process.



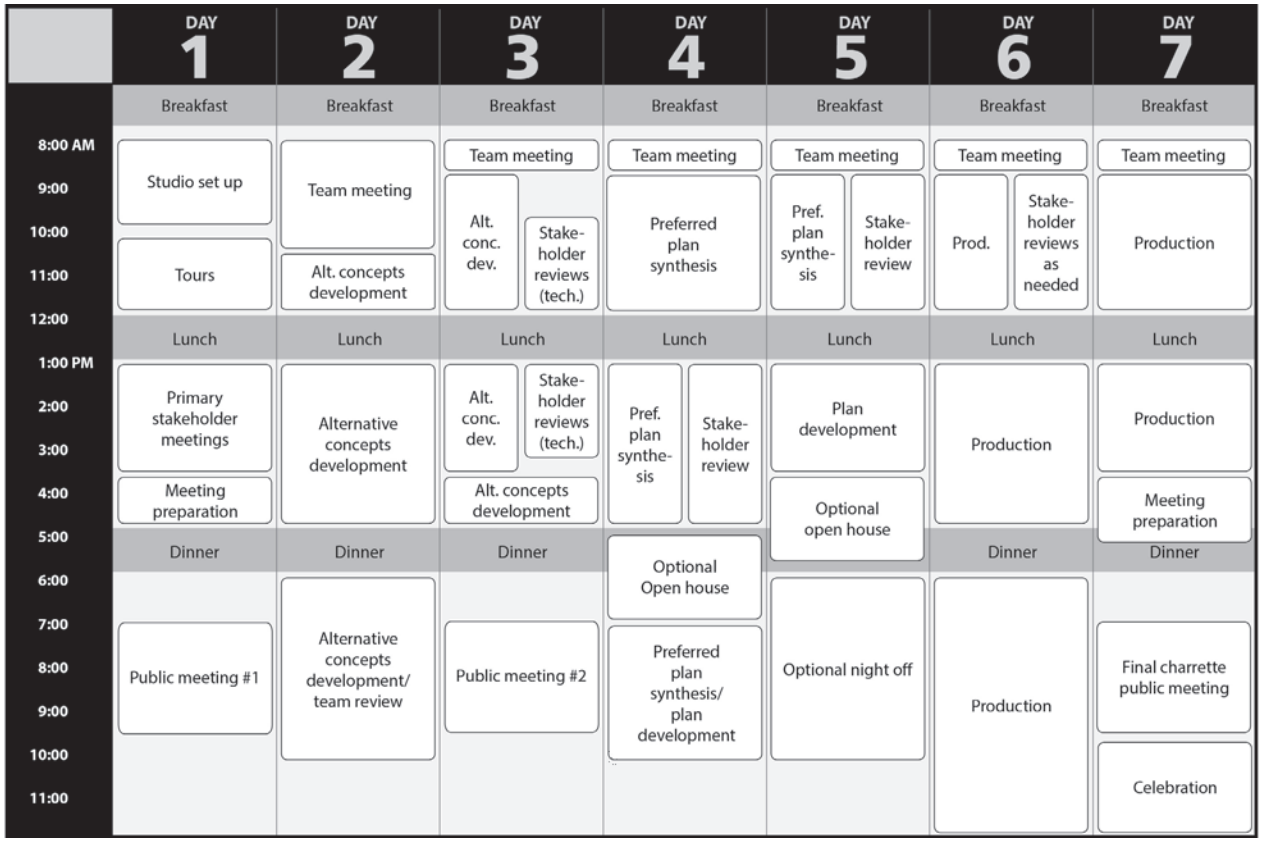
Charrette System Phase 1:
Research, Education and Charrette Preparation

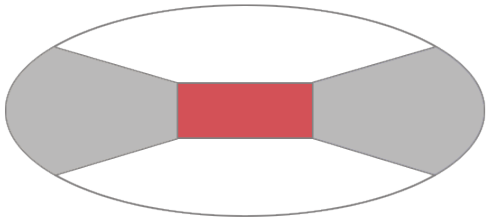
1.5 Charrette Studio and Public Meeting Venue Logistics

The location of the charrette studio and public meeting venues should be determined early in a project. It can be difficult to find the right place in a community that is available for several days

and nights in a row. The charrette studio is first a remote working office for the charrette team. As such, it must contain the furniture and equipment necessary for this group of professionals to do their jobs. The studio must also accommodate ongoing meetings as well as receive drop-in visits from community members. Large public meetings may or may not take place at the studio site. Due to their size, these meetings are commonly held off-site at a school, church or some other public meeting place. Common charrette studio locations are storefronts, hotel conference areas and community centers. The charrette studio should be easily accessible by transit. It is critical that someone with experience in charrettes visit and assess the studio prior to the charrette to assure that it can support the needs of the charrette team. The project sponsor should commit to holding meetings that are accessible and comfortable for diverse and under-served populations. If necessary, providing meals, childcare, transit passes (or reimbursement), translated materials and interpreters of different languages as appropriate.

Example 7-day charrette schedule:





Charrette System Phase 2: The Charrette

CHARRETTE SYSTEM PHASE 2: THE CHARRETTE

The following describes the basic elements of a charrette, see The Charrette Handbook (Lennertz and Lutzenhiser 2006) for a complete how-to charrette guide.

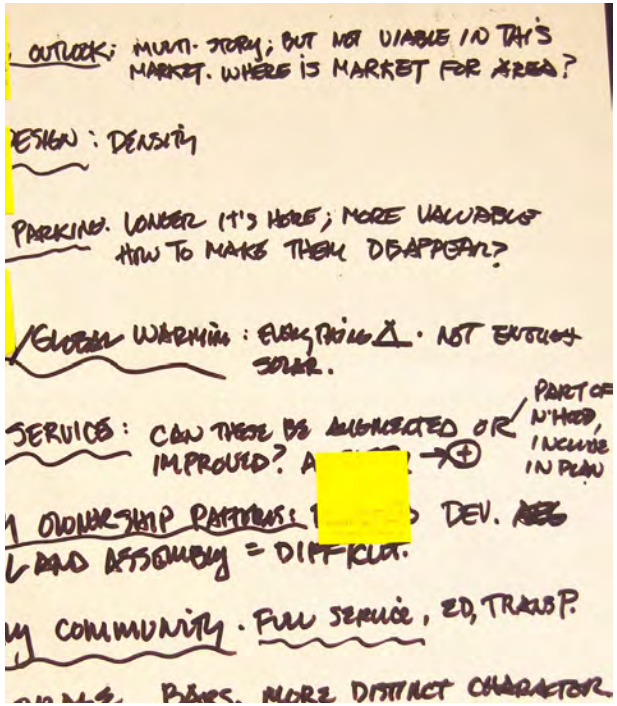
Charrette Overview

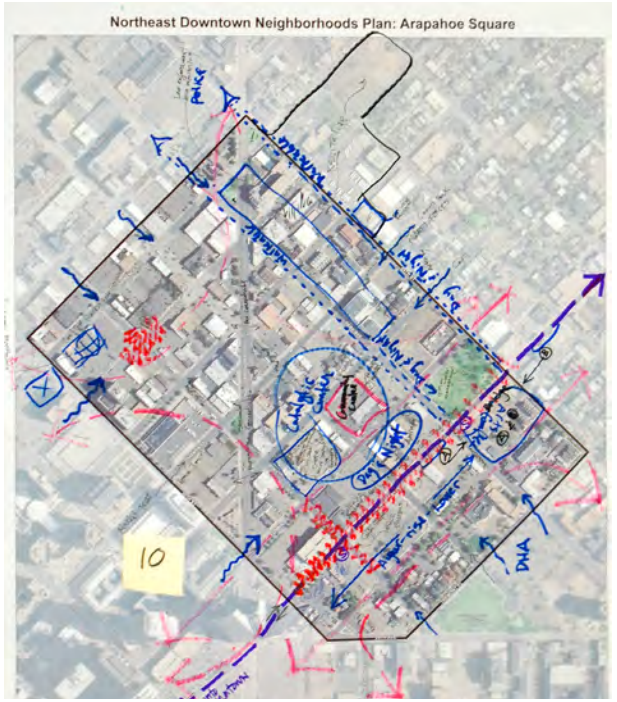
Once completed, the Research, Education and Charrette Preparation phase assures that a project is charrette ready with all the necessary people and all the right information in place. The charrette is the catalytic event of the NCI Charrette System™. It is a collaborative event that lasts at least five to seven-days. The goal of the charrette is to produce a feasible plan that benefits from the support of all stakeholders through its implementation. A multidisciplinary charrette team, consisting of consultants and sponsor staff, produces this plan. It takes place in a charrette studio situated on or near the project site.

The charrette opens with a public meeting to create a shared understanding of the project and the process and to solicit the values, vision, and needs of the community. The charrette team then breaks off to create alternative plans or scenarios, which are presented in a second public meeting, usually a day or two later. After gathering feedback at the second public meeting, the team synthesizes the best aspects of the alternatives into a preferred plan that is developed in detail and tested for economic, design and political feasibility. The charrette concludes with a comprehensive presentation at a final public meeting.

The charrette is organized as a series of feedback loops through which stakeholders are engaged at critical decision making points. These decision

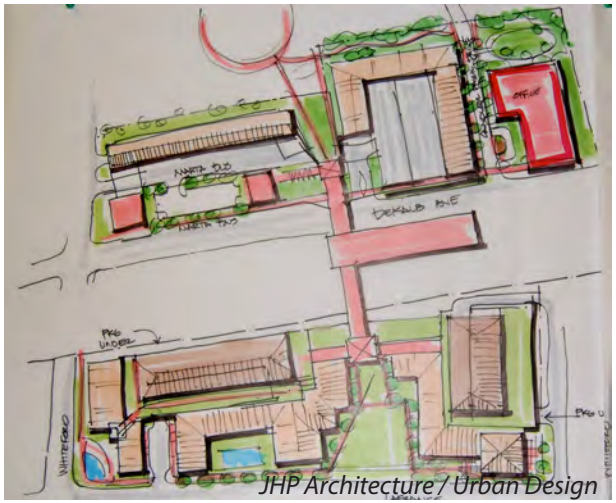
Meeting neighbors a on site tour

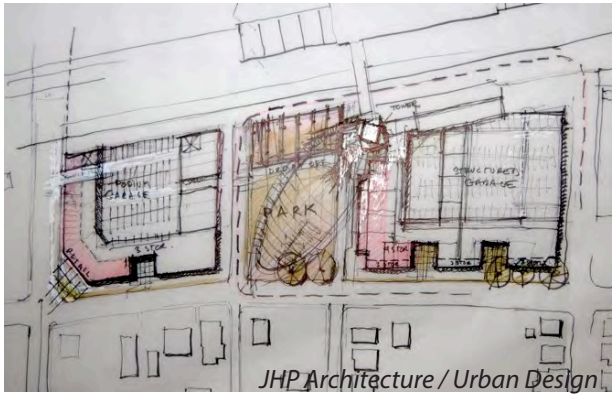




Sketches and notes from a hands-on workshop. Images by National Charrette Institute.

making points occur in primary stakeholder meetings, several public meetings, and possibly in an open house during the course of the charrette. These feedback loops provide the charrette team with the information necessary to create a feasible plan. Just as importantly, they allow the stakeholders to become co-authors of the plan so that they are more likely to support and implement it. The following five charrette phases are described by day, based on a seven-day charrette as shown in the previous schedule graphic (page 21). The same process and phases apply to shorter charrettes, with phases compressed into the lesser number of days.





Examples of alternative concept plans from the Edgewood Station TOD planning charrette in Atlanta, GA

2.1 Organization, Education, Vision (Day 1)

The main activities of the first day of a charrette consist of setting up the studio, taking a tour, checking in with primary stakeholders, and holding a public meeting. It is important for everyone to understand that the design itself, putting pencil to paper, begins on the second day, only after gathering input at the opening public meeting. Starting with a "blank slate" prior to meeting with the public is a key feature of the charrette process and demonstrates the inclusionary and collaborative nature of what is to come throughout the charrette.

Studio set up and organization

The day begins with studio set-up and a team organizational meeting. The project team meets to get organized, review roles, base data, the schedule, and deliverables. The charrette team is responsible for studio set-up, which means creating a temporary office for the duration of the charrette, complete with computers, internet access, meeting space and drawing/work stations.

Tour

Following the team organizational meeting, the charrette team and other project team member (and perhaps community members) set off on a tour of the site and surrounding area. The tour

Feedback loop session

Community members attend an open house mid course review. Images by National Charrette Institute.

allows the team to gather site info, take photos, interview community members along the way, and generally get a feel for the project, transit system and surrounding community. To make the most of the tour, the charrette manager can arrange for presentations to occur along the way with agency staff, community members, and local historians.

Stakeholder meetings

Meetings are held with selected primary and secondary stakeholders the first day (often morning) of a charrette. If the entire charrette team does not need to go on the tour, these meetings may occur concurrent with the team tour. Since the team has yet to begin design, this is not a design review meeting. These meetings are mostly political in nature. The purpose of these initial stakeholder meetings is to check in with important people before the first public meeting to assure that they will attend and to gather last minute input, advice, and updates on local current events. Typical attendees include transit agency managers and board members, local agency department heads, and community leaders.

Opening public meeting

The overall goal of this first public meeting during the charrette is for participants to gain a complete understanding of the project and how they can be involved. Attendees at this meeting should include the TOD team, the charrette team, the project working group, the press, all key stakeholders (as determined in the Stakeholder Analysis) and the public. They should leave with a sense of excitement about participating and want to come back to the next meeting with their friends and neighbors. The other primary goal of the meeting is to gather stakeholder input on the project in the form of notes and drawings.

The meeting, held on the first night of the charrette, is divided into two parts. The first involves an informational presentation by members of the consultant team lasting no more than 45-minutes. The presentation covers the project description, purpose and process time line. It is important to clarify the community's role in the decision-making process as well as basic technical information that will be helpful in the hands-on workshop to follow.

