

PROGRAM HIGHLIGHTS**ENGINEERING SERVICES**

<u>SERVICE INDICATORS</u>	<u>Actual 2010</u>	<u>Actual 2011</u>	<u>Estimated 2012</u>	<u>Projected 2013</u>
1. Capital Project Design Completed by Consultants	6	6	7	6
2. Capital Project Design Completed by Engineering Staff	14	13	13	10
3. Project Management of CIP Projects	28	26	27	25
4. Public Project Meetings by Engineering Staff	3	5	6	5
5. Private Development Project Plan Reviews	29	40	35	35
6. Construction Inspection of Private Development Project	37	40	42	40
7. Administer Financial Guarantees	22	34	30	30
8. Street/Driveway/Excavation Permits	617	642	459	475
9. Utility Service Connections/Inspections	58	52	41	50
10. Monitoring Well Annual Licenses	*0	43	43	43
11. Monitoring Well Permits	*0	0	1	1
12. GIS Referrals/Requests for Service	132	137	170	170
13. Plans Digitally Updated in GIS	41	36	50	60
14. Traffic Operations Committee Referrals	47	41	40	40
15. Poles and Wires Licenses	17	29	25	20
16. DIGSAFE Markout/Utility Layouts	1,876	2,178	2,374	2,275

* Monitoring Well Permit and Annual License Fee introduced through Ordinance in FY 2011.

2013 GOALS

1. Develop and/or continue an implementation strategy for City Council's consideration of improvement options on the City's priority transportation corridors: a) Loudon Road Corridor (CIP #19); and b) Langley Parkway (CIP #40).
2. Advance and/or complete the design and/or construction of the following major transportation corridor projects in accordance with their respective program schedules: a) US Route 3 North (North State Street, Fisherville Road, Village Street from Penacook Street to the Boscawen Town Line) (CIP #35).
3. Advance and/or complete the design and/or construction of the following major traffic intersection projects in accordance with their respective program schedules: a) South Street, Clinton Street, Broadway, and West Street (McKee Square) Intersection Improvement Project (CIP #31); and b) Manchester Street, Old Turnpike Road Intersection Improvement Project (CIP #519).
4. Advance and/or complete the design and/or construction of the following major airport projects in accordance with their respective program schedules: a) Design of Parallel Taxiway to Runway 12/30 (CIP #73); and b) Runway Safety Area Study – Runway 12/30 (CIP #73).
5. Advance and/or complete the design and/or construction of the following major utility projects in accordance with their respective program schedules: a) Hopkinton Road/Saw Mill Road Water Main Cleaning and Lining Project – Design (CIP #84); b) Loudon Road Water Main Replacement Project – Phase 2 (CIP #85); c) Sewalls Falls Road Water Main Extension Project (in conjunction with the design of the Sewalls Falls Road Bridge Replacement) (CIP #86); and d) Penacook Water Main Cleaning and Lining Project, Phase II (CIP #84).
6. Advance and/or complete the design and/or construction of the following major streetscape, sidewalk, traffic operation and targeted neighborhood improvement projects in accordance with their respective program schedules: a) Main Street/Pleasant Street Traffic Signal Operations Improvement Project (CIP #283); b) Pleasant Street/Warren Street/Fruit Street Traffic Signal Operations Improvement Project (CIP #283); and c) Warren Street Safe Routes to School Improvements Project (CIP #380).

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7. Advance and/or complete the design and/or construction of the following major bridge improvement projects in accordance with their respective program schedules: a) Design/Permitting of the Sewalls Falls Road Bridge Replacement Project (CIP #22).
8. Advance and implement the following major technology improvements in accordance with their respective program schedules: a) Digital Tax Map Development Project – Phase 3 (CIP #297).
9. Develop strategies for evaluating and implementing mechanisms for a City-wide Stormwater Enterprise for funding the stormwater management program (CIP #479).
10. Continue to support the comprehensive City-wide traffic and transportation engineering program with staff and the Transportation Policy Advisory Committee (TPAC), including review of the City's Transportation Master Plan and the Traffic Management Policy.

