

# Harwich Community Meeting

Update on Design of the East Harwich Sewer System

David Young, P.E.

Michael Guidice, P.E.

*January 16, 2018*

**CDM  
Smith.**

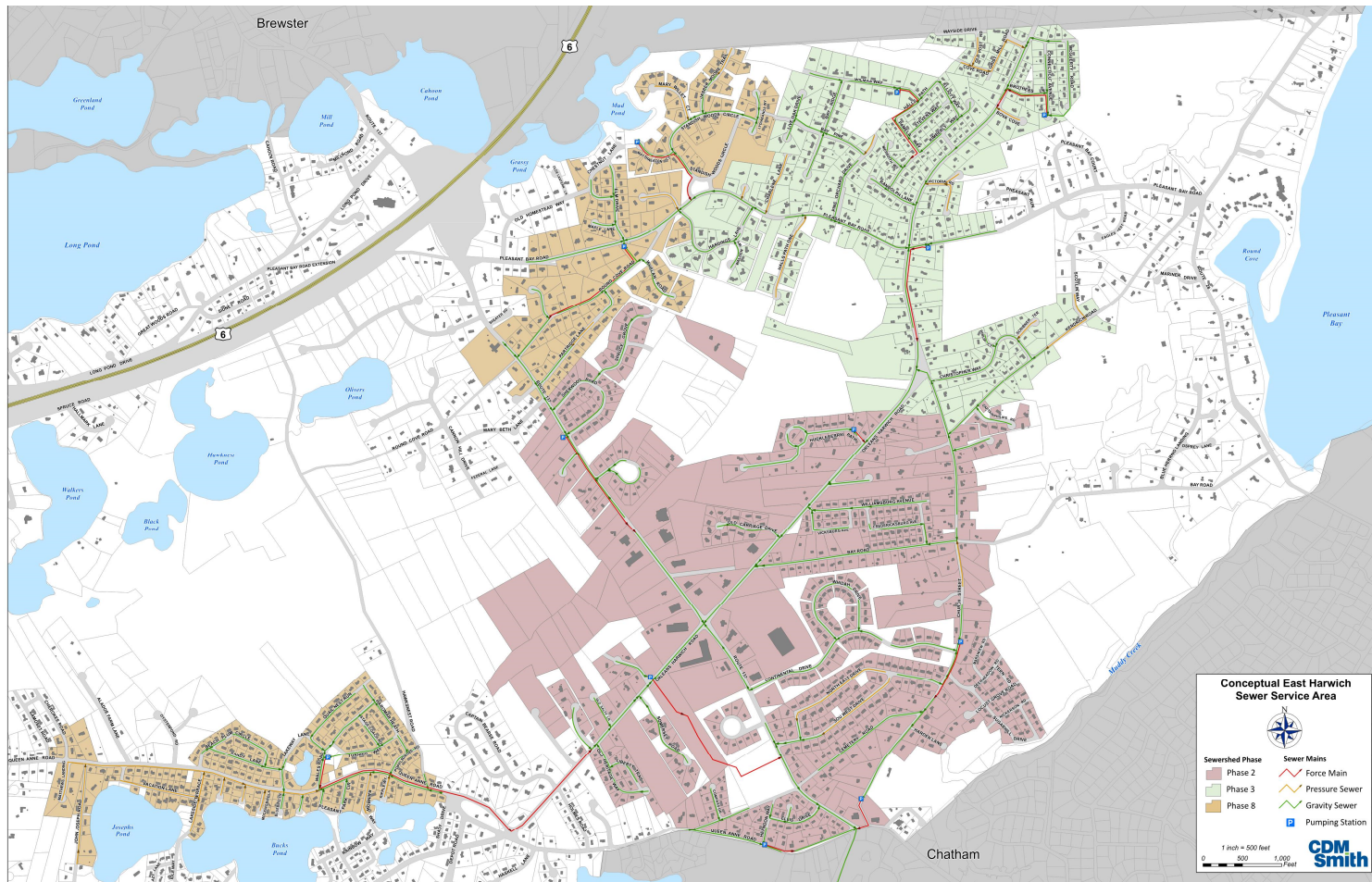


# AGENDA



- Schedule
- Design Process
- Construction Process
- Property Owner Costs
- Communications
- Questions and Comments







