June 1, 2011

FINAL REPORT

Re-Thinking Main Street

Prepared for:

Main Street CONCORD

PENACOOK 1775 — THE WILDERNESS WAS GLAD FOR THEM — LAW EDUCATION RELIGION — 1853 — CONCORD — ADOPTED CITY CHARTER

CONCORD 2020

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EXECUTIVE SUMMARY

The project must preserve and enhance the economic vitality of downtown Concord by creating a Main Street that is a destination for residents and visitors alike.

The CVS building before its transformation serves as the example of how Economics, Sustainability and Historic Preservation all work together. "There is not a single successful downtown that doesn't have a strong preservation component." – Donovan Rypkema, real estate and economic development

THE SETTING

For nearly 300 years Concord's Main Street has served as the primary thoroughfare of commerce. Bustle of activity reverberates in the pulse and pace of the community. Six rods wide, a mere 99 feet, the merchant stores, variety of eateries, professional businesses and government institutions that encompass Main Street are the Capital city's most visible indicators of the health and economic stability of the downtown. Throughout its existence Main Street has adapted in the face of shifting economies and evolving transportation modes. This report evaluates the need to once again adapt Main Street in order for Concord to retain and further develop its economic vibrancy.

There is no argument that Concord has one of the finest downtowns in New England. As the state capital, Concord's Main Street core, North Main Street from Centre to Pleasant Street, retains a symbolic representation as the heart of New Hampshire. It holds an endearing place in the mind of every state resident. With direction from Concord's citizens and other residents across New Hampshire, the Re-Thinking Main Street Task Force and the Hoyle Tanner team set out to ensure preservation of this state treasure. The intent was to create a streetscape every resident can proudly call "New Hampshire's Main Street."

The Re-Thinking Main Street Project presented the opportunity to take a close look at the current economic state of the downtown and explore what ways the streetscape can serve to better circulate users among the local shops, restaurants and professional companies. In turn, the resulting higher use of downtown businesses will enhance local wealth and strengthen Concord's overall economic health and opportunity.

The overarching goal of the project is **to enhance the economic vitality of downtown through increased retail activity and decreased vacancies among storefronts and upper story spaces.** The Re-Thinking Main Street Project should be a catalyst for continued investment in downtown.

Therefore, throughout the exploration of the Re-Thinking Main Street Project each recommendation for improvement was guided by the following principle:

"The project must preserve and enhance the economic vitality of downtown Concord by creating a Main Street that is a destination for residents and visitors alike. The project should identify opportunities for new and existing businesses, promote Main Street as a friendly and safe place to be and an attractive place to work, shop, dine, and live. The project should also enhance opportunities for cultural events and gatherings within the downtown."

The resulting overall economic assessment of our state capital:

Concord is healthy, but fragile.

EXECUTIVE SUMMARY

Circa 1927 this postcard shows Main Street with two travel lanes, back-in angled parking and a center lane for use by the trolley.

Trolley cars and early automobiles share the road.

BACKGROUND

Over the past 14 years, several studies have been completed that presented opportunities, planning visions and design recommendations in an effort to improve Concord's downtown. These include:

- 1997 Downtown Master Plan
- 2001 Concord 2020 Vision Report
- 2005 Opportunity Corridor Study
- 2006 Downtown Streetscape Improvement Plan

In recent years, interest has been raised by members of the community and the City of Concord to create a "new" Main Street with mixed-use development, an enhanced sense of place and expanded pedestrian environment, while preserving and playing up the authentic historic character of our downtown. The idea, as seen through the above mentioned studies, actually returns Main Street to its true historic design: Main Street would once again be walkable, offering a range of housing options and job types. Downtown would return to a streetscape standard that was prominent before the rise of the automobiles, but without ignoring the realities of life in the 21st century. Concord's Main Street would instead present a "complete street" that balances all transportation modes.

The Re-Thinking Main Street Task Force consisted of members of the community with relevant economic and business experience, individuals residing near the downtown, members of the Community Development, Engineering and General Service departments of the city, members of City Council, property owners, restaurateurs and merchants in the Downtown. The composition of the Task Force was developed to ensure diverse representation from City government, the business community, and local residents.

The team of Hoyle Tanner & Associates, Carol R. Johnson Associates, Applied Economic Research and Elizabeth Durfee Hengen was hired to assist with the Re-Thinking Main Street Project. The team explored the feasibility of viable design concepts developed from previous studies; developed additional design concepts; undertook an economic analysis that included focus groups, intercept surveys, case studies and a demographic profile; took the findings and, through an intensive public process, developed a Community Consensus Design.

The evaluation was two-fold:

1. The Economics
and
2. The Street

The outcome of these evaluations provided implementation strategies to *preserve and enhance the economic vitality of downtown* and *create a Main Street that is a destination for residents and visitors alike.*

EXECUTIVE SUMMARY

We went to Keene and Manchester to measure the success of their streetscape projects.

Thirty years after undertaking a streetscape project in Keene empty storefronts in downtown are virtually nonexistent with less than a 1% vacancy rate.

Manchester purposefully changed its streetscape in 1996 to fill vacant storefronts on Elm Street. Today, downtown Manchester is attracting new retailing, a particularly strong mix of new restaurants and expanded cultural offerings.

PROJECT AREA

The project area is a 12 block section of Main Street, bounded by

Pitman Street to the north
Storrs Street to the east
Perley Street to the south
North/South State Streets to the west

The focus of the project is

North Main Street from Centre Street to Pleasant Street
South Main Street from Pleasant Street to Storrs Street

The 2006 study of potential streetscape improvements in this area has served as the driver for the more in-depth design project portion of this report.

PUBLIC PROCESS

Two very important components of the project were economic analysis of Concord and public outreach related to the streetscape of Main Street. It was critical that these two components advanced concurrently as they both involved participation and consensus building with residents, merchants, property owners, restaurateurs, local officials and other involved stakeholders. An extensive public outreach process was undertaken for this project to allow maximum participation in an interactive and informative way. As a result, over 1,000 people participated by providing their input, observations and guidance in the development of the Implementation Strategies to strengthen Concord's economy and the Community Consensus Design for the streetscape.

1. Economic Analysis

A thorough investigation and understanding of the economics at play in downtown was essential in translating the traffic, pedestrian, streetscape, and parking design improvement elements into the language of tax base expansion, improved retail sales, enhanced business climate and public/private reinvestment and development.

Having completed this analysis and determining that **Concord is healthy but fragile**, the Hoyle Tanner team is convinced that **downtown needs a major facelift to retain and enhance its market presence.** Further, we conclude that undertaking the Community Consensus Design outlined in this report will result in a more prosperous retail and investment environment.

The economic analysis indicates that the inherent risk of waiting to pursue improvements to the district may result in more vacancies along Main Street. The time to do these projects is not when downtown is already in severe distress, as recovery is slow and costly. Concord needs to proceed with these improvements so that the Re-Thinking Main Street Project can be a catalyst for continued investment in downtown.

Over the course of eleven months, more than 1,000 people participated in Re-Thinking Main Street.

Residents, retailers and other community stakeholders think about Main Street.

Through a series of revisions and refinements the Community Consensus Design emerged.

2. The Street – Community Consensus Design

The Community Consensus Design resulted from a comprehensive and inclusive public process. As the team developed and evaluated concepts, the viability of each was first measured in terms of the following objectives:

- Improve the universal accessibility of the pedestrian environment
- Improve visibility and accessibility to the businesses
- Develop aesthetic continuity along the streetscape
- Improve vehicular movements
- Provide social gathering way points
- Incorporate sustainable design elements
- Minimize impacts of construction
- Demonstrate implementation feasibility

Each possible design had to then pass the economic litmus test: would the reconfigured streetscape have the potential to negatively impact the economic viability of downtown? If it did, the design was deemed infeasible and the concept was eliminated from further exploration.

The public process yielded community consensus on a number of desired outcomes:

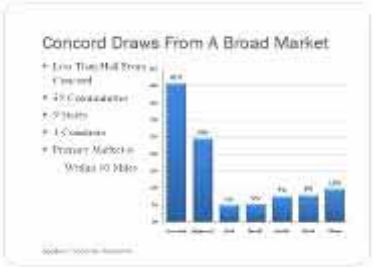
- Preserve as much parking as possible
- "I want to park safely." Many people shared concern about the mechanics of pulling in and out of the current parking spaces along Main Street. Common phrases were "difficult," "scary" and "stressful"
- "Make the sidewalks the same on both sides." Symmetry was important to people and they recognized the narrowness and condition of Main Street's east side, particularly along South Main Street from Gibson's Bookstore to Storrs Street.

One concept emerged from the public process which was coined the People's Choice as it evolved through subsequent presentations. Now termed Community Consensus Design, the concept met the following criteria:

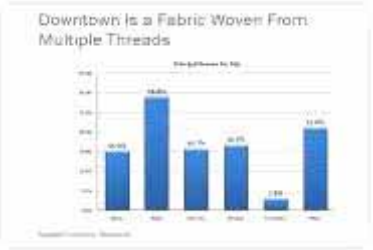
- Angled parking was preserved on both sides, maximizing on-street parking potential
- Equal-width sidewalks struck the best balance between vehicular circulation, pedestrian safety improvements, universal accessibility, and streetscape opportunities. Although just shy of an ideal width to facilitate unobstructed tree canopy growth, it was the best compromise.
- Minimal vehicular traffic reductions and delays.

The reconstruction of the street will enable the existing double step curb on the west side to be eliminated and replaced with a normal single curb; it will also permit accessible ramps to be installed at every street corner, thus resolving the existing and very serious safety deficiency. The universal accessibility benefits of this change are enormous for all people using downtown. Lastly, recommendations for realigning parking spaces will

The economic analysis of downtown Concord took a four pronged approach including a demographic analysis, focus groups, intercept surveys and case study review.



Patrons of downtown businesses hailed from 59 different communities.



Customers work, shop, dine and utilize the business services in downtown. We could do better to have more people living downtown.

provide safer conditions for people backing out onto Main Street, and reduce the stress today's downtown patrons are experiencing.

IMPLEMENTATION STRATEGIES

Just as the project resulted in two primary evaluation areas, two sets of Implementation Strategies were generated which contain both short term and long term improvements.

1. The Economics

The primary recommendation is for the City of Concord to seek out funding for improvements to downtown. Although overall Concord is healthy, economic analysis also revealed vulnerability among downtown's retail stores and upper story businesses. There are a number of opportunities for the Re-Thinking Main Street Task Force to work with various downtown stakeholders in order to fortify the district. These include:

- Strengthen ties to the student population at the area colleges. According to the National Center for Educational Statistics today's college students have "a tremendous amount of disposable income" that is virtually untapped in the downtown business climate.
- Development of a new Gap Identification Survey coupled with a strong business recruitment effort to reduce downtown vacancies. Concord's history of success with this tool indicates these measures will benefit the district greatly.
- Expanded store hours and Sunday hours. These were most desired by customers during the Intercept Surveys. Focus Group sessions showed the businesses that are capitalizing on every market potential, including expanded hours, were seeing sales figures recovering more quickly.
- Develop a city-wide marketing campaign aimed directly at entrepreneurs to promote the benefits of doing business in Concord.
- Develop a marketing campaign aimed at capitalizing on state tourism.

2. The Street

In support of Economic Analysis findings, Concord should set its primary task as seeking funding to implement the Community Consensus Design. It must also recognize that despite the public's input and support for making major improvements to Main Street the single recommendation to reduce the travel way to the proposed three lane configuration was met with skepticism. Because increased efficiency with fewer lanes is counterintuitive, it is difficult for people to envision how Main Street can maintain its functionality with such a configuration. Therefore the Hoyle Tanner team recommends while funding is being sought for permanent improvements to the streetscape, a minimum six-month trial be conducted for the three-lane configuration. This would involve the removal of the existing striping and re-striping to three-lanes.

EXECUTIVE SUMMARY

The Community Consensus Design returns Main Street to its 1927 street configuration.

What was previously the center trolley lane would now become the center turning lane.

If the measure of success is **the time it takes to drive through Main Street**, the proposed three lanes will have little impact to flow of traffic relative to time. Today, the time to travel along Main Street is contingent upon the configuration of the signal at the North Main/South Main/Pleasant Street intersection. Improvements at this juncture are critical for improving pedestrian safety, traffic flow and will allow for organized turning movements at the intersection. Projecting population growth and trends for the next 10-years, if left in its current cycling stage and Main Street's four lane configuration, delays will add in excess of two minutes more in travel time. This significant delay will divert cars to other roadways, resulting in the loss of potential patrons and will negatively impact downtown businesses.

The measure of success is not time, but **the enhanced economic vitality of downtown**. Therefore the Hoyle Tanner team recommends upgrading the signal at the Pleasant Street intersection in conjunction with the three lane trial period. However the upgraded intersection should be a permanent improvement. It will be necessary to eliminate the diagonal crosswalks and to extend or create turning pockets. Some on-street parking will be sacrificed.

The Hoyle Tanner team also recommends a section of the angle parking on South Main Street be re-striped to accommodate back-in angle parking to test whether or not the City and users feel this is an option worth exploring further.

If Concord chooses to implement a trial period for the proposed lane configuration under the Community Consensus Design, re-striping the parking bays simultaneously will allow for expanding the existing spaces to a depth of 16-feet. This will greatly enhance the safety of vehicles backing into traffic along the corridor. This recommendation also comes with the ability to add parking immediately along South Main Street by converting existing parallel parking to angled parking.

Our concluding thought comes from the article "How Your Community Can Thrive — Even in Tough Times" by Philip Myrick, a certified planner whose expertise encompasses public space planning:

Take over the streets. *Streets are the most prominent and prevalent public space in any town, and making them more pedestrian-friendly is the closest thing you have to a silver bullet for improving your community. A walkable downtown or neighborhood shopping district quickly becomes a magnet for both public life and economic expansion, thus enriching your community in several ways at the same time.*

SECTION II

Background & Context

BACKGROUND & CONTEXT

Re-Thinking Main Street builds on the work of four past studies:

1997
Downtown Master Plan

2001
2020 Vision Report

2005
Opportunity Corridor Study

2006
Downtown Streetscape Improvement Plan

BACKGROUND

Concord is the state capital and as such Concord's Main Street is "New Hampshire's Main Street", the City's civic and cultural heart for all who visit and for those who reside in this state. The historic downtown has served as a gathering point for residents, workers and visitors to shop and socialize for nearly three centuries. Many eclectic stores, restaurants and cafes, theatres, and art galleries offer visitors a variety of entertainment, cultural, shopping, and dining alternatives. Throughout the year Main Street serves as the site for various concerts and festivals that bring tens of thousands of people to the city from around the region, state and abroad.

Over the past 13 years, several studies have been completed that have presented opportunities, planning visions and design concepts in an effort to improve the downtown area of Concord, These include:

- 1997 Downtown Master Plan
- 2001 Concord 2020 Vision Report
- 2005 Opportunity Corridor Study
- 2006 Downtown Streetscape Improvement Plan

Concord 2020, Main Street Concord, Inc. and the City of Concord initiated the Re-Thinking Main Street project to enhance economic vitality in the district by further advancing previous studies and to develop a Community Consensus Design. The collective goal for this project was to develop, present and receive public input on viable design concepts that would preserve and enhance the economic vitality of downtown Concord by creating a Main Street that is uniquely Concord and authentic to its historic and physical character, while maintaining its appeal as a destination for residents and visitors alike.

The project area is a 12 block section of Main Street, bounded by
Pitman Street to the north
Storrs Street to the east
Perley Street to the south
North/South State Streets to the west

An approximate length of 4,200 linear feet encompass the project focus (see Figure 1 & 1A)
North Main Street from Centre Street to Pleasant Street
South Main Street from Pleasant Street to Storrs Street

HISTORIC FRAMEWORK

Concord's downtown reflects many aspects of its history. The city's central location within the state led to its designation as state capital in 1808 and secured the community's role as the heart of political and social life in New Hampshire. After the railroad arrived in 1842, the city entered an era of major growth and prosperity, as Concord became the gateway to northern New England. Along Main Street three and four-story brick buildings emerged, housing stores, businesses, hotels, theaters, meeting halls and housing units. The architectural richness of downtown Concord is frequently cited by visitors today as a major drawing point.

BACKGROUND & CONTEXT

Everything evolves. The buildings, businesses and roadway have all changed over time.

First, horse drawn wagons were the mainstay on Main Street.

Then, trolley cars and early automobiles shared the road.

In the last half century, the focus shifted entirely to cars.

Throughout the 19th and early 20th centuries, Concord supported a tremendous variety of manufacturing enterprises, whose products were shipped worldwide and whose diversity sustained the community over the years. Musical instrument production, furniture-making, printing, carriage manufacturing (led by the famed Abbot-Downing Company), harness and axle production, and granite quarrying numbered among the more prolific industries. In more recent years, insurance, state government and health care have been major employers. Many of these businesses have helped to shape downtown.

PROCESS

The team of Hoyle, Tanner & Associates, Carol R. Johnson Associates, Applied Economic Research and Elizabeth Durfee Hengen was hired to assist with the Re-Thinking Main Street Project. The team explored the feasibility of viable design concepts developed from previous studies; developed additional design concepts; undertook an economic analysis that included focus groups, intercept surveys, case studies and a demographic profile; took the findings and, through an intensive public process, developed a Community Consensus Design. This design will be the catalyst to move this project through to final design, ultimate construction and ultimately renewed investment in downtown.

A thorough investigation and understanding of the economics at play in downtown was essential in translating the traffic, pedestrian, streetscape, and parking design improvement elements into the language of tax base expansion, improved retail sales, enhanced business climate and public/private reinvestment and development. A thorough understanding of those economics helped guide the Hoyle, Tanner team in refining input from the public with regard to the streetscape, balanced against the goal of enhanced economic vitality. At each juncture, the team asked and answered the following thought: would the reconfigured streetscape have the potential to negatively impact the economic viability of downtown? If it did, the design was deemed infeasible and the concept was eliminated from further exploration.

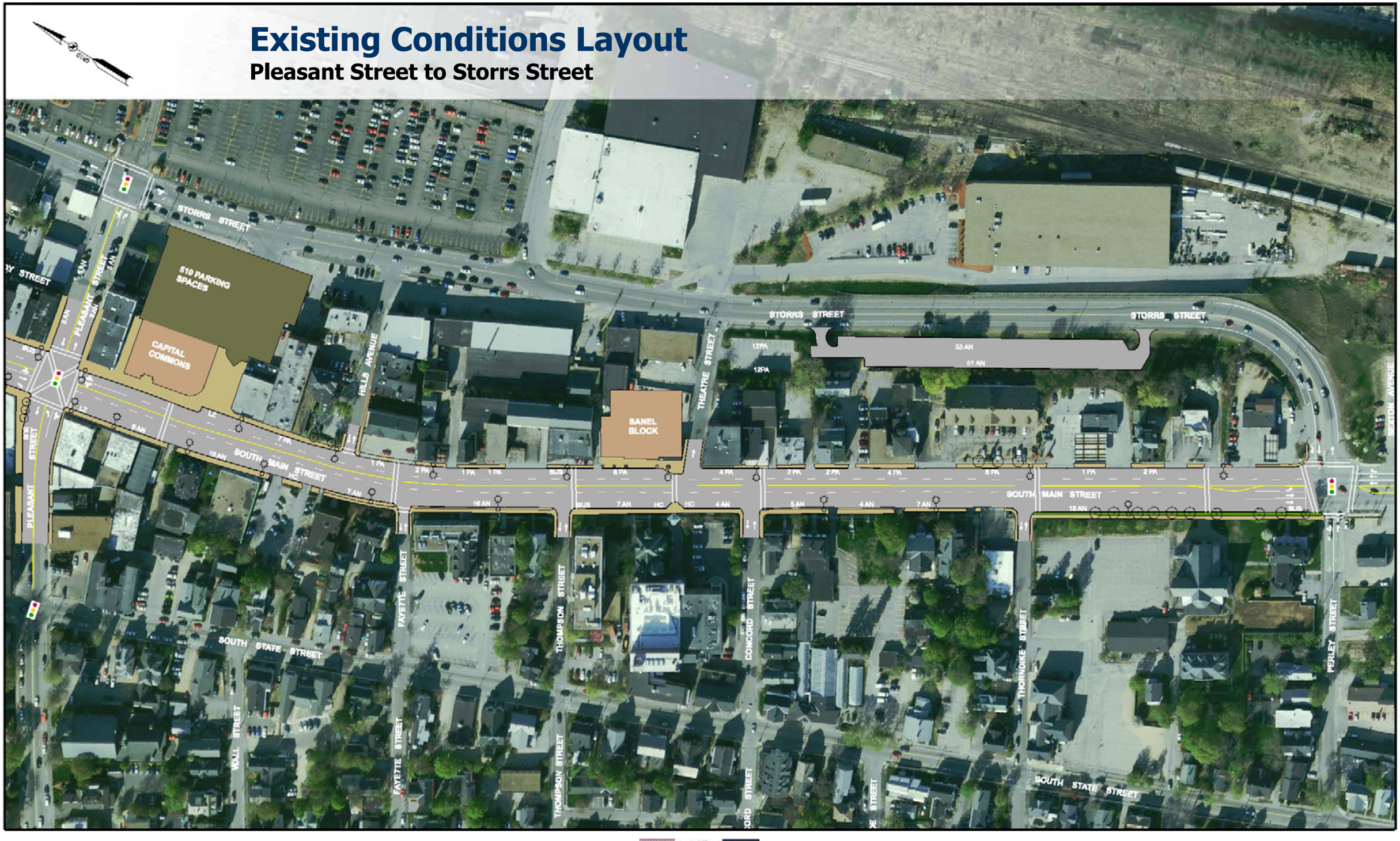
Throughout, Main Street was envisioned as a "complete street" in keeping with Concord's Transportation Policy; one where needs of all users were considered and brought into balance. Drivers, pedestrians, cyclists and transit users were accommodated in roughly equal measures in a safe and inviting manner. The Hoyle, Tanner team sought to create a Main Street that balances all modes of transportation.

Existing Conditions Layout

Centre Street to Pleasant Street

Existing Conditions Layout

Pleasant Street to Storrs Street



SECTION III

Community Involvement

COMMUNITY INVOLVEMENT

Over the course of eleven months, more than 1,000 people participated in Re-Thinking Main Street.

Residents, retailers and other community stakeholders think about Main Street.

Discussions started with the Hoyle Tanner Team presenting six different potential configurations for Main Street.

Through a series of revisions and refinements the Community Consensus Design emerged.

The two most important components of the Re-Thinking Main Street project were the public outreach related to the streetscape and the economic study and analysis. It was critical that these two components be advanced concurrently as they both involved participation and consensus building with residents, retailers, building owners, visitors, local officials and other involved stakeholders. For this project to be truly successful, the Community Consensus Design must be integral with and driven by these components.

Extensive public outreach allowed maximum participation in an interactive and informative way. As a result, over 1,000 people took part in the process. Initial outreach began in February, 2010 when Concord 2020 and Main Street Concord, Inc. presented preliminary informational sessions at the Red River Theatres; Capital Sunrise, Concord and Bow Rotary Clubs; Greater Concord Chamber of Commerce – Local Government Affairs Committee; Centennial Senior Center; Havenwood Heritage Heights; Concord High PTSO; Concord Young Professionals Network; City of Nashua–Economic Development Director; and the Merchants Roundtable.

Members of the Hoyle Tanner team, as well as representatives from Concord 2020 and Main Street Concord, Inc., conducted the first public meeting on June 30, 2010. They spent three days at Market Days and conducted the second public meeting on September 21, 2010. After completing nearly 300 intercept surveys and holding focus groups with more than 75 participants representing a wide range of downtown users – professional services, merchants, energy/environment, property owners/realtors, residents /patrons, and restaurant owners – to gather input for the economic analysis; presented to the City of Concord Economic Development Advisory Committee; presented to HEAL – Healthy Eating Active Living and the NHTI- Architectural Design Technology Class; they held the third public meeting on November 3, 2010. They also made presentations to the City of Concord and four subsequent meetings were held with the Merchants Roundtable to hear and answer questions relative to the Community Consensus Design.

Additional outreach through media outlets resulted in extensive coverage in the *Concord Monitor*, including an interview and formal presentation to the editorial board; an interview and article in both *Hippo Press* and *Union Leader*; a coffee chat on WKXL; airing of presentations on Concord TV - Around Town with Dick Patten; and a WMUR television interview. Together, Main Street Concord, Inc. and Concord 2020 also ran a comprehensive ad campaign.

FORMAL PUBLIC PROCESS:

Public Meeting #1
Holiday Inn, Concord

On June 30, 2010, the Hoyle Tanner team presented an overview of the process that would be used going forward in order to develop a Community Consensus Design. The team objectively presented the pros and cons of several design concepts including maintaining the existing 4-lane

The Re-Thinking Main Street Task Force carried the conversation out into the community. Among the places visited:

A small but involved group joined us at the Centennial Senior Center. The Re-Thinking Main Street Task Force also went to Havenwood Heritage Heights and included Pleasant View Retirement in the Focus Group sessions.

The Merchants Roundtable hosted presentations of Re-Thinking Main Street in June and October.

The team visited the Capital City Sunrise Rotary, Concord Rotary and Bow Rotary.

configuration; a 3-lane configuration that included various parking arrangements; and a 2-lane configuration with raised medians. Each preliminary design concept discussed the following:

- Associated traffic scenarios
- Traffic patterns
- Vehicular capacity
- Signalization
- Lane usage
- Parking
- Sidewalk widths
- Pedestrian crossings
- Streetscape
- Universal accessibility and access issues
- Vehicular and pedestrian circulation
- Utility impacts
- Opportunities to highlight and incorporate Concord's unique history

The team also outlined the process for a four-pronged economic analysis:

- Perform a Market Analysis of potentials in retail, service, office and residential markets
- Conduct Focus Group Interviews with stakeholders and Intercept Surveys with customers
- Conduct Case Study investigation of Keene and Manchester
- Integrate economic elements with the physical concept plans

Economic Analysis also identified the market area and presented characteristics such as population, population change and income (spending growth).

At every opportunity comments and general input was solicited and gathered from the public relative to the ideas presented.

Market Days

On July 15-17, 2010 members of the Hoyle, Tanner team, with assistance from the Re-Thinking Main Street Task Force volunteers, presented the three design concepts developed for the first public meeting, as well as a new concept design that evolved from the input received during the June 30th meeting. The new concept was a 3-lane configuration with the centerline adjusted to allow the sidewalks on each side of Main Street to be of equal width. Our team held one-on-one discussions with attendees of the event to gather additional feedback on existing conditions compared to the several new design concept ideas.

