

# Nashua Riverfront Promenade Design Charrette

September 23 & 24, 2005



**PLAN NH**

The Foundation for Shaping the Built Environment

# NASHUA CHARRETTE ACKNOWLEDGEMENTS

SINCERE THANKS GO OUT TO THOSE INDIVIDUALS WHO DONATED THEIR PROFESSIONAL AND PERSONAL TIME TO THIS CHARRETTE

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ALSO, MANY THANKS TO THE CITIZENS AND CITY OFFICIALS WHO SHARED THEIR THOUGHTS AND KNOWLEDGE WITH US

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# PLAN NH VISITS NASHUA, N.H.

SEPTEMBER 23 & 24, 2005

## WHO IS PLAN NH?

PLAN NH IS A PROFESSIONAL ASSOCIATION FOR THOSE WORKING IN THE *BUILT ENVIRONMENT*. THE ORGANIZATION INCLUDES ARCHITECTS, PLANNERS, ENGINEERS, BANKERS, CONSTRUCTION MANAGERS, HISTORIC PRESERVATION-ALISTS, AND OTHERS WHO CONCERN THEMSELVES WITH BUILDINGS AND COMMUNITIES. IT WAS ESTABLISHED TO CREATE A FORUM FOR BRINGING TOGETHER THESE DIFFERENT PROFESSIONAL GROUPS AND AS A CATALYST FOR SPURRING INTEREST IN COMMUNITY DEVELOPMENT. PART OF PLAN NH'S MISSION IS TO MAKE A POSITIVE CONTRIBUTION TO NEW HAMPSHIRE COMMUNITIES. ONE WAY IN WHICH PLAN NH IS DOING THIS IS THROUGH THE OFFER OF FREE DESIGN ASSISTANCE TO COMMUNITIES WITH DEMONSTRATED NEEDS.

## SO WHAT IS A DESIGN CHARRETTE, ANYWAY?

SIMPLY STATED, A DESIGN CHARRETTE IS A BRAINSTORMING SESSION WHERE LOTS OF IDEAS ARE BROUGHT FORTH BY BOTH PROFESSIONAL DESIGNERS AND LOCAL CITIZENS, IN AN ATTEMPT TO RESOLVE A PROBLEM OF LOCAL INTEREST. BECAUSE OF THE COMPRESSED TIME FRAME, THE CONCLUSIONS REACHED ARE USUALLY CONCEPTUAL. THEY DISCUSS HOW DIFFERENT PLAN ELEMENTS SHOULD RELATE TO EACH OTHER, AS OPPOSED TO THE DETAILS OF HOW A PARTICULAR BUILDING WOULD ACTUALLY BE CONSTRUCTED.

AT THEIR BEST, CHARRETTES BLEND THE BROAD EXPERIENCE OF DESIGN PROFESSIONALS WITH LOCAL CITIZEN'S KNOWLEDGE OF THEIR COMMUNITY TO PRODUCE A PLAN OF ACTION THAT DEALS WITH A PARTICULAR ISSUE OF CONCERN TO THAT COMMUNITY. THE CHARRETTE PROVIDES AN OVERALL FRAMEWORK WITHIN WHICH FINAL SOLUTIONS CAN BE DEVELOPED. IT SETS A TONE AND GIVES A DIRECTION AGAINST WHICH FUTURE DECISIONS MAY BE MEASURED.

## HOW DID THE PLAN NH CHARRETTE COME TO NASHUA?

IN JANUARY OF 2005, THE CITY OF NASHUA'S COMMUNITY DEVELOPMENT DIVISION SUBMITTED A PROPOSAL TO PLAN NH FOR DESIGN ASSISTANCE. OF THE EIGHT PLUS PROPOSALS SUBMITTED, NASHUA WAS ONE OF THREE COMMUNITIES SELECTED FOR A CHARRETTE.

PLAN NH IS INTERESTED IN PROVIDING DESIGN ASSISTANCE TO COMMUNITIES THAT SEEM READY TO MOVE FORWARD WITH A PROJECT, WHERE THERE APPEARS TO BE THE ORGANIZATIONAL EXPERTISE AND WHERE THERE IS THE ABILITY TO MOVE FORWARD WITH RECOMMENDATIONS THAT SURFACE IN THE COURSE OF THE WEEKEND EVENT. PLAN NH IS LOOKING FOR COMMUNITY PROBLEMS THAT MAY HAVE TRANSFERABILITY TO OTHER COMMUNITIES.



# HISTORY & PRESENT DAY CHALLENGES IN DOWNTOWN NASHUA

ON JULY 4, 1803, A CANAL BOAT, THE NASHUA, FLOATED DOWN THE NASHUA/MERRIMACK RIVER, NOW NAMED THE NASHUA RIVER. THE BOAT CANAL WAS BUILT TO CONNECT THE RIVER AND DOWNTOWN. A DAM WAS BUILT TO AID TRANSPORTATION. THERE WERE 4 LOCKS BUILT ON LOCK STREET TO AID 80 FOOT LONG AND 10 FOOT HIGH BOAT THROUGH THE CANAL WHICH CONTINUED TO WRAP AROUND WHERE BAE IS PRESENTLY LOCATED. MARGARITA'S WAS THE ORIGINAL POWER HOUSE BUILT IN 1919. THIS AREA WAS THE SOLE POINT OF SHIPPING AND RECEIVING FROM 1825-1838. THERE WAS A LARGE WHARF AREA WITH DOCKS WHICH RECEIVED MANY STEAM BOATS. UNTIL 1836 NASHUA WAS NAMED DUNSTABLE. NASHUA WAS TRULY A PORT CITY. THE FIRST BRIDGE WAS BUILT IN 1748; HOWEVER THERE HAS BEEN A SERIES OF BRIDGES BUILT SINCE THEN. THE MAIN STREET BRIDGE REPLACED THE ORIGINAL BRIDGE THAT WAS 30 FEET LOWER. BOTH HILLS ON EACH SIDE OF THE BRIDGE WERE CUT DOWN TO CREATE FLATTER LAND FOR EASIER TRAVEL. AS YOU WALK THROUGH THE DOWNTOWN AREA EVERYTHING YOU SEE WAS MAN CREATED AND NOT NATURAL. FROM THE FALLS THERE IS A 32 FOOT DROP THAT GOES 3 MILES OUT. IN 1823 NASHUA AND LOWELL,



