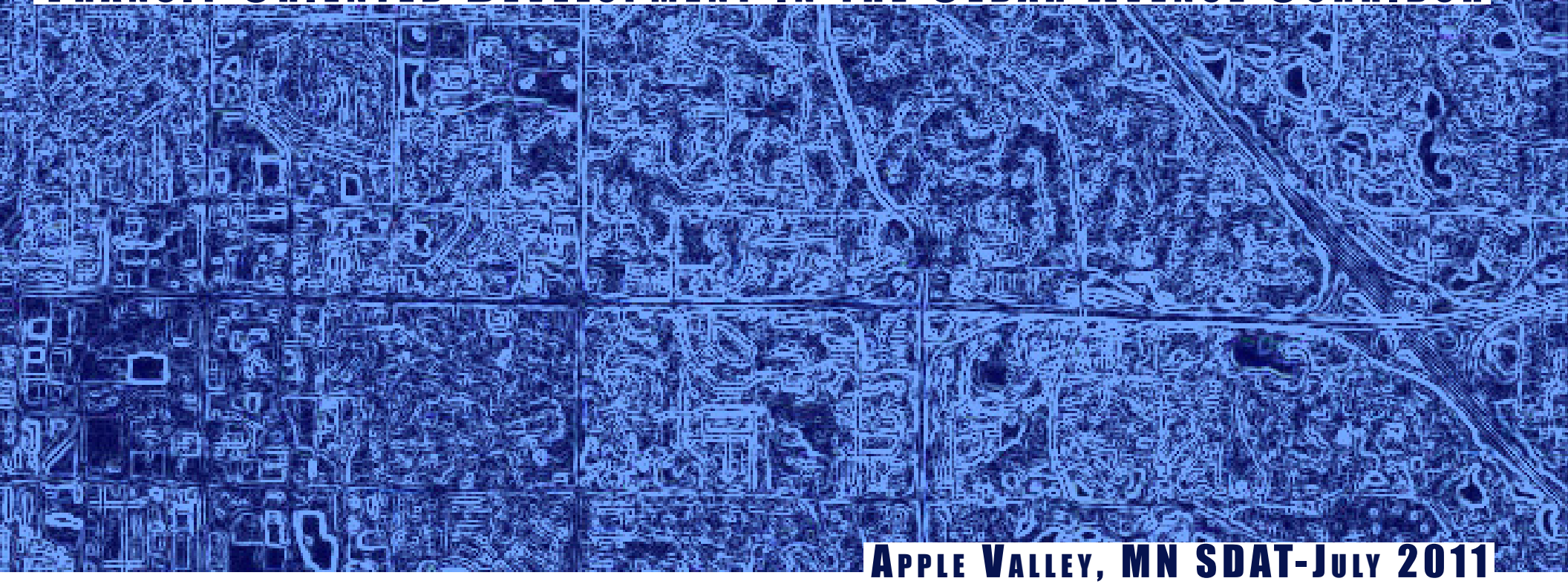
Transit Oriented Development in the Cedar Avenue Corridor



Apple Valley, MN SDAT-July 2011

AIA Communities by Design

ENVISION. CREATE. SUSTAIN.

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The American Institute of Architects Sustainable Design Assessment Program

AIA Communities by Design

ENVISION. CREATE. SUSTAIN.

Introduction

In November 2010, Apple Valley, MN submitted a proposal to the American Institute of Architects (AIA) for a Sustainable Design Assessment Team (SDAT) to assist the community and its citizens in addressing key issues facing the community. The issues included transit oriented development, urban design, economic development, and green infrastructure. The AIA accepted the proposal and, after a preliminary visit by a small group in April 2011, recruited a multi-disciplinary team of volunteers to serve on the SDAT Team. In July 2011, the SDAT Team members worked closely with local officials, community leaders, technical experts, non-profit organizations and citizens to study the community and its concerns. The team used its expertise to frame a wide range of recommendations, which were presented to the community in a public meeting. This report represents a summary of the findings and recommendations that were presented to the community.

The Sustainable Design Assessment Team Program

The Sustainable Design Assessment Team program focuses on the importance of developing sustainable communities through design. The mission of the SDAT program is to provide technical assistance and process expertise to help communities develop a vision and framework for a sustainable future. The SDAT program brings together multidisciplinary teams of professionals to work with community stakeholders and decision-makers in an intensive planning process. Teams are composed of volunteer professionals representing a range of disciplines, including architects, urban design professionals, economic development experts, land use attorneys, and others.

Today, communities face a host of challenges to long-term planning for sustainability, including limited resources and technical capacity, ineffective public processes and poor participation. The SDAT approach is designed to address many of the common challenges communities face by producing long-term sustainability plans that are realistic and reflect each community's unique context. Key features of the SDAT approach include the following:

- **Customized Design Assistance.** The SDAT is designed as a customized approach to community assistance which incorporates local realities and the unique challenges and assets of each community.
- **A Systems Approach to Sustainability.** The SDAT applies a systems-based approach to community sustainability, examining cross-cutting issues and relationships between issues. The SDAT forms multi-disciplinary teams that combine a range of disciplines and professions in an integrated assessment and design process.

- **Inclusive and Participatory Processes.** Public participation is the foundation of good community design. The SDAT involves a wide range of stakeholders and utilizes short feedback loops, resulting in sustainable decision-making that has broad public support and ownership.
- **Objective Technical Expertise.** The SDAT Team is assembled to include a range of technical experts from across the country. Team Members do not accept payment for services in an SDAT. They serve in a volunteer capacity on behalf of the AIA and the partner community. As a result, the SDAT Team has enhanced credibility with local stakeholders and can provide unencumbered technical advice.
- **Cost Effectiveness.** By employing the SDAT approach, communities are able to take advantage of leveraged resources for their planning efforts. The AIA contributes up to $15,000 in financial assistance for each project. The SDAT team members volunteer their labor and expertise, allowing communities to gain immediate access to the combined technical knowledge of top-notch professionals from varied fields.

The SDAT program is modeled on the Regional/Urban Design Assistance Team program, one of AIA's longest-running success stories. While the R/UDAT program was developed to provide communities with specific design solutions, the SDAT program provides broad assessments to help frame future policies or design solutions in the context of sustainability and help communities plan the first steps of implementation. Through the Design Assistance Team (DAT) program, over 500 professionals from 30 disciplines have provided millions of dollars in professional pro bono services to more than 200 communities across the country. The SDAT program leverages the pivotal role of the architectural community in the creation and support of sustainable livable communities. The following report includes a narrative account of the Apple Valley SDAT project recommendations, with summary information concerning several principle areas of investigation. The recommendations are made within the broad framework of sustainability, and are designed to form an integrated approach to future sustainability efforts in the community.

Background & Executive Summary

Background

In 2010, the City of Apple Valley applied to the American Institute of Architects' Communities by Design program "to assist a steering committee with the conception of a framework and vision for sustainable development through transit oriented design (TOD)".

The goals for this SDAT were listed as:

1. Attract large employers and create places to work in areas adjacent to the Downtown.
2. Unify the Downtown.
3. Improve connections to the region and world.
4. Reinvest in Downtown with value-added improvements.
5. Support new business in science, technology, engineering and math.

The members of the Assessment team were selected on the basis of these goals and with the understanding that the project would focus on creating a vision for the downtown. This vision would include land use, multi-modal connections, sustainability, transit, urban design, and real-estate economics. The team members came from across the country to meet for three days in Apple Valley and produced a vision and framework as a point of departure for the City to achieve its goals.

Apple Valley, Minnesota is a 17.5 square mile fourth-ring suburb of approximately 50,000 residents located in the Minneapolis-St. Paul Metropolitan Statistical Area (MSA). The city was incorporated as a village in 1969 and became a statutory city in 1974. Prior to that time the city was known as Lebanon Township, whose settlers engage primarily in the pursuit of agriculture. In 1955, 100 years after the founding of Lebanon Township, residential neighborhoods began to replace some of the rural farm fields. A significant housing boom started in the early 1960s when Orrin Thompson Homes bought land in the southwest corner of the community and platted subdivisions with the name Apple Valley.

Apple Valley is located in Dakota County, which is the third most populous county in Minnesota. Dakota County comprises the southeast portion of the seven-county Minneapolis-St. Paul MSA. The estimated population of Dakota County in 2006 was almost 400,000. In January of 2008, the Dakota County Regional Rail Authority (DCRRA) adopted a plan to implement a series of improvements within the Cedar Avenue corridor, a principal arterial roadway in the cities of Apple Valley, Eagan, and

Lakeville. One of the major improvements is the establishment of a bus rapid transit (BRT) system, which will be the first such system in the state.

The Minnesota Valley Transit Authority (MVTA) is in the process of constructing this BRT line in the Cedar Avenue Corridor. Cedar Avenue bisects Apple Valley and is the principal connecting arterial in Apple Valley, Eagan and Lakeville and connects to the south terminus of the metropolitan light rail line at the Mall of America in Bloomington, 8 miles north of Apple Valley. Cedar Avenue and County Road 42 (150 Street W) form the major north/south-east/west arterials for Apple Valley, and their intersection is the approximate geographic center of the community. Built around this intersection is the primary core area of Apple Valley, including shopping, the municipal center, major office development, the central village, housing and the primary transit center for the new BRT system.

The transit center, located on Cedar Avenue at 155 Street W, includes two temperature controlled station structures, side loading platforms, a pedestrian over-crossing spanning Cedar Avenue, and a 750 car parking structure. This transit center is situated amidst what is identified by the City of Apple Valley as the core of their downtown - an emerging center that is envisioned as a vibrant mixed use center containing a variety of uses and activities. This core has already seen a great deal of development and public improvements, including a peripheral "ring road" that serves all the properties within the core from points off of the major arterials; streetscape improvements; lighting and street furniture; a mix of commercial and residential uses within the Central Village development; and a major active/passive use park.

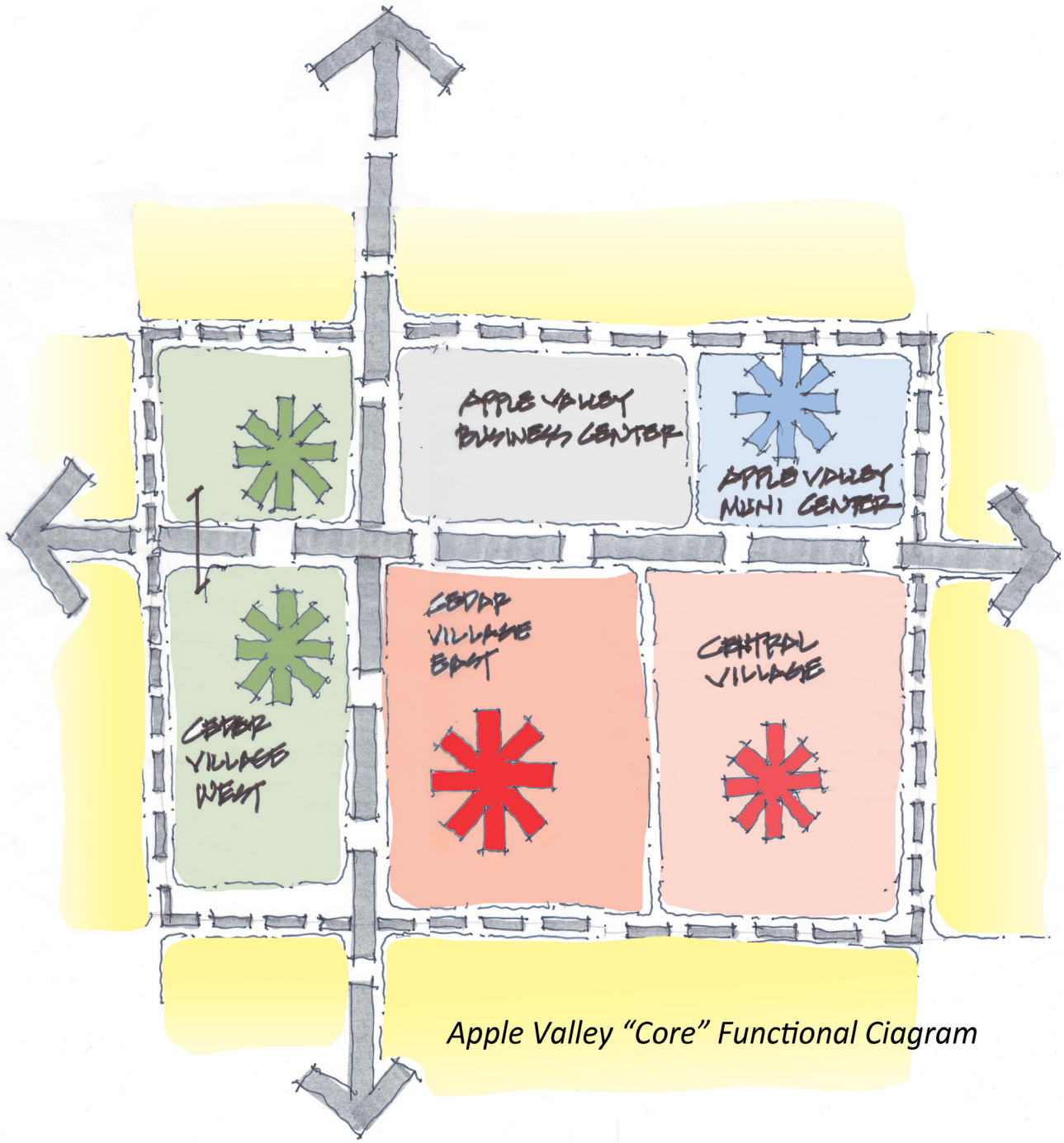
However, the core is dominated by multiple "big box" retail establishments and older strip-commercial centers with acres of surface parking. This dominant land use scheme is both the opportunity and constraint in dealing with the redevelopment of the Downtown. The SDAT team's assignment was to make sense of this scenario, develop a framework to create a cohesive Downtown with a mix of uses, good multi-modal circulation connected throughout, sustainable systems all supported by viable economic strategies . The existing codes and ordinances of the City have allowed and promoted this auto-dominated land use scheme and without a significant overhaul of the regulations, the goal of a unified downtown, with a clear identity, is unlikely.

The City's comprehensive plan singles out the Cedar Avenue Corridor Transitway and the roadway improvements, including the BRT service, as a significant event in the life of the City. The plan anticipates that the evolution of the BRT in the corridor will produce a variety of issues and opportunities, not the least of which are:

- Sidewalk and trail connections to transit.
- Connections with local transit services.
- The Need for additional park and ride facilities.
- New development (redevelopment) that seeks strong connections with rapid transit.
- Additional improvements to Cedar Avenue.

Three Days to a Vision for Downtown

The work of the SDAT team began the first morning with breakfast, the introduction of the team members to the Apple Valley steering committee, and a bus tour of the community. The tour pointed out the many assets of the community at large, including the award-winning Minnesota Zoo. The tour highlighted the lower density, dispersed, suburban nature of the community and pointed out the deficiencies in connections. The core area bounded by the "ring road" and bisected by Cedar Ave and 150th Street W was the "ground zero" of the



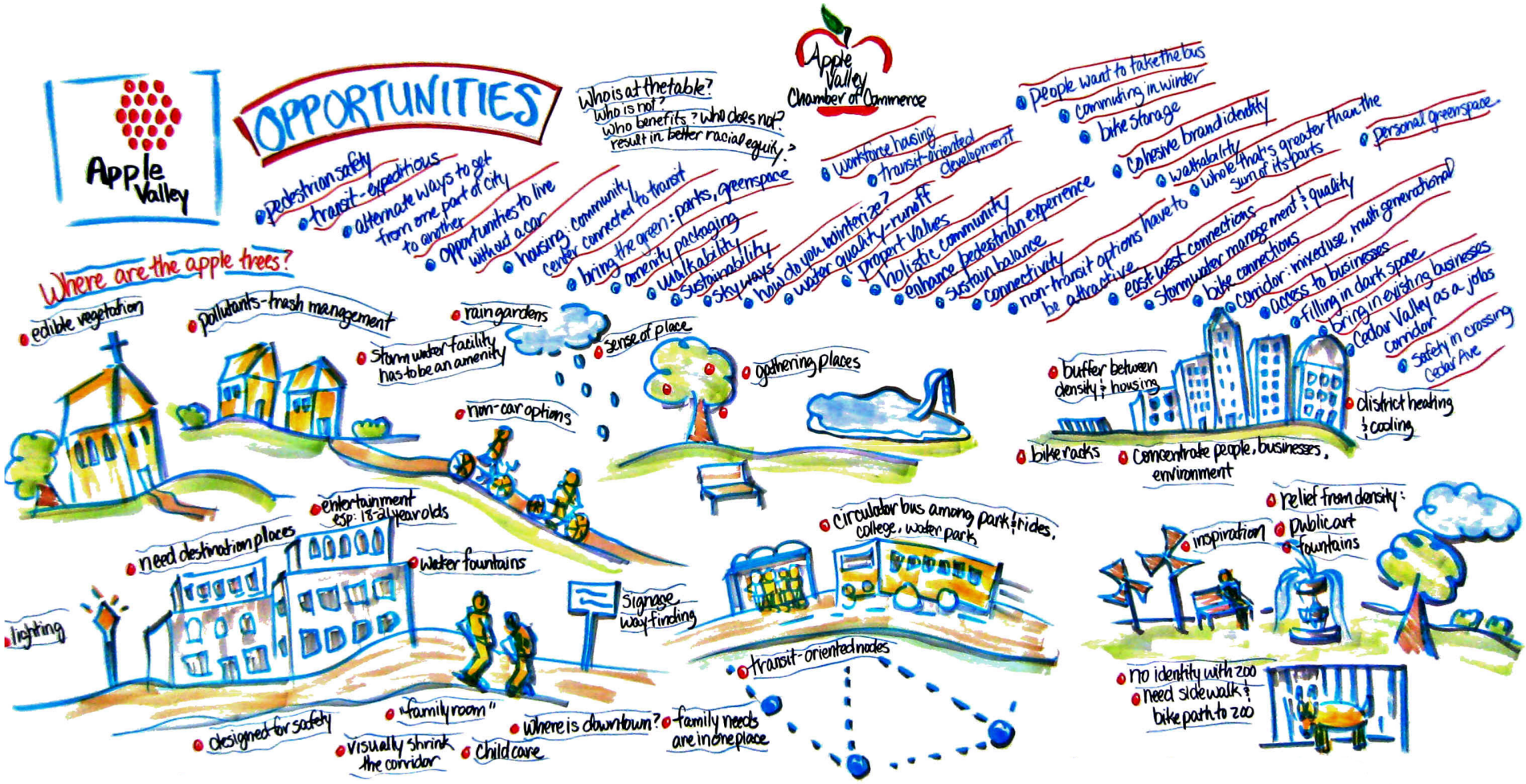
Apple Valley "Core" Functional Ciagram

team's consideration for this project and the tour illustrated clearly the opportunities and constraints presented by past and current development decisions.