The second part of the meeting should include some type of interactive, hands-on workshop involving all participants seated at small tables of no more than eight per table. It is hard for everyone to participate when there are more than eight in a group. A common exercise involves drawing ideas for the future vision of the study area on top of aerial photographs of the site. The exercise should address the unique issues related to transit station planning. For example, ask people to draw the pedestrian and bicycle approaches to the station. The exercise concludes with brief presentations to the all attendees by a community member from each table, summarizing each group's key issues. *(See High-tech Tools Analysis beginning on page 47 for options for supporting this meeting).*

2.2 Alternative Concepts Development (Day 2-3)

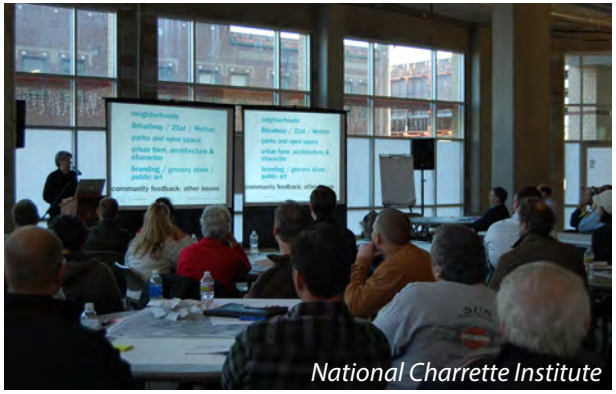
After the opening public meeting, the charrette team returns to the studio and begins to develop a set of alternative concepts based on the results of the public meeting, the project objectives and other physical, financial and political factors. After several hours of design work, the team meets for technical reviews of the early alternative concepts. The purpose of these reviews is to test the initial set of design ideas with the people who have technical expertise about and/or jurisdictional power over the project. Typical participants in these technical reviews include transit and transportation planners and engineers, operations staff, environmental planners and possibly key community groups. The litmus test for participation is anyone who can cause substantial rework if they are not involved at these meetings.

Ongoing charrette communications

Throughout the charrette, the charrette team performs a daily upload to the project website of the on-going charrette work including team biographies, charrette schedule, news updates, interviews, pictures from the meetings and

A charrette team hours before the final presentation

Selected Final Products form the Edgewood/Candler Park MARTA Station Charrette Atlanta, Georgia - April, 2011



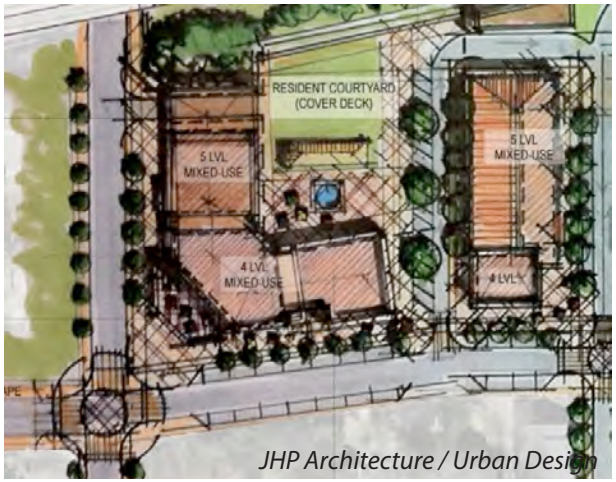
A charrette final presentation

images of the work-in-progress. The website also contains links to online networking sites such as Facebook and Twitter pages for the project, which should be updated regularly and monitored throughout a charrette. The website should allow participants from the first meeting to follow the ongoing work of the charrette and perhaps comment online.

Mid-course public review

After the initial primary stakeholder review of the alternative concepts, the charrette team makes

PlaceMakers



Charrette team: JHP Architecture / Urban Design, Green Rock Partnership, PlaceMakers, Columbia Residential, National Charrette Institute, Ellen Dunham-Jones

any necessary adjustments to the alternatives and prepares for the mid-course public review. This review occurs anywhere from 24 to 48 hours after the opening public meeting. The timing depends on the length of the charrette. This review can take place in the form of a casual open house or a more structured public meeting. In either case, participants from the opening meeting learn about the trade-offs among the alternatives as measured against their input from and the project objectives. Strengths and weaknesses of the alternatives are identified and revisions are suggested on the spot. This review process is the hallmark of the charrette and can be particularly effective for TOD projects with very broad and diverse stakeholders. It is an opportunity for all parties to learn about the multifaceted nature of transit oriented development projects. Participants are immersed in a collaborative learning environment in which all viewpoints are represented. People value knowing that they are involved while design decisions are being made and that they have the ability to have an impact on the outcome.

2.3 Preferred Plan Synthesis (Day 4)

Following the mid-course review, the charrette team meets to review the results of the public input and to work out a preferred direction for the plan. This decision is based on a combination of public and stakeholder input, the project objectives and performance measures, and the professional judgment of the charrette team members. The best aspects of each alternative are merged into a preferred solution. There is always room for optional approaches to different areas but it is important that the major issues have been resolved in a preferred approach. The creation of the preferred plan is a defining moment in a charrette. Here, the pressure is on the charrette team to create design solutions that will satisfy the issues and needs of the project sponsor and the stakeholders. Often this involves the discovery of an unexpected solution that will allow the project to move forward. This discovery can represent a transformative event for the project and perhaps the community. People whose opposition was based on a misconceived set of solutions may now support the project. They may even emerge from the charrette with a different viewpoint regarding the benefits of transit oriented development or possibly the community planning process itself.

2.4 Plan Development (Day 4-5)

After the preferred plan is selected, the charrette team begins a series of feasibility tests. During the plan development phase, each charrette team member shifts to focus on his or her own studies rather than on the plan as a whole. Studies should be developed at a minimum for economics, transportation, transit, environment, storm water and urban design. This plan development work is the crucial test necessary to assure that the preferred plan is politically, practically and financially feasible. These studies can take the form of detailed plans, site sections, economic analysis, transportation modeling, etc. This feedback provides the information necessary to adjust the plan and reduce time spent pursuing fruitless alternatives.

Plan development is a crucial step toward reducing rework and improving likelihood of implementation. In the NCI Charrette System™, designers begin testing the plan immediately on the heels of the preferred plan selection. This quick feedback allows designers to adjust immediately without wasting time on infeasible options. One of the key deliverables developed at this time is a clear implementation strategy for the project as a whole. This strategy should identify the next steps, the roles and responsibilities of each stakeholder, and a general time line for when these activities should occur.

2.5 Production and Presentation (Day 6-7)

The last days of the charrette are reserved for the production of the drawings and documents that will be presented at the final charrette public meeting. During the production phase, the charrette team's role is to produce beautiful, informative drawings and carefully prepared data for the detailed preferred plan and implementation strategies in a comprehensive digital presentation.

The charrette concludes with a comprehensive presentation of the preferred plan at a public meeting. This "work-in-progress presentation" has the potential to be a pivotal moment for creating the support necessary to propel the project through unexpected challenges on the path to implementation. This meeting is, at its best, an impressive and entertaining event and one that makes the community proud of its collaborative effort during the charrette. The final charrette public meeting can last up to two and a half hours.

Attendees should include the project sponsor, project team, charrette team, project working group, press, all key stakeholders, and the public. The meeting consists of three segments: work-in-progress presentation, public input session, and open house and reception.

Work-in-progress presentation

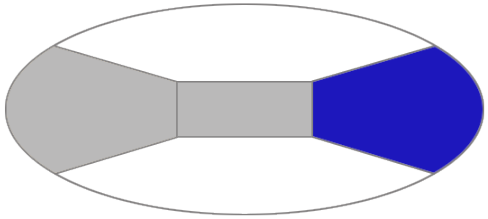
This is a digital presentation by members of the charrette team. The first part of the presentation covers the project purpose and how the charrette is a part of a larger design and approvals process. Next is a summary of what happened during the charrette, followed by the presentation of the charrette preferred plan by the charrette team on all aspects of the project. The presentation concludes with a review of the next steps in the adoption process including the timing of the next public meeting.

Public input session

A facilitated open discussion follows the presentation. This can either be conducted as an open forum or in small table group discussions facilitated by staff. Input can also be gathered using keypad polling.

Open house and reception

As part of the meeting set-up, the charrette team erects a gallery of the charrette preferred plan drawings and documents. Meeting attendees review the gallery before the beginning of the meeting. After the public input session, attendees return to the gallery where they can informally discuss the results with members of the charrette team. This open house can be combined with a reception with refreshments. This is an excellent time for discussions among key project partners and the community about the necessary next steps toward adopting the plan. It is also an optimal time to check in to see how things went with members of the working group.



Charrette System Phase 3: Plan Adoption

CHARRETTE SYSTEM PHASE 3: PLAN ADOPTION

The project team works with the community after the charrette to guide the plan toward adoption as soon as possible. The NCI Charrette System™ assures that the charrette products are well tested and vetted with the key stakeholders and the community. This approach is aimed at minimizing change though adoption and eventually engineering.

The passage of time can sometimes work against project implementation. It is best to move into the plan adoption phase right after the charrette, while people are in place and the memory of the process is fresh. Along with a long adoption process can come changes in leadership, staff, and community members. These changes can require costly added meetings to explain the planning process to newcomers. Strategies for shortening the adoption time frame include:

- Continuing a robust outreach, education and communications campaign with all stakeholders
- Testing and revising the products of the charrette
- Conducting post-charrette public meetings
- Briefings with transit agency leaders and board members -
- Holding informational sessions with local leaders and staff -
- Incorporating the final charrette plan into a community plan that is adopted by local leaders
- Working with local leaders and agency staff on implementation steps and strategies
- Leveraging the working group to maintain and stabilize community relationships

3.1 Project Status Communications

It is the responsibility of the project sponsors to maintain a timely and transparent flow of communication with all stakeholders after a charrette. All available communication channels should be used during the approvals period including face-to-face meetings, articles in the press and on blogs, website postings, and social media updates. The project working group is also very active in this phase. Their focus is on informing their constituents about the charrette

The passage of time can be one of the biggest enemies of project implementation. It is preferable that the plan adoption phase be as short as possible to reduce the risks associated with changes in political and regulatory leadership.

results and keeping them involved throughout the approvals phase, especially at the public meetings. There should be a clear channel of communication between the project sponsor and the project working group during this phase to share information about the pulse of the community during this important phase.

3.2 Charrette Product Testing and Refinement

As presented at the final charrette public meeting, the preferred plan is a work-in-progress. During the charrette, the team conducted feasibility analysis and testing of the preferred plan. This work is prevention against any fatal project flaws that may hinder the adoption and implementation of the plan. However, there is always a need for more in-depth testing to assure the accuracy and feasibility for some of the plan elements after the charrette. This review and revision usually takes between one and three-months.

3.3 Presentation and Product Finalization

Once the plan revisions are identified it is advisable to hold a follow-up community meeting. This meeting ideally occurs four to six-weeks after the charrette. If they are held any later than this, there is the potential for a change in leadership that can have a destabilizing effect on the project. This event can be a stand-alone evening meeting or a pair of evening meetings occurring one or two-days apart. The two-meeting model is especially effective for projects that remain volatile after the charrette or for projects with significant post-charrette revisions. This provides an important forum for those who were either absent from the charrette or for those who maintain serious reservations about the state of the project.

The follow-up community meeting is a great opportunity to defuse any post-charrette project opposition and to shore up community support. This meeting should be designed in part to provide a safety net for people who are new to the project. The concerns of these people are best accommodated as they are in the charrette, through a final feedback loop.

Following these community meetings, the project team works to finalize all plan revisions, complete project documents for adoption and write the final project report.

3.4 Educational Sessions for Leaders and Staff

Speedy project adoption, and eventual implementation, is greatly supported when the local leader and agency staff have a clear shared understanding about the purpose of the plan and the details of its implementation. During and/or after the plan approvals period it is recommended to conduct training sessions with staff, commissioners and elected officials to assure that those who are responsible for the day-to-day administration of the plan have a clear understanding of the project process and their role in its implementation. Members of the charrette team usually facilitate this training.

TOD CASE STUDIES

INTRODUCTION

Planning for TOD occurs at the scale of the region, the corridor, the station area, and the land parcel. These separate levels of planning should be coordinated to achieve the most successful outcomes. Planning at the regional scale serves to integrate regional goals, such as decreasing traffic congestion and improving public health, with regional contexts, such as a consideration of population growth and the location of major employment centers. Planning for TOD most often takes place at the station area level, and this is where it's easiest to understand local benefits such as reduced transportation costs for residents, and the creation of a sense of place and community. Development projects are planned at the scale of the land parcel.

The following case studies show the application of the NCI Charrette System™ to four different scales and types of projects- a transit village at a regional rail stop in suburban California, a neighborhood redevelopment plan around a rail station in an outer Miami neighborhood, the redevelopment of a brownfield industrial site in New Jersey and a BRT (Bus Rapid Transit) corridor along the low density Florida State Route 7. For all four projects, construction is either complete or near completion. The cases explain the public engagement process in addition to the problem and design solution for each project. All projects leverage the charrette itself as a central strategy to maximize public involvement.

DOWNTOWN KENDALL

SUMMARY

In a dramatic success story of transformation, Downtown Kendall, in Miami-Dade County, Florida, has evolved from a suburban-style commercial center to an urban, mixed-use downtown. The 324-acre site, located 10 miles south of Miami on the Metrorail line, was seen as an opportunity to turn a suburban mall and surrounding strip development into a metropolitan center that better leveraged its unique place in the regional transportation system. Plagued by an environment of skepticism, the charrette process and smart growth principles were successfully used to generate a creative vision that involved community members, county government, neighboring municipalities, developers, and business owners, forming a lasting identity for Downtown Kendall.

