

**DRAFT COPY**

**TOWN OF HUDSON  
CAPITAL IMPROVEMENTS  
PROGRAM**

**FISCAL YEAR 2016 ELEMENT**

**JUNE 2014**

**PREPARED BY THE CAPITAL IMPROVEMENT  
COMMITTEE (C.I.C.)  
FOR THE  
HUDSON, NEW HAMPSHIRE  
PLANNING BOARD**

**TOWN OF HUDSON  
CAPITAL IMPROVEMENTS PROGRAM  
FY 2016 CIP ANNUAL ELEMENT**

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# Capital Improvement Program

Committee Members FY2016

# FY2016 ELEMENT CAPITAL IMPROVEMENTS COMMITTEE MEMBERS

George Hall 18 Par Lane	Planning Board
Richard Maddox 323 Fox Run	Board of Selectmen
Timothy Malley 4 St. John Street	Planning Board
Glenn Della-Monica 38 Bush Hill Road	Planning Board
Geoffrey Keegan 7 Sousa Boulevard	Budget Committee
Michael Truesdell 3 Watts Circle	School Board
Laura Bisson 7 Nathaniel Drive	School Board
Normand Martin 3 Edgar Court	Citizen Member

## STAFF

Steve Malizia, Town Administrator  
Kathy Carpentier, Finance Director  
John Cashell, Town Planner

# Capital Improvement Program PREFACE

# PREFACE

The Capital Improvements Committee (CIC) concentrated on developing a Capital Improvements Program (CIP) in accordance with NH RSA's 674:5 – 674:7 - the state statutes that authorize and mandate local Capital Improvements Programs. Specifically, and as in years past, the CIC supported and ranked capital improvement projects deemed most in need of implementing, as well as having a likelihood of implementation in Fiscal Year 2016. The CIC recognizes that by achieving this latter aspect of the annual CIP, it will continue to help strengthen this program. Thus, continuing to make the CIP an important capital improvement tool for all eligible applicants, i.e., municipal departments, agencies, districts, commissions and private citizens.

Another important aspect of the CIP is to recognize that this program is not a one-year capital improvements program, but rather, a six-year program. As such, the CIC requests each applicant to submit capital improvement projects, if applicable, for each of the six succeeding fiscal years.

As in prior years, the CIC worked with all CIP applicants, relative to providing them with the information they needed to actively participate in this year's CIP. For strong Committee and administrative support of the annual CIP will help to continue to improve Hudson's municipal services and facilities.

Please note, for purposes of the CIP, a Capital Project, is defined as follows:

Capital projects: non-recurring municipal expenditures for projects or facilities having a useful life of at least five years, and generally involving a gross expenditure of at least \$50,000. Note: excluded from this definition is scheduled vehicle (rolling stock) replacement.

In regard to Impact Fees associated with the CIP, the Town of Hudson employs two established sets of impact fee processes for capital improvements\*\*, with these fees collected for:

- ∪ Routes 3A, 102, and 111\*
- ∪ Public Schools, Grades 1 through 8

\* In January 2014 the Town of Hudson engaged the services of VHB, Inc., relative to assessing a new methodology for the collection of Impact Fees. As of this writing, this assessment is still under review.

\*\* With the completion of the Rodgers Memorial Library in 2010, the collection of Library Impact Fees ceased.

# Capital Improvement Program

## Chapter 674:5

# Capital Improvements Program

## CROSS REFERENCES

Master plan generally, see RSA 674:1 et seq.  
Municipal budgets and finance generally, see RSA 32-34.

**674:5 Authorization.** In a municipality where the planning board has adopted a master plan, the local legislative body may authorize the planning board to prepare and amend a recommended program of municipal capital improvement projects projected over a period of at least 6 years. The capital improvements program may encompass major projects being currently undertaken or future to be undertaken or future projects to be undertaken with federal, state, county and other public funds. The sole purpose and effect of the capital improvements program shall be to aid the mayor and the budget committee in their consideration of the annual budget.

## HISTORY

Source. 1983, 447:1, eff. Jan. 1, 1984.

## CROSS REFERENCES

Consideration of program by mayor and budget committee, see RSA 674:8.  
Preparation of program, see RSA 674-7.

## ANNOTATIONS

### Construction and application

Other than its management tool capabilities, a capital improvements program has no part to play in review of subdivision applications presented to governmental authorities. *Zukis v. Town of Fitzwilliam* (1992) 135 N.H. 384, 604 A 2d 956.

### Cited

Cited in *Rancourt v. Town of Barnstead* (1986) 129 N.H. 45, 523 A.2d 55.

## Library References

### New Hampshire Practice

15 N.H.P. Land Use Planning and Zoning  
4.01, 5.08, 17.05, 26.03, 31.02.

**674:6 Purpose and description.** The capital improvements program shall classify projects according to the urgency and need for realization and also contain the estimated cost of each project and indicate probable revenues, if any, as well as existing sources of funds or the need for additional sources of funds for the implementation and operation of each project. The program shall be based on information submitted by the departments and agencies of the municipality and shall take into account public facility needs indicated by the prospective development shown in the master plan of the municipality or as permitted by other municipal land use controls.

## HISTORY

Source. 1983, 447:1 eff. Jan. 1, 1984.

## ANNOTATIONS

**Construction and application**  
Other than its management tool capabilities, a capital improvements program has no part to play in review of subdivision applications

presented to governmental authorities. *Zukis v. Town of Fitzwilliam* (1982) 135 N.H. 384, 604 A.2d956.

Library References

**New Hampshire Practice**  
15 N.H.P. Land Use Planning and Zoning  
4.02, 29.02.

### 674:7 Preparation.

- I. In preparing the capital improvements program, the planning board shall confer, in a manner deemed appropriate by the board, with the mayor or the board of selectmen, or the chief fiscal officer, the budget committee, other municipal officials and agencies, the school board or boards, and shall review the recommendations of the master plan in relation to the proposed capital improvements program.
- II. Whenever the planning board is authorized and directed to prepare a capital improvements program, every municipal department, authority or agency, and every affected school district board, department or agency, shall upon request of the planning board, transmit to the board a statement of all capital projects it proposes to undertake during the term of the program. The planning board shall study each proposed capital project, and shall advise and make recommendations to the department, authority, agency, or school district board, department or agency, concerning the relation of its project to the capital improvements program being prepared.

## HISTORY

**SOURCE.** 1983, 447:1, eff July 2, 1995  
**Admendments-1995.** Paragraph II: Inserted  
"and every affected school district board,  
department or agency" preceding "shall, upon

request" in the first sentence and deleted "or"  
following "authority" and inserted "or school  
district board, department or agency"  
preceding "concerning" in the second sentence.

## CROSS REFERENCES

Authorization of program, see RSA 674:5.  
Contents of program, see RSA 674:6.

## LIBRARY REFERENCES

**New Hampshire Practice**  
15 N.H.P. Land Use Planning and Zoning 4.03

**674:8 Consideration by Mayor and Budget Committee.** Whenever the planning board has prepared a capital improvements program under RSA 6774:7 it shall submit its recommendations for the current year to the mayor and the budget committee, if one exists, for consideration as part of the annual budget.

## HISTORY

**Source.** 1983, 447:1, eff. Jan 1, 1984.

## CROSS REFERENCES

Authorization of program, see RSA 674:5.  
Purpose of program, see RSA 674:6.

## LIBRARY REFERENCES

**New Hampshire Practice**  
15 N.H.P. Land Use Planning and Zoning 4.03

# Capital Improvement Program



Ratings FY2016

**Updated in June 2014**

**Town of Hudson, NH  
Capital Improvement Program (CIP) Ratings  
Fiscal Year 2016**

Rating	Project	Department	FY16	Total Points
1	Central Fire Station	Fire Department	\$6,242,643	150
	Windham Road Booster Station, 1.2 MGD Storage Tank Barrett's Hill Rd. & 5,200 lf 12" Water main Barretts Hill Rd.	Municipal Utility Committee	\$3,925,000	140
2			\$3,433,305	133
3	Police Facility Expansion	Police Department	\$410,000	132
4	County Road Bridge	Land Use Division	\$345,000	131
5	Melendy Road Bridge	Land Use Division		
6	Radio System Upgrade	Fire Department	\$612,938	107
7	Burns Hill Fire Station	Fire Department	\$848,592	98

# Capital Improvement Program

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Six Year Funding Plan

FY 2016 -- FY 2021

**Updated in June 2014**

**Town of Hudson, New Hampshire**  
**FY2016 Capital Improvement Program Six Year Funding Plan**

Rankin	Project	Department	FY16	FY17	FY18	FY19	FY20	FY21
1	Central Fire Station	Fire	\$6,242,643					
2	Windham Road Booster Station, 1.2 MGD Storage Tank & 5,200 L.F. 12" Water Main Barretts Hill Rd.	Municipal Utility Comm.	\$3,925,000					
3	Police Facility Expansion	Police	\$3,433,305					
4	County Road Bridge	Land Use Division	\$410,000					
5	Melendy Road Bridge	Land Use Division	\$345,000					
6	Radio System Upgrade	Fire	\$612,938					
7	Burns Hill Fire Station	Fire	\$848,592					
<b>Below are Proposed Non-Ranked Out-Year Proposed CIP Projects</b>								
	Gordon Street Tank-Paint Exterior w/misc. repairs	Municipal Utility Comm.		\$277,000				
	Gordon Street Tank -Paint Interior	Municipal Utility Comm.		\$205,000				
	3,250 l.f. - 16" Water Transmission Line, Lowell Rd. from Birch St. to Central St.	Municipal Utility Comm.			\$767,000			
	1,100 L.F. - 12" Water Transmission Line, Sagamore Park Dr.	Municipal Utility Comm.			\$215,000			
	1,000 L.F. -16" Water Transmission Line, Ferry St.	Municipal Utility Comm.				\$774,000		
	4,500 L.F. - 12" Water Transmission Line, Lowell Rd.	Municipal Utility Comm.					\$1,500,000	
	Add right-turn lane on Rte. 3A/Lowell Rd. SB from Flagstone Dr. to Sagamore Bridge Rd. WB	Land Use Division		\$520,000				
	Continue Ped/Bike Lane Derry St/Rte. 102 from Towhee Dr. to Megan Dr.	Land Use Division			\$548,446			
	Continue Ped/Bike Lane Derry St/Rte. 102 from Phillips Dr. to Hudson Mall	Land Use Division				\$241,606		
	Continue Sidewalk on 3A/Lowell Rd. from Nottingham Sq. to Executive Dr.	Land Use Division					\$187,003	
	Continue Sidewalk on 3A/Lowell Rd. from Birch St to Pelham Rd.	Land Use Division						\$249,338
	<b>Grand Total:</b>		<b>\$15,817,478</b>	<b>\$1,002,000</b>	<b>\$1,530,446</b>	<b>\$1,015,606</b>	<b>\$1,687,003</b>	<b>\$249,338</b>

# Capital Improvement Program

\*

Tax Rate Impact

FY2016

**FY2014 - not updated as of June 2014**

*Please be advised, the Tax Rate Impact Section of this DRAFT COPY edition of the FY2016 CIP is pending, it's completion is expected in time for the FINAL draft of this document.*

# Capital Improvement Program



Debt Schedule

FY2016

**As of FY2014 - not updated thereafter**

*Please be advised, the Debt Schedule Section of this DRAFT COPY edition of the FY2016 CIP is pending, it's completion is expected in time for the FINAL draft of this document.*

# Capital Improvement Program



Impact Account Balances  
**Updated in June 2014**

*Please be advised, the Impact Account Balances Section of this DRAFT COPY edition of the FY2016 CIP is pending, it's completion is expected in time for the FINAL draft of this document.*

# Capital Improvement Program

## Summary and Recommendations FY2016

## Summary and Recommendations

In preparing the Capital Improvements Program for FY2016, the Capital Improvements Committee (CIC), determined the capital improvement needs for the Town of Hudson in accordance with RSA 674:5 – 674:7. That is, throughout the development of this year's Capital Improvements Program (CIP), the CIC focused on determining: (i) the capital improvement projects most in need of implementing, (ii) estimating the cost to implement each project, (iii) identifying project implementation funding sources and (iv) reviewing the status of previous CIP projects.

To the effect of the above, the following represents a summary and recommendations on those capital improvement projects determined by the CIC as most in need of implementation. Please note, the following project recommendations should not lead the reader to think that all 7 projects should be budgeted for implementation in FY2016. Rather, the following project recommendations should be considered as a multi-year CIP implementation proposal, and one that the Board of Selectmen and Budget Committee may want to consider seeking outside consultation, relative to developing a financial strategy to best fund the subject projects so that each becomes implemented.

With the foregoing financial aspect of this summary taken into consideration, the CIC determined as qualified for the FY2016 CIP project rating process, the following 7 projects:

- 1) **Central Fire Station** – This CIP proposal was submitted by the Fire Department as this department's most important project for the Town to consider for implementation. After reviewing the submitted documentation for this proposal, and after listening to Fire Chief, Robert Buxton's presentation on same, the CIC rated the Central Fire Station as the CIP project most in need of implementation, receiving 150 points in the rating system (please refer to the Ratings Table). In taking this action, the CIC recognized during Chief Buxton's presentation that a new Central Fire Station is not only a facility the Fire Department knows all too well is long overdue and much needed, but it's also a facility the residents of Hudson deserve in order to properly serve their emergency needs.

**NOTE:** The above Fire Department project, as well as the following 6 FY2016 CIP rated projects, are described in their entirety in the Departmental Submittal Chapter of this CIP, and they are also referenced in the April 14, 2014 and April 28, 2014 CIC Meeting Minutes (included as the final Chapter of this CIP). Each project is further referenced, as to its associated cost, tax rate impact and funding sources in the Ratings, Six Year Funding Plan and Impact Account Balances Tables of this CIP.

- 2) **Combined Water Improvement Project:** i.e., the Windham Rd. Booster Station, the 1.2 MGD Storage Tank at Barretts Hill Rd. and the 5,200 lf 12" Water Main along Barretts Hill Rd. During the review of the submitted project documents, and presentation on these 3 projects by the former Municipal Utility Committee Chairman, Bernie Manor, both Mr. Manor and the CIC recognized that in order for any 1 of the 3 projects to produce a benefit to the Town's water users, all three projects must be completed. As such, the CIC voted to

combine the subject 3 projects into 1, and in so doing, this singular water system improvement project received the second highest number of points in the rating process: 133 points. Note: the CIC also recognized during the review of this project, that it can be funded exclusively by the ratepayers, and not from property tax revenues or other locally produced revenues. As such, the CIC urges, herein, that the Board of Selectmen and Budget Committee take into consideration the need for this project to be implemented, and because of its exclusive funding source, move this project forward toward fruition.

- 3) **Police Station Expansion Project**– This project was submitted by Police Chief, Jason Lavoie, as the Police Department’s sole CIP proposal, and although this project received the 3d highest number of points by the CIC, 133, it was recognized by Chief Lavoie, as well as the CIC, that until the Central Fire Station becomes a reality, approval of this project for implementation will most likely be deferred. Nonetheless, the CIC recommends, herein, that it is important for the Town to recognize that the existing Police Station was undersized when built, and 15 years now since its completion, it is even more undersized today, and in the future will be even more so. As such, the CIC, in the least, and for purposes of inclusion in this FY2016 CIP, would like to bring this project to the attention of the Board of Selectmen and the Budget Committee, as a project certainly in need of implementation and not too many years in the future. Also, as stated in the above two project recommendations, the CIC would like to emphasize, here, that with the creation of the right financial strategy this project could also become a reality in the foreseeable future.

**NOTE:** on the topic of creating the financial means to fund all of the projects recommended in this summary, please further note the following: there has, perhaps, never been a more opportune time in Hudson’s modern history to invest in and to be able to finance the subject projects. This position, in part, takes into consideration the following: the Town does not need to build a new school(s). Yes, rehabilitation work of Hudson’s schools is being planned for by the School Board, but the huge cost associated with building of a new school(s) is not anticipated. Also, it’s obvious the Town doesn’t need a library, senior center or park in the foreseeable future. Also, the Town has little, if any, municipal debt to be concerned with. Taking the aforementioned existing infrastructure and financial advantages into account, plus the still present historically low interest rates, the present time is the right time to consider investing in the CIP related infrastructure needs of the community of Hudson.

- 4) **County Road Bridge** – Of the 7 projects considered by the CIC for implementation, it was recognized that this project, as well as the following one, namely, the Melendy Road Bridge, should be considered by the Board of Selectmen and Budget Committee for funding and implementation in FY2016. This recommendation takes into consideration the many years both bridges have been planned for (i.e., in excess of 16 years), and as described in the Land Use Division Project Submittal Chapter of this CIP, both bridges are cited in the NHDOT “**Red List**” on bridges dating back to 2001. In terms of whether or not both projects are financially feasible to implement, the CIC wishes the Board of Selectmen and Budget Committee to recognize that the Town’s share to construct both bridges is estimated to be only \$150,000. For the total cost involved for both bridge projects, please refer to the Land Use Division CIP Project Submittal Chapter of this CIP.

- 5) **Melendy Road Bridge** – Recommended, as cited-above.
- 6) **Radio System Upgrade** – After reviewing Fire Chief, Robert Buxton’s, proposal to replace the Fire Department’s existing radio system, which, according to the Chief, “...is reaching the end of its serviceable life,” the CIC voted in support of this project. It received a total of 107 points, and was recognized as another important infrastructure improvement project for the Board of Selectmen and Budget Committee to consider supporting in their respective preparations of the FY2016 Town Budget.
- 7) **Burns Hill Fire Station** – As with the Central Fire Station, the CIC voted to recommend implementation of this Fire Department expansion proposal, which concerns 1 of its 2 secondary stations. The CIC’s support of this proposal resulted from their realization that there is a true need to upgrade and modernize this important emergency facility, so that the residents of the south central area of the community are provided with adequate emergency services.

In closing, and in regard to: (i) estimating the cost to implement each of the above-cited projects, (ii) identifying project implementation funding sources, (iii) reviewing out-year CIP project proposals, as well as (iv) reviewing the status of previous CIP projects, please refer to the following chapters and tables of this CIP:

- ✓ CIP Ratings FY2016
- ✓ Six Year Funding Plan
- ✓ CIP Tax Rate Impact
- ✓ Debt Schedule
- ✓ Impact Account Balances
- ✓ Departmental Submittal, and
- ✓ Status of Projects Rated in the FY2010 CIP

Respectfully Submitted,

John M. Cashell  
Town Planner

# Capital Improvement Program

Report of the Chairman FY2016

## CHAIRMAN'S REPORT – CIP FISCAL YEAR 2016

The CIP for FY2016 continues the work done in previous budget planning cycles. During April of this year, the Capital Improvement Committee (CIC) reviewed and prioritized the requested expenditures of capital improvement projects presented by the various town departments and organizations. The CIC used the same process to evaluate and score each of the proposed projects as used in prior years. The totals of the CIC member's scores were calculated and then used to determine the final ranking priorities for each of the projects. This report documents FY2016 CIP project rankings, which as prescribed by NH RSA's 674:5 – 674:7, will assist the Board of Selectmen and Budget Committee in preparing the FY2016 municipal budget. Note: for specific FY2016 CIP project rankings, please refer to the following sections of this CIP: Capital Improvement Program Ratings FY2016 and Capital Improvement Program – Six-Year Funding Plan FY2016 thru FY2021.

During the course of the CIP process this year, as well as the previous CIP, it became evident that the system used to rank and prioritize proposed projects does have some flaws, and as a result, the CIC would recommend that the Town consider revising how the CIP proposals are put forth by the Town departments and organizations. Primarily, a source of funding should be available to Department Heads, allowing them to hire professionals to assist in preparing their proposals providing drawings, descriptions, and reliable cost estimates. While the CIC recognizes the difficulty departments and organizations may face gathering some information, determining the scope and cost of a particular project is crucial, relative to the CIC assigning priority rankings.

In closing, I would like to personally thank each and every member of the CIC this year for taking time out of their busy schedules to attend the meetings, review the proposals and listen to the presentations made by the various departments and organizations. I would also like to thank Town Staff for the efforts put forth in preparation for meetings, assisting in the evaluation process and the preparation of the CIP Report.

Sincerely,

George Hall  
Chairman, Capital Improvements Committee

# Capital Improvement Program

Attendance Report  
FY2016



# Capital Improvement Program

## Status of Projects Ranked in the FY2010 CIP Element\*

**\*FY2010 the most recent year the Town of Hudson prepared and completed a CIP.**

## Status of Projects Ranked in the FY2010 CIP

1. **Circumferential Southern Tier Two-Lane Feasibility Study** – In the fall of 2007 this study received \$15,000.00 in Community Technical Assistance Program (CTAP) funding. **Completed.**
2. **Melendy Rd. Bridge Improvements** – Funding and construction for this project is scheduled for 2016. Project estimated to cost: \$100,000.00 with 80% funded by DOT and 20% by the Town.
3. **1.2 MGD Storage Tank - Barretts Hill Rd.** Funding for this Town water improvement project remains pending. Tentatively scheduled for construction by the Town in 2016.
4. **Windham Rd. Booster Station** – Funding for this Town water improvement project remains pending. Tentatively scheduled for construction by the Town in 2016.
5. **5,200 L.F. 12” Water Main Barretts Hill Rd.** – Funding for this Town water improvement project remains pending. Tentatively scheduled for construction by the Town in 2016.
6. **Pelham Rd. Culvert at 2d Brook (Structural Upgrades)** – This project has been funded by the Town and construction is scheduled to commence in the summer of 2014.
7. **Police Department Expansion Project** – In 2007 this project did not receive the Board of Selectmen’s support, and as such, was not placed on the 2008 Town Warrant. This project was resubmitted as a FY2010 CIP project, but was not ranked. Rather, it will possibly come before the CIP Committee as a FY2016 project.
8. **Benson’s Train Depot Welcome Center (interior design)\*** Incomplete.
9. **County Rd. Bridge Upgrade** – Scheduled for DOT funding and commencement for construction in FY2016.
10. **Haselton Barn (remove roof, repair frame and replace with metal roof)\*** Pending.
11. **Alvirne High School ADA Improvements (i.e., elevator, chair lifts and bathrooms)** – Pending.
12. **H.O. Smith School Exterior Elevator** – Pending.
13. **Kimball-Webster School Administration Bldg. ADA Improvements (i.e., exterior chair lift serving all floors, ADA railing and vestibule)** - Pending.
14. **Hills House ADA Improvements (i.e., bathrooms, ramp and study to access 2d flr.)** - Pending.
15. **Development of Site Plan for Benson’s Train Center – Welcome Center – Relocate/Restore Historic Benson (renovate grounds) Historic Benson – (Renovate Office & Kitchen Building)\*** - Mostly Complete.
16. **Nottingham West School HVAC Upgrade** –Pending.

**Note:** the word “pending” above means funding and construction start dates have not been determined for the subject project.

# Capital Improvement Program

Department Submittals FY2016

# Hudson Fire Department

## FY2016 CIP

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Central Fire Station

Burns Hill Fire Station

Radio System



TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Hudson Fire Department

Department Priority: 1 of 3 Projects

FY 2016

Type of Project (Check One)  Fire Station Replacement	Primary effect of project is to: <input checked="" type="checkbox"/> Replace or repair existing facilities or equipment <input type="checkbox"/> Improve or repair existing facilities or equipment <input type="checkbox"/> Expand capacity of existing service level facility <input type="checkbox"/> Provide new facility or service capacity
--	---

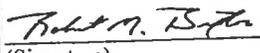
Service Area of Project (Check One)	<input type="checkbox"/> Region <input checked="" type="checkbox"/> Town <input type="checkbox"/> School District	<input type="checkbox"/> Central Business District <input type="checkbox"/> Neighborhood <input type="checkbox"/> Street <input type="checkbox"/> Other Area
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**Project Name:** Hudson Fire Department – Central Fire Station  
**Description:** This CIP project proposes to build a new Central Fire Station as a result of a facility study completed by Pacheco Ross Architects, P.C. in November of 2007. Additional information and rationale are attached to this document.

Rational for Project: (Check those that apply: elaborate below.)	<input type="checkbox"/> Removes imminent threat to public health or safety <input checked="" type="checkbox"/> Alleviates substandard conditions or deficiencies <input checked="" type="checkbox"/> Responds to federal or state requirement to implement <input checked="" type="checkbox"/> Improves the quality of existing services <input checked="" type="checkbox"/> Provides added capacity to serve growth <input checked="" type="checkbox"/> Reduces long term operating costs <input checked="" type="checkbox"/> Provides incentive to economic development <input type="checkbox"/> Eligible for matching funds available for limited time
--	---

**Narrative Justification:** Please see the attached justification and supporting documentation.

Cost Estimate: (Itemize as necessary)  <p style="text-align: center;">Capital Costs</p> <p style="text-align: center;"><u>Dollar Amount (in current \$s)</u></p> \$ _____ Planning/feasibility analysis \$ _____ Architecture & engineering fees \$ _____ Real estate acquisition \$ _____ Site Preparation \$ _____ Construction \$ _____ Furnishing & equipment \$ _____ Vehicles & Capital Equipment \$ _____ includes most of above @ \$325/sq.ft <p style="text-align: right;"><b>Total Project cost estimate</b></p>	Impact on Operating & Maint. Costs or Personnel Needs  <p style="text-align: center;">Add Personnel                  Increase O&amp;M costs                  Reduce Personnel                  Decreased O&amp;M costs</p> <p style="text-align: center;">Dollar Cost of Impacts if know                  Plus \$ _____ annually                   Minus \$ _____ annually</p>
---	--

Source of Funding: <u>AMOUNT</u> Grant from: _____ Loan From: _____ Donation/bequest/private _____ User fees & charges _____ Capital reserve withdrawal _____ Impact fee account _____ Current revenue _____ Bonds _____  Total project cost <u>\$6,242,643.00</u>	Form Prepared By:  (Signature)  Fire Chief Robert M. Buxton (Approved by)  Hudson Fire Department (Department/Agency)
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# TOWN OF HUDSON

## FIRE DEPARTMENT

39 FERRY STREET, HUDSON, NEW HAMPSHIRE 03051



Emergency 911  
Business 603-886-6021  
Fax 603-594-1164

Robert M. Buxton  
Chief of Department

TO: John Cashell  
Town Planner

FR: Robert M. Buxton  
Fire Chief

*RMB*

DT: April 8, 2014

RE: Capital Improvement Project #1 – Central Fire Station

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The Fire Department is requesting the Planning Board support the construction of a new Central Fire Station. This would be inclusive of land purchase, design and construction of the new facility.

In 2007 the Board of Selectmen supported the Fire Department by investing in a facility study for the Lenny Smith Central Fire Station. This facility is one of four buildings that support the Hudson Fire Department.

The Lenny Smith Central Fire Station was built in 1952 and a single story addition was completed in 1987. The original building is 62 years old. The facility is showing signs of its age and most systems are reaching the end of their serviceable life. The building is structurally sound but does not meet the current requirements for the American Disabilities Act or National Fire Protection Association guidelines. The limitations of this facility not only affect the housing of our staff, but also greatly impact the fleet of the Fire Department. The door heights on the apparatus floor have great impact on the specification of apparatus the town purchases. In 2013 the Fire Department purchased an ambulance and during the specification review we were limited to the type of chassis that we could purchase because of the overall height of the door.