# Schedule

# Schedule

■ Town Meeting Construction Funding Vote	Early May 2018
■ Town-wide Construction Funding Vote	Mid-May 2018
■ SRF Application and 90% Design to DEP	October 2018
■ Project Advertised for Bidding	Early 2019
■ Construction Start	Spring 2019
■ Construction Completed	Spring 2021
■ Sewer Connections Start	Summer 2021

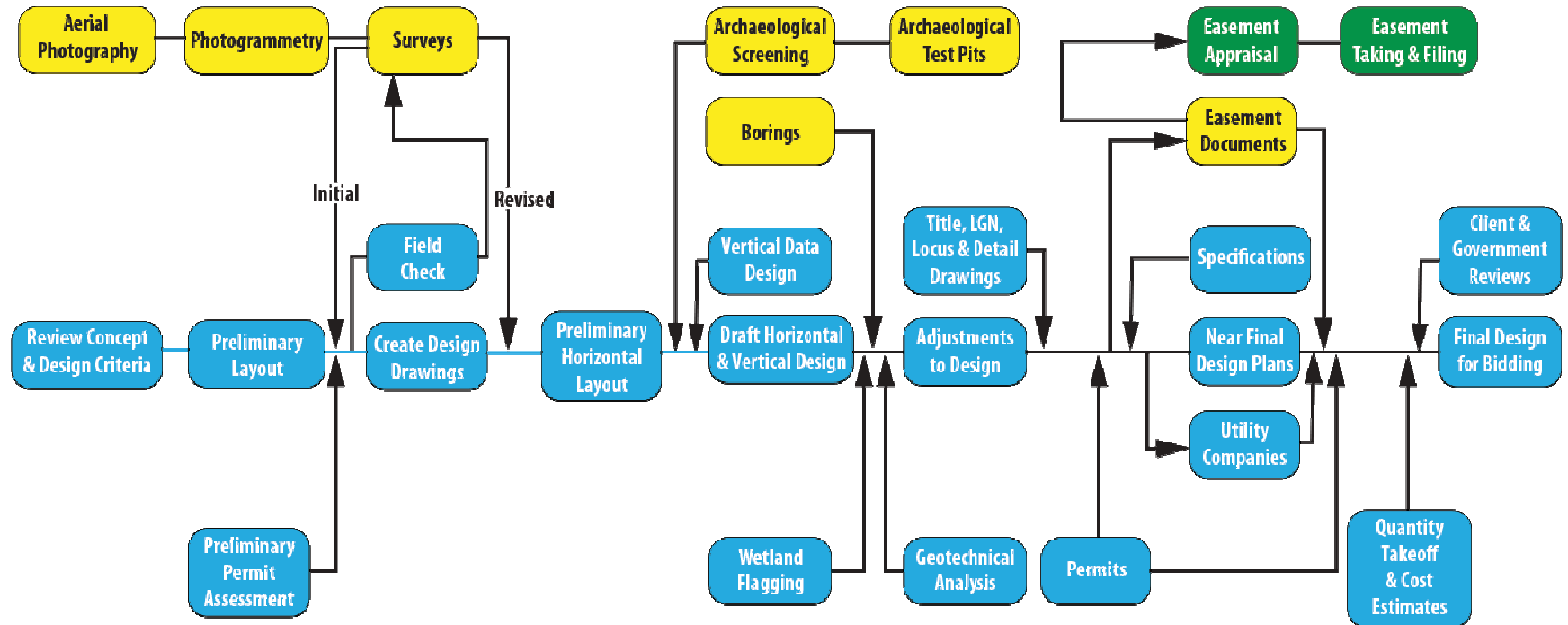


# Design Process

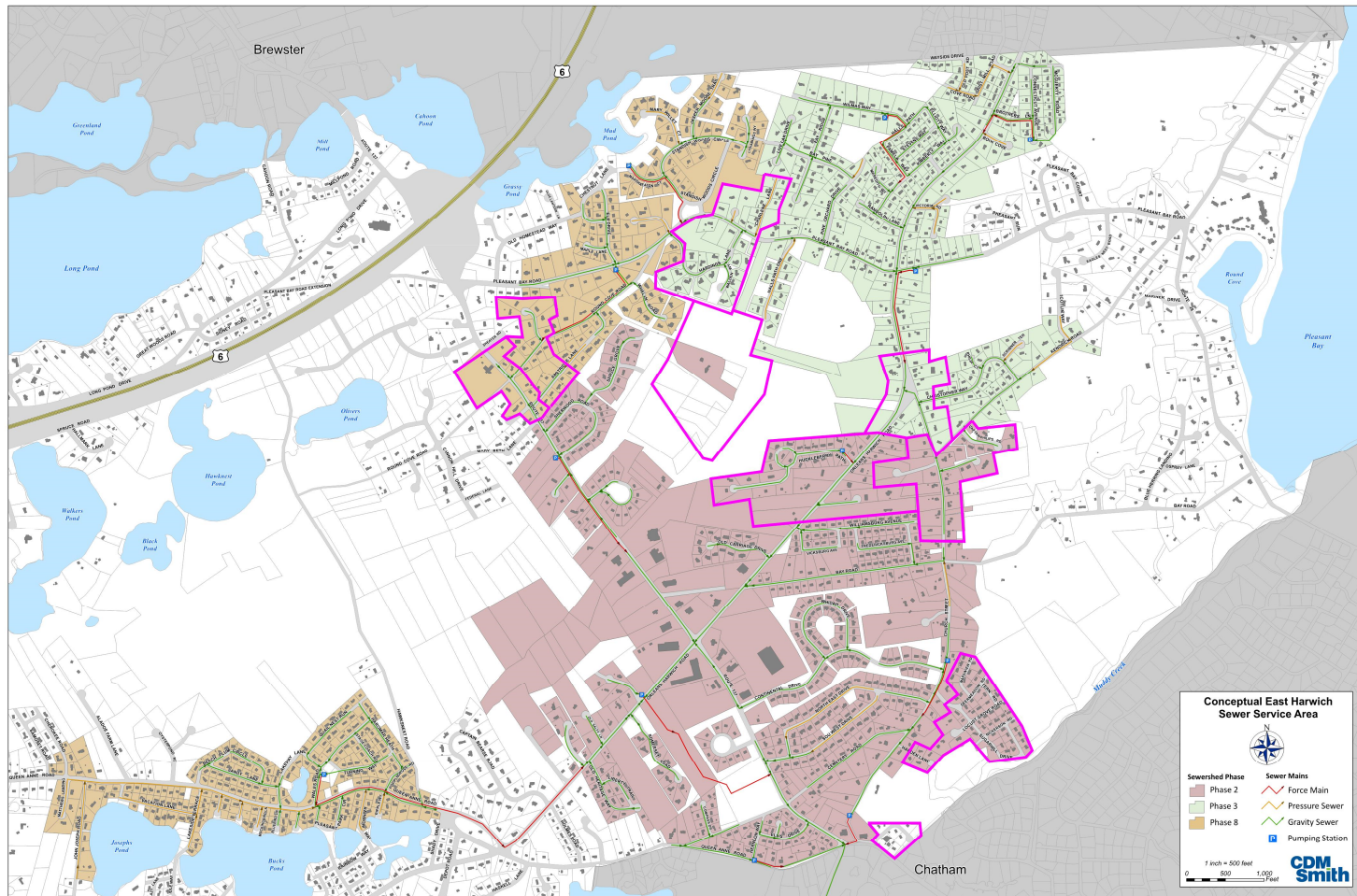
# Design Process

- Topographical Survey (completed)
- Plan/Profile Development
- Pumping Station Siting
- Easement Identification/Negotiation
- Subsurface Investigations
- Permitting
- Coordination with Chatham
- Contract Documents/Technical Specifications
- Cost Estimate

# Design Process



- CDM Smith Project Team Services
- Outside Subcontractor Services
- Town Actions







# Construction Process



# Construction Process

- Public Bidding per MGLs
- Town Executes Contract with General Contractor
- CDM Smith Resident Engineer Observes Construction
- Mainline Sewer Pipe
- Individual Sewer Service Laterals
- Pumping Stations
- Paving – Initial and Final