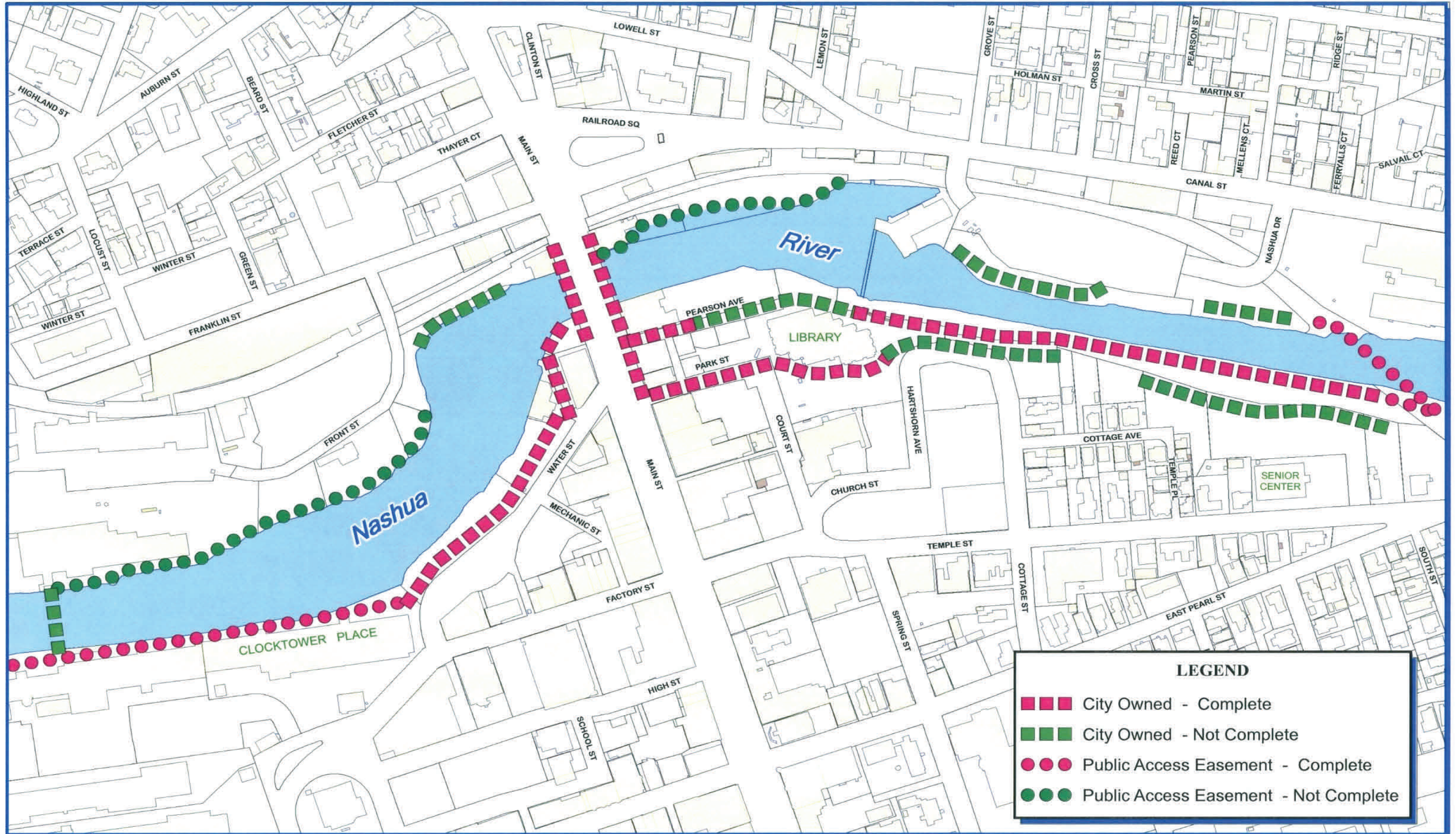
THE LOCATION FOR MANY MILL BUILDINGS. THE CITY OF NASHUA COMMISSIONED THE PROMENADE THE NASHUA/LOWELL RAILROAD IN 1836 WHICH WAS OPERATING BY 1838. THE RAILROAD DEPOT STATION WAS ON THE NORTHEAST SIDE OF THE RIVER NEXT TO THE PRESENT DAY DUNKIN-DONUTS. IN 1849 THERE WAS A 3-STORY RAILROAD STATION BUILT. IN 1931 IT BURNED DOWN. THERE WAS A MAGNIFICENT CAR HOUSE THAT ONCE STOOD EAST OF THE DAM ON THE EAST SIDE OF THE RIVER THAT WAS BUILT IN 1866. CANAL STREET WAS 12 FEET LOWER THAN PRESENT DAY ELEVATION. THE REMAINING PRE-CIVIL WAR RAILROAD STATION BRICK BUILDING ON CANAL STREET WAS BUILT IN 1860. IT IS THE SISTER BUILDING TO THE CAR HOUSE.

AT THE PRESENT TIME THERE ARE MANY SEGMENTS OF THE RIVERWALK PROMENADE ALREADY CONSTRUCTED, A PORTION IS PRESENTLY UNDER CONSTRUCTION, BUT MANY GAPS REMAIN THAT NEED TO BE BUILT TO MAKE A CONTIGUOUS LOOP. THE TAX INCREMENT FINANCING PROGRAM WAS CREATED TO HELP PAY FOR THE RIVERWALK CONSTRUCTION PRESENTLY UNDER WAY. THE RIVERWALK PRESENTLY BEING CONSTRUCTED WILL CONTINUE TO WRAP AROUND AND ATTACH TO THE BRICK BUILDING THAT PRESENTLY HOUSES THE ORIGINAL TOWNS CORNER OF THE MAIN STREET BRIDGE. THIS FOR TEXTILE SYSTEM WAS CREATED SO AS TO NOT TOUCH THE RIVER. IT HAS BEEN SUGGESTED THAT SOME KIND OF ICON BE CREATED TO DISTINGUISH THE BRIDGE FROM THE REST OF MAIN STREET. ONE OF THE BIG CHALLENGES IS CREATING A CONNECTION OF THE PROMENADE TO MARGARITA'S. THE JACKSON FALLS BUILDING WILL RUN ALONG TO MARGARITA'S POSITIONED IN THE INLET-OUTLET TOWNER AREA JUST ABOVE THE DAM. THE STRIP OF LAND THAT IS OWNED BY BAE WILL BE A CHALLENGE TO

DESIGN AND BUILD THE PROMENADE EXTENSION. A SIGNIFICANT STRUCTURE IN THIS AREA IS THE UNITARIAN UNIVERSALIST CHURCH OF NASHUA, BUILT IN 1826. THE CHURCH IS THE OLDEST CHURCH STRUCTURE IN THE CITY AND WILL BE AN IMPORTANT VISUAL ICON FROM THE PROMENADE.