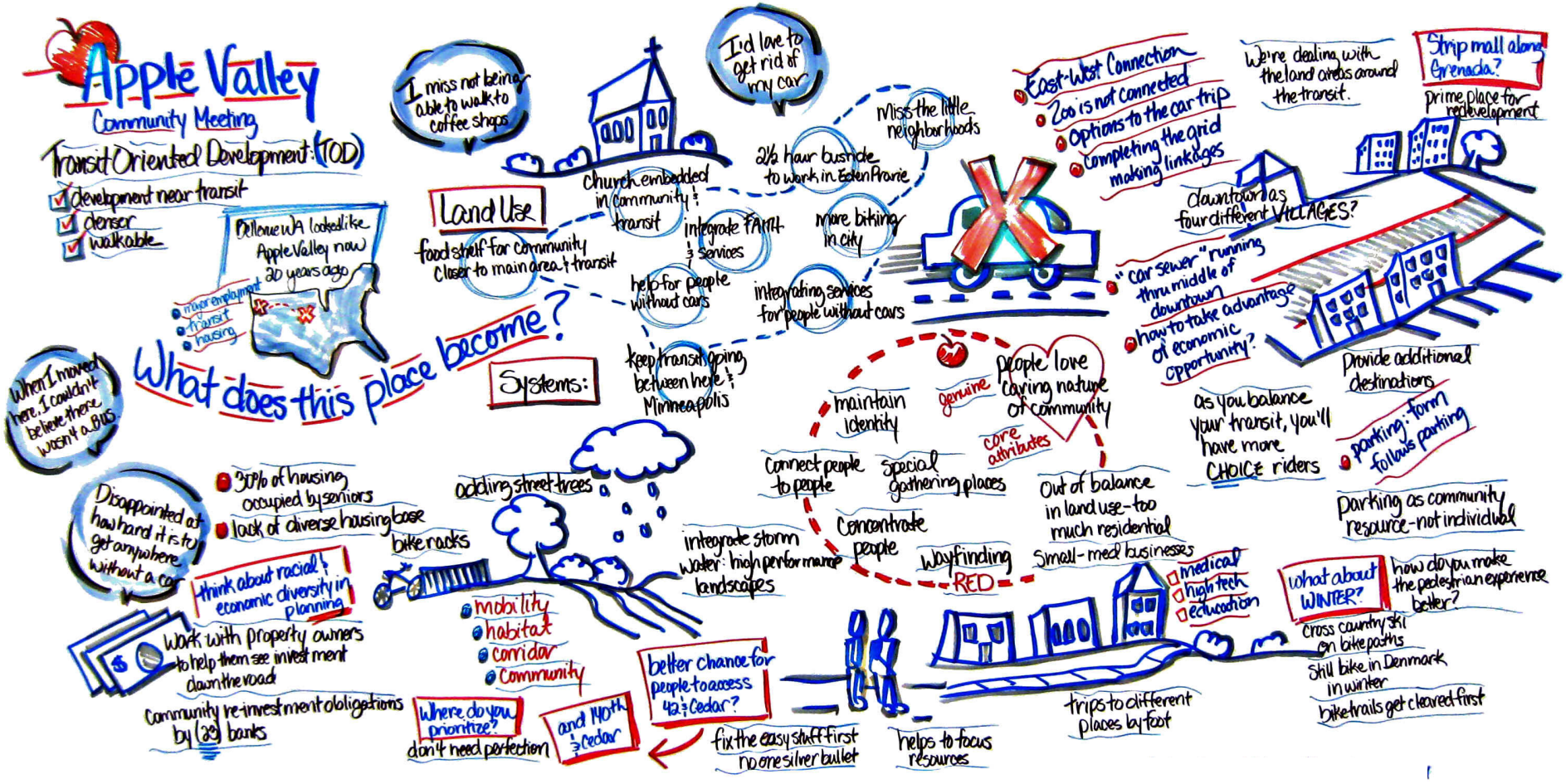
The team gathered additional information from a series of break-out sessions in the afternoon and a public meeting the first evening. This information was used extensively in the design and strategy sessions of the team over the next two days. The information was sorted, categorized, organized and analyzed during the "charrette", culminating in a final presentation to the steering committee, stakeholders and interested citizens the last evening of our visit.

The major points we heard in our break-out sessions and in interviews with particular stake-holders are summed up in this list and in the following three graphic recordings:

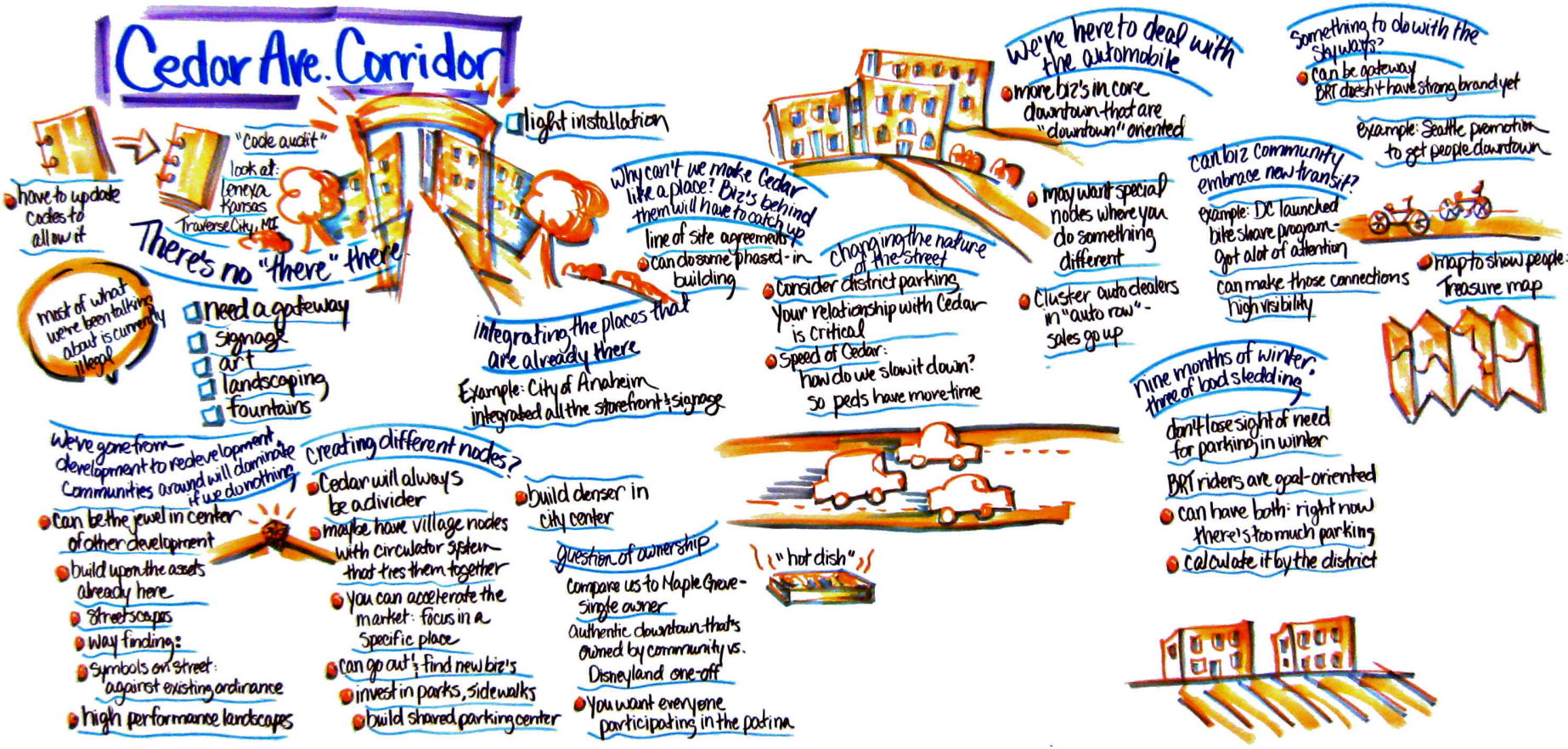
- Cedar Avenue is a "river" - creating "place" along it is difficult, but creating villages around it is promising.
- Rivers require bridges.
- Automobiles define downtown.
- Parking dominates ("Form follows parking").
- We want to walk! (mixed use districts)
- We want to bike! (connect to transit)
- Build on our assets
- Strong identity
- Small town character
- Sense of community
- Expand jobs, we are more than a bedroom community
- Our future is green



Graphic Recording of Stakeholder Session



Graphic Recording of Town Hall Community Meeting



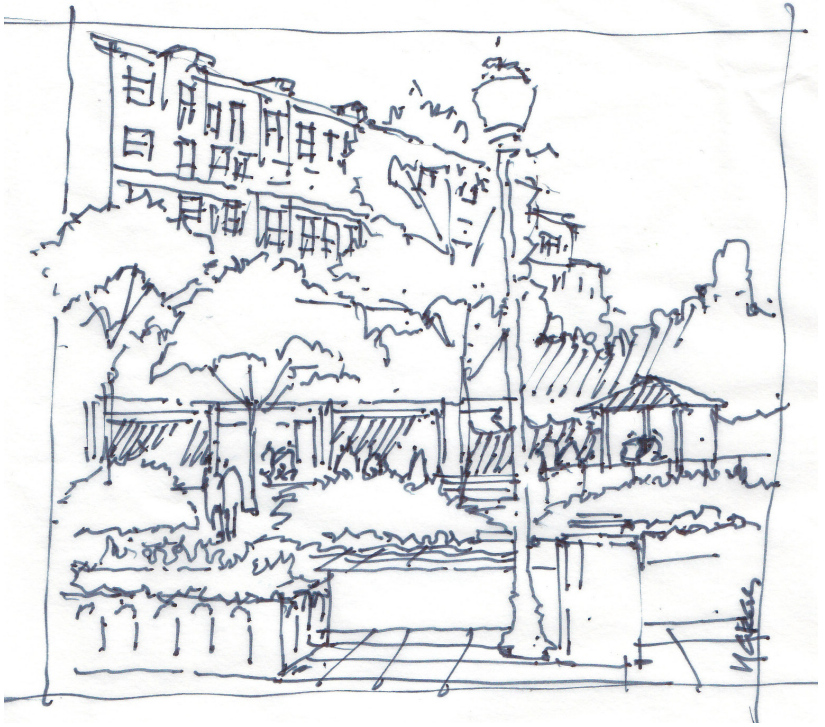
Graphic Recording of Stakeholder Session

GUIDING PRINCIPLES

Building on the arrival of Bus Rapid Transit in 2012, the City of Apple Valley is seeking to articulate a vision for what its downtown can become, and to create a clear path to implement that vision. It is a daring, ambitious and noble enterprise – one that overcomes current barriers and moves redevelopment forward, transforming the downtown into a new, 21st century center. The path to a new downtown for Apple Valley begins with a consensus around a long-term vision for a vital, walkable mixed-use center served by transit.

Tomorrow's downtown Apple Valley will be a place where people want to live, work, and play. In 2025, Downtown will be transformed into a destination known for great shopping, a sub-regional office location and residential address featuring a diversity of housing choices, people-oriented streets, a variety of open spaces, arts, and civic uses.

Today's downtown Apple Valley is defined not by what it offers, but by the automobile; nearly half of downtown is taken up by streets and parking. In the future, it should be easy to move within the downtown and to Apple Valley's neighborhoods without the need to rely on a car. New design standards and codes should hasten the transition to a new built form, one that includes great streets and integrate green infrastructure systems. The creation of a compact village core will be an evolutionary process requiring many actions, by many hands.



Transformation of the downtown core from suburban to a compact village should be guided by the following Principles:

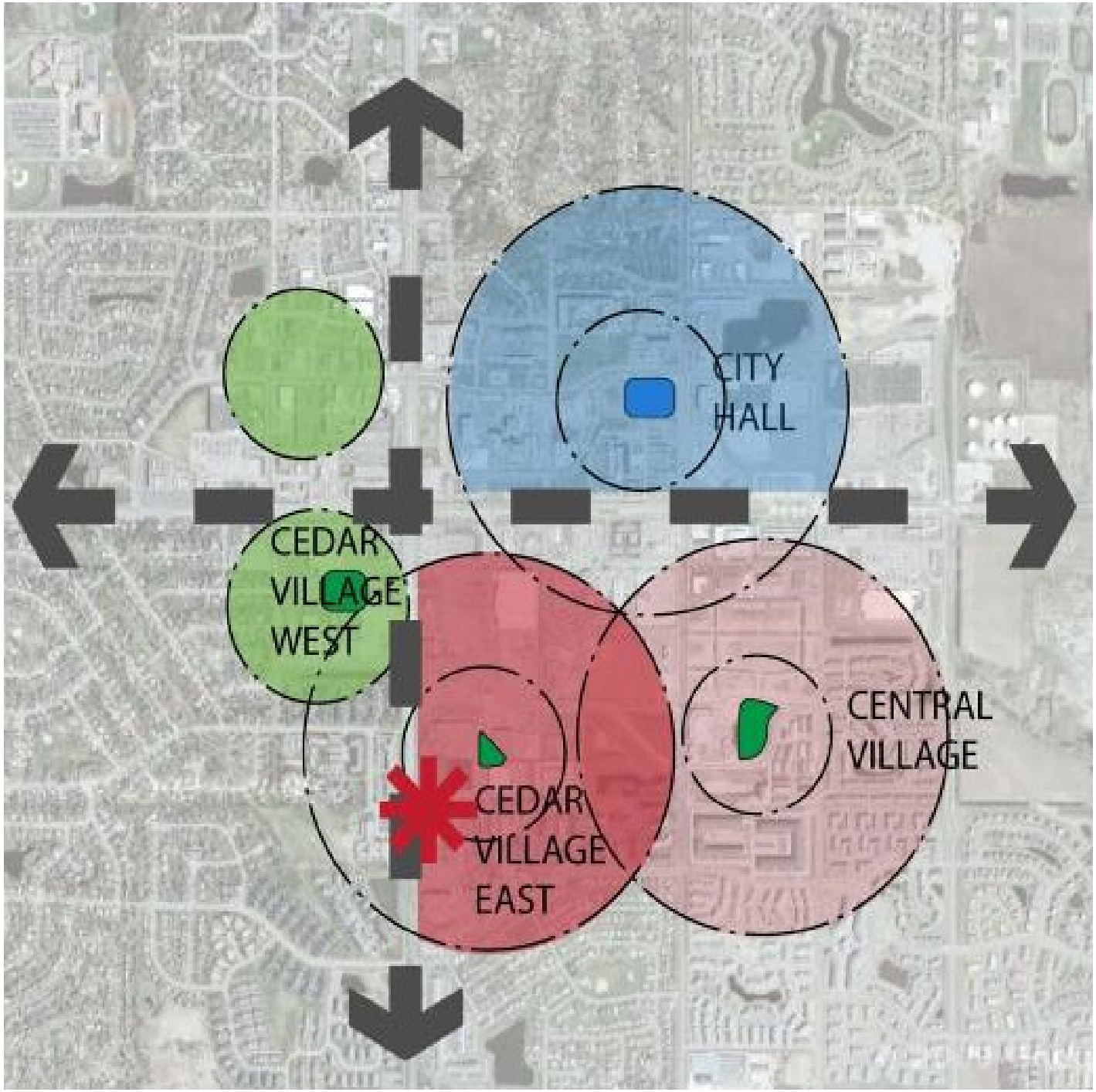
1. **Take a Long Term View.** Transformation takes vision, time, partners and persistence. Apple Valley needs to take a long view for the downtown and stick with it
2. **Be Willing to Say NO.** Achieving your vision means saying no to what you don't want; it also means making what you want to achieve predictable, legal & easy.
3. **Create an Active Center.** An active defined center, including a mix of uses and quality public spaces, is important to creating a sense of place and an anchor for Apple Valley.
4. **Balance the Automobile.** The automobile will continue to provide a majority of trips to the center. Reflecting the impact of a mix of uses and high quality active transportation, the downtown will thrive with limited and managed parking.
5. **Sustainable and Equitable.** Downtown Apply Valley will have a light touch on the land. The transformation of downtown will follow sustainable and equitable practices for design and living.
6. **Understand, Influence and Shape Market Forces.**
7. **Public leadership.** Private investment follows public investment and leadership. The City of Apple Valley must take the primary leadership role before the private sector will commit time and money on a new downtown.
8. **Build Communities, Not Projects.** How the pieces fit together matters. The areas between the buildings contribute to creating the special places that make people feel connected and make them want to return again and again.
9. **Remove Barriers.** Apply Valley's downtown should be the easiest and most desirable place to invest. The city should seek to remove barriers (financial, physical, market, regulatory, political) that unreasonably block a desirable projects way forward.
10. **Celebrate Success.** Success will take many forms and scales. Letting people need to know about the many positive accomplishments occurring in downtown will accelerate the momentum.

