PROPOSED ACTIVITIES

The project will consist of the construction of approximately 24,530 linear feet of new gravity sewers, 1,700 linear feet of new force main, rehabilitation of an existing pump station, installation of a new pump station and approximately 10,000 linear feet of replacement water mains in a portion of the service area.

Based on topography, it is anticipated that approximately 90% of the 8-inch diameter gravity sewer will be installed within paved roadways (or the shoulders of roadways). Gravity sewers will be installed within the following roadways:

- Sudbury Street
- Stonehill Road
- Turner Ridge Road
- Minehan Lane
- Hanlon Drive
- Carver Hill Road
- Farrington Lane
- Hawkins Lane
- Woodcock Lane
- Harper Circle
- Prendiville Way
- Littlefield Lane
- Sheffield Terrace
- Blanchette Drive
- Hemenway Street

The remaining 10% of the gravity sewer is anticipated to include three off-road segments in the following locations:

- Between Turner Ridge Road and Minehan Lane,
- East of Harper Circle to Sudbury Street, and
- South of Hanlon Drive to Sudbury Street.

One pump station would be required as it is not possible to convey all the sewer flows by gravity (i.e. depth of gravity sewer would be too deep). Thus, a new pump station is proposed to be located adjacent to Sudbury Street opposite of Farrington Lane. The pump station would consist of a below-grade wet well and valve chamber, an electrical control panel, an emergency generator, and a paved parking area approximately 25 feet by 25 feet. The pump station would be constructed within a 1,440 square foot area (36 foot by 40 foot) to be enclosed by a fence. A 6- inch diameter force main would be constructed within Farrington Lane to convey sewage from the proposed Sudbury Street pump station to an a new manhole and 8-inch diameter sewer that connects to the existing sanitary pipeline at the intersection of Stetson Drive.

Since the new sewers would be connected to the existing system, the City proposes to rehabilitate the existing pump station on Farrington Lane as part of this project. The existing Farrington Lane pump station was built in 1987. The proposed rehabilitation includes new pumps, process piping,

electrical power, instrumentation and controls, site work, and a backup generator. The Farrington Lane pump station conveys wastewater flows to an existing trunk sewer Interceptor located west of Fish Lane.

In addition, the City recognized that the sewer installation would provide an opportunity to simultaneously upgrade the aging water distribution infrastructure within Sudbury Street (since the roadway would already be disturbed), thereby reducing the potential duration of disruption and community impact (as opposed to returning to the same area in a few years). Thus, the project includes the replacement of approximately 8,800 linear feet of water main within the limits of Sudbury Street, from Concord Road to Wayside Inn Road, and extending to the first connection within the adjacent roadways. The work, consisting of the replacement of the existing water mains in-kind with either 8-inch or 12-inch water main, would occur entirely within paved roadways (or shoulders of the roadways). During installation of the replacement water mains, a temporary water main would be laid on the surface of the road's shoulder (and backfilled at grade at driveways to allow access), to maintain uninterrupted water supply to residents.

Installation of the new sewer and wastewater pipelines would employ standard heavy construction equipment to conduct the following activities: asphalt cutting, trench excavating, pipe laying, construction of manholes, backfilling, and site restoration. The trench width is conservatively estimated to be 8-feet wide for gravity sewers, force main installation, and water main work within the paved roadways (or shoulders of roadways) (although actual widths may be less). Off-road sewer alignment trench widths would also be 8-feet; however, the permanent sewer easement would be approximately 30-feet wide. Trench depths for the sewers would vary depending on location; however, an approximate depth range for excavation would likely be between 7 and 25 feet below grade. Due to the local geology and the required depth of the trenches, it is likely that bedrock will be encountered during excavation that may require hoe-ramming, blasting or other methods to complete the excavation. Since groundwater would be encountered during excavation, dewatering of trenches would be required; therefore, coverage under the general permit for construction site dewatering would be obtained from EPA and MassDEP.

Trenches would be backfilled to grade with excavated material or covered with steel plates at the end of each day. Soil which is not immediately used for backfilling would be covered or surrounded by straw bales and silt fence or other appropriate erosion and sedimentation controls to prevent erosion or sedimentation of adjacent areas. Upon completion of the proposed gravity sewer, force main, and water main work, site areas would be restored to pre-existing grade/contours where-ever possible while providing a grade that will accommodate access for future maintenance, and either repaved if previously paved, or re-vegetated with an appropriate seed mix.

Phase 1 would only provide sewer service to 45 of the 190 homes in the service area. The northern portion of the sewer pipe constructed in Sudbury Street (north of Minehan Lane) would be a ‘dry pipe’ as it will not be put into service until subsequent sewer construction occurs during the following phases. The timing and/or sequencing of the remaining phase(s) of sewer installation to complete the described Sudbury Street Area Sewers Project have not yet been determined, as it will depend on future budgets not yet allocated.