ONE OF THE LOGISTIC CHALLENGES WILL BE TO BUILD A RETAINING STRUCTURE THAT SUPPORTS THE BAE PARKING LOT THAT WILL ALLOW A CONTINUANCE OF THE PROMENADE AND HOW TO SAFELY ACCESS THE LOWER TRAIL ALONG THE RIVER'S EDGE. THE LOWER TRAIL AREA IS LAND OWNED BY THE CITY. THE PARKING LOT WAS THE LOCATION OF THE STRUCTURES THAT COMPRISED THE RAILROAD ROUND HOUSE. THERE IS A DESIRE TO CONNECT THE NEW SENIOR CENTER TO THE PROMENADE. THE PRESENT "LIBRARY WALK" IS A BEAUTIFUL LONG DIRT PATHWAY ALONG THE SOUTH SIDE OF THE RIVER RUNNING FROM TEMPLE STREET TO THE LIBRARY THAT WAS BUILT IN 1970. HOWEVER IT IS NOT A SAFE PLACE WITH NO OUTLETS OTHER THAN THE ENDS OF THE PATH. THERE IS A DESIRE TO CONNECT AN UPPER WALKWAY THAT WOULD CONNECT THE NEIGHBORHOOD TO THE SOUTH AND TO ADD AMENITIES TO MAKE THE PATHWAY SAFER. THE BANKS OF THE PATHWAY TO THE SOUTH IS FILLED WITH ASBESTOS, TO THE NORTH IS A BANKING TO THE RIVER BELOW. THIS WOULD BE IDEAL AS A BIKE TRAIL ON THE PRESENT PATH AND WALKING ON THE NEW UPPER PROMENADE



# NASHUA RIVERFRONT PROMENADE

A PLACE THAT BRINGS PRIDE TO THE COMMUNITY.



PREPARED: JULY 2004

# THE CHARRETTE PROCESS

NASHUA CITY OFFICIALS AND COMMUNITY RESIDENTS GATHERED WITH THE PLAN NH CHARRETTE TEAM ON AN OVERCAST FRIDAY AFTERNOON IN SEPTEMBER TO DISCUSS THE DETAILS OF THE TASK IN FRONT OF US. DESIGN PROFESSIONALS ON THE TEAM INCLUDED ARCHITECTS, PLANNERS, CIVIL ENGINEERS, CONSTRUCTION MANAGERS, COST ESTIMATORS, AND REAL ESTATE PROFESSIONALS. THE CRITICAL PIECE THAT THE CHARRETTE TEAM LACKED WHICH ONLY THE LOCAL RESIDENTS COULD OFFER WAS THE KNOWLEDGE OF THE CITY OF NASHUA.

*LOCAL RESIDENTS ARE THE EXPERTS ON THE COMMUNITY - WHAT MAKES SENSE, WHAT HISTORY HAS BROUGHT FORTH, WHAT WILL PASS AT THE LOCAL BOARD MEETINGS - AND THE DESIGN TEAM RELIES ON RESIDENT INPUT AND KNOWLEDGE TO DEVELOP VIABLE SUGGESTIONS AND PROPOSALS.*

WITH THAT IN MIND, THE TEAM AND RESIDENTS BEGAN FORMULATING THE FUTURE OF THE RIVERFRONT AND THE DOWNTOWN AREA OF NASHUA

THE TEAM BEGAN THE CHARRETTE WITH A WALKING TOUR OF THE AREA AND THE DOWNTOWN. THE FOCUS RANGED

FROM THE FROM MAIN STREET TO THE COTTON TRANSFER BRIDGE THE PRIVATELY OWNED PROPERTY HAS A 20-FOOT PUBLIC ACCESS EASEMENT FROM THE WEST SIDE OF THE SUB-STATION TO THE COTTON TRANSFER BRIDGE. THIS AREA IS DOMINATED BY THE 300,000 SQUARE FOOT BUILDING ON FRANKLIN STREET, HOME TO NASHUA CORPORATION FOR ALMOST 150 YEARS AND NOW OWNED BY GRACE FELLOWSHIP CHURCH. A PRIVATE SCHOOL, APARTMENTS, CAFETERIA, AND SOME INCUBATOR SPACE FOR SMALL BUSINESSES NOW OCCUPY THE ONCE HEAVY INDUSTRIAL SPACE. THE COTTON STORAGE BUILDING ALONG THE RIVER IS EMPTY, AND HAS BEEN OF INTEREST TO SEVERAL DEVELOPERS FOR HOUSING. OTHER BUILDINGS CONTINUE TO BE USED FOR INDUSTRY.

MUCH OF THE LAND ON THE NORTH BANK OF THE NASHUA RIVER IS IN THE FLOODPLAIN. THE DOWNTOWN MASTER PLAN ENVISIONS PARK SPACE, WITH BOTH ACTIVE AND PASSIVE USES INCLUDING POSSIBLY PLAY FIELDS, AN OUTDOOR AMPHITHEATER, AND A BOATHOUSE, WITH THE RIVERFRONT PROMENADE INCORPORATED INTO THE PARK.

FROM MAIN STREET THE CITY HAS A PUBLIC ACCESS EASEMENT FOR ABOUT 700 FEET. PRIVATE LAND CONTINUES ON THE TOP OF THE BANK TO THE RAILROAD BRIDGE. THE CITY HAS A CONTRACT WITH B&M FOR PEDESTRIAN USE OF THE RAILROAD BRIDGE. THE CITY OWNS THE EMBANKMENT BETWEEN MARGARITA'S AND THE RAILROAD BRIDGE. THE VISION IS A BOARDWALK FROM MAIN STREET CANTILEVERED ON THE OUTSIDE OF THE 1866 CAR HOUSE BUILDING. A CONCRETE WALK WILL CONTINUE, CONNECTING MAIN STREET TO MARGARITA'S. THE WALK WILL CONTINUE ON TOP OF THE BANK, WITH A SPUR DOWN TO THE RIVER, AND THEN TO AND OVER THE RAILROAD BRIDGE.