Results of Public Input Received at Market Days	
Three Lanes/Major Improvements	51.6%
No Change	12.7%
Major Improvements	11.8%
Four Lanes/Upgrade Streetscape/Minor Improvement	10.3%

With Main Street closed to traffic, patrons at Market Days & Summer Music Festival were able to participate in an on-the-street "test" of comfortable sidewalk widths.

The existing sidewalk width on the east side of Main Street was thought to be too narrow.

When the sidewalks were as wide as 22-feet, the distance from the building felt too big. Also, people were not in favor of Main Street changing to parallel parking.

Symmetry of sidewalk widths and preserving angled parking proved most important to people.

The results above were based on comment cards and discussions with the public. Although the comment card included a check box to indicate the number of lanes preferred (4-3-2-other). A majority of the people were not concerned with the number of lanes and did not check any box; rather they wrote in their preference for major or minor improvements to downtown. Based on this input, the phrase "*major improvements*" came to define a 3-lane configuration and extensive sidewalk improvements including widening. "*Minor improvement*" was defined as maintaining the existing 4-lane configuration but updating the streetscape without widening sidewalks.

Based on the above results and direction from the Task Force, our team advanced the development of three design concepts: *major improvements*, *minor improvements* and *no change*.

Intercept Surveys

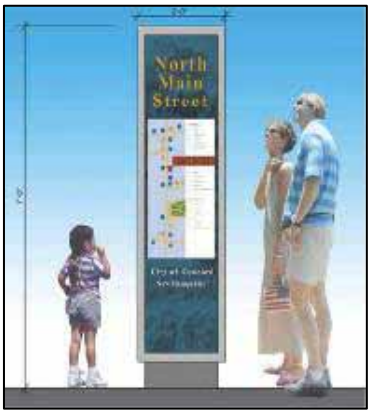
As part of the public process, Russ Thibeault of Applied Economics Research and representatives from Concord 2020 and Main Street Concord, Inc. conducted surveys and interviews with downtown patrons to reveal the district's strengths and weaknesses.

The survey was designed to "intercept" people as they moved throughout Concord's downtown. Intercept surveys are beneficial for a number of reasons but for the purposes of the Re-Thinking Main Street project, it was to capture a snapshot of the typical weekend and weekday visitor. Questions touched on many factors such as household income, visiting habits and frequency of trips to downtown Concord. The intent was to have a one-on-one conversational interview with the visitor. The surveys were performed on August 7 and August 12, 2010 by members of the Re-Thinking Main Street Task Force. From the survey we learned that it was important to: strengthen ties to the student population at area colleges; downtown vacancies are an issue; store hours during the week and on Sundays should be expanded; public restrooms need to be better signed and increased in number; improvements are needed to attract and accommodate senior citizens; universal accessibility throughout the district is paramount. ***(See Appendix A – Intercept Survey Data for further detail)***

Focus Groups Interviews

Economist Russ Thibeault led a series of group interviews on August 30, August 31 and September 3, 2010. Focus group participants represented professional services, merchants, energy/environment, property owners, realtors, residents, patrons, City representatives, restaurant owners and members of Concord's Creative Economy Task Force. Questions were designed to reveal the strengths and weaknesses of the downtown business environment, as well as to solicit reactions to the proposed design concepts. The groups observed that there is a sense that the downtown needs a facelift; downtown has been impacted by the recession; retailing in downtown is fragile; night life is scarce; and there needs to be sufficient parking. ***(See Appendix B – Focus Group Interview Notes for further detail)***

Intercept Surveys showed out-of-town visitors desire easy-to-find information about Concord.



Out-of-town visitors wanted Information Kiosks with a directional map.

Residents wanted Concord's historical significance to be on display. The kiosk could accommodate this need.

Public Meeting #2
Red River Theatres, Concord

On September 21, 2010 the consulting team offered some historical perspective, in order to put the discussion of design concepts and streetscape amenities into context. The team noted that the majority of the buildings along Main Street were erected prior to 1900, others throughout the 1900s, and the new century already saw one completed and another underway. Efforts to upgrade downtown have been a periodic occurrence throughout the years. In the 1950s and '60s, there was what might be called a "reverse restoration" trend. Feeling threatened by the newly opened Capital Shopping Center on Storrs Street, merchants and property owners attempted to modernize store and building fronts on Main Street. They applied metal panels to hide detailing and create smooth, streamlined surfaces. In several instances, upper floors were removed in order to have a one-story shopping experience. Citizens and consultants referred to Main Street buildings as "old brick shells" and "an unsightly canyon." There was even serious discussion about installing a moveable sidewalk to bring shoppers from the shopping center up to Main Street.

While past history is informative and interesting, the team made mention of these activities to illustrate how far today's approaches to downtown revitalization have come. They explained that in developing design concepts to a more refined level, they reviewed what types of street amenities and materials have been used in the past, on the premise that however the final design evolves, it must reflect and be true to Concord's history.

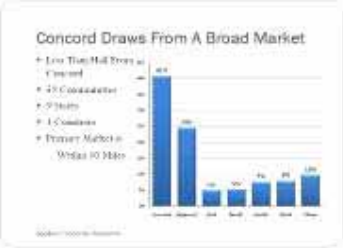
The three working design concepts depicted proposed sidewalk widths, planting scenarios, visual impacts, materials, layout, lighting, amenities, streetscape and street furniture options, medians, parking, intersection design and sustainability considerations with the streetscape.

The second half of the presentation was devoted to the economic analysis and the findings from the surveys, focus groups and Market Days, coupled with market demographics and demand factors.

The resulting analysis found that downtown Concord is healthy as evidenced by:

- Successful organizational framework—Main Street Concord, Inc., Concord 2020 and the City of Concord
- Concentrated worker population
- Retail shops and restaurants are diverse
- Historic fabric is largely intact
- Geographic market is broad
- Cultural destination
- Benefits from abutting residential neighborhoods
- History of innovative investments in downtown
- There is sufficient parking
- Residents appreciate downtown

The economic analysis of downtown Concord took a four pronged approach including a demographic analysis, focus groups, intercept surveys and case study review.



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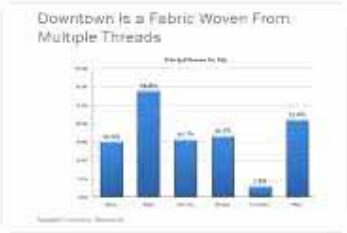


Customers work, shop, dine and utilize the business services in downtown. We could do better to have more people living downtown.

BUT, it is fragile:

- Recession is curtailing retail sales, restaurants are stable
- Regional economy will not grow as fast in the coming years as in prior years
- Despite successful efforts, there are vacant storefronts
- Vacancy rate on upper floors is high
- Housing is limited
- Downtown's streetscape is tired
- There is not much to do downtown after 5:00 pm or on weekends other than restaurants, despite Red River Theatres, Capitol Center for the Arts, City Auditorium, etc.
- Worker population by itself is not enough to support a diverse downtown

Since a goal of this meeting was to obtain community consensus on the presented concepts, participants were asked to vote on their preferred alternative. The results are provided as follows:

Results of Public Input Received at Public Meeting #2	
Major Improvements – 3-Lanes	67.17%
Minor Improvements – 4-Lanes	26.76%
No Change	6.06%

Based on the votes and further direction from the Task Force, the consultant team advanced the Major Improvements – 3-lane concept, including undertaking economic case studies in Manchester and Keene, NH where similar downtown improvements have been completed.

Public Meeting #3
Red River Theatres, Concord
On November 3, 2010 the team presented the Community Consensus Design which is Major Improvements with a 3-Lane configuration. This concept embodied all comments and input received to date relative to engineering issues, traffic, parking, pedestrian circulation, streetscape design, historical interpretations and sidewalk configurations and enhancing economic benefits. Lastly, the economic litmus test; would the reconfigured streetscape have the potential to negatively impact the economic viability of downtown? And the answer was No. It can be a catalyst for continued investment in downtown.

The findings of the economic case studies were also presented. A summary follows:

- Making downtown more pedestrian friendly is a **base-building activity with a positive economic impact**
- Projects of this type enable downtowns *to* **capture spin off economic benefits** of other public and private investments in downtown

Other amenities needed for downtown.

Public Restrooms – it took us by surprise and was voiced most by the elderly.

Shade – Adding trees was hotly debated and scorching summer may have contributed to people requesting more trees.

- Projects of this type **can enhance the downtown investment climate,** especially when combined with other economic enhancements
- Projects of this type are most effective if **undertaken BEFORE downtown collapses**
- Projects of this type are **part of the process** of improving downtown, but are not the whole story
- In both Manchester and Keene, the sentiment is that the **improvements have been helpful and worth undertaking**
- **Dedicated maintenance staff** is critical to the continuing viability of the stimulative effects

Merchants Round Table Meetings

Although many downtown merchants participated in the process that created the Community Consensus Design, some had additional concerns. In general, most merchants agree improvements need to be made to Main Street. With regard to Major Improvements and the 3-lane concept, questions remained relative to parking, construction and empirical data that the project would have a positive impact on their retail businesses. These concerns were voiced at the Public Meeting on November 3rd.

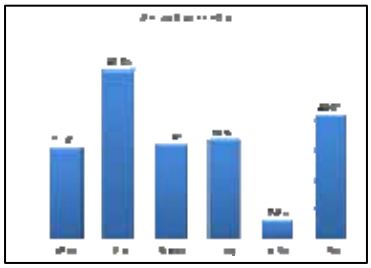
In follow up, the Re-Thinking Main Street Task Force compiled twelve different studies with subjects related to economic impacts of streetscape improvements, lane reductions in downtowns, etc. On November 30, 2010, representatives from Concord 2020, Main Street Concord, Inc. and the consultant team attended morning and evening meetings to present additional data, answer questions and further listen to merchants' concerns. Then January 26, 2011 a small group of stakeholders took an investigative fieldtrip to Littleton, New Hampshire. The town had recently completed a major streetscape improvement plan in their downtown. A follow up meeting with the Merchants Round Table was held February 22, 2011. The results of these meetings and supplementary outreach to the merchant stakeholders will be presented in an additional report.

SECTION IV

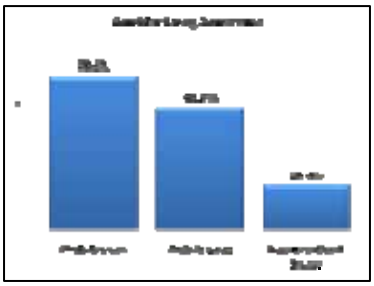
Economic Assessment

ECONOMIC ASSESSMENT

Downtown is a fabric woven of multiple threads.



Patrons of downtown come here to work, shop, dine, and to visit professional services. Options for living downtown are limited.



During our Intercept Survey many reported they would consider living downtown.

Market Area Population has grown. In 2009, there were over 90,000 people within a 10-mile radius. This is estimated to increase to more than 93,500 by 2014.

The purposes of the economic analysis were to:

- Identify the current economic health of downtown Concord;
- Analyze emerging market conditions; and
- Comment on the economic impact of improving the pedestrian environment in downtown Concord, including the possibility of widening sidewalks, increased plantings, increased pedestrian amenities (benches, etc.).

GENERAL PERCEPTIONS

Upon completing this analysis we are convinced that **downtown needs a major facelift to retain and enhance its market presence**. We conclude that **undertaking the Community Consensus Design Concept outlined in this report will result in a more prosperous retail and investment environment.**

Put into perspective, if downtown properties were to lose 10% of their value, a very real prospect if current trends continue, the resulting loss in revenues to the city would be over $1 million annually. Conversely, if values were to rise by a similar amount, which seemed uncovered in our case study communities, the entire streetscape improvement program would be easily justified, even in the absence of federal grants.

Applied Economic Resources (AER) also studied downtown Concord when the introduction of the Steeplegate Mall and other retailing on the Heights threatened downtown. At that time, we surmised downtown had enough strength to weather the storm, a conclusion that has proven to be accurate. Today, some thirty years later, however, a tired streetscape, combined with slower economic growth going forward, rising vacancies and much more pronounced competition lead us to another conclusion—**that downtown needs to be improved if it is to compete effectively for the next thirty years.**

Concord is the last major downtown in New Hampshire to make a major investment in its pedestrian environment. The experience of other New Hampshire downtowns undertaking similar improvement programs (including our case study communities of Keene and Manchester) has been positive—vacancies have declined, a more diverse mix of shops and restaurants has emerged and substantial new private investment has been experienced. If Concord undertakes the Community Consensus Design, or a close variant thereof, similarly positive economic benefits can be expected. If it chooses to not undertake major pedestrian improvements, its ability to achieve its economic goals of a more vibrant retailing environment and reduced upper floor vacancies will be very difficult to achieve.

Initially AER questioned the economic prudence of a major pedestrian improvement program in Concord. As we researched downtown's economic performance, weaknesses were revealed; downtown was not as healthy as we initially perceived:

- Existing retailers are struggling.

The Re-Thinking Main Street Task Force selected Keene and Manchester as for community case studies.

Keene was renowned as having the "widest Main Street in America – if not the world."

The team measured the economic health of Keene some 30-years after the streetscape improvements and the results were striking. First floor vacancies are virtually non-existent at less than 1%.

Keene's captive market is the students at Keene State College. Yet, Concord has its own captive market in the form of 15,000 workers within a mile of downtown.

- First floor vacancies are rising, partly due to the current national recession, but possibly also due to more fundamental weaknesses. Rising vacancies are apparent in a quantitative inventory and also of concern to our focus group interviewees.
- Second floor office vacancies in existing buildings are rising and the economics of *upgrading* upper floor space in existing buildings are unfavorable.
- Concord's market will not grow as fast in the coming years as in the past - national economic forecasts envision slower growth and state government (Concord's core economic engine) faces extreme budgetary pressures.
- Because of this slower growth, downtown retailers will face a more challenging environment because its retail pie will not expand as fast as in the past.
- Downtown has a weak night-time scene, according to our focus group interviewees, blunting its appeal to younger residents.
- There are virtually no decent quality residential units in downtown.
- The assessed value of downtown has declined in recent years, according to studies by the City's assessment department.

We concluded that downtown did have many healthy elements (highly concentrated captive worker market, strong community support, cultural venues, new office building construction, viable restaurants, close-in middle class neighborhoods, etc.), but that it was vulnerable. It is not as healthy as in recent years and its future health is not secure.

The two case studies we conducted were informative. In Keene, the results were striking from both a sense of downtown's ambiance and its economic performance. It is true that there are major differences between Keene and Concord. Keene is the home to Keene State College, whose campus adjoins downtown. This provides a captive market for the downtown. Yet, Concord has its own (and more affluent) captive market in the form of 15,000 workers within a mile of downtown, with most clustered densely around the State Capitol in downtown. Our interviewees in Keene indicated that downtown activity was most intense during the summer, when students were away, downplaying the significance of the student market to downtown.

Like Concord, Keene narrowed its Main Street, previously billed as the "Widest Main Street in the World". In doing so it lost parking along Main Street, as may be the case in Concord. Yet, the improved pedestrian environment has yielded success that more than offsets these factors and that parallel what Concord hopes for:

- First floor vacancies are virtually nonexistent measuring less than 1%.
- Upper floor space is actively utilized.
- New high-end housing ($400,000) plus is being built in downtown.

Downtown Manchester remade itself into the financial center of New Hampshire in the 80s and 90s only to see the state's five leading banks come to their demise. It devastated their downtown.

Before the road diet, Manchester was four travel lanes with parallel parking on both sides.

Streetscape improvements were begun in 1996 after downtown was severely distressed.

Today, Manchester views the street improvements as a success. Streetscape allowed downtown to capture benefits of Verizon Center, Fisher Cat Stadium, retain Art Institute. It created nightlife.

- There has been $50 million in new investment completed/ programmed in downtown, generating over $1 million in new tax revenues yearly.
- Downtown has an active nightlife.
- Retailers/restaurants are diverse and the shops show high levels of tenant improvements. Hours of operation are consistent with neighboring businesses and include evening hours and weekends, including Sundays.

The stakeholders in downtown Keene value their balanced downtown and the clear consensus is that the improvements have been a major success, supporting a downtown that is economically healthy and a valued social/economic center for the community and greater region.

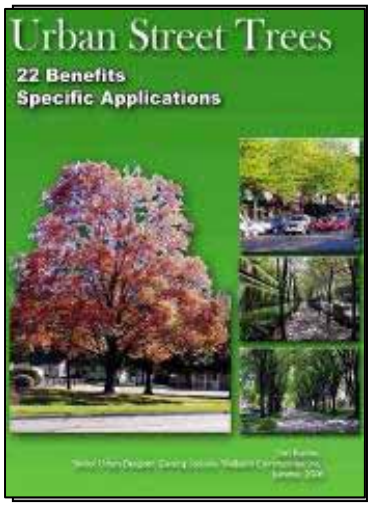
The results of pedestrian improvements in Manchester were also successful. At the time improvements were started on Elm Street, downtown Manchester in the words of one of our participants "was a dustbowl". Today, downtown Manchester has attracted new retailing, a particularly strong mix of new restaurants and expanded cultural offerings anchored by the Palace Theater, an expanded Currier Museum of Art, an expanded NH Institute of Art, the Verizon Center and Merchants baseball field. Most recently downtown captured the $130 million Elliot Hospital Acute Care facility.

Downtown Concord represents a critical aspect of the City and region's economy, with over 15,000 jobs within a mile of downtown and nearly $500 million in assessed value. It is the cultural and economic center of the community.

Many elements to the Community Consensus Design evolved during this study in such a way as to maximize the economic benefits while minimizing, to the greatest extent possible, economic concerns that arose during our research:

- There will be a six month trial period utilizing temporary lane and parking configurations. This will help merchants, shoppers and downtown professionals test the consultants' recommendations.
- The Community Consensus Design will create a less stressful parking experience for people by reconfiguring the parking spaces.
- Creating a safer, more pedestrian friendly environment will encourage longer stays in downtown. The residual affect is that shoppers will be more inclined to visit more retailers.
- A key element in successful downtowns is restaurants. Proposed wider sidewalks provide an opportunity for restaurants to increase their seating and offer a new dining environment. This will lend itself to a more visible nightlife in downtown.
- The possibility of heating the sidewalks appeals strongly to ground floor businesses and property owners. If implemented it would have strong appeal for shoppers concerned about slips, trips and falls. Potential cost savings on snow maintenance has added benefit to the city.

Streetscape elements directly relate to economic development. For a planting cost of $250 - $600 a single tree returns over $90,000 of direct benefits.



The competitive edge for Main Street…businesses on tree-lined streets show a 12% higher income stream.

Realtors report - streets lined with trees have an increased property and business value of $15 - $25,000 per property or business.

Shaded roadways add 40 to 60% more life to costly asphalt.

- Additional trees and plantings have an almost instant calming effect on consumers. This was very evident in Keene. Once you step onto the sidewalk the noise of the traffic is diminished and attention can be directed at the business. This is not so in Concord. Walking down the sidewalk here you can feel the vibration of the trucks and the whoosh as they drive by. It forces you to turn away from the stores.

ECONOMIC HEALTH TODAY

Downtown Concord is important to the entire City and the region's economic well-being. There are seven million square feet of taxable real estate in the downtown study area. The total taxable (excluding state and local government) assessed value in the study area is just under $500 million, generating nearly $11.5 million annually in property tax revenues. There are 15,000 public and private sector jobs within a one mile radius of downtown, rendering it the City's primary job base and there are numerous residences within walking distance of downtown. It is an important, diverse economic element that the City cannot afford to have decline.

Moreover, as interviewees in our case study communities noted:

"The downtown streetscape is critical. It powerfully influences the psychology of the community and confidence of the business community. It sends a profound message about how you feel about your community."

"Revitalizing Main Street was the best investment the City has made."

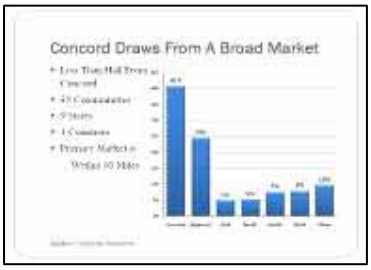
The fundamental finding of this analysis is that downtown Concord today is healthy, but fragile. Without a major facelift, downtown is likely to lose market share and runs the risk of suffering the kind of decline downtowns have experienced throughout the State and Nation. The market downtown Concord serves will grow over the next ten years, however at a much slower pace than the previous decade. This expected growth will provide some support for a more vibrant downtown, but only if the City invests in more attractive streetscape.

The positive elements of the current market environment are substantial and include:

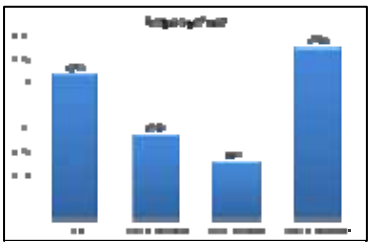
- Management of the downtown scene is well coordinated via the City, Main Street Concord and Concord 2020. This is a critical element common to essentially all successful downtowns.
- Concord serves a broad and densely populated market—nearly 500,000 people live within 25 miles of downtown Concord.
- Concord's market is affluent and growing, adding an average of $360 million in income annually during the 2000-2009 period.
- About 15,000 people work within one mile of downtown, providing ready access to a captive daytime market population.

ECONOMIC ASSESSMENT

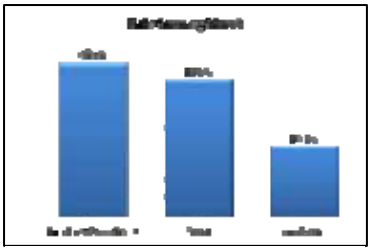
The economic analysis of downtown Concord took a four pronged approach including a demographic analysis, focus groups, intercept surveys and case study review.



Intercept Surveys showed patrons of the downtown businesses hailed from 59 different communities.



Fifty percent of the people surveyed come to Concord more than once a week.



The experience of crossing the street was met with mixed results.

- Private sector is investing in downtown as evidenced by Capital Commons, Sanel Block and CATCH projects.
- Worker population base in private industry is growing due to the favorable investment climate in downtown, witness Capital Commons and the Sanel Block revitalization. Counter to this is loss in public sector workers employed by the State of NH.
- Cultural facilities have replaced department stores as anchors to downtown activities in many communities. Concord is well-endowed by the Capital Center for the Arts, Red River Theatres, the City Auditorium, State museums, etc.
- Unlike the case in many communities, Concord's close-in residential neighborhoods are solidly middle and upper income settings.
- Overall, downtown Concord has enough parking, although on-street parking is viewed by some as barely adequate.
- There is a diversity of shops and services available in downtown. Main Street Concord's inventory reveals over 200 establishments (based mostly in first floor space) in nearly 30 different retail store and service categories.
- Restaurants in downtown are performing well, overall.
- Concord residents appreciate their downtown and have, over the years, supported new investments (Firehouse Block, Bicentennial Square, Capital Plaza, Eagles Square, Capitol Center for the Arts, Red River Theatres, etc.)
- Downtown has attracted significant new private office building investment including Capital Commons and the Sanel Block renovations, for example), which will add to the daytime worker population in downtown.

The fragile elements uncovered during our analysis include:

- Vacancies are rising among storefronts, despite new merchants moving into once vacant spaces.
- The current recession is severe, has taken a toll on current merchants and is unlikely to be reversed quickly.
- Projections indicate that economic growth in the market area will be significantly slower in the coming years than in the recent past, resulting in more intense competition for retail sales.
- Upper floor space was underused when the recession began, and the difficulties of filling upper floor space have increased during the recession.
- Merchants attending the focus group sessions indicate current market conditions are delicate.
- Although a significant amount of new office space has been constructed or is underway, there has not yet been a notable rehabilitation of residential space in downtown suitable for middle and upper income households.
- Respondents to the intercept survey and some attendees at the focus group interviews expressed a view that there is not enough to do in downtown after 5:30 PM.

During the Intercept Surveys, consumers shared what they liked most about the downtown.

Like Best

- Convenience
- Individual/Mix of Stores
- Historic Atmosphere

- If downtown properties were to lose 10% of their value (a very real prospect if current trends continue), the resulting loss in revenues to the city would be over $1 million annually. Conversely, if values were to rise by a similar amount, (as was revealed in our case study communities) the entire streetscape improvement program would be easily justified, even in the absence of federal grants.

ECONOMIC OUTLOOK

Our overall sense is that downtown Concord is losing ground to the extensive concentration of retail space along Loudon Road on the Heights and is not optimizing its market opportunities, particularly for retail and residential segments of the market. The emerging market environment will be more challenging than that faced by downtown in recent decades. Our concern is that downtown Concord's market appeal will erode unless significant steps are taken to improve its market performance. Downtown has a captive worker market that can support some, but not all of the activities and shops needed to make a downtown healthy—witness the experience of Manchester, which saw its downtown decimated in the 1980s and 1990s, despite a highly concentrated workforce in downtown and the adjacent Amoskeag Millyard.

Downtown Concord has some very strong *threads*, in the form of a captive worker population, cultural centers, healthy nearby residential neighborhoods, etc. But it is the *fabric* of diverse activities that underlies the health and prosperity of a downtown. In the case of Concord, the retail and residential constituents are not performing well and upper floor vacancies are high and rising.

We conducted case studies in downtown Manchester and Keene and the resulting evidence is clear: improving the pedestrian environment has a positive effect on the downtown economy, on retailing and on the level of private investment and tax base. In the case of Manchester, traffic was reduced from four lanes to three, as is being discussed in Concord. In Keene, once the seat of the "Widest Main Street in the World", on-street parking was reduced in favor of wider walkways. In both cases, these improvements are seen as a success and observers are pleased with new investments and vitality the improved pedestrian environment has wrought.

Both case studies also demonstrate that the return on investment is significantly greater and more quickly achieved if pedestrian improvements are undertaken before the downtown fabric is severely ripped. Once a downtown loses the critical mass needed to draw shoppers and visitors, it is very difficult to recapture their attention. Concord is approaching that point.

Concord is one of the few, if not the only, major NH downtowns to not undertake a major streetscape improvement program. Our analysis indicates now is the time for Concord to move forward with a major

Customers also shared what they liked least about the downtown.

Like Least

- Parking
- Vacant Storefronts
- Lack of Nightlife

renovation of its now tired streetscape and to improve its pedestrian environment. Such a renovation is not speculative, but rather a proven way to enhance the downtown economy and investment climate.