Currently, the Fire Department operates two facilities near Town Hall. We currently operate out of the Central Fire Station, which is approximately 9,806 square feet and the Fire Administration Building, which is approximately 1,800 square feet. During the facility study we conducted a space needs analysis which identified our space needs were approximately 23,000 square feet.

The Central Fire Station is the main facility for the Fire Department. All of our services begin out of this facility, so the impact to having a modern and accessible facility is important to not only the Fire Department, but also the community. This building is a piece of critical infrastructure owned by the Town of Hudson.

**Estimated Cost for this project is: \$6,242,643**

The Fire Department approached this project from a planning perspective. As you are aware, when we begin to look at the capital inventory of the town we can certainly identify several projects. We understand that our needs will be balanced out against the needs of other departments in town and look forward to your review. We believe this list of projects highlight the capital needs of the Fire Department. We look forward to reviewing the proposed projects with you so we can submit our proposals to the planning board for review.

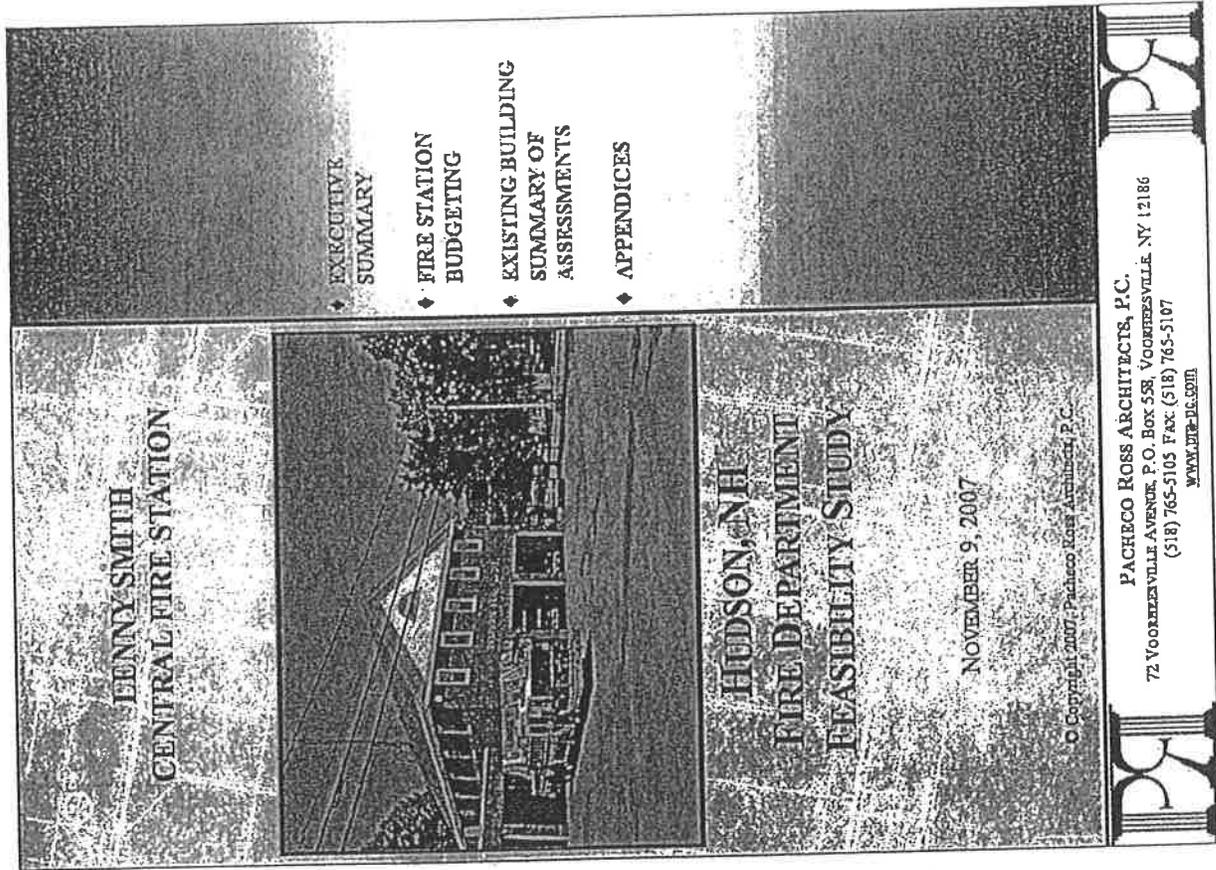
Please contact me with any questions.

# Hudson Fire Department

Central Fire Station

CIP FY16

Project #1



# Scope of Study

- Assess Lenny Smith Central Fire Station to determine its continued capacity to serve as a fire station.
- Study the possibility of renovations.
- Study the possibility of additions.
- Study the possibility of new construction on the existing site and whether the land and existing building will support such construction.
- Develop budgets for those options that were deemed feasible.



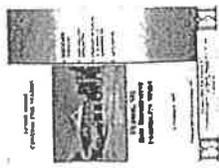
# Central Fire Station History



- Original two story building built in 1952.
- Two Apparatus Bay single story added in 1987.
- Original building 62 years old showing its age in terms of infrastructure and systems.
- Some systems while old and outdated are still serviceable.

# Central Fire Station

## Condition



- Building is structurally sound.
- Building does not meet current building codes, Americans with Disability Act (ADA), or Current National Fire Protection Association standards (NFPA).
  - Access to second floor and bathroom facilities do not meet ADA requirements.
- Heating, Ventilation, Air Conditioning (HVAC) and electrical systems do not meet current codes.

# Central Fire Station Condition

- Building has suffered neglect and lack of repairs and is nearing the end of its useful life.
- Repairs while needed, will not notably extend the building's serviceability or life.
- Renovation such as gutting and replacing Mechanical, Electrical, and Plumbing (MEP) systems is not practical or cost effective.



# Central Fire Station

## Condition



- Internal changes to interior were not well thought out or conducive to firematic layout.
  - Example – Workout room added to apparatus bays creating difficult access and poor ventilation.
  - Example – Mechanical room added to apparatus bays creating a lack of storage space on apparatus floors.
- A circuitous corridor/circulation pattern on second floor has been created by addition or movement of interior walls.
- In terms of life safety, there is only one single egress stair from second floor.



# Central Fire Station Condition



- Egress and Exit Issues:
  - Lack of panic hardware on all code required egress doors.
  - Lack of illuminated exit signs in the direction of egress.
  - Paths and means of egress are not free of obstructions, do not utilize their clear path, and have dead end corridors.
  - Doors do not swing in direction of egress.
  - Doors infringe on the width of exit corridors.

# Central Fire Station Size, Scope, Program



- Evaluation of Department needs, response, training issues, operations and growth potential was conducted to:
  - Determine basic needs to accommodate firefighters, EMTs and public.
  - Assess the size and scope of the fire station that Hudson needs.
  - To determine if this amount of space can fit onto the existing site.
  - Information gathered generates a space analysis document of the probable required building size.

# Central Fire Station Space Needs Analysis

This spreadsheet represents the efficient and effective working space needed for today's Hudson Fire Department

The spreadsheet is broken down into program areas such as:

- Firematic Support
- Firefighter & EMS
- Administration
- Public Spaces
- Miscellaneous Spaces
- Circulation Walls

Program Item #	Description	Area 1st Floor	Area 2nd Floor	Area Both Floors
1	Apparatus			
1.4	7 - Double Deck-Drive Through 123' x 80' 1 - Future Bay Single Deep No: Part of total	9,840	0	9,840
	Subtotal - Apparatus	9,840	0	9,840
	Firematic Support		960	960
1.7	Mezzanine 80 x 12	144		144
2	Storage Room #1 12 x 12	144		144
3	Storage Room #2 12 x 12	150		150
4	Work Room 12 x 15	144		144
5	Firematic DeCon/Laundry 12 x 12	144		144
6	EMS DeCon 12 x 12	180		180
7	Air Room - 3 CBA 12 x 15	240		240
8	Turn-out Gear - 40 Lockers	144		144
9	EMS Storage 12 x 12	180		180
10	Dispatch Room Only	0		0
10.6	Dispatch Room Support Areas - Not Part of Total	75		75
11	Rest Room for Bays	1,575	960	2,535
	Subtotal - Firematic Support	1,575	960	2,535
	Firefighters & EMS			
12	Firefighters-EMS Dry Room	0	900	900
13	Kitchen	0	450	450
14	Exercise	0	475	475
15	Ranker's Bath/Showers	0	1,600	1,600
16	10 Single Ranker Rest Rooms @ 160 sq ft each	0	50	50
17	Housekeeping Storage	0	3,555	3,555
	Subtotal - Firefighters & EMS	0	6,080	6,080
	Administration			
18	Meeting/Training Room - 40	600	0	600
19	Meeting/Training Storage	100	0	100
20	Conference Room	400	0	400
21	Office #1 Chief	180	0	180
22	Office #2 Deputy Chief	180	0	180
23	Office #3 Deputy Chief	180	0	180
24	Office #4 Captain	120	0	120
25	Office #5 Training Officer	120	0	120
26	EMS Coordinator	240	0	240
27	Fire Prevention Office #1	240	0	240
28	Fire Prevention Office #2	240	0	240
29	Secretary Area	100	0	100
30	Network IT	30	0	30
31	Records Storage	2,990	0	2,990
	Subtotal - Administration	2,990	0	2,990
	Public Spaces			
32	Public Entry	100	0	100
33	Public Restrooms	287	0	287
	Elevator/Stair	100	300	600
	Subtotal - Public Spaces	687	300	987
	Miscellaneous Building Spaces			
34	Janitor Closet	30	30	60
35	Mechanical Room	384	0	384
	Elevator Equipment Room	42	0	42
	Elevator Equipment Room	200	200	400
	Second Entry and Stair	656	230	886
	Subtotal - Miscellaneous Building Spaces	1,014	560	1,574
	Circulation Walls			
	Circulation @ 6%	1,575	807	2,382
	Wall @ 10%	1,929	807	2,736
	Subtotal - Miscellaneous	1,929	807	2,736
	Totals >>>	17,677	5,852	23,529

## Central Fire Station

### Space Analysis Conclusions:

- Total of 23,529 sq. ft necessary to meet needs of today's fire department.
- Requires a building of almost twice the size of the existing two buildings combined.
  - Provides modern bays that are larger than the current bays
  - Provides for safety, training and maintenance within the bays.
  - Provides more living space.
  - Provides a properly sized and secure dispatch center.
  - Provides for apparatus bay support services.



## Central Fire Station Space Analysis Conclusions:



- Additional Benefits (continued):
  - Provides required stairs, elevator, egress, corridors and bathroom spaces.
  - Provides needed facilities with response capabilities, equipment, apparatus, staff and personnel found in Hudson, the size and scope are comparable to many other similar stations in the Northeast.
  - Provides a safe, accessible, and energy efficient facility for Firefighters and Citizens of Hudson who may visit or utilize the facility.
  - Provides a long term cost savings and return on investment due to the development of a modern fire safety facility with energy efficient Mechanical, Electrical, and Plumbing systems.

# Central Fire Station Current Building Square Footage

## Central Fire Station Existing Building Size

(Square Feet)

- Original Apparatus Bays = 3,363
- Apparatus Bay Addition = 1,800
- First Floor Non – Bay = 640
- Second Floor Non – Bay = 4,003

**Total = 9,806**

## Administration Building Size

(Square Feet)

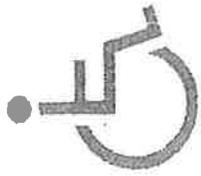
- First Floor = 900
- Second Floor = 900

**Total = 1,800**

## Total Existing Fire Station and Administration Building Size

(Square Feet)

**Total = 11,606 Square Feet**

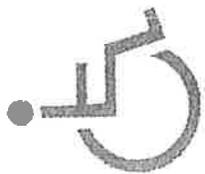


# Central Fire Station

## ADA Requirements/Compliance



- ADA compliance is mandatory for any new municipal structure, or renovation of an existing building that affects 50% or more of the building terms of size or cost.
- ADA compliant fixtures, proper space between fixtures, proper door width and swing are some of the necessary requirements.



# Central Fire Station

## ADA Requirements/Compliance



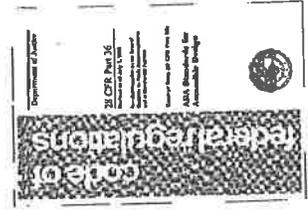
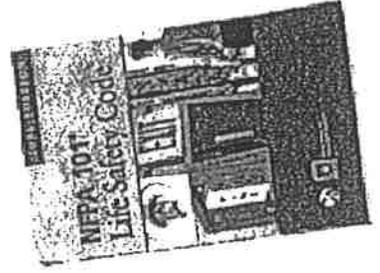
- Most difficult compliance issue will be width requirements for interior doors. ADA requires 12" to 18" between walls or permanent obstructions and the approach side of the door. Masonry walls create modification issues.
- Other Compliance Issues:
  - Shower accessibility
  - Room Signage
  - Countertop height
  - Interior curbs
  - Light switch placement and height
  - Electrical receptacle placement
  - Door hardware
  - Stairs



# Central Fire Station Other Code Requirements/Compliance



- International Building Code (IBC)
- NFPA Standards
- ADA
- FEMA FA-168 Safety and Health Considerations for the Design of Fire and Emergency Medical Services Stations



# Central Fire Station

## Options/Recommendations

- Four Options:
- Repairs, maintenance or minor remodeling:
  - Involves cosmetic changes but does not alter infrastructure, does ***not*** change basic systems, and does not move walls or involve selective demolition
- Renovations and/or additions:
  - Renovation involves selective demolition and replacement
    - Example would be to remove an HVAC system or mechanism and replace it with new units and ancillary components. There is selective demolition at points of connection and removal of the existing system. New work would be code compliant and meet current regulatory standards
- Raze the fire station and build new on site.
- Build a new facility at different location.



# Central Fire Station

## Town Zoning and Regulatory Requirements



- Central Fire Station site is zoned B-2 Business District
- Fire Station is a permitted use (Table of Principal Uses)
- Article VII, Dimensional Requirements Table 334.27, the following requirements apply:
  - Minimum lot area with sewer and water – 30,000 sq.ft
  - Minimum frontage – 150 ft
  - Building setbacks for front, side and rear yards in feet – 50/15/15
    - Library and School Street setbacks are only 40 feet
  - Section 334.14 Building Height restricts any habitable structure from exceeding 38 ft to highest part of roof. Does not include antennas' or cupola's
    - Current height is approximately 36 ft

# Central Fire Station Options/Recommendations



- **Barriers to renovations or building a new station on site:**
  - Renovation work must take place around 24/7 inhabitants and response that is germane to the fire station.
  - Relocation of crews would be necessary if a new building is built on site; this adds additional costs of relocating during construction including temporary structure, relocation of dispatch center, and other critical operational issues.
  - Relocation of crews could effect public safety due to response times of relocating.
  - Renovations do not add any additional square footage to alleviate current space and operational needs as identified in the space analysis model.

# Central Fire Station

## Other Site Concerns/Barriers

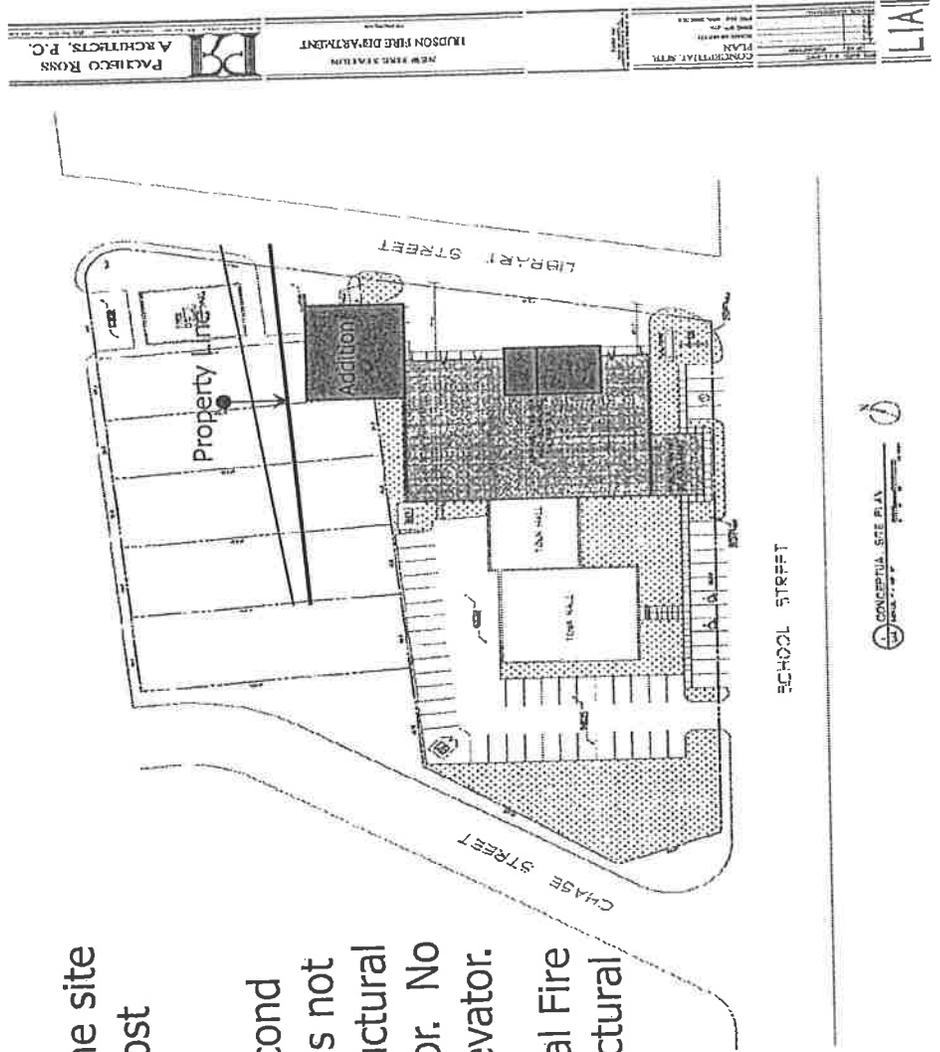


- **Barriers to renovations or building a new station on site:**
  - Current site does not comply with EPA Storm Water Management Phase II requirements.
  - Current site does not have waste water/oil separator containment system.
  - Current site driveways and sidewalks will require significant improvements to pavement including improvement of traffic flow and parking areas.
  - Current site does not have sufficient working space for dumpster.
  - Current site emergency generator will require upgrade/replacement and is located in a vulnerable and unsecured area

# Central Fire Station Conceptual Site Plan

Conceptual Site Plan was created to evaluate practicality of adding addition/square footage:

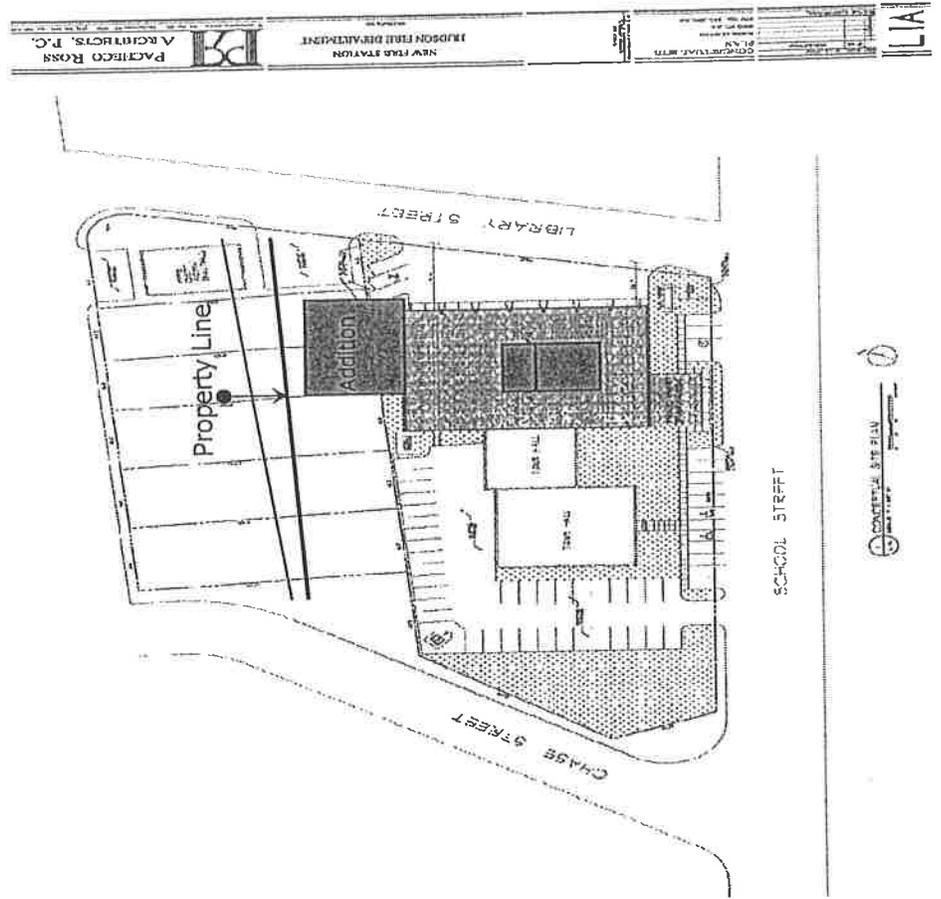
- Findings:
  - Any addition, using land within the site is too small, impractical, and not cost effective.
  - Adding square footage to the second floor of the addition (Ladder bay) is not feasible. The foundations and structural capacity will not hold a second floor. No additional room for stairs or an elevator.
  - Adding a third floor to the Central Fire Station is not practical due to structural considerations.



# Central Fire Station Conceptual Site Plan

Conceptual Site Plan was created to evaluate practicality of adding addition/square footage:

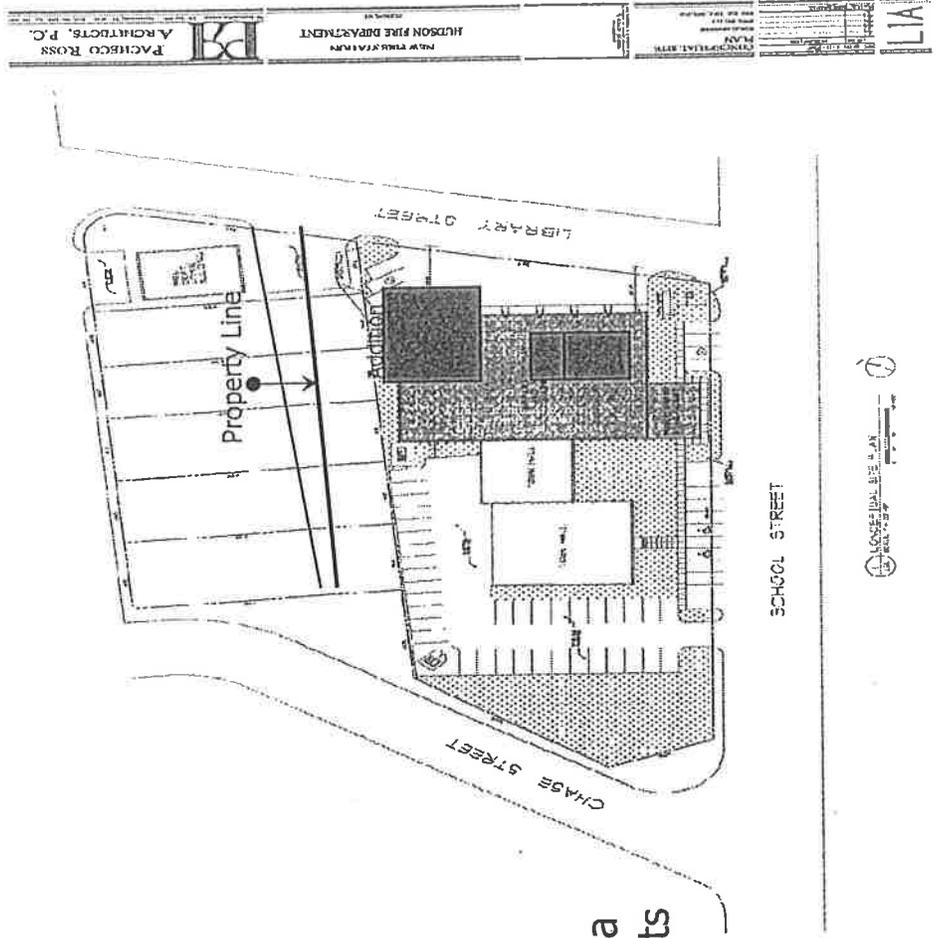
- Findings:
  - The addition of bays, support space, and required stairs and elevator utilizes the entire site.
  - All other support space would need to be placed on the second floor. Inherently it is more expensive than if the space was attached to the apparatus bays.
  - Space over the bays would require interior columns in the current bays and requires a structural floor system that will create a taller building exceeding 38 foot limit if sloped roof is used.



# Central Fire Station Conceptual Site Plan

Conceptual Site Plan was created to evaluate practicality of adding addition/square footage:

- Findings:
  - Forces apparatus bays to face east on Library Street. This will:
    - Abolish parking spaces
    - Results in improper apron space from bays to road
    - Does not respect setbacks
    - Eliminates drive through bays
  - Essentially forces program space into a area not designed to fit the requirements and needs of the fire department.





## Lenny Smith Central Fire Station Pacheco Ross Architects, P.C.

### Recommendations

- *" It is the professional opinion of Pacheco Ross Architects, P.C. that the current fire station site is too small and impractical to hold the programmed space. The Town of Hudson may consider a different site for a new fire station or building a new fire station on the "entire" site and moving town hall."*
- *"The Town may also consider upgrading the Lenny Smith Station (not as the Central station) and then building another new station on the new site."*

Lenny Smith Central Fire Station  
Pacheco Ross Architects, P.C.

Recommendations

- " Even if the Town implements a code upgrade/renovation program as outlined in Conceptual Renovation Budget, this station will **not** serve the needs of the Town or its Fire Department as the Central Station. The bays, supports spaces and operational needs of a central station cannot fit on the given amount of property available."
- " It is our professional opinion that the considerable amount of money required to bring this facility into code and regulatory compliance is **not** worth the cost and does not gain any additional space."
- "PRA does **not** recommend renovation as a cost-effective solution to meet the space requirements and operational needs of the Fire Department. The Conceptual Renovation Budget is approximately \$3.2 million and does **not** add any new space that is needed by the fire department."



TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Hudson Fire Department

Department Priority: 2 of 3 Projects

FY 2016

Type of Project (Check One)  Burns Hill Fire Station	Primary effect of project is to: <input type="checkbox"/> Replace or repair existing facilities or equipment <input checked="" type="checkbox"/> Improve or repair existing facilities or equipment <input type="checkbox"/> Expand capacity of existing service level facility <input type="checkbox"/> Provide new facility or service capacity
---	---

Service Area of Project (Check One)	<input type="checkbox"/> Region <input checked="" type="checkbox"/> Town <input type="checkbox"/> School District	<input type="checkbox"/> Central Business District <input type="checkbox"/> Neighborhood <input type="checkbox"/> Street <input type="checkbox"/> Other Area
--	---	---

**Project Name:** Hudson Fire Department – Burns Hill Fire Station  
**Description:** This CIP project proposes to renovate and improve the Burns Hill Fire Station. This would accomplish the addition of approximately 1800 square feet of living space and renovate the existing 781 square feet of living space.

