

MAIN STREET PROJECT REVIEW

Main Street Design through Phase I (East)

- June 2013 **Master Plan Completed with Budget Estimate of \$1,371,754 for Phase I**
 At that time Phase I included 540 feet of reconstruction from Laurel Hill to Post Office and 1200 feet of milling/paving from Post Office to Middlesex Avenue (also included sidewalk and Chesterfields' wall

Proposed Revenue of \$983,200 STEAP and approximately \$388,000 of town or other source of funds
- Dec 2014 **Request for \$350,000 from MS Capital account not approved by BOF** – resulted in change of scope of project to remove sidewalks and embankment wall from the upper portion of Main Street and redesign by Kent & Frost at cost of \$18,000. Milling and paving of Upper Main Street to be paid for out of Capital Roads account
- March 2015 \$100,000 released from Main Street Capital Account at town meeting.
- Spring 2015 Low bidder for construction was Centerplan Construction with \$813,576.60, but rejected as incomplete by Town and DOT. Second lowest bidder was Quality Associates with \$857,622.90. Bid accepted.
- September 2015 Additional \$48,600 released from Main Street Capital Account to have appropriate contingency on hand.

COST ESTIMATE AT PROJECT START

Revenue:	\$ 200,000.00	2009 STEAP Grant (Design and Construction)
	\$ 333,088.00	2011 STEAP Grant Reallocation (Water Main Middlesex Ave)
	\$ 450,000.00	2014 STEAP Grant
	\$ 100,000.00	MS CIP released 3/5/15
	<u>\$ 48,600.00</u>	MS CIP released 9/15/15
	\$1,131,688.00	Available Funds for Project Construction Start May 2015
	\$1,045,922.90	Total Estimated Revised Project Cost May 2015 (see attached)

Actual Expenses:

Lower Main Street Construction

\$857,622.00	Quality Bid
<u>\$ 51,914.00</u>	Additional Cost
\$909,536.00	Total Lower Main Construction

Lower Main Design and Bid Docs/Construction Admin

\$134,743.00	Kent & Frost Project Design/Bid Docs (contract allowed \$136,500)
\$ 63,515.00	Construction Observation/Resident Project Rep (inspections and construction admin) (Kent & Frost/Stadia Engineering)(contract estimated \$64,800)
<u>\$ 2,978.00</u>	Administration and publication cost
\$198,259.00	Total Design/Construction Admin

TOTAL ACTUAL COMPLETION COST: \$1,110.773.00

Because this was a unit cost contract it is apparent to see where quantities were increased or decreased. Also note there were only 4 extras added to this project at a cost of \$6,028 (Additional Drain, Belgian Block 123 Main where insufficient space between sidewalk and curb for sod to take, walkway pavers in front of 81 Main Street, Photocell for lights in Laurel Hill Cemetery left off of original plan estimate). Quantity changes reflect the actual in place measurement of the materials installed as required by the project engineer or inspector.

Examples of cost increases: Based on Quality's invoice #8 are: (1) pervious structural back fill, 50CY estimated, 1,032CY used because the quality of the existing material was not suitable for the drainage trench and in some locations the closeness of CWC water main required soil replacement and compaction. (2) processed aggregate base material, estimate 200CY, 423CY used, additional material needed for deeper sub-base grade depth and replacement of unsuitable milled bituminous. (3) Laurel Hill parking lot pavement, 145 ton estimate, 206 ton used, pavement depth was increased because of marginal sub-base condition. (4) Culvert replacement items, stone wall, concrete, epoxy steel bars and bedding material quantities increased per engineer. (5) granite curbing, increased by 168 feet in front of Jacobson's office per change to drainage design (gutter flow) and desire to have granite curbing throughout lower Main Street. (6) Laurel Hill parking lot stone wall height increased for better buffer with adjacent property and higher elevation above 6" bituminous curb. (7) additional concrete sidewalk reflects new sidewalk connections on adjacent properties that required replacement after grading. (8)

additional bituminous driveway pavement reflects extended aprons at 3 locations and measured in place quantity. (9) additional 2" PVC conduit was installed for future decorative lighting service to Maple Street parking lot walkway and possible extension to front of Post Office.

Some of the cost savings that offset increases in lower section were: (1) elimination of 3 catch basins per redesign by engineer \$10,500. (2) elimination of 500 feet of 6" edge drain, not needed based on field conditions, \$14,750 (3) elimination of Merritt Parkway guardrail at culvert crossing, determined too out of scale with Main Street, \$4,845. (4) elimination of Traffic Control by Town officers, \$25,000 per 1st Selectman's coordination with contractor, private flagger and Chester police department.