The downtown office market is generally healthy today although upper floor space in older buildings is struggling. Our analysis reveals that the emerging retail market environment, while expanding slower than in recent years, will nonetheless provide the raw material, in the form of growing spending, for downtown to prosper. Spending by residents living within 10 miles of downtown on the types of merchandise typically found in downtown shops is expected to grow from $368 million (2010) to $398 million (2015). We estimate that downtown Concord is capturing less than its fair share of this market, in the face of suburban competition that has grown markedly during the past 15 years.

We are concerned that if downtown Concord does not follow the lead of essentially every other downtown in New Hampshire by improving the pedestrian environment, then it will not only fail to capture its share of this growth, but will actually experience declining sales levels, which result in lower occupancy and rent levels—generating fewer jobs and a lower tax base.

The weak elements of the downtown investment environment today include first floor retailing, lack of middle and upper income housing, and underutilized upper floor space. In a suburban setting, these uses rely almost exclusively on auto traffic and convenient parking. In a downtown setting, these elements rely on an attractive pedestrian environment. Newbury Street in Boston and downtown Portsmouth have very difficult parking conditions—far more difficult than those in downtown Concord today. Yet, retailers in those settings far outperform those in Concord and the residential market is strong. This is because they are attractive enough to keep downtown shoppers going from shop to shop and offset the disadvantages of living downtown with a pleasant environment. They strive to get people out of their cars into downtown shops and utilizing downtown services.

The math behind this concept is illusive, but can be illustrated. For example, if the downtown environment were attractive enough to convince each worker to spend an additional $7.50 per day—about the cost of a take-out sandwich, beverage and chips - downtown retailers would enjoy an additional $28 million in sales, enough to support 30 or more downtown businesses.

This isn't the whole picture but it illustrates how a small incremental increase in per capita spending can have a significant impact when spread across a large population base. The thrust of downtown revitalization is to get people already in the market area to spend more time and more money in downtown.

Prime spaces along Main Street are in demand; they provide parking for a wide range of users.

Merchants shared concerned that the loss of even one parking space will negatively impact their business.

Customers shared their frustration about backing into traffic especially when parked next to long bed trucks, SUVs and mini vans.

It is possible that a modest amount of on-street parking may be lost, depending on the final design of the pedestrian improvements. Downtown merchants have expressed concern that the loss even a few parking spaces would be devastating. This concern however would carry more weight if:

- Every parking space in downtown was occupied by a shopper. This is not the case. During our evaluation one third of the weekday intercept survey respondents who were occupying on-street parking spaces were actually visitors to government offices and private sector services such as law firms. Unfortunately, our observations also revealed some on-street spaces were occupied by downtown employees.
- The experience of other downtowns, including Manchester and Keene, indicated that pedestrian improvements, even at the cost of a narrower street or fewer parking spaces did not work out. This is not the case. In fact all communities that have undertaken the traffic calming and pedestrian improvements under consideration in Concord have found those improvements to have a beneficial impact on downtown retailing and the broader investment climate.
- Downtown parking today was functioning at capacity, such that the loss of spaces meant a proportional loss in visitors. In fact, the inventory includes 860 on-street metered/kiosk spaces and 1,200 spaces in garages. The City's ad hoc parking committee found that the typical metered space was occupied for an average of only 3.5 hours on weekdays. Prime spaces along Main Street are in demand, but as noted, they provide parking for a wide range of users, not just shoppers.

SECTION V

Implementation Strategies-Economics

IMPLEMENTATION STRATEGIES - ECONOMICS

Strengthen ties to the area colleges.

UNIVERSITY of NEW HAMPSHIRE SCHOOL of LAW

UNH Law is less than a mile from Main Street.

NHTI Concord's Community College

NHTI is 1.8 miles from downtown.

Hesser College

Hesser College sits a mere two and a half miles from the downtown core.

The primary recommendation is for the City of Concord to seek out funding for improvements to downtown. Although overall Concord is healthy, economic analysis revealed vulnerability among downtown's retail stores and upper story businesses. There are a number of opportunities for the Re-Thinking Main Street Task Force to work with various downtown stakeholders to fortify the district. These include:

- Encouraging greater patronizing of downtown businesses to the existing 15,000 workers within a one-mile radius of downtown. Even small increases in customer spending will have tremendous benefits to the business community.
- Strengthening ties to the student population at the area colleges. According to the National Center for Educational Statistics, today's college students have "a tremendous amount of disposable income" that is virtually untapped in the downtown business environment.
- Developing a new Gap Identification Survey coupled with a strong business recruitment effort to reduce downtown vacancies. Concord's history of success with this tool indicates these measures will benefit the district greatly.
- Working with property owners to develop incentive programs for new and existing businesses. Focus Group sessions revealed businesses are shopping around for better leases in order to reduce overhead. This can be stemmed now with cooperation and ingenuity.
- Expanding store hours and Sunday hours. These were most desired by patrons during the Intercept Surveys. Focus Group sessions showed the businesses that are capitalizing on every market potential, including expanded hours, were seeing quicker recovering sales figures.
- Developing a city-wide marketing campaign aimed directly at entrepreneurs to promote the benefits of doing business in Concord.
- Developing a marketing campaign aimed at capitalizing on state tourism.
- Recognizing that the streetscape is only one portion of a much greater effort to revitalize downtown. Continued efforts on upper-story development, particularly creating a balance of housing options are also vital. The streetscape effort should be considered a base-building activity.
- Being aggressive in seeking opportunities to capture spin off economic benefits of other public and private investments in downtown. Let positive improvements, such as the Duprey Project and Menino Place project generate more positive improvements. Build on these projects.
- Investigating use of the parking spaces for expanded outdoor seating during the warm weather months. The restaurants are already performing well. Give them opportunities to succeed more, bringing more people into downtown. As shown in the Intercept Surveys, people want more outdoor café seating. Even if allowing use of parking spaces on the weekends only.

IMPLEMENTATION STRATEGIES - ECONOMICS

Concluding thoughts: Sooner rather than later. Once a downtown loses its critical mass, it is very difficult to recapture their attention

The National Association of Realtors dedicated their entire Winter 2010-2011 publication to how Placemaking and Economic Development work together

Downtown Concord is important to the entire City and the region's economic well-being. There are seven million square feet of taxable real estate in the downtown study area. The total taxable (excluding state and local government) assessed value in the study area is just under $500 million, generating nearly $11.5 million annually in property tax revenues. There are 15,000 public and private sector jobs within a one mile radius of downtown, rendering it the City's primary job base and there are numerous residences within walking distance of downtown. It is an important, diverse economic engine that the City cannot afford to have decline.

Concluding thought - sooner rather than later. Concord's market has vulnerability and once a downtown loses the critical mass needed to draw shoppers and visitors, it is very difficult to recapture their attention. Concord is approaching that point. Concern is mounting that if downtown Concord does not follow the lead of essentially every other downtown in New Hampshire by improving the pedestrian environment, then it will not only fail to capture its share of this growth, but will actually experience declining sales levels, which result in lower occupancy and rent levels—fewer jobs and a lower tax base.

SECTION VI

Community Consensus Design

COMMUNITY CONSENSUS DESIGN

With Economic Development as the goal, the Hoyle Tanner Team presented all feasible roadway configurations that would not negatively impacted the economy of downtown.

Option 0: Leave things as they are with existing lane configuration and sidewalk widths.

Option 1: Offered three lanes of travel with angled parking preserved on both sides. Sidewalk widths 12' and 17', east side to west.

The Community Consensus Design resulted from a comprehensive, inclusive public process and an in-depth economic analysis. As the Hoyle Tanner team developed and evaluated concepts, the viability of each was measured in terms of these objectives:

- Improve the universal accessibility of the pedestrian environment.
- Improve visibility and accessibility to the businesses.
- Develop aesthetic continuity along the streetscape.
- Improve vehicular movements.
- Provide social gathering way points.
- Incorporate sustainable design elements.
- Minimize impacts of construction.
- Demonstrate implementation feasibility.

The Community Consensus Design embodied all comments and input received relative to engineering issues, traffic, parking, pedestrian circulation, streetscape design, historical interpretations and sidewalk configurations.

Finally, the resulting design passed the economic litmus test. The Hoyle Tanner team concludes undertaking the Community Consensus Design will result in a more prosperous retail and investment environment. Further, improvements to the downtown streetscape would serve be the catalyst for continued investment in downtown.

The public process yielded community consensus on a number of desired outcomes:

- Preserve as much parking as possible.
- "I want to park safely." Many people shared concern about the mechanics of pulling in and out of the current parking spaces along Main Street. Common phrases were "difficult," "scary" and "stressful"
- "Make the sidewalks the same on both sides." Symmetry was important to people and they recognized the narrowness and condition of Main Street's east side, particularly along South Main Street from Gibson's Bookstore to Storrs Street.

The Community Consensus Design strikes the best balance between vehicular circulation, pedestrian safety improvements, and streetscape opportunities to enhance the economic vitality of the downtown area.

It is envisioned that North Main Street would be reconstructed from Center Street to Pleasant Street, and South Main Street from Pleasant Street to Storrs Street would be milled and overlaid. This would allow the centerline of the reconstructed street to be shifted to the east to balance the sidewalk widths on both sides and provide for added tree plantings.

A stately "Boulevard" feeling about the street would be achievable as the trees mature providing pedestrians with protection from the elements and encouraging them to linger and shop longer. Main Street will feel less like a through transportation corridor, as studies indicate that traffic speeds will

Option 2 and 2A: Offered three lanes of travel with a mix of angled parking and parallel parking. This option was preferred by people with disabilities.

Option 3: Offered three lanes of travel with parallel parking on both sides of Main Street. This option was not favored by patrons specifically because of the high number of lost parking spaces.

Option 3A: This configuration was viewed as the most aesthetic with a planted median down Main Street and received the least public support for two reasons; parallel parking and concern for the historic buildings in the event of a fire.

be reduced, making it safer for all users. The planting of new trees also has economic benefits:

- Businesses on tree-scaped streets show 12% higher income streams. This is often the essential competitive edge needed for main street store success versus competition from plaza discount store prices.
- Added value to adjacent homes, businesses and tax base. Realtor based estimates of street tree versus non street tree comparable streets relate a $15-25,000 increase in home or business value. This often adds to the tax base and operations budgets of a city allowing for an income stream which will cover expenses related to street maintenance.
- Longer pavement life. Studies conducted in a variety of California environments show that the shade of urban street trees can add 40-60% more life to costly asphalt. This factor is based on reduced daily heating and cooling (expansion/ contraction) of asphalt. As peak oil pricing increases roadway overlays, this will become a significant cost reduction to maintaining a more affordable roadway system.

More spacious sidewalks will permit the installation of more benches, planters, way finding signs and historical markers, trash receptacles, and other street furnishings without obstructing the majority of the sidewalk which is reserved for pedestrian travel. The addition of benches will provide pedestrians with opportunities to rest between store visits and create gathering spaces where people can meet with friends or sit and enjoy locally purchased food.

The reconstructed street will enable the existing double step curb on the west side to be eliminated and replaced with a normal single curb. It will also permit accessible pedestrian ramps to be installed at every street corner, thus resolving the existing and very serious safety deficiency. The universal access benefits of this change are enormous for all people using downtown.

More pedestrian space and more space for infrastructure features, such as signal poles and signs, will be provided at every major street corner. The comfort level, visual quality and number of pedestrian amenities on the sidewalks will be greatly enhanced, making downtown a much more attractive and safe place to shop, work, visit and stroll.

New street lighting and paving for the all sidewalks throughout the project area are two proposed features that will give the downtown area a large measure of consistency, a quality much lacking today. If well conceived and designed, these vertical and horizontal features can add a "signature" feeling that gives the state capital's Main Street its own identity.

Throughout, Main Street was envisioned as a "complete street" in keeping with Concord's Transportation Policy where the needs of all users were

The Community Consensus Design evolved out of input from the general public. It was refined through input from downtown stakeholders.

Interestingly, no one under 18 years old selected anything other than the Community Consensus Design.

considered and brought into balance: drivers, pedestrians, cyclists and public transit users. The Hoyle Tanner team sought to create a Main Street that was designed for all constituents: shoppers, workers, visitors, strollers, residents, merchants, diners, service and emergency personnel, and culture seekers.

Bicycles are a missing but vital element to the balance among modes of travel in the Community Consensus Design. Instead, inexperienced cyclists should travel Storrs Street, accessing Main Street via the side streets, is preferred. Skilled riders should simply "take the lane".

Today's parking configuration and movements make the roadway unsafe for the novice rider. Communities around the country are turning parking around by instituting back in angle. For Concord, this is an old concept as back in angle parking was used during the 1920s. Beyond safety benefits for cyclists, other pluses include: improved visibility when entering traffic on Main Street; loading and unloading from the tailgate occurs on the sidewalk rather than the street; and, children exit vehicles and go directly to the sidewalk instead of the street.

Nothing is more prohibitive to creating a balance of all modes and users in downtown than parking. It is the "gorilla in the room" for Concord. Despite conditions that impede the safety of every pedestrians of downtown, opportunities to remedy deficiencies and protect constituents generate passionate discussion and intense objection from individuals across all stakeholder groups. This response is consistent with past efforts to improve pedestrian safety in downtown. Opposition comes because all solutions to minimize hazardous conditions require a reduction of on-street parking.

Indeed, during peak hours the number of available parking spaces can be limiting, but the anxiety people report when backing into traffic is constant. Adding to this stress is the inability to see around SUVs, minivans and long bed trucks. Some parking spaces are positioned so that motorists back directly into the crosswalks. Existing bump outs position pedestrians behind the line of park cars which contributes to the complaints from people that vehicles do not yield, and vice versa, that pedestrians dart into the roadway.

Without question, on-street parking is extremely important to the economic health of downtown businesses. Today however, parking on Main Street is itself a barrier to prosperity. Although the various stakeholder groups might voice a different perspective on parking in downtown, together the negativity sings like a chorus heard across the city, region and state.

The Community Consensus Design represents the optimal balance of all users. To take full advantage of the opportunity to improve the economic viability of Main Street some parking must be sacrificed on North Main while parking can be added on South Main.

Consistency in the streetscape amenities will help unify the district and tie North Main and South Main together.

Benches

Light posts

Newspaper Boxes

Table 1 depicts these impacts relative to the number of parking spaces. The design is flexible as the size of the proposed visibility enhancement platforms at each crosswalk can be narrowed, thereby regaining some lost parking. The trade off is reduced safety.

One notable observation was the volume of novice cyclists riding on the sidewalks. This is an extremely dangerous condition. For the safety of pedestrians the Hoyle Tanner team recommends stronger enforcement of this violation in downtown.

Table 1: Potential Impacts on Parking Spaces												
Segment		**Existing Conditions**			**Major Sidewalk Improvements**				**Major Sidewalk Improvements ALT (Angled Parking Both Sides on S. Main)**			
		West	**East**		**West**	**East**		**Difference**	**West**	**East**		**Difference**
North Main Street	Loudon / Capitol	14	19		16	11		-6	16	11		-6
	Capitol / School	10	5		7	5		-3	7	5		-3
	School / Warren	25	27		17	22		-13	17	22		-13
	Warren / Pleasant	15	15		6	12		-12	6	12		-12
	Subtotal	**64**	**66**	**130**	**46**	**50**	**96**	**-34**	**46**	**50**	**96**	**-34**
		West	**East**		**West**	**East**		**Difference**	**West**	**East**		**Difference**
South Main Street	Pleasant / Fayette	30	8		21	19		2	21	19		2
	Fayette / Thompson	16	4		15	4		-1	15	4		-1
	Thompson / Theatre	8	6		6	6		-2	6	11		3
	Theatre / Concord	5	4		3	4		-2	3	6		0
	Concord / Thorndike	16	14		17	13		0	17	18		5
	Thorndike / Storrs	18	3		20	4		3	20	6		5
	Subtotal	**93**	**39**	**132**	**82**	**50**	**132**	**0**	**82**	**64**	**146**	**14**
Total				**262**			**228**	**-34**			**242**	**-20****

**** As discussed this number can turn from a total loss of 20 spaces to a net gain of 3 spaces with dimensional changes to the size of the visibility enhancement platforms located at the crosswalks and side streets on North Main Street and adding angled parking on both sides of South Main Street.**

Community Consensus Design-Major Sidewalk Improvements

View Looking South From Capitol Street to Pleasant Street

Pros:

- Maximum number of on-street parking spaces
- Preferred sidewalk widths
- Street tree planting on both sides of the street
- Safer pedestrian road crossing widths

Cons:

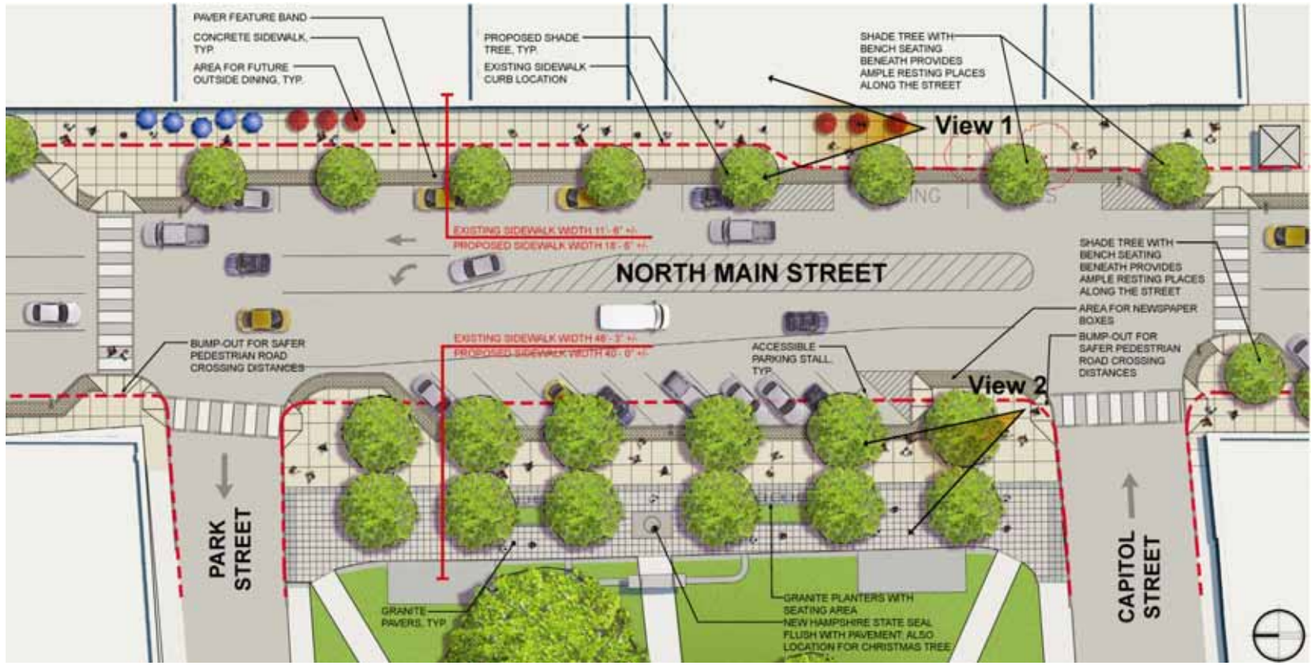
- Sidewalk width for street tree planting 4" less than desired 14'-10"