PROJECT DESCRIPTION

What is now Downtown Kendall was formerly a commercial crossroads in suburban Miami-Dade County, with poor pedestrian accessibility and visual blight common to auto-oriented suburbs. Once farmland, the area was transformed in the 1960s with the introduction of the Dadeland Mall, the construction of limited access highways on two sides, and the remarkably fast growth of retail, offices, hotels, and residential neighborhoods along the four heavily traveled, regional roadways crisscrossing the site.

During the 1980s the Metrorail transit system was established, including two major commuter rail stations, Dadeland South and Dadeland North, the former of which also serves as a major bus transit hub. In spite of these public transportation opportunities, the area remained auto-oriented with empty buildings, office towers, and huge parking lots surrounding the 1.4 million sq. ft. Dadeland Mall.

By the mid-90s, residents were fed up with the suburban development pattern and were making things difficult for developers by opposing permits. Though the area was designated in the county's Comprehensive Development Master Plan as a "future urban center", talk of transforming this area into a pedestrian-friendly, mixed-use new urbanist development - "Downtown Kendall" - seemed laughable; there was no "downtown."

Chamber South, the local chamber of commerce, saw the need to take a fresh look at the Downtown Kendall area. Paul Vrooman, Chamber South's then-Marketing Director, began to wonder about the region's growth, asking himself, "Where are the gathering places if there are only malls? Where will people watch the Fourth of July fireworks and listen to jazz concerts?" Having seen the changes made in downtown South

TOP RIGHT: *Existing conditions in 1999 with the Dadeland Mall and sprawling development pattern.*
MIDDLE RIGHT*: Rendering produced during the 1998 Downtown Kendall Charrette. This aerial view illustrates a new vision for the area, with interconnected streets, mixed-used development, and mid-block parking, all in effort to transform the auto-oriented landscape.*
BOTTOM RIGHT: *Existing conditions in 2010. New development has occurred in accordance with the Downtown Kendall Plan and Code.*

Miami as a result of a master plan designed by town planners Dover, Kohl & Partners, Chamber South asked Dover, Kohl & Partners for their help transforming Downtown Kendall into an urban center.

Nearby residents agreed that a new start on planning was needed for Kendall. Private business and property owners in the area required a harder sell, with the Chamber and Dover, Kohl & Partners spending three years informing, building relationships, and slowly gathering support for the charrette process.

The Chamber of Commerce was able to eventually pull together key stakeholders, including the transit authority, Miami-Dade County, and powerful property owners entrenched in the old way of doing development. The Chamber also convinced the county to fund the majority of the process, with additional funding coming from private land owners, the South Florida Water District, and Florida Power and Light. This effort to pull in funding from a variety of stakeholders not only made the project possible, but also helped build critical buy-in.

PROCESS DESCRIPTION

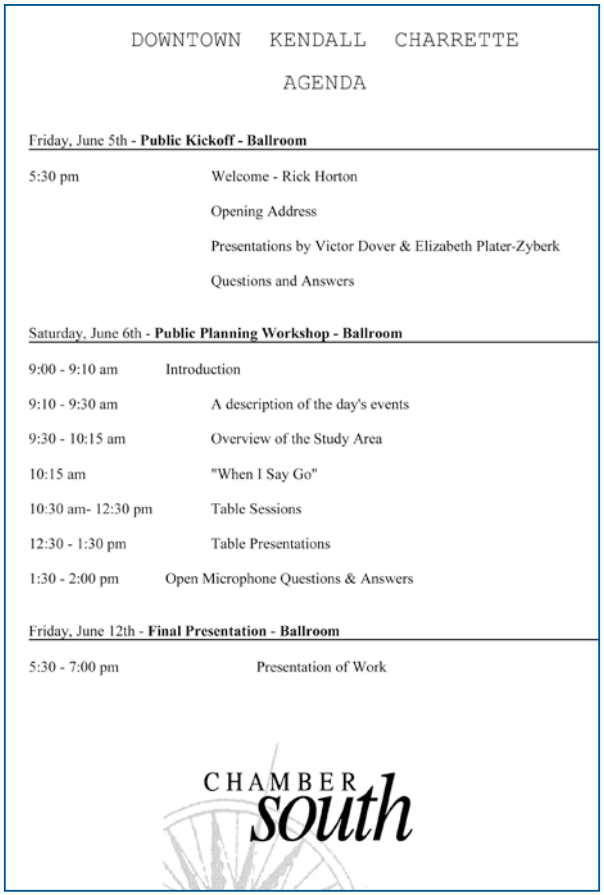
The Downtown Kendall planning process involved a full charrette process that was led by two of the foremost urban design firms in the Country, Dover, Kohl & Partners and Duany Plater-Zyberk & Company, both located in South Florida. Below is a brief description of the public process.

Pre-charrette

- For the three years leading up to the charrette, the Chamber and Dover, Kohl & Partners met face-to-face with stakeholders, informing them about smart growth, mixed-use, transit-oriented development, and the benefit of working together to transform Downtown Kendall.
- Lectures and rallies were held to inform the public on a variety of planning-related topics.
- A committee made up of local stakeholders was assembled to guide the process and organize the charrette.

Charrette

- The design team conducted a seven-day charrette in June 1998, with over 300 people taking part in the opening public workshop.
- The charrette began with a Friday evening kick-off event. Saturday morning Dover Kohl led a hands-on design workshop. The public was invited to stop by the studio located in the heart of the project site and attend a mid-week open house to provide feedback on the in-progress plans.
- During the charrette, a master plan for the site was produced in collaboration with the stakeholders and the public. During the charrette, it was discovered that both residents and private developers valued pedestrian connectivity and high-quality public spaces. This agreement resulted in a plan with streets, arcades, squares, and greens, transforming Kendall's existing superblock pattern into smaller blocks with more meaningful public spaces. The charrette as a public forum allowed these parties to recognize their shared values and begin to implement them.



DOWNTOWN KENDALL CHARRETTE

AGENDA

Friday, June 5th - **Public Kickoff - Ballroom**

5:30 pm	Welcome - Rick Horton
	Opening Address
	Presentations by Victor Dover & Elizabeth Plater-Zyberk
	Questions and Answers

Saturday, June 6th - **Public Planning Workshop - Ballroom**

9:00 - 9:10 am	Introduction
9:10 - 9:30 am	A description of the day's events
9:30 - 10:15 am	Overview of the Study Area
10:15 am	"When I Say Go"
10:30 am- 12:30 pm	Table Sessions
12:30 - 1:30 pm	Table Presentations
1:30 - 2:00 pm	Open Microphone Questions & Answers

Friday, June 12th - **Final Presentation - Ballroom**

5:30 - 7:00 pm	Presentation of Work

CHAMBER *south*

Downtown Kendall Charrette Public Meetings Agenda

- A variety of tools were used to communicate the vision for Downtown Kendall to the public. Steve Price, from Urban Advantage, created a series of photo simulations showing before photographs, changing over time, to reflect the vision for the project. One simulation shows Dadeland Boulevard transformed for the pedestrian, with colonnades designed to protect people from the elements, building facades that face the street, and on-street parking to slow traffic. In addition, street level hand-drawn illustrations showed how the proposed new town square would look to a pedestrian walking through the space.

Post Charrette

- Following the charrette, the consultant made regular trips to attend meetings with the 13 county commissioners.

PROJECT OUTCOME

The intent of the charrette plan was, in Victor Dover's words, to replace Kendall's "chaotic development" with "coherent town building." The charrette resulted in unanimous approval of the final plan by the Miami-Dade Planning Commission. Subsequently, the same team produced the Downtown Kendall Urban Center District Code, which was approved unanimously by the Miami-Dade County Commission, and is today guiding the build-out of Downtown Kendall.

During the first 18 months following the plan's approval, more than 2,000 residential units, over 200,000 square feet of commercial space, and several hotels proceeded through the permitting process. The new development has been met with rapid market acceptance. Currently, approximately six city blocks, named "Downtown Dadeland," including residential and commercial uses, have been developed. Another eight city blocks comprising an urban quarter named "The Colonnade" are under construction.

INNOVATIVE PUBLIC INVOLVEMENT TECHNIQUES

Inspirational lectures & rallies

To prepare the community for the charrette, public lectures and rallies were hosted by Chamber South and Miami-Dade County. Speakers included Peter Katz, new urbanist author and consultant; Elizabeth Plater-Zyberk, Dean of the University of Miami School of Architecture and founding principal of DPZ; and Kristen Paulsen Pickus, planner and smart growth educator. The lectures covered such topics as edge cities, retail, and how "great cities can do great things," helping to inspire new ideas and change the dynamic of the land use conversation.

Stakeholder committee at the lead

A multi-stakeholder, 20+ member committee, which included local business leaders, property owners and neighbors, was assembled by Chamber South to guide the process. This committee helped to organize the charrette and was instrumental in generating public turnout.

Funding as a tool for stakeholder buy-in

Establishing a strong relationship between public and private sponsors was an important foundation for the Downtown Kendall project, with the Chamber sponsoring the public charrette process and the County serving as the primary funder. The project also received additional financial backing early on from a diverse range of local stakeholders, who put their own money on the line. The agreement of local businesses to share the cost was a transformative part of the pre-charrette process, building critical stakeholder buy-in.

LESSONS LEARNED

Short feedback loops

The process of using short feedback loops enabled the charrette team to develop a win/win design solution to a building height controversy. Months before the charrette, a developer arrived with an application to build a tower complex. The proposed building rose 390 feet and required a variance, which was stridently opposed by business owners and neighbors. The variance was approved by the county, which prompted a neighboring municipality to file a lawsuit objecting to the process. The situation contributed to an environment of distrust, especially between county leaders and local residents. The charrette provided an opportunity to solve this core issue.

The solution, generated during the charrette, was a better approach to regulating building height, in which height is measured in stories, not feet. This solution has the benefit of incentivizing greater floor to ceiling height, which increases the value of living spaces and provides a more varied skyline.

As a result of the problem solving that occurred during the charrette, the developer abandoned his initial plan for a 390-foot tall building and instead built a six- and seven-story development, with three levels of underground parking. Remarkably, studio condos in this project sold for $200,000, which for this region was unheard of, and had the effect of increasing property values for nearby properties, including those outside the study area.

Pre-charrette outreach and education

The Downtown Kendall Charrette was possible because of three years of face-to-face conversations between the Chamber of Commerce and local stakeholders. At the time the project was conceived, the charrette process, mixed-use development, and transit-oriented design were new ideas that had little place in the conventional single-use development pattern that dominated south Florida. In order to change the status quo and begin to move in a new direction, the Chamber had to build relationships and trust through informal conversations, presentations, and informational workshops. Eventually a critical mass of developers and land owners were willing to try a new approach to planning.

Street level renderings

During this early charrette, Dover, Kohl & Partners learned that ground level illustrations resonate extremely well with the public and can have a strong effect on long-term policy decisions. One street-level rendering, in particular, was very powerful. The illustration showed one of the streets in the study area fronted with podium parking garages. A second rendering showed how the street would look with garages lined with habitable space. Though the developers didn't like the idea of wrapping their parking garages with liner buildings, the renderings generated strong consensus among the public in favor of an active streetscape. These powerful graphic tools eventually lead both the county and the city to require habitable space along the street, drastically improving the pedestrian experience and consequently improving land values.

Public and private sector collaboration

County street standards were not capable of delivering the quality of streets and sidewalks required in the pedestrian-oriented charrette plan. The old standards would have resulted in developers spending considerable resources to propose and negotiate alternate street designs for every project submittal, which would have stifled redevelopment and the realization of the vision.

To address this problem, the county planning department hired transportation engineer Rick Hall to design street templates that made the developers' jobs easier and increased the feasibility of better street design. By understanding the economic reality of the private sector and working to remedy the problem, the county was able to make it possible for the private sector to more easily build the community's vision.

Post-charrette plan adjustment

Although the owners and managers of Dadeland Mall (Simon Properties and Lend-Lease Corporation) participated in the charrette, soon after the ordinance was adopted they filed a property-rights claim, asking to be excepted from the ordinance. They did not buy into the street-oriented model and feared that the ordinance would hinder "business as usual." In response to the claim brought by the developers, urban designer Jonathan Barnett and urban economist Chris Leinberger were brought in to find a workable compromise. Barnett suggested small changes to the master plan while Leinberger made a powerful economic argument in favor of street-oriented development. By returning to the basic principles of the charrette plan, refining language regarding grandfathering of pre-existing rights, and subtly modifying the official maps to incorporate new information from the mall owners, a compromise was found. A solid base of public support helped ease the changes, which in the end strengthened the original plan.

PROJECT DETAILS

Charrette cost: $200,000 (not adjusted for inflation)

Funding source:

Primary funding from Miami-Dade County, with additional funding from local stakeholders

Number of participants: 300+

Current program build-out:

- over 1,500 residential units
- 624,450+ square feet of retail & office uses
- 300+ hotel rooms

Replication:

Downtown Kendall project modeled after South Miami charrette.

CONTRA COSTA CENTRE TRANSIT VILLAGE

SUMMARY

The Contra Costa Centre Transit Village is a 125-acre district surrounding the Pleasant Hill BART Station in Walnut Creek, California, located just 25 miles east of the San Francisco Bay Area. After multiple failed attempts at building consensus and completing the heart of the transit oriented development, Contra Costa County held a design charrette that galvanized the community and enabled the project to move forward. Now the Contra Costa Centre Transit Village is nearing full build-out and is serving as a model for how to design a successful public process that works for even the most politically charged situation.

PROJECT DESCRIPTION

Contra Costa, which started as a quiet agricultural valley, began to transform into a regional transportation hub with the arrival of the I-680 highway interchange at Treat Boulevard in the mid 1960s and the construction of the local Pleasant Hill BART station in 1973. To address increased growth pressure and to take advantage of the transit stop, a specific plan for the 125-acre BART station area was adopted by Contra Costa County in 1983, incorporating the principals of Transit Oriented Development (TOD), well before the term was commonly used. The plan called for a high density, mixed-use transit-oriented community, including Transportation Demand Management to promote walking and minimize car trips.