Land Use & Urban Design

LAND USE AND URBAN DESIGN

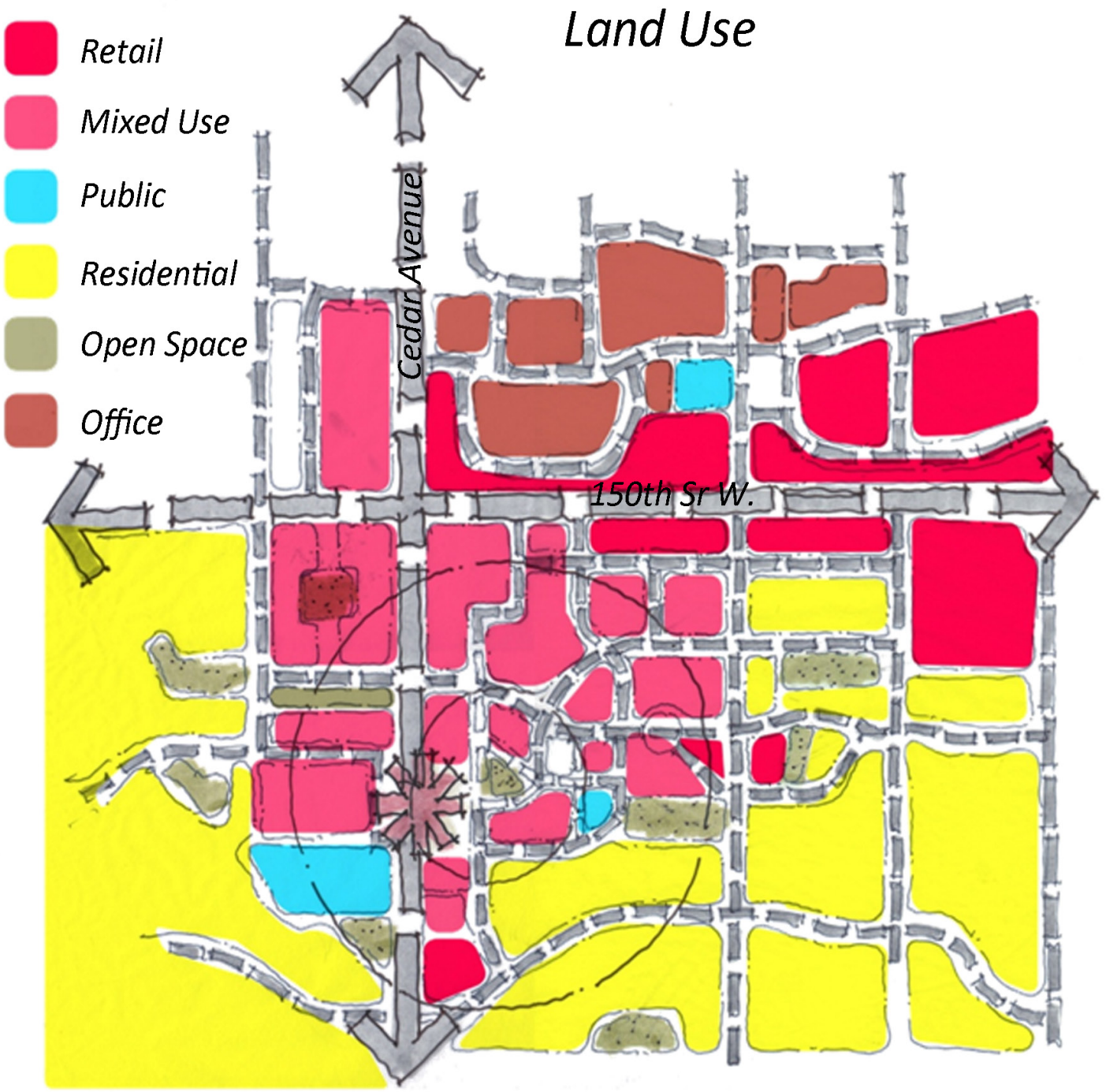
We took what we had heard and seen into our team work sessions. Our first task was to come up with a land use scheme that made sense; we then worked to tie it to the existing physical design of the downtown, connect it to transit, and ultimately show how it could possibly become a reality.

Our understanding of the place is described in this diagram. There are two existing clearly defined "centers" in the downtown - the City Hall or Municipal Center and the newer Central Village community. Two smaller sub centers exist in the northwest and southwest quadrants. Each of these centers are divided by major arterials, but are linked with the ring road on the outer periphery. The asterisk is the BRT station and our efforts were directed at creating a third major center adjacent the station. We called this center Cedar Village East.



Our next effort was to define a land use plan and circulation diagram that would integrate a mix of uses with a new block pattern. We approached the large suburban super-blocks as land masses that could be subdivided into small blocks, providing connectivity and a more accessible pedestrian system and environment.

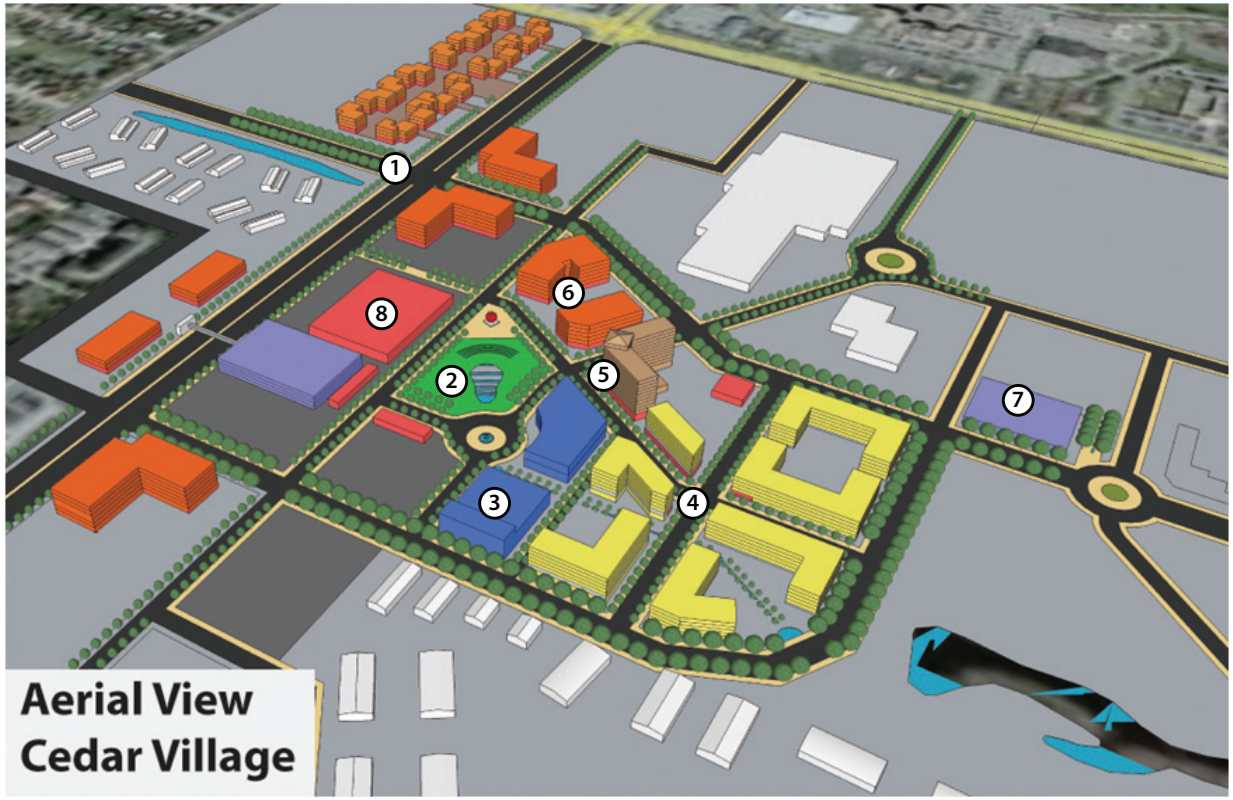
The decision was made to focus on "villages" on either side of Cedar Avenue since the character of Cedar Avenue, with transit and high volumes of traffic, precluded it as a "mainstreet" development potential. The strategy to develop smaller neighborhoods in each quadrant made more sense, with greater potential for creating walkable neighborhoods.



Cedar Village East was our main focus for a well developed urban design plan. Beginning with a new pattern of smaller blocks, the decision was made to center the neighborhood on a major park or village green. We concluded that some existing uses nearby should remain, so we retained Cub Foods (albeit in a smaller footprint), the movie theaters, the post office, and, while we believe it could transition to another, perhaps smaller footprint in the future, we retained Target in its present configuration. We also retained parking and bus circulation areas for transit near the station.

The large areas of surface parking were in-filled with five story office development near the Cedar Avenue corridor. A new street parallel to 153rd street becomes a commercial street with a mix of uses including office, retail, public buildings, a landmark hotel, and housing, some of which surround the new village green.

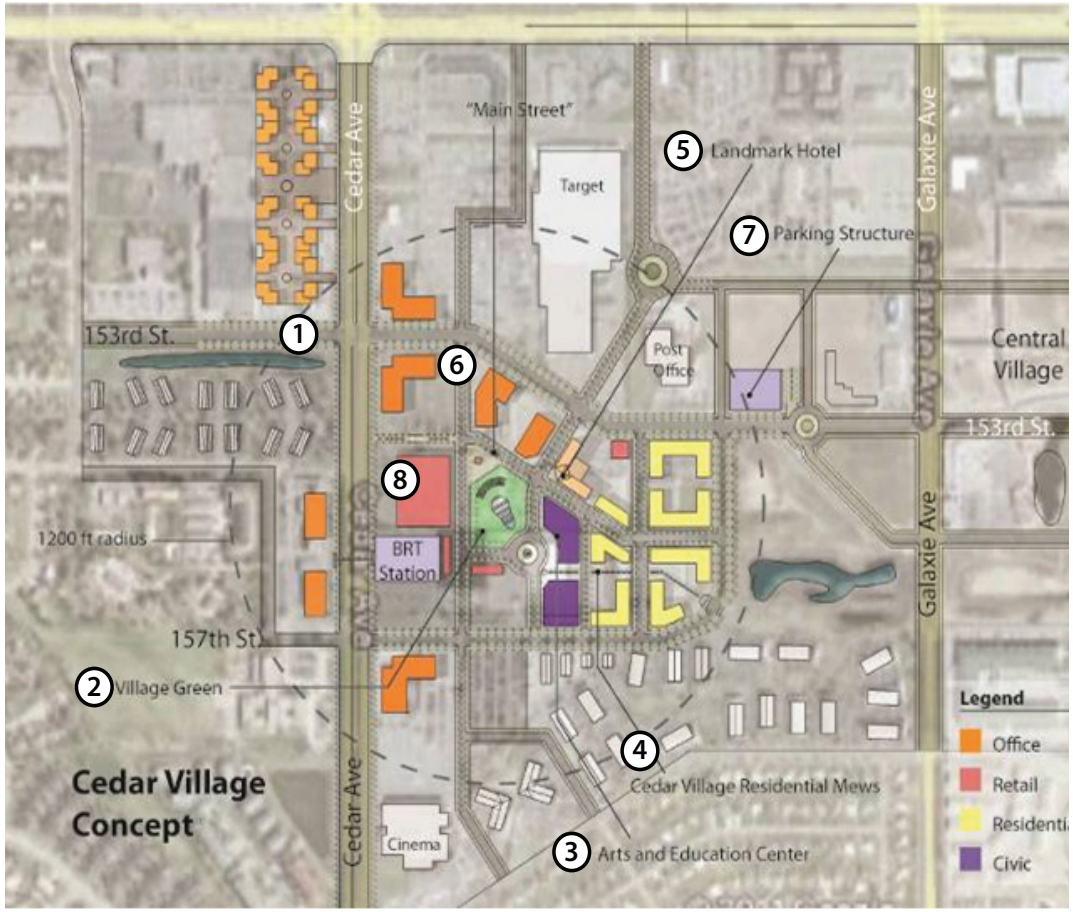
Green infrastructure is used as an amenity throughout Cedar Village, linking fountains and open landscaped swales with an existing storm water facility in the adjacent Central Village. Our recommendations extend



Aerial View Cedar Village

beyond Cedar Village East to the west side of Cedar avenue, recognizing the redevelopment potential of the existing sub-centers in the SW and NW quadrant of the Cedar Avenue/150th Street intersection. Both of these locations provide an opportunity for additional neighborhoods of mixed use, pedestrian scaled environments.

The character of development in Cedar Village East and West should be compatible with the existing development at Central Village. Heights should not exceed 5 stories, except for the landmark hotel. Parking should be surface transitioning to a structure (our plan provides a four story parking structure for use between Central Village and Cedar Village West). The bottom floors of most buildings facing the village green should have smaller scale retail uses including restaurants and cafes.



① **Urban Street Grid-** The street network is flanked by 153rd on the north and 175th on the south. In between, there would be a pattern of smaller blocks, with one intended as a pedestrian-oriented "Main Street" lined with shops and restaurants and having wider sidewalks and street trees. This street would tie the Village Green to the East Village. All internal street would be one lane each direction, with on-street parking to ensure a setting conducive to walking. Most of Cedar Village would be within a 10 minute walk of the BRT station.

② **Village Green-** This is a space that marks the center of Cedar Village. It is designed to serve both as passive green space, with grassy areas for sitting with an enclosing canopy of trees. It would contain prominent public art (a large apple on a pedestal is shown set on a corner plaza as an example). It would contain a unique water feature with both serene elements and interactive elements. There would be an amphitheater allowing for concerts and events, surrounding the water feature. The water feature would serve as a symbolic "headwaters" for a narrow urban canal that would meander though the residential sector of the village.

③ **Arts & Education Center-** Across a roundabout from the village green the plan suggests a set of buildings to be developed over time that would include hands-on arts spaces, meeting rooms, multipurpose rooms, galleries and classrooms. This could be cooperative venture between local higher education centers, the zoo, and the school district. One building could be a small performing arts theatre. The purpose would be to build upon the long-standing appreciation for the arts that the region is well-known for.

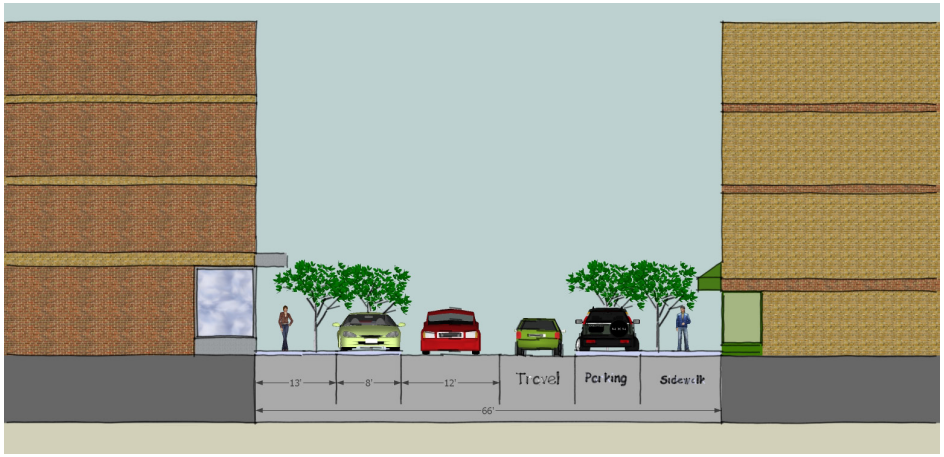
④ **East Village Residential Sector-** Intended to blend in with expected higher density residential development in the Central Village, this area would be occupied by urban residential buildings of 4 to 5 stories. Most of the parking would be underground, leaving the surface for interior greens and courtyards. These interior spaces would be linked by a narrow, shallow canal of water that would flow between the Village Green and the lake to the east with a trail/bike route.

⑤ **Landmark Hotel-** Anchoring the center vertically, a major hotel would be located across from the Village Green. This would be the tallest building in the village, ranging from 8-12 stories (100 to 140 feet). It would have meeting facilities and a ballroom and would be used for many community and civic events. A shuttle bus would connect it with the zoo, so that packages could be arranged for visitors.

⑥ **Office Buildings-** The plan shows locations for at least a half-dozen office buildings within a short distance of the BRT station. These would be in the range of 3-5 stories (40 – 65 feet). The ground floor of each building would contain shops, services and cafes. Parking would be underground and at a ratio considerably less than typical, because of the presence of BRT.

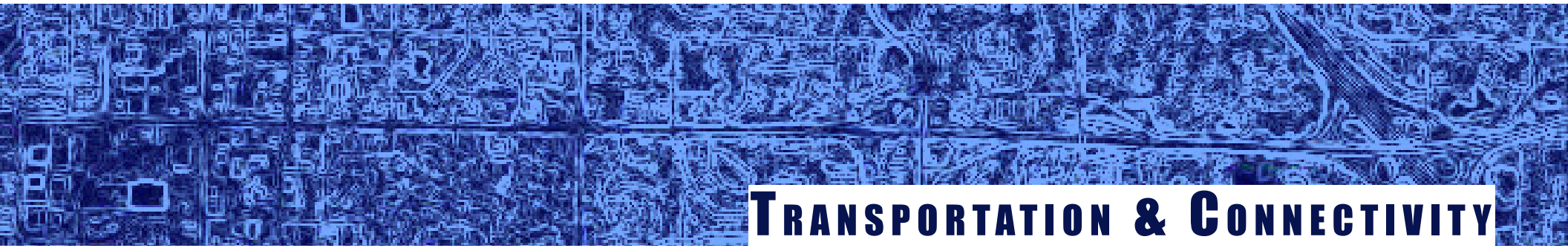
⑦ **Future Parking Garage-** In the short term, surface parking and on-street parking could be relied upon to meet parking needs. But as Center Village matures and intensifies, there will likely be a need for a public parking structure. The plan shows a location midway between the two villages. It includes a plaza that would serve as a shuttle bus station that would potentially link with other parts of downtown and the zoo.