14.5' SIDEWALK

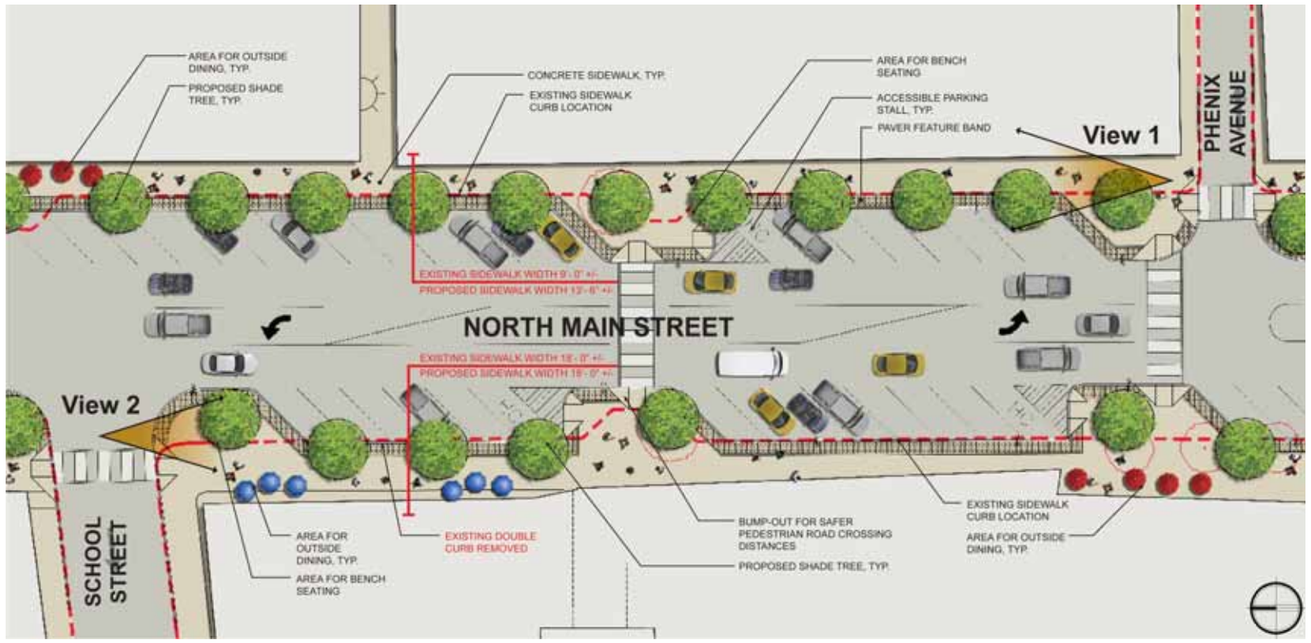
14.5' SIDEWALK

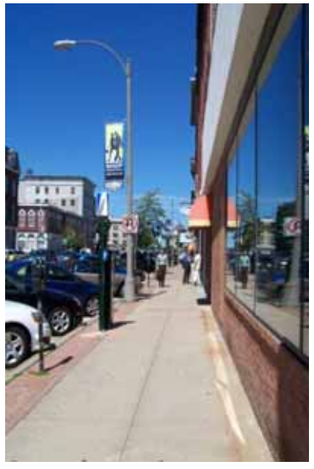
3 Lane Option

State House Plaza Potential

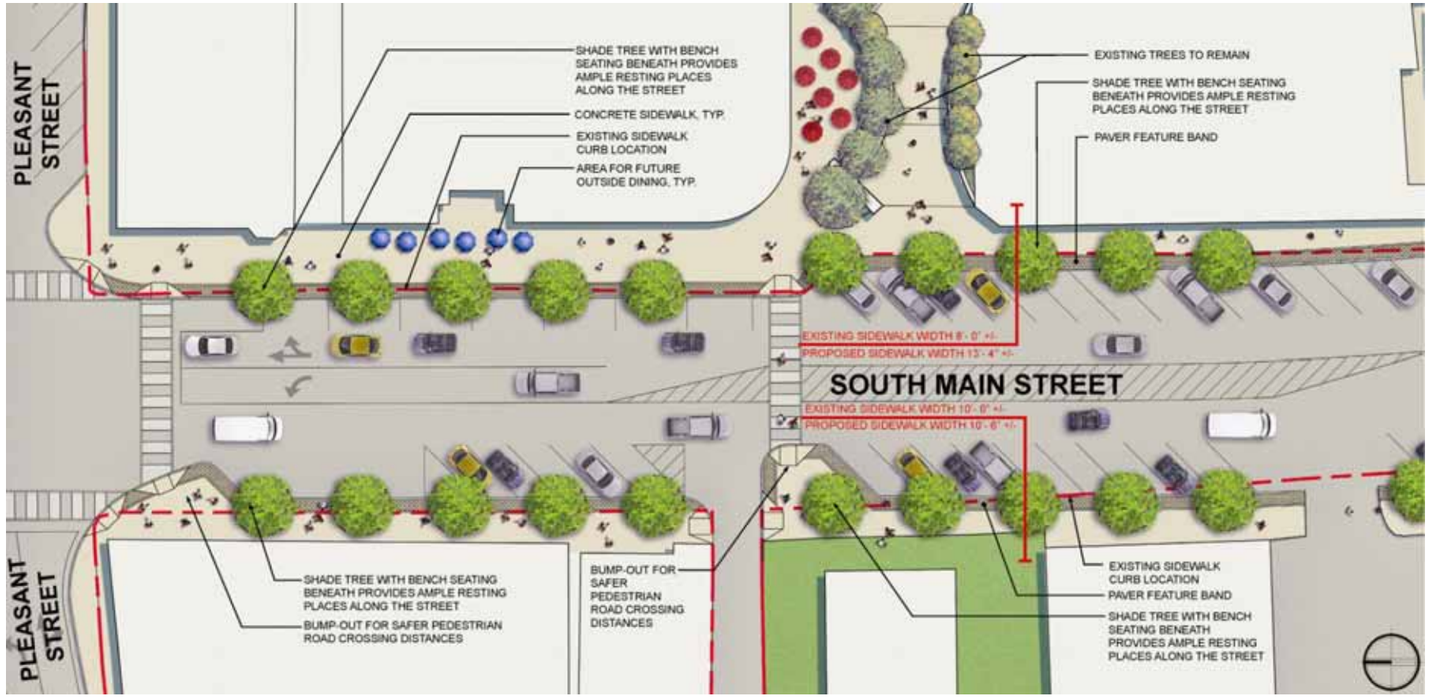


School to Phenix Potential

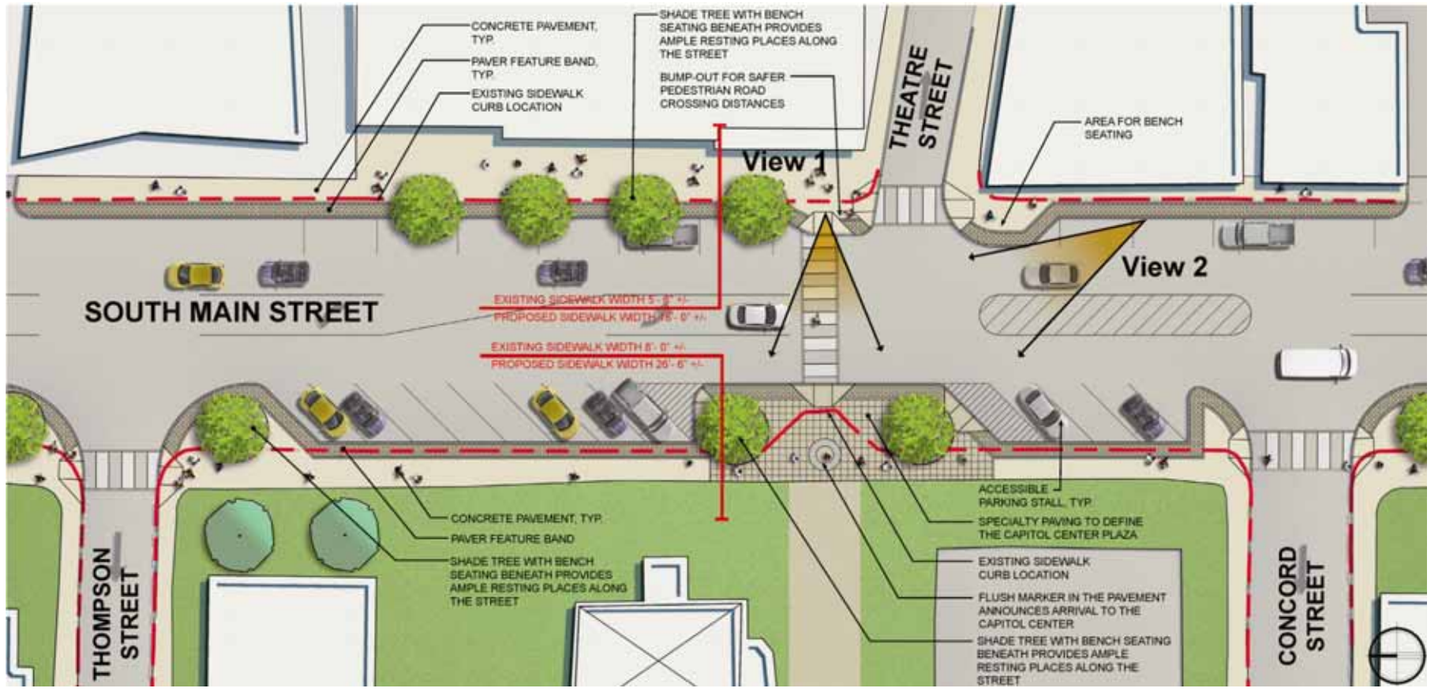




Pleasant to the Co-Op Potential

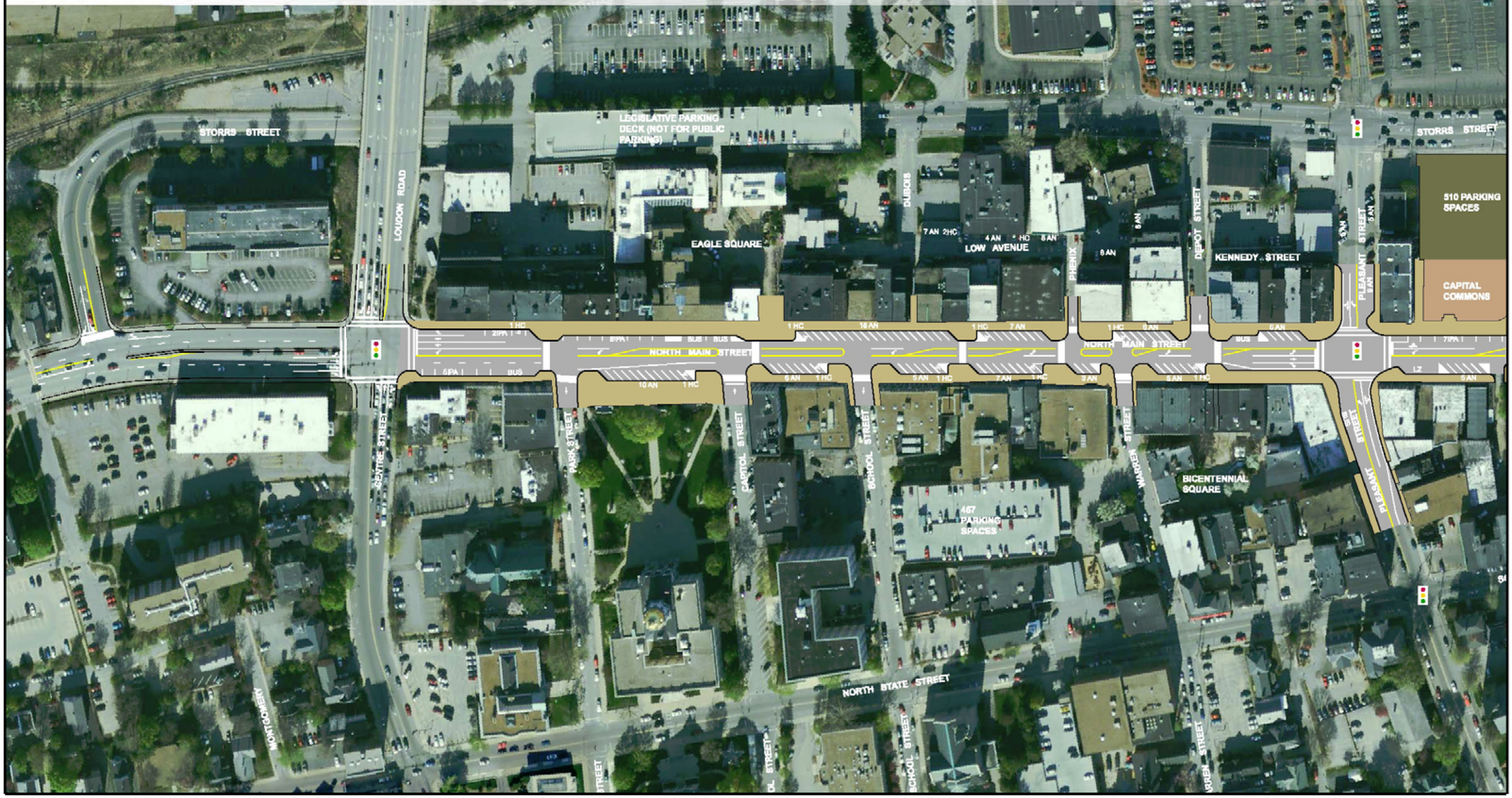


Capital Center for the Arts Potential



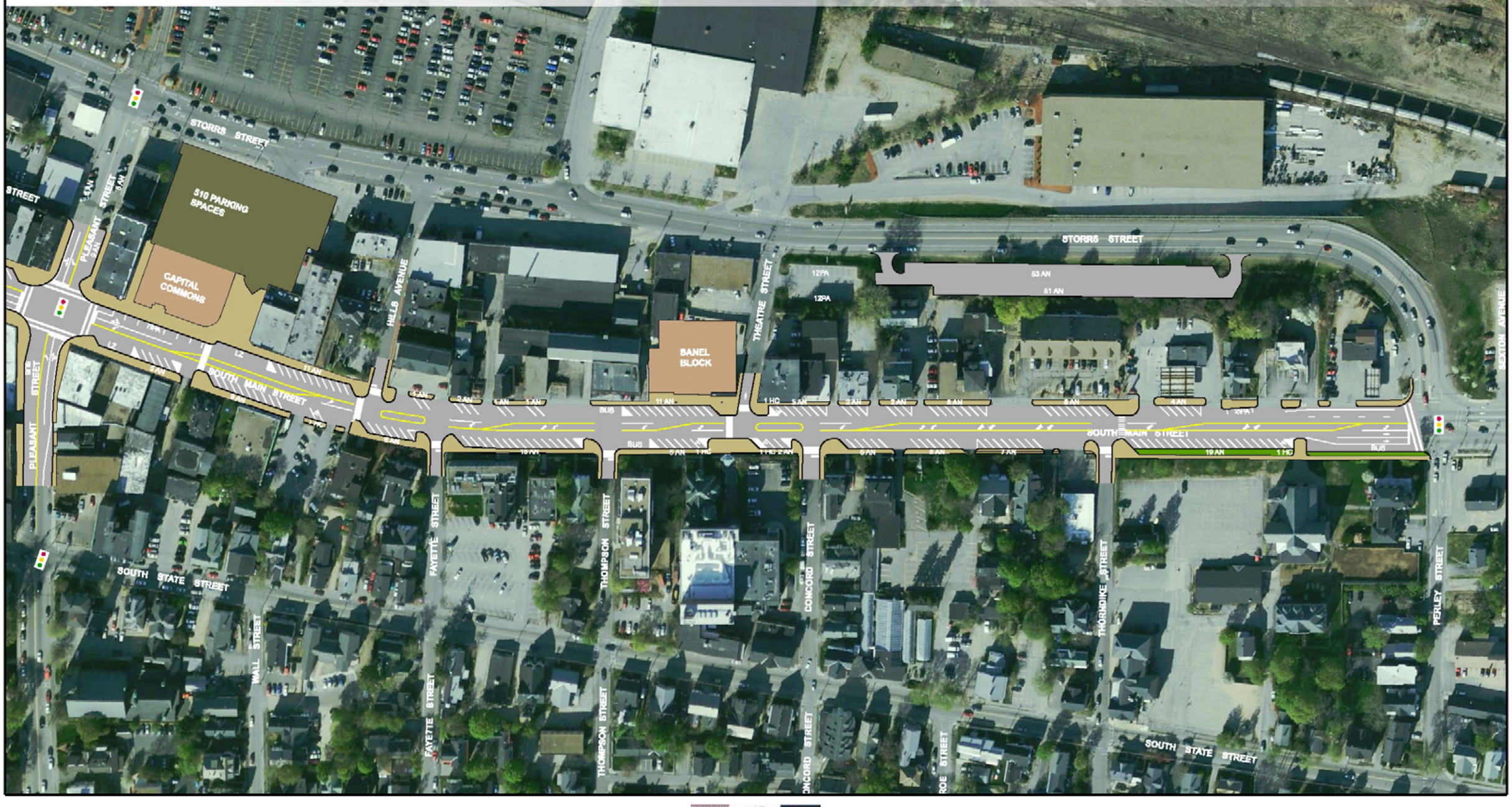
Community Consensus Design Layout

Centre Street to Pleasant Street



Community Consensus Design Layout

Pleasant Street to Storrs Street



SECTION VII

Opinion of Construction Costs

OPINION OF CONSTRUCTION COST

Summary

ENGINEERING/PERMITTING			
A	ENGINEERING		
	1 SURVEY	$50,000.00	
	2 PRELIMINARY ENGINEERING (3%)	$206,378.00	
	3 FINAL ENGINEERING (5%)	$343,963.00	
	4 PROJECT MANAGEMENT/PUBLIC RELATIONS (1%)	$68,793.00	
	5 CONSTRUCTION ENGINEERING (60 WEEKS)	$250,000.00	
B	RIGHT-OF-WAY (NO ROW ANTICIPATED)	$0.00	
C	PERMITTING		
	1 AOT	$20,000.00	
	2 WETLANDS	$5,000.00	
	3 NEPA-CE REVIEW	$20,000.00	
		ESTIMATED ENGINEERING SUBTOTAL:	$964,134.00
CONSTRUCTION			
A	DEVELOPMENT OF THREE-LANE SECTION (STORRS STREET TO CENTRE STREET)	$2,780,407.00	
B	MAIN STREET/PLEASANT STREET INTERSECTION IMPROVEMENTS	$754,016.00	
C	MAIN STREET STREETSCAPE MODIFICATIONS	$2,437,332.00	
D	GENERAL CONTRACT ITEMS	$907,500.00	
		ESTIMATED CONSTRUCTION SUBTOTAL:	$6,879,255.00
		TOTAL ESTIMATED PROJECT COST:	$7,843,389.00
		SAY:	$7,850,000.00
PROJECT ALTERNATIVES			
	1 UNDERGROUND UTILITIES (HILLS AVENUE SOUTH TO STORRS STREET)	$1,000,000.00	
		ESTIMATED PROJECT ALTERNATIVGE SUBTOTAL:	$1,000,000.00 *
	* FROM CITY'S ESTIMATE FOR CIP		
		TOTAL ESTIMATED PROJECT COST (W/ALTERNATIVE):	**$8,850,000.00**
6-MONTH TRIAL PERIOD			
	1 STRIPING & SIGNAL MODIFICATIONS FOR 6-MONTH TRIAL PERIOD		$72,240.00

OPINION OF CONSTRUCTION COST

Striping & Signal Modifications for 6-Month Trial Period

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
615.01	NEW TRAFFIC SIGN	EA	10	$100.00	$1,000.00
615.043	REMOVING TRAFFIC SIGN	EA	8	$75.00	$600.00
616.11	TRAFFIC SIGNAL MODIFICATIONS	U	1.00	$10,000.00	$10,000.00
632.3106	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 6" LINE	LF	20,000	$1.00	$20,000.00
632.3112	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 12" LINE	LF	3,360	$2.25	$7,560.00
632.3118	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 18" LINE	LF	320	$3.00	$960.00
632.32	RETROREFLECT. THERMOPLAS. PAVEMENT MARKING, SYMBOL OR WORD	SF	755	$6.00	$4,530.00
632.9104	OBLITERATE PAVEMENT MARKING, 4" LINE	LF	3,510	$0.50	$1,755.00
632.9106	OBLITERATE PAVEMENT MARKING, 6" LINE	LF	6,915	$0.50	$3,457.50
632.9118	OBLITERATE PAVEMENT MARKING, 18" LINE	LF	2,140	$1.25	$2,675.00
	MISCELLANEOUS		25%		$13,134.38

SUBTOTAL:	$65,671.88
10% CONTINGENCY:	$6,567.19
TOTAL:	**$72,239.06**

AL-Allowance, LS-Lump Sum, LF-Linear Foot, CY-Cubic Yard, SF-Square Foot, EA-Each, MO-Month, WK-Week

OPINION OF CONSTRUCTION COST

Preferred Concept - Major Sidewalk Improvements

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT	TOTAL
202.41	REMOVAL OF EXISTING PIPE 0-24" DIAMETER	LF	300	$15.00	$4,500.00
202.5	REMOVAL OF CATCH BASINS, DROP INLETS, AND MANHOLES	EA	16	$300.00	$4,800.00
202.6	CURB REMOVAL FOR STORAGE	LF	5,810	$3.00	$17,430.00
203.1	COMMON EXCAVATION	CY	3,600	$8.00	$28,800.00
203.3	UNCLASSIFIED EXCAVATION	CY	250	$15.00	$3,750.00
214	FINE GRADING	U	1	$10,000.00	$10,000.00
304.2	GRAVEL (F)	CY	1,100	$18.00	$19,800.00
304.3	CRUSHED GRAVEL (F)	CY	1,225	$24.00	$29,400.00
306.112	RECLAIMED STABILIZED BASE PROCESSED IN PLACE, 12 IN DEEP (F)	SY	26,315	$2.50	$65,787.50
403.11	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	TON	7,945	$65.00	$516,425.00
403.12	HOT BITUMINOUS PAVEMENT, HAND METHOD	TON	1,600	$90.00	$144,000.00
411.1	HOT BITUMINOUS CONCRETE LEVELING COURSE	TON	200	$65.00	$13,000.00
417	COLD PLANING BITUMINOUS SURFACES	SY	1,590	$3.00	$4,770.00
520.01	CONCRETE CLASS AA	CY	125	$400.00	$50,000.00
603.0031	12" R.C. PIPE, 3000D	LF	120	$40.00	$4,800.00
603.0032	15" R.C. PIPE, 3000D	LF	400	$50.00	$20,000.00
604.12	CATCH BASINS TYPE B	U	20	$1,800.00	$36,000.00
604.22	DROP INLETS TYPE B	U	2	$1,200.00	$2,400.00
604.32	DRAINAGE MANHOLES	U	6	$2,000.00	$12,000.00
604.4	RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET	U	70	$300.00	$21,000.00
604.5	RECONSTRUCTING/ADJUSTING MANHOLES	U	46	$300.00	$13,800.00
604.51	RECONSTRUCTING/ADJUSTING SEWER MANHOLES	U	71	$300.00	$21,300.00
604.54	RECONSTRUCTING/ADJUSTING TELEPHONE MANHOLES	U	2	$400.00	$800.00
604.6	MANHOLE COVERS & FRAMES	EA	46	$500.00	$23,000.00
604.72	GRATES & FRAMES, TYPE A	EA	20	$450.00	$9,000.00
604.72	GRATES & FRAMES, TYPE B	EA	22	$450.00	$9,900.00
604.8	ADJUST MONITORING WELL COVER	EA	4	$250.00	$1,000.00
608.26	6" CONCRETE SIDEWALK (F)	SY	11,100	$35.00	$388,500.00
608.54	DETECTABLE WARNING DEVICES, CAST IRON	U	50	$100.00	$5,000.00
609.01	STRAIGHT GRANITE CURB	LF	6,790	$28.00	$190,120.00
609.02	CURVED GRANITE CURB	LF	1,175	$32.00	$37,600.00
609.5	RESET GRANITE CURB	LF	50	$8.00	$400.00
611.811	ADJUSTING/RELOCATING HYDRANTS	EA	4	$2,000.00	$8,000.00
611.90001	ADJUSTING WATER GATES AND SHUTOFFS SET BY OTHERS	EA	10	$150.00	$1,500.00
614.522	MOLDED PULL BOX 13"X24"	EA	16	$500.00	$8,000.00
614.7314	3" PVC CONDUIT, SCHEDULE 40	LF	600	$18.00	$10,800.00
614.7318	3" PVC CONDUIT, SCHEDULE 80	LF	1,200	$40.00	$48,000.00
615.03	TRAFFIC SIGN TYPE C (F)	SF	925	$50.00	$46,250.00
615.034	RELOCATING TRAFFIC SIGN, TYPE C	U	36	$200.00	$7,200.00
615.06	TRAFFIC SIGN TYPE CC (F)	SF	240	$25.00	$6,000.00
616.11	TRAFFIC SIGNALS, MAIN STREET @ STORRS STREET	U	1	$175,000.00	$175,000.00
616.12	TRAFFIC SIGNALS, MODIFICATION MAIN STREET @ CENTRE STREET	U	1	$125,000.00	$125,000.00
621.31	SINGLE DELINEATOR WITH POST	EA	20	$30.00	$600.00
622.1	STEEL WITNESS MARKERS	EA	8	$30.00	$240.00
622.2	CONCRETE BOUNDS	EA	24	$300.00	$7,200.00
622.52	RESETTNG BOUNDS	EA	12	$250.00	$3,000.00
628.2	SAWED BITUMINOUS PAVEMENT	LF	2,500	$2.00	$5,000.00
632.3106	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 6" LINE	LF	20,000	$1.00	$20,000.00
632.3112	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 12" LINE	LF	450	$2.25	$1,012.50
632.3118	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 18" LINE	LF	945	$3.00	$2,835.00
632.32	RETROREFLECT. THERMOPLAS. PAVEMENT MARKING, SYMBOL OR WORD	SF	755	$6.00	$4,530.00
641	LOAM	CY	300	$26.00	$7,800.00
646.31	TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS	SY	900	$1.00	$900.00
	MISCELLANEOUS		10%		$219,795.00

SUBTOTAL:	$2,417,745.00
15% CONTINGENCY:	$362,661.75
TOTAL:	**$2,780,406.75**

FROM CITY'S ESTIMATE FOR CIP

AL-Allowance, LS-Lump Sum, LF-Linear Foot, CY-Cubic Yard, SF-Square Foot, EA-Each, MO-Month, WK-Week

OPINION OF CONSTRUCTION COST

Main Street/Pleasant Street Intersection Improvements

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
202.41	REMOVAL OF EXISTING PIPE 0-24" DIAMETER	LF	200	$15.00	$3,000.00
202.6	CURB REMOVAL FOR STORAGE	LF	1,105	$3.00	$3,315.00
202.5	REMOVAL OF CATCH BASINS, DROP INLETS, AND MANHOLES	EA	10	$300.00	$3,000.00
203.1	COMMON EXCAVATION	CY	400	$8.00	$3,200.00
203.3	UNCLASSIFIED EXCAVATION	CY	100	$15.00	$1,500.00
214	FINE GRADING	EA	1	$5,000.00	$5,000.00
304.2	GRAVEL (F)	CY	350	$18.00	$6,300.00
304.3	CRUSHED GRAVEL (F)	CY	400	$24.00	$9,600.00
306.112	RECLAIMED STABILIZED BASE PROCESSED IN PLACE, 12 IN DEEP (F)	SY	3,555	$2.50	$8,887.50
403.11	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	TON	1,455	$65.00	$94,575.00
403.12	HOT BITUMINOUS PAVEMENT, HAND METHOD	TON	270	$90.00	$24,300.00
411.1	HOT BITUMINOUS CONCRETE LEVELING COURSE	TON	100	$65.00	$6,500.00
417	COLD PLANING BITUMINOUS SURFACES	SY	1,050	$3.00	$3,150.00
520.01	CONCRETE CLASS AA	CY	100	$400.00	$40,000.00
603.0031	12" R.C. PIPE, 3000D	LF	150	$40.00	$6,000.00
603.0032	15" R.C. PIPE, 3000D	LF	250	$50.00	$12,500.00
604.12	CATCH BASINS TYPE B	EA	8	$1,800.00	$14,400.00
604.22	DROP INLETS TYPE B	EA	2	$1,200.00	$2,400.00
604.32	DRAINAGE MANHOLES	EA	4	$2,000.00	$8,000.00
604.4	RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET	LF	5	$300.00	$1,500.00
604.5	RECONSTRUCTING/ADJUSTING MANHOLES	LF	5	$300.00	$1,500.00
604.51	RECONSTRUCTING/ADJUSTING SEWER MANHOLES	LF	5	$300.00	$1,500.00
604.54	RECONSTRUCTING/ADJUSTING TELEPHONE MANHOLES	LF	2	$400.00	$800.00
604.6	MANHOLE COVERS & FRAMES	EA	4	$500.00	$2,000.00
604.72	GRATES & FRAMES, TYPE B	EA	10	$450.00	$4,500.00
608.26	6" CONCRETE SIDEWALK (F)	SY	2,325	$35.00	$81,375.00
608.54	DETECTABLE WARNING DEVICES, CAST IRON	EA	8	$100.00	$800.00
609.01	STRAIGHT GRANITE CURB	LF	1,275	$28.00	$35,700.00
609.02	CURVED GRANITE CURB	LF	55	$32.00	$1,760.00
609.5	RESET GRANITE CURB	LF	50	$8.00	$400.00
611.811	ADJUSTING/RELOCATING HYDRANTS	EA	2	$2,000.00	$4,000.00
611.9	ADJUSTING WATER GATES AND SHUTOFFS SET BY OTHERS	EA	10	$150.00	$1,500.00
614.522	MOLDED PULL BOX 13"X24"	EA	12	$500.00	$6,000.00
614.7314	3" PVC CONDUIT, SCHEDULE 40	LF	200	$18.00	$3,600.00
614.7318	3" PVC CONDUIT, SCHEDULE 80	LF	600	$40.00	$24,000.00
615.03	TRAFFIC SIGN TYPE C (F)	SF	80	$50.00	$4,000.00
615.034	RELOCATING TRAFFIC SIGN, TYPE C	EA	5	$200.00	$1,000.00
615.06	TRAFFIC SIGN TYPE CC (F)	SF	60	$25.00	$1,500.00
616.1	TRAFFIC SIGNALS	EA	1	$150,000.00	$150,000.00
622.2	CONCRETE BOUNDS	EA	8	$300.00	$2,400.00
622.52	RESETTNG BOUNDS	EA	6	$250.00	$1,500.00
628.2	SAWED BITUMINOUS PAVEMENT	LF	1,500	$2.00	$3,000.00
632.3106	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 6" LINE	LF	3,360	$1.00	$3,360.00
632.3112	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 12" LINE	LF	570	$2.25	$1,282.50
632.3118	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 18" LINE	LF	115	$3.00	$345.00
632.32	RETROREFLECT. THERMOPLAS. PAVEMENT MARKING, SYMBOL OR WORD	SF	185	$6.00	$1,110.00
	MISCELLANEOUS		10%		$59,606.00

SUBTOTAL	$655,666.00
15% CONTINGENCY:	$98,349.90
TOTAL:	**$754,015.90**

FROM CITY'S ESTIMATE FOR CIP

AL-Allowance, LS-Lump Sum, LF-Linear Foot, CY-Cubic Yard, SF-Square Foot, EA-Each, MO-Month, WK-Week

OPINION OF CONSTRUCTION COST

Streetscape Amenities for Preferred Concept

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
201.21	REMOVING SMALL TREES	EA	17	$200.00	$3,400.00
202.81	REMOVE/RESET EXISTING FENCE	LF	500	$25.00	$12,500.00
520.01	CONCRETE CLASS AA	CY	200	$40.00	$8,000.00
608.28	SIDEWALK HEATING SYSTEM	SY	4,000	$200.00	$800,000.00
608	UNIT PAVERS	SF	19,245	$1.50	$28,867.50
608	GRANITE PAVERS	SF	5,729	$3.50	$20,051.50
608.54	DETECTABLE WARNING DEVICES, CAST IRON	SY	60	$100.00	$6,000.00
609	FLUSH GRANITE BAND	LF	5,734	$28.00	$160,552.00
609	GRANITE PLANTER CURB	LF	308	$28.00	$8,624.00
614.521	MOLDED PULL BOX 8" X 23" - SD 2.030	U	12	$500.00	$6,000.00
614.7314	3" PVC CONDUIT, SCHEDULE 40	LF	3,600	$18.00	$64,800.00
614.7318	3" PVC CONDUIT, SCHEDULE 80	LF	2,400	$40.00	$96,000.00
625	LIGHT POLE BASES	EA	90	$650.00	$58,500.00
625.6	20' ALUMINUM LIGHT POLE	U	90	$2,000.00	$180,000.00
625.71	LUMINAIRE "S1"	U	26	$600.00	$15,600.00
625.72	LUMINAIRE "S2"	U	29	$800.00	$23,200.00
625.73	LUMINAIRE "S3"	U	35	$1,000.00	$35,000.00
641	LOAM	CY	400	$26.00	$10,400.00
645.153	BARK MULCH 3" DEEP	SY	200	$25.00	$5,000.00
659.1	STREET TREES	EA	105	$1,800.00	$189,000.00
660.52	BENCH (6' WITH BACK)	EA	60	$1,100.00	$66,000.00
660.53	TRASH RECEPTACLE	EA	10	$600.00	$6,000.00
660.54	PLANTER	EA	20	$500.00	$10,000.00
660.55	BIKE RACK	EA	5	$450.00	$2,250.00
660.56	PAPER BOX ENCLOSURE	EA	4	$1,500.00	$6,000.00
680.01	GATEWAY MONUMENT SIGN	EA	10	$5,000.00	$50,000.00
680.02	DIRECTIONAL SIGN	EA	20	$1,500.00	$30,000.00
680.03	SIDEWALK DIRECTIONAL SIGN	EA	25	$1,000.00	$25,000.00
	MISCELLANEOUS		10%		$192,674.50

SUBTOTAL:	$2,119,419.50
15% CONTINGENCY:	$317,912.93
TOTAL:	**$2,437,332.43**

FROM CITY'S ESTIMATE FOR CIP

AL-Allowance, LS-Lump Sum, LF-Linear Foot, CY-Cubic Yard, SF-Square Foot, EA-Each, MO-Month, WK-Week

OPINION OF CONSTRUCTION COST

General Contract Items

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
618.61	UNIFORMED OFFICERS WITH VEHICLE	HR	3,000	$60.00	$180,000.00
618.7	FLAGGERS	HR	6,400	$30.00	$192,000.00
619.1	MAINTENANCE OF TRAFFIC	EA	1	$100,000.00	$100,000.00
619.253	PORTABLE CHANGEABLE MESSAGE SIGN (UNIT WEEK)	WK	180	$450.00	$81,000.00
645.7	STORM WATER POLLUTION PREVENTION PLAN	EA	1	$8,000.00	$8,000.00
645.7100	MONITORING SWPPP AND EROSION AND SEDIMENT CONTROLS	AL	1	$8,000.00	$8,000.00
692.0000	MOBILIZATION	EA	1	$250,000.00	$250,000.00
698.13	FIELD OFFICE TYPE C	MO	15	$900.00	$13,500.00
699	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	AL	1	$10,000.00	$10,000.00
1010.15	FUEL ADJUSTMENT	EA	1	$20,000.00	$20,000.00
1010.2	ASPHALT CEMENT ADJUSTMENT	EA	1	$25,000.00	$25,000.00
1200	QA/QC MATERIALS TESTING PROGRAM	AL	1	$20,000.00	$20,000.00

TOTAL: $907,500.00

AL-Allowance, LS-Lump Sum, LF-Linear Foot, CY-Cubic Yard, SF-Square Foot, EA-Each, MO-Month, WK-Week

SECTION VIII

Implementation Strategies-
The Street

IMPLEMENTATION STRATEGIES – THE STREET

Concord should implement a six month trial of the three lane configuration.

