

City of Portsmouth  
Portsmouth, New Hampshire  
**Public Works Department**  
RFQ #37-14  
REQUEST FOR QUALIFICATIONS

ENGINEERING SERVICES  
INFILTRATION AND INFLOW (I/I) STUDY AND  
POST CONSTRUCTION MONITORING PLAN (PCMP)

**INVITATION:**

Sealed Statement of Qualification (SOQ), plainly marked RFQ #37-14, "I/I Study and PCMP" on the outside of the mailing envelope, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, NH 03801 will be accepted until **2:00 pm on April 2, 2014**.

This Request for Qualifications (RFQ) can be found on the City's website at <http://www.cityofportsmouth.com/finance/purchasing.htm>.

**PRE-PROPOSAL MEETING**

There will be a **non-mandatory pre-proposal meeting on Friday, March 21, 2014 at 10:00 a.m.** at the Department of Public Works, 680 Peverly Hill Road, Portsmouth, NH. All firms will have an opportunity to ask questions at this meeting.

**FUNDING**

This effort will be funded by sewer enterprise revenues.

**PROJECT BACKGROUND/PURPOSE**

The City of Portsmouth (City) is located in Rockingham County at the mouth of the Piscataqua River in the seacoast area of New Hampshire. The City of Portsmouth's sewerage system consists of approximately 115 miles of sewers (including the Pease International Tradeport), 1,650 sewer manholes, 20 pumping stations, and two wastewater treatment facilities. The Peirce Island wastewater treatment facility (WWTF) located on Peirce Island is a 4.8 million gallon per day (MGD) advanced primary treatment system. Design of an upgrade to this WWTF is underway. The Pease WWTF located at the Pease International Tradeport is a 1.2 MGD sequencing batch reactor secondary wastewater treatment facility. The City has an agreement with the Town of New Castle, an island to the northeast of Portsmouth, to treat their wastewater at the City's Peirce Island WWTF. Additionally, the City has entered into a long-term Municipal Services Agreement (MSA) with the Pease Development Authority (PDA) to maintain and operate the wastewater collection and treatment facilities at the Pease International Tradeport, and has other agreements with Rye, New Hampshire and Greenland, New Hampshire.

The City has two sewer collection systems, one collection system which is tributary to the Pease WWTF and one sewer collection system which is tributary to the Peirce Island WWTF. The collection system tributary to the Pease WWTF will not be studied in this work.

Approximately 20% of the City's collection system (exclusive of Pease) consists of combined sewers which carry both wastewater and stormwater, portions of which are over 100 years old. These combined areas generally occur in the older urbanized portions of the City. Since the 1970s, the City has undertaken numerous separation projects, facilities expansions, and repair projects aimed at eliminating the majority of the discharges to the Piscataqua River. Currently, there remain three permitted combined sewer overflows (CSOs) two of which discharge to South Mill Pond and one to the Piscataqua River near the intersection of Deer Street and Market Street. The remaining 80% of the City's collection system consists of separate sewers with no direct stormwater connections. Portions of the separate sewers are over 100 years old and in need of rehabilitation or replacement.

In 2005, EPA rejected the City's application for renewal of the Peirce Island Treatment Facility's National Pollutant Discharge Elimination System (NPDES) permit with a Section 301(h) waiver from secondary treatment requirements. A NPDES permit requiring secondary treatment was issued in 2007. Since secondary treatment could not be achieved using the existing Peirce Island WWTF chemically enhanced primary treatment system EPA issued the City an Administrative Order to comply with secondary treatment that resulted in a Consent Decree in August 2009. The Consent Decree was later amended in July 2012. The Consent Decree stipulated the City update its Wastewater Master Plan and the City's 2005 Combined Sewer Overflow Long Term Control Plan (LTCP). The final supplement to the Wastewater Master Plan and LTCP was completed in November 2010. The amended Consent Decree stipulated the implementation timeline for the Peirce Island WWTF upgrade and the sewer separation projects identified by the City. The Consent Decree further required the City develop and implement a Post Construction Monitoring Plan (PCMP) at the completion of the sewer separation project (October 2014) to determine the effectiveness of the separation work. The 2010 Draft Wastewater Master Plan document (Volume 2) provided the basis for the 2010 LTCP Update and PCMP. Note the implementation schedule of the PCMP in Volume 2 of the 2010 Draft Wastewater Master Plan needs to be updated. The attached figures indicate previously completed sewer separation projects and the limits of the separation projects referenced in the 2005 Long Term Control Plan.