2012 GOALS STATUS

1. Develop an implementation strategy for City Council's consideration of improvement options on the City's major transportation corridors: a) Loudon Road Corridor (CIP #19); and b) Langley Parkway (CIP #40).
9-Month Status: a) Engineering staff completed the development of a comprehensive and detailed Synchro 7 traffic model of the Loudon Road corridor, depicting traffic operations and delay, which will be used to support the operational assessment of a potential three-lane road conversion. A corridor concept plan has been reviewed with staff, the Traffic Operations Committee, the Transportation Policy Advisory Committee and Ward Councilors. Review by City Council and the public is anticipated by spring 2012. In late March 2012, Engineering staff coordinated a review meeting of potential Highway Safety Improvement Program (HSIP) funding through the NHDOT for these improvements along the Loudon Road corridor. Staff received notice in the first week of April that both NHDOT and FHWA determined that the proposed improvements qualify for HSIP funding (90% Federal/10% Local) and will support the project. The project is currently programmed in the FY2013 CIP, however a shift to FY 2014 is recommended by staff to follow the expected completion of the Loudon Road water main reconstruction (CIP 85). b) The traffic and environmental feasibility study is underway to determine the project related impacts of the Langley Parkway – Phase 3 project. Engineering staff continues to work with VHB, the City's transportation planning consultant, on the project. Extensive traffic modeling with the regional traffic model, through the assistance of NHDOT, was completed in late 2011; and conceptual design of corridor alignment and intersections is underway. The project study is expected to continue through early 2012, concluding with a presentation to City Council in mid-2012.
2. Advance and/or complete the design and/or construction of the following major transportation corridor projects in accordance with their respective program schedules: a) US Route 3 North (North State Street, Fisherville Road, Village Street from Penacook Street to the Boscawen Town Line) (CIP #35); and b) Signalization of the Airport Road/Integra Drive/Manchester Street Intersection (CIP #36).
9-Month Status: a) Construction of Phase 3 of US Route 3 North (Lake Street to Palm Street) was substantially completed in December 2011. Engineering staff also completed designs for two major culvert projects along North State Street for 2011 construction. The Rattlesnake Brook Culvert replacement was completed in August 2011. Another major culvert project at 296 North State Street (vicinity of Palm Street) began in early January 2012 and is expected to be completed by mid-April. Design of the Phase 4a improvements (Palm Street to Call Street) was completed by Engineering staff in late 2011, and the design of the Phase 4b improvements (Call Street to Penacook Street) was completed in mid-March 2012. Both projects were released for bid advertisement on March 26, 2012. Construction of the Phase 4a and 4b improvements is expected to start in April/May 2012 and continue throughout the 2012 construction season. b) Right-of-way acquisitions for the project are complete and the realignment of Airport Road with Manchester Street, across from Integra Drive, was substantially completed in late 2011. The realignment of Broken Bridge Road with Integra Drive was completed at that same time. City Council authorized the discontinuance of Airport and Broken Bridge Road upon project completion, and the relocation of the private utilities is underway. Construction work resumed in April 2012 with substantial work planned along Manchester Street expected to be completed by June 30, 2012.