Improvements at the Pleasant Street intersection are critical for improving pedestrian safety, traffic flow and will allow for organized turning movements at the intersection.

In support of the Economic Assessment findings, downtown needs a major facelift to retain and enhance its market presence, Concord should set its primary task as seeking funding to implement the Community Consensus Design.

While funding is being sought, Concord should implement a minimum six-month trial for the three-lane configuration. This would involve the removal of the existing striping and re-striping to three-lanes. Recognize that despite the public's input and support for making major improvements to Main Street the single recommendation to reduce the travel way to the proposed three lane configuration was met with skepticism, not opposition. Because increased efficiency with fewer lanes is counterintuitive, it is difficult for people to envision how Main Street can maintain its functionality. When suggested that the three-lane configuration could be tried first, people were enthused by the opportunity to see action and results before investing in permanent improvements.

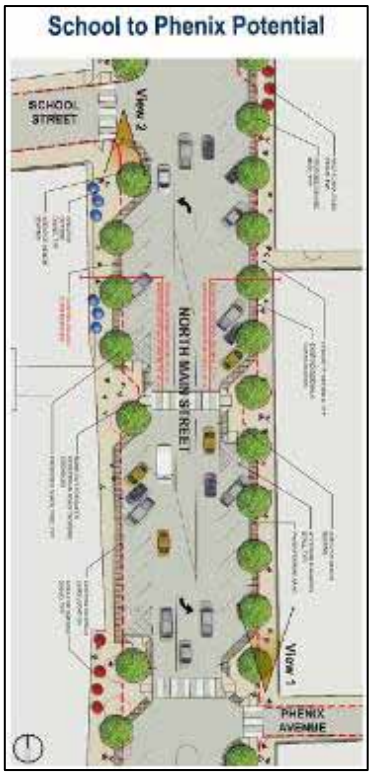
If the measure of success is **the time it takes to drive through Main Street**, the proposed three lanes will have little impact to flow of traffic relative to time. Today, the time to travel along Main Street is contingent upon the configuration of the signal at the North Main/South Main/Pleasant Street intersection. Improvements at this juncture are critical for improving pedestrian safety, traffic flow and will allow for organized turning movements at the intersection. Projecting population growth and trends for the next 10-years, if left in its current cycling stage and Main Street's four lane configuration, delays will add in excess of two minutes more in travel time. This significant delay will divert cars to other roadways resulting in the loss of potential patrons which will negatively impact downtown businesses.

The extension and creation of turning pockets can be performed at the existing North Main/South Main/Pleasant Street intersection. The lengthening of the southbound right turn lane and eastbound thru/right lane, as well as the construction of a westbound thru/right lane will allow for additional queue storage and allow traffic to bypass traffic queued in adjacent lanes. This improvement will come at the expense of some parking. The construction of Visibility Enhancement Platforms and the elimination of diagonal crosswalks at this intersection will reduce pedestrian crossing times and allow additional seconds to be provided for vehicular movements.

For long term safety improvements Concord should consider relocation and consolidation of crosswalks at un-signalized intersections throughout the corridor, along with the re-construction of the existing Visibility Enhancement Platforms to conform to current industry standards will help to reduce pedestrian and vehicle conflict points and durations.

The conversion of Main Street to three lanes will allow the Pleasant Street intersection to be configured for more efficient operation. The conversion will provide exclusive northbound and southbound left turn lanes on Main

The Community Consensus Design creates a balance of transportation modes with vehicles, public transit and pedestrians.



Following the lead of the public, the Community Consensus Design preserves as much parking as possible, corrects deficiencies in the parking spaces to allow safer movement backing out onto Main Street, and creates equal sidewalk widths.

Street which will improve left turning safety while maintaining efficiency. The reduction in curb-to-curb width on Main Street will also allow for even shorter pedestrian crossing times. The reduction in the travel width on Main Street will provide additional sight distance for right turning vehicles on Pleasant Street and allowing "Right Turns on Red" should be investigated.

It is important to recognize the goal is not to move traffic through downtown as quickly as possible, but rather to **enhance the economic vitality of downtown**. A driver intent on passing through should be able to see the people and activity on the sidewalks, read the business signs, gaze upon a window display or two. All of these actions are opportunities to attract a potential customer either at that moment or for a future visit. Today, a typical driver is focused on the potential chaos ahead of them. "Stressful" and "anxious" should not be the words people choose to associate with driving down Main Street. Success is easily measured when people express their experience of driving Main Street as pleasant, interesting, lively, vibrant, and countless other positive words.

Throughout, Main Street was envisioned as a "complete street" in keeping with Concord's Transportation Policy; one in which the needs of all users are considered and brought into balance. Drivers, pedestrians, cyclists and transit users are accommodated in roughly equal measures in a safe and inviting manner. The Hoyle Tanner team sought to create a Main Street that was designed for all constituents: shoppers, workers, visitors, strollers, residents, merchants, diners, service and emergency personnel and culture seekers.

Bicycles are a missing but vital element to the balance. Today's parking movements make the roadway unsafe for the novice rider. In the Community Consensus Design, inexperienced cyclists should be encouraged to travel Storrs Street, accessing Main Street via the side streets, as the preferred usage. Skilled riders should simply "take the lane". One notable concern is the volume of novice cyclists riding on the sidewalks. This is an extremely dangerous condition. For the safety of pedestrians the Hoyle Tanner team recommends stronger enforcement of this violation in downtown for the safety of both cyclists and pedestrians.

Concord should designate a section of angle parking on South Main Street to be re-striped to accommodate back-in angle parking. This allows the opportunity to test whether or not the City and users feel this is something worth exploring further during the 6-month trial period. *(See Section VII for an Opinion of Construction Cost for the six month trial period).* Back-in angle parking eliminates visibility issues associated with backing into traffic and allows for safe bicycle usage on Main Street. An adjustment period is needed and well worth the safety benefits for all users.

If Concord chooses to implement a trial period for the proposed lane configuration under the Community Consensus Design, re-striping the parking bays simultaneously will allow for expanding the existing spaces to

If Concord conducts a trial period of the three lanes, converting existing parallel parking on South Main can immediately add on-street parking.

A return to back-in angle parking would provide the greatest benefit to both drivers and cyclists.

a depth of 16-feet. This will greatly enhance the safety of vehicles backing into traffic along the corridor. This recommendation also comes with the ability to add parking immediately along South Main Street by converting existing parallel parking to angled parking.

Conditions that would warrant a reversion to conditions as they exist today with four lanes of travel:

- Traffic congestion and delays substantially higher than currently projected;
- Substantial traffic diversions from Main Street to Storrs Street or parallel streets;
- Substantial increase in traffic accidents, including pedestrians; or
- Other significant traffic problems that cannot be resolved by other methods.

Moving forward, funding sources for this project need to be sought and identified. It is desired that the City work diligently with federal, state and local representatives to apply for all eligible sources of funding. A partial list of some potential funding opportunities includes:

Transportation Enhancement Funds (TE): Portions of the project such as the proposed pedestrian improvements, update the plaza adjacent to the State House, landscaping and other scenic beautifications, historic preservation as it relates to the downtown area and environmental mitigation efforts to reduce water pollution due to highway runoff. All of these aspects of the overall project are eligible for TE funding.

Congestion Mitigation and Air Quality Funds (CMAQ): Portions of the project such as the signalization, intersection improvements and traffic management, and control services, are eligible for CMAQ funding.

STP Urban Funds Program: This program is maintained and operated by the New Hampshire Department of Transportation. Based on the City of Concord's current allocations under this program and proposed future needs project funding may be eligible.

Betterment Funds: These funds are available for generally lower cost projects. However, portions of the Main Street project could qualify for funding such as, landscaping, lighting fixtures and associated informational banners.

Corridors Program: This program is part of the FHWA Discretionary program. It provides an 80% federal share for improvements to high priority and other select corridors. The City of Concord acting through the MPO could be eligible for this funding.

Transportation, Community and System Preservation (TCSP) Grant Funds: This program is also part of the FHWA Discretionary program. The federal share is 100%. The Main Street project could be eligible for funding.

APPENDIX A

Intercept Survey Data

INTERCEPT SURVEY DATA

Simply defined, the Intercept Survey was designed to "intercept" people as they moved about Concord's downtown. The intention was to allow for a conversational, one-on-one interview of the visitor. Intercept Surveys are beneficial for a number of reasons but for the purposes of the Re-Thinking Main Street Project, the exercise was to capture a snapshot of the typical weekend and weekday patron.

As with most surveys a number of important quality controls were established in order maintain validity of the data obtained. The Re-Thinking Main Street Task Force utilized the following strategies:

- Control of the questionnaire sequence.
- Limiting survey respondents to one or two individuals per intercept (eliminating the ability of a dominant individual to sway others' opinions as sometimes occurs in focus group settings).
- Respondents were not allowed to fill out surveys independent of the interviewer.
- Interviewers were directed to intentionally gather information evenly across all age demographic segments, preferably over 18-years old.
- Interviewers were directed to be more conversational in their question delivery in order to gain a quantifiable response as well as to obtain deeper insight behind the response. More knowledge is gained in the discussion, rather than the answer to the question, as is often the case in intercept surveys.
- Each interviewer received approximately 30 minutes of training prior to circulating downtown to talk with people.
- Each Interviewer was provided a target number of surveys to gather.
- Using Concord's 2008 population base of 42,255 the intercept survey task force had a target goal of collecting 300 surveys. For various reasons, a total of 26 surveys were disqualified leaving a base of 274 quality surveys.
- This data is valid on its own to a confidence level of 95%, with 99% confidence at ±5.9.
- The ratio of weekday to weekend surveys was roughly 3:1. This target ratio was predetermined in an effort to normalize the daily data for a typical week.

SNAPSHOT OF THE WEEKEND VISITOR

Surveys were gathered on Saturday, August 7, 2010 from 11:30 a.m. to 1:30 p.m. The weather was 78 degrees with blue skies and sunshine. Interviewers were scattered along Main Street from Eagle Square to Hills Avenue on both the East and West sides. Periodically, an interviewer would enter Bicentennial Square to speak with people enjoying the City park. The Farmer's Market was open on Capitol Street, however, the Concord Arts Market was not operating in Eagle Square. Interviewers were directed to limit surveying near the Farmer's Market so as to not influence the question related to the purpose of the visit to downtown.

Lessons Learned:

- Most people came downtown to shop. (57.7%)
- Eating was the second highest ranking reason for coming downtown. (15.5%) The interviewers noted a substantial number of people not being interviewed who were asking for directions to "any sandwich shop that was open." It was recognized that Brown Bag Deli, Caffenios, Capital Deli and Eagle Square Deli were closed.
- Most responders come to downtown more than one time per week. (58.7%)
- More than half the visitors intended to visit 4 to 10 stores. (50.7)
- An additional 4.2% anticipated visiting more than 10 stores
- Visitors rated the walking experience in downtown as "Excellent/Very Good" (66.2%)
- Crossing the street also rated high for "Excellent/Very Good" (59.2%)
- What people like best about downtown:
    - It is convenient
    - The stores are locally owned and there is a good mix of stores
    - It is historic
- What people like least about downtown:
    - Parking

  - Empty storefronts
  - Lack of nightlife
- Given a magic wand, most people wanted to improve downtown by:
  - Filling the empty storefronts
  - Having more restaurants and outdoor seating
  - Having more nightlife
  - Adding more greenery: trees, bushes, flowers and other flora
  - Parking would be free
  - Downtown should be moved to the river
- Weekend patrons tend to be more affluent. Most of the people interviewed had household earnings in excess of $100,000 annually (28.2%). Nearly three-quarters earned over $50,000 annually (74.6%). Comparatively, Concord's 2008 Median Household Income was $42,447. These indicators are significant in the retail environment. In review of the first survey question, patrons of downtown came to the district to shop. These numbers show that 3 out of every 4 persons have the money to spend.
- While not a reflection of the downtown visitor, interviewers were instructed to try to gather an even distribution of survey takers; Male to female and across five age groups.
  - The least represented age group were citizens over 70-years old (2.8% but none were men). The inability to obtain an adequate sampling of individuals from this demographic segment mirrored comments taken from earlier presentations that seniors have a difficult time moving about downtown and therefore avoid the area entirely.
  - The second least represented demographic category were men between the ages of 30 and 45 (3.8%).
  - Interviewers noted the struggle to find young adults in the 20-29 age range.
- A review of the zip codes collected showed:
  - 40.4% were from Concord.
  - 11.1% were out-of-state tourists
  - 8.8% came from Manchester
  - 6.7% came from the seacoast
- Other notable comments/observations:
  - Visitors were disappointed the State House was closed

A significant number of people mentioned parking as an issue in the downtown area but unexpectedly, the problem was not finding a place to park or paying for parking. The problem was in the stressful mechanics of parking. Respondents cited circling the block to find a suitable space. "Suitable" was defined as not next to an SUV, minivan or truck. People expressed fear and frustration about "inching their way" or "blindly backing out" onto Main Street. With nearly 60% of the people interviewed being from out-of-town, the interviewers noted a number of people confused about the meters/kiosks. Kiosks were being installed in downtown, but not become operational at the time of the surveying. Although proximity to the intended destination was mentioned, when asked, more people revealed they intended to visit more than one business, so a close parking spot was not important.

SNAPSHOT OF THE WEEKDAY VISITOR

Surveys were gathered on Thursday, August 12, 2010 from 11:30 a.m. to 1:30 p.m., 2:30 to 3:30 p.m. and 5:00 to 7:00 p.m. The weather was cloudy and 82-degrees. Interviewers were scattered along Main Street from Eagle Square to Hills Avenue on both the East and West sides. Periodically, an interviewer would enter Bicentennial Square or Eagle Square to speak with people enjoying the city parks.

Lessons Learned:

- Most people came downtown to shop although at a percentage much smaller than the weekend visitor (25.1% vs. 57.7%).
- Visiting service industry locations (i.e.: banks and other financial institutions, attorneys, personal care, library, City Hall, etc.) ranked second (22.2%).
- 21.7% noted they worked downtown.

- 20% came downtown specifically to eat.
- More than one-third of surveyors reported coming to downtown daily (35.5%) Conversely, 31.5% stated coming here less than once a week.
- The majority of respondents expected to visit zero to 3 businesses (72.9%). All interviewers noted the lunchtime and early afternoon consumers often responded to this question with a smaller number than was their actual business visits. For example, a man holding a CVS bag about to enter The Works stated he would only visit one business, but in reality was visiting two. In further discussion, the same person revealed he had purchased coffee at The Works in the morning and had stopped at the bank before going into CVS. This consumer was demonstrating "unconscious reasoning" which is typical behavior from individuals in a work-mode mind set. The "executive" side of the brain does the thinking, while the "habitual" side of the brain takes care of the doing. Lunchtime errands and eating are carried out by habit, and not great thought.
- Less than half the respondents rated the experiences of crossing the street as Excellent or Very Good (43.8% and 38.9% respectively). Interviewers recognized the high percentage of daily visitors yielded more comments on the behavior of the motorists. All Interviewers observed pedestrians, whether being interviewed or not, commenting that "the drivers are behaving today."
- What people like best about downtown:
    - It is convenient
    - The variety of stores and that they are locally owned
    - The atmosphere and friendliness of downtown
- What people like least about downtown:
    - Parking
    - Empty storefronts
    - Lack of nightlife
- Given a magic wand, most people wanted to improve downtown by:
    - Having more restaurants and outdoor seating
    - Free parking
    - Filling the empty storefronts
    - Having more nightlife
- Almost a quarter of the patrons surveyed were affluent with combined household earnings in excess of $100,000 annually (24.1%). Nearly an equal number ranked in the $50,000 to $74,999 range (21.7%). The smallest representation came from those households earning less than $25,000 annually (8.9%). Roughly two-thirds of the respondents earned over $50,000 annually (64.0%). Again, comparative to Concord's median household income it appears 2 out of 3 persons have the means with which to purchase goods.
- The least represented age group were citizens over 70-years old (1.5% with one male).
- Interviewers again noted the struggle to find young adults in the 20-29 age range.
- A review of the zip codes collected showed:
    - 42.4% were from Concord.
    - 6.4% were out-of-state tourists and 3.0% were Canadian or overseas travelers
    - 4.9% were from Contoocook/Hopkinton area and 3.48% came from Manchester. These represented the second and third highest zip codes reported.
    - There were 41 New Hampshire zip codes, representing 36 unique cities or towns, in the sampling of Thursday patrons.
- Other notable comments/observations:
    - Nearly 30% of respondents mentioned parking as an issue in the downtown. The weekday visitor was more concerned first, with finding an available on-street spot and secondly, in front of the intended destination. Concerns about enforcement, cost of parking, fines or just the existence of meters were also cited. The experience and stress of backing into traffic was also mentioned but not to the degree of the Saturday visitor.
    - Requests for retail evening hours and Sunday shopping hours rated high among surveyors. Also of note, visitors found it difficult to tell whether the stores were opened or closed, as the lack of lighting and cloudy skies made it difficult to perceive.

- Shading elements, such as trees, greenery and awnings were requested. Some respondents recommended locations to place trees in order to block what they perceived as unsightly buildings.

RECOMMENDATIONS

As stated earlier in this report, the overall assessment of downtown is that it is healthy but fragile. However, a number of opportunities to strengthen the district, without dependence on the streetscape improvements, were revealed through the Intercept Survey. These include:

- **Strengthen ties to the student population at the area colleges**
  - The article *The Successful Few* identified one of the attributes of a successful downtown is the proximity and connection to a university within 2-miles of the downtown core. The University of New Hampshire Law School enrolled 457 students for the Fall 2010 semester and is located .8 miles from downtown. New Hampshire Technical Institute has approximately 5,000 students enrolled and is 2.2 miles from downtown. Today's college students have a tremendous amount of disposable income according to the National Center for Educational Statistics. After completing interviews on Saturday, the team only obtained 4.7% of the target goal of 20% in this age bracket. Surveying efforts the following Thursday were targeted at reaching this group. The opinions of the 20-29 year old are critical to the Re-Thinking Main Street Project as they represent the generation that will be most affected, long term, by changes in the downtown area. Interviewers were successful at reaching 17.5% of the total surveys – showing that the students are here. Downtown can offer more to keep students returning to the district.
- **Downtown Vacancies**
  - While downtown is fragile, people perceive the district to be economically worse than it truly is. The current retail vacancy rate from Centre Street to Hills Avenue, including side streets, is 12%. Comparatively, New Hampshire's 2010 third quarter retail vacancy rates are 12.2%. The high perception of a strained downtown can be attributed to the number of vacant storefronts located directly on Main Street.
  - Large retail spaces, adjacent spaces and vacant prominent storefronts are further contributing factors. Retail business recruitment efforts should be concentrated on filling these retail spaces which include: the former Blooming Iris, Ritz Camera and Bookland storefronts, Rare Essentials, Pachamama and Pitchfork Records locations.
  - The Gap Identification Survey should be updated using the ESRI Retail Marketplace Profile which identifies the leakage/surplus and retail potentials.
- **Expanded Store Hours and Sunday Hours**
  - This request was most prevalent in the weekday surveys. Often the downtown worker commented that shopping had to be done during lunchtime because the stores would be closed when the person ended the work day. Limiting opportunities for browsing and impulse purchases can be impacting individual retail sales. During discussions with retailers during the focus groups, those retailers reporting gains in sales also noted they were extending hours to capitalize on every opportunity.
  - The request for more stores to be open on Sundays was also mentioned more often by the weekday consumer and downtown workers. Many noted limited shopping opportunities were forcing shopping activities to Saturdays or other shopping districts in Concord.
- **Identify and Expand Access to Public Restrooms**
  - Facilities are limited and often hidden or locked, which discourages long stays in downtown.
- **Attract and accommodate Senior Citizens**
  - The senior population was significantly lacking in the surveys. Persons over 70-years old measured 1.8% of the total survey responses, while the 60 to 70 year old bracket measured 10.9%. The NH Chapter of the AARP identifies 170,000 state residents over age 65 and the number is anticipated to double by 2030. The current streetscape poses numerous challenges for seniors. Among the challenges; lack of public restrooms, lack of places to pause, a difficult curb line, maneuvering out of on-street parking spaces and limited handicap parking spaces.

APPENDIX B
Focus Group Results

FOCUS GROUP RESULTS

A series of Focus Group interviews were held with approximately 75 downtown stakeholders in late-August 2010. With specific regard to urban planning, this strategy is considered one of the best forms of qualitative research since the purpose is not to understand the "what, where and when" of decision making, but rather the "why and how" a decision or an opinion comes about.

Results are believable, reliable and considered to yield a high apparent validity of common opinions - since each individual group dynamic typically settles toward one idea that all can easily understand and support. There are occasions when an entire group is overtaken by the opinions of one or two dominant individuals. In these instances, the remaining participants become passive and submissive. Formulating a reliable, common opinion or decision is impossible under this circumstance. This behavior was identified in two Focus Group Sessions for Re-Thinking Main Street and so the resulting "commonalities" are not included here. This summary includes only perceptions shared without sway as observed by AER.