Rational for Project: (Check those that apply; elaborate below.)	<input type="checkbox"/> Removes imminent threat to public health or safety <input checked="" type="checkbox"/> Alleviates substandard conditions or deficiencies <input type="checkbox"/> Responds to federal or state requirement to implement <input checked="" type="checkbox"/> Improves the quality of existing services <input checked="" type="checkbox"/> Provides added capacity to serve growth <input checked="" type="checkbox"/> Reduces long term operating costs <input checked="" type="checkbox"/> Provides incentive to economic development <input type="checkbox"/> Eligible for matching funds available for limited time
---	--

**Narrative Justification:** Please see the attached justification and supporting documentation.

**Cost Estimate:**  
(Itemize as necessary)

Capital Costs	
Dollar Amount (in current \$'s)	
\$ _____	Planning/feasibility analysis
\$ _____	Architecture & engineering fees
\$ _____	Real-estate acquisition
\$ _____	Site Preparation
\$ _____	Construction
\$ _____	Furnishing & equipment
\$ _____	Vehicles & Capital Equipment
<b>\$848,592</b>	<b>Total Project cost estimate</b>

**Impact on Operating & Maint. Costs or Personnel Needs**

Add Personnel Increase O&M costs Reduce Personnel Decreased O&M costs
Dollar Cost of Impacts if know Plus \$ _____ annually Minus \$ _____ annually

Source of Funding:	AMOUNT
Grant from: _____	_____
Loan From: _____	_____
Donation/bequest/private	_____
User fees & charges	_____
Capital reserve withdrawal	_____
Impact fee account	_____
Current revenue	_____
Bonds	_____
Total project cost <b>\$848,592</b>	

**Form Prepared By:**  
Robert M. Buxton  
 (Signature)

**Fire Chief Robert M. Buxton**  
 (Approved by)

**Hudson Fire Department**  
 (Department/Agency)



# TOWN OF HUDSON

## FIRE DEPARTMENT

39 FERRY STREET, HUDSON, NEW HAMPSHIRE 03051



Emergency 911  
Business 603-886-6021  
Fax 603-594-1164

Robert M. Buxton  
Chief of Department

TO: John Cashell  
Town Planner

FR: Robert M. Buxton *Rmb*  
Fire Chief

DT: April 8, 2014

RE: Capital Improvement Project #2 – Burns Hill Fire Station

---

The second project the Fire Department is requesting that the Planning Board support is the renovation/addition to the Burns Hill Fire Station.

In November of 2001 the Fire Department started to staff the Burns Hill Station on a twenty-four hour basis. Prior to this, the facility was a sub-station that was staffed by Call Fire Fighters, not full-time personnel. During the expansion of the Fire Department in 2001 this facility did not change. Currently, we have three members who are operating in approximately 781 square feet. We are proposing the renovation of the current space with the addition of 1800 square feet. This additional space would be utilized for several different functions including training, protective clothing storage, physical fitness, and updating the mechanical, electrical and plumbing equipment.

The Fire Department understands that there is potential development inclusive with the proposed bypass. We feel that this project maybe impacted by the bypass and may require that we consider the relocation of this facility.

**Estimated Cost for this project is: \$848,592**

The Fire Department approached this project from a planning perspective. As you are aware, when we begin to look at the capital inventory of the town we can certainly identify several projects. We understand that our needs will be balanced out against the needs of other departments in town and look forward to your review. We believe this list of projects highlight the capital needs of the Fire Department. We look forward to reviewing the proposed projects with you so we can submit our proposals to the planning board for review.

Please contact me with any questions.

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Hudson Fire Department

Department Priority: 3 of 3 Projects

FY 2016

Type of Project  
(Check One)  
  
Hudson Fire Department  
Radio System

- Primary effect of project is to:
- Replace or repair existing facilities or equipment
  - Improve or repair existing facilities or equipment
  - Expand capacity of existing service level facility
  - Provide new facility or service capacity

Service Area of Project  
(Check One)

- Region
- Town
- School District
- Central Business District
- Neighborhood
- Street
- Other Area

**Project Name:** Hudson Fire Department – Radio Station

**Description:** This CIP project proposes to replace and repair the current radio infrastructure for the Town of Hudson.

Rational for Project:  
(Check those that apply:  
elaborate below.)

- Removes imminent threat to public health or safety
- Alleviates substandard conditions or deficiencies
- Responds to federal or state requirement to implement
- Improves the quality of existing services
- Provides added capacity to serve growth
- Reduces long term operating costs
- Provides incentive to economic development
- Eligible for matching funds available for limited time

**Narrative Justification:** Please see the attached justification and supporting documentation.

Cost Estimate:  
(Itemize as necessary)

Capital Costs	
Dollar Amount (in current \$'s)	
\$	Planning/feasibility analysis
\$	Architecture & engineering fees
\$	Real-estate-acquisition
\$	Site Preparation
\$	Construction
\$	Furnishing & equipment
\$	Vehicles & Capital Equipment
<b>\$612,938</b>	<b>Total Project cost estimate</b>

Impact on Operating & Maint. Costs or Personnel Needs

Add Personnel  
Increase O&M costs  
Reduce Personnel  
Decreased O&M costs

Dollar Cost of Impacts if know  
Plus \$ \_\_\_ annually  
Minus \$ \_\_\_ annually

Source of Funding:	AMOUNT
Grant from: _____	_____
Loan From: _____	_____
Donation/bequest/private _____	_____
User fees & charges _____	_____
Capital reserve withdrawal _____	_____
Impact fee account _____	_____
Current revenue _____	_____
Bonds _____	_____

Total project cost **\$612,938**

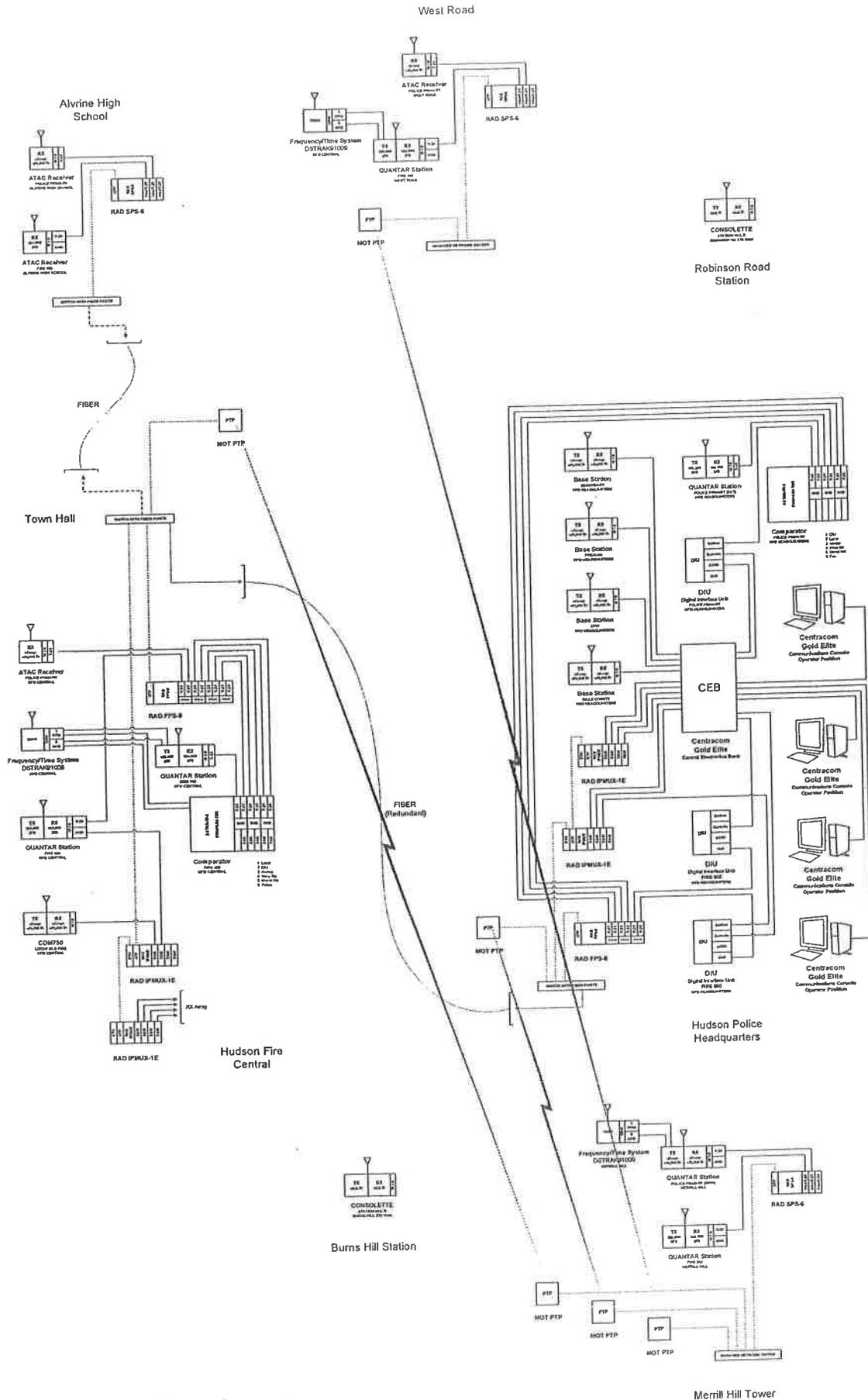
Form Prepared By:

Robert M. Buxton  
(Signature)

Fire Chief Robert M. Buxton  
(Approved by)

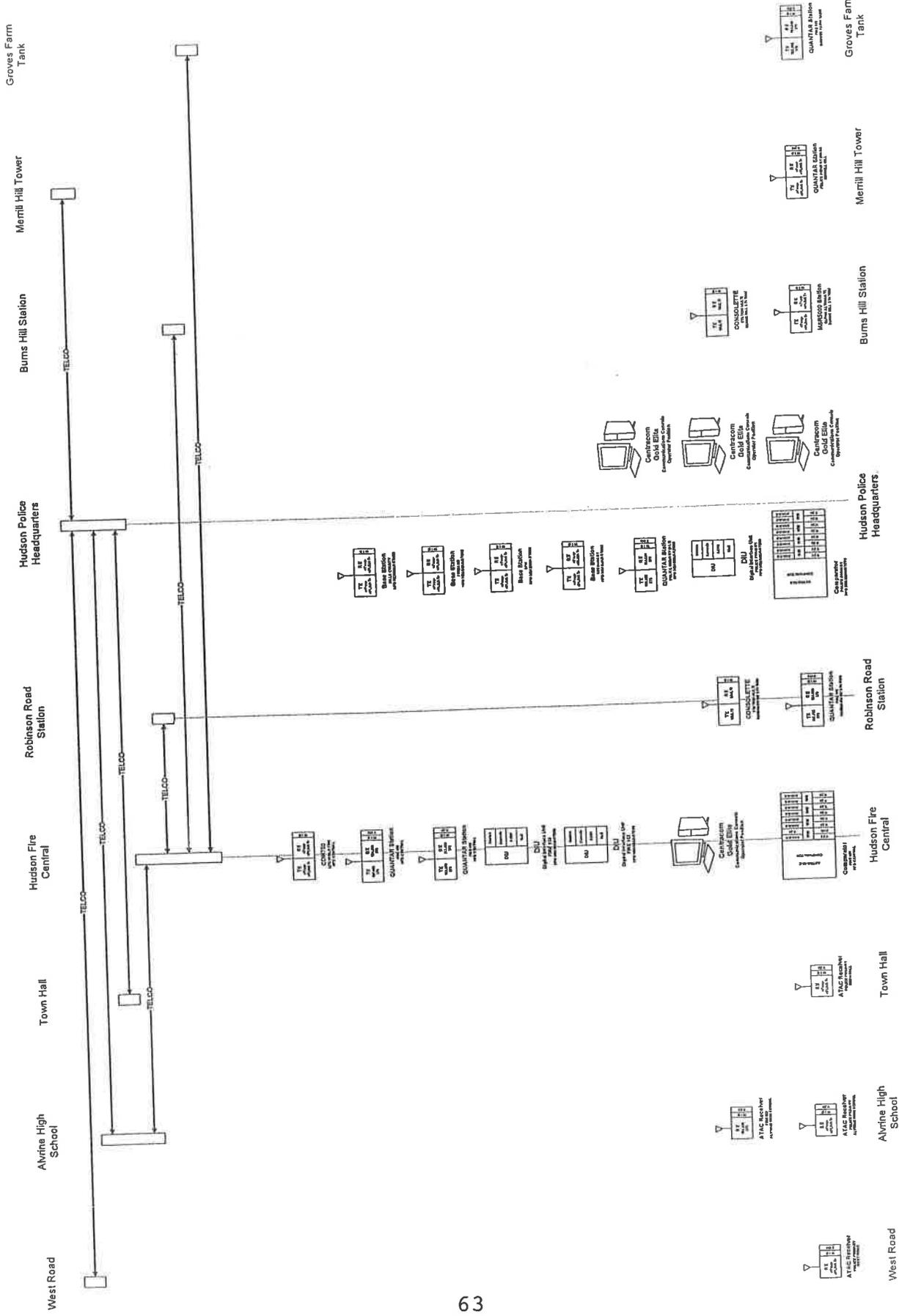
Hudson Fire Department  
(Department/Agency)





**HUDSON MUNICIPAL RADIO SYSTEMS**  
 RADIO SYSTEMS - PROPOSED COMBINED CONNECTIVITY

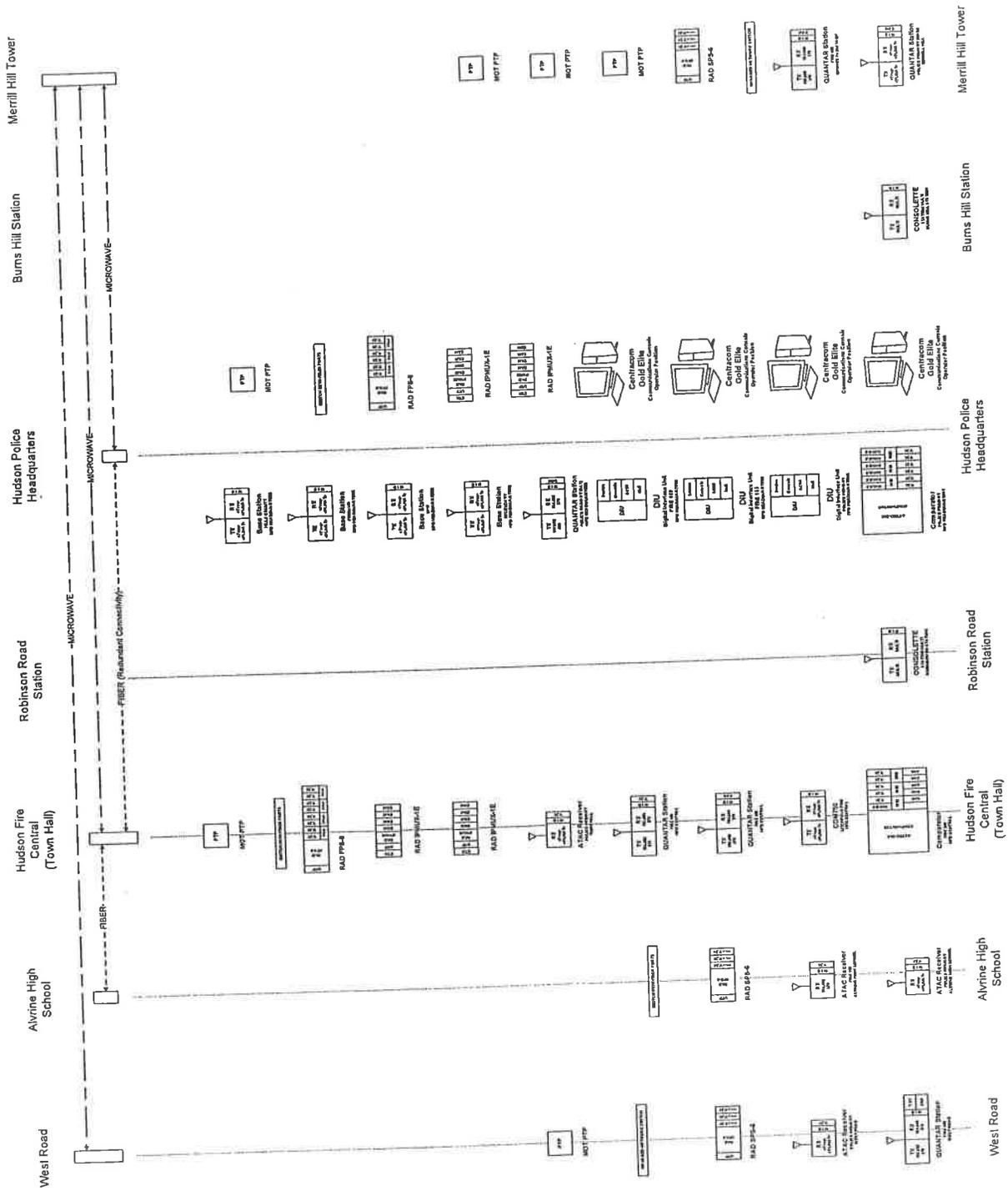
© 1995 Communications Services, Inc. Confidential Proprietary  
 System drawings may not be reproduced, copied or altered without  
 written permission.



**HUDSON MUNICIPAL RADIO SYSTEMS**

RADIO SYSTEMS - CURRENT SYSTEMS UNDER

CONSTRUCTION



**HUDSON MUNICIPAL RADIO SYSTEMS**  
 RADIO SYSTEMS - PROPOSED COMBINED LINKS

These connections are subject to the availability of the equipment and the location of the equipment.



# Hudson Police Department

FY2016 CIP

Police Facility Expansion



**TABLE 2**

**CAPITAL IMPROVEMENTS PROGRAM**

Department: Hudson Police Department

Department Priority: 1 of 1 Projects

FY 2018

Type of Project (Check One)	Primary effect of project is to: <input type="checkbox"/> Replace or repair existing facilities or equipment <input type="checkbox"/> Improve or repair existing facilities or equipment <input checked="" type="checkbox"/> Expand capacity of existing service level facility <input type="checkbox"/> Provide new facility or service capacity
--------------------------------	---

Service Area of Project (Check One)	<input type="checkbox"/> Region <input checked="" type="checkbox"/> Town <input type="checkbox"/> School District <input type="checkbox"/> District	<input type="checkbox"/> Central Business District <input type="checkbox"/> Neighborhood <input type="checkbox"/> Street <input checked="" type="checkbox"/> Other Area
--	--	--

**Project Name:**  
**Description:** Police Facility Expansion

Rational for Project: (Check those that apply; elaborate below.)	<input type="checkbox"/> Removes imminent threat to public health or safety <input checked="" type="checkbox"/> Alleviates substandard conditions or deficiencies <input checked="" type="checkbox"/> Responds to federal or state requirement to implement <input checked="" type="checkbox"/> Improves the quality of existing services <input checked="" type="checkbox"/> Provides added capacity to serve growth <input type="checkbox"/> Reduces long term operating costs <input type="checkbox"/> Provides incentive to economic development <input type="checkbox"/> Eligible for matching funds available for limited time
---	---

**Narrative Justification:** SEE ATTACHED

Cost Estimate: (Itemize as necessary)	Impact on Operating & Maint. Costs or Personnel Needs
Capital Costs Dollar Amount (in current \$s) \$ ___ Planning/feasibility analysis \$ ___ Architecture & engineering fees \$ ___ Real estate acquisition \$ ___ Site Preparation \$ ___ Construction \$ ___ Furnishing & equipment \$ ___ Vehicles & Capital Equipment \$ <input checked="" type="checkbox"/> includes most of above @ \$382.68/sq.ft \$ ___ \$3,433,305.00 Total Project cost estimate	Add Personnel Increase O&M costs Reduce Personnel Decreased O&M costs  Dollar Cost of Impacts if know Plus \$ ___ annually  Minus \$ ___ annually

Source of Funding: <u>AMOUNT</u> Grant from: _____ Loan From: _____ Donation/bequest/private _____ User fees & charges _____ Capital reserve withdrawal _____ Impact fee account _____ limited funds will be available_ Current revenue _____ Bonds _____  Total project cost <u>\$3,433,305.00</u>	Form Prepared By: _____ Chief of Police (Signature) _____ Chair Board of Library Trustees Approved by _____ Hills Memorial Library Department/Agency
---	--

# HUDSON POLICE DEPARTMENT FACILITY EXPANSION FY 2016

## Preface:

I have tried several times over recent years to get an approximate cost per foot from people in this field and have not been able to get a return phone call. This is probably because of time wasted by the experts who realize it isn't worth their time to call and then be involved in a conversation in which there is no compensation for. If the CIP committee were to provide a budget line that provided money to pay consultants a more detailed report would probably be provided. Until such time, this report is all we are able to provide.

This report is being provided without the advice of experts. The CIP committee needs to keep in mind the following when reviewing this report:

- (1) the below costs are for brand new buildings, as opposed to additions;
- (2) add that there are also floor area – perimeter multipliers not taken into account;
- (3) I am neither a builder nor a cost estimator and only a local company or local individual experienced in cost estimation with appropriate drawings etc. would be able to give an accurate estimate on this.
- (4) I will attempt to highlight my thoughts on where this expansion could go. I have not taken into consideration setbacks, etc.

The former CIP recommendations were based upon the needs and vision of the Chief of Police at that time. Just as that report was provided for me to use as a guide to help plan for the future, this updated report will provide information for future leaders of the police department. It should be used as a reference point for the specific time the document was created. Adjustments will need to be made as predicated at that time and need.

## GOAL:

To construct a two-story addition for a total of 8,972 square foot expansion to the existing police facility, to accommodate the needs of the community in fiscal year 2016.

## DESCRIPTION OF EXPANSION:

The addition would start between the window of the chief's office and the first window as you approach the detective windows. An expansion would move south off this wall by 33 feet toward Constitution Drive. It would then head west and extend into the employee parking lot for a total of 68 feet (Break down: 30 feet along current wall and 38 feet across grass/sidewalk/parking lot). It would then turn north toward the employee entrance for a total a distance of 92 feet and ending just before the jog.

Additional money would be needed to help deal with the roof lines.

**BACKGROUND:**

The Hudson Police Department is presently housed in a 14,200 square foot facility located on Constitution Drive. The current facility was designed by Kaestle-Boos Associates Inc. around 1993. It was initially designed as a 25,000 square foot facility, costing approximately \$3 million dollars. That facility was estimated to accommodate the police department's needs for at least 20-25 years.

The plan was later reduced to an 18,000 square foot facility. Through further cuts by the Board of Selectmen at that time, it was reduced to a 14,200 square foot facility. The cost at that time was \$1.5 million, which was accepted by the voters in 1994. It was estimated by Kaestle-Boos that the facility would accommodate our needs for the next 10-15 years.

In years 2006 we started outgrowing our facility. Interestingly enough, this is the time frame Kaestle-Boos said we would outgrow our facility. Between 2006 and 2012 the Police Department has made a number of significant changes within the building to accommodate the growth. Some of the changes were to the dispatch, records, services, and prosecution divisions. These changes caused us to eliminate a small meeting/conference room and our only two large storage closets.

In 2008, Retired Chief Gendron consulted with Kaestle-Boos Architects. It was determined that the Hudson Police Department should consider a 12,000 square foot expansion to the existing facility. The addition and/or expansion of existing areas were as follows:

Indoor Firing Range	Information Support Systems
Detectives/Narcotics	Locker Rooms
Legal Division	Report Writing Stations
Evidence Room	Separate Juvenile Lock Up
Records Division	Communications Division
2 Bay Garage	Roll Call Area
Operations Bureau	Storage
Additional Jail Cells	Special Operations Briefing Room

**Areas Eliminated/Delayed:**

Based upon some of the initiatives we have undertaken I believe some the above mentioned areas could be eliminated/delayed in being expanded. They are listed below with a more detailed explanation to follow:

Evidence Room	2 Bay Garage
Operations Bureau	Additional Jail Cells
Special Operations Briefing Room	Indoor Firing Range
Information Support Systems	Report Writing Stations

Evidence Room: Dramatic changes have occurred in this area over the last three years. We added lockable storage cages for weapons and items of high value. Those changes have resulted in a space that now has room for more storage. Additionally, a system has been put in place to ensure that evidence will be removed in a systemic way as soon as legally possible.

Returning evidence promptly after the disposition of cases will continue to keep available space for items as they come in.

Operations Bureau: I am not sure of the specificity of this distinction. The Operations Commander has a sufficient size office.

Special Operations Briefing Room: There is not enough frequency to justify this type of specialized room. We have the Ann Seabury Community Room that can be utilized for special briefings. This room allows for as many as eighty people and it has the necessary equipment for presentations that need to be made to illustrate the situation.

Information Support Systems: As technology advances some equipment has been made smaller. If and when the communications division undergoes an expansion, this could absorb the improvement of our computer server room by changing some of the walls in the current facility.

2 Bay Garage: We currently have a 2 bay sally port. The sally port is not big enough to fit an ambulance in. I do not believe there is a frequency to warrant an expansion to accommodate an ambulance. I do believe there is a need to expand the sally port furthest away from the building for a couple reasons. The first would be to allow us to store more vehicle maintenance equipment such as tire, windshield washer fluid, and etc. The height of the entrance should be increased to accommodate the crime scene truck. This would slow down the aging/appearance of the vehicle for more years to come. Another reason for the increase width would be to allow the crime scene team enough space to work in when processing vehicles.

An alternative to this would be to pour a concrete pad and purchase a large metal out building. This may be a cheaper alternative to reconstructing the sally port. Heat would have to be provided to this building as well as a video security system.

Additional Jail Cells: We have never had all the jail cells filled with arrested individuals. Consideration should be given to providing a cell designed for handicapped people. We do have available options to address handicapped people such as a hand summons or using the Valley Street Jail in Manchester, NH.

Indoor Firing Range: Although it is not an exact enhancement we have purchased a firing range simulator through a grant. This allows us to provide additional training to officers regardless of weather conditions. Again the simulator helps with some aspects of shooting but does not fully replicate actual time firing real rounds. We do have access to indoor ranges on occasion through partnerships we have formed with other agencies such as the Nashua and Manchester Police Departments.

Report Writing Room: We were able to build a report writing room by eliminating a large storage closet. There are two stations available for officers to sit down and access computers. Storage space was added higher up on the walls by building shelves. Other items that were kept in the room were moved to other parts of the building.

#### Newer Perspective:

Just as I was provided with a road map for the future I do not believe that all of the above suggestions are necessary at this time. Some would be nice to have and may make sense if

solving all needs at once. Some of the interior changes have allowed us to delay some of the areas of concern above. I would suggest a two phase project.

### Phase 1:

Detective Division  
Roll Call Area  
Locker Rooms

Legal Division  
Storage

#### Detective Division, Legal Division, and Roll Call Room:

These areas are aligned along the south west side of the building. The end wall can be blown out toward the employee parking lot. The Detective Division can also be expanded toward Constitution Drive. The expansion in this area will have a synergistic benefit to the problems concerning the locker rooms and storage.

Detective Division: This area currently contains four detective cubicles, a sergeants office, interview room, and a counter top with additional workstations. The workstations were put in due to the natural growth of the department, technology, and trends in crime.

Increasing the square footage of this area will provide better workstations for the changes that have taken place. It would also be important to have enough space to insert a round table that could be utilized as a meeting space. This would allow detectives to share and consult with the team their cases.