Much of the land surrounding the station was built-out under the Specific Plan, with the exception of one critical piece of property, a BART-owned 18-acre commuter surface parking lot. Located directly adjacent to the station, this property would become the heart of the Contra Costa Center Transit Village.

During the 1990s, one developer-driven program after another was proposed for the BART station surface lot, none gaining traction. By the late 1990s many residents worried that any additional development other than local service and residential uses would push the growing traffic problem over the edge. Community members also felt they were given limited opportunities to participate in the review of development proposals, and when they were engaged there were too few options on the table. It looked to the residents as though the heavy commercial and entertainment uses were a foregone conclusion and that their input had no impact on the proposed outcomes.

In 1999, in an effort to better engage the public and move the project forward, Contra Costa County initiated a conventional public planning process, which took a year and had unsatisfactory results for all parties involved. The process was marred by slow feedback loops, a lack of continuity caused by a changing roster of participants, and planning that largely occurred behind closed doors. In addition, the final outcome was a compromise that failed to satisfy any of the participants. Everyone was disappointed.

In 2001, nearing the end of this first public process, County Supervisor Donna Gerber attended a conference where she heard about a process described as the solution for politically complex conditions, a process known as a charrette. Gerber saw that new urbanism and the charrette process could possibly be an answer to the stalled situation in Contra Costa. She returned home and was able to convince BART and the County to start over again.

PROCESS DESCRIPTION

To plan the Pleasant Hill BART project, the County hired Lennertz Coyle & Associates to initiate a full charrette process, with a significant pre-charrette phase to provide needed time to rebuild trust and enthusiasm around a second public process. The primary stages of the charrette process are described below.

Pre-charrette

- The charrette process began in 2001 when a local steering committee selected a consultant team, which included urban designers, transit planners, transportation engineers, market economists, retail consultant and architects, computer imaging consultants, public outreach specialists, and form-based code specialists.
- Stakeholder groups within the community actively sought the participation of various interests from the boarder community. -
- The charrette was also publicized with press releases, public notices, and information sent

to an extensive e-mail list generated by the steering committee.

- A month before the design charrette, the consultant team held an initial public kick-off meeting that sought to build trust between the community members and the project sponsors, Contra Costa County, BART, and the developer. In addition to informing the public about the project and the charrette process, the meeting also began to solicit ideas for the future of the TOD neighborhood. Over 150 community members worked in small groups to discuss how the project related to the area and what a vision for the developed site might look like. The consultants took this input and combined it with the other critical information such as market demand, financing requirements, and site constraints to develop alternative concepts for the site. By the time the charrette took place, it was widely understood that broad participation was expected. People responded by turning out and further contributing to the process.

Charrette

- A six day charrette process was held in 2001, with over 500 people taking part. Public meetings were held for anyone who wished to attend, and stakeholder meetings were scheduled with neighbors, bicycle and pedestrian advocacy groups, and BART representatives, among others. The charrette team worked with all of the input from these meetings and developed alternative concepts communicated through the use of hand-drawn, renderings and photo simulations. These concepts were brought back to the stakeholders and the general public numerous times throughout the week at public meetings and open houses and were revised according to additional input. The charrette team took the refined plans and synthesized them into one final plan representing the best of all ideas.

- In addition to an illustrative plan, the consultant team created and refined form-based zoning and architectural codes; market and financial feasibility analyses; street and transit circulation plans; a

Computer generated image of Treat Boulevard produced during the Contra Costa Center charrette.

Station Square at the Contra Costa Centre Transit Village- public open space surrounded by retail with housing above.

pedestrian paths and parks plan; a transit plan for buses, taxis, and park and ride; regulating plan; and illustrative renderings depicting the future of the area.

- In the end, the charrette resulted in a comprehensive and detailed plan that met the basic requirements of all parties, ending the historic deadlock.

PROJECT OUTCOME

During the closing presentation of the charrette, then County Supervisor, Donna Gerber, ended the evening by asking, "Do you like what you see?" which received an overwhelming, "yes". To which she replied, "Well, what you see is what you'll get!"

In 2002, Contra Costa County Supervisors unanimously approved the plan with no attendee speaking in opposition and incorporated the charrette plan into the area specific plan. The county created a position for a town architect who was hired to ensure that incoming development applications adhered to the form-based codes created during the charrette.

The project is now nearing completion with more than 2,700 housing units, two hotels, offices with more than 6,000 employees, and more than $90 million in major public infrastructure improvements, all within walking distance of the Pleasant Hill BART Station.

INNOVATIVE PUBLIC INVOLVEMENT TECHNIQUES

Collaboration from the beginning

At the very beginning of the charrette process a steering committee was formed, comprised of the Contra Costa County Redevelopment Agency, BART, the designated developer, and members of nearby neighborhood associations. This group, which brought to the table representatives of previously opposing groups was tasked with selecting a consultant team, giving them an active role in shaping the process and therefore the outcome of the planning effort. By giving this diverse group an active role, the barriers of planning behind closed doors were replaced with planning done in a partnership between governmental agencies, private developers and community members all working together.

Face-to-face relationship building

In this project, because of the highly contentious sentiments within the community, the charrette team spent 4 months in advance of the charrette, meeting with local stakeholders, getting to know neighborhoods, and building trust. This preliminary networking was conducted independently of the County, allowing the team to arrive at the charrette with a certain level of credibility. This type of intensive personal public outreach is rare due to budget constraints, but was a key to success in Contra Costa.

The power of drawing ideas

A key that kept the public coming back over the course of the charrette was the realization that their opinions were being heard, which they could see in the emerging plans produced by the designers. The public had full access to the charrette team during non-meeting hours, at all times of the day. They could test what was being produced against what was being heard at meetings.

LESSONS LEARNED

Choosing the right process

In Contra Costa, a conventional planning process and the charrette process occurred back to back, demonstrating the overwhelming disparities between the two approaches. In the conventional process, fewer than 100 people participated, the consultants were unable to overcome psychological barriers, there was a high level of participant turnover and drop-out, and the outcome was a compromise that failed to meet anyone's expectations. In the charrette process, the compressed meeting schedule resulted in high levels of participation (over 500 people), psychological stalemates were addressed and resolved, the stakeholders and the community took ownership of the project, and the outcome was the result of many problem-solving exercises that produced a plan supported by almost everyone involved.

Contra Costa emphasizes that in the case of a highly political environment, the charrette

process is better designed to effectively build consensus and overcome entrenched mindsets. BART Director Gail Murray observed, "The planning charrette is a powerful tool for achieving consensus on land use issues. By empowering the local community, and supporting them with technical resources, communities will create smart growth solutions that are sustainable even in the most challenging of circumstances."

The right number of days

Extremely contentious political environments require at least a six-day charrette. This allows for time to deal with the unexpected. For instance, at the Contra Costa charrette, it quickly became apparent that issues surrounding traffic would have to be addressed. During the second day of the charrette, neighborhood representatives questioned the validity of the traffic modeling because it was based on two-year-old traffic counts. The consultant and County planners decided to order new traffic counts to begin the next day. This announcement to the neighbors was a profound moment because the County acknowledged and addressed their concerns quickly. An ad hoc second transportation meeting was then conducted during the charrette where the traffic concerns of the neighborhood were put to rest. The success of the charrette might not have been possible in a shorter time frame.

Strong political leadership

This project spotlights the benefits of strong leadership from an elected official, Donna Gerber, who was able to initiate the process and help keep the project on track. Not only did Ms. Gerber convince the county and other key players to get behind a new and largely unheard of charrette process, but she also put her political career on the line by telling her constituents that it was unacceptable for the BART property to remain surface parking and that people needed to engage.

In addition to Gerber, County Redevelopment Director, Jim Kennedy, provided the staff support needed to turn the plan into a reality. He not only managed the process but paid close attention to details during both the planning and implementation phases of the project.

Accurate base mapping

An accurate base plan is extremely important. The team did not have an accurate base map to work from at the charrette. It was only 24 months later that the engineering team discovered this fact. The result, although it did not drastically alter the charrette plan, did cause considerable rework that could have been avoided if accurate base maps had been available during the charrette.

Choosing the right consultant team

The quality of the consultant team is critically important to the charrette process. A complex project with numerous stakeholders and vast amount of information that needs to be quickly synthesized requires consultants that exude confidence, technical abilities, good listing skills, and the ability to gain the trust of stakeholders. In Contra Costa, an experienced and well designed charrette team was able to facilitate the transformation of a highly skeptical community into believers in the public process.

PROJECT DETAILS

Planning costs: $600,000 (charrette process)

Source of funding:

Contra Costa Redevelopment Agency (using TIF revenue)

Number of participants: 500+

Current program build out:

- 2,700 residential units
- 35,590 square feet of local serving retail
- 423 hotel rooms
- 19,400 square feet of business conference center, and
- 2.4 million square feet of class A office

Replication:

BART has 45 stations with Transit Oriented development potential. Several others stations are looking at using a similar model.

Partnerships:

Public/Private partnerships played a key role in this project, including Contra Costa County, BART, the developer Millennium Partners, and Contra Costa Redevelopment Agency.

LAUDERDALE LAKES CHARRETTE

SUMMARY

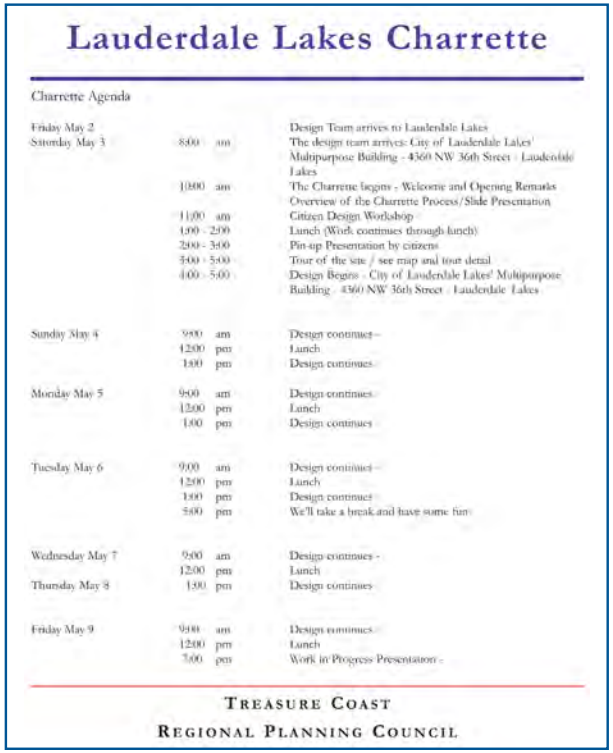
The City of Lauderdale Lakes, located 30 miles north of Miami embarked on an ambitious journey to establish a Community Master Plan that would lay the groundwork for a new Lauderdale Lakes Town Center. Strong leadership from the City, an understanding of the charrette process, and an innovative funding strategy are transforming what was a sprawling vehicular-oriented crossroads into a community center and multi-modal transportation facility.

PROJECT DESCRIPTION

Lauderdale Lakes is situated in the middle of Broward County, with two of the County's most travelled roadways, State Road 7 and Oakland Park Boulevard, forming a crossroads at its center, with approximately 130,000 vehicles crossing this intersection daily.

During the 1970s, Lauderdale Lakes was the focus of new commercial investment and population growth as development spread westward and State Road 7 established itself as the primary north/south retail corridor west of I-95. In the 1980s, however, as the region's population moved further west, investment started to leave the community or pass it by. City leadership, through the Lauderdale Lakes Community Redevelopment Agency (CRA), saw an opportunity to engage the community, chart a new course for the future that reflected emerging needs, and take advantage of the significant opportunities for redevelopment. With the highest use of public transportation (through bus ridership in all of Broward County) there was also an interest in developing an integrated strategy for multi-modal transportation and adjacent transit-oriented development.

Lauderdale Lakes CRA Executive Director, Gary Rogers, was familiar with the charrette process through prior work done by the Treasure Coast Regional Planning Council, also based in Florida. After a change in leadership, staff received the encouragement and support needed to jump-start the charrette process from the community and elected officials. Funding was secured for the project through an allocation of CRA Tax Increment Financing and the community began a rigorous public engagement process.



Lauderdale Lakes Charrette

Charrette Agenda

Friday May 2			Design Team arrives to Lauderdale Lakes
Saturday May 3	8:00	am	The design team arrives: City of Lauderdale Lakes' Multipurpose Building - 4360 NW 36th Street - Lauderdale Lakes
	10:00	am	The Charrette begins - Welcome and Opening Remarks Overview of the Charrette Process/Slide Presentation
	11:00	am	Citizen Design Workshop
	1:00 - 2:00		Lunch (Work continues through lunch)
	2:00 - 3:00		Pin-up Presentation by citizens
	3:00 - 5:00		Tour of the site / see map and tour detail
	4:00 - 5:00		Design Begins - City of Lauderdale Lakes' Multipurpose Building - 4360 NW 36th Street - Lauderdale Lakes
Sunday May 4	9:00	am	Design continues -
	12:00	pm	Lunch
	1:00	pm	Design continues -
Monday May 5	9:00	am	Design continues -
	12:00	pm	Lunch
	1:00	pm	Design continues -
Tuesday May 6	9:00	am	Design continues -
	12:00	pm	Lunch
	1:00	pm	Design continues -
	5:00	pm	We'll take a break and have some fun
Wednesday May 7	9:00	am	Design continues -
	12:00	pm	Lunch
Thursday May 8	1:00	pm	Design continues -
Friday May 9	9:00	am	Design continues -
	12:00	pm	Lunch
	3:00	pm	Work in Progress Presentation -

Treasure Coast
Regional Planning Council

Lauderdale Lakes Charrette Agenda

PROCESS DESCRIPTION

The Lauderdale Lakes Master Plan grew out of a public 7-day charrette held in May of 2003. The Master Plan captures the citizens' vision for the future of the City of Lauderdale Lakes. Local planners used a number of tools and strategies to generate widespread public involvement in the process.