⑧ **Re-designed Cub Market-** All urban neighborhoods benefit from the presence of a full service supermarket. The plan envisions retaining the Cub, although in a more compact footprint and with an entrance oriented both to surface parking and the Village Green. A new, east façade of the market could incorporate dining and other outward-facing uses such as take-out, flowers, etc. Additional retail shops are shown that can be supported by transit users and users of the Village Green. The New Cub would anchor the west end of the "Main Street."



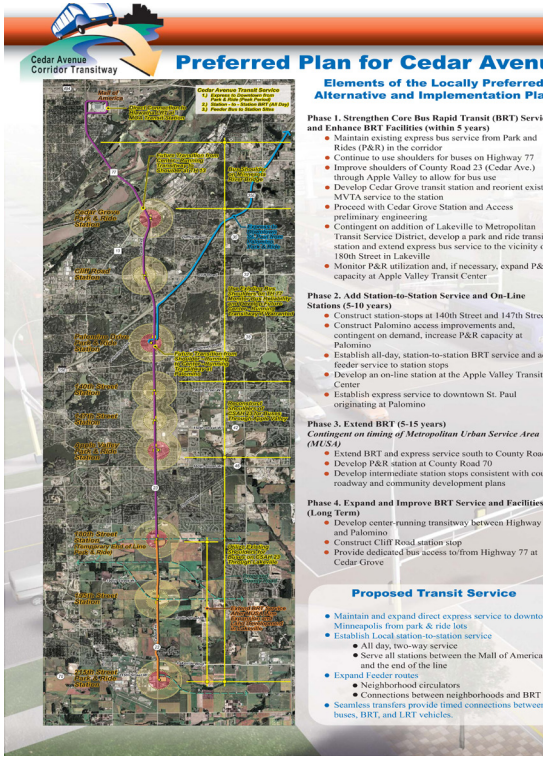
Streets should have a narrower section than most streets in downtown Apple Valley. They should be a maximum of 66 feet from back of sidewalk to front of sidewalk. The street section should include a 13 foot sidewalk with street trees and furniture, an 8 foot parking lane on either side and two 12 foot travel lanes. Certain streets could have curb extensions at the corners, but the street sections are narrow enough to reduce vehicle speeds, thereby creating a safe pedestrian environment.

Cedar Village East and West have the potential of creating mixed use, pedestrian oriented neighborhoods near transit. These neighborhoods or "villages" would create an identity for Apple Valley that could serve as a major regional attraction since most of the surrounding cities have nothing like what we are proposing. The scale, texture, quality and character of these Central Apple Valley villages would provide the backdrop for a vibrant, active and desirable place to live in the heart of the city.


TRANSPORTATION & CONNECTIVITY

OVERVIEW

The Cedar Avenue Bus Rapid Transit (BRT) line represents a substantial new transportation asset for Apple Valley, and all communities through which it passes. Maximizing this opportunity and leveraging it for future investment and sustainable development is dependant on ensuring that it is safely, comfortably, and efficiently connected to the rest of the intermodal system of Apple Valley and the surrounding jurisdictions and destinations.



The BRT line cannot and will not independently transform the transportation and development landscape of Apple Valley, and it cannot be the only major new transportation investment made. Additional investments to complete the multi-modal bicycle, pedestrian and local transit network are also required to leverage the impact of the BRT. These investments will provide viable and attractive non-auto travel options to the residents, workers and visitors of Apple Valley.

Funding full implementation of the planned BRT facilities as well as additional transportation enhancements is a challenge; however, creative partnerships and funding sources can help bridge the gap and provide a higher return on investment for the BRT than would be expected without these enhancements.

This section of the SDAT report, therefore, first assesses potential opportunities and enhancements along Cedar Avenue and the BRT facility currently under construction. It then provides recommendations for the Apple Valley network as a whole to ensure that the impact and benefit of the BRT facility penetrates farther into the community than the limited area immediately around the programmed stops.

CEDAR AVENUE CORRIDOR

It goes without saying that Cedar Avenue is a busy street. Carrying well over 65,000 vehicles per day along some segments, it is a vital travel corridor not only for Apple Valley but for the greater Minneapolis/St. Paul metropolitan economy as a whole. The corridor currently operates at acceptable levels of service for pedestrians; however, during discussions with residents, workers and stakeholders it was clear that the pedestrian and bicycle levels of service at Cedar Avenue (and other arterial) crossings were not acceptable.

The Cedar Avenue BRT line will have three stops in Apple Valley: the main Apple Valley Transit Station with Park and Ride facilities at approximately 155th Street, as and two walk-up stations at 147th Street and 140th Street. While the master plan calls for skyways at all stations, current budget constraints have only allowed for construction of a skyway at the 155th Street stop. The other two stations have been designed to accommodate the addition of skyways at a later date. Another existing Park and Ride facility and bus transfer location at Palomino Hills is within the Apple Valley community but is not directly connected to the Bus Rapid Transit system.

Although cognizant of the financial challenges the local authority, municipalities and the State are experiencing that preclude the construction of skyways for the initial opening of the BRT, at-grade pedestrian crossings of such wide and heavily trafficked streets as Cedar Avenue present certain challenges of their own. If successful, as is hoped, the BRT will attract additional riders to the corridor. For the walk-up stations, every transit passenger is a pedestrian at the beginning and end of their trip and each round trip will require at least one crossing of Cedar Avenue. This will result in an increase in pedestrian demand across the corridor. Given the demographics of Apple Valley, it is also likely that this increase will include more seniors, caretakers with children, and others that may have limitations on their walk speed and endurance. 140th Street and Cedar Avenue in particular already experiences a number of crashes (55 from 2003 – 2005) and therefore safety is of particular concern there. As a result, accommodating these populations to ensure they have safe access to and use of the BRT may require additional time on the signals for the pedestrian clearance interval.

This additional signal time could negatively affect vehicle throughput and level of service on the corridor. Signal timings should be thoroughly reviewed to ensure slower pedestrians will be able to safely and completely cross the street and equitably utilize the new transit services.

The absence of the skyway will also result in longer round-trip distances for some nearby origins or destinations. In fact, one of the nearest residences to the 140th Street station, while only 300' as the crow flies is roughly half a mile from the northbound stop (see figure on previous page). Transit-sheds are often calculated using gross measures of ½ mile and ¼ mile radius from transit stops, however with limited crossing opportunities these gross measures may mask the true travel distance of walk-up patrons.

Clear wayfinding directional signage is essential to ensure pedestrians do not attempt to cross at illegal crossings (such as 138th Street) and introduce further risk to riders and travelers of the corridor. Station design and landscaping should overtly orient passengers toward the intersections where crossings are available.

Additional corridor enhancements, now or over time, can further entice and encourage ridership and patronage of the BRT. Pedestrians seek three critical characteristics – safety, comfort and convenience. Safety and convenience were discussed above, but corridor enhancements can improve the comfort of the walk. Plans should be reviewed to see if additional opportunities may exist to provide additional landscaping or structural elements that provide shade or shelter from adverse weather. Landscaping may also enhance the sense of buffer from the heavy traffic of the corridor more than turf alone may provide. Lighting should be oriented toward the pedestrian. Snow clearance and storage should be carefully considered to ensure pathway is not only clear but also sightlines around the pathways (i.e. no large piles of snow that obscure vision of pedestrians or pedestrian's sight line to safe havens). Elements that encourage pedestrian interest should be incorporated into longer term plans such as display windows, active entry ways, public art, and other uses that draw the pedestrian along and make the walk seem shorter.

While pedestrian connections at walk-up stations are a critical concern, connections to other modes are equally important. Bicycling is a very viable means of transport in Apple Valley and while some riders will take their bikes on the BRT, several are likely to wish to store the bike at stations to shorten that "last mile" connection between the station and home or work. Adequate and secure bicycle parking and storage should be provided at all stations if not already planned. Bicycle network connectivity should be assessed to ensure safe and complete pathways to stations. In addition, future connections to proposed "north-south" and "cross-town" local transit bus extensions should be considered to ensure seamless integration if these are implemented at a later date.

While many of these improvements are planned in the near-term enhancement, there are several longer term actions to explore. Fully funding and implementing the

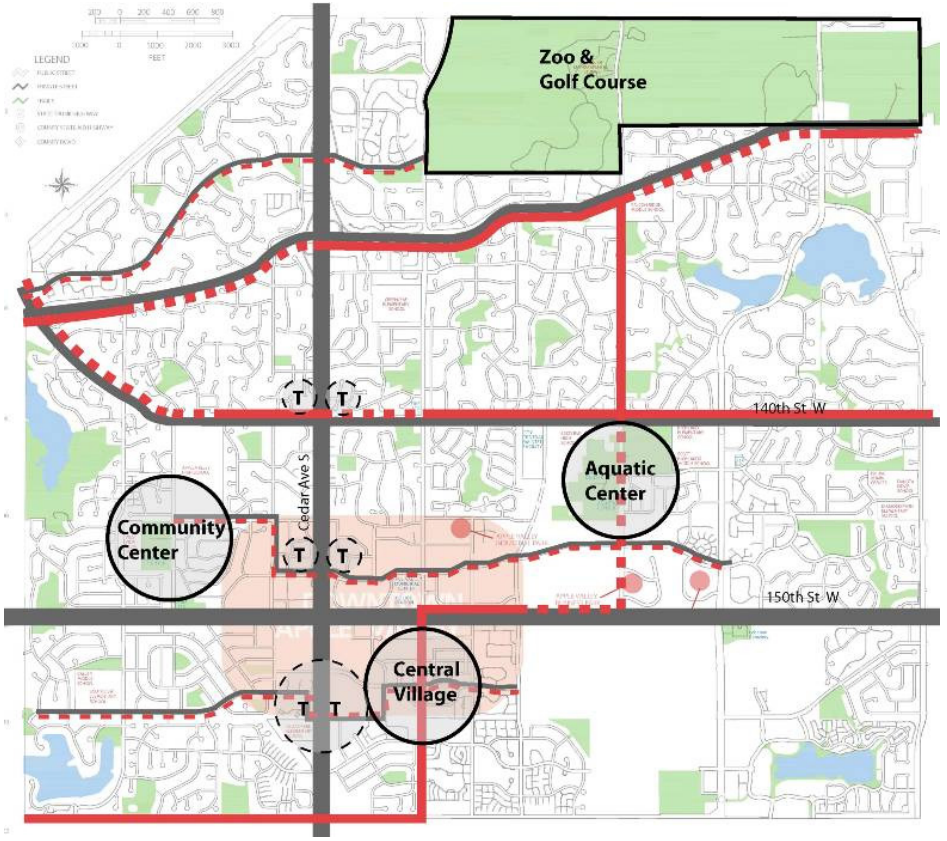
skyways is recommended and innovative partnerships or funding streams should be explored to make this happen in the not-too-distant future.

APPLE VALLEY MULTI-MODAL NETWORK

Although the task put to the SDAT team was to explore opportunities to leverage the new BRT system for transit-oriented development, additional multi-modal improvements are recommended to enhance the overall system and maximize connections to the new BRT system.

Apple Valley is still a relatively young community and continues to grow, develop and transform. Although many streets in the network are discontinuous and certain links are missing, the comprehensive plan anticipates these connections will be made as former industrial or agricultural parcels are converted. Implementing this street connectivity over the long term will greatly benefit the connectivity and utility of the BRT service and potential for enhanced development around its stations.

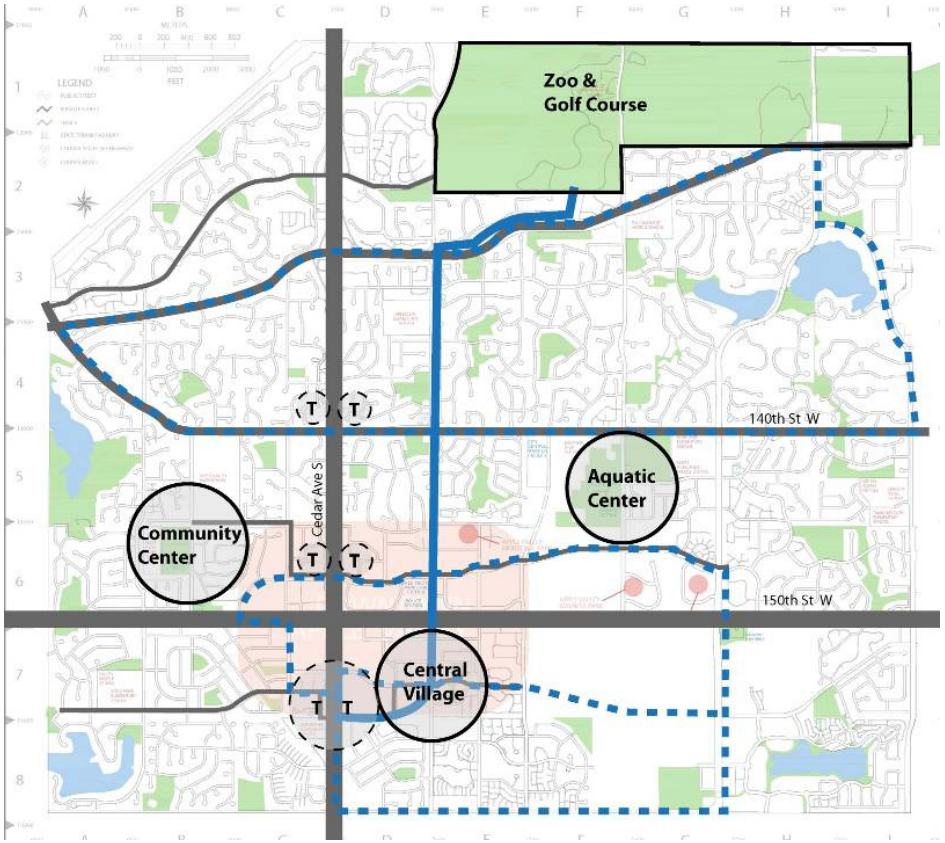
While Apple Valley is fortunate to have a well crafted and articulated bicycle and pedestrian plan, it is interesting to note that on-street bicycle facilities are not a component of that plan at this time. Many stakeholders interviewed indicated a strong desire for bicycling to be a convenient and viable option for them to travel at least part of the year. While the community is rich in off-street trails, the trails will not meet every need or be viable on a range of streets. Mixing bicycles and pedestrians on sidewalk facilities is appropriate in areas of sparse pedestrian traffic, but it is often



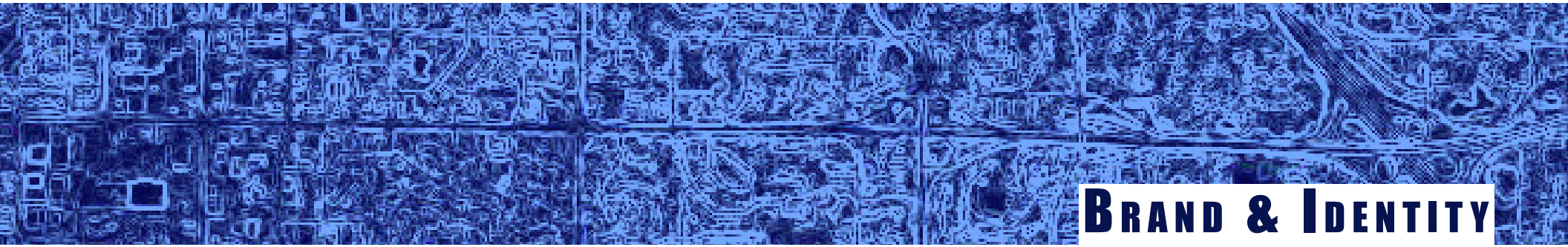
Connecting the bike.

an uncomfortable mix for elderly pedestrians and those with small children. The team looked closely at options for providing both on-street bicycle lanes as well as "sharrows" in certain street typologies which contribute to great streetscapes and provide opportunities to incorporate green infrastructure (see drawings in the "Green Infrastructure" section of this report). Several "missing links" in the planned bicycle network should be prioritized for near term implementation to closely coincide with the opening of the BRT line if possible.

Finally, Apple Valley is fortunate to be the home of the Minneapolis Zoo, which draws over 1 million visitors annually to the community. However, this major regional destination, is not conveniently accessible to either the coming BRT service or the commercial establishments of Apple Valley's main retail districts. This appears to be a ripe opportunity for a public-private circulator connecting the Mall of America, the Zoo, Apple Valley main street(s) and the BRT line, utilizing creative cost sharing between the business districts, zoo worker transit subsidies, and public funding. Improved bicycle and pedestrian connectivity to the main entrance should concurrently be enhanced.



Connecting everything.