Legal Division: This improvement will allow the division to all be in one place. Currently, the division is broken up. The victim-witness advocate is in one small office, the full-time and part-time legal clerk are in the records division, the two prosecutors are in a separate office situated between the detective division and roll call room. Expanding this area would put the five member legal team in one area. This would allow for better filing, less transporting of files, and better communication between the team. This will create more efficiency in this division.

By placing everyone together, this would vacate the current office used by the victim-witness advocate. This office could now be used by the information manager who supervises both the records and communications divisions. For the times the victim-witness advocate needs a private place to meet with victims, Information Manager could leave the office and spend time in either communications or records.

Roll-Call Room: This area needs more expansion to accommodate the amount of people that are in attendance. As we have grown we needed to add more mailboxes for the officers and sitting area to adequately prepare the officers before they hit the road. On a regular basis we have as many as ten to fifteen people in this room. This is due to the overlap in shifts, detectives, legal and administrative personnel all participating in roll call.

Locker Rooms: One of the synergistic benefits of this expansion may create opportunities to create a locker room to meet the needs of the female employees and the Special Operations Unit (SWAT Team). There are not enough lockers to meet the needs of the female personnel. In addition there are not enough lockers for any more male employees. As the department grows there is no more space add new lockers. The current female locker room would not go to waste. Instead the wall that separates the male locker room from the female locker room could

be modified to add a doorway. This solves the problems of creating more space for the male personnel.

The members of the SOU are currently forced to store some of their equipment in the armory and their personal vehicles. Having to use their personal vehicles is not appropriate. Using the armory to store their bulky equipment is a terrible situation for a tactical unit. Adding a locker room designed for the SOU members would improve the conditions we currently have. This is not a new idea. Newer build or renovated departments such as Nashua, Manchester, and Londonderry, have all made these adjustments to meet the needs of an important unit.

Storage: As these areas are being designed opportunities to create either pockets of storage space or one larger room/closet for storage should be sought after.

## **Phase 2:**

Communications Division: This area was redesigned in 2006. Three work stations were put in. With some minor changes one more station could probably be added for those rare times when there is a large scale emergency. This fourth station would allow for the supervisor to be present and make real time observations to the performance of the communications division.

If this area is going to be expanded considerations should be given to adding an office for a supervisor. If square footage was going to be added to this area there are a couple of things to keep in mind. The first would be to determine if an office needed to be created for the Information Manager. It may not if this need was addressed in Phase 1. If the increase in square footage needed was minor then building out into the current lobby would be one suggestion. At times the lobby is full of people and the space is needed. The current lobby also provides a very professional appearance to the department. However, it may be possible to reduce this area by a few feet in depth in order to provide more space for the server room or creating a secondary space for server equipment. The other way to expand the communications room may be to absorb some of the space in the community room. It is important to keep in mind that there are dozen or so times a year where every square foot of the community room is needed.

Cell Area: If a larger scale improvement was being made to the communications room it may be prudent to consider adding a jail cell to accommodate a handicapped person. This would allow us to be ADA compliant.

## **PROJECTED COST:**

I never heard back from Kaestle-Boos Associates, Inc who build our original building. I was able to obtain some information kindly provided by the Town's Assessor who obtained reference material from Marshall & Swift- Marshall Valuation Service; <http://www.marshallswift.com/>. The below Section 15 Page 33, November 2013 – Calculator Method – Police Stations – Code 489 had the following information:

Class A-B construction (as the current police station is graded/constructed as); Good quality rating ; \$293.63 per SF –base cost ; plus extreme climate HVAC adj . - \$18.10 per SF; plus

sprinkler wet system - \$5.82 per SF; rolled up cost of \$317.55 times current cost multiplier of 1.03 times local multiplier of 1.17 = est. cost of \$382.68 per SF. This total is \$3,433,305.00.

(This does not include architect fees, site preparation and after building suite alterations- landscaping, nor furniture costs nor general contingency reserves nor any potential story height multiplier, nor any costs for ledge removal etc).

### **JUSTIFICATION:**

The adequacy, quality and appearance of the police facility from which your police department operates, have a great impact on the performance of the department as a whole. For example, attractive, functional, clean and well designed quarters contribute substantially to the morale and resultant productivity of the agency, as well as to its public image, dignity and prestige. Most citizens have little contact with the police and often, therefore, make judgments, which are at least partially based upon the aspect of police facilities. It follows then, that a good image of the department must 'be maintained not only by the proper department of the individual officer, but also by the appearance of his/her physical surroundings. The community should recognize the need for additional space to the current building if it is to receive the most effective and productive service as possible.

# Municipal Utility Committee

## FY2016 CIP

FY2016 Sewer and Water Utility CIP Projects

FY2016 WATER UTILITY CIP PROJECTS  
 TABLE 3: LIST OF PROJECTS SUBMITTED FOR REVIEW IN CAPITAL IMPROVEMENT PROGRAM

Description of Project or Equipment	Dept.	Dept.	Proposed Program Year	Total Cost	Project Notes	Priority Class or Point Score
		Priority Rank				
Windham Rd. Booster Station	Water Utility	1C	2016	\$321,000		
1 - 2MGD Storage - Barretts Hill	Water Utility	1A	2017	\$2,494,000		
5,200 L.F. 12" Water Main Barretts Hill Rd.	Water Utility	1B	2016	\$1,110,000		
Gordon St. Tank - Paint Exterior w/misc. repairs	Water Utility	2	2017	\$277,000		
Gordon St. Tank - Paint Interior	Water Utility	3	2017	\$205,000		
3,250 L.F. 16" Water Transmission line Lowell Rd. from Birch to Central	Water Utility	4	2018	\$767,000		
1,100 L.F. 12" Water transmission line, Sagamore Park Dr.	Water Utility	5	2018	\$266,000		
1,000 L.F. 16" Water Transmission Line Ferry St	Water Utility	6	2018	\$774,000		
4,500 L.F. 12" Water Transmission Line	Water Utility	7	2018	\$1,500,000		

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Water Utility

Department Priority: 1 of 9 Projects

FY 2016

Type of Project  
(Check One)  
Windham Road Booster Station

- Primary effect of project is to:
- Replace or repair existing facilities or equipment
  - Improve or repair existing facilities or equipment
  - Expand capacity of existing service level facility
  - Provide new facility or service capacity

Service Area of Project  
(Check One)

- Region
- Town
- School District
- District
- Central Business District
- Neighborhood
- Street
- Other Area

**Project Name: Upgrade Windham Road Booster Station**

Description: Per the Water Utility Distribution System (pages 6-10), substantial improvements are necessary to upgrade this station to meet future demands and meet NHDES standards. This will allow time for the Barretts Hill storage tank to be constructed, and yet improve water service to the Windham Road high service area. Eventually, this booster station will be used to fill the Barretts Hill storage tank.

Rational for Project:  
(Check those that apply:  
elaborate below.)

- Removes imminent threat to public health or safety
- Alleviates substandard conditions or deficiencies
- Responds to federal or state requirement to implement
- Improves the quality of existing services
- Provides added capacity to serve growth
- Reduces long term operating costs
- Provides incentive to economic development
- Eligible for matching funds available for limited time

Narrative Justification: This is the first step in making necessary improvements to fire and water service capacity to the Windham Road and Marsh Road high service area.

Cost Estimate:  
(Itemize as necessary)

Capital Costs	
Dollar Amount (in current \$'s)	
\$27,500	Planning/feasibility analysis
\$44,000	Architecture & engineering fees
\$	Real-estate-acquisition
\$	Site Preparation
\$249,500	Construction
\$	Furnishing & equipment
\$	Vehicles & Capital Equipment
\$	includes most of above @ \$325/sq.ft
\$	
\$321,000	<b>Total Project cost estimate</b>

Impact on Operating & Maint. Costs or Personnel Needs

Add Personnel  
Increase O&M costs  
Reduce Personnel  
Decreased O&M costs

Dollar Cost of Impacts if know  
Plus \$ \_\_\_\_\_ annually  
Minus \$ \_\_\_\_\_ annually

Source of Funding:	AMOUNT
Grant from: _____	_____
Loan From: _____	_____
Donation/bequest/private	_____
User fees & charges	_____
Capital reserve withdrawal	_____
Impact fee account	_____
Current revenue	_____
Bonds	\$275,000
<b>Total project cost</b>	<b>\$321,000</b>

Form Prepared By:

Gary Webster  
(Signature)

Approved by

Department/Agency

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Water Utility

Department Priority: 2 of 9 Projects

FY 2017

Type of Project (Check One) 1.2 MGD Storage Barretts Hill Rd	Primary effect of project is to: <input type="checkbox"/> Replace or repair existing facilities or equipment <input checked="" type="checkbox"/> Improve or repair existing facilities or equipment <input checked="" type="checkbox"/> Expand capacity of existing service level facility <input type="checkbox"/> Provide new facility or service capacity	
Service Area of Project (Check One)	<input type="checkbox"/> Region <input checked="" type="checkbox"/> Town <input type="checkbox"/> School District <input type="checkbox"/> District	<input type="checkbox"/> Central Business District <input type="checkbox"/> Neighborhood <input type="checkbox"/> Street <input type="checkbox"/> Other Area

**Project Name:** 1.2 MGD Storage Barretts Hill Rd. and Marsh Road high service area.  
**Description:**

Rational for Project: (Check those that apply: elaborate below.)	<input type="checkbox"/> Removes imminent threat to public health or safety <input checked="" type="checkbox"/> Alleviates substandard conditions or deficiencies <input checked="" type="checkbox"/> Responds to federal or state requirement to implement <input checked="" type="checkbox"/> Improves the quality of existing services <input checked="" type="checkbox"/> Provides added capacity to serve growth <input checked="" type="checkbox"/> Reduces long term operating costs <input type="checkbox"/> Provides incentive to economic development <input type="checkbox"/> Eligible for matching funds available for limited time
--	--

**Narrative Justification:** This is the second of three steps in the improvement program for the Windham Road & Marsh Road high service areas. There is need to improve fire protection and water service to the Windham Road & Marsh Road high service area. This project is described in the Water Utility Distribution System Study (pgs. 4-6).

<b>Cost Estimate:</b> (Itemize as necessary) <table style="margin-left: 20px;"> <tr> <th colspan="2">Capital Costs</th> </tr> <tr> <th colspan="2">Dollar Amount (in current \$'s)</th> </tr> <tr> <td>\$33,000</td> <td>Planning/feasibility analysis</td> </tr> <tr> <td>\$198,000</td> <td>Architecture &amp; engineering fees</td> </tr> <tr> <td>\$ _____</td> <td>Real-estate acquisition</td> </tr> <tr> <td>\$ _____</td> <td>Site Preparation</td> </tr> <tr> <td>\$2,263,000</td> <td>Construction</td> </tr> <tr> <td>\$ _____</td> <td>Furnishing &amp; equipment</td> </tr> <tr> <td>\$ _____</td> <td>Vehicles &amp; Capital Equipment</td> </tr> <tr> <td>\$ _____</td> <td>includes most of above @ \$325/sq.ft</td> </tr> <tr> <td>\$ _____</td> <td></td> </tr> <tr> <td>\$2,494,000</td> <td><b>Total Project cost estimate</b></td> </tr> </table>	Capital Costs		Dollar Amount (in current \$'s)		\$33,000	Planning/feasibility analysis	\$198,000	Architecture & engineering fees	\$ _____	Real-estate acquisition	\$ _____	Site Preparation	\$2,263,000	Construction	\$ _____	Furnishing & equipment	\$ _____	Vehicles & Capital Equipment	\$ _____	includes most of above @ \$325/sq.ft	\$ _____		\$2,494,000	<b>Total Project cost estimate</b>	<b>Impact on Operating &amp; Maint. Costs or Personnel Needs</b> <table style="margin-left: 20px;"> <tr> <td>Add Personnel</td> </tr> <tr> <td>Increase O&amp;M costs</td> </tr> <tr> <td>Reduce Personnel</td> </tr> <tr> <td>Decreased O&amp;M costs</td> </tr> <tr> <td>Dollar Cost of Impacts if know</td> </tr> <tr> <td>Plus \$ _____ annually</td> </tr> <tr> <td>Minus \$ _____ annually</td> </tr> </table>	Add Personnel	Increase O&M costs	Reduce Personnel	Decreased O&M costs	Dollar Cost of Impacts if know	Plus \$ _____ annually	Minus \$ _____ annually
Capital Costs																																
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Minus \$ _____ annually																																

<table style="width: 100%;"> <tr> <th style="text-align: left;">Source of Funding:</th> <th style="text-align: left;">AMOUNT</th> </tr> <tr> <td>Grant from: _____</td> <td>_____</td> </tr> <tr> <td>Loan From: _____</td> <td>_____</td> </tr> <tr> <td>Donation/bequest/private</td> <td>_____</td> </tr> <tr> <td>User fees &amp; charges</td> <td>_____</td> </tr> <tr> <td>Capital reserve withdrawal</td> <td>\$500,000</td> </tr> <tr> <td>Impact fee account</td> <td>_____</td> </tr> <tr> <td>Current revenue</td> <td>_____</td> </tr> <tr> <td>Bonds</td> <td>_____</td> </tr> <tr> <td><b>Total project cost</b></td> <td><b>\$1,994,000</b></td> </tr> </table>	Source of Funding:	AMOUNT	Grant from: _____	_____	Loan From: _____	_____	Donation/bequest/private	_____	User fees & charges	_____	Capital reserve withdrawal	\$500,000	Impact fee account	_____	Current revenue	_____	Bonds	_____	<b>Total project cost</b>	<b>\$1,994,000</b>	<b>Form Prepared By:</b> Gary Webster _____ (Signature)  Approved by _____  Department/Agency _____
Source of Funding:	AMOUNT																				
Grant from: _____	_____																				
Loan From: _____	_____																				
Donation/bequest/private	_____																				
User fees & charges	_____																				
Capital reserve withdrawal	\$500,000																				
Impact fee account	_____																				
Current revenue	_____																				
Bonds	_____																				
<b>Total project cost</b>	<b>\$1,994,000</b>																				

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Water Utility

Department Priority: 3 of 9 Projects

FY 2016

Type of Project (Check One) 5,200 LF – 12" Water Main Barretts Hill Rd	Primary effect of project is to: <input type="checkbox"/> Replace or repair existing facilities or equipment <input checked="" type="checkbox"/> Improve or repair existing facilities or equipment <input checked="" type="checkbox"/> Expand capacity of existing service level facility <input type="checkbox"/> Provide new facility or service capacity
---	--

Service Area of Project (Check One)	<input type="checkbox"/> Region <input checked="" type="checkbox"/> Town <input type="checkbox"/> School District <input type="checkbox"/> District	<input type="checkbox"/> Central Business District <input type="checkbox"/> Neighborhood <input type="checkbox"/> Street <input type="checkbox"/> Other Area
--	--	---

**Project Name:** 5,200 LF 12" water main connecting the Barretts Hill storage tank (Windham Road high service) via Barretts Hill Road from Greeley Street.  
**Description:**

Rational for Project: (Check those that apply: elaborate below.)	<input type="checkbox"/> Removes imminent threat to public health or safety <input checked="" type="checkbox"/> Alleviates substandard conditions or deficiencies <input checked="" type="checkbox"/> Responds to federal or state requirement to implement <input checked="" type="checkbox"/> Improves the quality of existing services <input checked="" type="checkbox"/> Provides added capacity to serve growth <input checked="" type="checkbox"/> Reduces long term operating costs <input type="checkbox"/> Provides incentive to economic development. <input type="checkbox"/> Eligible for matching funds available for limited time
--	---

**Narrative Justification:** This is the third and last step in the improvement program for the Windham Road and Marsh road high service areas. This project is described in the Water Utility Distribution System Study. This project also benefits the town by removing the Marsh Road Booster Station from service, which is underground, and as such, is a safety concern.

<b>Cost Estimate:</b> (Itemize as necessary)	<b>Impact on Operating &amp; Maint. Costs or Personnel Needs</b>
Capital Costs Dollar Amount (in current \$'s) \$22,000 Planning/feasibility analysis \$110,000 Architecture & engineering fees \$ _____ Real-estate-acquisition \$ _____ Site Preparation \$978,000 Construction \$ _____ Furnishing & equipment \$ _____ Vehicles & Capital Equipment \$ _____ includes most of above @ \$325/sq.ft \$ _____ \$1,110,000 Total Project cost estimate	Add Personnel Increase O&M costs Reduce Personnel Decreased O&M costs  Dollar Cost of Impacts if know Plus \$ _____ annually  Minus \$ _____ annually

<b>Source of Funding:</b>	<b>Form Prepared By:</b>																				
<table style="width: 100%;"> <tr> <th style="text-align: left;">Source of Funding:</th> <th style="text-align: left;">AMOUNT</th> </tr> <tr> <td>Grant from: _____</td> <td>_____</td> </tr> <tr> <td>Loan From: _____</td> <td>_____</td> </tr> <tr> <td>Donation/bequest/private _____</td> <td>_____</td> </tr> <tr> <td>User fees &amp; charges _____</td> <td>_____</td> </tr> <tr> <td>Capital reserve withdrawal _____</td> <td>_____</td> </tr> <tr> <td>Impact fee account _____</td> <td>_____</td> </tr> <tr> <td>Current revenue _____</td> <td>_____</td> </tr> <tr> <td>Bonds \$1,110,000 _____</td> <td>_____</td> </tr> <tr> <td><b>Total project cost</b> \$1,110,000 _____</td> <td>_____</td> </tr> </table>	Source of Funding:	AMOUNT	Grant from: _____	_____	Loan From: _____	_____	Donation/bequest/private _____	_____	User fees & charges _____	_____	Capital reserve withdrawal _____	_____	Impact fee account _____	_____	Current revenue _____	_____	Bonds \$1,110,000 _____	_____	<b>Total project cost</b> \$1,110,000 _____	_____	Gary Webster _____ (Signature)  Approved by _____  Department/Agency _____
Source of Funding:	AMOUNT																				
Grant from: _____	_____																				
Loan From: _____	_____																				
Donation/bequest/private _____	_____																				
User fees & charges _____	_____																				
Capital reserve withdrawal _____	_____																				
Impact fee account _____	_____																				
Current revenue _____	_____																				
Bonds \$1,110,000 _____	_____																				
<b>Total project cost</b> \$1,110,000 _____	_____																				

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Water Utility

Department Priority: 4 of 9 Projects

FY 2017

Type of Project  
(Check One)  
Gordon Street Water Tank –  
Exterior Painting

Primary effect of project is to:  
 Replace or repair existing facilities or equipment  
 Improve or repair existing facilities or equipment  
 Expand capacity of existing service level facility  
 Provide new facility or service capacity

Service Area of Project  
(Check One)

Region  
 Town  
 School District  
 District  
 Central Business District  
 Neighborhood  
 Street  
 Other Area

**Project Name:** Gordon Street Water Tank – Paint exterior of tank, including minor repairs to same.  
**Description:**

**Rational for Project:**  
(Check those that apply:  
elaborate below.)

Removes imminent threat to public health or safety  
 Alleviates substandard conditions or deficiencies  
 Responds to federal or state requirement to implement  
 Improves the quality of existing services  
 Provides added capacity to serve growth  
 Reduces long term operating costs  
 Provides incentive to economic development  
 Eligible for matching funds available for limited time

**Narrative Justification:** Tank is steel and subject to corrosion and must be painted periodically. Repairs are necessary per Life/Safety codes for steel water storage tanks. Refer to TIC report dated 11-06-06 on file in the Engineer's Office.

**Cost Estimate:**  
(Itemize as necessary)

Capital Costs  
 Dollar Amount (in current \$s)  
\$11,000 Planning/feasibility analysis  
\$22,000 Architecture & engineering fees  
 \$ \_\_\_\_\_ Real estate acquisition  
 \$ \_\_\_\_\_ Site Preparation  
\$244,000 Construction  
 \$ \_\_\_\_\_ Furnishing & equipment  
 \$ \_\_\_\_\_ Vehicles & Capital Equipment  
 \$ \_\_\_\_\_ includes most of above @ \$325/sq.ft  
 \$ \_\_\_\_\_  
\$277,000 Total Project cost estimate

Impact on Operating & Maint. Costs or Personnel Needs

Add Personnel  
 Increase O&M costs  
 Reduce Personnel  
 Decreased O&M costs  
  
 Dollar Cost of Impacts if know  
 Plus \$ \_\_\_\_\_ annually  
  
 Minus \$ \_\_\_\_\_ annually

Source of Funding:      AMOUNT

Grant from: \_\_\_\_\_

Loan From: \_\_\_\_\_

Donation/bequest/private \_\_\_\_\_

User fees & charges      \$125,000

Capital reserve withdrawal \$152,000

Impact fee account \_\_\_\_\_

Current revenue \_\_\_\_\_

Bonds \_\_\_\_\_

Total project cost \$277,000

Form Prepared By:

Gary Webster  
(Signature)

Approved by

Department/Agency

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department:

Department Priority: 5 of 9 Projects

FY 2017

Type of Project  
(Check One)  
Gordon Street Tank - Paint

- Primary effect of project is to:
- Replace or repair existing facilities or equipment
  - Improve or repair existing facilities or equipment
  - Expand capacity of existing service level facility
  - Provide new facility or service capacity

Service Area of Project  
(Check One)

- |  |  |
|--|--|
| <input type="checkbox"/> Region          | <input type="checkbox"/> Central Business District |
| <input checked="" type="checkbox"/> Town | <input type="checkbox"/> Neighborhood              |
| <input type="checkbox"/> School District | <input type="checkbox"/> Street                    |
| <input type="checkbox"/> District        | <input type="checkbox"/> Other Area                |

Project Name: **Gordon Street Water Tank – Paint Interior**  
Description:

Rational for Project:  
(Check those that apply;  
elaborate below.)

- Removes imminent threat to public health or safety
- Alleviates substandard conditions or deficiencies
- Responds to federal or state requirement to implement
- Improves the quality of existing services
- Provides added capacity to serve growth
- Reduces long term operating costs
- Provides incentive to economic development
- Eligible for matching funds available for limited time

Narrative Justification: Tank is steel and subject to corrosion and must be painted periodically. Repairs are necessary per Life/Safety codes for steel water storage tanks. Refer to TIC (report dated) 11-06-06 on file with the Engineering Department.

Cost Estimate:  
(Itemize as necessary)

Capital Costs	
Dollar Amount (in current \$'s)	
\$ 5,500	Planning/feasibility analysis
\$11,000	Architecture & engineering fees
\$ _____	Real estate acquisition
\$ _____	Site Preparation
\$188,500	Construction
\$ _____	Furnishing & equipment
\$ _____	Vehicles & Capital Equipment
\$ _____	
\$ _____	
\$205,000	<b>Total Project cost estimate</b>

Impact on Operating & Maint. Costs or Personnel Needs

- Add Personnel
  - Increase O&M costs
  - Reduce Personnel
  - Decreased O&M costs
- Dollar Cost of Impacts if know  
Plus \$ \_\_\_\_\_ annually  
Minus \$ \_\_\_\_\_ annually

Source of Funding:

AMOUNT

Grant from: _____	_____
Loan From: _____	_____
Donation/bequest/private	_____
User fees & charges	\$100,000
Capital reserve withdrawal	\$105,000
Impact fee account	_____
Current revenue	_____
Bonds	_____
 Total project cost	 \$205,000

Form Prepared By:

\_\_\_\_\_  
(Signature)

Approved by

\_\_\_\_\_  
Department/Agency

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department:

Department Priority: 6 of 9 Projects

FY 2018

Type of Project  
(Check One)  
3,250 L.F. 16" Water  
Transmission Line Lowell Road

Primary effect of project is to:  
 Replace or repair existing facilities or equipment  
 Improve or repair existing facilities or equipment  
 Expand capacity of existing service level facility  
 Provide new facility or service capacity

Service Area of Project  
(Check One)

Region  
 Town  
 School District  
 District  
 Central Business District  
 Neighborhood  
 Street  
 Waste Service Areas

**Project Name:** 3,250 L.F. 16" , Water transmission line, Lowell Road from Birch Street to Central Street scheduled for 2008  
**Description:**

Rational for Project:  
(Check those that apply:  
elaborate below.)