# Sewer Installation

- Trenching



- Sewer Installation



# Trench Backfill and Compaction

- Trench Compaction

- Backfilled Trench





# Paving

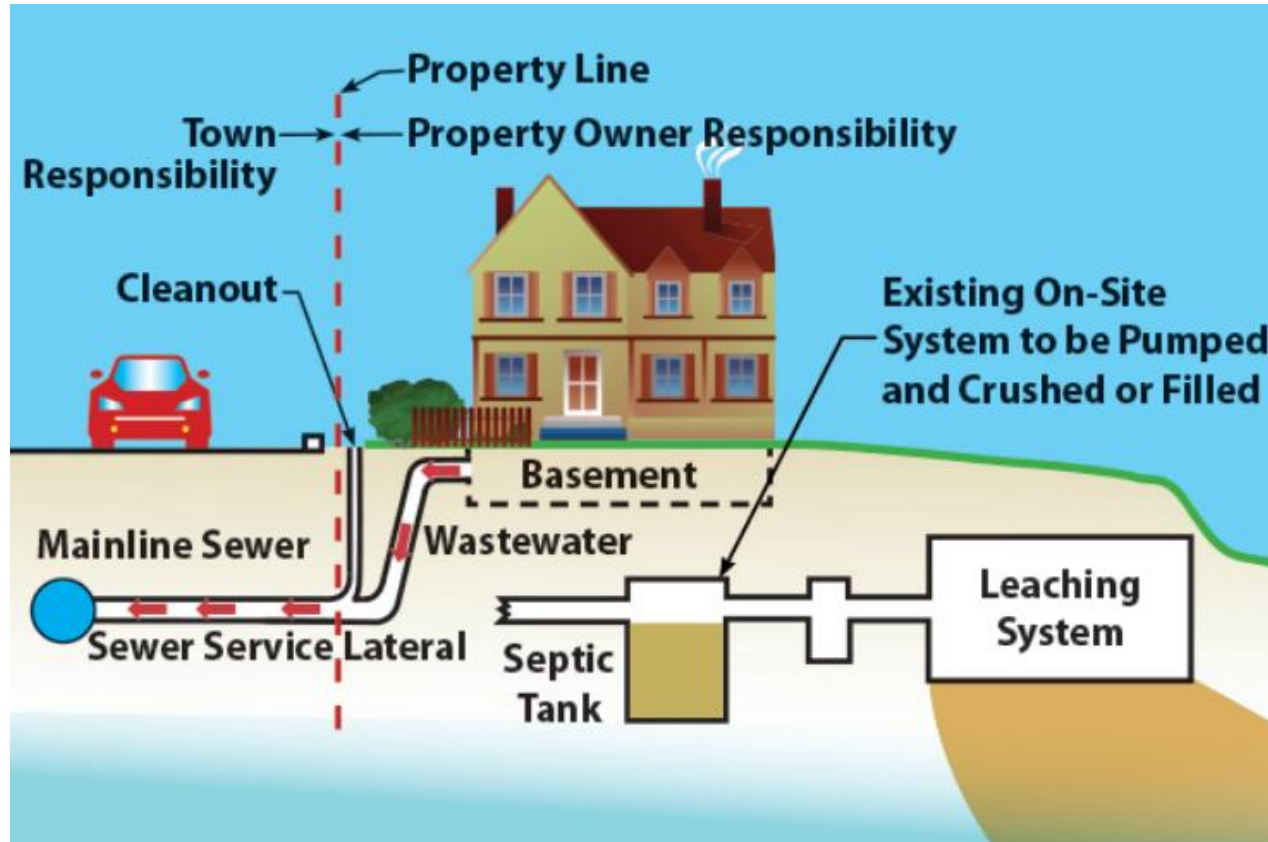