# THE LISTENING SESSIONS

DURING THE PUBLIC SESSIONS, RESIDENTS IDENTIFIED SPECIFIC ISSUES, AND DESIRES FOR THE DOWNTOWN PROMENADE AND HOW THE RIVER CAN ENHANCE THE CITY AND THEIR QUALITY OF LIFE

## POSITIVE ASPECTS OF NASHUA:

- QUICKLY ACCESSIBLE FROM EXITS 4, 5, 6, & 7 OFF THE EVERETT TURNPIKE AND ONLY 15 MINUTES WEST OF INTERSTATE 93
- PLENTY OF PARKING ON THE STREET AND IN GARAGES.
- PARKING IS FREE AFTER 5:00PM WEEKDAYS, SATURDAY AND SUNDAY
- 5-10 MINUTE WALK TO MINE FALLS PARK, WITH NATURE AND BIKING TRAILS, SPORTS FIELDS, NASHUA RIVER, STELLOS STADIUM, CONWAY ARENA, HOLMAN STADIUM, MANY BEAUTIFUL VICTORIAN ERA HOMES, GREELEY PARK
- INTERCITY AND LOCAL BUS SERVICE AND TAXI SERVICE
- MANY RESTAURANTS, SHOPS, AND LOCAL BUSINESSES
- CULTURE AND EVENTS SPONSORED BY THE GREAT AMERICAN DOWNTOWN
- DOWNTOWN LIVING WITH A POTENTIAL FOR MORE FOR ALL INCOME GROUPS

## COMMUNITY VISION/GOALS/OPPORTUNITIES

- THE PROMENADE TO BECOME THE CENTERPIECE FOR DOWNTOWN
- COLLECTION OF 4 DISTINCT AREAS
- HAVE A LONG TERM MAINTENANCE PROGRAM
- CONSIDER CLOSING THE CANTILEVERED WALKWAYS IN THE WINTER
- PROVIDE A DOWNTOWN INFORMATION CENTER, PROVIDE INFORMATION AND HISTORY ON PLAQUES ALONG THE PROMENADE
- BUILDING "19" IS A POTENTIAL VENUE FOR HOUSING
- CREATE A BUFFER TO THE GREELEY HOUSE
- VISUAL ENHANCEMENT TO THE MAIN STREET BRIDGE
- UPGRADE SEWER SYSTEM TO LESSON IMPACT TO RIVER POLLUTION
- CREATE A BOAT ACCESS TO THE RIVER
- CREATE ACCESS TO MAIN STREET TO THE NORTHWEST CORNER OF THE PROMENADE
- MORE POLICE PATROLS ALONG THE PROMENADE
- MORE NEIGHBORHOOD CONNECTIONS TO THE PROMENADE AND DOWNTOWN



- CREATE MORE DEVELOPMENT OPPORTUNITIES ALONG THE RIVER PROPERTIES
- CREATE MORE AMENITIES FOR TEENAGERS
- INSTALL MORE BENCHES ALONG THE PROMENADE ROUTE, CREATE GOOD LANDSCAPE DESIGN ALONG THE RIVER
- CREATE CONNECTIONS TO DIFFERENT POINTS OF THE DOWNTOWN DISTRICT, SENIOR CENTER ACCESS TO THE PROMENADE
- CREATE A "FIT-TRAIL", HANDICAP ACCESS TO THE PROMENADE
- CLEAN UP DOWNTOWN GRAFFITI, BLUE LIGHTS INSTALLED FOR SAFETY
- CREATE MORE SOCIAL ACTIVITIES SUCH AS A RIVERFEST
- ERECT A PLAQUE TO REMEMBER THE CROWN HILL FIRE
- ACCESSIBILITY TO THE PROMENADE BY FIRE AND POLICE DEPARTMENTS
- PUBLIC AND PRIVATE COOPERATION WILL BE NEEDED TO MAKE THE PROJECTS ALONG THE PROMENADE SUCCESSFUL
- NEED TO ADDRESS PARKING ACCESSIBILITY

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## PROBLEM ISSUES

- NOT ENOUGH WORKFORCE HOUSING
- NO RETAIL STORES THAT CATER TO THE MODERATE AND LOWER INCOME PERSON
- MAIN STREET IS NOT WELL SIGNED
- LACKING A DOWNTOWN INFORMATION CENTER
- TOO MUCH FOLIAGE ALONG BOTH SIDES OF THE RIVER
- LIFE SAFETY AND ADEQUATE LIGHTING
- POLLUTION IN THE RIVER
- LACK OF A DOWNTOWN MAINTENANCE PROGRAM
- SEWER CONTRIBUTES TO THE POLLUTION OF THE RIVER
- NO PUBLIC RESTROOMS DOWNTOWN
- THE CITY IS VIOLATING FEDERAL AIR QUALITY STANDARDS FOR OZONE



# CHARRETTE TEAM PROPOSALS & RECOMMENDATIONS

WE HAVE HEARD THE OPINIONS AND THE INPUT FROM THE RESIDENTS. WE HAVE WALKED THE AREA AND HAVE SEEN THE CONDITIONS WITH WHICH WE MUST DEAL. NOW, WE ARE PREPARED TO PRESENT OUR FINDINGS AND RECOMMENDATIONS TO THE CITIZENS OF NASHUA.

## WEST SIDE OF MAIN STREET

THERE ARE CONSTRAINTS FROM THE MAIN STREET BRIDGE WEST TO THE COTTON BRIDGE. THERE ARE BARRIERS TO GET ACROSS MAIN STREET AND AROUND THE PHARMACY BUILDING THAT NEED TO BE REWORKED TO MAKE A SMOOTHER TRANSITION AND ACCESS ON BOTH THE NORTH AND SOUTH SIDES OF THE RIVER. THESE BARRIERS AS SHOWN INCLUDE GRANITE CURBING THAT IS TOO LOW, OVERHEAD POWER LINES AND TREES, ERODED DRIVEWAY WITH ABANDONED RAILROAD TRACKS, AND ELEVATIONS THAT NEED TO BE EASED.

ON THE NORTH SIDE OF THE RIVER THE BEST SOLUTION FOR CONTINUATION OF THE RIVERWALK IS TO CANTILEVER OUT



OVER THE RIVER FROM MAIN STREET TO THE GREELEY HOUSE. THE GREELEY HOUSE NEEDS PRIVACY FROM PUBLIC AREAS. BUILD. A NEW PEDESTRIAN BRIDGE IS PROPOSED OVER THE RIVER FROM A NEW PARK EAST OF THE GREELEY HOUSE OVER TO THE SOUTH SIDE OF THE RIVER CREATING AN EASY ACCESS FOR THE RESIDENTS OF THE CLOCK TOWER. IN THE NEW PARK AREA IS A BOAT LAUNCH, SMALL CONCESSION AREA, AND RESTAURANT, SITTING AREAS. ALL WITH HANDICAP ACCESS,