Each focus group was organized by type of stakeholder interest:

- Professional services (2 focus groups)
- Merchants (3 focus groups)
- Energy and Environment
- Property owners/Real Estate (2 focus groups)
- Residents/Patrons
- Restaurants
- Creative Economy

Interviews were conducted in the Main Street Concord office with an open structure to maximize the range of issues explored in each setting. Each session explored the following points:

STUDY BACKGROUND

- Describe the purpose of the study
- Describe AER and its role

ECONOMIC ENVIRONMENT

- What are the major trends influencing the downtown market setting
- How downtown is performing over the past two years in economic terms
- What are the strong points of the downtown business environment
- What are the weak points of the downtown business environment
- How can the business environment in downtown be most effectively improved

THE PROPOSAL

- Describe the concept, emphasizing that it is preliminary
- What do they see as positive about it
- What are their concerns about it
- How can it be improved
- What should the team be careful about

RELEVANT OBSERVATIONS NOTED THROUGHOUT THE VARIOUS SECTORS

- Retailing in downtown is fragile, first floor vacancies are rising and many stores are underperforming. This was noted by merchants, building owners, members of the professional community and residents
- Rising vacancies (both upper story and first floor) are hampering private sector re-investment
- Restaurants in downtown are performing well, but merchants are struggling. Some retailers reported sales were beginning to recover
- Upper floor office space is difficult to lease
- Downtown has limited appeal to the younger demographic—longer store hours and more restaurants/music venues would enhance downtown's appeal
- There is some but relatively little opposition to changes
- There is a sense that downtown needs a facelift

- Merchants expressed concern about the loss of parking along Main Street and the disruptions to business during the construction phase
- In general participants were supportive of improving the pedestrian environment (three lanes of traffic and wider sidewalks) and were not typically concerned about narrowing the roadway
- Concern was raised if improvements are not made, downtown would become stagnant. There is a risk that downtown Concord will go the way of downtown Manchester -- -- a fairly healthy market for professional services and restaurants, but a very thin inventory of retail shops
- Crossing the street is not safe under the current configuration
- The current parking configuration is not ideal—it is hazardous to back into traffic
- Participants generally preferred the alternative that resulted in the loss of the fewest number of on-street parking spaces
- The lack of consistent store hours is an impediment to shopping downtown
- Concord residents value and support the downtown

The stakeholder-specific results of the focus group interviews are set summarized here:

MERCHANTS

Economic Observations:

- Downtown's retailing environment is difficult. As one participant noted, "The most difficult environment I have ever seen."
- Sales dipped as much as 15-20% in last 2 years, seeming to improve now
- Retailing's strength in downtown is perceived to be that retailers know their customers
- Vacancies on Main Street are a problem
- Concord residents are supportive of a strong downtown
- "Today's retailers are more passionate about what they do- they are the survivors"

Street Observations:

- Concerns were raised about the impact of the project during the construction phase
- Potential loss of on-street parking spaces, particularly on Main Street would be difficult
- Maintenance of existing landscape/streetscape is not satisfactory
- Some, but not all, merchants noted, "Something needs to be done" in downtown. The project is thought to create a more attractive atmosphere, would give us a good image and attract more people-- -- but timing is an issue
- "Downtown doesn't have curb appeal"
- Heat the sidewalks

RESTAURANTS

Economic Observations:

- In contrast to most of the retailers participating in the focus groups, restaurant owners expressed optimism and noted stable-rising sales volume
- Lunch is particularly strong due to the concentration of office workers in downtown
- Restaurateurs noted that the state closes down its museums on weekends, which has a negative impact on potential tourism
- Outdoor seating is profitable

Street Observations:

- Pedestrian signage directing people to businesses off Main Street
- Consider closing side streets to vehicles

PROPERTY OWNERS AND REALTORS

Economic Observations:

- Downtown is stressed

- Property owners and realtors articulated the challenges of keeping stores full in the current economic environment
- Landlords expressed difficulty in justifying improvements to their buildings when vacancies are high
- Banks are more cautious about lending to both merchants and building owners
- Concord residents overall are supportive of downtown
- Existing tenants are shopping leases
- Current environment is a "most challenging time for building owners."
- The majority of tenants are experiencing a difficult business environment
- Number of vacancies is rising
- As one participant noted, "downtown Concord has never been this bad
- Upper floor space is difficult to lease because it often lacks air conditioning, elevators and handicapped access

Street Observations:

- Downtown's sidewalks are looking tired
- The group was supportive of improvements to the streetscape in downtown
- Uncertain if this is the right time to take on a new project
- Need to change Main Street from a thoroughfare to a destination

PROFESSIONAL SERVICES

Economic Observations:

- Downtown has a strong setting for office space but the recession has had an impact and that many building owners are taking a wait and see attitude
- First floor vacancies are more obvious now than in the past
- There is a strong sense of community in downtown Concord, residents are involved in the process and volunteerism is strong
- There needs to be more things for younger people to do in downtown, particularly a stronger nightlife
- Downtown is seen as a great place to network for businesses, a major strategic advantage within the market environment
- Consistent store hours would help, particularly if evening hours could be introduced
- Bicentennial Square and Eagle Square are currently underutilized
- Downtown retail inventory is not complete
- More restaurants would improve the ambiance of downtown

Street Observations:

- As was true for the merchants, some of the participants in the focus groups expressed concerns about the impact on downtown during the construction phase
- If downtown was attractive, it will be worth walking

ENERGY AND ENVIRONMENT

Economic Observations:

- Compact design of downtown is seen as supportive of green initiatives, but the environment-supportive aspects of downtown are currently not highlighted in its marketing messages
- Participants noted there is very little green space in downtown now, apart from the statehouse lawn
- Currently there are not enough trees to soften the streetscape and provide shade in the summer
- Need to have continued plan for economic development that extends beyond the streetscape

Street Observations:

- Traffic calming and bicycle uses would all accentuate the positive environmental factors potential in downtown Concord
- Planting of trees, rain gardens and storm water management systems are essential

- Opportunities abound in encouraging alternative transportation options (such as charging stations for electric cars)
- Place recycling containers on sidewalks
- Be conscious of light trespass and light pollution
- Incorporate solar energy into design
- Utilize porous surface treatments
- Important to have strong environmental metrics

CREATIVE ECONOMY

Economic Observations:

- Downtown is fragile and tenuous
- Rents are prohibitive for artists -- -- artists need affordable retail space
- It's hard to get people to come out for a cultural activity
- Capital Center is struggling, attracts 96,000 people a year
- Many of our landlords are reaching the end of their career and are reluctant to take on a major investment

Street Observations:

- This is a good time for innovation, trying something new

RESIDENTS/PATRONS

Economic Observations:

- Downtown is "not a happening place for young people."
- I love walking along Main Street
- I like the architecture
- Downtown needs more of a small town feel
- There has to be more than shopping that you go downtown for
- Concord has a lot to offer
- Concord is a hidden gem
- Downtown has potential

Street Observations:

- Participants noted that traffic in downtown moves a bit too quickly and that in cities like Keene, traffic moves more slowly and that is safer for pedestrians
- There was a desire for a bike lane in downtown and it was noted that parallel parking is more conducive to a bike lane
- There is generally a shortage of effective handicapped-designated parking spaces in downtown
- Signage downtown is out of control
- Downtown needs more trees and window boxes to make it more attractive
- Public restrooms are needed -- -- important for tourists
- There should be an information kiosk
- There needs to be a mix of accessible parking, one size does not fit all
- "It's kind of dumb to have four lanes for cars and not enough space for pedestrians"
- Ally connections should be more attractive and highlighted
- Backing up onto Main Street is awful, but parallel parking is worse
- "I've never had any difficulty finding parking"

APPENDIX C
Case Studies

As part of the research strategy for the economic analysis of downtown Concord, Hoyle Tanner team member, Russ Thibeault of AER, conducted Case Study analyses of two New Hampshire downtowns that had undertaken streetscape improvements. The selected cities were Keene and Manchester. Both communities completed their streetscape projects more than 10 years ago. Keene's revitalization effort occurred some 30 years ago. As such, quantitative data is outdated and unreliable for the purpose of equal comparison. For Re-Thinking Main Street, the case study methodology was an informative, retrospective assessment to capture the general benefits and issues with each project

CITY OF KEENE

Although there are major differences between Keene and Concord, the results here were striking from both a sense of the ambiance and its economic performance in Keene's downtown.

Keene is of course the home to Keene State College, whose campus adjoins downtown. This proximity provides a captive market for the businesses. One would easily conclude that campus life spills over to downtown providing synergy that would otherwise dissolve if existing without the college as its neighbor. Our interviewees in Keene however indicated that downtown activity was most intense during the summer months, when students were away, therefore downplaying the significance of the student market.

What Keene lacks most from is the captive, affluent market downtown Concord enjoys. In reaching just one mile from the Main Street District, downtown's strength comes from the population of 15,000 workers. Most are clustered densely around the State Capitol.

Like Concord is investigating, Keene narrowed its Main Street, previously billed as the "Widest Main Street in the World". In doing so it, travel speeds through the downtown were slowed and some on-street parking was sacrificed. The immediate benefit was the improved pedestrian environment which has yielded success that more than offsets these factors.

Re-Thinking Main Street theorizes the hoped improvements in downtown Concord will yield economic benefits some 40 to 50 years from today. Keene was selected specifically to look at the state of the downtown some three decades after their revitalization efforts. Here's what was revealed:

- First floor vacancies are virtually nonexistent;
- Upper floor space is actively utilized;
- New high-end housing ($400,000) plus is being built in downtown;
- There has been $50 million in new investment completed/programmed in downtown, generating over $1 million in new tax revenues yearly;
- Downtown has an active nightlife; and
- Retailers/restaurants are diverse and the shops show high levels of tenant improvements

The stakeholders in downtown Keene value their balanced downtown and the clear consensus is that the improvements have been a major success, supporting a downtown that is economically healthy and a valued social/economic center for the community.

Lessons Learned in Keene:

- Downtown Keene's vitality is partly attributable to the adjacent college, but not totally so—Concord's downtown daytime population is higher and Concord's market area more populated;
- Like Concord, serves a broad geographic market;
- Excellent streetscape design is important;
- "We're trying to get cars to be stuck in downtown, not drive through as fast as they can";
- Did lose some parking spaces—a concern to Concord merchants (no garages in Keene, only one small parking deck), but downtown is prospering none the less;
- City must commit to maintenance;
- Public sector is very entrepreneurial (Monadnock Regional Development Corporation);

- Coordinating the construction program with businesses is critical; and
- Keene does not have easy Main St bypass options, unlike Concord. This is a favorable condition for Concord.

Concluding Thoughts:
The health of downtown Keene during the economic climate of today was remarkable. Our analysis also revealed the streetscape was one portion of a much greater effort to revitalize and retain Keene's market edge. The downtown is managed and maintained. Efforts in Concord should be considered a base-building activity that will have a positive economic impact but the real benefit is that projects of this type enable downtowns to capture spin off economic benefits of other public and private investments in downtown.

CITY OF MANCHESTER

The results of pedestrian improvements in Manchester were also successful. When improvements were started on Elm Street in 1996, in the words of one participant "downtown was a dustbowl". Today, downtown Manchester has attracted new retailing, a particularly strong mix of new restaurants and expanded cultural offerings anchored by the Palace Theater, an expanded Currier Museum of Art, an expanded NH Institute of Art, the Verizon Center and Merchants baseball field. Most recently downtown Manchester captured the $130 million Elliot Hospital Acute Care facility.

In retrospect, Manchester was already in demise before efforts to revitalize the downtown started. Factors that attributed to its dearth began as early as the 1950s and 1960s with the demise of the Amoskeag Millyard which pulled workers out of downtown. Then through the 1970s and 1980s downtown Manchester was hard-hit by suburban retail and office development. The final blow occurred after downtown re-made itself to be the self-styled financial center of the New Hampshire only to succumb when the state's five major banks failed.

With regard to travel lanes, Manchester undertook a "Road Diet" with a reduction in lanes from four lanes to three. Observers in Concord noted Elm Street's center line shifts back and forth when travelling down the road. One person commended "it's annoying", but in Manchester the tradeoff was additional parking. Under the previous four lanes, all parking was parallel and the new three lanes allowed for angled parking in some blocks.

Lessons Learned in Manchester:
- Streetscape improvements were not begun until downtown was severely distressed and was probably less effective because of this fact
- Streetscape allowed downtown to capture benefits of Verizon Center, Fisher Cat Stadium, retain Art Institute—created a nightlife
- Resulted in additional on-street parking by converting parallel to angled spaces
- Improvements seen as a success today. The restaurants are doing well and residential uses are returning
- Downtown Manchester is also seeing some areas struggling today. Retailing is weak and upper floor occupancy has been impacted by the recession

Concluding Thoughts:
Two clear messages should guide Concord.
1. Sooner rather than later. Concord's market has vulnerability and once a downtown loses the critical mass needed to draw shoppers and visitors, it is very difficult to recapture their attention. Concord is approaching that point.
2. Such a renovation of the streetscape is not speculative, but rather a proven way to enhance the downtown economy and investment climate. Concord is one of the few, if not the only, major NH downtowns to not undertake a major streetscape improvement program. Concern is mounting that if downtown Concord does not follow the lead of essentially every other downtown in New Hampshire by improving the pedestrian environment, then it will not only fail to capture its share of this growth, but will actually experience declining sales levels, which result in lower occupancy and rent levels—generating fewer jobs and a lower tax base.

APPENDIX D
Evaluation of Alternative Concepts

EVALUATION OF ALTERNATIVE CONCEPTS

The concepts initially presented to the public for input and comment were those developed in the 2006 Downtown Streetscape Improvement Plan. This plan presented conceptual design recommendations that a focused on pedestrian safety, way finding, and improvements to Phenix and Low Avenues. The concepts presented represent those that would not negatively impact the economic vitality of the downtown. The economic analysis indicates that Main Street is healthy but fragile. Based on concern from some of the public over the expense of a construction project in this economy, the concept to keep Main Street as is was kept throughout the process.

Main Street must undergo improvements if the many goals identified for this project – economic vitality, appealing destination and attractive historic place – are to be achieved. As it exists today, on average there is 99 feet of space from building face to building face along Main Street. Current considerations limit options for streetscape opportunities such as benches, trees, informational kiosks, and outside dining. There are real safety concerns for pedestrians crossing the street, as well as universal access issues particularly on the west side of Main Street. Main Street also has a moderately high accident rate for both vehicle-to-vehicle and pedestrian-to-vehicle accidents.

It was critical to engage as many stakeholders in the public participation process as possible to receive input, hear comments and concerns, and gather feedback to guide our team in developing a preferred concept that would achieve community consensus. Through the public process, many concept ideas were discussed and evaluated. For example, one idea was to close Main Street to traffic entirely, similar to the pedestrian mall on Church Street in Burlington, Vermont; this was deemed infeasible as the reduction in traffic would have an adverse effect on commerce. Burlington's success is due in large part to the close proximity of four colleges; also, its central shopping district is in the city's center. Another idea was to create a one-way loop traveling Main Street and Storrs Street. While this option addressed some of the goals of the project, it would have an adverse effect on the downtown economy.

The consultant team explored five new design concepts, in addition to the existing 4-lane configuration. For study purposes, the team focused on the portion of Main Street between pleasant Street and Capitol streets, on the assumption that this portion of Main Street illustrated typical issues for all of Main Street.

The team first researched previous approaches to street amenities and traffic management by examining historic photographs taken over a period of 125 years to understand how materials and design features were used. It was clear that brick and granite have always been predominant materials—brick for buildings, and granite for occasional buildings, but more commonly for bollards and curbing. Iron, also fashioned locally, was used for light fixtures and bollards. Sidewalks traditionally have been made of concrete.

Light fixtures changed regularly throughout the years, but until the past fifty years, they were scaled to pedestrians. The fixtures for the most part were fairly simple, yet attractive, relying on angled forms, rather than curved. Oftentimes, street signs were integral with the light fixture. We discovered that back-in-first angled parking was employed on Main Street in the 1920s. Although there is no intent to be saddled by the past, the team felt strongly that it was important to understand past approaches in order to inform future concepts and decisions.

The five new concepts were all based on a new 3-lane traffic configuration, a through-lane in each direction with a center turn lane. The area the fourth travel lane occupied provides space for wider sidewalks and streetscape amenities.
A number of factors were considered to determine the feasibility of converting Main Street from four lanes to three, including but not limited to:

- Roadway function
- Total traffic volume and level of service
- Turning volumes and patterns
- Weaving, speed and queues
- Accident history
- Pedestrian safety and mobility

- Presence of parallel roadways
- Economic impacts

It seems counterintuitive that reducing the number of lanes on a road from four to three can carry the same amount of traffic while providing safe and efficient travel. However, past research and case study results performed in areas where this type of conversion has been implemented prove this to be the result. The team also performed a traffic simulation model (Synchro) that showed this conversion on Main Street would not significantly impact vehicular Level of Service (LOS) at the intersections. In fact, the three-lane conversion with minor improvements to lane usage and adjustments to the signal at the intersection of Pleasant and Main Streets actually improves the LOS. (*See Appendix A for the Traffic Volumes and Operations Analysis)*

The 3-lane configuration would improve vehicle and pedestrian safety. It would reduce speed variability along Main Street, decrease the number of conflict points between vehicles, and improve sight distance for vehicles turning left. The 3-lane configuration removes left-turning vehicles from the through lane, thus reducing the need for drivers to wait behind or make an impulsive, sometimes hazardous, lane change around them. Based on past research and case studies, accident rates have been documented to decrease when four lanes are converted to three lanes. Pedestrian safety improves in several ways. It is easier to cross Main Street due to the shorter distance, and pedestrians have better sight lines to see oncoming vehicles.

While the new concepts are all based on three lanes, each offered a different parking layout on either side of the roadway.

The team studied each concept regarding traffic scenarios including patterns, lane use, and capacity; signalization; number and location of parking spaces; sidewalk widths; crosswalks; streetscape amenities, such as trees, benches, bicycle racks, and lighting; signage; access issues; vehicular and pedestrian circulation; utility impacts; and opportunities to showcase the City's history. Every concept incorporated the use of the Concord steam lines that exist in most of the study area to provide heated sidewalks wherever possible.

Existing 4-Lane Configuration

This concept used the existing parking configuration as its basis with angled parking on both sides of the street. As a result, this option contains the largest number of parking spaces but has the lowest potential for added streetscape amenities. The sidewalks on both sides are too narrow to permit additional street trees. The opportunities that exist for improving the sidewalks under this configuration include: repaving the sidewalks and resetting the curbing using consistent paving material; the pedestrian ramps could be brought up to code, where possible; new lighting could be installed throughout the area with historically themed fixtures; some trees could be added where sidewalk width permits; and the signage and way finding plan could be improved. Minor improvements to the signalized intersection at Pleasant/Main Streets would result in better traffic and pedestrian movements.

Existing 4-Lane Configuration

View Looking South From Capitol Street to Pleasant Street

Pros:

- Maximum number of on-street parking spaces

Cons:

- Widest pedestrian road crossing widths
- Sidewalk widths too narrow for additional street tree planting
- Limited number of existing street trees

11’ SIDEWALK

4 Travel Lanes

12’ SIDEWALK

View on East Side Looking South Towards Phenix Avenue

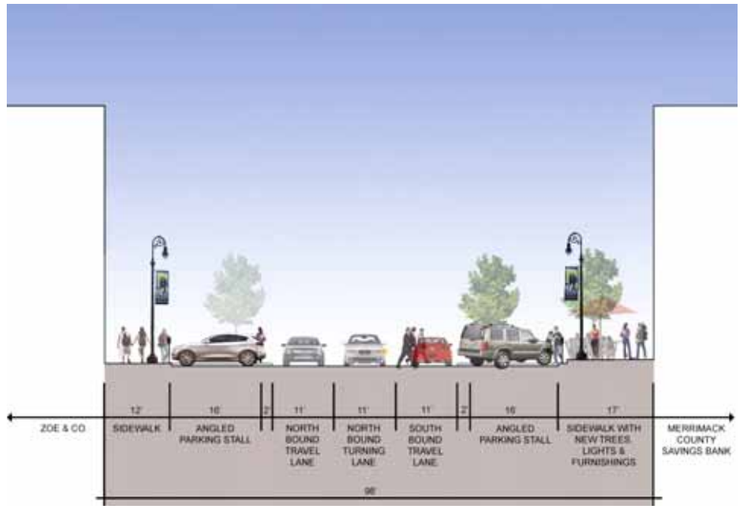
Concept 1 - Angled Parking Both Sides

This concept used the existing parking configuration – angled parking on both sides of the street – as its basis. As a result, this concept offers the highest number of parking spaces of all the design alternatives. The sidewalks on both sides would be reconstructed and widened slightly; however, they cannot be widened enough to permit additional tree planting or amenities such as benches, landscaped areas, informational kiosks, etc. as the other concepts could provide.

There would be safety improvements made in the form of new Enhanced Visibility Platforms for pedestrians crossing at the crosswalk locations. The universal access issues along the west side of Main Street – the double step curb that runs from Park Street to Pleasant Street and along portions on South Main Street – would remain.

Concept 1: Angled Parking Both Sides

View Looking South From Capitol Street to Pleasant Street



Pros:

- Sidewalk slightly widened
- Maximum number of on-street parking spaces

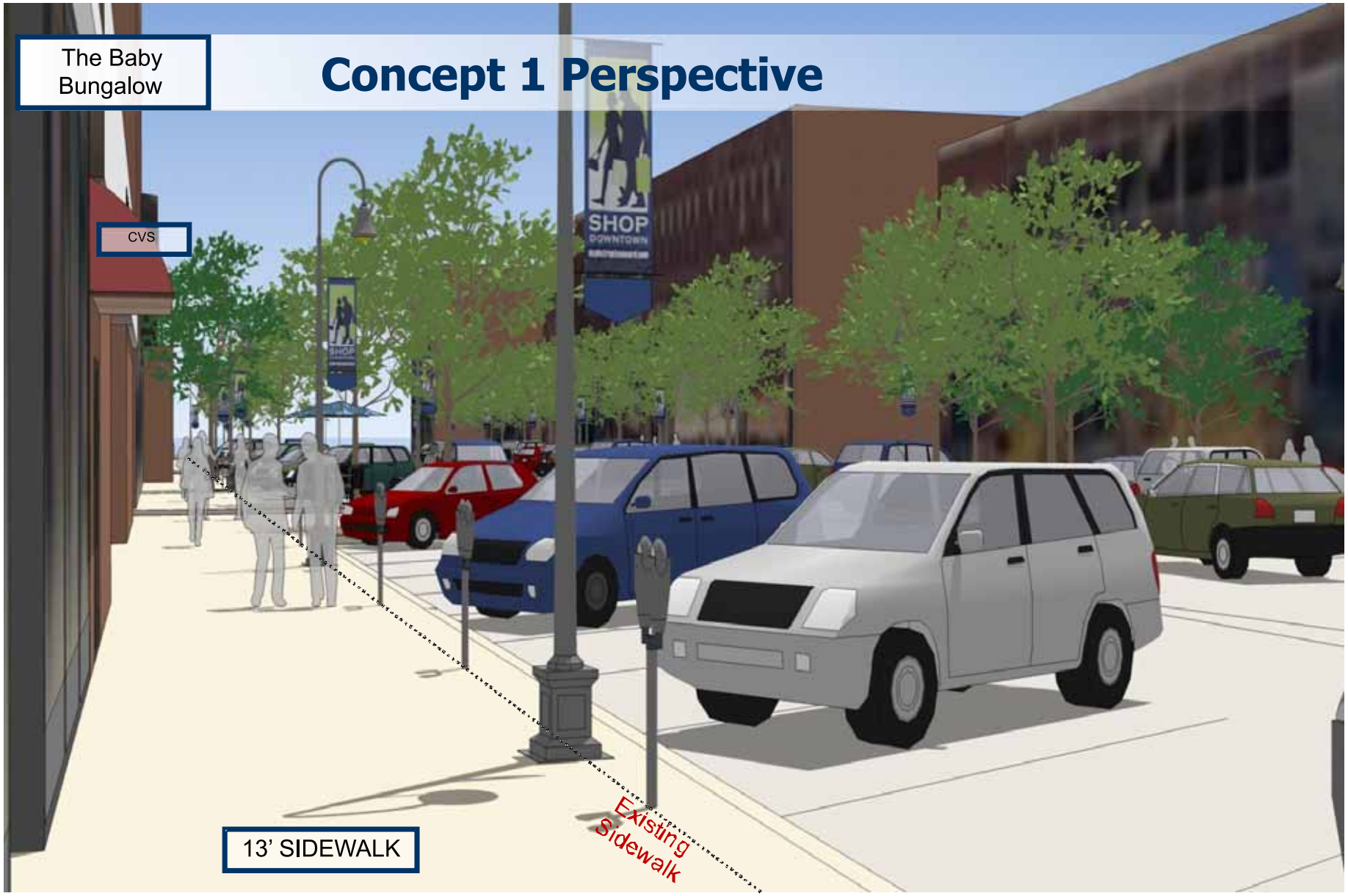
Cons:

- East sidewalk too narrow for street tree planting
- Fewest number of new street trees
- Widest pedestrian road crossing widths
- Sidewalk universal access issues remain

12’ SIDEWALK

17’ SIDEWALK

3 Lane Option



View on East Side Looking South Towards Phenix Avenue

Concept 2 – Angled Parking on East/Parallel on West

This concept introduces parallel parking on the west side of the street. Keeping the centerline of the street in its current location, the option would create a dramatic increase in the westerly sidewalk width. For a portion of this stretch, the width would increase from 12 to 27 feet.

There would be safety improvements made in the form of new Enhanced Visibility Platforms for pedestrians crossing at the crosswalk locations. The universal access issues along the west side of Main Street consisting of the double step curb from Park Street to Pleasant Street and portions on South Main Street would become code compliant.

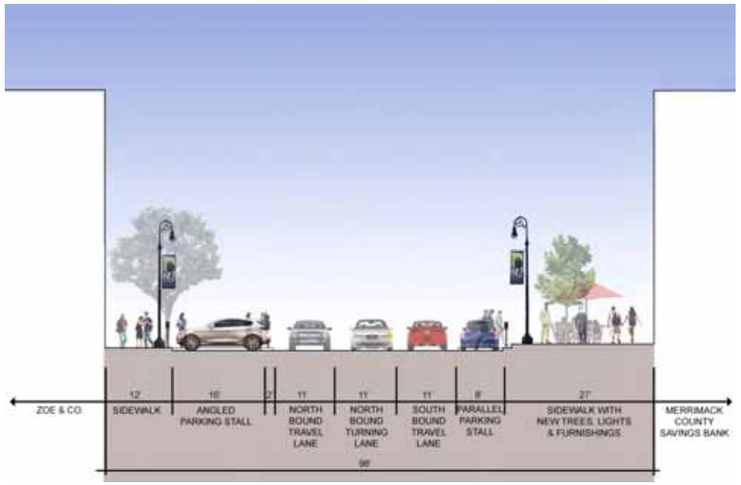
This concept reduced the parking count, as typically for every one parallel space, 1.6 angle parking spaces can be provided. Furthermore, though wider reconstructed sidewalks are desirable, the team concluded that 27 feet would actually be too broad a sidewalk for the projected pedestrian usage.

The easterly sidewalk would remain 12 feet wide, too narrow to permit additional tree planting or other amenities that the other options could provide.

Based on feedback from the public, this concept was eliminated early on in the process; it lacked public support.