- Initial Trench Paving



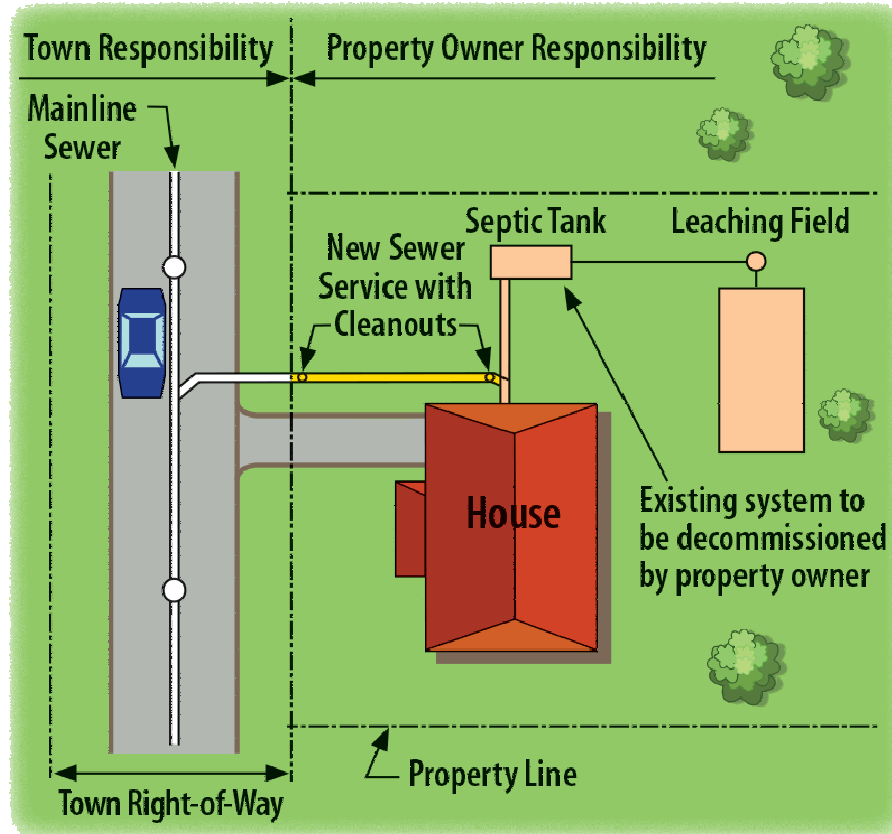
- Final Paving



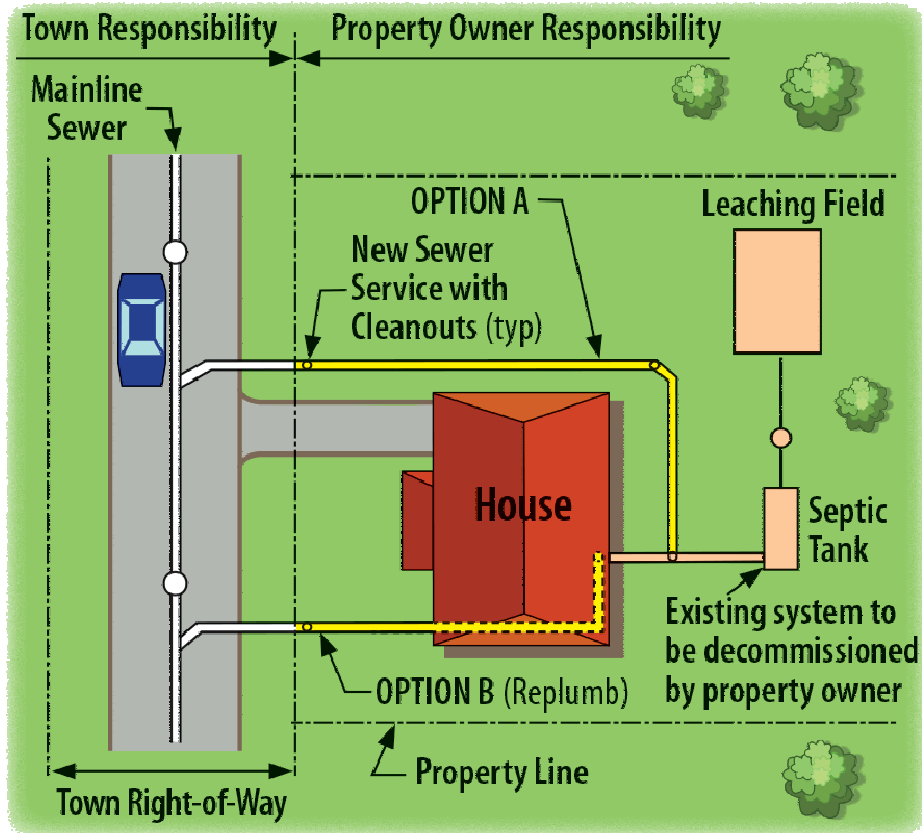