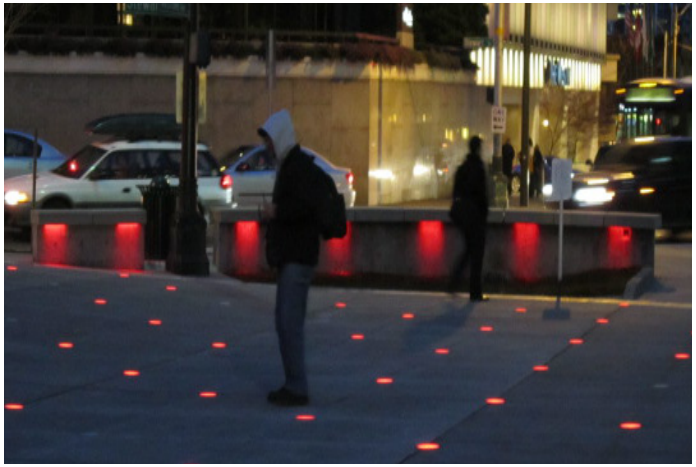

BRAND & IDENTITY

BRANDING APPLE VALLEY

It was discovered during the stakeholder breakout sessions that there are several methods available to promote the identity of Apple Valley. Suggestions include branding, way finding, public art and public spaces. The City and the Apple Valley Chamber of Commerce have created a brand using the City's logo. This iconic logo is recognized throughout the community and is easily transferable using a variety of applications. With the new BRT coming online soon, it is important to integrate this brand with the Minnesota Valley Transit Authority and the Dakota County Regional Rail Authority within Apple Valley's city limits. The city's brand is very important as it relates to the Cedar Avenue Corridor BRT system. This may be accomplished by incorporating graphic displays on the buses, as well as providing signage and urban design treatments unique to the BRT transit stations located within the city limits.

WAY FINDING SIGNAGE

The current sign system is predominantly oriented to automobiles. Therefore, there needs to be a sign system to accommodate more sustainable travel modes such as biking and walking. This sign system should provide information, location and distance to BRT stations, downtown, and other major attractions like the zoo, surrounding villages and recreation facilities. Facilitating the use of walking and bicycling trails and sidewalks enhances the retail economics located along these routes. The city should prepare a way finding signage master plan so they are in position to begin phased implementation of a signage program as public and private projects come on line.



PUBLIC ART

Several stakeholders during the breakout sessions expressed the desire to see more public art in Apple Valley. Public and private art may convey many messages, such as the identity of a place, the city's past history and the desire of the citizens to move forward with new exciting art installations. Art also adds an inviting dimension to a place whether it is interactive, changes with time or seasons, or is permanent.

Art elements can also be used to announce major events. Like way finding signage, the city should prepare an art master plan for special districts like the Cedar Avenue BRT corridor, the downtown district and the proposed Cedar Villages. The art master plan should identify art opportunities. In addition, the art plan should focus on art integration with public infrastructure projects. Places also come to life with the integration of art using light applications to make places more attractive in the evening hours and during dark winter months.

PUBLIC REALM

The public realm is one of the city's greatest assets. How we feel about a place is often expressed in the public realm. Streets, sidewalks, bike lanes, trails, parks, plazas and open space all contribute to the public realm. Residents and visitors use these facilities to commute, stroll, rest, congregate and recreate. As was stated during one of the breakout sessions, the public realm needs to connect people to people and people to places. Investment in these spaces is vital to the city's success. The public realm must be safe, accessible, lively and attractive.

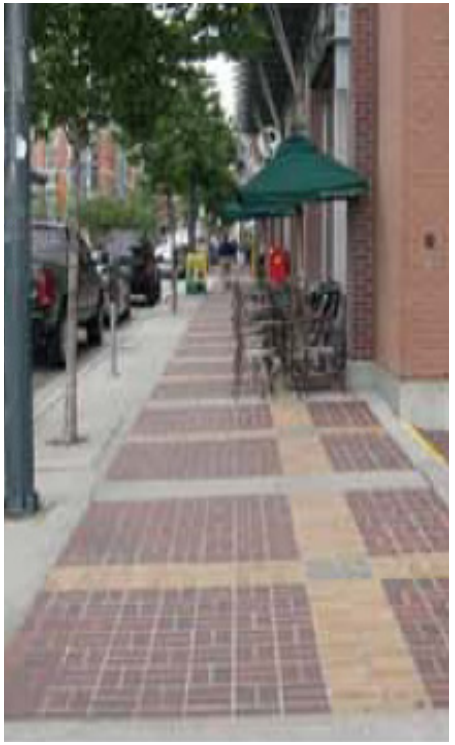
The city needs to look for opportunities to create pedestrian friendly spaces within autocentric facilities, such as Cedar Avenue. The Cedar Avenue design precludes providing street trees in the sidewalk area due to snow removal storage; however, there is an opportunity to provide seasonal landscape areas at street intersections, near pedestrian crossings, at transit stops and stations. Also, as new streets are planned for the Cedar Village areas, consideration should be given to including landscape median boulevards in the streets to compliment community character and provide traffic calming.

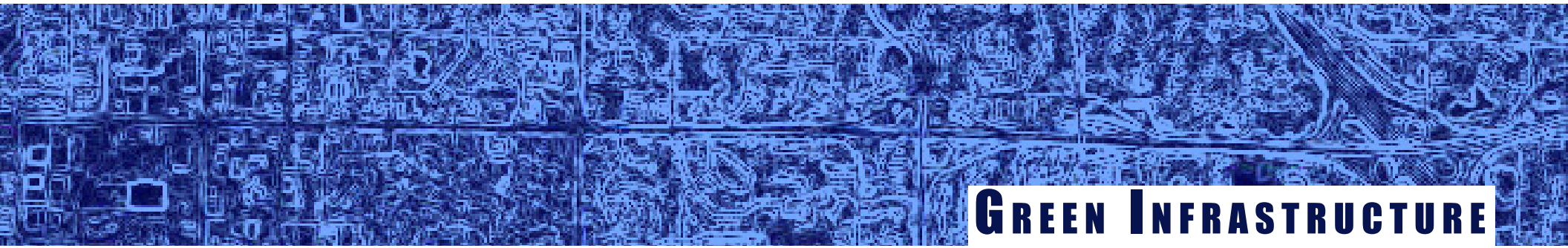
Other key assets in the public realm are parks, plazas and open space. Public spaces, like Kelley Park in Central Village, bring people together, provide breathing room and recreation opportunities for all ages. Large plaza spaces in the heart of villages, like the proposed Village Green provide flexibility for programmed events and for spontaneous play.

PRIVATE INTERFACE

Improvements in the public realm are often the catalyst for private development, as is the case around the Cedar Avenue BRT project. For example, when designing sidewalks in the retail areas of Cedar Village, the sidewalk width is crucial to encourage private retail, such as restaurants and coffee shops, to spill out into the sidewalk area, as well as convenience retail to interface with the sidewalk traffic.

Parks like the Village Green proposed for Cedar Village will provide a "community family room" surrounded by residential, office and retail uses. Whether the mechanism is through easements or city ordinances, public and private realms should coexist and overlap in many cases to provide great places.




GREEN INFRASTRUCTURE

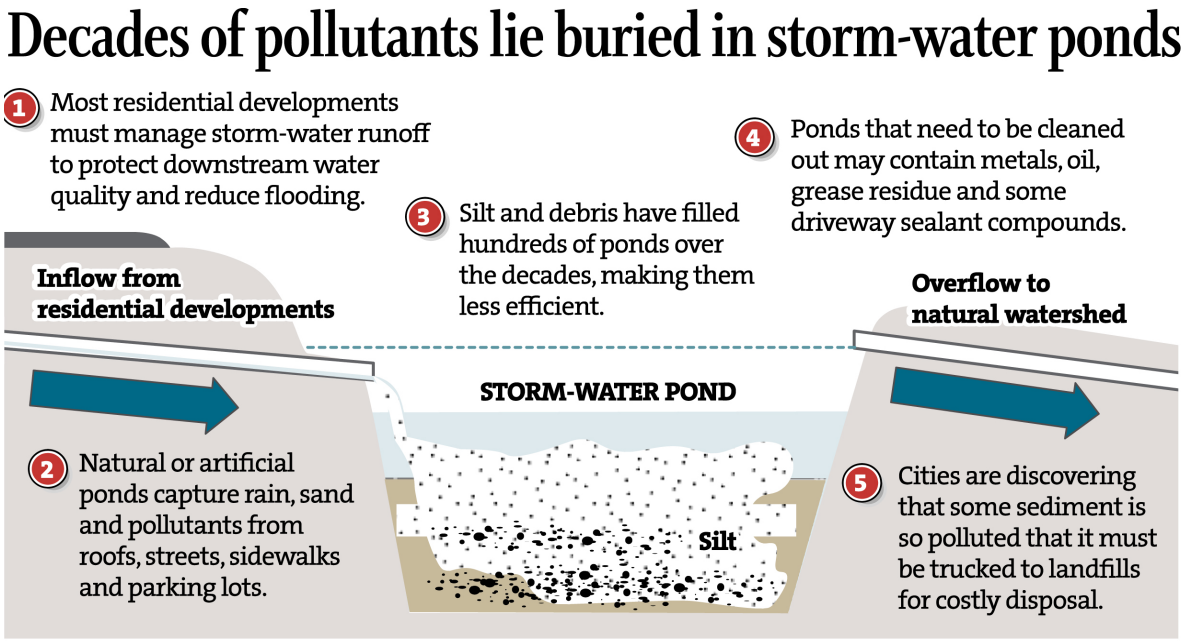
GREEN INFRASTRUCTURE

Apple Valley's existing public storm drain infrastructure is a conventional system, made up of collection structures, conveyance pipes and wet ponds. This system collects and conveys stormwater runoff to a downstream facility that treats and controls runoff at a neighborhood or basin scale. The infrastructure is similar to most communities in the Twin Cities and the result of standard design practices from the last several decades.

Like many communities, Apple Valley's storm drain system has been identified as having capacity constraints;, namely being unable to manage the volume of stormwater runoff during large storm events or provide effective water quality treatment. These deficiencies can be attributed to a variety of factors, including the City's current development practices, current stormwater requirements, and a changing climate that is producing larger and more frequent storm events.

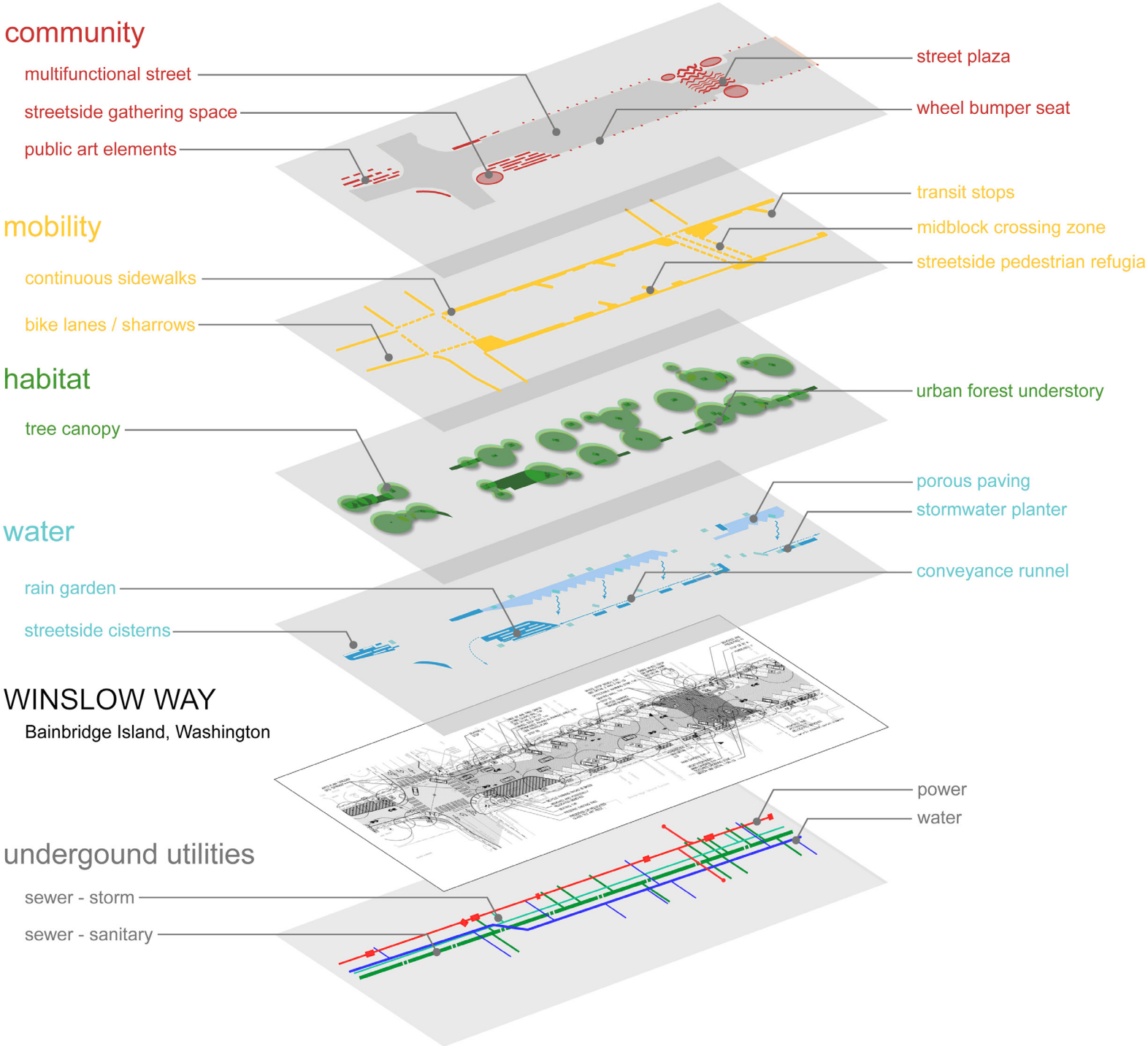
WHAT IS GREEN INFRASTRUCTURE?

Green infrastructure (GI) is a stormwater management approach that uses natural systems to mimic natural processes and reduce stormwater runoff through infiltration,



evapotranspiration, and stormwater resuse. Examples of green stormwater infrastructure include bioretention and biofiltration facilities (e.g. rain gardens and bioswales), permeable pavements, green roofs, trees, and rainwater harvesting. These facilities can also be thought of as 'high-performance landscapes,' combining the ecological services of the natural environment with the infrastructural needs of our built environment.

In many cities across the country, GI has become standard practice for managing stormwater runoff. In addition to stormwater benefits, GI systems should also be recognized for the multiple amenities that can be achieved to improve our neighborhoods and streets. The graphic on the next page illustrates how a green infrastructure design framework can be described through a set of interdependent systems that benefit mobility, community, habitat, energy and water systems.


community
multifunctional street
streetside gathering space
public art elements
street plaza
wheel bumper seat
mobility
continuous sidewalks
bike lanes / sharrows
transit stops
midblock crossing zone
streetside pedestrian refugia
habitat
tree canopy
urban forest understory
water
rain garden
streetside cisterns
porous paving
stormwater planter
conveyance runnel
WINSLOW WAY
Bainbridge Island, Washington
undergound utilities
sewer - storm
sewer - sanitary
power
water

INTEGRATING GREEN INFRASTRUCTURE

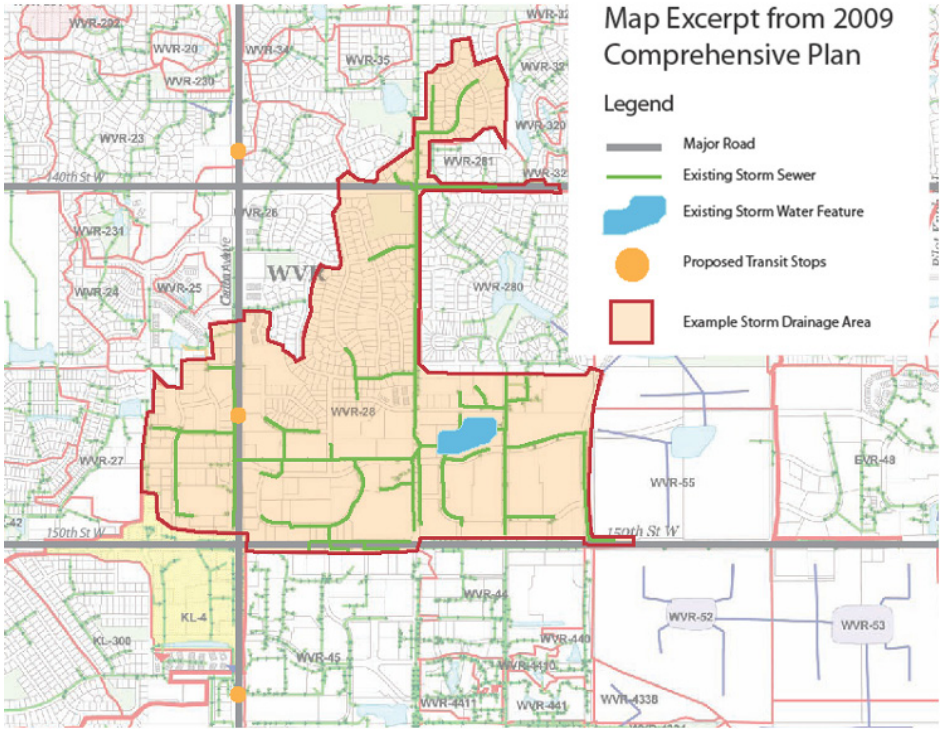
The City is in a unique position with its existing infrastructure and soil profile to be able to integrate green stormwater infrastructure into its public and private realm.

- **Streets:** The existing right-of-way network is wide and consists of large streets and areas of impervious surface that can be readily retrofitted for GI systems.
- **Parks and Open Space:** The extensive network of parks and trails provides a framework to link GI into the suburban fabric of Apple Valley and create a more inviting and functional landscape.
- **Geologic Profile:** Much of the city was developed over an existing sand and gravel mine that will facilitate stormwater infiltration and groundwater recharge.