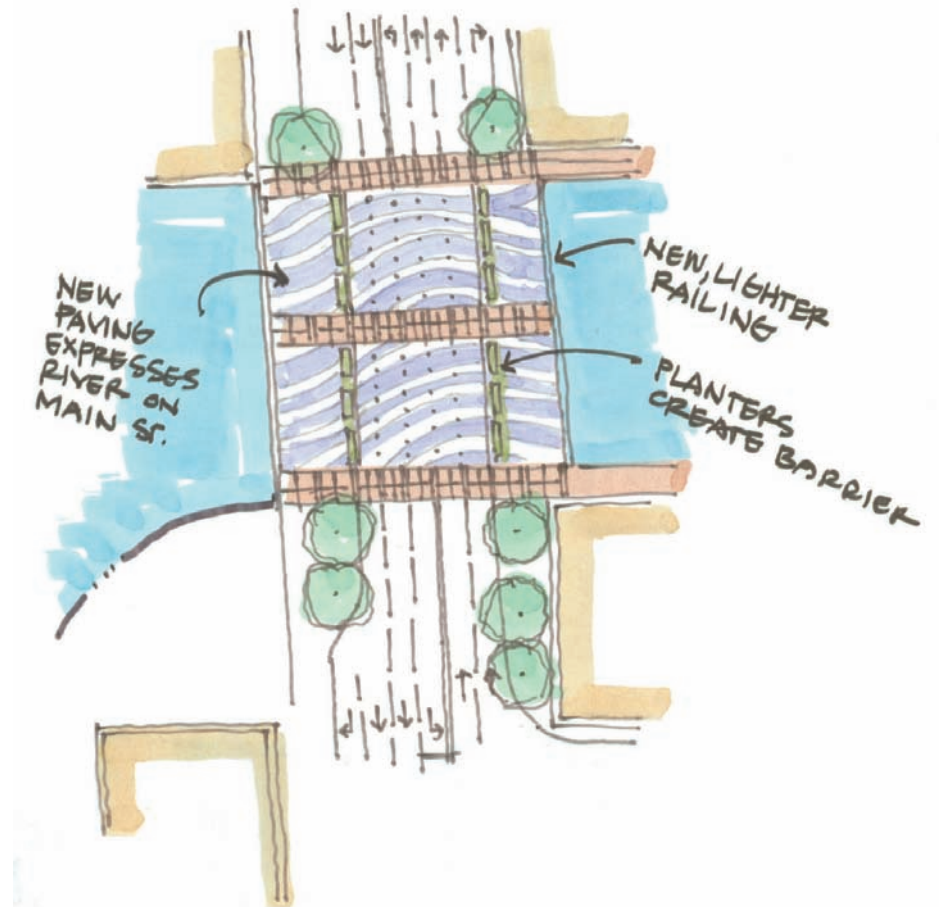
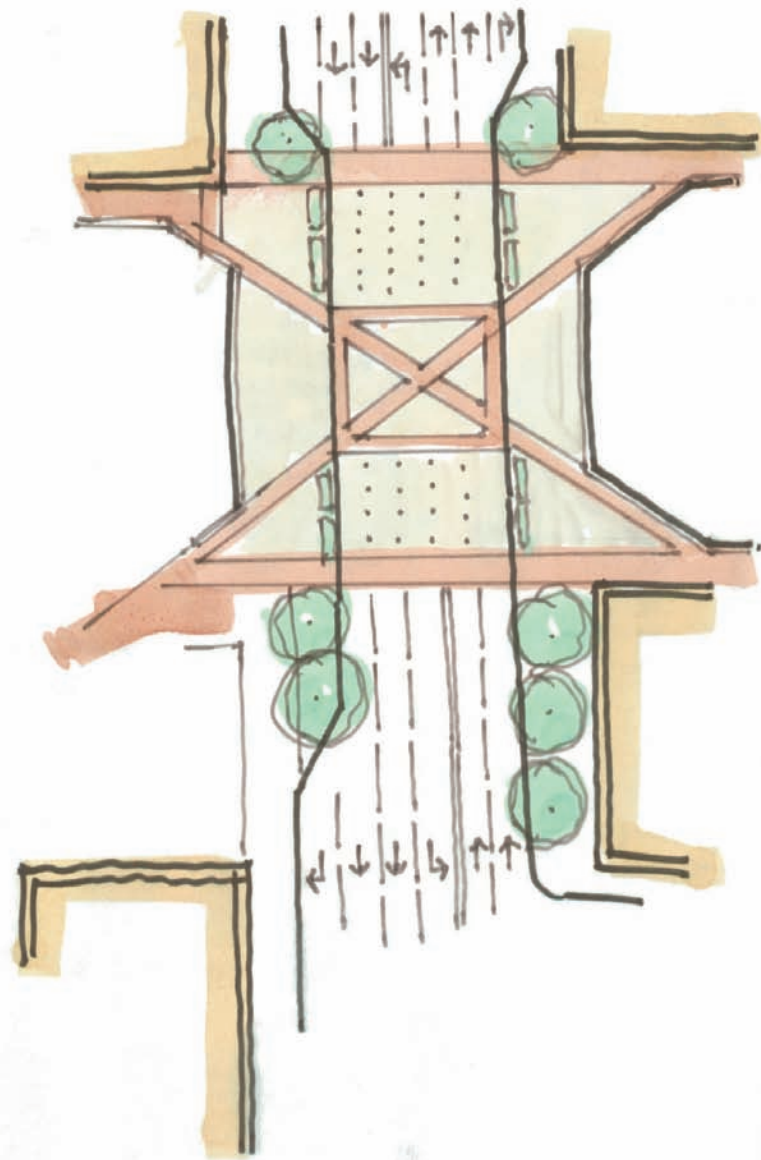