The Need:

Repair and replacement of deteriorating pavement, curbing, sidewalks and inadequate drainage

What was accomplished:

Roadway from Laurel Hill Cemetery to School Lane completely rebuilt, milled and repaved.

Construction timed to coincide with replacement of 100 year old Water Main.

New granite curbing throughout to replace broken curbing

Drainage - Drainage completely replaced through roadway realignment and installation of 18 new catch basins and pipes; deteriorated brook culvert replaced with proper sized box culvert with guard rails and walls.

Laurel Hill Cemetery: Expanded and paved Laurel Hill Cemetery parking lot to 19 spaces (5 additional); photocell controlled lighting and construction of new drainage to control storm water discharge into Chester Creek. Stone wall repaired at entrance.

Construction of new ADA sidewalks 4' wide with ADA accessible ramps at crosswalks and street corners;
New driveway aprons

Benches and decorative lighting throughout; replaced and replanted where disturbed by grading.
Additional landscaping and plantings at culvert crossing.

New parking spaces along Main Street outside of regular travel lanes.

What went well and lessons learned....

- The preparation by the MSPC and Town adoption of the Main Street Master was beneficial to getting STEAP grant awards and should be used when applying for any future STEAP or Main Street Investment Fund Grants and LOTCIP. The plan illustrates project phases, concept design and cost estimates that can be used for CIP planning. The plan is also useful in informing property owners and businesses of the long range vision for our Town Center. I believe the fact that Chester has a Master Plan for the Center helped in getting CTDOT's cooperation in the successful bridge project.
- Excellent cooperation with affected property owners; need thorough documentation of condition of fences/plantings and drainage issues near construction site for potential damage discussion when project complete.
- Designs should be vetted by other health and safety officials, especially including the Fire Marshal with regard to sign placement, entrance steps and other potential obstacles to emergency ingress or egress. First priority of the Town is the safety of the public using the sidewalks and roadway.
- Good coordination with CT Water Company for the timing of the water main replacement (will be needed again in Main Street Phase III). Not enough knowledge of new water main materials and soil needs for accurate estimation of fill needs during the design phase (very large adjustment in cost - \$49,000 additional). Coordination with utility companies during project design is critical to reduction of construction disruption. The CWC and our WPCA should be involved in reviewing construction plans. The CWC needs to give the Town its schedule for replacement of the water main for Phase III and an agreement on trench paving cost sharing in place before their construction starts. In Phase I CWC paid the Town \$15,000 in lieu of the final trench paving,
- The Town met its commitment to provide \$200,000 of local funds for the Phase I project. This should be documented and taken credit for in future grant applications.
- The pros/cons of a lump sum versus unit item project bid needs to be discussed with the project engineer early in the design process. CTDOT grants may require unit cost project bidding
- The project engineer's budget should have sufficient fund for full time construction inspection.
- Public right of way survey is critical to identifying encroachments by abutting private owners. Where these occur they should be resolved and when necessary the encroachment removed

WE HAVE A GENEROUS, SKILLED AND TALENTED VOLUNTEER FORCE IN CHESTER!

STEAP No. 26-123 Project Budget
Chester Main Street East Reconstruction Phase I
Revised Project Scope – Maple Street to School Lane
(Revised May 7, 2015)

Available Funds for Project Construction Start May 2015:

\$200,000	2009 STEAP Grant (May be used for Both Design and Construction)
\$333,088	2011 STEAP Grant Reallocation (Middlesex Avenue Water Main)
\$450,000	2014 STEAP Grant
<u>\$100,000</u>	CIP Main Street Project approved Town Meeting 3-5-2015
\$1,083,088	
48,600	<i>CIP Main Street Project Town Meeting 9-15-15</i>
<u># 1,131,688</u>	

Estimated Project Soft Costs

\$136,500	Kent & Frost and Stadia Engineers
\$14,800	Stadia Engineers Construction Administration – Task 6
\$34,000	Stadia Engineer Project Inspection 400 hours @ \$85/hour – Task 6
<u>\$3,000</u>	Materials and Soils Testing
\$188,300	Project Design and Construction Management Costs

Project Construction Bid – Quality Associates, Inc. April 9, 2015

\$857,622.90

TOTAL ESTIMATED PROJECT COST

\$1,045,922.90

Available for construction contingency -	\$37,165	
Additional requested for 10% contingency -	<u>\$48,597</u>	<i>approved Town Meeting 9/15/15</i>
	\$85,762	Say: \$85,765