Integrating GI into the City's existing storm drain infrastructure will reduce stormwater runoff and improve water quality. GI effectively manages stormwater runoff where it falls by attenuating, or slowing, runoff before it reaches downstream wet ponds. Water quality is improved locally by removing sediment and pollutants before they enter the existing public storm drain system. A variety of strategies can be used to accomplish this:

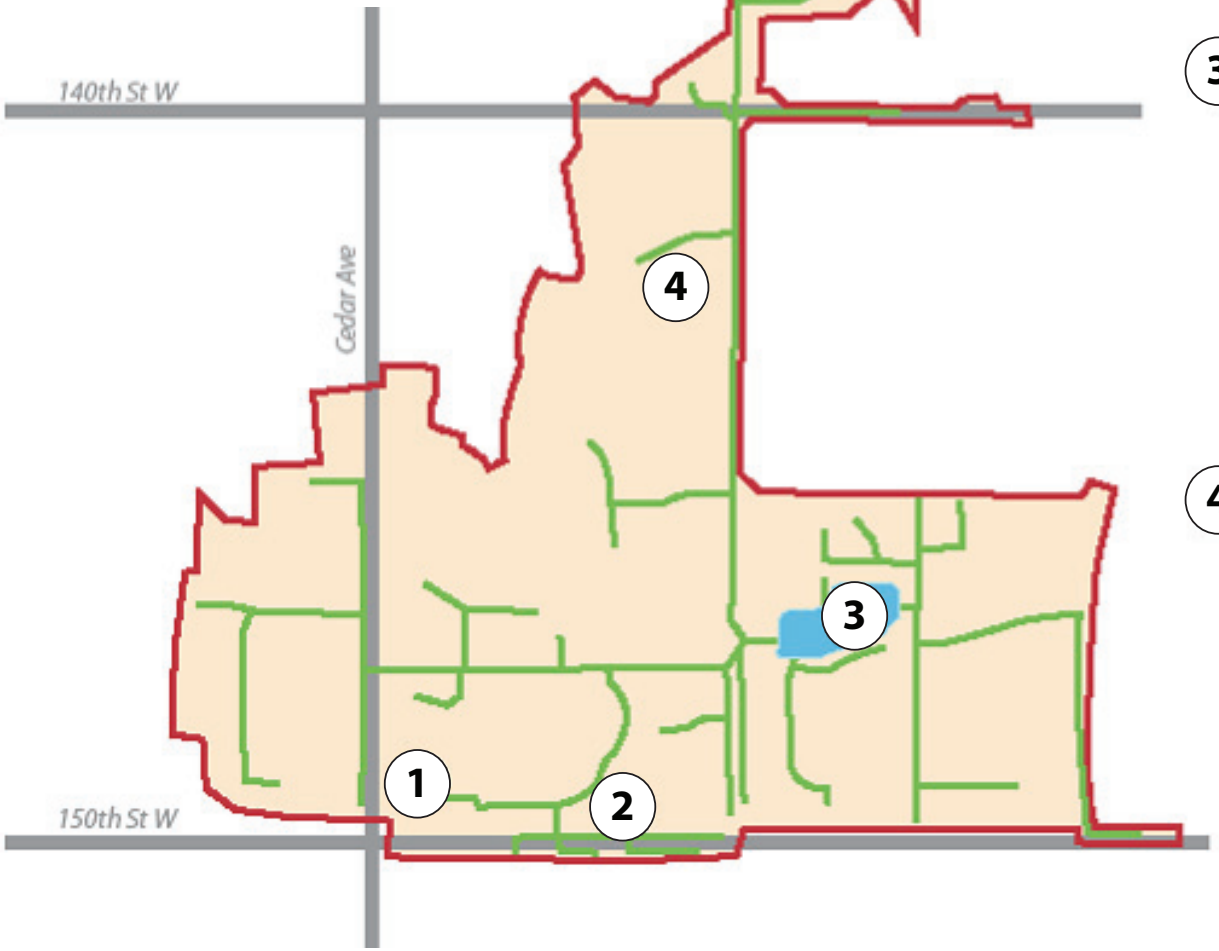
- **Reducing Impervious Area:** Retrofitting existing streetscapes and private developments can allow for high performance landscapes to be integrated (e.g. rain garden curb bulbs at street intersection, management of inefficiencies in parking lot layouts, limiting travel lane widths and impervious lot coverages).
- **Recognizing the Benefits of Effective Impervious Runoff:** Increased tree canopy and permeable pavement can reduce surface runoff.
- **Attenuating Stormwater Runoff:** Utilize GI systems such as bioretention and permeable pavements to slow the rate at which stormwater is collected and conveyed downstream to reduce the peak demands.
- **Promoting Infiltration:** Already a City policy, but one that can be integrated into standard practices and improved (e.g. require for small scale retrofits which use amended soils to pretreat runoff before infiltration).
- **Enhancing Existing Wet Ponds:** Increase capacity and remove sediment buildup, integrate floating wetlands to improve water quality, add underground injection controls to improve infiltration.

The Utility Chapter of the City's Comprehensive Plan includes a drainage map showing 200+ drainage subbasins that cover the city limits. The graphic on the following page shows one of the drainage subbasins located within the Cedar Avenue Corridor and illustrates how specific GI systems can be integrated to improve the capacity and function of the existing storm drain infrastructure.



1

Commercial Parking Retrofit: Reorganization of marking & management of layout inefficiencies allow integration of bioretention and bioinfiltration as well as opportunities to integrate permeable pavements.



2

Public Street Retrofits: Small retrofit interventions that can reduce impervious surface and provide opportunity for water quality treatments that enhance the pedestrian realm and eliminate sediment from entering the public storm drain system.

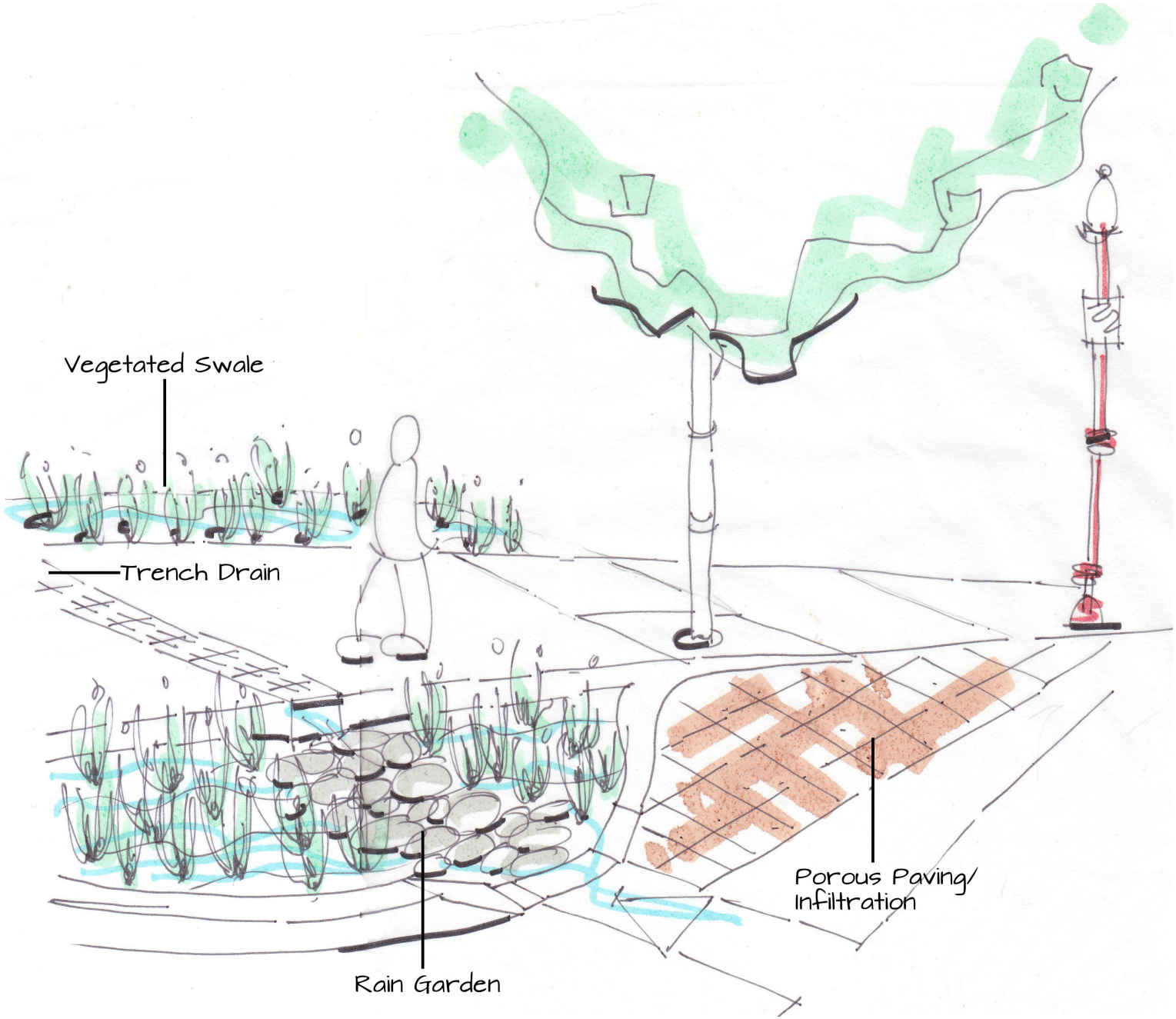
3

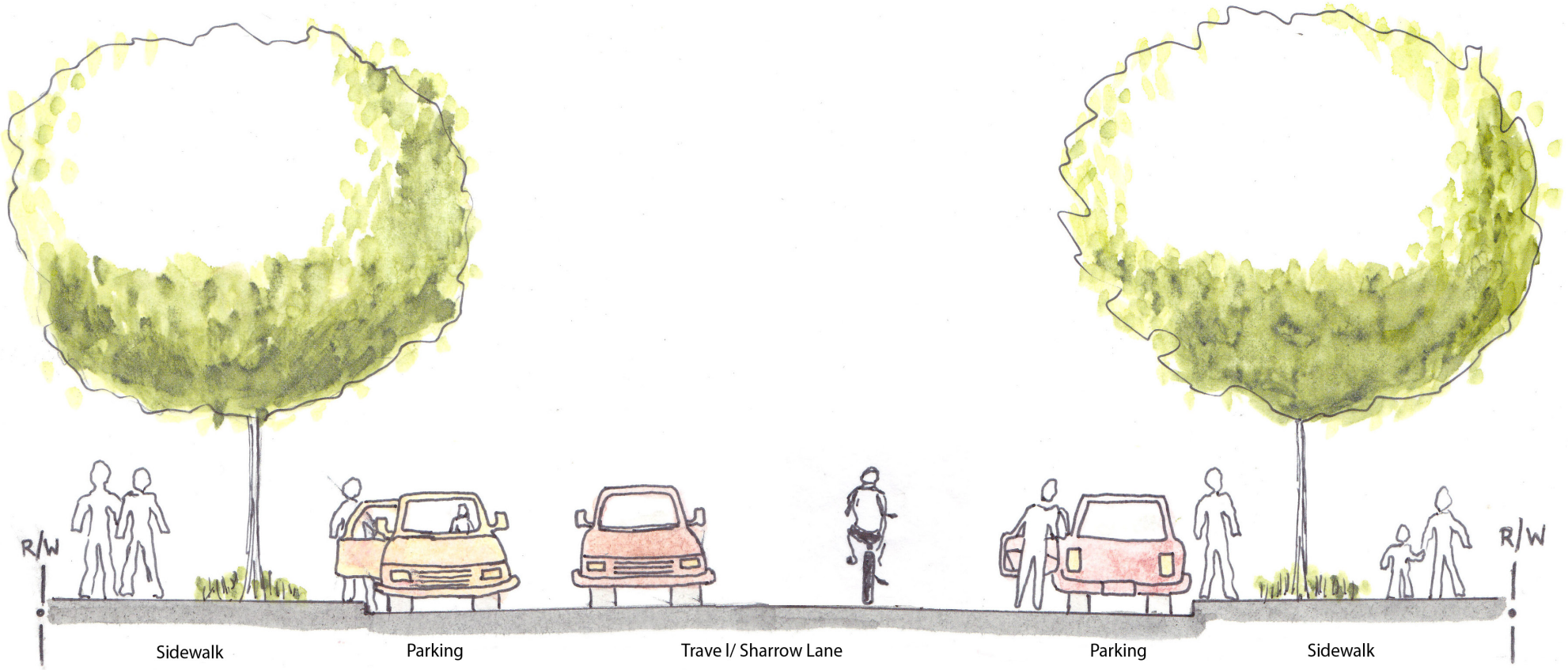
Wetpond Modifications: Improve water quality of ponds through planting, pretreatment, and downstream modification to existing stormwater ponds using floating wetlands.

4

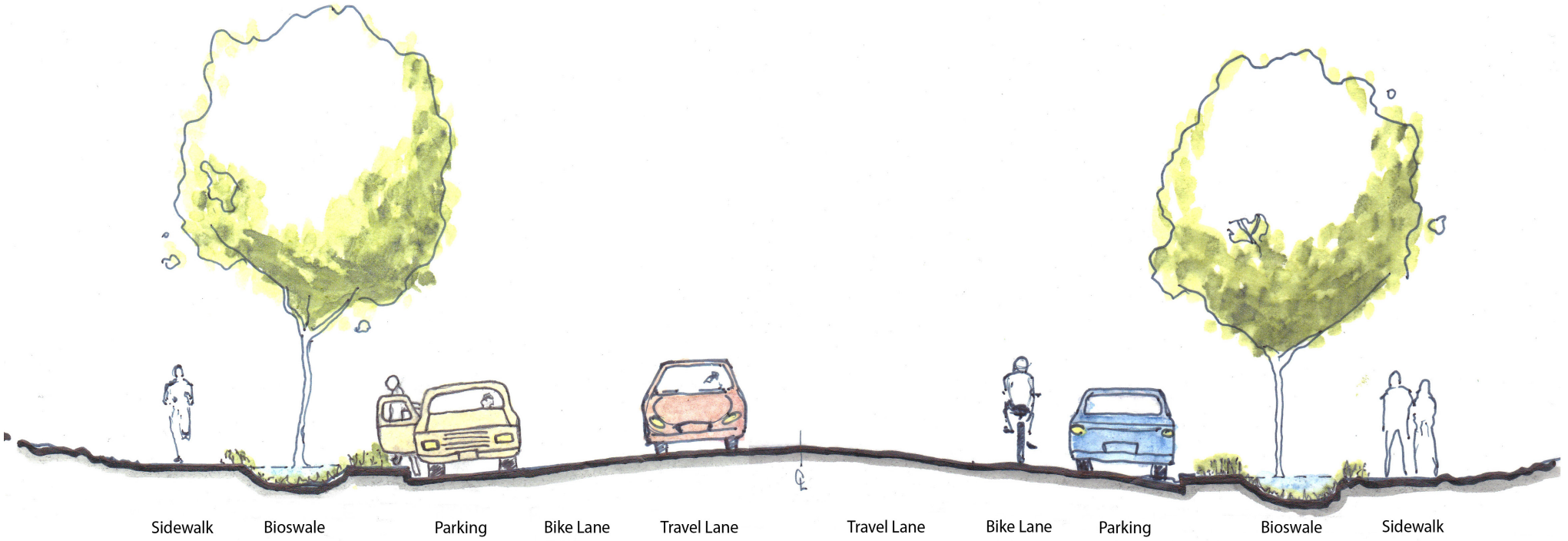
Capital Improvement Projects (CIP): Opportunistic construction can coincide with CIP improvements and public works projects. Green streets can reduce impervious area, and provide onsite treatments.

The following color renderings were drawn over site photographs to show how GI systems might look integrated into Apple Valley's public realm. The images also show how green stormwater infrastructure improves the on-street pedestrian experience by creating a buffer between the pedestrian and vehicular areas, creating plant habitat areas, and reducing heat island effect.





Downtown Village Street- 66' R/W, 20 mph design speed



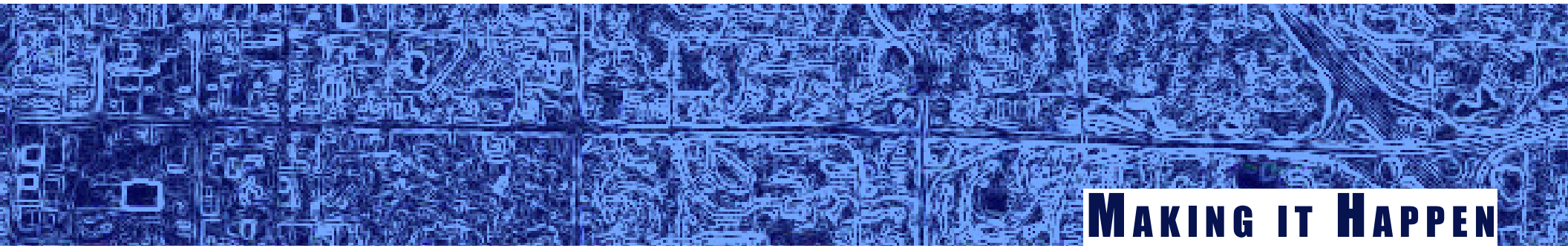
Neighborhood Collector- 100' R/W, 35 mph design speed

MOVING FORWARD WITH GREEN INFRASTRUCTURE

One image continues to standout from our visit: the transit center parking lot. This parking lot was designed to use bioretention to manage stormwater runoff from the surface parking area. However, the system is not functioning properly. This may be due to poor design, bad construction, a lack of maintenance, or a combination of these factors. What is important about this GI installation is that it illustrates how important the planning, design, construction, AND maintenance are to the successful integration of GI into the built environment.

Local and national resources are readily available to simplify this process for Apple Valley. Seattle, Washington and Portland, Oregon have developed standard plans and specifications for permeable pavements and bioretention soil that can be referenced and modified to meet local material requirements and conditions. The Shingle Creek Watershed, in the northwest Twin Cities, is in the second of a three year program to monitor and study the durability and effectiveness of porous asphalt during the harsh Minnesota winters (spring snowmelt is the largest polluting event each year for most places in the Twin Cities). In February of 2011, Dakota County published revised Low-Impact Development (LID) Standards so that LID or GI facilities properly meet municipal permit requirements.