The work of this contract will include three components:

1. Infiltration and inflow study for the separated portions of the collection system
2. PCMP for the projects identified in the 2005 LTCP in the Lincoln Avenue Area as stipulated in the City's Consent Decree. These components will both require installation of continuous flow meters in the collection system. The field work associated with flow monitoring will be performed by Flow Assessment, Inc.
3. City-wide sump pump removal program

The goals of this study include the following:

**Infiltration and Inflow:**

- Identify extraneous flow in the separated collection system
- Estimate rate and annual volume of extraneous flow
- Perform cost benefit of treating versus removal of extraneous flow
- Recommend plan for extraneous flow removal through replacement, rehabilitation or other means
- Develop implementation plan and costs

**PCMP:**

- Update the 2010 Post Construction Monitoring Plan to be consistent with the EPA's "CSO Post Construction Compliance Monitoring Guidance", May 2012. Work with the City to obtain EPA approval on the Final PCMP with an updated PCMP schedule
- Identify additional data collection or other assessment tools necessary to perform the PCMP for the Lincoln Area Sewer Basin
- Implement the PCMP and assess the effectiveness of the completed sewer separation projects

**Sump Pump Removal Program**

- Assessment of effective sump pump removal programs
- Development of a sump pump removal program to be implemented by the City.

**ENGAGEMENT OF THE ENGINEER**

**A. Required Contents of the SOQ**

A sealed proposal, plainly marked RFQ #37-14, "VI Study and PCMP" on the outside of the envelope, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, NH 03801 will be accepted until **2:00 pm on April 2, 2014**. Five (5) copies of the SOQ shall be submitted and include the following information:

**1. Firm (team) Experience (for each firm in the team):**

Describe relevant experience in each of the following primary areas of focus:

- a. Familiarity with the Portsmouth Sewer Division's operations
- b. Infiltration and inflow studies and sump pump removal programs
- c. Developing and implementing CSO PCMPs and familiarity with the EPA CSO Post Construction Compliance Monitoring Guide, May 2012. Measured success with other similar CSO projects will be beneficial.
- d. Developing and implementing water quality field sampling plans, QAPPs, and plans for assessing CSO controls
- e. Development and assessment of Long Term Control Plans and Nine Minimum Controls. Assessment of green infrastructure projects will be beneficial.
- f. Wastewater collection system modeling

The firm's experience shall be summarized in a matrix format. In addition, detailed project descriptions of no more than five reference projects containing the majority of the focus areas listed above shall be included. The project descriptions shall be current and limited to a maximum of one full page per project, along with client references and up-to-date contact information (name, title, organization, phone, cell and email).

## 2. Project Team:

List each member of the proposed Project Team along with their:

- a. Firm affiliation
- b. Area of specialty
- c. Office location and distance to Portsmouth DPW
- d. Total years of experience
- e. Years with current firm
- f. Specific involvement/role in projects used as references

One member of the Project Team must be assigned as the Project Manager that will act as the primary client contact and who shall be involved in day to day management of the Project. All resumes shall be included and limited to a maximum of two pages per team member.

## 3. Project Understanding and Approach:

The Consultant(s) shall state in succinct terms their understanding of what is required by this Request for Qualifications. Describe in narrative or outline form the consultant's approach and technical plan for accomplishing the work of this RFQ including the following:

- Describe the sequential tasks to be used to accomplish this project
- Indicate all key deliverables
- Describe the responsibilities of each person on the project team
- List the portion of the work to be subcontracted
- Include a list of information required or tasks to be completed by City staff.

Project Schedule: Provide a schedule for completing each task in the Scope of Work, including deadlines for preparing project deliverables.

The entire submittal, including SOQ, text, charts, figures, diagrams, tables, and abbreviated resumes shall be **NO MORE THAN 20 PAGES** long (forty pages of text). The submittals must be submitted only on typed 8½" x 11" paper with a font size no smaller than 12-point. Tables and figures can be expanded to 11" x 17" paper folded to 8½" x 11".

## **B. Available Information:**

The following information can be used by the Consultant(s) in developing their Statement of Qualifications and is available at [www.portsmouthwastewater.com](http://www.portsmouthwastewater.com) under "Resources" unless indicated otherwise:

1. Collection system mapping indicating combined and separate sewers (to be provided separately)
2. July 2012 Amended Consent Decree. Note page 3.