Pre-charrette

- - Charrette stakeholder outreach began in earnest with direct interviews of over 50 stakeholders, direct mail notices, postings, public meetings, and website notifications. -
- - Elected officials were invited to attend meetings, and they did. Because the meetings were noticed, they were able to participate and have the kinds of open conversations not typically afforded during regular council meetings.

Charrette

- - The Charrette was attended by over 250 residents, property, and business owners, representing a diverse cross-section of the community. -
- - The Treasure Coast Regional Planning Council's Design Studio and the assembled

team of planning and design professionals assisted the citizens in studying the many challenges faced by the community, and proposed specific solutions. Ideas continued to develop and were brought up at future meetings for validation and for further input and refinement.

- Ideas that had widespread support or generated excitement rose to the surface, while some ideas failed to gain traction. For example, during the charrette, one woman wanted to see an ice skating rink included in the vision, so she wouldn't have to drive the 8 miles to the existing rink. Due to the extreme cost and lack of need, this idea did not resonate with the public and did not make it into the plan.
- Certain ideas were the subject of ongoing debate. Alternatives were developed and presented to the community for review. In some cases, they public was asked to vote with stickers for their preferred alternative. Visual preference surveys, which are set up as visual surveys with groupings of images, were used to gauge public opinion and inform consultants on issues such as architectural preference.
- A presentation of work in progress was held in May. Residents, property and business owners, as well as city staff and elected officials were present. Work continued in the weeks that followed the initial public workshop.
- Design and development of the Town Center emerged as the central goal of the Master Plan with clear strategies for expanded transportation services, regulatory reform, strategic investments in public infrastructure, diversification of local retail offerings, expanded professional services, and increased local employment opportunities.

Post-Charrette

- A series of final presentations by Treasure Coast Regional Planning Council staff was held during the summer of 2003 to collect further citizen and professional input. -

PROJECT OUTCOME

The Master Plan was adopted in 2005 by the City Planning and Zoning Board, the Community Redevelopment Agency Board of Directors and the City Commission as a guide for future public and private investment and community growth.

Following adoption of the 2005 Master Plan, 73% of local voters overwhelmingly approved a General Obligation Bond of $15 million to fund many of the projects included within the plan. "If you want to prove the public likes your planning, ask them to vote to tax themselves," says Rogers, Executive Director of the Lauderdale Lakes CRA.

Consequently, bond funds paid for the construction of four new parks, design and construction of new masonry bus shelters on

BELOW LEFT: *Broward County Lauderdale Lakes Public Library and Community Education and Cultural Center. The project, which was completed for $6 million in 2010, is the centerpiece of the Lauderdale Lakes mixed-used development.* **BELOW RIGHT:** *One of 12 masonry bus shelters that have been constructed, with Federal Stimulus funds funding ten more this year. The bus shelters, which were a significant outcome of the charrette, boast the first real-time, solar powered, bus arrival time display in the county, wi-fi, and new limited stop service for commuters traveling regionally.*

Images from: J. Gary Rogers, Executive Director, City of Lauderdale Lakes Community Redevelopment Agency

main corridors, neighborhood traffic calming, landscaping improvements, and road resurfacing.

In 2008, to jump-start the private sector initiatives and the development of the Town Center in particular, the CRA partnered with the City and a private developer to construct a library and mixed-use civic center on 25 acres of City-owned property. This privately financed development, valued at $150 million, is under construction at this time. The Bella Vista project follows the conceptual plan developed during the charrette and will contain 551 dwelling units, a village green, a public Library/Community Education and Cultural Center, a 5,000 sq. ft. clubhouse and Olympic size swimming pool on a thirty-acre site with public transit facilities.

INNOVATIVE PUBLIC INVOLVEMENT TECHNIQUES

Pre-charrette stakeholder meetings

Prior to the charrette, local planners held focus groups with the economic advisory board, neighborhood associations, senior staff, and the parks board. These facilitated meetings were 3-4 hours long and included highly visual presentations to help get people excited about the potential for new development. Each meeting was open to the public as well and drew a minimum of 50 participants. These meetings laid the groundwork for the open and inclusive charrette process.

Repeat meeting attendance

At the end of each informational meeting or workshop, local planners invited participants to come to the next meeting, and urged them to bring three neighbors. Because people liked what they heard at the meetings, and because of the direct ask to invite others, people responded and came back, bringing family, friends, and neighbors with them.

Winning support with integrity

The professional integrity of both staff planners and consultants insured that the public's ideas were heard and included. Planners cared about the process, cared about the outcome, and communicated this with the community. At every meeting, planners made a direct appeal telling the public, "We work for you. Its your town." And asking them, "What do you want this place to be?" People began to talk, to listen, and most importantly return to future meetings.

LESSONS LEARNED

Charrettes as a marketing tool for change

Following the charrette, the CRA wanted to keep the momentum strong, and so put up for a vote a bond for $15 million. The bond would pay for many of the public investments included in the master plan created during the charrette. In an overwhelming show of support, the bond passed with 73% voter approval. CRA Executive Director, Rogers, gives credit to the charrette process for building this kind of public approval. He mentions one woman who wanted a trail along the canal. This idea gained traction and was included in the plan. She called all her neighbors and had them vote in support of the plan and bond. This kind of response would not have happened without the success of the charrette process.

Implementation strategies and knowing what to expect

Because of the city staff's familiarity with similar projects in nearby communities where the charrette process was employed, there was a certain level of comfort with how the charrette would operate and what the broad outcome would be: a master plan that proposed mixed-use commercial and civic uses oriented toward the pedestrian and multi-modal transportation. Understanding the likely community goals and desired outcome of the public process, City staff was able to spend significant energy making sure known problems were specifically addressed in the plan, paving the way for future implementation. Because of this targeted approach and focus on actionable items and clear implementation strategies, Lauderdale Lakes has been able to accomplish most of the goals included in the Master Plan.

PROJECT DETAILS

Cost of charrette: $80,000

Source of funding:

Community Redevelopment Agency (CRA) TIF funds

Number of participants: 250

Current program build out:

- 20,000 sf of new civic space
- 551 residential townhouse units
- 12 new bus shelters completed, 10 more under construction
- 2 miles of linear trail and approximately 45 acres of public parklands -

Replication:

Due to the success enjoyed by Lauderdale Lakes as a result of their process, three other areas of the state have established Commercial Corridor Collaborative models for area-wide and local planning based upon their model.

LIBERTY HARBOR NORTH

SUMMARY

Liberty Harbor North is an 80-acre brownfield site located within Jersey City, New Jersey, that has been transformed into a 27-block, mixed-use neighborhood, benefiting from proximity to New York City and views of lower Manhattan. Despite a contentious relationship between the site's primary land holder and the City Redevelopment Authority, the charrette process brought together these and other key stakeholders, to generate an ambitious project that has served as a model for the City and the region.

PROJECT DESCRIPTION

Liberty Harbor North is a half-mile west of the Hudson river on the north bank of the Morris Canal. Two historic neighborhoods border the site, including the Van Vorst neighborhood to the east and the Hamilton Park neighborhood to the north.

During the 1980s, redevelopment of the site was mired in a complex tangle. The site had been identified as a redevelopment area, with the majority of land owned by a private developer, Liberty Harbor Holding, and the remaining parcels under the control of the City Redevelopment Agency. The Redevelopment Agency obtained their parcels though a condemnation process, which resulted in lawsuits between the owners of the condemned land and the City as well as lawsuits between the primary land holder and the City.

This lengthy and contentious legal entanglement was eventually settled, with the City able to secure the Canal Street. The litigation did have the significant and unanticipated benefit of delaying the project, which in its first iteration was based on a conventional suburban plan that had little support from the community.

Despite the eventual settlement of the legal cases and the City's acquisition of the Canal Street parcels, strong personal rifts kept the project at a standstill. It took a new administration and City Council leadership to convince the Redevelopment Authority to work with the developer to jump-start the project.
The City's Planning Department did research on urban design consultants and suggested the developer consider using Duany, Plater-Zyberk and Company (DPZ) because of the quality of projects they were doing in South Florida. Liberty Harbor Holding then hired the firm to conduct a community charrette process.

PROCESS DESCRIPTION

The Liberty Harbor North master plan grew out of a public, 7-day charrette held in March 1999. Though the charrette was funded by a developer, the project successfully engaged stakeholder groups from the community, the City, the Redevelopment Authority, as well as County and State agencies, resulting in a widely supported plan. A number of tools and strategies were used to generate significant public involvement in the process.

Pre-charrette

- Charrette stakeholder outreach included invitations mailed from the developers, e-mail, word of mouth, and letters to city, county, state, and federal agencies.
- A very strong sense of community existed already, and people were generally interested in development planning.
- Jersey City is a city of neighborhoods, all changing at their own pace, with varying levels of activity. The charrette benefited from two existing, well-organized neighborhood associations adjacent to Liberty Harbor. Both were active and generally stayed involved in local projects. Very little effort was required to get these groups involved in the charrette.

Charrette

- The Charrette was attended by over 100 residents, property, and business owners, representing a diverse cross-section of the community.
- Targeted stakeholder meetings were held with adjacent land owners, the City Engineering Department, environmental groups, light rail designers, and other key stakeholders.
- Elected officials were invited to attend meetings, and many participated throughout the process. Everyone who wanted to participate was able to do so. -

Liberty Harbor North Charrette Schedule

Liberty Harbor North Charrette Schedule		Sunday, March 21 TRAVEL DAY	Monday, March 22 DAY ONE	Tuesday, March 23 DAY TWO	Wednesday, March 24 DAY THREE	Thursday, March 25 DAY FOUR	Friday, March 26 DAY FIVE	Saturday, March 27 DAY SIX	Sunday, March 28 DAY SEVEN
DPZ Team: *Principal -* Andres Duany *Project Manager -* Jeff Speck *Urban Designers-* Ana Cristina Acosta Ludwig Fontalvo-Abello Oscar Machado Jorge Planas David San Roman Beatriz Nadal, Ben Northrup *Architects -* Ted Liebman / Alan Melting Katy MacNeil, Patrick Pinnell *Designer/Renderer -* Michael Morrissey *Landscape Architect -* Bruce Corban *Real Estate Consultant -* Todd Zimmerman *DPZ Engineering -* Anthony Sease **STUDIO** Hamilton Health Care Center 535 Monmouth Street Jersey City, NJ 07302 201-653-7230 / FAX # 201 239 8930 **LODGING** Club Hotel & Suites by Doubletree 455 Washington Boulevard Jersey City, NJ 07310 201-499-2400 / Fax: 201-499-2406	8:30 AM 9:00 AM 10:00 AM 11:00 AM 12:30 PM 1:30 PM 2:30 PM 3:30 PM 4:30 PM 5:30 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM 12:00 PM	Team Arrives DINNER out To Bed. . .	BREAKFAST Van Tour of Site Surrounding Area, and Comparables. **Photograph for slide show.** LUNCH at X Walking Tour of Site and Surrounding Area **Photograph for slide show.** Set up Studio TEAM SESSION (Project Overview) *Andres, Tony arrive @ 7:05* DINNER out *(Reservations)* To Bed. . .	EARLY Breakfast **NYC TOUR** *with J. Massengale* **Process Film for slide show.** LUNCH in Studio **DEVELOPER TEAM BRIEFING** **INTRODUCTORY LECTURE** *Bruce Arrives @ 7:10* Reception for Invited Guests DINNER out *(Reservations)* To Bed. . .	BREAKFAST TEAM SESSION **MEETING # 1** *Light Rail* TEAM SESSION LUNCH in Studio **MEETING # 2** *City Agencies* Design Review Struct. Engineer Attending **MEETING # 3** *Invited Architects:* Victoria Casasco (310-349-1206) vi Alexander Gorlin (212-229-1199) Elizabeth Guyton (718-625-2278) John Massengale (914-234-7277) Robert Orr (203-777-3387) DINNER in Studio *(Andres & Jeff w/publisher)* Design To Bed. . .	BREAKFAST TEAM SESSION **MEETING #4** *State Environmental* **MEETING #5** *CityPlanners WRT* LUNCH *Jeff to Birmingham @ 1:30* **MEETING # 6** ***Hotel/Parking Site*** Design Review **Afternoon Tour to Radburn** **NIGHT OUT** *Ludwig departs @ 8:00* To Bed. . .	BREAKFAST Design **MEETING #7** *TBA (Optional)* Design & Production LUNCH *Beatriz, Ben Arrive* Design & Production Design Review DINNER *(Early)* **Clean Up Studio** **MEETING # 8** *ARCHTECTURAL REVIEW* *Invited Architects and Press* *Pat Departs* *Jeff returns @ 9:00* To Bed. . .	BREAKFAST *Ben Departs* Final Design Review Production LUNCH Production DINNER Production	BREAKFAST Finish Drawings Photograph Drawings LUNCH / Process Film (2-3 Hours) *Bruce Departs @ 3:15* Team Packs Up Snack Set Up Lecture **FINAL LECTURE** DINNER out *(Reservations)* To Bed. . . ? Team Departs Monday AM

Draft: 3.16.1999 — Duany Plater-Zyberk & Company, Architects and Town Planners — Note: Charrette Team designs while meetings take place.

Open to the Public

ABOVE: *The charrette is roughly divided into a design phase and a production phase. The design phase features a series of technical meetings with key agency and stakeholder representatives during which time the design team creates a set of alternative concepts, on days one through three and the morning of day four. Once a preferred alternative is developed, around the end of day four, the production phase can begin, starting on day five, in which designers prepare documents and drawings for the final lecture on the last day.*

- The community was provided with numerous alternatives, which were considered during the first days of the charrette. People were asked, "What do you want to see?" The charrette team took that input and drew plans.
- Drawings were produced quickly following meetings, and represented what was discussed. The process was friendly, with people siting over plans, sketching, listening, and evolving the plan.
- Because the site was within a redevelopment area, the City could require architectural standards. Architects were brought into the process to draw up different building types, including town homes and flats, and provide choices to the public. The zoning

was also written to mandate that a variety of architects were involved in the design of the project, which has resulted in a high quality built environment.