From a funding standpoint, several grant and funding opportunities exist for using green stormwater infrastructure. Consideration should also be given for how stormwater utility funds might be leveraged to manage new GI that not only benefits stormwater, but also improves urban habitat, allow opportunities for integrating public art, provide buffers between different transportation modes, and improve the quality of the built environment.


MAKING IT HAPPEN

ECONOMIC CURRENT CONDITIONS

Apple Valley has grown and changed since its establishment in a formerly rural area. As the area grew, its central conduit to the north, Cedar Avenue, became a state highway with high traffic counts. Development oriented towards automobile access became the norm on Cedar Avenue, and the commercially zoned properties along the corridor were mostly built out by the 1980's. Now, bus rapid transit is being added to the mix, and planning is underway for creating transit ready development to support future ridership and lower vehicle miles traveled by Apple Valley residents.

The last ten years have continued to see growth in population, but more slowly than projected. The Metro Council projected that the 2010 population of Apple Valley would be over 61,000 persons, a change of over 15,000 people from year 2000. According to newly released data from the US Census, between 2000 and 2010 Apple Valley grew by 3,557 persons and 2,531 households. The demographic makeup of that growth is seen in the table below. The majority of growth in the city has been in the age groups over 45 years of age, with declines in the populations between 35 to 44 years and under 20 years of age.

APPLE VALLEY CENSUS POPULATION BY AGE			
Year	**2000**	**2010**	**Change**
0-19 Years	14,665	13,539	(1,126)
20-34 Years	8,504	9,141	637
35- 44 Years	8,723	6,911	(1,812)
45-64 Years	11,129	14,774	3,645
65 Years & Over	2,506	4,719	2,213

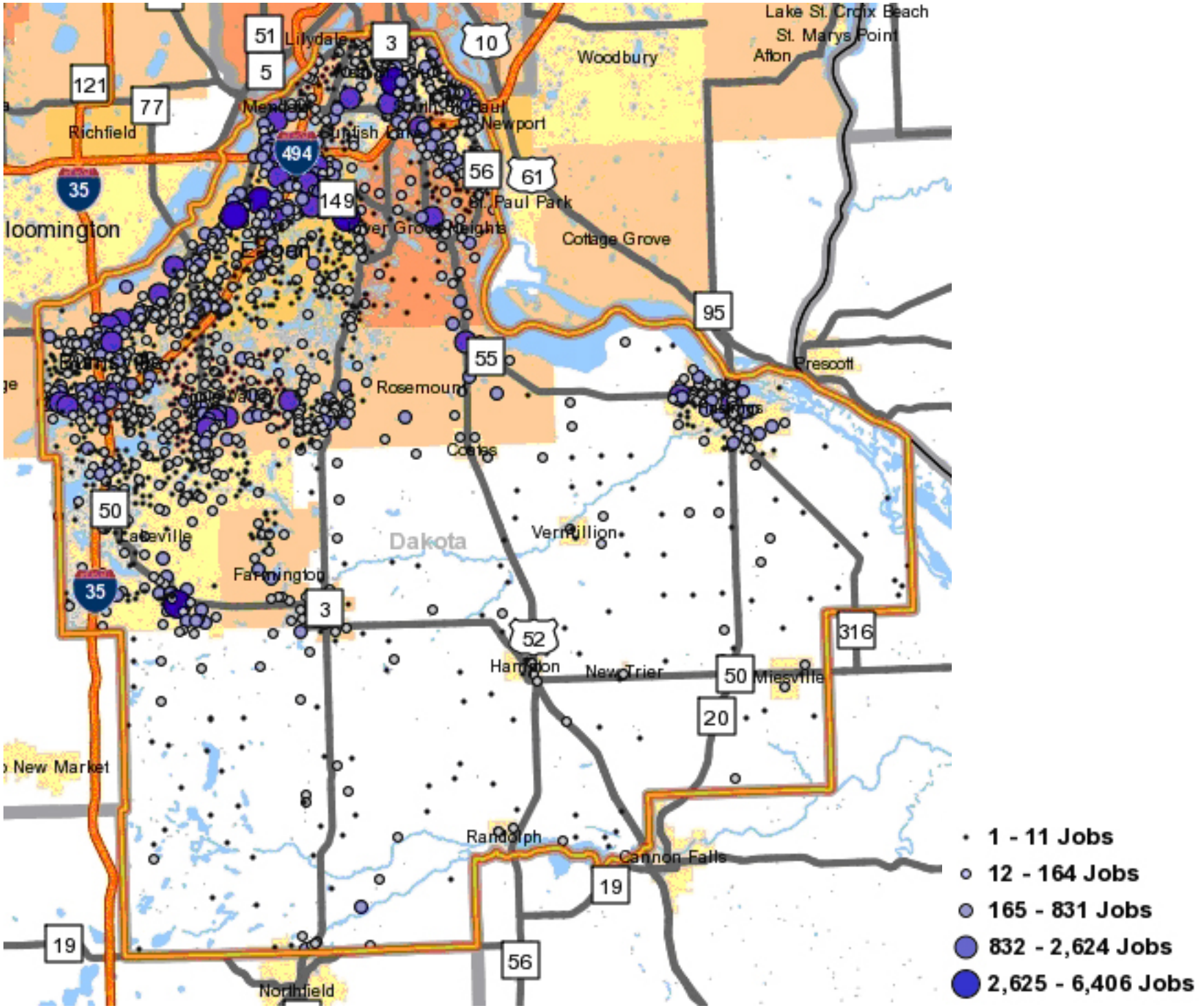
While Apple Valley grew at a rate of approximately eight percent, Dakota County grew by over 42,600 persons, adding close to the same number as the entire city of Apple Valley in 2000, a growth rate of twelve percent.

EMPLOYMENT

As population has shifted from Apple Valley to other areas of the county, employment has also shifted. According to Census Local Employment Dynamics data, Dakota County covered employment increased by over 16,000 jobs between 2003 and 2009, while in Apple Valley covered employment declined by 1,400 jobs. A map of 2009 employment locations shows the distribution of countywide employment.

COMMERCIAL AND RETAIL ENVIRONMENT

Despite the loss of some sectors of employment, office-using occupations other than in educational services increased in Apple Valley between 2003 and 2009 by approximately 880 jobs, and retail employment increased by approximately 260 during the same period.


Lake St. Croix Beach
St. Marys Point
Afton
Woodbury
Lilydale
Richfield
Newport
St. Paul Park
Cottage Grove
Prescott
Rosemount
Coates
Dakota
Vermillion
Farmington
Lakeville
New Market
Hampton
New Trier
Miesville
Randolph
Cannon Falls
Northfield
51
5
3
10
121
77
494
35
149
56
61
95
55
50
52
316
20
19
1 - 11 Jobs
12 - 164 Jobs
165 - 831 Jobs
832 - 2,624 Jobs
2,625 - 6,406 Jobs

APPLE VALLEY EMPLOYMENT	2003	2005	2007	2009	CHANGE '03 TO '09
Ag, Forestry, Fishing, Hunting	0	0	21	19	19
Mining, Quarrying	25	25	21	0	(25)
Utilities	2	0	0	25	23
Construction	475	498	376	184	(291)
Manufacturing	234	342	492	516	282
Wholesale Trade	257	296	259	641	384
Retail Trade	1,780	1,826	2,083	2,039	259
Transportation/ Warehousing	71	98	72	464	393
Information	76	210	70	467	391
Finance & Insurance	277	510	617	522	245
Real Estate, Rental, Leasing	107	130	217	202	95
Professional, Technical Services	489	451	504	506	17
Management Companies	147	80	186	185	38
Administration, Waste Management	371	322	285	462	91
Educational Services	5,410	256	3,125	2,622	(2,788)
Health Care/Social Assistance	2,030	1,830	1,157	1,539	(491)
Arts, Entertainment, Recreation	277	276	304	323	46
Accommodation, Food Services	1,700	1,347	1,121	1,405	(295)
Other Services	493	384	613	480	(13)
Public Administration	864	911	899	1,081	217
TOTALS	15,085	9,792	12,422	13,682	(1,403)

APPLE VALLEY SHARE OF DAKOTA COUNTY	2003	2005	2007	2009	CHANGE '03 TO '09
Ag, Forestry, Fishing, Hunting	0.00%	0.00%	3.02%	3.75%	3.75%
Mining, Quarrying	10.16%	15.63%	16.28%	0.00%	-10.16%
Utilities	0.49%	0.00%	0.00%	7.14%	6.65%
Construction	4.75%	4.46%	3.74%	2.51%	-2.24%
Manufacturing	1.20%	1.77%	2.45%	2.55%	1.36%
Wholesale Trade	2.12%	2.52%	2.40%	5.84%	3.73%
Retail Trade	12.29%	10.68%	11.98%	10.81%	-1.48%
Transportation/ Warehousing	1.13%	1.40%	0.71%	6.16%	5.02%
Information	1.21%	7.79%	0.81%	5.80%	4.59%
Finance & Insurance	3.41%	6.21%	7.14%	6.91%	3.50%
Real Estate, Rental, Leasing	4.93%	5.80%	8.02%	6.88%	1.96%
Professional, Technical Services	7.29%	5.80%	4.82%	6.31%	-0.98%
Management Companies	4.71%	2.47%	4.74%	5.94%	1.22%
Administration, Waste Management	5.80%	5.20%	4.32%	7.75%	1.94%
Educational Services	37.50%	2.29%	19.69%	17.88%	-19.62%
Health Care/Social Assistance	15.53%	13.15%	7.75%	8.15%	-7.37%
Arts, Entertainment, Recreation	11.71%	12.09%	15.16%	10.45%	-1.27%
Accommodation, Food Services	13.74%	10.31%	7.83%	9.57%	-4.16%
Other Services	8.85%	7.06%	10.46%	7.77%	-1.08%
Public Administration	20.44%	18.14%	17.33%	19.62%	-0.82%

Apple Valley's share of both of these categories increased, but the numbers are not strong enough to indicate an immediate demand for new space. At the same time, much of the retail space in the study area was built many years ago and is declining. Discussions with owners indicate that vacancy has increased to as much as 30 percent in older strip centers and rents have declined to as little as $8 per square foot from an earlier rate of $12 to $16 a foot.

CEDAR AVENUE AS A COMMERCIAL ENVIRONMENT

The retail trends may indicate that some of the space along Cedar Avenue in the study area is becoming economically obsolete and reaching the end of its useful life. At this point expensive upgrades may be necessary to revive these older centers to compete, upgrades that may not succeed in the face of newer competition already in place with newer shops and better offerings.

Streets like Cedar have been seen in the past as conduits for traffic, but years of research have demonstrated that the most successful downtowns use streets to arrive at destinations rather than as pass through conduits. The type of street and its speed of operation can also determine the feasibility of retail types along it.

Wide streets with speeds above 35 miles per hour favor large frontage retail with large setbacks for visibility. There are two reasons for this. First, higher speed necessitates long frontages and large signage in order for motorists to have time to see and react to opportunities to stop and patronize retail business. At 35 miles per hour, a driver will travel 51 feet in one second. An average downtown storefront is 25 to 35 feet—at 35 miles per hour most drivers will pass two storefronts before they know it. It takes as much as a second for a driver to react, so it requires around 2.5 to 3 seconds to see a business, find the entry and turn. To capture drive by traffic thus requires approximately three seconds. The large setbacks of big box stores increase the time to react because of a longer sight distance.

Mixed-use transit-ready development with smaller shop fronts relies on a model that uses both pedestrian traffic and auto traffic. Frontages of 25 to 30 feet need lower speeds to even be seen. A street with traffic moving at 20 to 25 miles per hour does not lose significant capacity but does increase the visibility of short frontages and aids pedestrian accessibility and safety. Lower speeds and minimal setbacks create the best conditions for small businesses to prosper from both auto traffic and pedestrians. Nationally strip malls on corridors have net rents that are roughly half of the net rents for space on successful pedestrian-friendly streets with on-street parking.

One way streets are a way to increase carrying capacity, but they are not optimal for businesses that rely on visibility and access and they are far less pedestrian friendly than two-way streets that operate at lower speed. Streets that are oriented to commuting may be under used for most of the day except for the commute hours and this is not positive for businesses. It also limits the variety of businesses since those that locate on the morning direction will not locate on the evening direction

and vice versa. The result is a street that is vital only for particular times of use and do not encourage pedestrian use.

THE COMING WAVE AND LIVING PREFERENCES

The population of Apple Valley is shifting toward seniors, while younger families are not moving to the city in large numbers and those in the middle years who are the core family and employment ages are declining. This reflects the presence of an aging-in-place population, but may also reflect a failure of the housing market to address a lifecycle of housing needs. As the number of children decreases, household size is decreasing and the need for a typical unit for a family of four is also declining.

The next wave of demographic change is the generation born since 1990, sometimes called Millennials, roughly equal in numbers to the baby-boom generation now retiring. Interestingly, they have some common preferences driven by differing needs. First, both groups are looking for walkable, pedestrian-oriented environments with high levels of amenities such as retail, services, entertainments and recreation opportunities close to their residences. For those retiring, a neighborhood that does not require a car makes aging in place more certain. For the young, it is a preference to use other modes of travel—for the first time, in this younger generation, the percentage of those desiring drivers licenses is going down compared to older cohorts.

To address the needs of both of these demographic groups a lifecycle of housing is needed. This means that complete neighborhoods should be a goal for the city, neighborhoods that have housing for first-time buyers, move-up housing as families grow, the great houses for those who proper, down-sizing housing for empty nesters, and senior housing for our most respected citizens to enable them to enjoy their neighborhood living independently. A complete transit-ready neighborhood includes retail and services and employment space to minimize vehicle miles traveled and, more importantly, to allow a lifestyle that is free from the grueling commuting and traffic that has become routine over the last 60 years.

The city of Apple Valley has challenges, but they are not insurmountable. The city has a willingness to plan proactively and to meet change with positive solutions that respond to changing markets. As part of this planning, the city will create new choices to attract business and new residents. The city is planning proactively to create plans to leverage regional transit amenities, and, if these plans proceed the city will have the ability to address Millennial market while better meeting the needs of its current residents.

DOES APPLE VALLEY HAVE THE CAPACITY TO MEET THE FUTURE?

Many see Apple Valley as place that is already built with few remaining sites for development. If development practice proceeds in the future as it has in the past this may be true. To examine this assumption, we looked at a series of programs

contrasting development in a standard model versus more proactive programs for complete neighborhoods.

AS IS PROGRAM

This program uses current densities and assumes separated land uses and high parking ratios. The final number of acres required includes streets, schools, employment and retail space, open space and churches and institutional uses. The as-is program assumes employment based upon Metro Council projections for 2060.

AS IS GROWTH SCENARIO		
Future Households		9,607 Households
Housing Land - Units per Net Acre Average	8	1,201 Households
Employment Adjusted Projection	FAR .25	4,236 New Jobs
Retail SF at Sales per Square Foot of	$439	366,600 Square Feet

Total land need including all ancillary uses: ± 2,700 acres

The city of Apple Valley does not have 2,700 acres of unencumbered land currently. In addition, if it did, more auto-centric development would not generate the density and value of transit ready development, and redevelopment of existing properties that are failing would be less feasible.

SUSTAINABLE PROGRAMS

These programs assume a jobs-housing balance based upon the future population, not upon standard projections. They also assume complete walkable neighborhoods with the capacity to support the retail square footage completely. Another assumption is that having created a walkable neighborhood with retail and employment that is pedestrian-oriented and transit ready, these new neighborhoods will become destinations for those not in the neighborhood due to their increased vitality. We are suggesting place making for complete, compact walkable places that:

- Have Jobs/Housing balance
- Have a full array of retail and services
- Have a mix and range of housing types, pricing
- Are transit-ready
- Address the Millennial Market

PRO-ACTIVE GROWTH SCENARIO		
Future Households		9,607 Households
Housing Land - Units per Net Acre Average	15	640 Net Acres
Employment, Low Sustainable Goal	FAR .5	10,500 New Jobs
Retail SF at Sales per Square Foot of	$439	366,600 Square Feet

Total land need including all ancillary uses: ± 1,500 acres

GROWTH CENTERS SCENARIO		
Future Households		9,607 Households
Housing Land - Units per Net Acre Average	25	384 Net Acres
Employment, Low Sustainable Goal	FAR .75	14,343 New Jobs
Retail SF at Sales per Square Foot of	$439	366,600 Square Feet

Total land need including all ancillary uses: ± 900 acres

SHORT-TERM OBSTACLES

- Sale prices now = current construction cost
- Lack of business lending
- Lower levels of business creation
- Lack of business expansion
- Competition for credit tenants

FINANCING

- Community development financial institutions
- Mitigated risk through consortium funding
- Community development entities
- Small Business Investment Company
- Low income housing tax credits
- Senior housing tax credits
- Tax Increment financing
- Down payment assistance for first time buyers
- Façade renovation programs

Regulatory Changes

FIXING THE CODE

The existing code is the primary barrier that is preventing Apple Valley from creating a true downtown environment. The present code produces a result that is sprawling, with widely separated buildings surrounded by many acres of asphalt. The primary drivers of this pattern are:

- Huge setbacks from the street right-of-way.
- Low lot coverage.
- Low building heights.
- High parking ratios.

To achieve the more urban, pedestrian friendly environment that many residents desire, Apple Valley should conduct a code audit for the downtown that identifies barriers and examines current best practices in transit-oriented, pedestrian-supportive downtown regulations. Additional modifications that would improve Apple Valley's code include:

1) Create a single chapter for Downtown Codes. There should be a single location for all regulations and standards that pertain to downtown instead of spreading those particulars throughout the entire book. Having a single, comprehensive chapter that only deals with development downtown would be immensely helpful to developers. It should be solely tailored for downtown, creating a one stop code section.