3. “Final Submission Wastewater Master Plan”, Weston & Sampson and Brown and Caldwell, November, 2010
4. “Draft Wastewater Master Plan and Long Term Control Plan Update”, Weston & Sampson and Brown and Caldwell, June, 2010
5. August 2009 Consent Decree. Note pages 5-10.
6. “CSO Long Term Control Plan, Portsmouth, New Hampshire”, Underwood Engineers, Inc., April 2005 (to be provided separately)
7. “Preliminary Design Report, Lincoln Area Sewer Separation Program”, Underwood Engineers, Inc., December 2003 revised July 2004 (to be provided separately)
8. “201 Facilities Plan Update, Portsmouth New Hampshire”, Underwood Engineers, Inc., November 1999
9. CSO and rainfall data 2001 through 2013 (to be provided separately)

### **C. Ranking of Qualifications**

Each SOQ will be reviewed and ranked according to the following criteria:

Firm’s experience successfully completing similar projects	Maximum of 15 points
Team and individual team member experience	Maximum of 15 points
References indicating successful projects of this type	Maximum of 20 points
Understanding and approach to project	Maximum of 40 points
Quality of SOQ package	Maximum of 10 points

### **SCHEDULE**

The project is anticipated to start in March 2014 with an initial focus on selection of locations for continuous flow monitoring. Data collection for infiltration and inflow portion of the work should be completed by the fall of 2014 with analysis and report preparation to follow. The PCMP work will begin in preparation for execution beginning in October 2014 as required by the City’s Consent Decree. Level of effort and final schedule will vary based on the negotiated scope and work tasks.

### **CITY ROLE**

City staff will be responsible for administering the project. Representatives of the City’s Public Works Department will provide input and assistance with any necessary field work and review all deliverables from the effort.

### **SELECTION AND CONTRACT DOCUMENT**

Upon review of all responsive SOQs using the criteria outlined above, the City may select up to three (3) firms to submit proposals and interview. Upon selection, the highest ranking firm will be invited to negotiate a Scope of Services and fee with the City. When the contract is executed by both parties, the Consultant will be instructed to commence providing the work outlined in the contract. All information, data, documents, photos, computer records, and other materials of any

kind acquired or developed by the consultant pursuant to this project shall be the property of the City of Portsmouth. If the City is unable to reach agreement with the highest ranking firm, the City will enter into negotiations with the next highest ranking firm. The City reserves the right to negotiate directly with the firm(s) selected for additional project work.

#### **RESERVATION OF RIGHTS**

The City reserves the right to undertake such investigation as it deems necessary to evaluate the qualifications of the firm and to evaluate the qualifications submitted. Firms may be requested to execute releases for information. Failure to provide a release upon request will result in disqualification.

The City of Portsmouth reserves the right to reject any or all proposals, to waive technical or legal deficiencies, and to accept any proposal that it may deem to be in the best interest of the City and to negotiate the terms and conditions of any proposal leading to execution of a contract.

#### **ADDITIONAL INFORMATION**

Requests for additional information should be directed to Terry Desmarais, City Engineer at (603) 766-1421 or by email at [tldesmarais@cityofportsmouth.com](mailto:tldesmarais@cityofportsmouth.com). Purchasing questions shall be directed to Lori MacGinnis at (603) 610-7227.