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3. Advance and/or complete the design and/or construction of the following major traffic intersection projects in accordance with their respective program schedules: a) South Street, Clinton Street, Broadway, and West Street (McKee Square) Intersection Improvement Project (CIP #31); and b) Manchester Street, Old Turnpike Road Intersection Improvement Project (CIP #519).
9-Month Status: a) A detailed engineering study of the McKee Square project area was completed by staff resulting in the development of conceptual layouts based upon traffic modeling efforts. Alternatives include: lane widening and signalization; a roundabout; and a keep existing option. Engineering staff reviewed the project concepts with the Traffic Operations Committee (TOC), the Transportation Policy Advisory Committee (TPAC), Ward Councilors and abutting businesses and land owners. A public review meeting was held on December 8, 2011. A final report and recommendation was submitted to City Council in April 2012 for a May public presentation. b) A detailed ground and topographic survey was completed along the Manchester Street/Old Turnpike Road intersection project area in late 2011, and Engineering staff has begun preliminary engineering. Staff is coordinating traffic and highway alignment of the intersection improvement project with the NHDOT Traffic Bureau. A preliminary design report on intersection improvement options is expected in mid-2012.
4. Advance and/or complete the design and/or construction of the following major airport projects in accordance with their respective program schedules: a) Design of Parallel Taxiway to Runway 12/30 (CIP #73).
9-Month Status: The City received a Notice to Proceed from the NHDOT for the design in January 2012. A contract for design services was awarded to the City's airport consultant, Jacobs Engineering. Field work and field survey is complete and the state permitting process is underway. The City submitted a grant application to conduct a Runway Safety Area Determination Study which, if granted, will provide guidance during the taxiway design process.
5. Advance and/or complete the design and/or construction of the following major utility projects in accordance with their respective program schedules: a) Spring Street Water Main Replacement Project (CIP #85); b) Sewalls Falls Road Water Main Extension Project (in conjunction with the design of the Sewalls Falls Road Bridge Replacement) (CIP #86); c) Penacook Water Main Cleaning and Lining Project (CIP #84); d) Manchester Street/Airport Road Water Main Relocation Project (CIP #86); and e) Loudon Road Sanitary Sewer Main Cleaning and Lining Project (CIP #91).
9-Month Status: a) The Spring Street water main replacement project was completed in December 2011. b) Final design is underway on the Sewalls Falls Road Bridge Replacement project. Initial efforts have focused on detailed analysis of the existing truss bridge structure. Design of the water main extension along Sewalls Falls Road from Manor Road to Monitor Way is expected in late 2012, in conjunction with the bridge project final design tasks. c) The Penacook Water Main Cleaning and Lining project contract was awarded to Mainlining, Inc., and work began in August 2011. The project was 80% complete in November when the contractor shut down for the winter. The project will resume in June to complete the water main lining, including additional areas negotiated, given great pricing received from this contract. d) The Manchester Street/Airport Road Water Main Relocation project was completed in December 2011. e) The Loudon Road Sanitary Sewer Main Cleaning and Lining project was completed in November 2011.
6. Advance and/or complete the design and/or construction of the following major streetscape, sidewalk, traffic operation and targeted neighborhood improvement projects in accordance with their respective program schedules: a) South Street Safe Routes to School Improvement Project (CIP #380); and b) Main Street, Pleasant Street Traffic Operations Improvement Project (CIP #283).
9-Month Status: a) The South Street Safe Routes Improvement Project was completed in September 2011. Staff is currently working with NHDOT to close out the project. b) The Main Street, Pleasant Street intersection project includes the full replacement and updating of traffic signal equipment at the intersection, including improved signal phasing and pedestrian operation. Ground survey and updated base mapping for the

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intersection area was completed in January 2012. Traffic analysis and engineering design (by staff) is anticipated in spring 2012. A consideration in the design will be potential compatibility with the proposed Downtown Streetscape Improvements project (CIP 460); Council recently authorized staff to apply for a federal TIGER4 grant opportunity for this project in March 2012. Construction is anticipated in late summer to fall 2012.

7. Advance and/or complete the design and/or construction of the following major bridge improvement projects in accordance with their respective program schedules: a) Design/Permitting of the Sewalls Falls Road Bridge Replacement Project (CIP #22); and b) Overweight Bridge Certification Program Project (CIP #518).

9-Month Status: a) Following the affirmation by City Council on the preferred bridge alternative in late 2010, City Council authorized the City Manager to enter into a municipal agreement with NHDOT. Final agreement documents were signed in November 2011 and Engineering staff is managing the initial phases of the design, including a detailed bridge structural evaluation by the design consultant. The evaluation is currently underway and is expected to continue through April 2012. The final design report is due in May 2012, where the project team will review existing bridge conditions, strategies and costs to rehabilitate and final project determination. b) Staff has been coordinating with representatives of NHDOT to develop a program for entering City-owned bridge data into the state's Overweight Bridge Certification Program (OBCP) so contractors can be self-permitting when they enter the City with overweight loads. A summer intern is scheduled to enter the data in the spring/summer of 2012.

8. Advance and implement the following major technology improvements in accordance with their respective program schedules: a) Migration from ESRI ArcIMS to ArcGIS Server for better internet/intranet GIS service; and b) Digital Tax Map Development Project – Phase 2 (CIP #297).