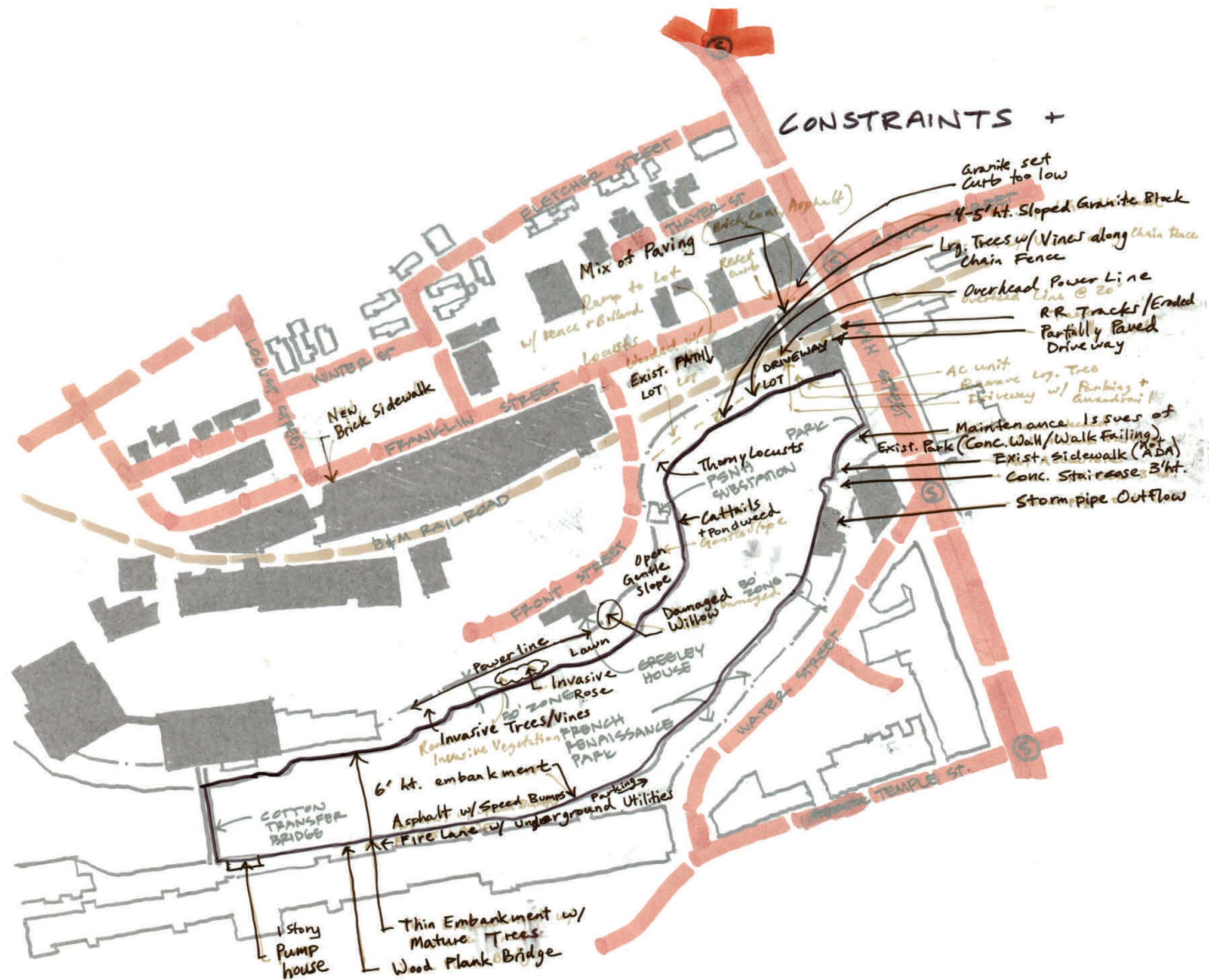
IT IS PROPOSED TO CREATE PEDESTRIAN WAYS FROM THE NEW PUBLIC SPACES AND GREELEY HOUSE TO A NEW 2 LEVEL PARKING FACILITY WITH 10,000SF OF RETAIL ON THE GROUND LEVEL.

THE PRESENT NASHUA CORP SITE IS SLATED FOR 200 UNITS OF NEW HOUSING. THE BUILDINGS ARE PROPOSED TO BE 4-STORY WITH PARKING UNDER. FRONT STREET SHOULD EXTEND TO EACH OF THE NEW HOUSING BUILDINGS. A COURT YARD WILL ACT AS A GATEWAY OVER THE COTTON TRANSFER BRIDGE MOVING SOUTH TO THE WEST OF THE CLOCK TOWER BUILDING.

## THE MAIN STREET BRIDGE

THE ISSUES THAT WE ARE DEALING WITH NOW WERE ISSUES DEALT WITH 100 YEARS AGO. THOSE ISSUES ARE: REASONS TO WIDEN THE MAIN STREET BRIDGE, MODE OF TRANSPORTATION, AND THERE IS NOT A SENSE OF CROSSING A RIVER WHEN GOING OVER THE MAIN STREET BRIDGE. WE PROPOSE TO CREATE PARKING ON EACH SIDE OF THE BRIDGE TO REDUCE THE TRAVEL WAY, CREATE PEDESTRIAN WALKS OVER THE BRIDGE, PLACE PLANTERS AS VEHICLE BARRIERS, REPLACE THE CONCRETE GUARDRAIL WITH A TRANSPARENT RAIL SYSTEM TO OPEN UP THE RIVER VIEWS WITH THE BRIDGE, AND BRING THE RIVERWALK INTO THE BUILDINGS WITH A CANTILEVERED STRUCTURE







## EAST SIDE OF MAIN STREET BRIDGE

THE PROPOSAL IS TO CREATE PEDESTRIAN PLAZAS AT DIFFERENT INTERVALS LEADING TO A CANTILEVERED RIVERWALK FROM THE MAIN STREET BRIDGE TO MARGARITA'S. DUNKIN DONUT'S IS NOT THE HIGHEST AND BEST USE IN ITS PRESENT LOCATION. A LOWER TIERED RIVERWALK CAN BE CREATED BEHIND THE BAE PARKING LOT. AROUND THE MARGARITA'S BUILDING ARE PROPOSED TIERED PLAZAS AND PLATFORMS FOR PUBLIC ACCESS NODES TO THE RIVERWALK AND OUTDOOR DINING AREAS. THE PROPOSED WALKWAYS WILL NEED TO BE ADA ACCESSIBLE. THE BAE PARKING LOT WILL LOOSE SPACES IN THIS DESIGN, HOWEVER A MULTI LEVEL PARKING GARAGE WILL BE NEEDED FOR INCREASE DEMAND. THE SOUTH PATH NEEDS TO BE OPENED UP AND THE VEGETATION CLEANED UP FOR VISUAL ACCESS TO THE NORTH, SPECIFICALLY THE UNIVERSALIST CHURCH WITH MULTIPLE ACCESSES FOR SAFETY. ACCESS POINTS CAN BE AT THE NEW SENIOR CENTER, AND TEMPLE STREET AS WELL AS THE LIBRARY. THE WOODEN BRIDGE REDESIGN SHOULD MIRROR THE REDESIGN OF THE MAIN STREET BRIDGE.

## RIVERWALK DESIGN POINTS

THE ENTIRE RIVERWALK SHOULD INCLUDE PROPER LIGHTING, EMERGENCY PULL STATIONS, SIGNAGE, HISTORICAL MARKERS, SECURITY, SURVEILLANCE, AND PROVISIONS FOR POST CONSTRUCTION MAINTENANCE AND PUBLIC RESTROOMS.





NASHUA RIVERFRONT PROMENADE



NASHUA RIVERFRONT PROMENADE



# SUSTAINABILITY

N UNDERTAKING TO VITALIZE THE DOWNTOWN WITH AN EMPHASIS ON PEDESTRIAN CONNECTIONS TO THE RIVER-FRONT AND PRIDE IN THE COMMUNITY THE CITY OF NASHUA IS ALREADY GOING A LONG WAY TOWARD RESPONDING TO THE ENVIRONMENTAL AND ECONOMIC SUSTAINABILITY NEEDS OF THEIR CITY.