2) Embrace the concept of overlay districts. In overlay districts, some standards are identical for the purpose of continuity and connectivity. Others are tailored to achieve individual character and identity. For example, perhaps there could be a tailored code for each of the proposed villages. These codes could have some commonalities, but they would also have things that allow each of the villages to differentiate themselves with unique places, unique details, unique usage, all to further the goal of creating unique neighborhoods within the downtown area.

3) Offer incentives. The code needs to offer incentives that will encourage private developers to provide public amenities, such as public spaces, plazas, courtyards, green roofs, and other sustainable components. In return for providing these features, the intensity of development can be increased as compensation for the added expense of providing the amenities. Other communities have a long history of providing incentives, and it's become a fairly standard practice in downtowns.

4) Develop a complete set of design guidelines and standards. Guidelines should not impede development, but should instead inspire good development. The current code mainly addresses landscaping and a few superficial aspects of architecture. Revised urban design standards and guidelines, at a minimum, should address:

- The Public Realm- There currently is very limited information in the existing code that deals with the public realm. Specific guidelines should be created to deal with the public realm, including sidewalks, streets, public spaces, and pedestrian connections.

- Site Design- The code should contain specific guidelines that inform the relationship of building frontages to the sidewalk. Guidelines should pertain both to landscape and building design. While the current code does loosely address landscape, it is very suburban in style. Modified and additional guidelines need to address pedestrian connections between developments and to major destinations. Similarly, some pieces of the existing code do deal with building design, but they only address superficial specifics such as style and materials. They don't impact the actual substance of how people live. Apple Valley needs to develop urban design guidelines that deal with windows, entrances, pedestrian features, weather protection, handicap accessibility, the treatment of the sidewalks that lead to the building, lighting that attracts pedestrians, bike racks, etc. People should feel welcome and safe, and the community should be both comfortable and convenient. Create a code that is inspirational and aspirational, rather than merely regulatory.

Moving Forward

GETTING STARTED: WHAT YOU CAN DO NOW

- **Clarify Your Vision.** Understand exactly where it is that the community wants to go, and know exactly what kind of community you want to be. That vision will ultimately guide all your future planning decisions, so it needs to be crystal clear.
- **Identify Your Priorities.** What do you want do first? Second? Third? What will you accept, and what will you decline? You will need to say "no" to some things in order to have the resources to say "yes" to others.
- **Brand WITH the BRT.** The BRT is coming. The construction has begun, and the project is moving forward. DOT will soon start working to develop a brand and identity for the BRT. Now is the time to make sure that Apple Valley's branding corresponds and compliments the BRT branding. Use your brand to draw people who are using the BRT service into your community. Use the excitement generated with the launch of the BRT to generate excitement about the launch of your own brand.
- **Review Signal Timing on Cedar Avenue.** You can never make a first impression twice. When the BRT begins running, people are going to base their entire opinion of the service on that first impression. If that first experience involves narrowly escaping being run over by traffic on Cedar Avenue, they will walk away with a bad first impression of Apple Valley, and they will be less likely to make a second visit.
- **Ensure Sufficient Bicycle Parking.** If passengers go to use the BRT but find that there is no place to park their bicycle, they will be disinclined to try the service a second time.
- **Start a Public Art program.** Public art programs are very easy to start, and can be accomplished quickly, thereby giving the community a very visual accomplishment/win. If you were to start tomorrow, you could have a thriving public art program within six months.

KEEP GOING: NEAR TERM

- **Prioritize Budgets.** After you've finalized your vision and identified your priority endeavors, you need to then prioritize both your capital and operational budgets. Get your ducks in the row now, so that you know exactly what your resources are and when they will be available.
- **Develop Performance Measures.** We achieve what we measure. Decide what you are trying to achieve, and then develop concrete, real, quantitative performance management measures to evaluate your progress and your success.
- **Develop A Parking Management Plan.** You need to open up some of the many acres of parking currently present within the community. Each individual business is providing parking for their customers, but those customers are frequenting numerous adjoining businesses. Customers should not drive in between parking lots; there should be a shared space where customers could leave their cars in order to frequent multiple businesses. Other shared opportunities can be found between the different uses. Office complexes experience peak demand for parking during the day, whereas retail, restaurant, and entertainment facilities have higher demand during the late afternoon and evening. A shared plan could help consolidate the need for parking spaces.
- **Develop Pedestrian Way-finding.** Instead of the current limited auto-oriented sign system, develop a sign system to accommodate more sustainable travel modes such as biking and walking. This sign system should provide information for the location and distance to BRT stations, downtown, the zoo, surrounding villages, recreation facilities, and any other noteworthy destinations.
- **Retrofit Existing Infrastructure to Reduce Impervious Surfaces.** Small retrofit interventions can reduce impervious surface and provide opportunity for water quality treatment.

- **Develop Green Infrastructure Standards.** Create a manual so that you can guide new developers as they commence projects in the community.
- **Organize a Community Development Financial Institution.** Get the standard structure in place so that there's predictability in all that follows.
- **Conduct a code audit.** Identify existing barriers that prevent desired development, and incorporate best practices for creating transit-oriented, pedestrian-supported downtown regulations.

KEEP GOING: MID TERM

- **Create an Art Framework Plan.** The framework Plan should specifically focus on special districts such as the BRT corridor, the downtown, and the proposed Cedar Villages. It should focus on identifying public art opportunities and integrating public art with public infrastructure improvements.
- **Finalize Funding Mechanisms.** Consider creating CDFI's, community development entities, small business investment companies, and tax increment financing. Use the CDFI to attract and support new business.
- **Partner with Willing Property Owners.** There are a number of property owners who own large parcels of land in the downtown area, and they are ready to move forward with development NOW. They are ready to do something different and recognize the value of developing a more urban downtown.
- **Begin Redevelopment on Opportunity Sites.** Focus particularly on developing rental housing. There is a big demand for rental housing in the current economic market, especially in the downtown core. Rental housing is not something to avoid; there is a huge demand for Class A rental housing at the moment, and Apple Valley should capitalize on that demand as an opportunity to create a more vibrant, livable downtown district.
- **Adopt Specific Area Master Plans.** Specific Area Master Plans will take the recommendations developed by the SDAT and will help develop them into reality.

KEEP GOING: LONG TERM

- **Complete (Built) Node Infrastructure.** Determine what your node is going to be, and what that Central Village on Cedar Avenue will look like, and complete your built infrastructure.
- **Complete Node Amenities (Parks, Plazas, and Other Civic Venues).**
- **Develop Local Circulator Routes.** Connect your zoo with the downtown so that people who visit the zoo have any easy route into the downtown. Connect all of your points of interest, districts, and hubs to enable easy access to visitors and residents alike.
- **Continue to Integrate and Complete the Green Network Throughout the City.** Create a green infrastructure that includes bike networks in order to become a sustainable community.

Team Roster & Acknowledgements

Apple Valley Sustainable Design Assessment Team Members

Robert Yakas - Team Leader

With over 30 years in urban design, architecture, planning and transportation planning, in both the public and private sectors, Bob Yakas has led teams in all scales of community design projects. From individual site design to master planned residential communities utilizing Transit Oriented and Traditional Neighborhood Development strategies, He has worked successfully in the public and private sectors in short and long range planning, and on projects from concept through implementation. His international experience includes work in Mexico, Canada, Turkey, France, Japan and most recently in Johannesburg, South Africa.

As a leader of and key member of design teams Mr. Yakas has been involved in major development projects for towns and cities from Alaska to Florida; transportation projects in Washington, Oregon, California, Colorado and Utah, and has lectured and presented at forums for the American Planning Association and the National Light Rail Transit Conference. He was an adjunct professor in the department of Urban and Regional Planning at Portland State University for 12 years teaching all the core urban design and site design courses offered in the graduate curriculum.

Mark Hinshaw, FAIA- Urban Design/Land Use

Mark is an architect and the director of urban design and a principal at LMN Architects. He has had an influential career spanning architecture, planning, and journalism. His consulting practice at LMN Architects spans design and planning.

For 35 years, Mark has combined his background as an architect with his skills as a city planner to help communities understand growth and development choices. He has gained increasing prominence and regard as a speaker and writer, in a variety of local, national, and international media. While his popular column in The Seattle Times has brought Seattleites a fresh look at the phenomena of their own city, designers from around the nation and the world have gained their impressions of Seattle's urban achievements from his writings in Architecture, Architectural Record, Landscape Architecture, and other professional journals. Mark has described the influences that have shaped his unique way of looking at cities, as observer and problem-solver, in a wide-ranging view that spans the urban horizon "from public policy to social psychology."

Mark holds Bachelors in Architecture from the University of Oklahoma and a Masters in Urban Planning from Hunter College/CUNY. Mark was inducted into the AIA College of Fellows in 1994. He was inducted into the AICP College of Fellows in 2000. He served as AIA Seattle President 1992-93.

Colie Hough-Beck- Urban Design/Placemaking

Colie Hough-Beck has practiced landscape architecture and urban design in the Pacific Northwest for 32 years and is a founding Principal of HBB Landscape Architecture in Seattle. Her practice has focused on urban infrastructure projects with an emphasis on transportation. Prior to her private consulting work, Colie was an associate planner with the City of Bellevue at a time when land use and transportation policies were forming the foundation for Bellevue as the urban center it is today. Throughout her career, Colie has participated as a member of the University of Washington College of Built Environment's Professional Advisory Council, where she serves on the education/ curriculum committee. The College's Landscape Architecture Department presented her a "Firm Honor Award" for significant works and deeds to the Department and profession. She holds a Bachelors degree in Landscape Architecture from the University of Idaho. Colie has successfully participated in the development of over 80 transportation projects that accommodate multiple modes of travel including vehicular, transit, pedestrian and bicycle facilities. By using community-based design as a guiding principle, she creates a sense of place and character that is sensitive to the local context and enhances economic development. She has received awards from the American Planning Association, American Society of Landscape Architects and Puget Sound Regional Council and was recognized in Ronald Lee Fleming's book The Art of Place Making: Interpreting Community Through Public Art and Urban Design for her work on the Mercer Island Downtown Streetscape Project. As an active member of the Seattle Planning Commission, she is currently co-chair of the land use and transportation committee.

G.B. Arrington- Transit-Oriented Development

GB Arrington is the principal practice leader for Parsons Brinckerhoff's (PB) PlaceMaking group. In this role, he is responsible for providing strategic direction and leading PB's global transit-oriented development (TOD) practice. Australia's Urban Development Institute called GB "the world's foremost authority on TOD policy, design and implementation." His work has taken him across the United States, to China, Australia, New Zealand, Dubai, Canada and the Caribbean. During his career, he has directed the preparation of more than 125 TOD plans.

Mr. Arrington specializes in policy, research, planning and design services that assist public- and private-sector clients in solving politically and technically complex land use and transportation challenges. His career has been defined by a commitment to continuous innovation to reinvent how cities grow while enhancing their quality of life. Before joining PB, he charted a new, award-winning direction for Portland, Oregon's transit agency. Mr. Arrington created and led the Portland region's widely acclaimed TOD program. His innovative planning and community involvement strategies changed the face of transit and land use in the Portland region and received awards from the White House and the Federal Transit Administration (FTA). Mr. Arrington is one of the founders of PlaceMaking and the Rail~Volution conference.

Karina Ricks- Transportation

Karina Ricks has over 20 years of public and non-profit experience in planning, economic development, transportation and environmental policy. She has most recently served as the Associate Director for the Policy, Planning and Sustainability Administration in the District Department of Transportation where she oversaw a wide range of transportation initiatives for a very urban system including launching the nation's first and largest public bike sharing system, initiating construction on the first two lines of what will be a 34 mile streetcar network for the city, and overseeing a wide range of large infill TOD projects. Karina joined DDOT initially to lead the Mayor's groundbreaking Great Streets program – a unique initiative that recognizes the powerful impact of transportation investments and infrastructure design on local economic development, neighborhood livability, and travel mode choices and targets investments to achieve larger economic, environmental and human capital objectives. Karina came to DDOT from the District's Office of Planning where she was the city's Transit-Oriented Development Coordinator. Prior to joining the District government, Karina was with U.S. EPA headquarters as a Policy Advisor working with communities across the nation on smart growth and sustainable development issues. She has also worked for years as an international consultant on development and democracy in Eastern Europe and Oceana. Karina has served on several national, municipal and regional task forces including the regional Transportation Planning Board (TPB), Public Space Committee, Rail~Volution National Steering Committee, Ford Foundation Roundtable on Equity and Smart Growth, Transportation Research Board, and several AASHTO committees. Karina holds a Master's Degree in Urban Planning from Cornell University and a Bachelor's Degree from Michigan State University and is a potter, urban gardener and mother of two.

Ed Starkie- Market Analysis/Economic Development

Mr. Starkie has 25 years experience in real estate that includes moving complex projects from conception and feasibility analysis to financing and development. A particular career focus has been the economic structure of vital urban places, of downtowns and neighborhoods that are pedestrian and transit oriented environments. His work has received four awards from the American Planning Association in the areas of main streets and downtown revitalization, and he contributed to the current EPA guidelines for promoting Smart Growth. His recent work has also gained an award from the California Preservation Foundation and a Charter Award from the Congress for New Urbanism. Mr. Starkie is a financial advisor for private and public development who brings a unique, pragmatic approach that results in projects that are feasible, profitable, and contribute to community livability. Mr. Starkie holds a Master of Science in Real Estate Development from the Massachusetts Institute of Technology. He is a panel member of Urban Land Institute Advisory Services. Mr. Starkie also has also served on the faculty of the University of Oregon Urban Architecture Program and the Portland State University Urban Planning and Architecture programs.

Nathan Polanski- Green Infrastructure

Nathan, a dedicated bike commuter, has experience with planning and designing streetscape projects that focus on complete and green street principles. As project engineer, he has worked on a variety of sustainable projects that have focused on mobility and accessibility at local and regional scales to improve levels of service for all modes of transportation. These projects have leveraged sustainable storm water strategies, integrating low impact development (LID) and green infrastructure solutions, including bioretention and swale systems and permeable pavements. Nathan's recent projects include:

- Winslow Way Street Planning and Design, Bainbridge Island, WA
- 21st Street Complete Street Plan, Paso Robles, CA
- Port Townsend Streetscapes, Port Townsend, WA
- Central Coast Complete Green Streets Workshop, California
- Burke-Gilman Trail - 11th Ave NW to the Ballard Locks, Seattle, WA
- University of Washington and Sound Transit LINK Station – Montlake Triangle Improvements, Seattle WA
- Sunnydale Master Plan, San Francisco, CA
- Minneapolis Riverfront Design Competition Finalist, Minneapolis, MN

Joel Mills – Director, Center for Communities by Design

Joel Mills serves as Director of the American Institute for Architects' Center for Communities by Design. The Center is a leading provider of pro bono technical assistance and participatory planning for community sustainability. Through its design assistance programs, the Center has worked in 55 communities across 32 states since 2005. In 2010, the Center was named Organization of the Year by the International Association for Public Participation (IAP2) for its impact on communities and contributions to the field.

Joel's career in civic health and governance spans over 17 years, and includes community-based technical assistance, process design, facilitation and training across a number of fields. During the 1990s, Mr. Mills spent several years supporting international democratization initiatives by providing technical assistance to parliaments, political parties, local governments, civic and international organizations. His scope of work included constitutional design and governing systems, voter and civic education, election monitoring and administration, political party training and campaign strategy, collaborative governance, human rights and civil society capacity building. His work has been featured on ABC World News Tonight, Nightline, CNN, The Next American City, Smart City Radio, The National Civic Review, Ecostructure Magazine,The Washington Post, and dozens of other media sources.

Erin Simmons- Director, Design Assistance Team Program

Erin Simmons is the Director of Design Assistance at the Center for Communities by Design at the American Institute of Architects in Washington, DC. Her primary role at the AIA is to provide process expertise, facilitation and support for the Center's Sustainable Design Assistance Team (SDAT) and Regional and Urban Design Assistance Team (R/UDAT) programs. In this capacity, she works with AIA components, members, partner organizations and community members to provide technical design assistance to communities across the country. Through its design assistance programs, the AIA has worked in 200 communities across 47 states. In 2010, the Center was named Organization of the Year by the International Association for Public Participation (IAP2) for its impact on communities and contributions to the field. To date, Erin has served as staff lead on over 45 design assistance teams.

Prior to joining the AIA, Erin worked as senior historic preservationist and architectural historian for an environmental and engineering firm in Georgia, where she practiced preservation planning, created historic district design guidelines and zoning ordinances, conducted historic resource surveys, and wrote property nominations for the National Register of Historic Places. She holds a Bachelor of Arts degree in History from Florida State University and a Master's degree in Historic Preservation from the University of Georgia.

Julie Stuart – Graphic Recorder

Julie is principal with Making Ideas Visible, a graphic facilitation firm. Throughout her career, Julie Stuart has drawn on both words and images to communicate ideas. With experience in journalism, public relations, environmental politics, political campaigns, and as a professional artist and teacher, her interest in organizational change, strategy, advocacy and creativity has led her to visual facilitation where she combines skills as a deep listener and strategist who can easily synthesize, visualize and organize emerging ideas. Julie has a degree in political science from Purdue University and a Masters in Fine Art from Georgia State University. As a visual facilitator, she conceptually guides and maps conversations by clearly synthesizing and visualizing the wisdom in the room through deep listening for key concepts and themes. The people and organizations Julie works with are able to see emerging ideas woven into a story, allowing for navigation and common decisions about the way forward. This process has proven to be a useful tool for guiding groups as they undergo organizational change processes including strategic planning, visioning and branding.

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AIA Communities by Design

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