Concept 2: Angled Parking on East/Parallel on West

View Looking South From Capitol Street to Pleasant Street



Pros:

- Safer pedestrian road crossing widths
- Removes sidewalk universal access issues

Cons:

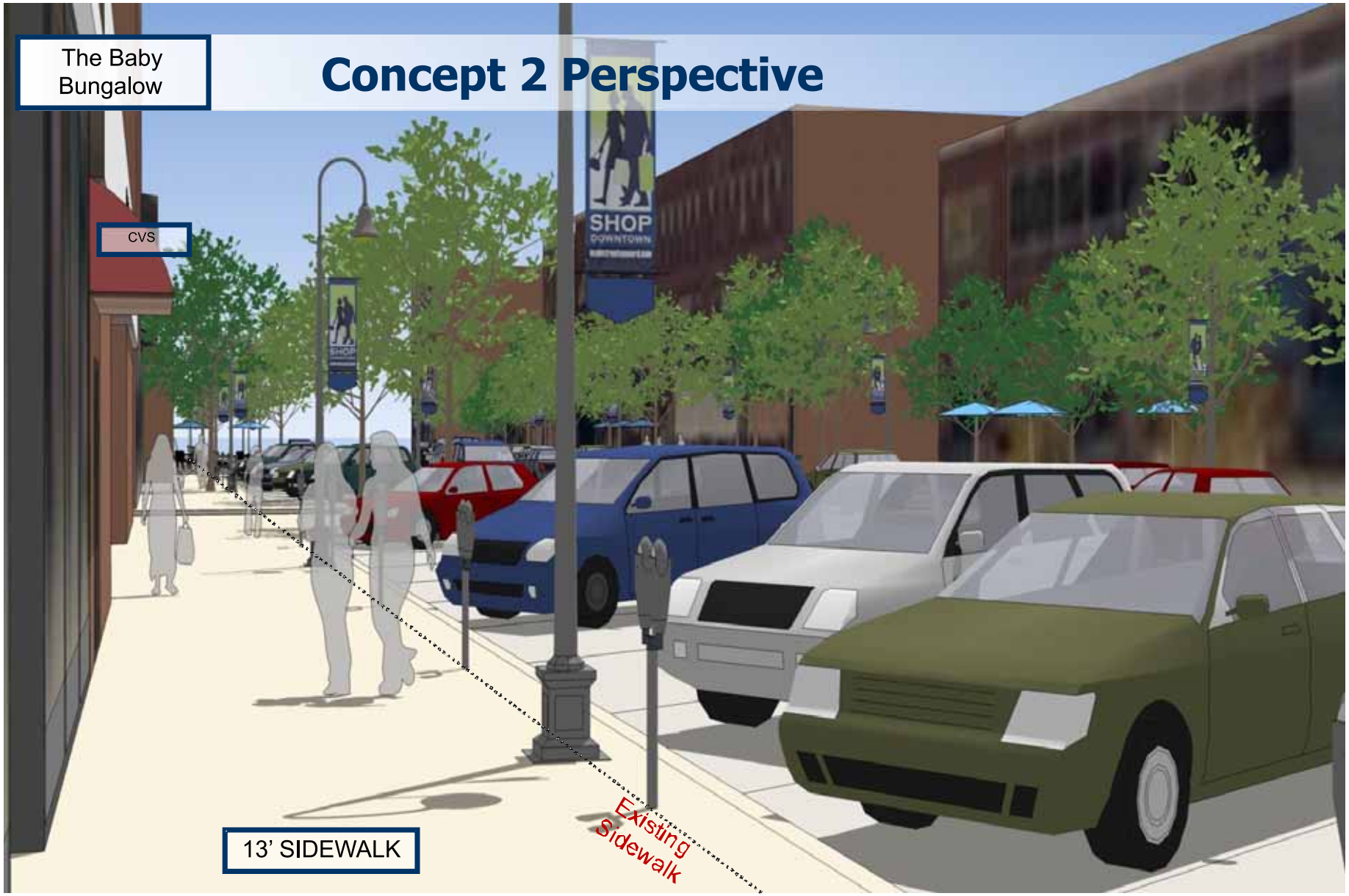
- West sidewalk too wide
- East sidewalk too narrow for street tree planting
- Reduced number of on-street parking spaces

12’ SIDEWALK

27’ SIDEWALK

3 Lane Option

Concept 2 Perspective



View on East Side Looking South Towards Phenix Avenue

Concept 2A: Angled Parking on West/Parallel on East

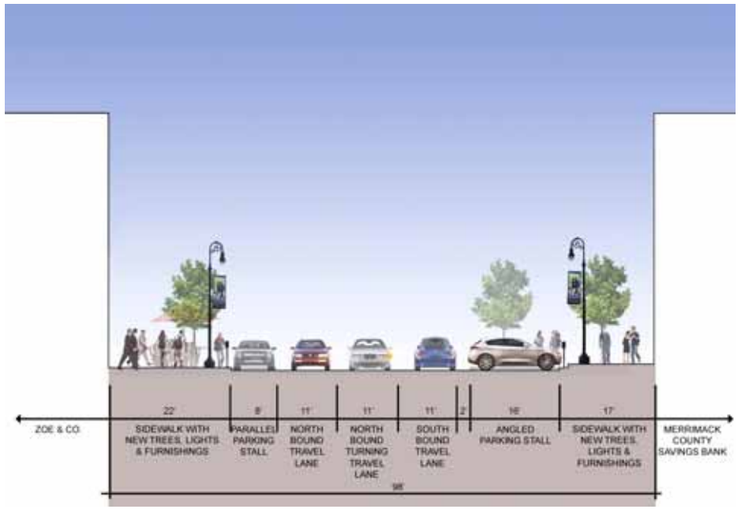
The parking configuration here is "flipped" from Concept 2. The result is a better balancing of sidewalk widths – to approximately 22 feet on the east side and 17 feet on the west side. Both of these widths would relate well to the projected future use of the sidewalks. The more balanced sidewalk widths would enable additional street tree planting; amenities such as benches, informational kiosks, historical markers, and plantings; and outside dining opportunities on both sides of the street. Overall it would be a greener, healthier streetscape. This option has slightly fewer parking spaces than Concept 2, because the intersecting streets on the west side reduce the number of spaces.

Safety improvements could be made in the form of new Enhanced Visibility Platforms for pedestrians crossing at the crosswalk locations. The universal access issues along the west side of Main Street – the double step curb from Park Street to Pleasant Street and along portions of South Main Street – could be removed.

Based on feedback from the public, this concept was eliminated early on in the process; it lacked public support.

Concept 2A: Angled Parking on West/Parallel on East

View Looking South From Capitol Street to Pleasant Street



Pros:

- Evens out sidewalk widths
- Street tree planting on both sides of the street
- Sidewalk width provides ample room for activities and pedestrian movements
- Provides safer pedestrian road crossing widths
- Removes universal access issues

Cons:

- Reduces number of on-street parking spaces

22' SIDEWALK

17' SIDEWALK

3 Lane Option

Concept 2A Perspective

View on East Side Looking South Towards Phenix Avenue

Concept 3: Parallel Parking Both Sides

This concept would have the lowest number of on-street parking spaces, but would maximize the sidewalk widths on both sides and allow street tree planting and streetscape amenities throughout the downtown area.

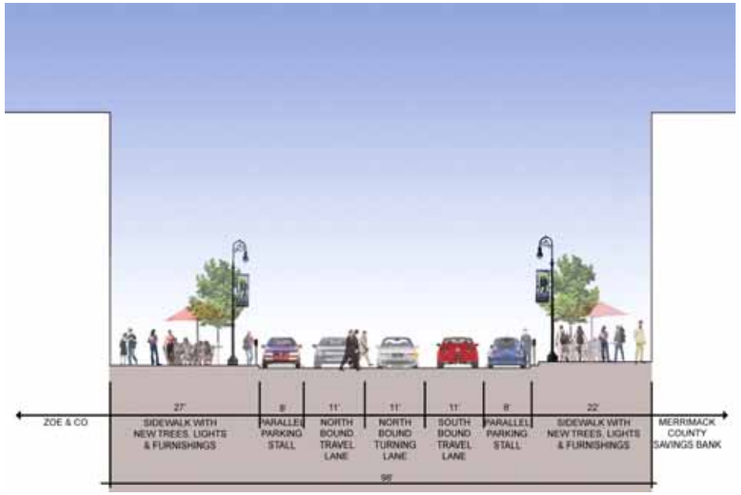
There would be safety improvements made in the form of new Enhanced Visibility Platforms for pedestrians crossing at the crosswalk locations. The universal access issues along the west side of Main Street – the double step curb from Park Street to Pleasant Street and along portions of South Main Street – would become code compliant.

A potential drawback of this configuration would be that the sidewalks may be too wide for downtown and thus appear too sparsely populated at non-peak times of the year.

Based on feedback from the public, this concept was eliminated early on in the process; it lacked public support.

Concept 3: Parallel Parking Both Sides

View Looking South From Capitol Street to Pleasant Street



Pros:

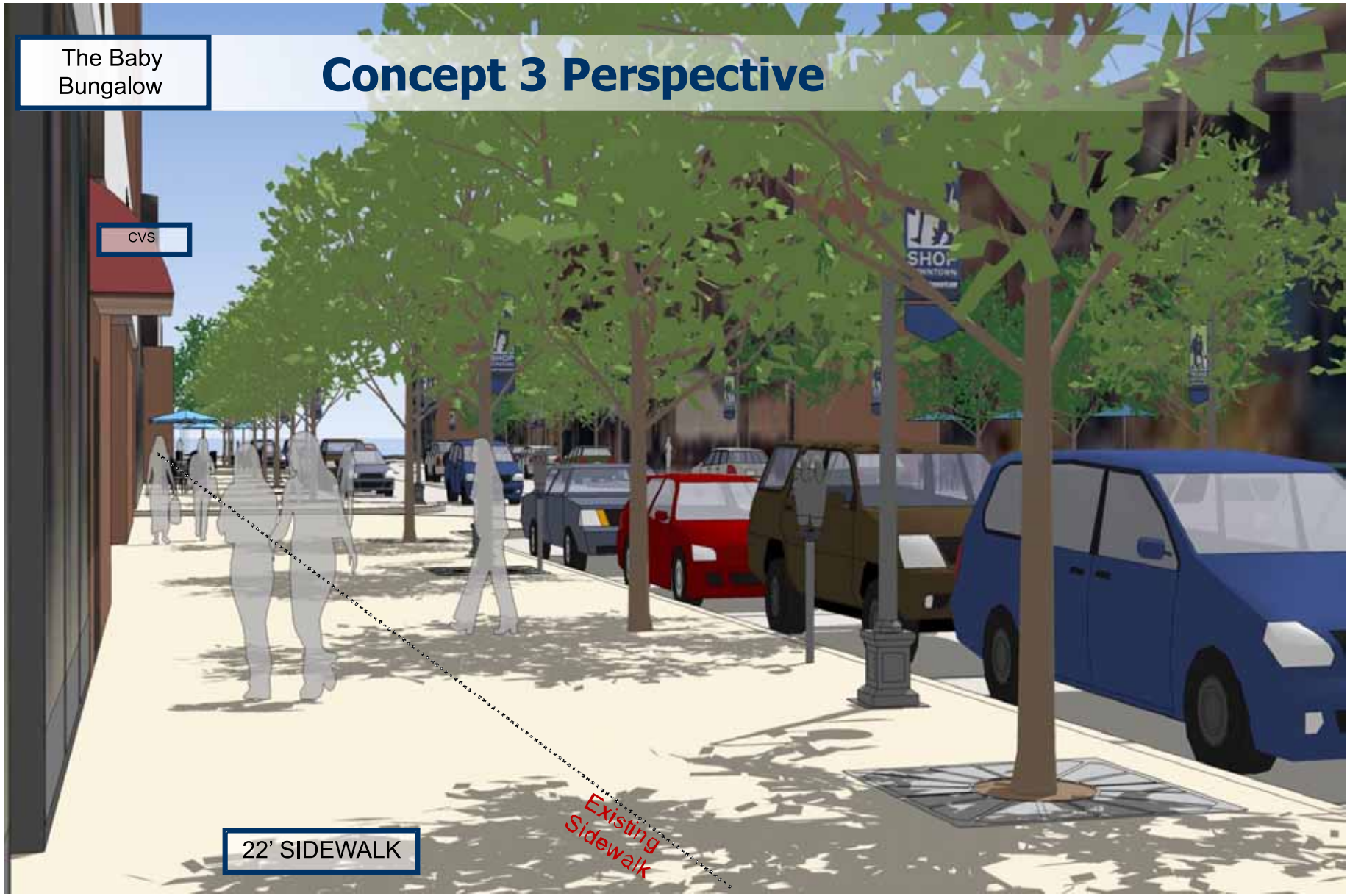
- Maximum street tree planting
- Safest pedestrian road crossing widths
- Removes sidewalk universal access issues

Cons:

- Sidewalk too wide for number of users
- Least number of on-street parking spaces

3 Lane Option

Concept 3 Perspective



View on East Side Looking South Towards Phenix Avenue

Concept 3A: Parallel Parking with Planted Medians

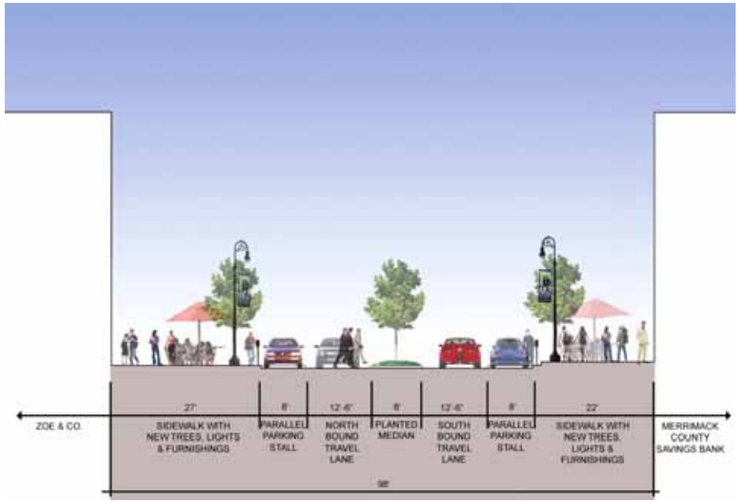
This concept creates the greenest downtown possible for Concord with street trees on both sidewalks and tree and shrub planting in center medians. Planted medians would also provide places of refuge for crossing pedestrians. The universal access issues along the west side of Main Street – the double step curb from Park Street to Pleasant Street and along portions of South Main Street – would become code compliant.

Finally, sidewalks would be too wide this configuration has the least number of on-street parking spaces. Vehicular movements, particularly in emergency situations, could be compromised by raised, fixed medians.

Based on feedback from the public, this concept was eliminated early on in the process; it lacked public support.

Concept 3A: Parallel Parking With Planted Medians

View Looking South From Capitol Street to Pleasant Street



Pros:

- Greenest version with most street trees
- Safest pedestrian road crossing widths with central place of refuge
- Removes universal access issues

Cons:

- Least number of on-street parking spaces
- Vehicular movement compromised by raised median, reduced flexibility
- Sidewalks too wide for number of users

27’ SIDEWALK

22’ SIDEWALK

3 Lane Option

View on East Side Looking South Towards Phenix Avenue

Concept 4: Angled Parking Both Sides with Equal Sidewalks

This concept has angle parking on both sides of the street, thereby maintaining as many parking spaces as possible. Input gathered during the evaluation of these concepts indicated that while most prefer the angle parking, they experience difficulty once parked if a larger vehicle was parked next to them as it reduces oncoming traffic visibility and forces them to inch their way out into traffic. The Hoyle, Tanner team explored back-in angle parking as a means to improve this situation. Some of the benefits are: (1) when leaving a parking space the driver is able to see oncoming traffic and cyclists; (2) no one has to back out blindly from a parking space; (3) car doors open in a manner that directs passengers towards the sidewalk; (4) trunks are adjacent to the sidewalk and open doors offer protection from the street; and (5) loading and unloading occurs outside of the travel way. Many felt that this would be difficult to adjust to, but in fact it is easier than parallel parking and safer than blindly backing into traffic.

The entire street including sidewalks would be reconstructed in order to shift the centerline of the street to the east to equalize sidewalk widths. The sidewalk widths would be conducive to new street tree planting and allow flexible use and placement of streetscape amenities throughout the downtown area.

There would be safety improvements made in the form of new Enhanced Visibility Platforms for pedestrians crossing at the crosswalk locations. The universal access issues along the west side of Main Street consisting of the double step curb from Park Street to Pleasant Street and portions on South Main Street would become code compliant.

The result would be more spacious and pedestrian friendly sidewalks than today, without there being overly or unnecessarily broad for the scale of downtown. This concept strikes the best balance between vehicular circulation, pedestrian safety, parking spaces and downtown revitalization opportunities.

Based on feedback from the public, this concept is the preferred concept.

Concept 4: Angled Parking Both Sides with Equal Sidewalks

View Looking South From Capitol Street to Pleasant Street

Pros:

- Maximum number of on-street parking spaces
- Practical and flexible sidewalk widths
- Street tree planting on both sides of the street
- Safer pedestrian road crossing widths
- Safer pedestrian road crossing widths

Cons:

- Sidewalk width for street tree planting 4" less than desired 14'-10"