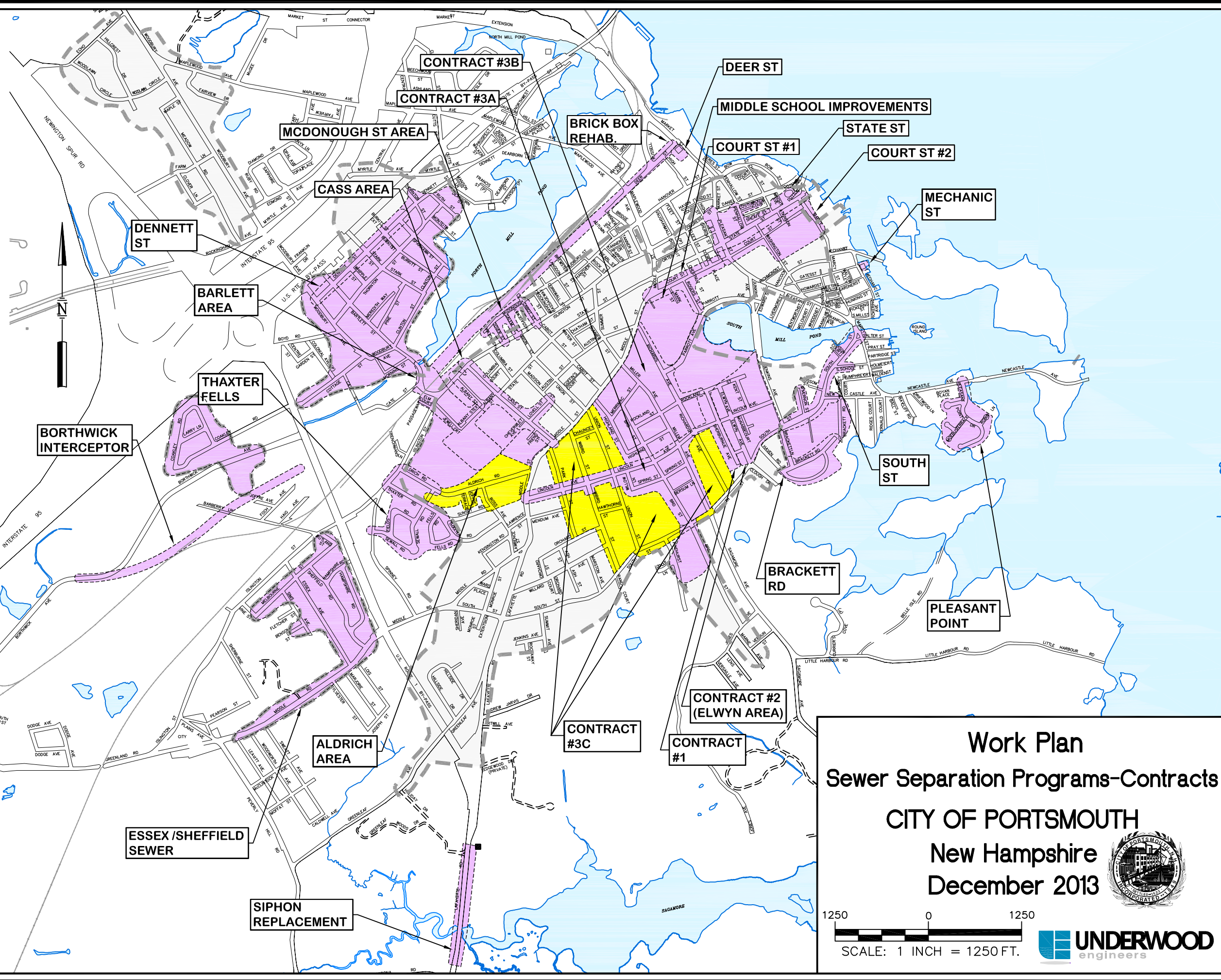
Addenda to this request for qualifications, if any, including written answers to questions, will be posted on the City of Portsmouth website at the City's web site at <http://www.cityofportsmouth.com/finance/purchasing.htm> under the project heading. Addenda and updates will NOT be sent directly to firms. Firms submitting qualifications should check the web site daily for addenda and updates after the release date. Firms should print out, sign and return addenda with the proposal. Failure to do so may result in disqualification.

#### **INDEMNIFICATION AND INSURANCE REQUIREMENTS**

The Contract will require the Consultant to agree to pay on behalf of and hold harmless the City of Portsmouth for all claims arising in whole or in part from its work on behalf of the City. Consultant will be required to maintain insurance in such form as will protect the Consultant from claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract. Consultant shall also be required to maintain professional liability insurance. Amounts and coverages shall be subject to contract negotiations

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Project	Project Length (FT)	Acres Separated	Year Complete
Pannaway Manor	4000	26	2001
Borthwick Ave Interceptor	3500	9	2007
Coakley Road Area		21	
Dennet Street	1550	7	2005
Dennet St Area (City Projects)		68	
Bartlett Area	3000	25	2011
Thaxter Fells	4500	20	1999
Essex / Sheffield	3600	39	1999
Siphon Rplacement	1800	7	2001
Cass Street Area	4000	22	2013
Mcdonough Street Area	1900	5	2010
Lincoln Area - Contract 1	3600	18	2004
Lincoln Area - Contract 2	3200	18	2006
Lincoln Area - Contract 3A	6500	31	2012
Lincoln Area - Contract 3B	7800	34	2013
Lincoln Area - Contract 3C	6600	48	2014
Brick Box Rehabilitation	4700	13	1999
Deer Street Pump Station	-	1	2007
Court Street - Contract 1	1500	7	2002
Court Street - Contract 2	2300	12	2007
State Street Area	2300	12	2011
Mechanic St Pump Station	-	0.5	
South Street	2200	10	2002
Pleasant Point	2000	10	2008
Brackett Road	2100	9	2004
Middle School Drain	800	11	2011
Aldrich Area	3000	13	2014
<b>TOTALS:</b>	<b>76,450</b>	<b>497</b>	



**Legend:**

- Original Combined Sewer Area
- Design Phase
- Construction Phase
- Completed

## Work Plan

### Sewer Separation Programs-Contracts

#### CITY OF PORTSMOUTH

#### New Hampshire

#### December 2013

SCALE: 1 INCH = 1250 FT.

**UNDERWOOD**  
engineers