Removes imminent threat to public health or safety  
 Alleviates substandard conditions or deficiencies  
 Responds to federal or state requirement to implement  
 Improves the quality of existing services  
 Provides added capacity to serve growth  
 Reduces long term operating costs  
 Provides incentive to economic development  
 Eligible for matching funds available for limited time

**Narrative Justification:** This transmission line upgrade is recommended is the "Water Distribution System Study" as another step in upgrading the usage and fire capacity, improving redundancy and decreasing the potential for emergency situations with respect to the water distribution system

Cost Estimate:  
(Itemize as necessary)

Capital Costs  
Dollar Amount (in current \$'s)  
 \$11,000 Planning/feasibility analysis  
 \$93,500 Architecture & engineering fees  
 \$ Real estate acquisition  
 \$ Site Preparation  
 \$622,500 Construction  
 \$ Furnishing & equipment  
 \$ Vehicles & Capital Equipment  
 \$  
 \$  
 \$767,000 Total Project cost estimate

Impact on Operating & Maint. Costs or Personnel Needs

Add Personnel  
 Increase O&M costs  
 Reduce Personnel  
 Decreased O&M costs  
 Dollar Cost of Impacts if know  
 Plus \$ annually  
 Minus \$ annually

Source of Funding: AMOUNT

Grant from:	_____
Loan From:	_____
Donation/bequest/private	_____
User fees & charges	_____
Capital reserve withdrawal	\$767,000
Impact fee account	_____
Current revenue	_____
Bonds	_____
<b>Total project cost</b>	<b>\$ 767,000</b>

Form Prepared By:  
 \_\_\_\_\_  
 (Signature)  
 \_\_\_\_\_  
 Approved by  
 \_\_\_\_\_  
 Department/Agency

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Water Utility

Department Priority: 7 of 9 Projects

FY 2018

Type of Project (Check One) 1,100 L.F. 12" Water Transmission Line Sagamore Park Road	Primary effect of project is to: <input type="checkbox"/> Replace or repair existing facilities or equipment <input checked="" type="checkbox"/> Improve or repair existing facilities or equipment <input checked="" type="checkbox"/> Expand capacity of existing service level facility <input type="checkbox"/> Provide new facility or service capacity
---	--

Service Area of Project (Check One)	<input type="checkbox"/> Region <input checked="" type="checkbox"/> Town <input type="checkbox"/> School District <input type="checkbox"/> District	<input type="checkbox"/> Central Business District <input type="checkbox"/> Neighborhood <input type="checkbox"/> Street <input type="checkbox"/> Waste Service Areas
--	--	--

**Project Name:** 1,100 L.F. 12" , Water transmission line, Sagamore Park Road  
**Description:**

Rational for Project: (Check those that apply: elaborate below.)	<input type="checkbox"/> Removes imminent threat to public health or safety <input checked="" type="checkbox"/> Alleviates substandard conditions or deficiencies <input type="checkbox"/> Responds to federal or state requirement to implement <input checked="" type="checkbox"/> Improves the quality of existing services <input type="checkbox"/> Provides added capacity to serve growth <input checked="" type="checkbox"/> Reduces long term operating costs <input type="checkbox"/> Provides incentive to economic development <input type="checkbox"/> Eligible for matching funds available for limited time
--	--

**Narrative Justification:** This transmission line upgrade is recommended in the "Water Distribution System Study" as another step in upgrading the usage and fire capacity, improving redundancy and decreasing the potential for emergency situations with respect to the water distribution system

<b>Cost Estimate:</b> (Itemize as necessary)  <table style="width: 100%;"> <tr> <th colspan="2" style="text-align: center;">Capital Costs</th> </tr> <tr> <th colspan="2" style="text-align: center;">Dollar Amount (in current \$s)</th> </tr> <tr> <td>\$ 5,500</td> <td>Planning/feasibility analysis</td> </tr> <tr> <td>\$22,000</td> <td>Architecture &amp; engineering fees</td> </tr> <tr> <td>\$ ,</td> <td>Real estate acquisition</td> </tr> <tr> <td>\$</td> <td>Site Preparation</td> </tr> <tr> <td>\$238,500</td> <td>Construction</td> </tr> <tr> <td>\$</td> <td>Furnishing &amp; equipment</td> </tr> <tr> <td>\$</td> <td>Vehicles &amp; Capital Equipment</td> </tr> <tr> <td>\$</td> <td></td> </tr> <tr> <td>\$</td> <td></td> </tr> <tr> <td>\$266,000</td> <td><b>Total Project cost estimate</b></td> </tr> </table>	Capital Costs		Dollar Amount (in current \$s)		\$ 5,500	Planning/feasibility analysis	\$22,000	Architecture & engineering fees	\$ ,	Real estate acquisition	\$	Site Preparation	\$238,500	Construction	\$	Furnishing & equipment	\$	Vehicles & Capital Equipment	\$		\$		\$266,000	<b>Total Project cost estimate</b>	<b>Impact on Operating &amp; Maint. Costs or Personnel Needs</b>  Add Personnel Increase O&M costs Reduce Personnel Decreased O&M costs  Dollar Cost of Impacts if know Plus \$ _____ annually  Minus \$ _____ annually
Capital Costs																									
Dollar Amount (in current \$s)																									
\$ 5,500	Planning/feasibility analysis																								
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\$																									
\$																									
\$266,000	<b>Total Project cost estimate</b>																								

<table style="width: 100%;"> <tr> <th style="text-align: left;">Source of Funding:</th> <th style="text-align: left;">AMOUNT</th> </tr> <tr> <td>Grant from: _____</td> <td>_____</td> </tr> <tr> <td>Loan From: _____</td> <td>_____</td> </tr> <tr> <td>Donation/bequest/private</td> <td>_____</td> </tr> <tr> <td>User fees &amp; charges</td> <td>_____</td> </tr> <tr> <td>Capital reserve withdrawal</td> <td>\$266,000</td> </tr> <tr> <td>Impact fee account</td> <td>_____</td> </tr> <tr> <td>Current revenue</td> <td>_____</td> </tr> <tr> <td>Bonds</td> <td>_____</td> </tr> <tr> <td><b>Total project cost</b></td> <td><b>\$266,000</b></td> </tr> </table>	Source of Funding:	AMOUNT	Grant from: _____	_____	Loan From: _____	_____	Donation/bequest/private	_____	User fees & charges	_____	Capital reserve withdrawal	\$266,000	Impact fee account	_____	Current revenue	_____	Bonds	_____	<b>Total project cost</b>	<b>\$266,000</b>	<b>Form Prepared By:</b> _____ (Signature)  _____ Approved by  _____ Department/Agency
Source of Funding:	AMOUNT																				
Grant from: _____	_____																				
Loan From: _____	_____																				
Donation/bequest/private	_____																				
User fees & charges	_____																				
Capital reserve withdrawal	\$266,000																				
Impact fee account	_____																				
Current revenue	_____																				
Bonds	_____																				
<b>Total project cost</b>	<b>\$266,000</b>																				

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Water Utility

Department Priority: 8 of 9 Projects

FY 2018

Type of Project  
(Check One)  
1,000 LF 16" Transmission Line  
Ferry Street

- Primary effect of project is to:
- Replace or repair existing facilities or equipment
  - Improve or repair existing facilities or equipment
  - Expand capacity of existing service level facility
  - Provide new facility or service capacity

Service Area of Project  
(Check One)

- |  |  |
|--|--|
| <input type="checkbox"/> Region          | <input type="checkbox"/> Central Business District |
| <input checked="" type="checkbox"/> Town | <input type="checkbox"/> Neighborhood              |
| <input type="checkbox"/> School District | <input type="checkbox"/> Street                    |
| <input type="checkbox"/> District        | <input type="checkbox"/> Other Area                |

Project Name: 16" transmission line on Ferry St., between Webster St. & Library St.  
Description: 1,000 LF 16" diameter ductile iron pipe with fittings.

Rational for Project:  
(Check those that apply:  
elaborate below.)

- Removes imminent threat to public health or safety
- Alleviates substandard conditions or deficiencies
- Responds to federal or state requirement to implement
- Improves the quality of existing services
- Provides added capacity to serve growth
- Reduces long term operating costs
- Provides incentive to economic development
- Eligible for matching funds available for limited time

Narrative Justification: Continuation of water transmission improvements recommended in the "Water Distribution System Study".

Cost Estimate:  
(Itemize as necessary)

Capital Costs	
Dollar Amount (in current \$s)	
\$11,000	Planning/feasibility analysis
\$71,500	Architecture & engineering fees
\$ _____	Real-estate acquisition
\$ _____	Site Preparation
\$691,500	Construction
\$ _____	Furnishing & equipment
\$ _____	Vehicles & Capital Equipment
\$ _____	includes most of above @ \$325/sq.ft
\$ _____	
\$774,000	Total Project cost estimate

Impact on Operating & Maint. Costs or Personnel Needs

Add Personnel  
Increase O&M costs  
Reduce Personnel  
Decreased O&M costs

Dollar Cost of Impacts if know  
Plus \$ \_\_\_\_\_ annually  
Minus \$ \_\_\_\_\_ annually

Source of Funding: AMOUNT

Grant from: _____	_____
Loan From: _____	_____
Donation/bequest/private	_____
User fees & charges	\$325,000
Capital reserve withdrawal	\$449,000
Impact fee account	_____
Current revenue	_____
Bonds	_____
Total project cost	\$774,000

Form Prepared By:

Gary Webster  
(Signature)

Approved by

Department/Agency

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Water Utility

Department Priority: 9 of 9 Projects

FY 2018

Type of Project  
(Check One)  
4,900 LF 12" Parallel  
Transmission Line on Lowell Rd.

Primary effect of project is to:  
 Replace or repair existing facilities or equipment  
 Improve or repair existing facilities or equipment  
 Expand capacity of existing service level facility  
 Provide new facility or service capacity

Service Area of Project  
(Check One)

Region  
 Town  
 School District  
 District  
 Central Business District  
 Neighborhood  
 Street  
 Other Area

Project Name: 4,900 LF 12" Parallel Transmission Line on Lowell Rd.  
 Description: 4,900 LF 12" diameter ductile iron pipe with fittings.

Rational for Project:  
(Check those that apply:  
elaborate below.)

Removes imminent threat to public health or safety  
 Alleviates substandard conditions or deficiencies  
 Responds to federal or state requirement to implement  
 Improves the quality of existing services  
 Provides added capacity to serve growth  
 Reduces long term operating costs  
 Provides incentive to economic development  
 Eligible for matching funds available for limited time

Narrative Justification: Continuation of water transmission improvements recommended in the "Water Distribution System Study".

Cost Estimate:  
(Itemize as necessary)

Capital Costs  
 Dollar Amount (in current \$'s)  
 \$16,500 Planning/feasibility analysis  
 \$110,000 Architecture & engineering fees  
 \$ \_\_\_\_\_ Real estate acquisition  
 \$ \_\_\_\_\_ Site Preparation  
 \$1,373,500 Construction  
 \$ \_\_\_\_\_ Furnishing & equipment  
 \$ \_\_\_\_\_ Vehicles & Capital Equipment  
 \$ \_\_\_\_\_ includes most of above @ \$325/sq.ft  
 \$ \_\_\_\_\_  
 \$1,500,000 Total Project cost estimate

Impact on Operating & Maint. Costs or Personnel Needs

Add Personnel  
 Increase O&M costs  
 Reduce Personnel  
 Decreased O&M costs  
 Dollar Cost of Impacts if know  
 Plus \$ \_\_\_\_\_ annually  
 Minus \$ \_\_\_\_\_ annually

Source of Funding:	AMOUNT
Grant from: _____	_____
Loan From: _____	_____
Donation/bequest/private	_____
User fees & charges	\$1,500,000
Capital reserve withdrawal	_____
Impact fee account	_____
Current revenue	_____
Bonds	_____
<b>Total project cost</b>	<b>\$1,500,000</b>

Form Prepared By:

Gary Webster  
(Signature)

Approved by

Department/Agency



100 International Drive, Suite 152  
Portsmouth, NH 03801  
tel: 603-431-3937 fax: 603-433-4358  
www.westonandsampson.com

planning, permitting,  
design, construction,  
operation, maintenance,  
design/build, & equipment.

**Weston&Sampson.**

Town of Hudson, New Hampshire  
Project No. 2120728

February 15, 2013

Mr. Patrick R. Colburn, P.E.  
Town Engineer  
Town of Hudson  
12 School Street  
Hudson, New Hampshire 03051

Re: **Cost of Treatment Investigation  
Nash Well**

Dear Mr. Colburn:

Weston & Sampson has performed a preliminary analysis on the cost to establish the 6-inch diameter bedrock well located on Old Derry Road (referred to as the "Nash Well") as a public water supply. This cost is compared to the cost of purchasing an equivalent amount of water from the City of Nashua/Pennichuck Water Works (PWW) to meet the Town's water needs.

#### *Previous Work*

On February 1, 2012, a step rate pumping test was conducted on the Nash Well to determine potential well yield. The test included two 60-minute steps conducted at rates of 17 and 42 gallons per minute (gpm) followed by a final step conducted at a rate of 75 gpm for two hours. The Nash well step rate test confirmed the Old Derry Road area is a high water yield location for a bedrock source and preliminary test results indicated that a safe yield between 140 and 250 gpm could be expected from the Nash Well. The pumping test effort determined the following:

- ✓ A longer duration pump test is required to determine the actual well safe yield.
- ✓ Further consideration of the well is warranted due to the potential of a 140 to 250 gpm yield.
- ✓ The well will require treatment to lower the arsenic level below 0.01 mg/l to meet the primary drinking water standards.
- ✓ The potential well yield may be sufficient to justify the cost of treatment and pumping costs.

It was further recommended that the relative cost to develop the Nash well and treat the water should be assessed and evaluated against the current and future cost of purchasing an equivalent amount of water from Pennichuck Water Works (PWW).

#### *Nash Well Treatment*

The existing Nash well is a 6-inch bedrock well which cannot support a pump that can deliver flows between 150 to 250 gpm at the total dynamic head required to meet system pressures. Due to this, we

recommend the existing well be reamed to an 8-inch diameter. The cost to ream the well will be lower than drilling a new, adjacent bedrock well of 8- or 10-inch diameter sufficient for a public water supply. The below observations and assumptions were used to determine the cost to develop the Nash Well, construct an arsenic and iron removal treatment system, and connect the supply to the existing distribution system. We also evaluated costs to operate and maintain the system for a 30 year life cycle.

The existing distribution system extends to the northwestern corner of the Nash property as 8-inch ductile iron water main. Constructing a water main to the existing system will require approximately 650 feet of new water main from the well site to Old Derry Road.

The treatment system will utilize greensand-plus media within pressure filtration vessels to reduce raw water arsenic levels (approximately 16 ug/L) to below regulatory levels. Arsenic is an EPA primary drinking water standard constituent requiring treatment if the running annual average of the water source exceeds 10 ug/L. Iron, a secondary standard constituent, would also be reduced through greensand plus treatment. Raw water iron was measured at approximately 1.3 mg/L which is above the secondary standard of 0.3 mg/L.

An elevated level of aluminum was detected when the Nash Well was sampled during the step rate pump test. The rock type identified on the bedrock geology maps for the Nash well area is both the Berwick Formation (SOB) and a 2-mica granite of the New Hampshire Plutonic Series. The mica's (biotite and muscovite) are high in aluminum as well as feldspars. Prior to the pump test, the Nash well had been sitting dormant for an extended period. Under those conditions, the feldspars are suspected to have chemically weathered to clay minerals (hydrrous aluminum phyllosilicates) which may have contributed to the high aluminum levels detected in the well. Based on our past experience, it is assumed that under frequent operation the Nash Well would not continue to exhibit high aluminum levels that require removal via an additional treatment process. Therefore, we have not included the cost of specific treatment to remove aluminum in our evaluation within this letter report.

The pressure filtration treatment system will require vessel cleaning via a backwash cycle. During the backwash process, residuals are produced that require a method of storage and ultimate disposal. It is assumed lagoons would be constructed at the site to store the residuals and allow for thickening and drying. Once a year, the residuals would be removed from the lagoon and disposed.

#### *Treatment Costs*

Since the actual safe yield of the well has not been determined, the cost analysis examines three scenarios in which the well can yield 150, 200 and 250 gpm. This allows the cost effectiveness of developing a new source to be examined at each of the differing flow rates within the expected safe yield range.

All costs presented are the present worth of a water treatment facility, including both the capital construction cost and the operation and maintenance (O&M) cost for a 30 year life of the facility. The capital cost to construct the facility includes the cost of the treatment process, building, water main to

connect the facility to the existing distribution system, residuals handling, engineering costs, and contingency.

The O&M costs presented below are the present worth values for the well and treatment facility over a 30-year period. These costs include power consumption by the pump and motor, chemical addition, residuals handling, filter media replacement, and labor required to operate the facility. O&M costs are more variable based on the Nash Well flow rate as increased power consumption is needed to operate a higher flow rate and chemical addition to treat the water is directly correlated to flow. The capital costs to construct the facility and O&M costs at each of the three flow rates are presented below.

Flow Rate (gpm)	Capital Cost	O&M Cost (Present Worth)	Total Cost (Present Worth)
150	\$1,300,000	\$540,000	\$1,840,000
200	\$1,310,000	\$640,000	\$1,950,000
250	\$1,320,000	\$740,000	\$2,060,000

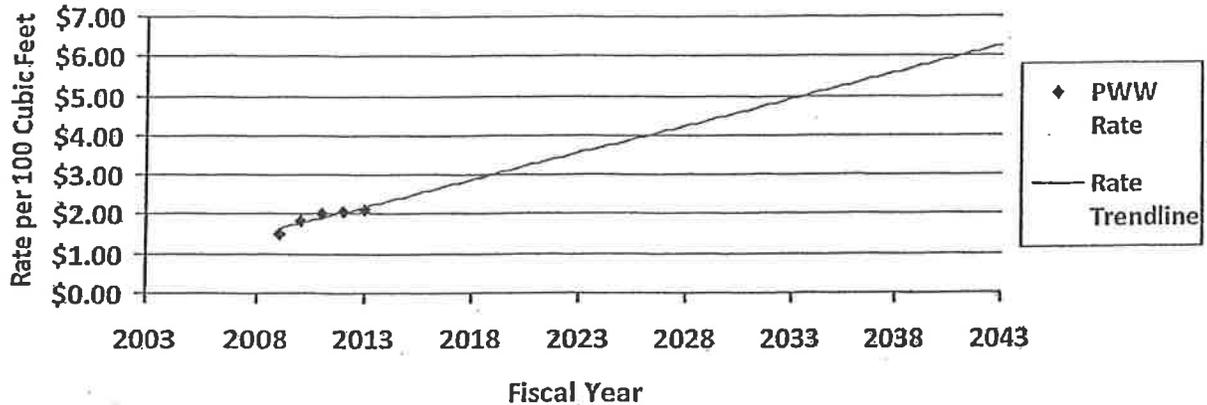
As can be seen in the table above, the capital costs associated with well and treatment construction do not vary widely based on the flow rate from the Nash Well. The capital costs dependent on well yield are subtle differences in treatment vessel size and pump and motor size, whereas the O&M costs can vary more widely based on the volume of water delivered.

***Pennichuck Water Purchase***

To assist in meeting the Town's water demand a connection to the PWW system, via a pipeline across the Taylor Falls bridge, is typically opened in April and remains open until November. Based on water usage records from 2003 to 2010, we have assumed water supplied through the Taylor Falls connection occurs annually from approximately April 20 until November 7, which is a period of approximately 200 days. For this analysis the Nash Well is assumed to operate for 20 hours per day for the 200 day period in which the Taylor Falls connection is open. If the Nash Well is operated under the conditions described above, the Town will produce 36, 48, and 60 million gallons a year at a flow of 150, 200, and 250 gpm, respectively. Each gallon of water produced by the Town is one less gallon purchased from PWW. Due to this, it is important to understand the potential cost of future water from PWW and compare that cost to the cost to construct Town-owned water supply. The PWW purchasing rates for the last five fiscal years were plotted and a best fit trend line was applied to project the purchasing rate over the 30 year life of the facility.

→ Varying usage records,

Projected PWW Wholesale Rate



The Town currently purchases water from PWW in units of 100 cubic feet (748 gallons). The projected average annual increase in the rate was brought back to a present worth value of \$38.01 per 100 cubic feet unit for the 30 year life of the facility. The present worth factor was multiplied by the volume of water produced by the Nash Well at each flow rate to determine the estimated total present worth of purchasing water from PWW, and can be seen in the table below.

Flow Rate (gpm)	Volume of Water (MG)	PWW Purchase Cost
150	36.18	\$1,838,500
200	48.24	\$2,451,300
250	60.30	\$3,064,200

**Recommendation**

The Nash Well yield is unknown at this time since a long duration pump test was not conducted on the well. The ultimate yield of the well will have a bearing on whether the well is cost effective to construct. However, utilizing the table below it can be seen that the development of the Nash Well and construction of a water treatment facility is cost effective when compared to the purchase of water over a 30 year period.

Flow Rate (gpm)	Present Worth Cost Purchase Water	Present Worth Cost Treatment of Nash Well
150	\$1,838,500	\$1,840,000
200	\$2,451,300	\$1,950,000
250	\$3,064,200	\$2,060,000

As stated above, a longer duration pump test is recommended to determine the actual safe yield of the Nash Well. The well should also be reamed to an 8-inch diameter to allow a pump capable of producing a flow rate of 250 gpm to be installed. Reaming the well is a less costly alternative to drilling a new 8 or 10-inch diameter well adjacent to the existing. If the results of the pumping test confirm a safe yield above 150 gpm, it is recommended to construct a treatment facility and incorporate the Nash well into the Town's water supply.

Please note that the Town will still need to purchase water from PWW to meet system demand. However, the Nash Well is capable of reducing the amount of water purchased from PWW and thereby providing water to the Town at a lower cost than PWW over an assumed the 30 year period utilized during this evaluation.

Thank you for the opportunity to assist the Town in this important issue. Should you have any questions or concerns regarding this matter, please contact us at (603) 431-3937.

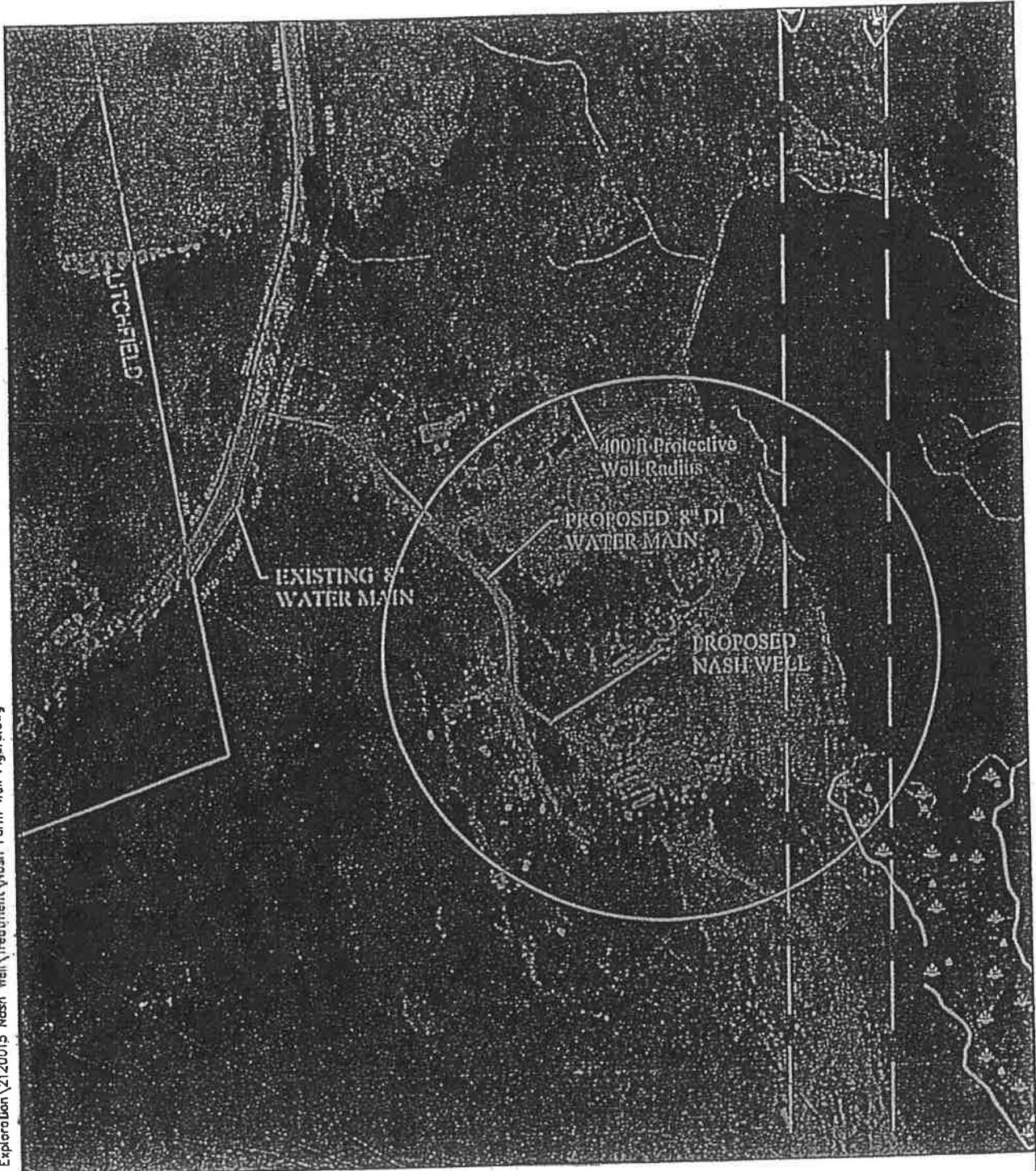
Very truly yours,  
WESTON & SAMPSON ENGINEERS, INC.



Jeffrey W. McClure, P.E.  
Project Manager

Attachment: Figure 1 – Nash Well Locus Map

P:\HUDSON NH\WATER SUPPLY EXPLORATION\2120015 NASH WELL\TREATMENT\NASH TREATMENT INVESTIGATION.DOC

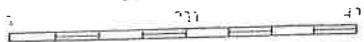


P:\Hudson NH\Water Supply Exploration\2120015 Nash Well\Treatment\Nash Farm Well Figure.dwg

FIGURE 1  
TOWN OF HUDSON, NEW HAMPSHIRE  
NASH WELL TREATMENT INVESTIGATION

LOCUS MAP

SCALE: 1"=200'



# Land Use Division

## FY2016 CIP



TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Land Use Division

Department Priority: 1 of 3 Projects

FY 2016

Type of Project (Check One) County Road Bridge	Primary effect of project is to: <input type="checkbox"/> Replace or repair existing facilities or equipment <input checked="" type="checkbox"/> Improve or repair existing facilities or equipment <input type="checkbox"/> Expand capacity of existing service level facility <input type="checkbox"/> Provide new facility or service capacity
--	---

Service Area of Project (Check One)	<input type="checkbox"/> Region <input type="checkbox"/> Town <input type="checkbox"/> School District <input type="checkbox"/> District	<input type="checkbox"/> Central Business District <input type="checkbox"/> Neighborhood <input checked="" type="checkbox"/> Street <input type="checkbox"/> Other Area
--	---	--

**Project Name:** County Road Bridge over First Brook  
**Description:**

Rational for Project: (Check those that apply: elaborate below.)	<input type="checkbox"/> Removes imminent threat to public health or safety <input checked="" type="checkbox"/> Alleviates substandard conditions or deficiencies <input type="checkbox"/> Responds to federal or state requirement to implement <input type="checkbox"/> Improves the quality of existing services <input type="checkbox"/> Provides added capacity to serve growth <input type="checkbox"/> Reduces long term operating costs <input type="checkbox"/> Provides incentive to economic development <input checked="" type="checkbox"/> Eligible for matching funds available for limited time
--	---

**Narrative Justification:** This bridge was originally scheduled for replacement prior to Fiscal Year 2001. No action was taken and the project remains unfunded. This bridge is on the "Red List" with NHDOT and should be replaced as soon as possible. NOTE: The County Road bridge should be replaced before the County Road sidewalk is done.