# Sewer Service Connection



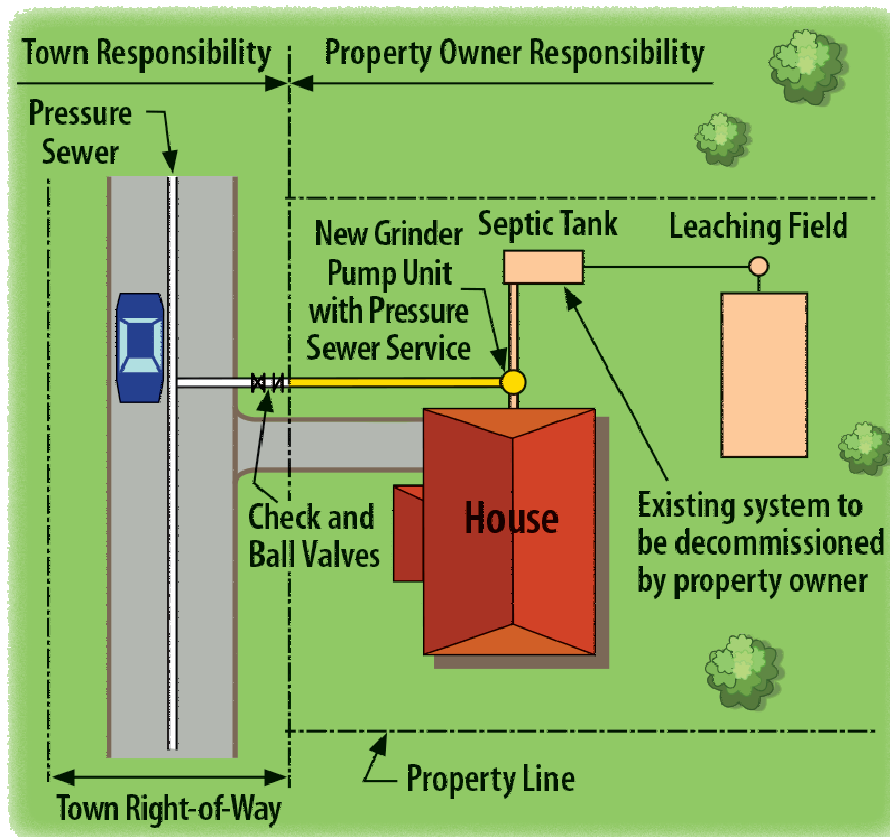
# Sewer Service Connection



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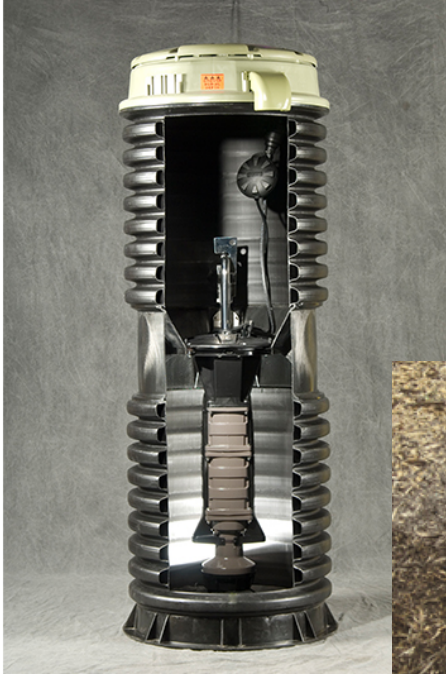