- Members of the two adjacent neighborhood associations participated in the charrette and were so impressed by the quality of the planning and design work that they were content to attend only feedback review sessions. The project's strongest opponents were also won over.

- A final charrette presentation attended by over 80 people was held in the City Hall chambers, followed by a celebratory reception. Decisions and elements of the plan could be explained based on what the team heard directly from the community. The event was planned knowing that there was widespread support for the plan, and served as a culmination of the week's events.

Post-Charrette

- Because the plan was complete at the end of the charrette and the stakeholders were all happy with the final product, there was little need for additional public meetings following the charrette.

PROJECT OUTCOME

The charrette was so effective at communicating feasibility issues that the developer was able to triple the density on their 80 acres from 2,500 to 8,000 units. The public understood that because the developer was willing to build a robust grid of streets, instead of a suburban gated-community-type pattern, they would also need to increase their revenue to pay for the increased cost of infrastructure.


Matthew Lambert, Duany, Plater-Zyberk & Company


Matthew Lambert, Duany, Plater-Zyberk & Company

Matthew Lambert, Duany, Plater-Zyberk & Company


Matthew Lambert, Duany, Plater-Zyberk & Company

TOP LEFT: *The new streetscape includes traditional front stoops.*
TOP RIGHT: *Corner buildings step up in height in concert with surrounding neighborhood patterns.*
BOTTOM LEFT: *The new neighborhood is served by light rail.*
BOTTOM RIGHT: *View of corners articulated by taller buildings that step out.*

In addition to repairing the historic grid, the plan also included a large central park, several neighborhood parks, and a boardwalk along the river.

The Redevelopment Plan was adopted unanimously by the Planning Board and City Council, following the public hearing process. Phase one of the project, between Grand Street and the Light Rail, is currently under construction with 4-story townhouses lining Grand Street and development on the side streets increasing to 8 stories toward the waterfront. There has been a significant increase in light rail ridership.

To this day, there is widespread consensus that the project is the best example of new construction in the City of Liberty Harbor. And the plan is still relevant and actively referred to even 10 years later. People were so pleased with the final product, that now many people don't feel the need to attend meetings about the project. They trust the outcome will be as promised.

INNOVATIVE PUBLIC INVOLVEMENT TECHNIQUES

Overcoming developer fear of public involvement

Going into the charrette, the developer had a fear of sharing the process with the public, and worried about losing control. With support from their consultant, they were able to overcome this fear and go into the charrette with an open attitude. The process did effectively engage and win over the public. The developers now wholeheartedly endorse the charrette process, which was able to produce what many agree is the most beloved project in Jersey City.

A clearly evolving plan, based on feedback

Many people engaged in the process because of the clear connection between what was said in meetings and how the plan evolved.

The Planning Board Chair and Vice Chair were regulars, engaging in the studio activity every day. They, like members of the public, were able to express their ideas and like many were in love with the process.

The number of charrette attendees grew over the course of the process. People wanted to see the presentations and see the final outcome. If a problem was raised during a meeting, the team would respond by saying, "Ok, we'll change that." People would then come back to see how the plan developed in response to the feedback. The process was not like a regular hearing where people just talk. They could see their comments had an effect on the outcome.

Meeting over lunch

The developers incentivized public participation by providing free lunch every day of the charrette. This was an opportunity for the developers, officials, and the public to sit down over a meal, which had the affect of leveling the playing field and facilitating open conversation.

LESSONS LEARNED

An informed and empowered leadership

In the final moments of the charrette, lawyers representing the Redevelopment Authority made an effort to change the plan and make the street network optional. Because City leadership had been involved in the charrette process from the beginning, and had listened to presentations from the consultant about the importance of creating a street network, the City knew this critical element of the plan had to be required. The direct communication between consultants and a critical number of local leaders during a charrette is often integral to building long-term capacity through education.

Planning & building based on historic precedent

Grand Street is a main transportation corridor running through Liberty Harbor North. At the time of the charrette, Grand Street was a place to be avoided, with heavy traffic and vacant lots. Despite historic buildings lining one side of the street, the client, City, and other stakeholders were skeptical when DPZ urged them to face new buildings onto this corridor. They could not imagine the potential for this street to transform into a desirable place. Now, having followed the charrette plan and the recommendations to mirror the historic buildings with new housing, Grand Street has become a destination and desired address. New 4.5-story multi-family buildings with marble steps are so well designed and built that residents of the City confuse the new buildings for historic structures.

Charrette master plan still guides change a decade later

Because of the Master Plan's overall success and popularity, it has survived over 10 years of administration changes and modifications to elements of the plan without any significant compromises to the spirit of the original vision. The City is now looking at one of the biggest changes to the plan, the site of the Boys & Girls Club. The building that houses this organization is relatively unattractive and is located at a gateway to the neighborhood. A recent opportunity will enable the Boys & Girls Club to relocate to another site, which will allow the City to remove this nondescript building. Though the Master Plan does not show how to address this situation, there is widespread agreement that a new larger building should be constructed and that the road ending at the site should be extended through the site to further increase the connectivity of the neighborhood. Despite the magnitude of these changes, there is no opposition to the plan because the public trusts the ability of the developer, City, and the charrette plan to result in positive changes on the ground.

PROJECT DETAILS

Cost of charrette: $150,000

Source of funding: Private Developer

Number of participants: 100+

Current program build out:

- 600 units (600,000 sf) of fully occupied housing, 2/3 rental, 1/3 condo
- 500 parking spaces
- 35,000 sf of retail - 1/3 leased
- Montessori school
- 2 approximately 12,000 sf parks

HIGH-TECH PLANNING TOOLS

TOOLS ANALYSIS OVERVIEW

The following pages describe a number of highly technical visualization tools that can be used during the charrette process by regional organizations, municipalities, non-profit groups, consultants and developers to help the public understand the implications of specific development proposals or broad land use decisions on the future character of a place.

Traditionally, charrettes have used hand-drawn renderings to provide the needed visual support for illustrating complex planning goals. This "low-tech" graphic aid can be produced quickly and at a relatively low expense, the quality of the product largely dependant on the artist's technical drawing skills and training in architecture and urban design. Hand-drawn renderings are also a viable option for both street-level views and bird's eye views and can be used in combination with the other more high-tech tools described within this report. The nine tools discussed in this guide were chosen to represent various levels of complexity and price. We encourage you to visit chosingviz.org (see box below) for a larger set of available tools.

Being able to visualize the impact of land use choices can help insure that the best decisions are made and that large groups of people arrive at a common understanding of the challenges and implications of regulatory, policy, and design-based decisions.

Each tool has unique strengths that can help assist communities and organizations in determining how to best communicate with constituents through the charrette process. This guide attempts to answer questions, such as "what is this tool about" and "how could this tool be helpful for my town or region's charrette?" Each tool has a unique set of applications and unique set of capabilities. For more information including pricing for any of these tools visit each provider website.

This brief analysis of each tool specifically looks at how each tool performs in the following areas:

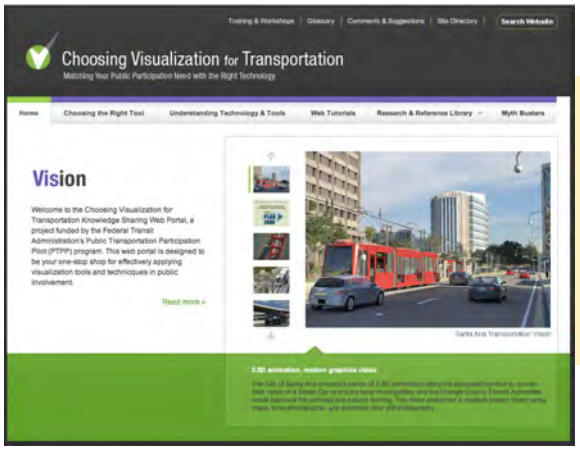
3D Visualization: the ease, quickness and clarity of image

Indicators: the flexibility and responsiveness of the tool to creating and/or revising indicators during the charrette

Public Interface: the tool's capacity and clarity when used in hands-on workshops

Real-time Capability: the ability for the tool to be used during the compressed format of a charrette.

The information contained in the following pages is meant to be used as a starting point to help better understand options for illustrating planning concepts during a charrette process. For each tool, you will find a brief description, samples of the graphics produced, and an "at a glance" overview of the tool's charrette fit. For more information on any of these tools, please refer to the websites for each product.



ChoosingViz.org

In addition to the information contained within this report, there is an extensive on-line resource called Choosing Visualization for Transportation. This website provides a user friendly interface that allows users to enter baseline information about their public process, desired project outcomes, budget, and other criteria. Based on the unique characteristics of the project, the website will provide a list of potential tools and basic resources to help lead users in the right direction.

UNDERSTANDING THE VARIABLES

Successful scenario planning at any charrette requires visualization tools with a high level of clarity and ease of use for both professional planning practitioners and the larger community involved in the many stages of the charrette process. Tools that can produce alternative land use scenarios that can be easily manipulated are valuable assets. While at the same time it must be recognized that a certain expected level of quality requires both time and effort to bring success.

The most useful scenario planning tools are highly scalable, with the ability to zoom in and out of a future land use scenario from the individual building lot, to the neighborhood, to the town, to the region. The ease at which scenarios can be easily adjusted to move through different scales provides a functionality that helps the public understand the larger picture and to see how small decisions made at the local level have an effect a number of factors at the regional scale.

Each tool for visualization, analysis and education comes with a certain learning curve for practitioners to overcome. Many tools were developed as resources for particular employees of the companies that developed them and the ease at which new users can quickly learn the software is a hallmark of tools that will see wider adoption professionally compared to those that require extensive training and continued technical support.

Depending on the complexity of the tool and the amount and type of information it was designed to process, there will be a range in costs that may have an effect on the feasibility of using a certain tool for charrettes with a limited scope and length. Some visualization tools are services rendered for specific cases and with specific criteria and thus have an individual cost each time they are generated. Others are software packages that may have associated costs related to training, update maintenance, and tech-support. In whatever form, each tool becomes applicable for certain uses and for certain goals with cost being one of the controlling factors.

3D Visualization

This category evaluates the ease and ability of each tool to generate 3D visualizations. Typically 3D images show how a place will look from the perspective of a person walking down a sidewalk or a bird's eye view looking down at a place. Different types of visualization tools generate different types of 3D imagery and each will have different strengths in conveying different types of information for various uses.

Indicators

Indicators refer to criteria that can be used to evaluate the outcome of various planning scenarios. Typically, the indicators will be selected by a community in collaboration with a consultant, in order to identify variables that will clearly relate to the values of a community and best evaluate the relative success of each alternative.

Public Interface

This category describes the ease with which the public can understand and/or interact with the tool. A tool that generates images, comparisons, and information that are obvious and that make sense to most people is naturally of higher value to a charrette team than a tool that results in misunderstanding, disparate individual interpretations, abstract concepts, confusion, and that requires a significant investment in educating the public.

Real-time Capability

The real-time capability category evaluates the ability of each tool to respond to real time manipulation. Some tools are designed to use numeric inputs in order to quickly generate alternative scenarios, while others tools require tailored construction of each scenario essentially from scratch. Tools that can be easily and quickly manipulated to show participants slightly different alternatives of a future land use scenario provide the best results for successful scenario planning.

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INDEX

www.crit.com

INDEX PlanBuilder is an interactive GIS-based planning support system designed to assist in community planning and development, including measurement of existing conditions, creation of scenarios, evaluation of alternatives, and implementation of adopted plans. The tool benchmarks existing conditions and then compares business-as-usual futures against alternative scenarios created by users.

Use of INDEX in a charrette requires advance assembly and organization of data for the geographic area in question. The type and extent of needed data will be driven by applicable issues and indicators. Utilization of the program is entirely scalable from neighborhoods all the way up to entire regions.

INDEX has two levels of required user skill level: 1) a model steward with advanced GIS experience, and 2) general users with basic GIS familiarity. Model stewards should have completed advanced ArcGIS instruction and have at least two years of experience using either package; general users must have familiarity with ArcMap. Audience members without GIS experience can be supported by a steward or general users able to interpret desired changes using the software.

INDEX was developed in 1994 by Criterion Planners as a tool for engaging citizens in local planning and helping to better inform community decision-making.

The tool performs its calculations at the building and parcel level, and scenarios can be assembled for blocks, neighborhoods, communities, and regions. Lower level scenarios nest within larger-scale scenarios. Images from INDEX.

"AT A GLANCE" CHARRETTE FIT

3D Visualization

INDEX includes a "growth canvas" 3D visualization tools that allows users to stack increments of growth, such as population or employment, on a location in the digital equivalent of stacking Lego building blocks. Through integration with ArcGIS, the companion program required for INDEX, the program can extrude the stacked data to create 3d maps of future growth scenarios.

Indicators

Alternative scenarios can be measured in real time as users make adjustments to mapped land uses by monitoring 50 possible indicators from a range of categories including demographics, land use, housing, employment, recreation, and environment.

Public Interface

With a user interface designed for non-technical audiences, Index can be operated on laptops at public meetings, allowing the public to make fine-grained changes to the underlying GIS data and periodically calculate indicators to get feedback about the direction the scenario is headed relative to objectives.

Real-time Capability

Fine grained plans can be sketched and scored in real time to enable rapid evaluation of alternative scenarios.