9-Month Status: a) GIS staff is researching and comparing three different software interfaces that ArcGIS Server can be built upon. Several vendors have submitted quotes and demo projects. The new website implementation is expected to be complete in summer 2012. b) The digital mapping portion of the project was awarded to Cartographic Associates Inc. (CAI). Included in this phase of the project, the City has contracted with Richard Bartlett & Associates (RDB) to establish survey grade GPS (Global Positioning System) points scattered throughout the project area to better tie down the digital tax map to state plane coordinates. The mapping project is expected to continue through 2012 for a spring 2013 completion.

9. Develop strategies for evaluating and implementing mechanisms for a City-wide Stormwater Enterprise for funding the stormwater management program (CIP #479).

9-Month Status: Staff reviewed a conceptual strategy for a stormwater utility with the Fiscal Policy Advisory Committee. Although the project was not funded in the FY 2011 or FY 2012 program, Engineering staff will continue to develop data and prepare funding option plans for Council review.

10. Continue to support the comprehensive City-wide traffic and transportation engineering program with staff and the Transportation Policy Advisory Committee (TPAC), including review of the City's Transportation Master Plan and the Traffic Management Policy.

9-Month Status: This is an ongoing effort. Engineering staff supports the full TPAC committee, as well as Bike, Pedestrian and Public Transit subcommittees.

ADDITIONAL 2012 ACCOMPLISHMENTS

1. Engineering staff assisted in a Community Development wide effort to complete a comprehensive design charrette in Penacook highlighting the upcoming US Route 3 (Village Street) improvements, as well as a village wide review with the Penacook Village Association.

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2. As part of the Energy Efficiency Community Block Grant (EECBG) program, Engineering and Fire Alarm Division staff assisted General Services Department staff in completing the installation of LED pedestrian signal upgrades throughout locations in Concord.
3. Engineering staff assisted the Planning Division in the technical review of 40 proposed land development projects. Significant projects include the Bindery Re-Development Project at 43-45 South Main Street, the North Parking Lot at NHTI, rework of the Bow Brook drainage improvements through State Office Park South, and Evolution Rock Fitness facility on South Main Street.
4. Engineering staff completed a professional peer review of a traffic impact study related to the site redevelopment project at 8 Loudon Road.
5. Engineering staff collected and compiled traffic volume and speed data at numerous locations city-wide to support ongoing street design projects and inquiries and referrals through the Traffic Operations Committee and Concord Police Department.
6. Engineering staff continued to provide administrative and technical support for the Transportation Policy Advisory Committee and its subcommittees: bicycle, pedestrian, public transit, and traffic operations.
7. Engineering staff supported the efforts of Concord 20/20 and Main Street, Inc. to complete the final report for "Rethinking Main Street" for acceptance by City Council.
8. Engineering staff prepared comprehensive grant applications and supportive documents to the Federal Highway Administration for 2011 Transportation Investment Generating Economic Recovery (TIGER 3) funds for the Downtown Streetscape Improvements Project (CIP #460) and the Langley Parkway Project (CIP #40). No TIGER 3 applications from New Hampshire were awarded funding in 2011. Staff also prepared a 2012 application for TIGER 4 funding for the Downtown Streetscape Improvements Project (CIP #460).
9. Engineering staff prepared comprehensive grant applications and supportive documents to the NH Department of Transportation (NHDOT) for 2011 Transportation, Community, and System Preservation (TCSP) funds for the Downtown Streetscape Improvements Project (CIP #460).
10. Engineering staff coordinated development of a city-wide STOP Sign Policy in conjunction with the TOC and TPAC.
11. The Environmental Assessment and Runway Safety Area Determination Study was completed at the airport.
12. Engineering staff worked closely with Parks and Recreation staff to complete the design and permitting for the expansion of the ponds at Beaver Meadow Golf Course. Construction of the pond for winter skating is expected to begin in late fall in anticipation of skating in winter 2013.
13. Engineering staff coordinated the efforts by the UNH Technology Transfer Center in the development of an ADA Transition Plan. The plan includes a comprehensive and detailed analysis of the City's sidewalks and curb ramps city-wide through the development of an objective priority scoring system. While the development of the program was specific to the conditions of Concord, the program will be modified for use by all NH cities and towns.
14. Engineering and General Services Staff created comprehensive sewer system maps for the Operation & Maintenance (O&M) Plan of the wastewater system in Penacook. The O&M Plan is required by the State and EPA in the Penacook Wastewater Treatment Plant permit renewal.
15. Along with the IT Department's Citywide computer upgrade, Engineering GIS staff upgraded all desktop and laptop computers to ArcGIS 10.
16. Engineering staff has completed a record management procedure to update and retrieve water system record cards digitally. With 15,000 water service and valve location cards scanned by a contractor, Engineering staff will continue to create approximately 400 new location cards each year to keep the system up-to-date. The records can be viewed on network computers and field laptops.
17. Engineering summer interns completed a citywide road surface pavement condition survey in July 2011. Pavement condition ratings calculated from the survey provides valuable base information for CIP paving project planning. Additionally, the interns completed an update of the City's large culvert conditions inventory and expanded the inventory to include all culverts city-wide.