# Pressure Sewer Service Connection

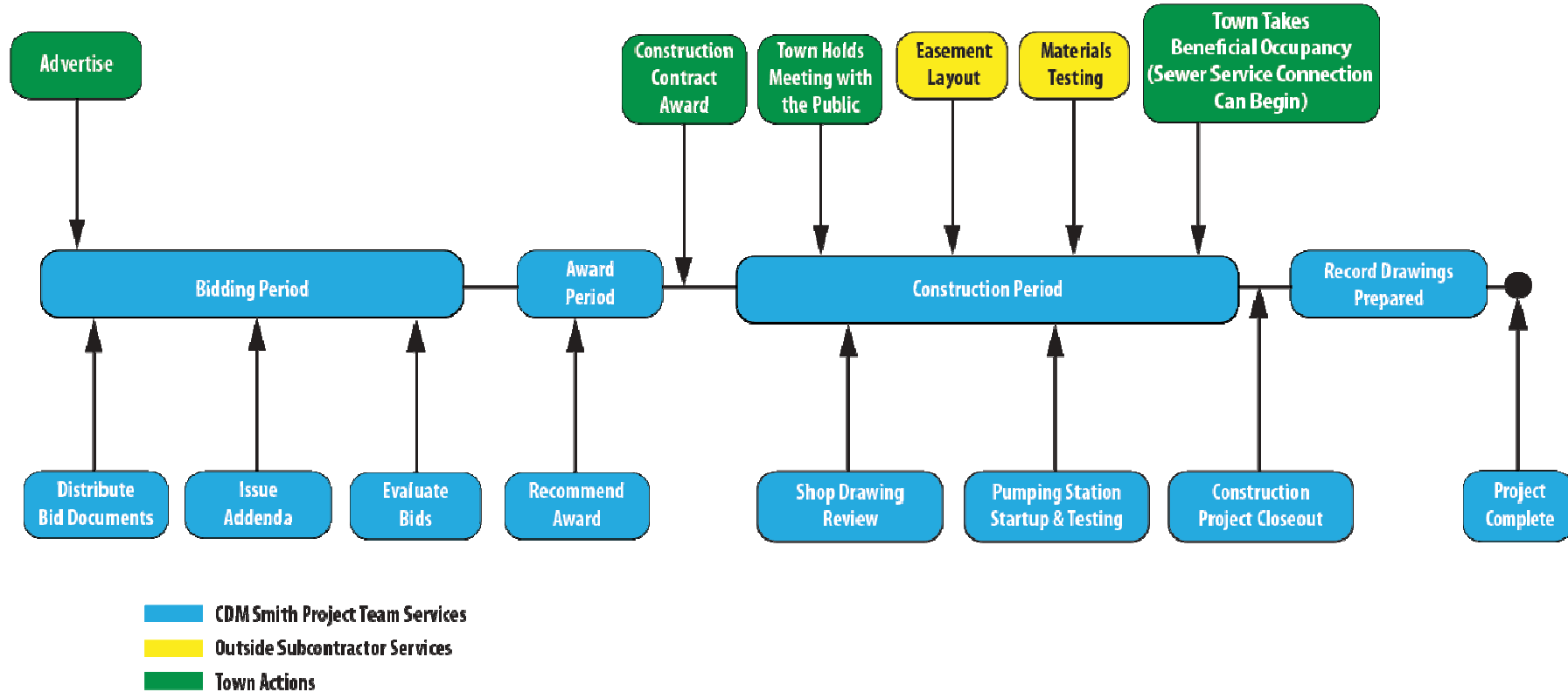




# Grinder Pump



# Construction Process





# Property Owner Costs

# Property Owner Costs

- Payments to Town
  - Plumbing Inspection      TBD (one-time fee)
  - Permit Fee                TBD (one-time fee)
  - Tax Rate Increase        \$150 (yearly, based on \$350K assessed value)
  - Sewer User Cost         \$510 (yearly, based on 70,000 gals/year)
- Payments to Private Contractors
  - Connection Plan by Professional Engineer      \$500 to \$1,500 +/-
  - Sewer Connection by Licensed Drain Layer      \$3,500 to \$6,500 +/-  
(varies depending on length, depth and individual property conditions)

# Funding Opportunities

- Barnstable County Community Septic Management Loan Program (5% interest rate)
- Bank Loans
  - Mortgage Refinance
  - Home Equity Loan
  - Home Equity Line of Credit (HELOC)



# Communications

# Communications

- Town Point of Contact – Chris Clark
- CDM Smith Resident Engineer during Construction
- Town Website
- Board of Selectmen/Sewer Commissioners' Meetings
- Public Meetings
- Newspaper
- Cable TV
- Reverse 911

## Communications (cont.)

- Residents should contact the Water Department to update their accounts if they have irrigation systems and have approved back-flow preventers installed.







# Questions and Comments

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