Cost Estimate: (Itemize as necessary)	Impact on Operating & Maint. Costs or Personnel Needs																						
<table style="width: 100%;"> <tr> <th style="text-align: left;">Capital Costs</th> <th style="text-align: right;">Dollar Amount (in current \$'s)</th> </tr> <tr> <td>Planning/feasibility analysis</td> <td style="text-align: right;">\$75,000</td> </tr> <tr> <td>Architecture &amp; engineering fees</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>Real estate acquisition</td> <td style="text-align: right;">\$ 5,500</td> </tr> <tr> <td>Site Preparation</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>Construction</td> <td style="text-align: right;">\$292,500</td> </tr> <tr> <td>Furnishing &amp; equipment</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td>Vehicles &amp; Capital Equipment</td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td></td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td></td> <td style="text-align: right;">\$ _____</td> </tr> <tr> <td><b>Total Project cost estimate</b></td> <td style="text-align: right;"><b>\$373,000</b></td> </tr> </table>	Capital Costs	Dollar Amount (in current \$'s)	Planning/feasibility analysis	\$75,000	Architecture & engineering fees	\$ _____	Real estate acquisition	\$ 5,500	Site Preparation	\$ _____	Construction	\$292,500	Furnishing & equipment	\$ _____	Vehicles & Capital Equipment	\$ _____		\$ _____		\$ _____	<b>Total Project cost estimate</b>	<b>\$373,000</b>	Add Personnel Increase O&M costs Reduce Personnel Decreased O&M costs  Dollar Cost of Impacts if know Plus \$ _____ annually  Minus \$ _____ annually
Capital Costs	Dollar Amount (in current \$'s)																						
Planning/feasibility analysis	\$75,000																						
Architecture & engineering fees	\$ _____																						
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Site Preparation	\$ _____																						
Construction	\$292,500																						
Furnishing & equipment	\$ _____																						
Vehicles & Capital Equipment	\$ _____																						
	\$ _____																						
	\$ _____																						
<b>Total Project cost estimate</b>	<b>\$373,000</b>																						

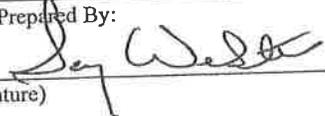
<table style="width: 100%;"> <tr> <th style="text-align: left;">Source of Funding:</th> <th style="text-align: left;">AMOUNT</th> </tr> <tr> <td>Grant from: NHDOT 80%</td> <td style="text-align: right;">\$298,400</td> </tr> <tr> <td>Loan From:</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Donation/bequest/private</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>User fees &amp; charges</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Capital reserve withdrawal</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Impact fee account</td> <td style="text-align: right;">_____</td> </tr> <tr> <td>Current revenue</td> <td style="text-align: right;">\$ 74,600</td> </tr> <tr> <td>Bonds</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><b>Total project cost</b></td> <td style="text-align: right;"><b>\$373,000</b></td> </tr> </table>	Source of Funding:	AMOUNT	Grant from: NHDOT 80%	\$298,400	Loan From:	_____	Donation/bequest/private	_____	User fees & charges	_____	Capital reserve withdrawal	_____	Impact fee account	_____	Current revenue	\$ 74,600	Bonds	_____	<b>Total project cost</b>	<b>\$373,000</b>	Form Prepared By:  _____ (Signature)  Approved by _____ Department/Agency
Source of Funding:	AMOUNT																				
Grant from: NHDOT 80%	\$298,400																				
Loan From:	_____																				
Donation/bequest/private	_____																				
User fees & charges	_____																				
Capital reserve withdrawal	_____																				
Impact fee account	_____																				
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Bonds	_____																				
<b>Total project cost</b>	<b>\$373,000</b>																				

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Land Use Division

Department Priority: 2 of 3 Projects

FY 2016

Type of Project (Check One) Melendy Road Bridge	Primary effect of project is to: <input type="checkbox"/> Replace or repair existing facilities or equipment <input checked="" type="checkbox"/> Improve or repair existing facilities or equipment <input type="checkbox"/> Expand capacity of existing service level facility <input type="checkbox"/> Provide new facility or service capacity
---	---

Service Area of Project (Check One)	<input type="checkbox"/> Region <input type="checkbox"/> Town <input type="checkbox"/> School District <input type="checkbox"/> District	<input type="checkbox"/> Central Business District <input type="checkbox"/> Neighborhood <input checked="" type="checkbox"/> Street <input type="checkbox"/> Other Area
--	---	--

**Project Name:** Melendy Road Bridge over First Brook  
**Description:**

Rational for Project: (Check those that apply: elaborate below.)	<input type="checkbox"/> Removes imminent threat to public health or safety <input checked="" type="checkbox"/> Alleviates substandard conditions or deficiencies <input type="checkbox"/> Responds to federal or state requirement to implement <input type="checkbox"/> Improves the quality of existing services <input type="checkbox"/> Provides added capacity to serve growth <input type="checkbox"/> Reduces long term operating costs <input type="checkbox"/> Provides incentive to economic development <input checked="" type="checkbox"/> Eligible for matching funds available for limited time
--	---

**Narrative Justification:** This bridge was originally scheduled for replacement prior to Fiscal Year 2001. No action was taken and the project remains unfunded. This bridge is on the "Red List" with NHDOT and should be replaced as soon as possible.

<b>Cost Estimate:</b> (Itemize as necessary)  Capital Costs Dollar Amount (in current \$s) \$ 60,000 Planning/feasibility analysis \$ _____ Architecture & engineering fees \$ 5,000 Real estate acquisition \$ _____ Site Preparation \$280,000 Construction \$ _____ Furnishing & equipment \$ _____ Vehicles & Capital Equipment \$ _____ \$ _____ \$345,000 Total Project cost estimate	<b>Impact on Operating &amp; Maint. Costs or Personnel Needs</b>  Add Personnel Increase O&M costs Reduce Personnel Decreased O&M costs  Dollar Cost of Impacts if know Plus \$ _____ annually  Minus \$ _____ annually
---	---

Source of Funding: <u>AMOUNT</u> Grant from: NHDOT 80% \$276,000 Loan From: _____ Donation/bequest/private _____ User fees & charges _____ Capital reserve withdrawal _____ Impact fee account _____ Current revenue \$ 69,000 Bonds _____  Total project cost \$345,000	Form Prepared By:  (Signature)  Approved by _____  Department/Agency _____
--	--

TABLE 2

CAPITAL IMPROVEMENTS PROGRAM

Department: Land Use Division

Department Priority: 3 of 3 Projects

FY 2017

Type of Project  
(Check One) Traffic Improvement

- Primary effect of project is to:
- Replace or repair existing facilities or equipment
  - Improve or repair existing facilities or equipment
  - Expand capacity of existing service level facility
  - Provide new facility or service capacity

Service Area of Project  
(Check One)

- Region
- Town
- School District
- District
- Central Business District
- Neighborhood
- Street
- Other Area

**Project Name:** Add 2d Lane to Lowell Rd. SB to Sagamore Bridge Rd WB  
**Description:** This project proposes to add a 2d lane on Lowell Rd SB, from Flagstone Dr to Sagamore Bridge Rd WB, plus reconfiguring the WB travel lanes on Wason Rd (at the intersection of Lowell Rd), so that 2 lanes are provided from said intersection onto Lowell Rd SB, leading to Sagamore Bridge Rd WB. Land takings and additional lane configurations are required along the Westside of Lowell Rd.

Rational for Project:  
(Check those that apply:  
elaborate below.)

- Removes imminent threat to public health or safety
- Alleviates substandard conditions or deficiencies
- Responds to federal or state requirement to implement
- Improves the quality of existing services
- Provides added capacity to serve growth
- Reduces long term operating costs
- Provides incentive to economic development
- Eligible for matching funds available for limited time

**Narrative Justification:** This project is proposed, taking into consideration that the A.M. and P.M. Peak Hour travel along the subject stretch of Lowell Rd. is so congested that it impacts the quality of air in the vicinity, as well as significantly adding travel time to commuters and the delivery of goods. This road improvement project will also offer the opportunity for the town to continue growing economically, which helps benefit the town's tax and jobs bases, but also that of the region and state.

Cost Estimate:  
(Itemize as necessary)

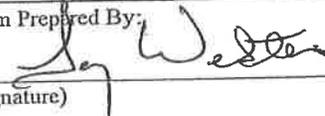
Capital Costs	
Dollar Amount (in current \$'s)	
\$ _____	Planning/feasibility analysis
\$ 75,000	Architecture & engineering fees
\$ 220,000	Real estate acquisition
\$ _____	Site Preparation
\$ 225,000	Construction
\$ _____	Furnishing & equipment
\$ _____	Vehicles & Capital Equipment
\$ _____	
\$ _____	
\$ 520,000	<b>Total Project cost</b>

Impact on Operating & Maint. Costs or Personnel Needs

Add Personnel  
 Increase O&M costs  
 Reduce Personnel  
 Decreased O&M costs

Dollar Cost of Impacts if know  
 Plus \$ \_\_\_\_\_ Annually  
 Minus \$ \_\_\_\_\_ Annually

Source of Funding:	AMOUNT
Grant from: _____	_____
Loan From: _____	_____
Donation/bequest/private _____	_____
User fees & charges _____	_____
Capital reserve withdrawal	\$385.00
Impact fee account _____	_____
Current revenue	\$135,000
Bonds _____	_____
<b>Total project cost</b>	<b>\$520,000</b>

Form Prepared By:   
 (Signature) \_\_\_\_\_  
 Approved by \_\_\_\_\_  
 Department/Agency \_\_\_\_\_

**Project Narrative: Rte 3A/Lowell Rd. Traffic Improvement Project - Add a right-turn lane on Rte. 3A/Lowell Rd. southbound, from Flagstone Drive to the westbound ramp on Sagamore Bridge Rd.**

It is envisioned by many residents and principals in the Town of Hudson, NH, that the above-cited proposed traffic improvement project will significantly alleviate the degree of existing traffic congestion occurring during the A.M. and P.M. peak commuter hours along the southbound Rte. 3A/Lowell Rd. corridor. Presently, during said travel times, and especially during the A.M. hours, the associated traffic queues extend more than a half mile along Lowell Rd. southbound and Wason Rd. westbound. The aforementioned traffic is presently restricted to the use of one travel lane onto Sagamore Bridge Rd. westbound, via one southbound right-turn lane on Lowell Rd. Said traffic is primarily destined for Rte. 3 southbound, with the minority of flow going to Rte. 3 northbound and Daniel Webster Highway in Nashua. Again, it is envisioned by many that the construction of said second lane having right-turn capacity on Lowell Rd., southbound from Flagstone Dr. to the westbound on ramp of Sagamore Bridge Rd., will greatly reduce the existing 1/2 mile queues on Lowell Rd. and Wason Rd. Further, said improvement will help to: (i) improve air quality for both impacted roadway corridors, (ii) shorten the travel time for commuters, and (iii) provide more efficient transportation of goods produced in Hudson and within the region as a whole.

**Project Narrative for Phase II - Continue Pedestrian/Bike Lane on NH Rte. 102(Derry Street), from Towhee Drive to Megan Drive**

This project is a shovel ready (i.e., fully engineered and designed) sidewalk and bike lane project, which is now designated as Phase II of a previously approved sidewalk improvement project along the eastside of NH Rte. 102 (Derry Street). This present phase specifically calls for the construction of a 5 ft. in-width bituminous concrete sidewalk , vertical granite curbing and a 4 ft. in-width bike lane - all located within the existing ROW of Rte. 102. As planned, this phase, as did Phase I, will run along the eastside of Rte. 102, from Towhee Drive south to Megan Drive, which is a distance of approximately 2000 +/- ft.

Please note, Phase I of this project was completed in its entirety last year (2010), and included: the construction of the aforementioned 5 ft. in-width sidewalk, vertical granite curbing and bike lane. This latter Phase ran from Evergreen Drive south to Towhee Drive – a distance of approximately 2000 ft. Note: at Evergreen Drive the sidewalk and bike lane connected with sidewalks and bike lanes constructed several years earlier on both sides of Rte. 102, from Evergreen Drive to just south of the Alvirne Public High School on Rte. 102.

The primary purpose of Phase II (the subject improvement project) is to continue to enhance the safety of pedestrians and bicyclists travelling along the high-speed/high-volume Rte. 102. A secondary benefit of this project involves a reduction in bus and vehicle trips along Rte. 102, which are associated with residents and students living in proximity to the 2 public schools and public library located along this way.

In conclusion, the community goals and objectives this project supports include: providing a safe and healthful means of alternative (i.e., physical-based) travel, improved air quality, reduction in traffic congestion, together with energy savings. Also of importance to cite, herein, is that the Town of Hudson has been engaged in long-term plans, and actual implementation of, interconnected sidewalks and bike lanes. To date, and over the course of the last 20 years, Hudson has completed the construction of nearly 5 miles of sidewalks and bike lanes, which of note, are presently not all connected to one another. Taking this latter deficiency of connectedness into account, Hudson's most up-to-date sidewalk and bike lane plans call for all of the existing pedestrian and bicyclists routes to be connected, which, when completed, will result in over 7 miles of safe and healthful routes of travel for municipal and regional pedestrians and bicyclists to utilize for both commuting and for pleasure.



**NASHUA REGIONAL PLANNING COMMISSION  
METROPOLITAN PLANNING ORGANIZATION  
TRANSPORTATION PROJECT PROPOSAL FORM**

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- A. IMPLEMENTATION TIME FRAME:**     Long-Range (2023 - 2040)     Mid-Range (2017-2022)     Short-Range (2013-2016)

**B. CONTACT INFORMATION**

Municipality/Applicant: Town of Hudson +

Contact Person: John Cashell Title: Town Planner

Address: 12 School Street, Hudson, NH 03051

Phone: (603)886-6005 Email: jcashell@hudsonnh.gov

**GENERAL PROJECT INFORMATION** Please submit the following with this form:

- A vicinity map that shows the proposed project location and limits.
- A project narrative that describes the proposed project's purpose and need, and whether it is building upon a previously implemented project or is a component of a larger project.

Project Route #/Road/Location: Rte 102 Derry Road +

Location Description (i.e., between which intersections or facilities):

Phase II - Continue Pedestrian/Bike Lane on Derry St/Rte. 102, from Towhee Dr. to Megan Dr. +

**Long-Range Projects Only:** Total Project Cost Estimate \$ 454,000 +

**C. SPECIFIC PROJECT INFORMATION FOR MID- AND SHORT-RANGE PROJECTS ONLY**

Cost Estimate:	Federal \$	State \$	Local \$	Private/Other \$	Total \$
Engineering		54,480	13,620		68,100
Right of Way		36,320	9,080		45,400
Construction		272,400	68,100		340,500
FTA Capital					0
FTA Operating					0
FTA Planning					0
<b>Total</b>	<b>0</b>	<b>363,200</b>	<b>90,800</b>	<b>0</b>	<b>454,000</b>

Is funding currently available?  Yes  No

If yes - Source: \_\_\_\_\_ Amount/Percent: \_\_\_\_\_

- Submittal of any documents or letters which demonstrate the ability of your organization/municipality to provide the necessary local share for this project is required.

For Roadway/Bridge Projects:

- Please submit a conceptual design of the proposed project with this form.

Project length: 2000 Road width: 45' - 65' ROW width: 50' to 75'  
 Number of lanes: \_\_\_\_\_ Shoulder width: \_\_\_\_\_ ROW acquisition?  Yes  No

Functional Classification:

- Principal Arterial                       Urban/Major Collector                       Local  
 Minor Arterial                                   Rural Minor Collector                       Unknown

Existing Conditions	Value	Year	Unknown	Not Applicable
Traffic Volume			<input type="checkbox"/>	<input type="checkbox"/>
Projected Volume			<input type="checkbox"/>	<input type="checkbox"/>
Level of Service (LOS)			<input type="checkbox"/>	<input type="checkbox"/>
Projected LOS			<input type="checkbox"/>	<input type="checkbox"/>
Bridge Rating			<input type="checkbox"/>	<input type="checkbox"/>
Accident Rate			<input type="checkbox"/>	<input type="checkbox"/>
% Heavy Trucks			<input type="checkbox"/>	<input type="checkbox"/>

- Bicycle/Pedestrian Provisions:  Sidewalks  
 Designated bicycle/pedestrian route or trail  
 Paved shoulders  
 Shoulders at least 4 feet wide

**D. TRANSPORTATION PLANNING CRITERIA**

**1. Improving Mobility and Accessibility for People and Freight**

Does the project add capacity?	<input checked="" type="radio"/> Yes <input type="radio"/> No
How will the project facilitate or improve regional traffic flow?	
The primary purpose of this project is to enhance safety for pedestrians and bicyclists travelling along Derry St./Rte. 102. A secondary benefit of this project involves a slight reduction in bus and vehicle trips along Derry St., which are associated with residents and students living in proximity to the 2 public schools and public library located along Derry St., as well as the nearby places of commerce.	
How will the project facilitate or improve accessibility for people and/or freight?	
The proposed sidewalk and bike lane will complete the connection between two existing sidewalks and bike lanes along Rte. 102/Derry St.	
How will the project enhance intermodal mobility?	
N/A	
What other mobility and/or accessibility needs will the project address?	
The proposed sidewalk construction includes ADA construction requirements, such as, sidewalk transition ramps and ADA truncated bump pads, which will enhance the safety and convenience of travel for physically challenged pedestrian and wheel-based travellers.	

**2. Preserving Existing Infrastructure**

How will the project extend the lifespan of a roadway, bridge or other facility?	
Together with the installation of vertical granite curbing, the proposed sidewalk will help to stabilize the existing edge of pavement. Stormwater drainage infrastructure will also be included in the construction of the sidewalk/bike lane.	
How will the project reduce vehicle trips?	
This project will help to reduce vehicle trips along the subject corridor by providing a safe and convenient alternative means of travel (i.e., pedestrian and bicycle) to students and other persons travelling from abutting residential neighborhoods to the two nearby public schools and public library, together with places of commerce located within the vicinity of the sidewalk/bike corridor.	
How will the project improve deficiencies in existing infrastructure or services?	
The project will improve the present deficiency of the existing corridor infrastructure, via the introduction of a safe means of pedestrian and bicycle travel, i.e., a 5 ft. in-width sidewalk and a designated bike route, which will run along the sidewalk and within the roadway pavement surface.	
How will the project make more efficient use of existing infrastructure or services?	
The project will make more efficient use of the existing infrastructure, by introducing safe and convenient pedestrian and bicycle capacity within the existing ROW. Thereby, helping to reduce the number of vehicle trips associated with the two nearby public schools and public library, together with nearby places of commerce.	
How else might the project preserve existing infrastructure?	
This project will also help to preserve existing infrastructure, by creating a more stable and wider ROW shoulder along the easterly side of Rte. 102, i. e., within the length of the project. Note: the recently completed Phases I and II of this project provide the aforementioned shoulder preservation within the length of said phases.	

**3. Transportation and Land Use Connections**

How will the project connect existing facilities or destinations?
The sidewalk will connect to two presently unconnected sidewalks, located to the north and south of this proposed project. In turn, the students and adults living in the abutting residential neighborhoods will have a safe and convenient alternative means of travel (i.e., pedestrian and bicycle) to the two nearby public schools and public library, together with places of commerce located within the vicinity of the sidewalk/bike corridor.
How will the project increase transportation options for the community and/or region?
The project will increase transportation options for the community, e. g., by providing a pedestrian and bicycle corridor to the two nearby public schools, school bus service will not be required for the area of benefit, thereby, reducing bus trips along the subject corridor. In addition, vehicle trips within the aforementioned corridor will be reduced, relative to the nearby public library and places of commerce.
How will the project improve provisions for bicycling and walking?
The sidewalk and bike lane will connect to two presently unconnected sidewalks/bike lanes, located to the north and south of this proposed project. In turn, the students and adults living in the abutting residential neighborhoods will have a safe and convenient alternative means of travel (i.e., pedestrian and bicycle) to the two nearby public schools and public library, together with places of commerce located within the vicinity of the sidewalk/bike corridor.
Will the project divide/disrupt neighborhoods/communities? <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
Will the project require relocating residential/business properties? <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
In what other ways might the project enhance transportation and land use connections?
This proposed project will connect with two other pedestrian/bike routes, and will help the community's short, to mid-range plans of connecting over 7 miles of sidewalks and bike routes along Rte. 3A (Lowell Rd.), Rte. 102 (Derry St.) and Rte. 111 (Ferry St. and Central St.). The interconnection of said sidewalks and bikeways will significantly enhance the pedestrian and bicycle travel capacity for Hudson and regional residents, and

**4. A Safe and Secure Transportation System**

How will the project reduce the rate and/or severity of crashes?
Established sidewalks and bikeways, as proposed by this project, will help to reduce personal injury and deaths that occur, relative to pedestrians and bicyclists having to walk and ride within the actual roadway surface.
How will the project improve access for emergency vehicles?
The project will improve access for emergency vehicles by virtue of the roadway surface being exclusive to vehicle use and not the sharing of same with pedestrians and bicyclists.
What other safety needs will the project address?
Other safety needs the project will address include: enhanced vehicle safety, for the roadway surface will be exclusive to vehicular travel, i.e., as opposed to pedestrians and bicyclists sharing the roadway, and thereby adding to the distraction and safety of all three parties.

**E. ADDITIONAL CONSIDERATIONS**

**5. Natural, Cultural and Historic Resources**

Are there federally listed threatened/endangered species, or their critical habitat, within or adjacent to the construction area?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
Is the project located in an environmentally sensitive area?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
Are there historic sites or publicly owned public parks, recreation areas, wildlife or waterfowl refuges (Section 4 [f]) within or adjacent to the construction area?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
Is there a National Register listed or potentially eligible historic properties, or archaeological resources within or immediately adjacent to the construction area?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
Will the project affect any visual or scenic resources?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
If yes to any of the above questions, what mitigation strategies will be used to minimize impacts?	
Will the project improve energy efficiency?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown

**6. Equitable Distribution of Benefits and Impacts**

Is the project located in an area with above-average populations of low-income, elderly and/or minority residents?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
If yes: a. What mitigation strategies will be used to minimize impacts to these populations?	
b. What opportunities have been or will be made for these populations to participate in the project planning process?	
Public meetings will be when and if needed to address any and all public concerns that may arise concerning this project.	

**7. Consistency with Regional Goals and Objectives**

What community goals and objectives does the project support?
The community goals and objectives this project supports include: providing a safe and healthful means of alternative (i.e., physical-based) travel, improve air quality, reduce traffic congestion and energy savings. Also, the Town of Hudson has been engaged in a long-term plan of building more miles of interconnected sidewalks and bikeways, and as budgetary allowances provide, the community continues to build new
What regional goals and objectives does the project support?
The regional goals and objectives achieved by the implementation of this project include: enhanced air quality, alternative modes of travel, energy savings, enhanced health benefits and traffic safety, etc.

**8. Funding**

Will the project use alternative funding sources?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Unknown
If yes, please list source(s) and amount(s)	

**9. Project Planning and Public Support**

Is the project supported by any local, regional or state plans?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
If yes: a. Please check the plan type(s) below	
<input checked="" type="checkbox"/> Local Master Plan	<input type="checkbox"/> Economic Development Plan
<input type="checkbox"/> State Transportation Plan	<input type="checkbox"/> Regional Transportation Plan
<input checked="" type="checkbox"/> Capital Improvement Plan	<input checked="" type="checkbox"/> Community Visioning Plan
<input checked="" type="checkbox"/> Specific Corridor Study	<input checked="" type="checkbox"/> Bike/Pedestrian Plan
<input type="checkbox"/> Congestion Management Process	<input type="checkbox"/> Hazard Mitigation Plan
<input type="checkbox"/> Other:	
b. Is the project a recommended alternative in the plan(s)?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
Has an Alternatives Analysis been completed?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
If yes, please describe both the viable and rejected alternatives analyzed.	
Has a feasibility, engineering, and/or other study been completed?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
If yes, please provide the title and date of the study or studies.	
In regard to feasibility, engineering, and/or other studies concerning this project, please refer to the following documentation and materials thereof: Town of Hudson Derry Street/Route 102 Sidewalk and Bike Lane Project, CLD Ref. No. 05-0119, NHDOT #13894.	
Are there existing/planned projects that could affect the project?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
If yes, please describe the project(s), including scope, location, and construction date, and explain how the projects will be coordinated.	
What are the potential benefits to the community from the improvement project?	
The potential community benefits from this improvement project include, but are not limited to: improved air quality, less traffic congestion, alternative safe modes of travel, energy savings, health and traffic safety, etc.	
Have negative impacts been evaluated and if yes, what are they?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Unknown
There are no known measurable negative impacts associated with this project.	
Please describe the public participation process for the project.	
The public participation process for this project has included: public hearings held by the Board of Selectman, Highway Safety Committee review, Board of Selectmen project approval. Please see all documentation supporting the public participation for this project attached herewith.	

- Submittal of any meeting minutes, adopted plans or official letters which demonstrate the support of your organization, Board of Selectmen, Town Council or Aldermen is required.

## **Project Narrative Continue Sidewalk on 3A/Lowell Rd. from Nottingham Square to Executive Dr.**

This project is proposed in order to connect the existing sidewalks on the east side of Rte. 3A (Lowell Rd.), from Executive Dr. to the south and the Nottingham Square Shopping Center to the north, a distance of 2,500 linear feet. This project specifically calls for the construction, within the existing ROW, of a 5 ft. in-width bituminous concrete sidewalk only, for vertical granite curbing and a 4 ft. in-width bike lane already exist along this stretch of Rte. 3A. As planned, this project will connect with an existing mile long sidewalk, running south along Rte. 3A to Wal-Mart Dr., and north to an existing (and mostly complete) and planned sidewalk network, extending over 4 miles to the Alvirne High School on NH Rte. 102.

The primary purpose of this project is to continue to enhance the safety of pedestrians travelling along the high-speed/high-volume Rte. 3A. A secondary benefit of this project involves a slight reduction in vehicle trips along Rte. 3A, i.e., relative to area residents and employees choosing to walk, rather than drive, to places of commerce, etc. within this subject locus.

In conclusion, the community goals and objectives this project supports include: providing a safe and healthful means of alternative (i.e., physical-based) travel, improved air quality, reduction in traffic congestion, together with energy savings. Also of importance to cite, herein, is that the Town of Hudson has been engaged in long-term plans, and actual implementation of, interconnected sidewalks and bike lanes. To date, and over the course of the last 20 years, Hudson has completed the construction of nearly 5 miles of sidewalks and bike lanes, which of note, are presently not all connected to one another. Taking this latter deficiency of connectedness into account, Hudson's most up-to-date sidewalk and bike lane plans call for all of the existing pedestrian and bicyclists routes to be connected, which, when completed, will result in over 7 miles of safe and healthful routes of travel for municipal and regional pedestrians and bicyclists to utilize for both commuting and for pleasure.



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- A. IMPLEMENTATION TIME FRAME:**     Long-Range (2023 - 2040)     Mid-Range (2017-2022)     Short-Range (2013-2016)

**B. CONTACT INFORMATION**

Municipality/Applicant: Town of Hudson +  
 Contact Person: John Cashell Title: Town Planner  
 Address: 12 School Street, Hudson, NH 03051  
 Phone: (603)886-6005 Email: jcashell@hudsonnh.gov

**GENERAL PROJECT INFORMATION** Please submit the following with this form:

- A vicinity map that shows the proposed project location and limits.
- A project narrative that describes the proposed project's purpose and need, and whether it is building upon a previously implemented project or is a component of a larger project.

Project Route #/Road/Location: Rte 3A/Lowell Rd. +

Location Description (i.e., between which intersections or facilities):  
Continue Sidewalk on 3A/Lowell Rd. from Nottingham Square to Executive Dr. +

**Long-Range Projects Only:** Total Project Cost Estimate \$ 200,000 +

**C. SPECIFIC PROJECT INFORMATION FOR MID- AND SHORT-RANGE PROJECTS ONLY**

Cost Estimate:	Federal \$	State \$	Local \$	Private/Other \$	Total \$
Engineering		24,000	6,000		30,000
Right of Way					0
Construction		136,000	34,000		170,000
FTA Capital					0
FTA Operating					0
FTA Planning					0
Total	0	160,000	40,000	0	200,000

Is funding currently available?  Yes  No

If yes - Source: Rte. 3A Corridor Impact Fees \$40,000 Amount/Percent: 20%

- Submittal of any documents or letters which demonstrate the ability of your organization/municipality to provide the necessary local share for this project is required.

For Roadway/Bridge Projects:

- Please submit a conceptual design of the proposed project with this form.

Project length: 2500 Road width: 45' - 65' ROW width: 50' to 75'  
 Number of lanes: \_\_\_\_\_ Shoulder width: \_\_\_\_\_ ROW acquisition?  Yes  No

Functional Classification:

- Principal Arterial                       Urban/Major Collector                       Local  
 Minor Arterial                                   Rural Minor Collector                       Unknown

Existing Conditions	Value	Year	Unknown	Not Applicable
Traffic Volume			<input type="checkbox"/>	<input type="checkbox"/>
Projected Volume			<input type="checkbox"/>	<input type="checkbox"/>
Level of Service (LOS)			<input type="checkbox"/>	<input type="checkbox"/>
Projected LOS			<input type="checkbox"/>	<input type="checkbox"/>
Bridge Rating			<input type="checkbox"/>	<input type="checkbox"/>
Accident Rate			<input type="checkbox"/>	<input type="checkbox"/>
% Heavy Trucks			<input type="checkbox"/>	<input type="checkbox"/>

- Bicycle/Pedestrian Provisions:  Sidewalks  
 Designated bicycle/pedestrian route or trail  
 Paved shoulders  
 Shoulders at least 4 feet wide

**D. TRANSPORTATION PLANNING CRITERIA**

**1. Improving Mobility and Accessibility for People and Freight**

Does the project add capacity?	<input checked="" type="radio"/> Yes <input type="radio"/> No
How will the project facilitate or improve regional traffic flow?	
The primary purpose of this project is to enhance safety for pedestrians along Rte. 3A/Lowell Rd. A secondary benefit of this project involves a slight reduction in vehicle trips along said road, which are associated with residents living in proximity to the one nearby public school and nearby places of commerce. <i>Note: the edge of pavement along the subject stretch of Rte. 3A includes a break-down lane /bike lane.</i>	+
How will the project facilitate or improve accessibility for people and/or freight?	
The proposed sidewalk will complete the connection between two existing sidewalks and bike lanes along Rte. 3A.	
How will the project enhance intermodal mobility?	
N/A	
What other mobility and/or accessibility needs will the project address?	
The proposed sidewalk construction includes ADA construction requirements, such as, sidewalk transition ramps and ADA truncated bump pads, which will enhance the safety and convenience of travel for physically challenged pedestrian and wheel-based travellers.	