CommunityViz™

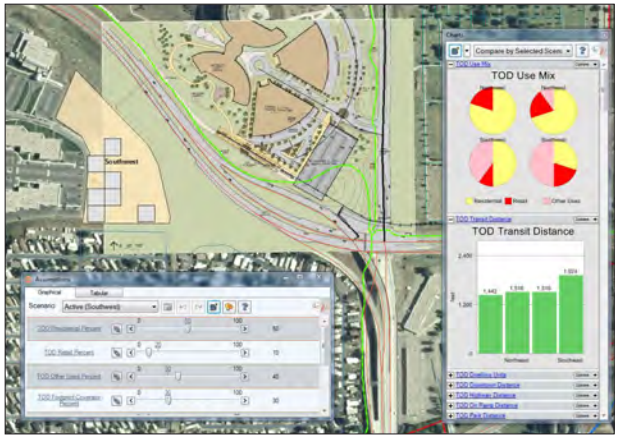
www.placeways.com/communityviz

CommunityViz is an advanced, yet easy-to-use GIS based software designed to help people visualize, analyze, and communicate how different planning decisions will impact a community.

Planners, resource managers, local and regional governments, and many others can use CommunityViz to help them make decisions about development, land use, transportation, conservation and more. The software can be applied to a variety of scales, from the block to the region, and supports scenario planning, sketch planning, 3-D visualization, suitability analysis, impact assessment, growth modeling and other popular techniques.

Community Viz has two components: Scenario 360 and Scenario 3D. Scenario 360 in an ArcGIS extension that adds interactive analysis tools and a decision-making framework to the ArcGIS platform and can be used to compare existing and potential scenarios, understand the impacts of making changes to a plan, and help illustrate how a community might look down the road. Scenario 3D generates realistic, interactive, sharable 3D scenes by transforming the two-dimensional plans created in Scenario 360 into interactive three-dimensional models, with fly-through capability.

CommunityViz was developed by the Orton Family Foundation and is managed by Placeways, LLC. Placeways offers viewers a free download that permits anyone to look at the 3D models without having GIS.



Scenario 360 is the core of CommunityViz, which can be used to set up alternative planning scenarios based on easily modified assumptions, dynamic auto-updating analysis, side by side scenario comparisons, dynamic charts, and measurable indicators (top image). Scenario 3D allows plans to be viewed in 3-dimensions, with fly-through capability (bottom image).

Images: Placeways LLC

"AT A GLANCE" CHARRETTE FIT

3D Visualization

The Scenario 3D component of CommunityViz can quickly generate three dimensional models that perfectly correspond to plans generated through Scenario 360 in GIS. Models can be viewed with Scenario 3D itself, ArcScene, a GIS viewer, or imported into Google Earth.

Indicators

CommunityViz has an extensive database of impact and performance measures that can help users choose alternatives that best match their objectives or desired outcomes. Indicator categories include demographics, environmental sustainability, physical build out, and many more.

Public Interface

In most cases, CommunityViz requires training to utilize its full range of capabilities and due to its integration with other programs for factors such as baseline information gathering and modeling of buildings, a specialists is needed to interpret public input into the program.

Real-time Capability

CommunityViz can be manipulated in real time during a charrette but requires that certain functionality within CommunityViz, such as indicator selection, construction of baseline scenarios, and development of standard building models, be generated in advance. Once set-up is completed, the software can be used live to instantly provide feedback about haw changes to a plan reflect desired outcomes.

MetroQuest

www.metroquest.com

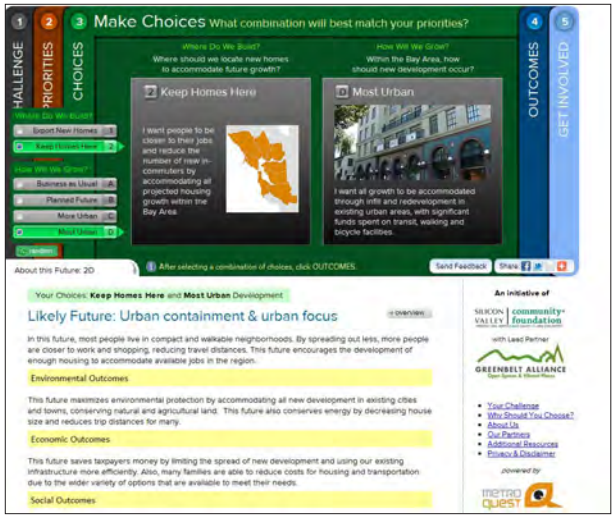
MetroQuest is a highly interactive and visual approach to building community consensus around broad planning concepts. The MetroQuest approach uses digital kiosk, public meetings with key-pad polling, and interactive websites to gather feedback and inform the public about the impact of planning decisions.

With each platform, MetroQuest provides stakeholders with information about future land use choices and allows them to set their priorities. In real time, MetroQuest provides an outcome based on those priorities, shown using GIS-based regional growth maps and graphs, helping a community to understand the impact of today's decisions on the future.

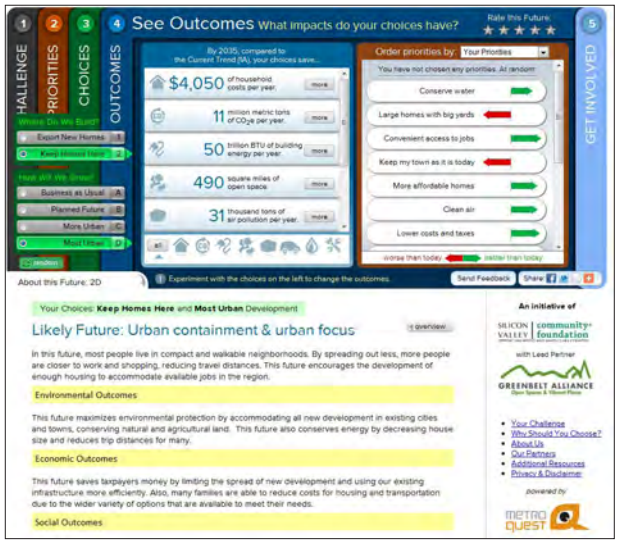
MetroQuest focuses on four areas, surveying community priorities, transportation and urban planning, budgeting and finance alternatives, and scenario exploration.

Over 70 municipalities and planning agencies have used MetroQuest to communicate the long-term impacts of the various policy choices to non-expert audiences, leaving them with a sense of ownership over the result.

MetroQuest was created by the Sustainable Development Research Institute at the University of British Columbia and is managed by Envision Sustainability Tools. If interested in using one of the standard configurations of software, new communities can apply to use the software for a limited time for free.



MetroQuest builds, compares, and evaluates alternative 40-year scenario simulations at municipal and regional scales.



Images from MetroQuest

"AT A GLANCE" CHARRETTE FIT

3D Visualization

MetroQuest bridges the gap between the general public and planning staff/decision-makers by representing complex information and counter-intuitive issues through easy-to-understand graphics, photos and language.

Indicators

MetroQuest overs broad issues like land use, transportation and environmental policy, revealing outputs like mode choice, commute times, greenhouse gas emissions and household costs and is based on models developed by the Institute for Resources, Environment and Sustainability.

Public Interface

MetroQuest was designed to be easy and simple to use, taking much of its inspiration from the computer game Sim-City. With that in mind, creators strived to make the program as little like GIS as possible, highly interactive and intuitive to use by the general public.

Real-time Capability

Attendees to public workshops can see the effects of the ideas they have for the future development of their town or city in real time. Each participant responds to a series of questions using a handheld keypad and the audience's answers are tabulated and used to create a model of future development that can be projected onto a screen at the workshop. An online version of the same tool allows those that can't attend the workshops to submits their own ideas and receive instant feedback.

Envision Tomorrow

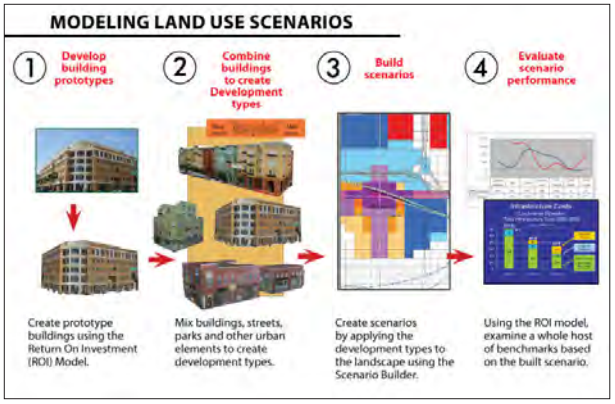
http://frego.com/projects/envisiontomorrow.html

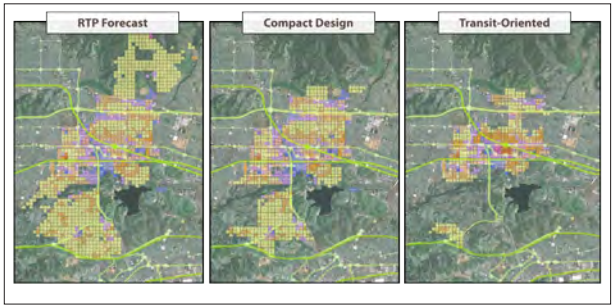
Envision Tomorrow is an innovative suite of urban and regional planning tools that can be used to model the development of buildings on a site-by-site basis as well as create and evaluate multiple land use scenarios at a range of scales.

To conduct analysis, Envision Tomorrow uses a four step process that begins with the creation of prototype buildings, which can be easily modeled and assigned numerical values for density, energy usage, sales price, etc. Step two involves defining the "places" or transect zones based on the unique makeup of building types, street types, and amenities. Step three allows the user to create different development patterns or combinations of places to test the implications of decisions or policies. And finally, step four compares alternative scenarios using charts, graphs, and side-by-side mapping.

At the site level, this tool can be used to identify financially feasible development opportunities and pinpoint ways to adjust existing land use regulations to encourage new development. At the neighborhood scale, various mixes of buildings and other attributes (e.g., streets, parkland) can be compiled to evaluate the implications of different styles of development. These buildings and development types can be used to create land use scenarios at the district, city, county, and regional scales.

The Envision Tomorrow tool also includes the ability to model the energy use, water use, and carbon footprint of potential development at all scales and includes an option to generate photo simulations of specific sites. Envision Tomorrow was developed by Fregonese Associates.





Images from Fregonese Associates

TOP: *The 4 step scenario planning process.*
MIDDLE: *Three growth scenario land use maps.*
BOTTOM: *Computer generated images showing the evolution of a TOD.*

"AT A GLANCE" CHARRETTE FIT

3D Visualization

Envision Tomorrow is primarily a tool for data generation but does output the information into easily read spreadsheets. The Return on Investment tool helps users understand the physical and financial feasibility of a proposed development or existing development regulations through a series of charts and graphs each tied to 3-D building types being analyzed.

Indicators

Scenario Evaluation spreadsheets allow users to examine a set of benchmarks based on scenario build out. Envision Tomorrow uses a Return-on-Investment model to test the physical and financial feasibility of a proposed development or existing development regulations. The ROI Model considers a range of factors including parking, height and use requirements, costs associated with construction, fees, rents and subsidies.

Public Interface

Like most other GIS based scenario planning programs, Envision Tomorrow requires some amount of training for users to become competent at its full level of planning functionality. Trained individuals should be used if public input is planned to be analyzed during any period of public audience input. Results of selected scenarios are typically presented to audiences using Scenario Evaluation spreadsheets that permit examination of a host of benchmarks.

Real-time Capability

Building scenarios within Scenario Builder first involves modeling buildings in Prototype Builder and then assigning the building types across the study area in different ways to create different land use scenarios. Once set-up of each scenario is complete, the tool allows real-time evaluation of each scenario's impact on multiple factors.

iPLACE³s

www.sacog.org/services/I-PLACE³S

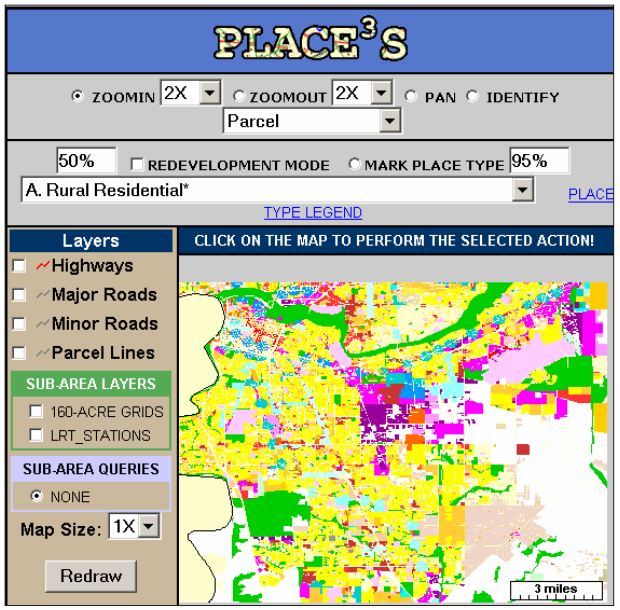
I-PLACE3S is a web-based land use and transportation modeling platform for scenario planning. It can evaluate how alternative development approaches or transportation investments may impact a number of indicators, including transportation patterns, energy usage, cost efficiency, and climate change.

I-PLACE3S analysis is conducted through a web-based map display. This strong visual component and interactive platform supports scenario development and testing by non-technical users in settings such as public workshops and because it is web-based, I-PLACE3S requires no specialized hardware or software.

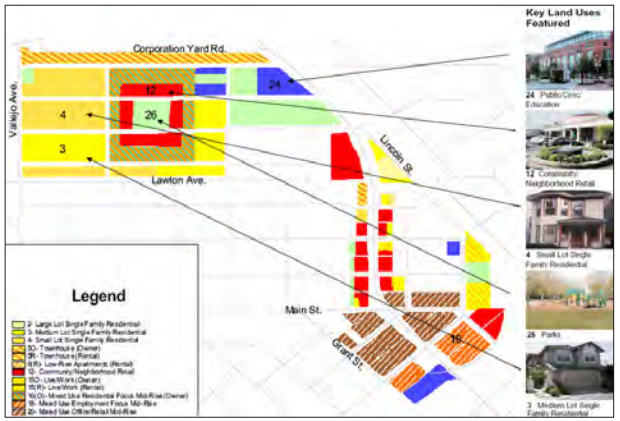
I-PLACE3S uses parcel level land use data for integrated, rapid analysis at the parcel, block, neighborhood, metro and regional level making it a valuable tool for land use planning at any scale. Because it is web-based, I-PLACE3S requires no specialized hardware or software.