THIS PROJECT IS PRIMARILY A SITE, LANDSCAPE AND CIVIL ENGINEERING PROJECT, WITH ENVIRONMENTAL CHALLENGES. WASTE WATER RUN OFF UN-SEPARATED FROM STORM WATER RUN OFF STILL GOES TO THE RIVER, AND SO THERE PROBABLY IS A WATER QUALITY ISSUE TO ADDRESS. THERE HAVE BEEN PRESENTATIONS BY JOHN TODD ABOUT THE USE OF LIVING MACHINES IN THE CLEAN UP OF WATER WAYS AROUND THE WORLD. IT MIGHT BE WORTH THE CITY'S WHILE TO CONTACT HIM FOR HIS OPINION ABOUT THE WAYS TO CLEAN UP A RIVER THE SIZE OF THE NASHUA. ANOTHER ENVIRONMENTAL CHALLENGE IS THE ASBESTOS ALONG THE BANKS OF THE RIVER. WILL THAT REQUIRE REMEDIATION IF EXCAVATION IS LIKELY?

WE HEARD THAT THE CITY INTENDS TO USE THE LEED™ GREEN BUILDING RATING SYSTEM TO CERTIFY THEIR BUILDINGS. THAT SAME RATING SYSTEM CAN BE USEFUL IN IDENTIFYING ISSUES OR CONCERNS RELATING TO SITE OR LANDSCAPE.

TO ACHIEVE LEED CERTIFICATION ANY BUILDING CONSTRUCTED BY THE CITY AS PART OF THE DOWNTOWN NASHUA RIVERFRONT PROMENADE SUCH AS A PUBLIC RESTROOM OR MULTIMODAL TRANSPORTATION HUB WILL NEED TO ADDRESS PREREQUISITES AND CREDITS IN THE FIVE CATEGORIES OF THE RATING SYSTEM AS FOLLOWS;

1. SUSTAINABLE SITES	SS
2. WATER EFFICIENCY	WE
3. ENERGY AND ATMOSPHERE	EA
4. MATERIALS AND RESOURCES	MR
5. INDOOR ENVIRONMENTAL QUALITY	EQ

TO ADDRESS SPECIFIC SITE OR LANDSCAPE ISSUES IT IS USEFUL TO REFER TO LEED FOR THE FOLLOWING;

## SUSTAINABLE SITES:

- SS PREREQUISITE 1 EROSION AND SEDIMENTATION CONTROL INTENT; CONTROL EROSION TO REDUCE NEGATIVE IMPACTS ON WATER AND AIR QUALITY
- SS CREDITS 5.1 AND 5.2 REDUCED SITE DISTURBANCE – PROTECT OR RESTORE OPEN SPACE/ DEVELOPMENT FOOTPRINT

INTENT; CONSERVE EXISTING NATURAL AREAS AND RESTORE DAMAGED AREAS TO PROVIDE HABITAT AND PROMOTE BIODIVERSITY

- SS CREDITS 6.1 AND 6.2 STORMWATER MANAGEMENT – RATE AND QUANTITY AND TREATMENT INTENT; LIMIT DISRUPTION OF NATURAL WATER FLOWS BY MANAGING STORMWATER.
- SS CREDIT 7.1 HEAT ISLAND EFFECT: NON-ROOF INTENT; REDUCE HEAT ISLANDS (THERMAL GRADIENT DIFFERENCES BETWEEN DEVELOPED AND UNDEVELOPED AREAS) TO MINIMIZE IMPACT ON MICROCLIMATE AND HUMAN AND WILDLIFE HABITAT
- SS CREDIT 8 LIGHT POLLUTION REDUCTION INTENT; ELIMINATE LIGHT TRESPASS, IMPROVE NIGHT SKY ACCESS AND REDUCE DEVELOPMENT IMPACT ON NOCTURNAL ENVIRONMENT

## WATER EFFICIENCY

- WE CREDITS 1.1 AND 1.2 WATER EFFICIENCY LANDSCAPING: REDUCED BY 50% OR NO POTABLE WATER USE OR IRRIGATION INTENT; LIMIT OR ELIMINATE THE USE OF POTABLE WATER FOR LANDSCAPE IRRIGATION

## ENERGY AND ATMOSPHERE

- EA CREDITS 2.1 THROUGH 2.3 RENEWABLE ENERGY INTENT; ENCOURAGE AND RECOGNIZE INCREASING LEVELS OF SELF-SUPPLY THROUGH RENEWABLE TECHNOLOGIES TO REDUCE ENVIRONMENTAL IMPACTS ASSOCIATED WITH FOSSIL FUEL ENERGY USE.
- EA CREDIT 5 MEASUREMENT AND VERIFICATION INTENT; PROVIDE FOR THE ONGOING ACCOUNTABILITY AND OPTIMIZATION OF ENERGY AND WATER CONSUMPTION PERFORMANCE OVER TIME.
- EA CREDIT 6 GREEN POWER INTENT; ENCOURAGE THE DEVELOPMENT AND USE OF GRID-SOURCE, RENEWABLE ENERGY TECHNOLOGIES ON A NET ZERO POLLUTION BASIS.

## MATERIALS AND RESOURCES

- MR PREREQUISITE 1 STORAGE AND COLLECTION OF RECYCLABLES INTENT; FACILITATE THE REDUCTION OF WASTE GENERATED THAT IS HAULED TO AND DISPOSED OF IN LANDFILLS.
- MR CREDITS 1.1 THROUGH 1.3 BUILDING REUSE: MAINTAIN 75% TO 100% OF EXISTING WALLS, FLOORS AND ROOF AND 50% OF NON-SHELL/NON-STRUCTURE INTENT; EXTEND THE LIFE CYCLE OF EXISTING BUILDING STOCK,