**2. Preserving Existing Infrastructure**

How will the project extend the lifespan of a roadway, bridge or other facility?	
The proposed sidewalk will help to stabilize the existing edge of pavement.	
How will the project reduce vehicle trips?	
This project will help to reduce vehicle trips along the subject corridor by providing a safe and convenient alternative means of travel (i.e., pedestrian) for students and other persons travelling from abutting residential neighborhoods to the nearby public school and places of commerce located within the vicinity of the sidewalk and associated connected sidewalks existing on both ends of this proposed sidewalk.	+
How will the project improve deficiencies in existing infrastructure or services?	
The project will improve the present deficiency of the existing corridor infrastructure, via the introduction of a safe means of pedestrian travel, i.e., a 5 ft. in-width sidewalk, which will connect to two existing sidewalks - one to the north at Nottingham Square and the other to the south at Executive Dr.	
How will the project make more efficient use of existing infrastructure or services?	
The project will make more efficient use of the existing infrastructure, by introducing safe and convenient pedestrian capacity within the existing ROW. Thereby, helping to reduce the number of vehicle trips associated with the nearby public school and nearby places of commerce.	
How else might the project preserve existing infrastructure?	
This project will also help to preserve existing infrastructure, by creating a more stable ROW shoulder along the easterly side of Rte. 3A/Lowell Rd., within the length of the project.	

**3. Transportation and Land Use Connections**

How will the project connect existing facilities or destinations?	
The sidewalk will connect to two presently unconnected sidewalks, located to the north and south of this proposed project. In turn, students and adults living in the abutting residential properties will have a safe and convenient alternative means of travel (i.e., pedestrian) to the nearby public school and places of commerce located within the vicinity of the sidewalk.	
How will the project increase transportation options for the community and/or region?	
The project will increase transportation options for the community, e. g., by providing a pedestrian corridor to the nearby public school, school bus service may not be required for the area of benefit, thereby, reducing bus trips along the subject corridor. In addition, vehicle trips within the aforementioned corridor will be reduced relative to the nearby public school and places of commerce.	
How will the project improve provisions for bicycling and walking?	
The sidewalk and bike lane will connect to two presently unconnected sidewalks, located to the north and south of this proposed project. In turn, the students and adults living in the area will have a safe and convenient alternative means of travel (i.e., pedestrian) to the nearby public school and places of commerce located within the vicinity of the sidewalk corridor.	
Will the project divide/disrupt neighborhoods/communities?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
Will the project require relocating residential/business properties?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
In what other ways might the project enhance transportation and land use connections?	
This proposed project will connect with two other sidewalks, and as such, will help the community's short, to mid-range plans of connecting over 7 miles of sidewalks and bike routes along Rte. 3A (Lowell Rd.), Rte. 102 (Derry St.) and Rte. 111 (Ferry St. and Central St.). The interconnection of said sidewalks and bikeways will significantly enhance the pedestrian and bicycle travel capacity for Hudson and regional residents and	

**4. A Safe and Secure Transportation System**

How will the project reduce the rate and/or severity of crashes?	
Established sidewalks, as proposed by this project, will help to reduce personal injury and deaths that occur, relative to pedestrians having to walk within the actual roadway surface.	
How will the project improve access for emergency vehicles?	
The project will improve access for emergency vehicles by virtue of the roadway surface being exclusive to vehicle use and not the sharing of same with pedestrians.	
What other safety needs will the project address?	
Other safety needs the project will address include: enhanced vehicle safety, for the roadway surface will be exclusive to vehicular travel and existing bike lane, i.e., as opposed to pedestrians and bicyclists sharing the roadway, and thereby adding to the distraction and safety of all three parties.	

**E. ADDITIONAL CONSIDERATIONS**

**5. Natural, Cultural and Historic Resources**

Are there federally listed threatened/endangered species, or their critical habitat, within or adjacent to the construction area?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
Is the project located in an environmentally sensitive area?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
Are there historic sites or publicly owned public parks, recreation areas, wildlife or waterfowl refuges (Section 4 [f]) within or adjacent to the construction area?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
Is there a National Register listed or potentially eligible historic properties, or archaeological resources within or immediately adjacent to the construction area?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
Will the project affect any visual or scenic resources?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
If yes to any of the above questions, what mitigation strategies will be used to minimize impacts?	
Will the project improve energy efficiency?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown

**6. Equitable Distribution of Benefits and Impacts**

Is the project located in an area with above-average populations of low-income, elderly and/or minority residents?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
If yes: a. What mitigation strategies will be used to minimize impacts to these populations?	
b. What opportunities have been or will be made for these populations to participate in the project planning process?	
Public meetings will be held when and if needed to address any and all public concerns that may arise concerning this project.	

**7. Consistency with Regional Goals and Objectives**

What community goals and objectives does the project support?
The community goals and objectives this project supports include: providing a safe and healthful means of alternative (i.e., physical-based) travel, improve air quality, reduce traffic congestion and energy savings. Also, the Town of Hudson has been engaged in a long-term plan of building more miles of interconnected sidewalks and bikeways, and as budgetary allowances provide, the community continues to build new
What regional goals and objectives does the project support?
The regional goals and objectives achieved by the implementation of this project include: enhanced air quality, alternative modes of travel, energy savings, enhanced health benefits and traffic safety, etc.

**8. Funding**

Will the project use alternative funding sources?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
If yes, please list source(s) and amount(s)	
Rte. 3A Corridor Impact Fees - \$40,000.00.	

**9. Project Planning and Public Support**

Is the project supported by any local, regional or state plans?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
If yes: a. Please check the plan type(s) below	
<input checked="" type="checkbox"/> Local Master Plan	<input type="checkbox"/> Economic Development Plan
<input type="checkbox"/> State Transportation Plan	<input type="checkbox"/> Regional Transportation Plan
<input checked="" type="checkbox"/> Capital Improvement Plan	<input checked="" type="checkbox"/> Community Visioning Plan
<input checked="" type="checkbox"/> Specific Corridor Study	<input checked="" type="checkbox"/> Bike/Pedestrian Plan
<input type="checkbox"/> Congestion Management Process	<input type="checkbox"/> Hazard Mitigation Plan
<input type="checkbox"/> Other:	
b. Is the project a recommended alternative in the plan(s)?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
Has an Alternatives Analysis been completed?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
If yes, please describe both the viable and rejected alternatives analyzed.	
Has a feasibility, engineering, and/or other study been completed?	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
If yes, please provide the title and date of the study or studies.	
In regard to feasibility, engineering, and/or other studies concerning this project, please refer to the attached plans for this project.	
Are there existing/planned projects that could affect the project?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
If yes, please describe the project(s), including scope, location, and construction date, and explain how the projects will be coordinated.	
What are the potential benefits to the community from the improvement project?	
The potential community benefits from this improvement project include, but are not limited to: improved air quality, less traffic congestion, alternative safe modes of travel, energy savings, health and traffic safety, etc.	
Have negative impacts been evaluated and if yes, what are they?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Unknown
There are no known measurable negative impacts associated with this project.	
Please describe the public participation process for the project.	
In the near term future the public participation process for this project will include: public hearings held by the Board of Selectman, Highway Safety Committee review, Board of Selectmen project approval.	

- Submittal of any meeting minutes, adopted plans or official letters which demonstrate the support of your organization, Board of Selectmen, Town Council or Aldermen is required.

## Project Narrative Continue Sidewalk on 3A/Lowell Rd. from Birch St. to Pelham Rd.

This project is proposed in order to connect the existing sidewalks on the east side of Rte. 3A (Lowell Rd.), from Birch St. to the north and Pelham Rd. to the south, a distance of 1,630 linear feet. This project specifically calls for the construction, within the existing ROW, of a 5 ft. in-width bituminous concrete sidewalk, curbing and a designated bike lane within the existing Lowell Rd. ROW and areas in which abutting easements have been granted. As planned, this project will connect with an existing sidewalk to the south, which runs several miles along each of the following corridors: Rte. 3a, Rte. 111 and Rte. 102. To the south, this sidewalk will connect with a shorter completed sidewalk and planned 2,500 ft. sidewalk, that when constructed will create a 1.5 mile sidewalk and multi-mile regional bike lane corridor along both Rte. 3A and Dracut Rd.

The primary purpose of this project is to continue to enhance the safety of pedestrians travelling along the high-speed/high-volume Rte. 3A. A secondary benefit of this project involves a slight reduction in vehicle trips along Rte. 3A, i.e., relative to area students, residents and employees choosing to walk, rather than drive, to the nearby public school and places of commerce, etc. within this subject locus.

In conclusion, the community goals and objectives this project supports include: providing a safe and healthful means of alternative (i.e., physical-based) travel, improved air quality, reduction in traffic congestion, together with energy savings. Also of importance to cite, herein, is that the Town of Hudson has been engaged in long-term plans, and actual implementation of, interconnected sidewalks and bike lanes. To date, and over the course of the last 20 years, Hudson has completed the construction of nearly 5 miles of sidewalks and bike lanes, which of note, are presently not all connected to one another. Taking this latter deficiency of connectedness into account, Hudson's most up-to-date sidewalk and bike lane plans call for all of the existing pedestrian and bicyclists routes to be connected, which, when completed, will result in over 7 miles of safe and healthful routes of travel for municipal and regional pedestrians and bicyclists to utilize for both commuting and for pleasure.



# Metropolitan Planning Organization Metropolitan Transportation Plan 2013-2040

## Adopted 2013 - 2040 Metropolitan Transportation Plan Transportation Projects in the Nashua Metropolitan Planning Area

October 17, 2012

HUDSON						Project ID	CAA Status	In TIP?	Overall Project Cost
Route/Road: Rte 3A/Lowell Road						L RTP14	E-51	No	\$669,023
Scope: Add a right-turn lane on Rte. 3A/Lowell Rd. southbound from Flagstone Drive to the westbound ramp on Sagamore Bridge Rd.									
Phase	FY	Federal \$	NH DOT \$	Other \$	Total \$	Funding Source			
P	2019	\$ 77,195	\$ 0	\$ 19,299	\$ 96,494	Federal			
R	2019	\$ 226,438	\$ 0	\$ 56,610	\$ 283,048	Federal			
C	2019	\$ 231,585	\$ 0	\$ 57,896	\$ 289,481	Federal			
<b>Total \$:</b>		<b>\$ 535,218</b>	<b>\$ 0</b>	<b>\$ 133,805</b>	<b>\$ 669,023</b>				

HUDSON						Project ID	CAA Status	In TIP?	Overall Project Cost
Route/Road: Rte 102/Derry Road						L RTP10	E-45	No	\$548,446
Scope: Phase II: continue Pedestrian/Bike Lane on Derry St/Rte. 102 from Towhee Dr. to Megan Dr.									
Phase	FY	Federal \$	NH DOT \$	Other \$	Total \$	Funding Source			
P	2017	\$ 65,814	\$ 0	\$ 16,453	\$ 82,267	Federal			
R	2017	\$ 43,876	\$ 0	\$ 10,969	\$ 54,845	Federal			
C	2017	\$ 329,068	\$ 0	\$ 82,267	\$ 411,335	Federal			
<b>Total \$:</b>		<b>\$ 438,757</b>	<b>\$ 0</b>	<b>\$ 109,689</b>	<b>\$ 548,446</b>				

HUDSON						Project ID	CAA Status	In TIP?	Overall Project Cost
Route/Road: Rte 3A/Lowell Road						L RTP12	E-45	No	\$187,003
Scope: Continue Sidewalk on 3A/Lowell Rd. from Birch St. to Pelham Rd.									
Phase	FY	Federal \$	NH DOT \$	Other \$	Total \$	Funding Source			
P	2018	\$ 24,934	\$ 0	\$ 6,233	\$ 31,167	Federal			
C	2018	\$ 124,669	\$ 0	\$ 31,167	\$ 155,836	Federal			
<b>Total \$:</b>		<b>\$ 149,603</b>	<b>\$ 0</b>	<b>\$ 37,401</b>	<b>\$ 187,003</b>				

HUDSON						Project ID	CAA Status	In TIP?	Overall Project Cost
Route/Road: Rte 3A/Lowell Road						L RTP13	E-45	No	\$249,338
Scope: Continue Sidewalk on 3A/Lowell Rd. from Nottingham Square to Executive Dr.									
Phase	FY	Federal \$	NH DOT \$	Other \$	Total \$	Funding Source			
P	2018	\$ 29,921	\$ 0	\$ 7,480	\$ 37,401	Federal			
C	2018	\$ 169,550	\$ 0	\$ 42,387	\$ 211,937	Federal			
<b>Total \$:</b>		<b>\$ 199,470</b>	<b>\$ 0</b>	<b>\$ 49,868</b>	<b>\$ 249,338</b>				

HUDSON						Project ID	CAA Status	In TIP?	Overall Project Cost
Route/Road: Rte 102/Derry Road						L RTP11	E-45	No	\$241,606
Scope: Phase III: Continue Pedestrian/Bike Lane on Derry St/Rte. 102, from Phillips Dr. to the Hudson Mall.									
Phase	FY	Federal \$	NH DOT \$	Other \$	Total \$	Funding Source			
P	2017	\$ 28,993	\$ 0	\$ 7,248	\$ 36,241	Federal			
R	2017	\$ 19,329	\$ 0	\$ 4,832	\$ 24,161	Federal			
C	2017	\$ 144,964	\$ 0	\$ 36,241	\$ 181,205	Federal			
<b>Total \$:</b>		<b>\$ 193,285</b>	<b>\$ 0</b>	<b>\$ 48,321</b>	<b>\$ 241,606</b>				

Phase Codes: P = Preliminary Engineering; R = Right-of-Way; C = Construction  
 Funding: Bold: FYs of 2013 - 2016 TIP; No Emphasis: Ten Year Plan funding beyond FY2016 or NRPC Estimate (not in TYP)  
 2013 - 2022 Ten Year Plan Project information is from the approved Plan signed into law June 11, 2012

# Capital Improvement Program

## Process Description

## **CIP PROCESS**

The process of this Capital Improvements Program comprises a series of seven successive steps. Worksheets leading to a complete Capital Improvements Program (CIP) allow for an organized, systematic process for assembling critical and necessary information.

### **STEP 1: CIP ORGANIZATION**

The New Hampshire statutes clearly place responsibility for preparation of the CIP with the Planning Board. The Planning Board will prepare the CIP in cooperation with the town departments and the goals of the Master Plan.

The Hudson CIP Committee shall consist of seven voting members as determined by the Planning Board. Certain department heads will serve in an advisory capacity.

### **STEP 2: DEFINE CAPITAL PROJECTS**

Capital projects are defined as follows: A non-recurring expenditure for a project or facility having a useful life of at least five years, and generally involving a gross expenditure of at least \$50,000; excluding scheduled vehicle (or rolling stock) replacement.

Capital projects include the following categories:

- ♦Projects that create a depreciable asset
- ♦Engineering and construction costs for upgrading town facilities and infrastructure
- ♦Special studies and analyses, town wide property revaluation, engineering and Design costs, land acquisition or landfill reclamation / decommissioning costs.

### **STEP 3: REVIEW THE MASTER PLAN**

The CIP committee shall review the Master Plan goals and objectives and strive to identify a linkage between the CIP and the Town's long-term goals for facility improvement and providing capacity for future growth.

### **STEP 4: REQUEST INPUTS TO CAPITAL IMPROVEMENTS PROGRAM**

The CIP Committee shall solicit formal inputs for capital projects from all departments, agencies, districts, commissions, and citizens having an impact on the overall capital spending which local citizens and taxpayers support. Proposed projects shall be submitted using forms provided by the Planning Board. In addition to these forms each department shall submit a draft 6-year schedule for capital projects.

### **STEP 5: REVIEW AND RATE CAPITAL PROJECTS**

Submitted projects are reviewed and rated in accordance with the following defined criteria:

<u>Evaluation Criteria</u>	<u>Point Score</u>
Further the goals of the Master Plan	5 4 3 2 1 0
Address an emergency or public safety need	5 4 3 2 1 0
Correct a deficiency in service or facility	5 4 3 2 1 0
Provide a capacity needed for future growth	5 4 3 2 1 0
Result in long-term cost savings	5 4 3 2 1 0
Support job development / increase tax base	5 4 3 2 1 0
Leverage the non-property tax revenues	5 4 3 2 1 0
Matching funds available for limited time	5 4 3 2 1 0

TOTAL PROJECT SCORE = \_\_\_\_\_ SUM OF ABOVE SCORES

Following an initial classification of projects the CIP Committee will hold a meeting with the department heads and agencies to discuss the initial review and to hear more information from those proposing the projects. At this time, requests could be entertained to modify the original CIP project requests. Following any amendments or modification, the Committee may wish to have a second public informational meeting to state its initial findings and to hear additional public comment on capital needs or proposals for other projects.

#### STEP 6: PREPARE A 6-YEAR PROJECT SCHEDULE AND PROPOSED FUNDING PLAN

The CIP Committee shall identify projects, which should be included within the six year CIP time frame. The Committee shall also show how the costs of these improvements can be distributed over the years to avoid high property tax impacts of any given year.

Capital projects shall be designated and scheduled on a continuing basis to adhere to a yearly budget level represented by \$1 on the Town's tax rate. In the event a unique high dollar project is proposed (like a new school) which by itself would exceed the \$1 per year budgetary limit, the CIP Committee may submit a plan to the Budget Committee and the Board of Selectmen which temporarily exceeds the \$1 limit.

#### STEP 7: ADOPT AND IMPLEMENT THE CIP

The Planning Board votes to adopt the CIP and forwards it to the Budget Committee and the Board of Selectmen.

The New Hampshire statutes clearly place responsibility for preparation of the Capital Improvements Program (CIP) with the Planning Board. The Planning Board will prepare the CIP plan in cooperation with the town departments and the goals of the Master Plan.

The Hudson, NH CIP Committee shall consist of seven voting members. Certain department heads will serve in an advisory capacity. Membership is further defined as follows:

- 2.1 The chairman of the CIP Committee shall be a member of the Planning Board, Appointed by the chairman of the Planning Board. The appointment will be on an annual basis, usually in January.
- 2.2 The Town Planner is designated as the central coordinator of the CIP process. Duties of the Town Planner in this role shall include the following:
  - Assist the Planning Board in its role to properly execute the CIP Process.
  - Maintain a file of all correspondence and minutes of meetings relating to the CIP.
  - Facilitate CIP Committee meetings. Post meeting notices. Assist departments or public in the preparation of CIP requests.
- 2.3 Two (2) members of the Planning Board, other than the CIP Committee Chairman.
- 2.4 One representative from the School Board, the Budget Committee, and the Board of Selectmen. In addition, one Town resident.
- 2.5 The Finance Director shall serve in an advisory role.

### **3.0 CIP SCHEDULE**

The CIP Committee shall develop a schedule of events for the CIP process. A simple format for the schedule is included as Table 1 (see attached page 6).

### **4.0 CAPITAL PROJECTS REQUIREMENTS/DEFINITION**

Capital projects are defined as follows, a non-recurring expenditure for a project or facility having a useful life of at least five-years, and generally involving a gross expenditure of at least \$50,000; excluding vehicle replacement.

Capital projects include the following categories:

- Projects that create a depreciable asset.
- Engineering and construction costs for upgrading town facilities.
- Special studies and analyses, town wide property revaluation, engineering and design cost, land acquisition or landfill reclamation/decommissioning cost.

### **5.0 CAPITAL PROJECTS BUDGETING**

Capital projects shall be designated and scheduled on a continuing basis to adhere to a yearly budget level represented by one dollar (\$1.00) on the Town's tax rate. In the event the unique high dollar project is proposed (like a new school) which by itself would exceed the \$1 per year budgetary limit, the CIP Committee may submit a plan to the Budget Committee and the Board of Selectmen which temporarily exceed the \$1 limit.

### **6.0 REVIEW THE MASTER PLAN**

The CIP Committee shall review with Master Plan goals and objectives to strive to identify a linkage between the Capital Improvements Program and the town's long-term goals for facility improvement and providing capacity for future growth. The following sections in the Master Plan shall be included in this review.

Population and Housing  
Community Facilities  
Utilities  
Recreation

Transportation  
 Economic Development  
 Conservation and Preservation

**7.0 Classification of Projects Based on the Master Plan**

The Capital Improvements Projects submitted to the CIP Committee shall be identified with the Master Plan goals and objectives. Initial classification of projects shall be accomplished in a general manner by groupings of projects which:

- 7.1 Adhere an imminent danger or threat or are needed to respond to a state or federal mandate.
- 7.2 Protect health and safety.
- 7.3 Improve the quality or level of Town services.
- 7.4 Expand capacity to serve new demand.

**8.0 Solicit proposals for Capital projects from departments**

- 8.1 The CIP Committee shall solicit formal inputs for capital projects from all departments, agencies, districts, commissions and citizens having an impact on the overall capital spending which are supported by local citizens and taxpayers. Proposed projects shall be submitted using the sample format attached as Table 2 (see-attached page 7). A separate sheet shall be filed for each project proposed.
- 8.2 In addition to these forms each department shall submit a draft 6-year schedule for the proposed projects.

**9.0 Review and rate proposed capital projects.**

The project request forms see Table 2, proposed to each department for submission of capital project proposals, will contain indicators of departmental priorities and their justification by urgency and need. The CIP Committee will use its judgement to classify and prioritize the projects from an overall community perspective.

**9.1 Point System**

An initial classification will be developed to accord the relative rank of the projects, in accordance with the numerical scoring system as defined in Table 3 (see attached page 8). A specific number of points will be awarded to each project for each of several review criteria as listed below and included in Table 3.

<u>Evaluation Criteria</u>	<u>Point Score</u>
Addresses an emergency or public safety need	5 4 3 2 1 0
Corrects a deficiency in service or facility	5 4 3 2 1 0
Provides capacity needed for future growth	5 4 3 2 1 0
Results in long-term cost savings	5 4 3 2 1 0
Supports job development/increased tax base	5 4 3 2 1 0
Furtheres the goals of the Master Plan	5 4 3 2 1 0
Leverages the non-property tax revenues	5 4 3 2 1 0
Matching funds available for limited time	5 4 3 2 1 0

- 9.2 The Planning Board shall develop an initial needs classification or priority ranking of the proposed projects on Table 4 (see attached, page 9). Point scores shall be entered using the data derived from the scoring system defined in paragraph 9.1.
- 9.3 Following an initial classification of projects the CIP Committee will hold a meeting with the department heads and agencies to discuss the initial review and to hear more information from those proposing the projects. At this time, requests could be entertained to modify the original CIP project requests. Following any amendments or modifications, the Planning Board may wish to have a second public informational meeting to state its initial findings and to hear additional public comment on capital needs or proposals for other projects.

## **10.0 PREPARE A 6 YEAR PROJECT SCHEDULE**

The CIP Committee shall identify projects, which should be included within the six year CIP time frame. The committee shall also show how the costs of these improvements can.

### **10.1 Draft Schedule of Annualized Costs and Revenues**

The following worksheets shall be used to draft a capital Improvements Program which considers the net annualized cost of \$1.00/\$1,000 of assessed property value. Tables 5 and 6 (see attached pages 10-15) can be used to modify the sequence of capital projects within fiscal constraints, suggest alternative funding means or other strategies to even out the potential property tax impacts of various combinations of capital improvements.

Table 5: Illustrates a worksheet for scheduling capital improvement projects and their annualized costs.

Table 6: Provides worksheets for entering specific non-property tax revenues, which may be dedicated to the capital improvements, proposed.

### **10.2 Adjust the Six Year Schedule**

## **11.0 ADOPT AND IMPLEMENT THE CAPITAL IMPROVEMENT PROGRAM AND BUDGET**

The Planning Board shall adopt the CIP plan after at least one public hearing unless there are substantive changes made as a result of the comments received at the public hearing. A certified copy of the plan is then filed with the Town Clerk and a copy filed with the Office of State Planning.

When the Planning Board has adopted a Capital Improvements Program, it is required to transmit its recommendations for the current year to the Board of Selectmen and the Budget Committee for consideration in the annual budget. Table 7 (see attached page 16) provides a format for the presentation of the annual CIP recommendations by the Planning Board.

## Table 1

### TOWN OF HUDSON

#### FY2016 CAPITAL IMPROVEMENTS COMMITTEE (CIC) SCHEDULE

<u>DATE</u>	<u>EVENT</u>
Friday, March 28, 2014	FY2016 Capital Improvement Program (CIP) submittals due.
<u>Monday April 14, 2014</u>	CIC Organizational Session, Community Development, Library, Recreation Department
<u>Monday April 28, 2014</u>	School, Police Department, and Fire Department
<u>Monday May 5, 2014</u>	Highway Department, Conservation Commission, Board of Selectmen. Public Proposals, Benson's Committee. <b>C.I.C. Assigns Priorities and Ranks Projects &amp; Develops Annualized Capital Project Schedule and Cost.</b>
June 27, 2014	<b>Publish draft CIP</b> for Departmental and Public comment
July 9, 2014	<b>Public Hearing</b> and Planning Board vote on CIP
August 13, 2014	Distribute final C.I.P. to Board of Selectmen, Budget Committee, C.I.P. Committee, and Planning Board.

Meetings begin at 7:00 PM and are held in the Community Development Meeting Room. Underlined dates are when the CIC meets with Town departments.

**TABLE 2**

**CAPITAL IMPROVEMENTS PROGRAM**

FY 2007

Department: \_\_\_\_\_ Department Priority: \_\_\_\_\_ of \_\_\_\_\_ Projects

Type of Project  
(Check One)

- Primary effect of project is to:
- Replace or repair existing facilities or equipment
  - Improve or repair existing facilities or equipment
  - Expand capacity of existing service level facility
  - Provide new facility or service capacity

Service Area of Project  
(Check One)

- Region
- Town
- School District
- District
- Central Business District
- Neighborhood
- Street
- Other Area

**Project Name:**  
**Description:**

Rational for Project:  
(Check those that apply; elaborate below.)