I-PLACE3S was developed in the public sector by the California Energy Commission, the California Department of Transportation and the U.S. Department of Energy, and is currently managed by the Sacramento Council of Governments.

This tool is free to use once an account is created at http://places.energy.ca.gov/places/ although i-PLACE3S must be used properly to achieve the desired results. The Sacramento Council of Governments strongly recommends formal training and provides it to their constituent members.



I-PLACE³S can incorporate data and provide feedback into regional travel models to illustrate regional transportation benefits resulting from alternative local land use choices.



Images from the Sacramento Area Council of Governments

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3D Visualization
The I-PLACE3S uses a real-time GIS tool to analyze and display the results of different land use scenarios as a series of digital maps and data tables that effectively communicate results to the public and decision makers. The data generated in i-PLACE3S can be exported and turned into tables, charts, and maps to help to clarify the trade-offs a community must make, the relative difference among scenarios and provide a common yardstick for measuring land use plans.

Indicators
I-PLACE³S offers a wide variety of indicators to compare complete scenarios or subareas within the same scenario. Categories include a diverse selection of demographic indicators including totals for and changes in population, employees, dwelling units, types of jobs, and many more.

Public Interface
I-PLACE3S exports both digital maps and statistical data tables. When properly presented to audiences, the differences between hypothetical future scenarios and current existing conditions can be easily illustrated while changes to indicator data are explained, allowing the public to develop a well informed opinion for a potential future path.

Real-time Capability
Normally, the range of possible scenarios is developed through feedback from stakeholders and the public before data is analyzed and presented for final opinion. The work involved to allow i-PLACE³S to output multiple scenarios in a timely manner takes place up front, primarily in setting up the base scenario the reflects current, existing conditions. Depending on the size of the project, statistical analysis time can vary.

Autodesk

usa.autodesk.com

Autodesk produces a number of CAD-based programs, including Autodesk VIZ, 3Ds Max, and Revit, as a suite of tools that can render and model buildings, streets, and numerous objects found in the urban environment so that even entire neighborhoods can be accurately modeled in 3D.

The Autodesk suite of Computer Aided Drafting programs are widely used by architects for building design, documentation, rendering and spatial modeling.

Autodesk VIZ (discontinued in 2008) and Revit, its replacement, have simple settings that produce high quality renderings from models of single buildings to complex assemblies of buildings forming a neighborhood.

Autodesk 3Ds Max is a more robust program for modeling, animation, and rendering, tuned specifically for architects, designers, and visualization specialists. The program can quickly produce large production renderings and fly-through animations.

Autodesk programs have the ability to model everything from small objects to entire urban districts and therefore provided visualization at a multitude of scales. The ability to depict different scenarios is also wide ranging, but limited by available time and skill level of the user.

Duany Plater-Zyberk & Company

ArX Solutions \ Dover, Kohl & Partners

The level of detail included in Autodesk graphics relates to the specific application used and the amount of time and effort invested. Renderings are generated from CAD based information and so are easily produced to scale and with ability to include significant architectural and landscape detail.

"AT A GLANCE" CHARRETTE FIT

3D Visualization

Autodesk's product line has a high learning curve for users to fully utilize all of the capabilities that the programs offer. Typically, architecture and design schools have students interacting with Autodesk software early and often throughout their programs so that they graduate with some level of competency. The ease at which someone can generate visualizations is directly relate to the experience someone has had with these programs.

Indicators

The majority of indicator criteria built into Autodesk products are related to building materials and sustainability but limited to the building scale. Typically, when modeling entire neighborhoods, buildings are modeled as shells where individual floors and rooms are not detailed. Therefore much of the information that can be exported about building performance is limited due to the way a model is generated itself.

Public Interface

Autodesk products are known for their powerful ability to render line information into photo-realistic 3D objects that bring a realistic look to modeled development scenarios.

Real-time Capability

Rendering CAD files into realistic quality, especially when dealing with large models the size of entire city districts, can take a number of hours in the most extreme cases and therefore limits the manipulation of scenarios quickly. That being the case, CAD products are often used to generate very high quality, final imagery for finalized plans.

Visual Nature Studio

www.3dnature.com

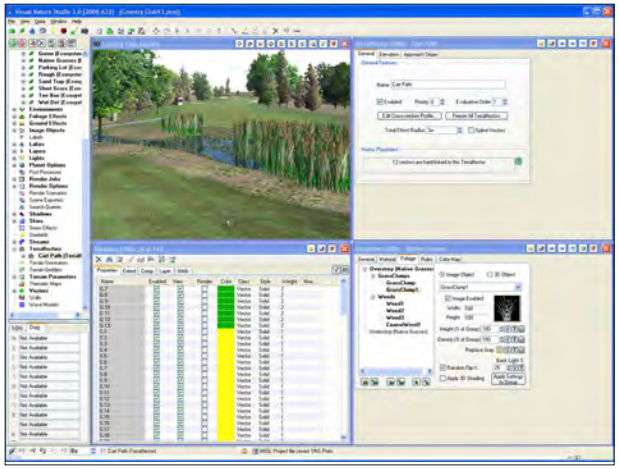
Visual Nature Studio is a GIS-based tool that produces photorealistic still images or animations of landscapes using digital elevation model (DEM) and geographic information system (GIS) data as input. The software is typically used by cartographers, historians, foresters, land planners, landscape architects, golf course designers, civil engineers and other natural resource professionals.

Visual Nature Studio provides tools to control visualizations directly from GIS data, simplifying and automating the process. The software provides extensive support of readily available terrain, 3D object, vector, point, image, image sequence and GIS data formats.

Visual Nature Studio is typically used in situations where vegetation or other natural features are an important part of the planning exercise. Though the focus of this software is heavily weighted toward natural landscapes, data files for buildings can be imported from CAD, Sketch Up and other modeling software and placed into natural scenes. The software does not currently have the capacity to work within a primarily urban context such as a street, neighborhood, or city.

Because of the time and detailed inputs required to develop each scene, scenario planning is not a strength of this software for use during the charrette, though alternative views can be generated to provide users with unique choices. The program does allow for scalability, permitting movement within the set parameters of a scene, zooming from the scale of the neighborhood to the scale of the building, though the level of detail remains constant. For individuals familiar with GIS, the professional learning curve is minimal and many users are able to learn the software on their own.

Visual Nature Studio was created by 3D Nature, a privately held software development company.



GIS or geospatial data is converted into a photorealistic image or animation that is easily understood by a non-technical audience.

"AT A GLANCE" CHARRETTE FIT

3D Visualization

Visual Nature Studio specializes in 3D visualization. The tool is ideal for considering the implications of landscape design, infrastructure, and issues dealing with topography. The software has a heavy focus on the natural landscape, with an extensive model library of foliage and plants. The software has the ability to import building data files, though these must be used with the platform of the natural landscape.

Indicators

Because Visual Nature Studio is a GIS-based tool, each image has associated geospatial data; however, this tool is not designed to easily compare the outcomes of alternative planning scenarios.

Public Interface

Visual Nature Studio is designed to be easily understood by the public. Similar to a hand-rendering, these photorealistic images include many of the fine-grained details to portray a complete visual picture of a naturalistic place.

Real-time Capability

Visual Nature Studio can be used to produce detailed photorealistic scenes during a charrette. The speed of production depends largely on the level of professional training. Scene set-up can take anywhere from 30 minutes to multiple days and rendering times can be just a few seconds to many hours, generating a very simple scene or animation to a very large or detailed scene or animation.

SketchUp

www.sketchup.google.com

SketchUp is a 3D modeling program with a three-dimensional design and modeling environment that permits users to draw the outlines of objects in a two-dimensional manner, similar to pencil and paper (a process already familiar to them). The two-dimensional, planar faces created by a user can then be pushed and pulled by editing tools within the environment to easily and intuitively create three-dimensional volumes and geometries.

SketchUp is easily scalable and can smoothly transition between the building, street, neighborhood, or city.

During a charrette, preliminary hand-drawn plans can be scanned and pulled into SketchUp. A quick massing plan can be generated by extruding buildings and adding other 3-dimentional objects from the 3D Warehouse. For more compelling scenes, photographs of building facades can be pasted onto building massings to generate photo-realistic views.

SketchUp is available as a free download, and in a Pro version that allows the export of models to a number of other platforms such as CAD. Google also offers a number of free training videos to get users started right on the SketchUp homepage. Unique to SketchUp as a visualization tool, models can be exported as a file than can be opened with Google Earth, so that proposed development scenarios can been seen in context.

Duany Plater-Zyberk & Company

Kenneth Garcia – Dover, Kohl & Partners

SketchUp can be used to show simple massings and the proportions of a street or it can be dressed up to show details of architectural style or even street furniture. Even more complex models will paste on photographs of actual building facades to create a more photo real image.

"AT A GLANCE" CHARRETTE FIT

3D Visualization

SketchUp has the ability to generate an endless number of "scenes" or views of a project from numerous angles determined by the user. Scenes can be saved as part of the model and selectively reviewed or exported as images for public presentations. It is also possible to create fly-through animations providing another level of context, unachievable in single images.

Indicators

SketchUp is primarily a visual rendering tool and the ability to evaluate one model from another is primarily aesthetic, however, because they are three dimensional by default SketchUp models inherently provide a better understanding of spacial dimensions than hand-drawn or computer generated plan-view maps of development scenarios.

Public Interface

SketchUp offers a wide range of visual styles for its models, all of which are designed to be quickly understood for models with a wide range to detail.

Real-time Capability

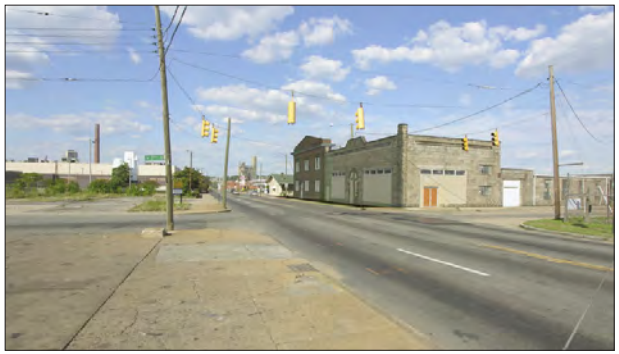
Elements within a SketchUp model (buildings, street lights, cars, etc.) can be saved individually. Thus, manipulation of their placement within a model can be easily handled. Similarly, SketchUp allows users to model on different "layers" that can be turned on and off to depict different scenarios on the same block structure and street network. Components, layers and scenes can all be used to do live simulations, but because the model is not driven by data, manipulation remains subjective and the real-time capability of any model requires anticipating changes the public might want to see as the model is being built. Completed scenarios work best for visualization purposes.

Photo Simulations

Photo Simulations are a tool generated using Photoshop, FormZ, and other graphic editing and 3D modeling programs for transforming photographs of existing conditions at a community site into realistic visualizations that clearly depict a desired future scenario. Most often used with street level views, photo simulations make an imagined future scenario palpably real and understandable to the public.

During a charrette, photo simulations can be constructed over the course of a few days to show how the community's vision will look in three dimensions. These snapshots can accurately represent how sections of a project or community plan will appear when built, providing the public with a non-threatening representation that has photographic believability.

A number of firms specialize in urban photo simulations and each have the ability to focus at different levels of detail, from the pedestrians view-point at street level to axonometric and birds-eye views of redeveloped streets and infill development. Scale, however, is one of the first decisions that must be made. In similar fashion, the proposed look of any scenario must be discussed early and often during the process of image creation so that the final product accurately depicts the desired scenarios.



Images by Steve Price, Urban Advantage

Proposed phasing of a street in Richmond, Virginia. **TOP:** *existing conditions.* **MIDDLE:** *Public infrastructure improvements.* **BOTTOM:** *Private investment and public transit. The images resonate with a non-technical crowd and can also be used for marketing purposes.*

"AT A GLANCE" CHARRETTE FIT

3D Visualization

Typically a specialist trained in the software used to generate photo simulations is needed to produce imagery of a level of quality that makes simulations effective with the public. Despite the expertise needed, Photo Simulations have been found to be one of the most effective tools for connecting to the public at large.

Indicators

Photo Simulations are normally developed through a series of feedback loops so that they accurately depict the desired form and style of buildings and streetscape elements as determined by the client. Simulations typically depict a single future scenario, although phasing can be demonstrated, but in cases where multiple possibilities are depicted for a single site, evaluation is typically aesthetic based.

Public Interface

Public audiences have regularly demonstrated that Photo Simulations are a successful tool for generating feedback from a community. Although the ability for the public to change simulations once completed is limited, the ability of the imagery to instigate conversation and generate feedback based on the change in look and feel of recognizable locations is the real value of generating simulation imagery.

Real-time Capability

Photo Simulations require tailored construction for each possible scenario being depicted which is often a significant period of time. One can expect to produce between one to three photo simulations during a seven-day charrette.

TOD RESOURCES

RECONNECTING AMERICA:

TOD 203: Transit Corridors and TOD (PDF, 5.2 MB)

http://reconnectingamerica.org/assets/Uploads/tod203corridors.pdf

TOD 101: Why TOD and Why Now? (PDF, 1.2 MB)

http://reconnectingamerica.org/assets/Uploads/tod101full.pdf

TOD 201: Mixed-Income Housing Near Transit: Increasing Affordability with Location Efficiency (PDF, 2.4 MB)

http://reconnectingamerica.org/assets/Uploads/091030ra201mixedhousefinal.pdf

TOD 202: Station Area Planning: How to Make Great Transit-Oriented Places (PDF, 2.6 MB)

http://reconnectingamerica.org/assets/Uploads/tod202.pdf

TOD 202: Transit & Employment: Increasing Transit's Share of the Commute Trip (PDF, 2.8 MB)

http://reconnectingamerica.org/assets/Uploads/employment202.pdf