14.5' SIDEWALK

14.5' SIDEWALK

3 Lane Option

Concept 4 Perspective

View on East Side Looking South Towards Phenix Avenue

North Main Street to Pleasant Street

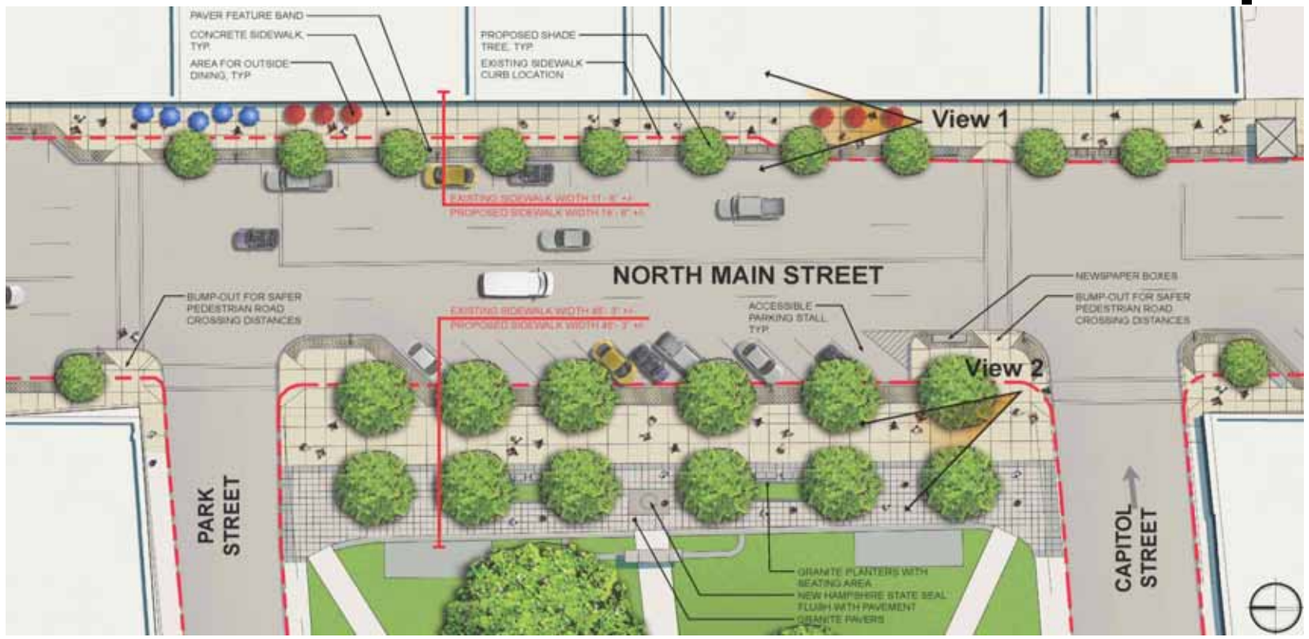
Minor Sidewalk Improvements

Major Sidewalk Improvements

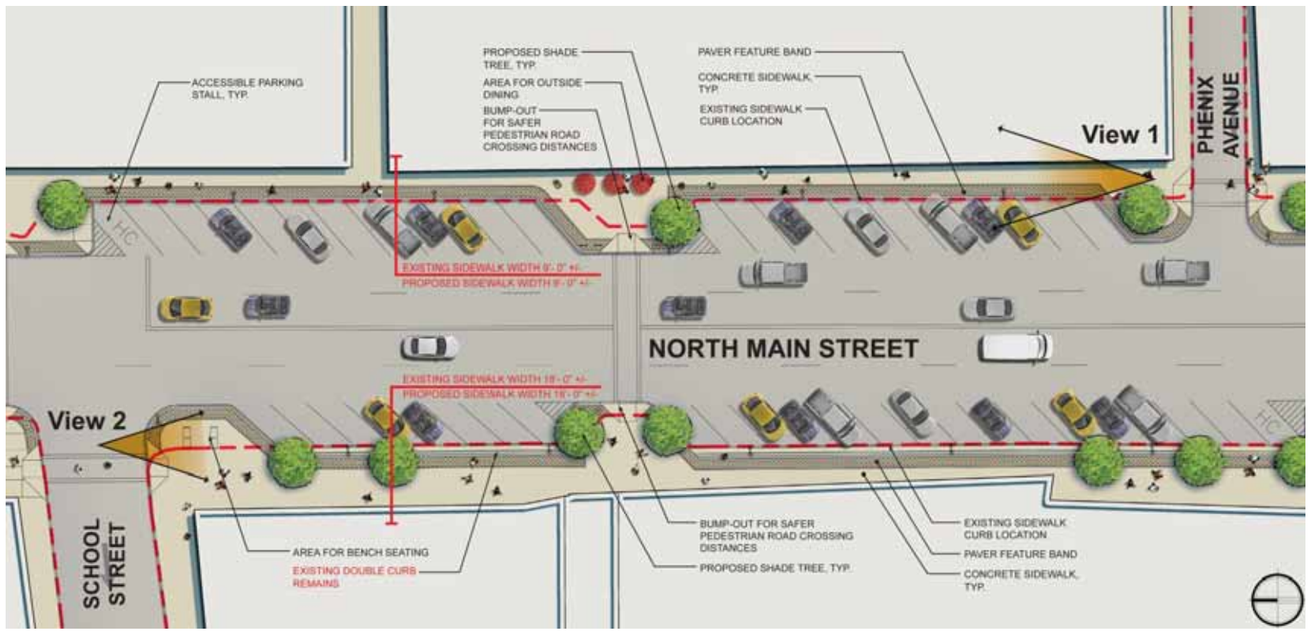
* - Handicap Parking Spaces

Minor Sidewalk Improvements

State House Plaza

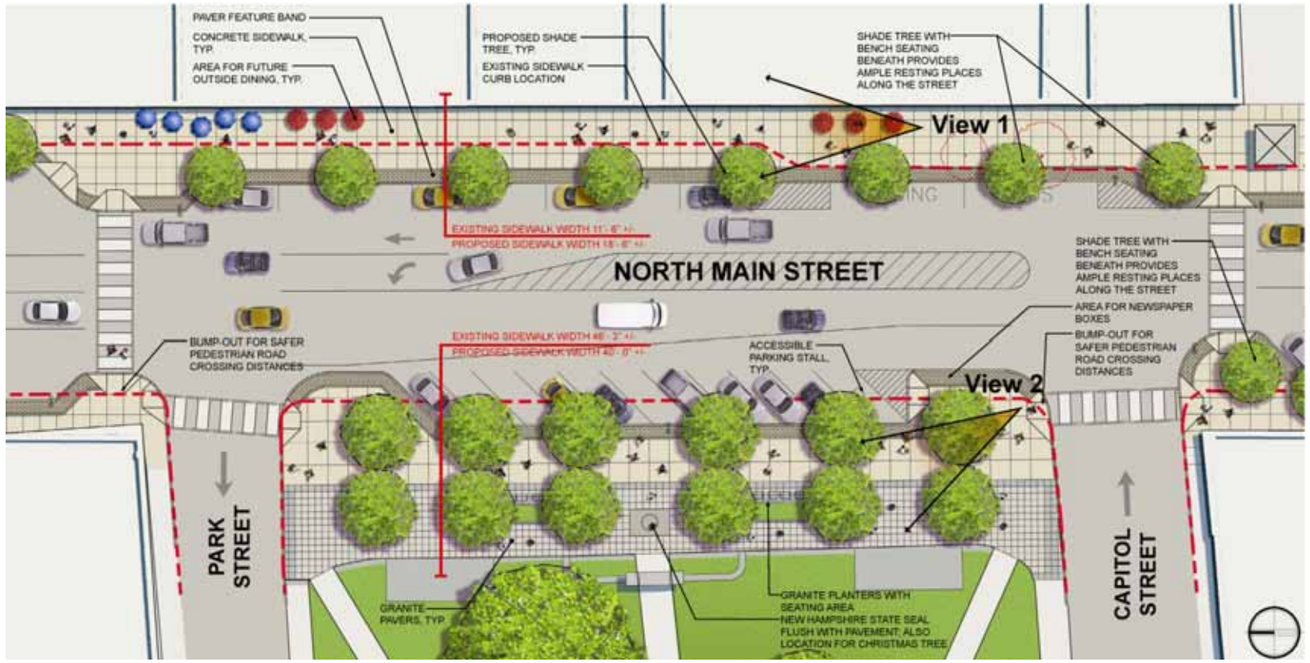


School Street to Phenix Avenue

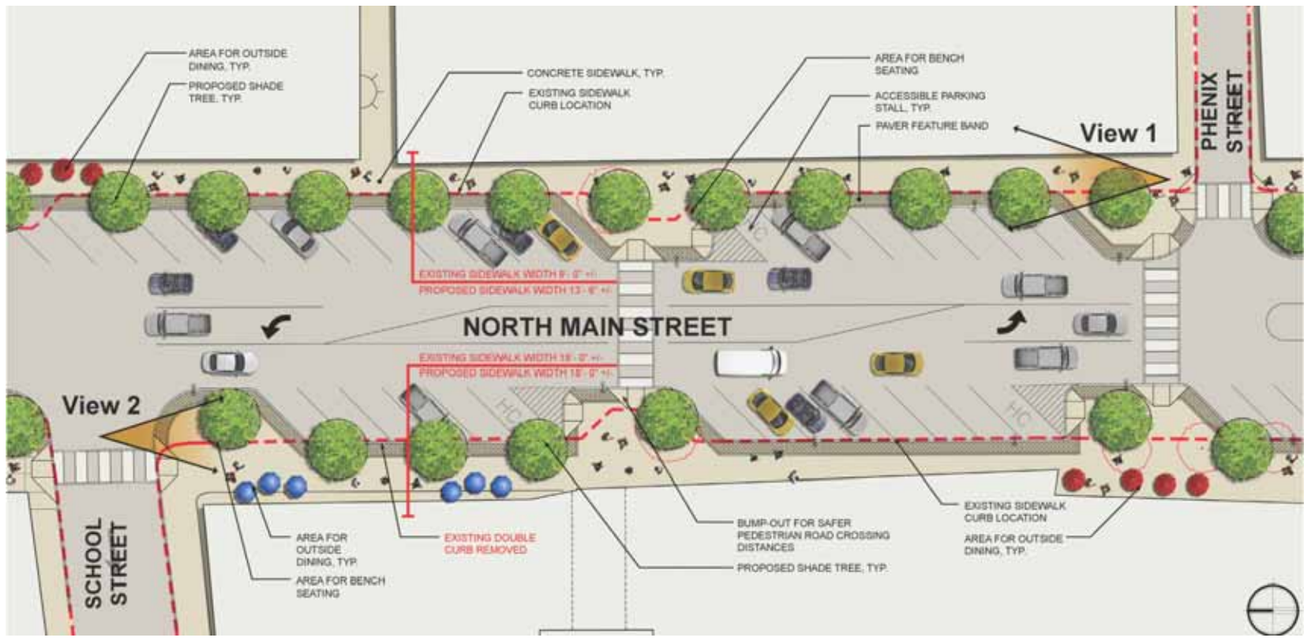


Major Sidewalk Improvements

State House Plaza

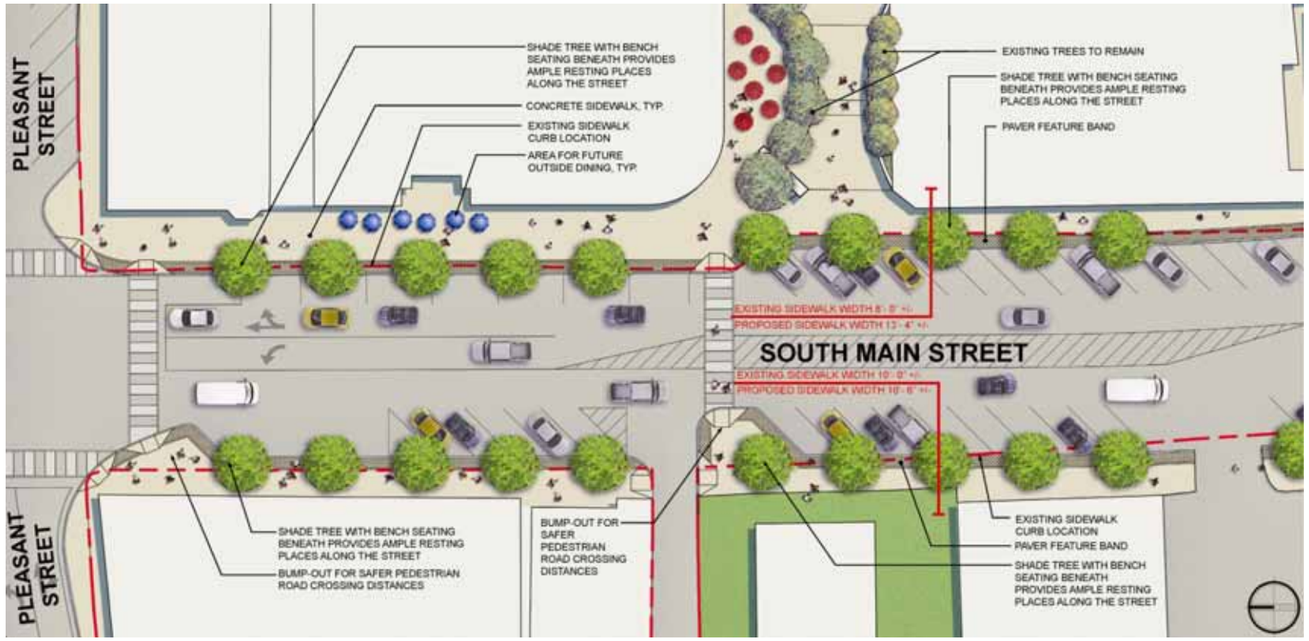


School Street to Phenix Street

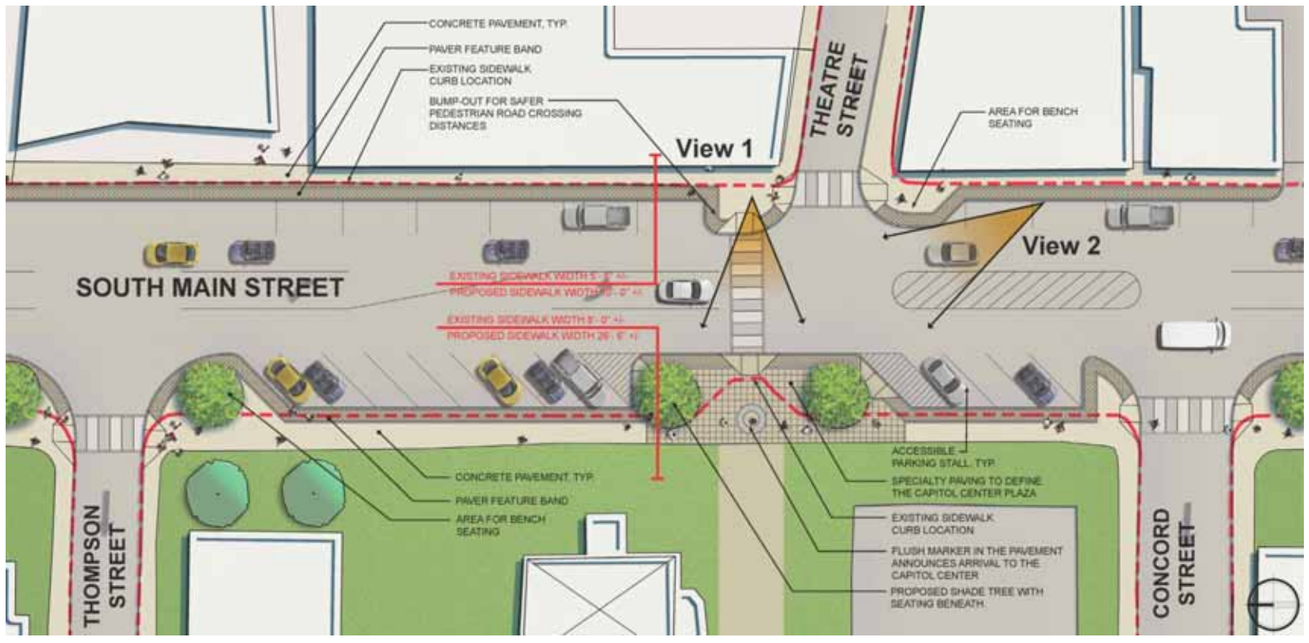


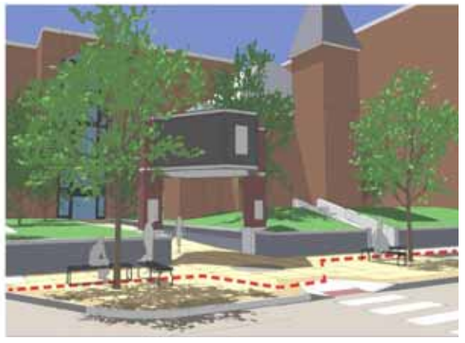
Major Sidewalk Improvements

Pleasant Street to the Co-Op



Capitol Center for the Arts





Options for Streetscape Amenities

With more spacious sidewalks on both the east and west sides of Main Street, a variety of pedestrian amenities can be installed in an organized manner without interfering with the prescribed space for pedestrian movement . Along the curb there will be a "site furnishing zone" to accommodate shade trees, planters, flower baskets, benches, bike racks, kiosks, trash receptacles, newspaper boxes, etc. Also in this zone will be necessary infrastructure features, such as hydrants, meters, parking signs, traffic directional signs, and street lights. Because street lights play such a large visual role on the street in both day and night, they are considered as both amenity and infrastructure.

There are three primary criteria to follow when selecting streetscape amenities:

1. Develop specific, coordinated, locational standards for each piece as part of the whole
2. Select a clear "family" of pieces
3. Select pieces with demonstrated functionality, durability and high quality.
4. Select pieces that are historically appropriate for Concord's Main Street

It is essential that the type and location of amenities be made in concert with city maintenance personnel, so that all aspects of maintaining the streetscape over time are thoroughly vetted from the outset.

With proper planning and design, all of these streetscape elements (amenity and infrastructure) should have prescribed locations that impart a sense of order, purpose, permanence, and comfort to the public realm. The consultant team also recommends that all elements be carefully selected with shared, consistent characteristics so that, taken together, they appear to be part of a "family" that belongs on Main Street. The team recommends selecting high quality, well designed, durable items from reputable manufacturers that both function well and have proven track records in northern, cold-climate regions.

Main Street's current amenities have very little consistency of style, location or level of quality. They actually contribute to a sense of clutter along the sidewalks. On the following pages, there are examples of amenities from reputable manufacturers to consider using in Concord. Some are more suited than others, in terms of style. It is critical that any final decisions should reflect, though not necessarily copy, forms and materials that have historically been used along Main Street.

Also included are several ways that the city could showcase its history and further add to the uniqueness of Main Street. As an example and shown on the following page, the team developed a double-sided marker that conveys directional information on one side and historic images and text on the other. These markers could be located on the new Enhanced Visibility Platforms at intersections where space is available for pedestrians to pause, look and read. One marker could tell the story of the Abbot-Downing Company, which even had a presence on Main Street. Another could explain the role of granite in the city and beyond. (The Library of Congress, the largest building in the world when built, was made from Concord granite.) Other locally important industries, such as printing, musical instruments, furniture, silver, and harnesses, could be similarly highlighted. Significant events that occurred downtown, such as President Lincoln's speech or the first celebration of Old Home Days, could also celebrated. A third tactic would be to incorporate historic forms into contemporary designs. For example design a bicycle rack that reflects the form of an early bicycle, with its large front and small rear wheel. The Concord Heritage Commission should be invited to participate in developing the markers, which perhaps could be integrated into the historic plaque program the commission already has underway.

The appearance and proper placement of all streetscape elements will help to convey the Main Street important message that this Main Street is the State's Capital and that great care has been taken in giving it the appropriate stature and comfort.

Historical Information Marker

Double-Sided Historic/Information Marker: Concord Historical Context

Main Street Informational Context

Double-Sided Historic/Information Marker: Main Street Information Context

Site Furnishings / Street Amenities

Existing Amenities

Existing Light Poles

Light Poles

Existing Bench

Benches

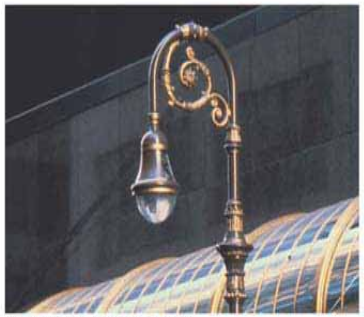
Existing Newspaper Boxes

Newspaper Boxes

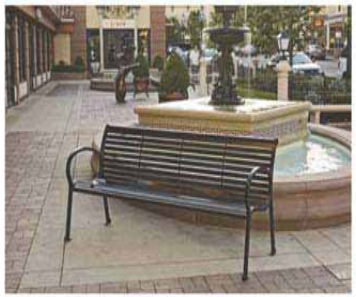
Proposed Amenities

Decorative Lantern Fixture

Spring City - Cambridge Cross Arm



Spring City - Bishop's Crook



Landscape Forms - Scarborough Bench

Landscape Forms - Plainwell Bench

Victor Stanley - Steelsites Bench

Contemporary Newspaper Box

Traditional Newspaper Box

Newspaper Box incorporating Advertising

Site Furnishings / Street Amenities

Existing Amenities

Existing Trash Receptacle

Trash/Recycling Receptacles & Ash Urns

Existing Bollard

Bollards

Existing Bike Rack

Bike Racks

Proposed Amenities

Landscape Forms - Scarborough & Napoleon

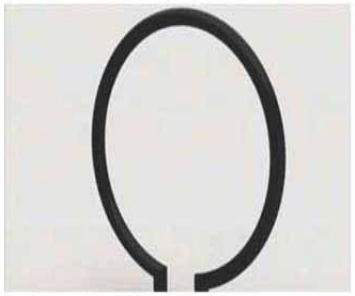
Big Belly Solar Trash and Recycling Receptacles

Victor Stanley - Ironsites Litter Receptacle & Ash

Landscape Forms - Annapolis Bollard

Reliance - Architectural Bollard

Dumor - Decorative Bollard



Landscape Forms - Ring

Landscape Forms - Pi Bike Rack

Alloy Castings Company - Bike Hitch

Site Furnishings / Street Amenities

Existing Amenities

Existing Planter

Planters & Hanging Baskets

Existing Tree Grate

Tree Planting Methods

Proposed Amenities

Landscape Forms - Rosa Planter

Haddonstone Planter

Hanging Basket on Light Pole

Paver Grate Installation

Tree Planted with Paver Grate

Tree Planted with Paver Grate

Site Furnishings / Street Amenities

Proposed Amenities

Wooden Legs and Frame

Steel Legs and Frame with Porcelin Enamel Graphics

Aluminum Legs and Frame with Porcelin Enamel Graphics

Informational/Historic Markers: Horizontal Viewing

Portable Seasonal Structure

Portable Seasonal Structure

Permanent All Year Structure

Kiosks

Brick with Flush Granite Banding

Concrete Unit Pavers

Concrete Pavement with Unit Pavers with Granite Band

Brick Pavement and Unit Pavers with Granite Band

Sidewalk Pavement Material Options

APPENDIX E
Traffic Volumes and
Operations Analysis

EXISTING TRAFFIC DATA

The existing traffic data for this corridor was provided by the City of Concord. This data, which consisted of manual turning movement counts at each intersection on North Main Street, was collected by City staff during August of 2008. The turning movement counts recorded both the number and classification (i.e. passenger car or heavy vehicle) of each vehicle in the intersection as well as the direction it went. These counts were performed during the weekday peak periods of 7:00 – 9:00 AM, 11:30 AM – 1:30 PM, and 4:00-6:00 PM. From these periods, the peak hour volumes were determined. This data was then adjusted to represent the peak month of the year using historical monthly data for Urban Highways compiled by the New Hampshire Department of Transportation (NHDOT) in 2008. The city counts were also supplemented with turning movement counts for the South Main Street intersections provided by Vanesse Hangen Brustlin, Inc. (VHB) in the Sanel Block Traffic Study performed in 2009. Since they were collected at different times, the North and South Main Street traffic volumes then needed to be balanced together. This was done by analyzing the amount of traffic that arrived and departed each intersection and making additions or subtractions as needed. Utilizing an assumed 1% background growth rate and anticipated traffic growth from Capital Commons and the proposed Sanel block, the AM, Mid Day, and PM traffic network volumes were increased to represent a 2010 Base year.

Additionally, manual pedestrian counts were conducted by the city during each of the counting periods. These counts were not adjusted to peak month or increased using a background growth rate, but have been incorporated into the traffic models as counted.

OPENING YEAR AND FUTURE YEAR TRAFFIC VOLUMES

It was determined from this data that the Main Street corridor was the most congested during the PM peak hour (4:30 to 5:30 PM). For this reason, only the PM volumes were further investigated for their feasibility with the corridor options. Since it is desired to see what the traffic will be during a potential opening year, the PM traffic volumes were increased again using the same growth rate and additional site specific growth. The resultant PM peak hour volumes represent a 2013 opening year and are illustrated in Figure 1.

A ten year design horizon was desired for the Main Street corridor. For this reason, the 2013 traffic volumes were increased to 2013. This was done using the same 1% growth rate and site specific traffic, while adding additional traffic from a possible NHDOT Park and Ride on Storrs Street. The PM peak hour volumes for the 2023 Future year are shown in Figure 2.

With the hope that major sidewalk improvements will increase business and pedestrian activity, for the 2013 and 2023 3-lane scenarios the pedestrian volumes was increased by 10 and 20 percent, respectively. Pedestrian volumes for the 2013 and 2023 existing 4-Lane scenario have not been increased.

This project also desired to determine what the daily traffic volumes would be at midblock segments. This is typically done using an Automatic Traffic Recorder (ATR) which is deployed for a period of 24-hours or longer. Since ATR counts were not conducted, the TMC counts were used to determine this information. This was done by analyzing how many vehicles arrived and departed adjacent intersections during the peak hour. These volumes were then combined and adjusted to represent an ADT utilizing an Urbanized K-Factor provided by the Highway Capacity Manual. A 2% traffic diversion has been applied to the 2013 and 2023 3-lane scenario ADT volumes. Research has shown that four to three lane conversions will cause some diversion; however, this diversion is not expected to be significant until traffic volumes approach 18,000 to 20,000 vehicles per day. The 2013 and 2023 PM 3-Lane and 4-Lane Main Street Average Daily Traffic Volumes are shown in the table below.

Roadway Section	ADT (4-Lane)		ADT (3-Lane)*	
	2013	2023	2013	2023
Loudon Road to Pleasant Street	13,308	14,891	13,042	14,593
Pleasant Street to Concord Street	11,539	12,660	11,308	12,407
Concord Street to Storrs Street	12,803	14,110	12,547	13,828

* Assumes 2% Traffic Diversion

INTERSECTION AND CORRIDOR CAPACITY ANALYSIS

The feasibility of the Rethinking Main Street improvement options is dependent on those improvements ability to facilitate traffic flow. Therefore, it is necessary to conduct a capacity analysis of the Main Street intersections and midblock sections. This analysis will need to be done for both opening year and future year traffic conditions as well as for the existing 4-Lane and the 3-Lane scenarios to allow for a proper comparison of the projects impacts to traffic. This analysis could be considered somewhat conservative since the 2% traffic diversion discussed in the previous section has not been used to reduce Main Street volumes.

The Highway Capacity Manual (HCM2000) provides the industry accepted methodology for calculating Level of Service (LOS) and delay for Signalized and Unsignalized Intersections and Urban Streets. The Synchro 7® computer program, which utilizes this method, along with Sim Traffic® was used to analyze and simulate the PM peak hour traffic volume network. The Level of service for both signalized and unsignalized intersections is assigned based on the average amount of seconds that a vehicle will be delayed as they progress thru an intersection. This amount of delay is then given a letter grade ranging from A thru F. LOS A represents little to no delay while an LOS F is characteristic of an intersection that is overcapacity and experiencing long delays. Since signalized intersections are expected to carry a higher volume of traffic, a higher level of delay is acceptable before the intersection is considered over capacity. For urban intersections like those on Main Street, LOS A through D is considered acceptable. The LOS and corresponding average control delay for both signalized and unsignalized intersections are shown in the following tables.

LOS Criteria for Signalized Intersections*

LOS	Control Delay per Vehicle (s/veh)
A	≤ 10
B	> 10 -20
C	> 20 -35
D	> 35 - 55
E	> 55 - 80
F	> 80

* From HCM 2000 Exhibit 16-2

LOS Criteria for Unsignalized Intersections*

LOS	Control Delay per Vehicle (s/veh)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

* From HCM 2000 Exhibit 17-2

The Level of Service for the midblock sections of Main Street was determined by the Urban Streets methodology in the HCM. This method determines LOS by comparing the average computed or observed travel speed to the expected free flow speed for the specific class of a roadway segment. Based on assumed speed limits of 35mph and under, Main Street is a Class IV urban street. The LOS and corresponding average travel speed for a Class IV urban street are shown below.

Range of Free-Flow Speeds (FFS)	35 toi 25 mi/h
Typical FFS	30 mi/h
LOS	Average Travel Speed (mi/h)
A	> 25
B	> 19 - 25
C	> 13 - 19
D	> 9 - 13
E	> 7 - 9
F	≤ 7

* From HCM 2000 Exhibit 15-2

2013 PM 3-LANE AND 4-LANE ANALYSIS

The anticipated Level of Service and Delay for the Main Street intersections during the 2013 PM peak hour for a 3-Lane and 4-Lane scenario can be seen in below.

Intersection	2013 4-Lane		2013 3-Lane	
	LOS	DELAY (sec)	LOS	DELAY (sec)
N. Main / Storrs	F / C	175.9 / 24.9	F / D	178.4 / 25.2
N. Main / Loudon	**F**	**89.3**	**F**	**89.1**
N. Main/Park	-	-	-	-
N. Main/Capitol	D / D	29.7 / 29.7	E / E	42.6 / 42.6
N. Main/School	-	-	-	-
N. Main/Phenix	B / B	14.5 / 14.5	-	-
N. Main/Warren	D / B	29.9 / 12.5	D / C	27.3 / 16.1
N. Main/Depot	-	-	-	-
N. Main/Pleasant	**E**	**58.8**	**D**	**42.5**
S. Main/ Hills	B / B	13.4 / 13.4	C / C	20.1 / 20.1
S. Main/Fayette	B / B	14.0 / 14.0	C / C	19.0 / 19.0
S. Main/Thompson	C / C	15.5 / 15.5	C / C	15.7 / 15.7
S. Main/Theatre	-	-	-	-
S. Main/Concord	B / B	13.0 / 13.0	B / B	13.9 / 13.9
S. Main/Thorndike	B / B	13.0 / 13.0	C / C	15.1 / 15.1
S. Main/Storrs	**C**	**34.7**	**C**	**34.7**

BOLD = Signalized Intersection (LOS and Delay are for overall intersection)
Not Bold = Stop Controlled Side Street (LOS and Delay are for LT/RT turn lanes of side street approach only)
(-) = One-way side street away from Main Street (No LOS or Delay for approach)

The majority of the intersections within the study area are T-intersections with the NB and SB Main Street movements running free while the side street is under stop control. Since Main Street movements are not required to stop at these intersections, they operate at LOS A with a few LOS B for left turning movements. For this reason, Main Street LOS and delay have not been included in the LOS and delay table. All of the side streets are projected to operate acceptably during 2013 PM peak hour with LOS ranging from B to D for left and right turning movements. The one exception is North Main at Storrs Street where left turning movements experience a LOS F and excessive delay. Despite these delays, this intersection does not meet traffic signal warrants in 2013 and no improvements are being recommended as part of the Rethinking Main Street project.

If major sidewalk improvements are completed and Main Street becomes three lanes, it is expected that there will be minimal impact to these stop controlled intersections. The Main Street movements should continue to operate at LOS

A and B. The side streets should see small increases in delay, particularly for left turning movements, due to the reduction in gaps between vehicles along Main Street

The Main Street study area also contains three signalized intersections. For these intersections, an overall intersection Level of Service and Delay has been provided. Under the 4-Lane scenario, their LOS range from C to F. The South Main Street and Storrs intersection operates at an acceptable level, while North Main at Pleasant is nearing capacity and North Main at Loudon Rd. is over capacity.

A Main Street conversion to three travel lanes will allow some benefits at signalized intersections. At the Main Street and Pleasant Street intersection, this scenario will allow for reduced delay and improved level of service. A three lane roadway section will allow for exclusive left turn lanes which provide more efficient operation than the current dual use left/thru lanes. The reduction in curb to curb width may also allow for a decrease in the necessary pedestrian crossing times and a reduction in vehicle delay. Small increases in turn lane storage will be necessary on both Pleasant and Main Street to facilitate these improvements. The North Main at Loudon Rd. and South Main at Storrs Street intersections will not undergo geometric or traffic signal modifications and will not experience changes in LOS or delay.

As previously mentioned, the Level of Service for midblock sections was also analyzed. The corridor and midblock LOS for 2013 PM peak hour for the 3-Lane and 4-Lane scenarios can be seen in the following table. For the 4-Lane condition, the LOS for midblock sections will range from LOS B to C. Due to the delay caused by the signalized intersections, the LOS for the Main Street corridor as a whole is a D. If major sidewalk improvements are completed along Main Street, it is anticipated that travel speeds will not drop significantly enough to reduce the level of service. As such, corridor travel times are not expected to appreciably increase.

Roadway Section	Scenario	
	2013 (4-Lane)	2013 (3-Lane)
	LOS	LOS
Main Street Corridor	**D**	**D**
Main Street Travel Time NB/SB (min)	4.25 / 4.28	4.33/3.8
Main Street Avg Speed NB/SB (mph)	12/11	12/13
Loudon Road to Pleasant Street	**C**	**C**
Pleasant Street to Concord Street	**B**	**B**
Concord Street to Strorrs Street	**B**	**B**

1. LOS is based on NB and SB Thru Movement Average Travel Speed for Section for per HCM-15 (Exhibit 15-2 Class IV Urban Street)
2. Travel Speeds LOS analysis provided by SimTraffic model

2023 PM 3-LANE AND 4-LANE ANALYSIS

The anticipated Level of Service and Delay for the Main Street intersections during the 2023 PM peak hour for a 3-Lane and 4-Lane scenario can be seen in the following table.

Intersection	2023 4-Lane		2023 3-Lane	
	LOS	DELAY (sec)	LOS	DELAY (sec)
N. Main / Storrs	F / E	367.2 / 39.0	F / E	373.7 / 40.2
N. Main / Loudon	**F**	**112.4**	**F**	**112.4**
N. Main/Park	-	-	-	-
N. Main/Capitol	E / E	38.8 / 38.8	F/ F	51.9 / 51.9
N. Main/School	-	-	-	-
N. Main/Phenix	B / B	14.9 / 14.9	-	-
N. Main/Warren	E / B	36.3 / 13.1	E / C	36.9 / 18.4

Intersection	2023 4-Lane		2023 3-Lane	
	LOS	DELAY (sec)	LOS	DELAY (sec)
N. Main/Depot	-	-	-	-
N. Main/Pleasant	**F**	**87.0**	**D**	**52.8**
S. Main/ Hills	B /B	14.0 / 14.0	C / C	23.8 / 23.8
S. Main/Fayette	B / B	14.9 / 14.9	C / C	23.0 / 23.0
S. Main/Thompson	C / C	17.2 / 17.2	C / C	17.0 / 17.0
S. Main/Theatre	-	-	-	-
S. Main/Concord	B / B	13.6 / 13.6	C / C	15.0 / 15.0
S. Main/Thorndike	B / B	13.9 / 13.9	C / C	16.6 / 16.6
S. Main/Storrs	**D**	**44.5**	**D**	**44.5**

BOLD = Signalized Intersection (LOS and Delay are for overall intersection)
Not Bold = Stop Controlled Side Street (LOS and Delay are for LT/RT turn lanes of side street approach only)
(-) = One-way side street away from Main Street (No LOS or Delay for approach)

At stop controlled intersections under the 4-Lane condition, the anticipated background and site specific growth out to 2023 will increase delay for all side streets intersecting Main Street. The left turning movements from Capitol and Warren Street will near capacity. If major sidewalk improvements are completed, the side street delay will increase by an additional 2 to 10 seconds. At this point, Capitol Street will exceed its capacity. Though traffic volumes will increase, Main Street movements are expected to continue to operate at LOS B or better for both 2023 PM Build and No-Build conditions.

This traffic growth will also degrade LOS at signalized intersections. For the 2023 4-Lane scenario, the Main Street at Pleasant intersection will exceed its capacity while the N. Main at Loudon Rd. will continue to fail during peak hours. As with the 2013 3-Lane scenario, if major sidewalk improvements are completed it will allow for reductions in delay at the Main Street /Pleasant Street intersection. The previously mentioned traffic signal improvements will allow this intersection to function at LOS D out to 2023. The North Main Street and Loudon Road intersection will require additional improvements to help mitigate delay.

The corridor and midblock LOS for 2023 PM peak hour for the 3-Lane and 4-Lane scenario can be seen in the table below. The increase in traffic volumes over the ten year design horizon are expected to increase average travel times throughout the corridor. The result is decreased average travel speeds which will degrade the LOS for the Main Street corridor from D to E. If major sidewalk improvements are completed along Main Street, it is anticipated that travel speeds during the 2023 PM peak hour will not drop significantly enough to reduce the level of service.

Roadway Section	Scenario	
	2023 (4-Lane)	2023 (3-Lane)
	LOS	LOS
Main Street Corridor	**E**	**E**
Main Street Travel Time NB/SB (min)	5.00/6.37	5.01/5.84
Main Street Avg Speed NB/SB (mph)	10/8	10/9
Loudon Road to Pleasant Street	**D**	**C**
Pleasant Street to Concord Street	**A**	**A**
Concord Street to Strorrs Street	**B**	**B**

1. LOS is based on NB and SB Thru Movement Average Travel Speed for Section per HCM-15 (Exhibit 15-2 Class IV Urban Street)
2. Travel Speeds for LOS analysis provided by SimTraffic model