- Removes imminent threat to public health or safety
- Alleviates substandard conditions or deficiencies
- Responds to federal or state requirement to implement
- Improves the quality of existing services
- Provides added capacity to serve growth
- Reduces long term operating costs
- Provides incentive to economic development
- Eligible for matching funds available for limited time

**Narrative Justification:**

Cost Estimate:  
(Itemize as necessary)

Capital Costs	
Dollar Amount (in current \$'s)	
\$ _____	Planning/feasibility analysis
\$ _____	Architecture & engineering fees
\$ _____	Real estate acquisition
\$ _____	Site Preparation
\$ _____	Construction
\$ _____	Furnishing & equipment
\$ _____	Vehicles & Capital Equipment
\$ _____	
\$ _____	
\$ _____	<b>Total Project cost</b>

Impact on Operating & Maint. Costs or Personnel Needs

- Add Personnel
  - Increase O&M costs
  - Reduce Personnel
  - Decreased O&M costs
- Dollar Cost of Impacts if know
- Plus \$ \_\_\_\_\_ annually
- Minus \$ \_\_\_\_\_ annually

Source of Funding:

AMOUNT

Grant from: _____	_____
Loan From: _____	_____
Donation/bequest/private	_____
User fees & charges	_____
Capital reserve withdrawal	_____
Impact fee account	_____
Current revenue	_____
Bonds	_____
Total project cost	_____

Form Prepared By:

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Department/Agency



**TABLE 4  
PROJECT RATING TABLE**

<u>Evaluation Criteria</u>	<u>Point Score</u>
Further the goals of the Master Plan	5 4 3 2 1 0
Address an emergency or public safety need	5 4 3 2 1 0
Correct a deficiency in service or facility	5 4 3 2 1 0
Provide a capacity needed for future growth	5 4 3 2 1 0
Result in long-term cost savings	5 4 3 2 1 0
Support job development / increase tax base	5 4 3 2 1 0
Leverage the non-property tax revenues	5 4 3 2 1 0
Matching funds available for limited time	5 4 3 2 1 0

TOTAL PROJECT SCORE = \_\_\_\_\_ SUM OF ABOVE SCORES

TABLE 5 PAGE 1

**SCHEDULE OF CAPITAL IMPROVEMENT PROJECTS AND ANNUALIZED COSTS**

(Includes Existing Scheduled Debt and New Bonded Debt for Proposed Projects)

DESCRIPTION OF PROJECT OR EQUIPMENT By Department or Service Area	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	6 Year Total
ADMINISTRATIVE/GENERAL GOV'T							
PUBLIC SAFETY							
POLICE DEPARTMENT							
FIRE DEPARTMENT							
HIGHWAY DEPARTMENT							

**TABLE 5 PAGE 2  
 SCHEDULE OF CAPITAL IMPROVEMENT PROJECTS AND  
 ANNUALIZED COSTS**

(Includes Existing Scheduled Debt and New Bonded Debt for Proposed Projects)							
DESCRIPTION OF PROJECT OR EQUIPMENT By Department or Service Area	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	6 YEAR TOTAL
RECREATION							
LIBRARY							
COMMUNITY DEVELOPMENT							
SEWER							
DPW							



TABLE 5 PAGE 3

**SCHEDULE OF CAPITAL IMPROVEMENT  
PROJECTS AND ANNUALIZED COSTS**

(Includes Existing Scheduled Debt and New Bonded Debt for Proposed Projects)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	6 YEAR TOTAL
DESCRIPTION OF PROJECT OR EQUIPMENT By Department or Service Area							
TOTAL TOWN CAPITAL EXPENDITURE							
TOWN SERVICES							
SEWER							
TOTAL TOWN CAPITAL EXPENDITURES							
SCHOOL CAPITAL COSTS: LOCAL SHARE							
COMMUNITY DEVELOPMENT							
TOTAL CAPITAL EXPENDITURE							

TABLE 6 PAGE 1							
SCHEDULE OF NON-PROPERTY TAX REVENUES AVAILABLE FOR CAPITAL PROJECTS AND CAPITAL PROJECT IMPACT ON TAX RATE							
DESCRIPTION OF PROJECT OR EQUIPMENT By Department or Service Area	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	6 YEAR TOTAL
ADMINISTRATIVE/GENERAL GOV'T							
PUBLIC SAFETY							
POLICE DEPARTMENT							
FIRE DEPARTMENT							
HIGHWAY DEPT							

TABLE 6 PAGE 2

SCHEDULE OF NON-PROPERTY TAX REVENUES AVAILABLE FOR CAPITAL PROJECTS AND CAPITAL PROJECT IMPACT ON TAX RATE

DESCRIPTION OF PROJECT OR EQUIPMENT By Department or Service Area	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	6 YEAR TOTAL
RECREATION							
LIBRARY							
COMMUNITY DEVELOPMENT							
SEWER							
DPW							

TABLE 6 PAGE 3

SCHEDULE OF NON-PROPERTY TAX REVENUES AVAILABLE FOR CAPITAL PROJECTS AND CAPITAL PROJECT  
IMPACT ON TAX RATE

DESCRIPTION OF PROJECT OR EQUIPMENT By Department or Service Area	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	6 YEAR TOTAL
TOTAL TOWN CAPITAL EXPENDITURE							
TOWN SERVICES							
SEWER							
SCHOOL, CAPITAL COSTS: LOCAL SHARE							
TOTAL CAPITAL EXPENDITURE							

TABLE 7  
 CAPITAL BUDGET OF FY \_\_\_ RECOMMENDED FOR INCLUSION IN THE BUDGET Based on the Capital Improvement  
 Program For the Years \_\_\_ to \_\_\_

DESCRIPTION OF PROJECT OR EQUIPMENT By Department or Service Area	Recommen ded Budget	Non-Property tax Revenues Anticipated for Project Amount Source	Property Tax Revenues Required	Notes
ADMINISTRATIVE/GENERAL GOVT				
POLICE				
FIRE				
HIGHWAY				
RECREATION				
LIBRARY				
COMMUNITY DEVELOPMENT				
SEWER				
SCHOOL DISTRICT				
TOTAL MUNICIPAL CAPITAL EXPENDITURE				
SCHOOL CAPITAL COSTS: LOCAL SHARE				
TOTAL CAPITAL BUDGET RECOMMENDED				

# Capital Improvement Program

FY2016 Meeting Agendas &  
Minutes

**PUBLIC MEETING  
TOWN OF HUDSON, NH  
APRIL 14, 2014**

The Town of Hudson Capital Improvements Committee will hold a meeting on Monday, April 14, 2014 at 7:00 p.m. in the "Community Development Meeting Room" at Town Hall. The Capital Improvements Committee (CIC) is scheduled to review the FY2016 CIP projects for the Police and Fire Departments. In this regard, each of these departments will have a representative(s) at the meeting in order to present their respective projects.

- I. CALL TO ORDER AT 7:00 P.M.
- II. PLEDGE OF ALLEGIANCE
- III. ROLL CALL
- IV. CORRESPONDENCE
  
- V. NEW BUSINESS:

- A. CIC Organizational Session

- B. Review and Rank Fiscal Year 2016 Capital Improvements Program projects for the following departments:

- 1) Police
      - 2) Fire Department

- VI. OTHER BUSINESS
        - VII. ADJOURNMENT

All proposed Capital Improvements Program projects are available for review in the Planning Office. Comments may be submitted in writing until 12:00 noon on the Thursday prior to the day of the meeting.

The public is invited to attend.

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John M. Cashell  
Town Planner

Posted: April 3, 2014  
Library  
Post Office  
Town Hall

**HUDSON FY2016 CAPITAL IMPROVEMENTS PROGRAM COMMITTEE  
MEETING MINUTES  
April 14, 2014**

I. **CALL TO ORDER** - Chairman George Hall called this Capital Improvements Committee (CIC) to order at 7:05 p.m. on Monday, April 14, 2014, in the Board of Selectmen Meeting Rm., Town Hall basement.

II. **Pledge of Allegiance** - Chairman Hall led the assembly in pledging allegiance to the Flag of the United States of America.

III. **ROLL CALL** - Chairman Hall called the roll. Those persons present, along with various applicants, representatives, and interested citizens, were as follows:

**Members**

**Present:**

George Hall, Tim Malley, Glenn Della-Monica, and Richard Maddox (Selectmen's Representative), Geoffrey Keegan, Budget Committee Member, Laura Bisson, Chair of the Hudson School Board and Normand Martin, Citizen Rep.

**Members**

**Absent:**

N/A

**Staff/Recorder**

**Present:**

Town Planner John Cashell.

IV.

**A. CIC Organizational Session**

Chairman Hall began the meeting by going over the CIP process, i.e., Steps 1 – 7, as cited in the CIP PROCESS document, which is attached to the staff report for this meeting.

**B. Review and Rate Fiscal Year 2016 Capital Improvements Program Projects for the following departments:**

**1) Hudson Police Department FY2016 CIP Police Facility Expansion**

The Police Dept., represented by Police Chief, Jason Lavoie, presented this department's CIP project, which involves a proposed expansion to the existing Police Station. After Chief Lavoie completed his presentation he answered several questions and concerns from CIC members. For example, the Chief stated that he has not been able to receive actual construction quotes for the proposed addition to the station. He said this was due to the fact that the Police Department does not have within their budget funds necessary to hire an architect to prepare a construction estimate.

During the course of the review, committee members suggested to the Chief that, perhaps, the best course of action to try and accomplish the goal of the addition, would be to first propose to the Board of Selectmen the need to establish funding for the planning of the project, followed by funding for the design and engineering and then for the actual construction, and that such a three phased approach, spread out of several years, could provide the means to see this project through to fruition.

The chief concurred with the aforementioned phased approach to this project, but he also acknowledged that because the existing Police Station is relatively new, that is, compared to the need for a new Central Fire Station, that he feels it would be in the Town's best interest to first build said Fire Station, before building an addition to the Police Station. On this note, the CIC moved to take the Police Department's proposed project under advisement, and chose to rate this project later in the meeting.

The above-cited project is described in-full, per the attached document entitled: **Hudson Police Department FY2016 CIP Police Facility Expansion**. This document includes: the Cover Sheet, Project Rating Table, Tables 2 & 3 and the project narrative. Please note, in accordance with the CIP prerequisite, Chief Lavoie presented the subject project to the BOS, and received their support to present this project to the CIC.

After due deliberation at the end of the meeting, the CIC voted on the above proposed Police Station addition as follows:

This project received a total number of points from the 7 voting CIC members of 133, broken down on a per member count as follows:

George Hall, Chair awarded this project a total score of 25  
Glenn Della-Monica – 24  
Geoffrey Keegan – 19  
Normand Martin – 22  
Laura Bisson – 18  
Tim Malley – 14  
Selectman Rick Maddox – 11

Note: the above scores resulted from the following Project Rating Table:

# PROJECT RATING TABLE

## POLICE – FACILITY EXPANSION

<u>Evaluation Criteria</u>	<u>Point Score</u>
Further the goals of the Master Plan	5 4 3 2 1 0
Address an emergency or public safety need	5 4 3 2 1 0
Correct a deficiency in service or facility	5 4 3 2 1 0
Provide a capacity needed for future growth	5 4 3 2 1 0
Result in long-term cost savings	5 4 3 2 1 0
Support job development / increase tax base	5 4 3 2 1 0
Leverage the non-property tax revenues	5 4 3 2 1 0
Matching funds available for limited time	5 4 3 2 1 0

**TOTAL PROJECT SCORE = 133 SUM OF ABOVE SCORES**

### 2) Hudson Fire Department

The next order of business at the meeting was the Fire Dept., represented by Chief Robert Buxton, who presented this department's 3 CIP projects:

- 1) Central Fire Station
- 2) Burns Hill Fire Station
- 3) Radio System

After Chief Buxton completed his presentation on each of the above proposed projects, he answered questions from CIC members. For example, in regard to the proposed Central Fire Station, he described the history of the present facility, i.e., when it was constructed in 1952, and then added onto in 1987. He also cited that the present Central Fire Station, together with the separate Administration Building, add up to a total of 11,606 sf, whereas, the space needs study

conducted several years ago determined that for a Town of Hudson's size and population, a Central Fire Station should provide space of nearly 23,000 sf. He said this fact, together with the structural age and other inadequacies of the building, including that it's in accessible to those with physical challenges, basically make the facility inappropriate for a community such as Hudson, both size-wise concerning firefighting and emergency apparatus, as well as concerning the administrative and training needs of the Fire Dept.

The above-cited projects are described in-full, per the attached document entitled: **Hudson Fire Department FY2016 CIP Central Fire Station, Burns Hill Fire Station, and Radio System**. For each of the 3 projects, this document includes: a Project Rating Table, Tables 2 & 3 and a project narrative. Please note, in accordance with the CIP prerequisite, Chief Buxton presented the subject projects to the BOS, and received their support to present them to the CIC.

At the conclusion of the above presentations, the CIC moved to rate the presented projects, as follows:

- 1) **Central Fire Station** - This project received a total number of points from the 7 voting CIC members of 150, broken-down on a per member count as follows:

George Hall, Chair awarded this project a total score of 26  
Glenn Della-Monica – 25  
Geoffrey Keegan – 20  
Normand Martin – 24  
Laura Bisson – 25  
Tim Malley – 17  
Selectman Rick Maddox – 13

- 2) **Burns Hill Fire Station** - This project received a total number of points from the 7 voting CIC members of 98, broken-down on a per member count as follows:

George Hall, Chair awarded this project a total score of 16  
Glenn Della-Monica – 18  
Geoffrey Keegan – 07  
Normand Martin – 19  
Laura Bisson – 16  
Tim Malley – 11  
Selectman Rick Maddox – 11

- 3) **Radio System** - This project received a total number of points from the 7 voting CIC members of 107, broken-down on a per member count as follows:

George Hall, Chair awarded this project a total score of 12  
Glenn Della-Monica – 21  
Geoffrey Keegan – 20  
Normand Martin – 20  
Laura Bisson – 11  
Tim Malley – 13  
Selectman Rick Maddox – 10

Please note, the above 3 Fire Department CIP proposed projects were rated based on the

same criteria specified in the above Project Rating Table (see page 2 of these minutes).

## **V. OTHER BUSINESS:**

In other business discussed at this initial CIP meeting, staff cited that he spoke with the Town's Finance Director, Kathy Carpentier, concerning the status of Town Debt, i.e., as it relates to the Capital Improvement Program. Mr. Cashell stated that Ms. Carpentier reported to him that said debt amount is "\$0.00". "Yes, there is some debt obligation pertaining Water Utilities, but this obligation is paid by user fees, and not as part of the debt funding provided for and described in the CIP process", Mr. Cashell stated. In regard to the aforementioned debt issue, Mr. Cashell referred to the CIP PROCESS document included in his staff report for this meeting. Specifically, STEP 6 (page 2 of 16) and Section 5.0 of said document (page 2 of 16).

In the above-cited CIP Process document, Mr. Cashell pointed-out that such capital investment debt, and its beneficial leverage capacity, can provide an affordable means to fund very much needed infrastructure improvement projects. He stressed, that the CIC must focus serious attention on this subject.

## **VI. ADJOURNMENT**

Meeting adjourned at approximately 10:05 P.M.

Respectfully Submitted,

John M. Cashell  
Town Planner

**PUBLIC MEETING  
TOWN OF HUDSON, NH  
APRIL 28, 2014**

The Town of Hudson Capital Improvements Committee will hold a meeting on Monday, April 28, 2014 at 7:00 p.m. in the "Community Development Meeting Room" at Town Hall. The Capital Improvements Committee (CIC) is scheduled to review the FY2016 CIP projects for the Municipal Utility Committee and Land Use Division. In this regard, each of these departments will have a representative(s) at the meeting in order to present their respective projects.

**I. CALL TO ORDER AT 7:00 P.M.**

**II. PLEDGE OF ALLEGIANCE**

**III. ROLL CALL** inaccessible

**IV. CORRESPONDENCE**

**V. NEW BUSINESS:**

A. Review and Rank Fiscal Year 2016 Capital Improvements Program projects for the following departments:

- 1) Municipal Utility Committee
- 2) Land Use Division

**VI. OTHER BUSINESS**

**VII. ADJOURNMENT**

All proposed Capital Improvements Program projects are available for review in the Planning Office. Comments may be submitted in writing until 12:00 noon on the Thursday prior to the day of the meeting.

The public is invited to attend.

---

John M. Cashell  
Town Planner

Posted at Town Hall, Library and Post Office on April 23, 2014.

**HUDSON FY2016 CAPITAL IMPROVEMENTS PROGRAM COMMITTEE  
MEETING MINUTES  
April 28, 2014**

I. **CALL TO ORDER** - Chairman George Hall called this Capital Improvements Committee (CIC) to order at 7:05 p.m. on Monday, April 14, 2014, in the Board of Selectmen Meeting Rm, Town Hall basement.

II. **Pledge of Allegiance** - Chairman Hall led the assembly in pledging allegiance to the Flag of the United States of America.

III. **ROLL CALL** - Chairman Hall called the roll. Those persons present, along with various applicants, representatives, and interested citizens, were as follows:

**Members**

**Present:** George Hall, Tim Malley, Glenn Della-Monica, and Richard Maddox (Selectmen's Representative), Geoffrey Keegan, Budget Committee Member, Michael Truesdell, Member of the Hudson School Board and

**Members**

**Absent:** Normand Martin, Citizen Rep.

**Staff/Recorder**

**Present:** Town Planner John Cashell.

**A. Review and Rate Fiscal Year 2016 Capital Improvements Program projects for the following committee and department:**

**1) Municipal Utility Committee**

At the meeting the Municipal Utility Committee was represented by its Chairman, Bernie Manor, who presented the proposed water distribution improvement projects included in the attached FY2016 Municipal Utility Committee's CIP Report. He stated that the first 3 proposed projects need to be thought of as one project, "...because if all three are not built there's no sense in building only 1 or 2." The subject 3 projects are: 1) the Windham Road Booster Station, 2) the 1.2 MGD Water Storage Tank at Barretts Hill, and 3) the 5,200 lf 12" Water Main for Barretts Hill Rd.

After the CIC members deliberated on the dilemma of how to best implement the above 3 separate projects, which, again, all need to be completed in the same time period in order for any one of them to provide a water distribution benefit for the Town, it was agreed that these projects should be combined as one, and recommended as such in the FY2016 CIP.

In effect, the above-cited 3 projects were combined as one and received a total vote of 140, i.e., by the 6 voting CIC members present at the meeting. Note: also included in the foregoing vote total was an average vote of 20, which represents the average of the vote totals cast by each of the 6 present voting members, with said average vote representing that of absent member, Normand Martin. Broken down on a per member count, this project received from:

George Hall, Chair awarded this project a total score of 17  
 Glenn Della-Monica – 22  
 Geoffrey Keegan – 19  
 Normand Martin – A (avg. points applied 20)  
 Michael Truesell – 19  
 Tim Malley – 20  
 Selectman Rick Maddox – 23

In addition to the above action taken by the CIC in regard to the Municipal Utility Committee’s FY2016 CIP Report, they reviewed an additional 6 capital improvement projects supported by said committee, relative to preparing for the out years of this CIP, i.e., 2017 – 21. These 6 projects together with the aforementioned 3 projects now combined into 1 are described in-full, per the attached document entitled: **Municipal Utility Committee FY2016 CIP**. This document includes: the Cover Sheet, Project Rating Table, Tables 2 & 3 and a report prepared by Jeffrey W. McClure, P.E., Project Mgr., for the Town’s consulting engineering firm, Weston & Sampson Engineering, Inc. This report details the following 2 water distribution improvements projects: Water Line Extension Greeley St. to Alvirne High School and the Water Line Extension End Old Derry Rd. to Christine Dr.

**2) Land Use Division**

The next order of business at the meeting was the review of the Land Use Division FY2016 CIP projects. The presenter was this author and the proposed projects include the following:

Melendy Rd Bridge	Land Use Div.	1	2016	\$345,000	NHDOT 80% FUNDING
County Rd Bridge	Land Use Div.	2	2016	\$410,000	NHDOT 80% FUNDING
Add 2d Lane SB Lowell Rd to Sagamore Bridge Rd WB	Land Use Div.	3	2017	\$520,000	IMPACT FEES & NHDOT FUNDING
Rtes. 102, 111 and 3A Sidewalk Improvement Projects	Land Use Div.	4	2018		IMPACT FEES & NHDOT FUNDING

After the above project presentations were completed and CIC questions/concerns were addressed by staff, the 2 FY2016 projects that were rated, receiving the following point totals from the CIC members in attendance, plus one vote for each based on the average of the six voting members present.

**County Road Bridge – Land Use Division received a total of 132 points.**

George Hall, Chair awarded this project a total score of 20  
 Glenn Della-Monica – 25  
 Geoffrey Keegan – 17  
 Normand Martin – A (avg. points applied 19)  
 Michael Truesell – 22

Tim Malley – 12  
Selectman Rick Maddox – 17

**Melendy Road Bridge – Land Use Division received a total of 131**

George Hall, Chair awarded this project a total score of 20  
Glenn Della-Monica – 24  
Geoffrey Keegan – 17  
Normand Martin – A (avg. points applied 19)  
Michael Truesell – 22  
Tim Malley – 12  
Selectman Rick Maddox – 17

The above-cited 4 projects are described in-full, per the attached document entitled: **Land Use Division FY2016 CIP**. This document includes: the Cover Sheet, Project Rating Table, Tables 2 & 3 and attachments thereto and an example (abridged) grant application that was filed with NHDOT concerning the proposed “Continue Pedestrian/Bike Lane on Derry St./Rte. 102, from Towhee Dr. to Megan Dr.” The other 2 grant applications also involve sidewalk enhancement projects along Rte. 111 and Rte. 3A. At the meeting, staff reported to the CIC, that if the Town decides to do a CIP in the next year or two, these sidewalk projects will, hopefully, gain the support they need to be achieved. Staff stated, “If supported and funded, these 3 sidewalk projects will connect all existing sidewalks along each of the 3 main corridors, thus, creating a 7 mile interconnected sidewalk network.”

In addition to the above, at the conclusion of the meeting staff cited that he will begin the work necessary to complete the FY2016 CIP in accordance with the below schedule. “This work will also involve consultation with the Town’s Finance Director, Kathy Carpentier, relative to determining how to best proceed with funding the Town’s side of the Capital Improvement Projects supported in the FY2016 CIP:

- |                        |   |
|------------------------|---|
| <b>June 25, 2014</b>   | <b>Publish draft CIP for Departmental and Public comment</b>  |
| <b>July 9, 2014</b>    | <b>Public Hearing and Planning Board vote on the CIP.</b>   |
| <b>August 13, 2014</b> | <b>Distribute final C.I.P. to Board of Selectmen, Budget Committee, C.I.P. Committee, and Planning Board.</b> |

Meeting adjourned at 9:00 P.M.

Respectfully Submitted,

John M. Cashell, Town Planner

# Capital Improvement Program

## Chapter 1 Introduction and Goals Section of the 2006 Master Plan

## CHAPTER I

### INTRODUCTION AND GOALS

#### A. INTRODUCTION

Preparing a community master plan is one of the most important responsibilities of a Planning Board and is the basis for the ordinances, regulations and policies that guide development and growth in the Town. New Hampshire Revised Statutes Annotated 674:1-4 give the Planning Board the authority to prepare a master plan and describe the chapters, adapted to the needs of each community, that such a plan must contain. This Master Plan contains discussion and analysis of: 1) Goals; 2) Population and Housing; 3) Natural Resources; 4) Economic Development; 5) Transportation; 6) Existing Land Uses; 7) Historic Resources; 8) Community Facilities; 9) Future Land Uses.

The 2006 Master Plan is an update of the 1995 Master Plan. This plan update was developed by the Planning Board over the course of a three-year time period with the assistance of the Town staff, the Nashua Regional Planning Commission, other consultants, experts and professionals from various fields. The Planning Board met monthly from June 2002 through January 2006. All of the information provided in the Master Plan was distributed to the Planning Board and the text reflects the discussion, recommendations and conclusions from each of their meetings.

The result of the work of the Planning Board is a Master Plan that considers the Town's short and long-term housing, transportation, natural resource, economic, land use, historic, and community facility needs. The plan is intended to address short-term needs while also providing guidance as to how Hudson will function and look as it approaches buildout. A significant amount of time is devoted to the remaining resources in the Town and strategies that can be used to ensure their protection for the benefit of Hudson's residents.

#### B. GOALS

##### 1. Population and Housing

- Provide for an acceptable rate of growth in relation to the regional rate of growth and in keeping with the ability of the town to provide essential facilities and services.
- Incorporate available demographic and population data into evaluations of municipal services to meet the needs of current and future residents of Hudson.
- Provide reasonable opportunities for the development of housing affordable to families and individuals of all income levels.
- Maintain the existing balance between single-family, two-family and multi-family housing units.
- Encourage the use of open space developments to provide attractive, cohesive neighborhoods with adequate parks and open space, that are designed with sensitivity to the landscape.

##### 2. Economic Development

- Encourage growth in employment, particularly of high quality, higher-wage professional, managerial and manufacturing jobs, to reduce unemployment and increase economic opportunities for Hudson residents.
  - i. Provide for the growth of commercial and light industrial uses in limited areas with adequate utility services and direct access to the State designated highway system.

- ii. Restrict the development of commercial and other non-industrial uses in industrial districts to reserve land for industrial development.
- iii. Conserve existing sewer capacity for future commercial and industrial development.
- iv. Develop a strategy for developing appropriate portions of the Merrimack River to attract shops, restaurants and other commercial enterprises that make use of the riverfront, while retaining and promoting its beauty.

### 3. Natural Resources

- Discourage the development of wetlands, steep slopes, floodplains, prime and important farmland soils, ridgelines and other sensitive lands.
- Encourage the appropriate use, conservation and development of the Merrimack Riverfront.
- Protect existing and potential public drinking water supplies and on-site wells, groundwater, and recharge areas from harmful developments, land use practices, and roadway contamination.
- Develop watershed-based planning techniques that include intermunicipal coordination of land uses in each watershed that spans town boundaries, such as the Musquash Brook Watershed, to ensure effective management and protection of the water resource.
- Designate and provide extra protection to the Town's prime wetlands and wetlands of importance based on their location and the benefits they provide.
- Encourage land use boards to keep up to date on the status of the state instream flow rules.
- Protect surface water resources in areas of existing or anticipated increased density from additional pollutant loads and increased flow associated with development.
- Adopt a shoreline protection ordinance consistent with the state model to permit Hudson to continue to regulate shoreline development at the local level.
- Develop an inventory and monitoring system of prime habitats and areas of significant flora and fauna for future conservation.
- Protect existing Town-owned land that is not currently protected as conservation land and take appropriate action to ensure that these parcels are permanently protected from future development or any adverse activities on the parcels.

### 4. Community Facilities

- Provide cost effective, conveniently located community facilities including schools, recreation, public safety, library, solid waste disposal, public water and public sewer facilities based upon community need and the ability of the town to pay.
- Plan for the expansion of existing community facilities to meet the existing and future needs of Town residents.
- Ensure that new development pays for its proportional share of capital facility costs.
- Encourage the preparation of an active, well publicized Capital Improvements Program (CIP).

### 5. Transportation

- Provide for a safe and efficient transportation system based on a hierarchy of arterial, collector and local roadways.
  - i. Promote the recommendations of the *Hudson-Litchfield Townwide Traffic Study, 2002*.

- ii. Advocate for development of the proposed Nashua/Hudson Circumferential highway while pursuing alternatives to highway construction in the event that the project fails to be implemented.
- iii. Revisit zoning standards and subdivision and site plan regulations to incorporate access management techniques to reduce the impact of new development and redevelopment on the circulation system.
- Encourage alternative transportation systems including provisions for bicycles, pedestrians and public transit.

#220F-1