- CONSERVE RESOURCES, RETAIN CULTURAL RESOURCES, REDUCE WASTE AND REDUCE ENVIRONMENTAL IMPACTS OF NEW BUILDINGS AS THEY RELATE TO MATERIALS MANUFACTURING AND TRANSPORT.
- MR CREDITS 2.1 AND 2.2: DIVERT 50% TO 75% FROM LANDFILL INTENT; DIVERT CONSTRUCTION, DEMOLITION AND LAND CLEARING DEBRIS FROM LANDFILL DISPOSAL. REDIRECT RECYCLABLE RECOVERED RESOURCES BACK TO THE MANUFACTURING PROCESS. REDIRECT REUSABLE MATERIALS TO APPROPRIATE SITES.
- MR CREDITS 3.1 AND 3.2 RESOURCE REUSE 5% TO 10% INTENT; REUSE BUILDING MATERIALS AND PRODUCTS UN ORDER TO REDUCE DEMAND FOR VIRGIN MATERIALS AND TO REDUCE WASTE, THEREBY REDUCING IMPACTS ASSOCIATED WITH THE EXTRACTION AND PROCESSING OF VIRGIN RESOURCES.
- MR CREDITS 4.1 AND 4.2 RECYCLED CONTENT INTENT; INCREASE DEMAND FOR BUILDING PRODUCTS THAT INCORPORATE RECYCLED CONTENT MATERIALS, THEREFORE REDUCING IMPACTS RESULTING FROM EXTRACTION AND PROCESSING OF NEW VIRGIN MATERIALS.
- MR CREDITS 5.1 AND 5.2 REGIONAL MATERIALS 20% MANUFACTURED REGIONALLY/50% EXTRACTED REGIONALLY INTENT; INCREASE DEMAND FOR BUILDING MATERIALS AND PRODUCTS THAT ARE EXTRACTED AND MANUFACTURED WITHIN THE REGION, THEREBY SUPPORTING THE REGIONAL ECONOMY AND REDUCING THE ENVIRONMENTAL IMPACTS RESULTING FROM TRANSPORTATION.
- MR CREDIT 6 RAPIDLY RENEWABLE MATERIALS INTENT; REDUCE THE USE AND DEPLETION OF FINITE RAW MATERIALS AND LONG-CYCLE RENEWABLE MATERIALS BY REPLACING THEM WITH RAPIDLY RENEWABLE MATERIALS.
- MR CREDIT 7 CERTIFIED WOOD INTENT; ENCOURAGE ENVIRONMENTALLY RESPONSIBLE FOREST MANAGEMENT.

## ENVIRONMENTAL QUALITY

- EQ PREREQUISITE 2 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL INTENT; PREVENT EXPOSURE OF PEOPLE AND SYSTEMS TO ENVIRONMENTAL TOBACCO SMOKE.
- EQ CREDITS 4.1 THROUGH 4.4 LOW-EMITTING MATERIALS INTENT; REDUCE THE QUANTITY OF

- AIR CONTAMINANTS THAT ARE ODOROUS, POTENTIALLY IRRITATING AND/OR HARMFUL TO THE COMFORT AND WELL BEING OF INSTALLERS AS WELL AS END USERS.

## INNOVATION AND DESIGN PROCESS

- INNOVATION IN DESIGN CREDIT 1.1 THROUGH 1.4 INTENT; PROVIDE DESIGN TEAMS AND PROJECTS RECOGNITION FOR EXCEPTIONAL PERFORMANCE ABOVE THE REQUIREMENTS SET BY THE LEED GREEN BUILDING RATING SYSTEM AND /OR INNOVATIVE PERFORMANCE IN GREEN BUILDING CATEGORIES NOT SPECIFICALLY ADDRESSED BY THE LEED GREEN BUILDING RATING SYSTEM.

ASIDE FROM OR IN ADDITION TO THE BROAD AREAS ADDRESSED IN THE LEED RATING SYSTEM OTHER SUGGESTIONS ARE;

- PROVIDE CLEARLY RECOGNIZABLE RECYCLING RECEPTACLES FOR SEPARATE CATEGORIES OF RECYCLABLES
- EXPLORE OPPORTUNITIES TO USE RENEWABLE ENERGY TECHNOLOGIES FOR SITE POWER NEEDS I.E. WIND, PHOTO VOLTAIC SOLAR, THERMAL SOLAR OR HYDRO ELECTRIC.
- EXPLORE OPPORTUNITIES TO SAVE ENERGY AND REDUCE AIR, WATER AND NOISE POLLUTION AND LIMIT THE USE OF FOSSIL FUELS IN THE SELECTION OF LIGHTING FIXTURES OR EFFICIENT EQUIPMENT FOR MAINTENANCE. (NO LEAF BLOWERS)
- A QUESTION WAS RAISED DURING THE CHARRETTE ABOUT HOW MUCH OF AN URBAN HARDSCAPE IS DESIRABLE FOR ANY OR ALL PARTS OF THE PROMENADE. CONSENSUS SAID THAT IT IS OK FOR DIFFERENT AREAS TO HAVE THEIR OWN CHARACTER AND SOME HARDER OR SOFTER AND MORE NATURAL THAN OTHERS. ONE THING TO KEEP IN MIND AS THESE CHARACTERS DEVELOP FOR EACH AREA IS SEASONAL CHANGES AS WELL AS HEAT ISLANDS AND STORM WATER RUNOFF. IF PAVING WILL BE USED IN THE MORE URBAN HARDSCAPES SOME THOUGHT SHOULD BE GIVEN TO THE COLOR, PERMEABILITY AND MAINTENANCE OF THE PAVING AND THE CONTRIBUTION TO SUMMER COOLING THAT SHADING AND GREEN SPACE PROVIDE IN A CITY.

# SUMMARY OF BUDGET COSTS

## WEST OF MAIN STREET BRIDGE

### NORTH SIDE OF RIVER

□ DEMOLITION:	\$ 150,000.00
□ 100' PROMENADE, (HC ACCESSIBLE)	\$ 75,000.00
□ LANDSCAPING, GATHERING SPACE AND LIGHTING (1900LF)	\$ 450,000.00
□ NEW BUILDING FOR PUBLIC BR'S (18x30)	\$ 150,000.00
□ NEW BUILDING: 350x120 2-LEVEL PARKING	\$ 4,500,000.00
□ CULTURAL CENTER/RETAIL SHOPS 350x30	\$ 1,600,000.00

### SOUTH SIDE OF RIVER

□ DEMOLITION OF THE COTTON BUILDING	\$ 375,000.00
□ 3 NEW BUILDINGS 200 UNITS OF HOUSING	\$42,000,000.00
□ PEDESTRIAN BRIDGE @ GREELEY HOUSE	\$ 1,000,000.00



## EAST OF MAIN STREET BRIDGE

### NORTH SIDE OF RIVER

□ 3-STORY BUILDING @ CORNER OF MAIN STREET, 70x70	\$ 3,000,000.00
□ 120x60 2-STORY W/ PARKING & RETAIL	\$ 1,500,000.00
□ UPPER & LOWER TRAILS SURFACE IMPROVEMENTS @BAE	\$ 375,000.00
□ STRUCTURAL ELEMENTS @ RR BRIDGE	\$ 525,000.00

### SOUTH SIDE OF RIVER

□ REPAIR RR BRIDGE	\$ 125,000.00
□ ADD CANTILEVERED BIKE TRAIL @RR BRIDGE	\$ 75,000.00
□ CANTILEVERED OVERLOOK @ MARGARITA'S	\$ 145,000.00
□ STAIRWAYS LEADING TO TEMPLE STREET	\$ 85,000.00
□ REWORK EXISTING TRAIL, CONNECT TO TEMPLE STREET, LIBRARY, MAIN STREET TO PEARSON STREET	\$ 625,000.00
□ SECURITY ELEMENTS ( POLICE KIOSK, LIGHTING CALL BOXES	\$ 275,000.00



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