ENGINEERING SERVICES**BUDGET DETAIL**

	2009 ACTUAL	2010 ACTUAL	2011 ACTUAL	2012 BUDGETED	2012 ESTIMATED	2013 FISCAL BUDGET
REVENUE						
LICENSE FEES	\$1,266	\$440	\$7,485	\$5,230	\$1,870	\$5,280
PERMITS, STUDIES AND MISC	\$3,952	\$915	\$4,418	\$2,000	\$4,500	\$2,000
MISCELLANEOUS	\$0	\$0	\$2,025	\$2,400	\$1,200	\$1,800
POLE LICENSE RECORDING FEE	\$0	\$850	\$280	\$100	\$100	\$100
REPORTS, PRINTS & COPIES	\$2,929	\$2,913	\$2,908	\$2,000	\$3,190	\$2,600
ADMIN FRM IMPACT FEES & TRUSTS	\$40,237	\$40,011	\$40,012	\$40,000	\$40,000	\$40,000
OTHER FEES AND CHARGES	\$17,926	\$11,216	\$12,280	\$15,400	\$14,300	\$19,250
Total	\$66,310	\$56,345	\$69,407	\$67,130	\$65,160	\$71,030
APPROPRIATIONS						
COMPENSATION	\$575,730	\$511,585	\$514,781	\$613,630	\$566,610	\$602,870
OUTSIDE SERVICES	\$53,791	\$49,791	\$75,874	\$57,760	\$55,975	\$62,360
SUPPLIES	\$16,120	\$13,210	\$12,599	\$15,282	\$15,310	\$15,380
VEHICLE MAINTENANCE	\$10,983	\$6,895	\$7,030	\$8,530	\$9,970	\$10,000
INSURANCES	\$16,735	\$20,837	\$18,726	\$22,370	\$20,570	\$24,620
ADMIN CHARGES ALLOCATED	(\$220,810)	(\$170,160)	(\$176,430)	(\$198,150)	(\$198,150)	(\$194,730)
FRINGE BENEFITS	\$332,815	\$352,161	\$316,327	\$405,800	\$367,300	\$373,120
Total	\$785,365	\$784,319	\$768,907	\$925,222	\$837,585	\$893,620

BUDGET DETAIL**ENGINEERING SERVICES**

<u>POSITION TITLE</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
City Engineer	1.0	1.0	1.0	1.0
Associate Engineer	2.0	2.0	2.0	2.0
Traffic Engineer	1.0	1.0	1.0	1.0
City Surveyor	1.0	1.0	1.0	1.0
GIS Coordinator	1.0	1.0	1.0	1.0
Project Manager	1.0	1.0	1.0	1.0
Senior Engineering Technician	1.0	1.0	1.0	1.0
Engineering Technician II	3.0	3.0	*2.0	2.0
Engineering Technician I	4.0	4.0	4.0	4.0
GIS Analyst	1.0	1.0	1.0	1.0
Engineering Aide	1.0	1.0	1.0	1.0
Fiscal Supervisor	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>
Total	18.0	18.0	17.0	17.0

* In FY 2012 a vacant Engineering Technician II position that was unfunded in FY 2011 was eliminated.

ENGINEERING SERVICES

FUNDING IMPACT

This budget contains no significant funding changes.