

# Neighborhood Improvements Project Water Transmission Main

Replacement – Neighborhood  
Looping - Town

New Castle, NH  
January 14, 2021

# Introductions



# Agenda

1. Purpose/Goals
2. Proposed Work
3. Neighborhood Expectations
4. Schedule
5. Questions and Answers

# Project Background



# Town of New Castle Water System

Town of New Castle System

## LEGEND

— VILLAGE SYSTEM  
⊙ MASTER METER — CITY OF PORTSMOUTH BILLING

## WATER PIPE DIA.

.75"  
1"  
1.5"  
2"  
4"  
6"  
8"  
10"  
12"

NOTE:  
DATA OBTAINED FROM GIS PROVIDED BY THE CITY  
OF PORTSMOUTH, RECORD DRAWINGS AND  
DISCUSSING WITH THE STAFF OF THE TOWN OF  
NEW CASTLE.

300 0 300 600



# City of Portsmouth Water System

Town of New Castle System

City of Portsmouth System  
And Private Systems

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⊙ MASTER METER — CITY OF PORTSMOUTH BILLING

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# Town Transmission Main Improvements

Town of New Castle System

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300 0 300 600



# Purpose of Transmission Main

- Fire Flows
- Reliability
- Water Quality



Optional Looping  
Where/if Possible

Town of New Castle System

LEGEND

— VILLAGE SYSTEM  
⊙ MASTER METER — CITY OF PORTSMOUTH BILLING

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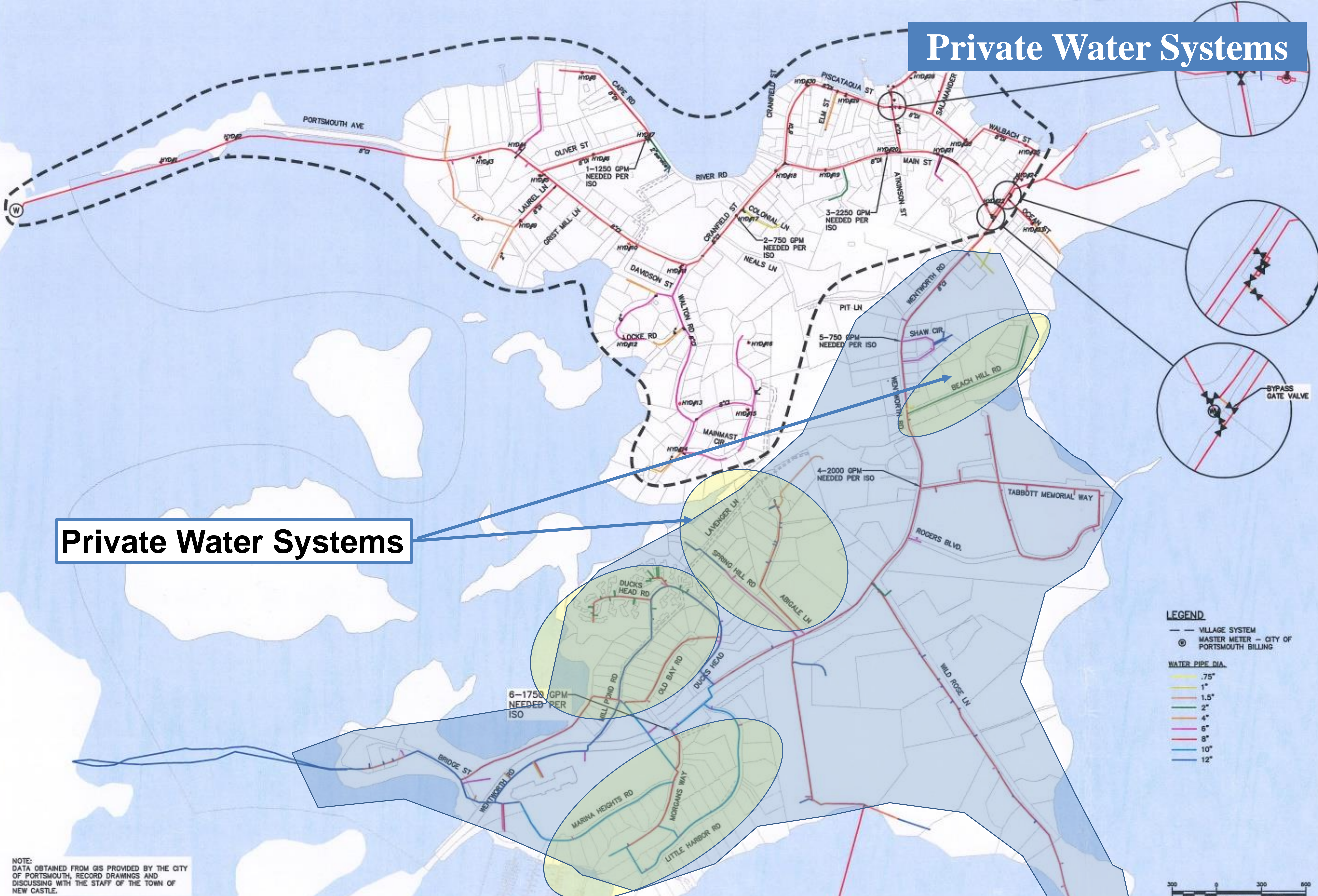
# Purpose of Looping

- Reliability/Redundancy
- Water Quality
- Increase flows



# Private Water Systems

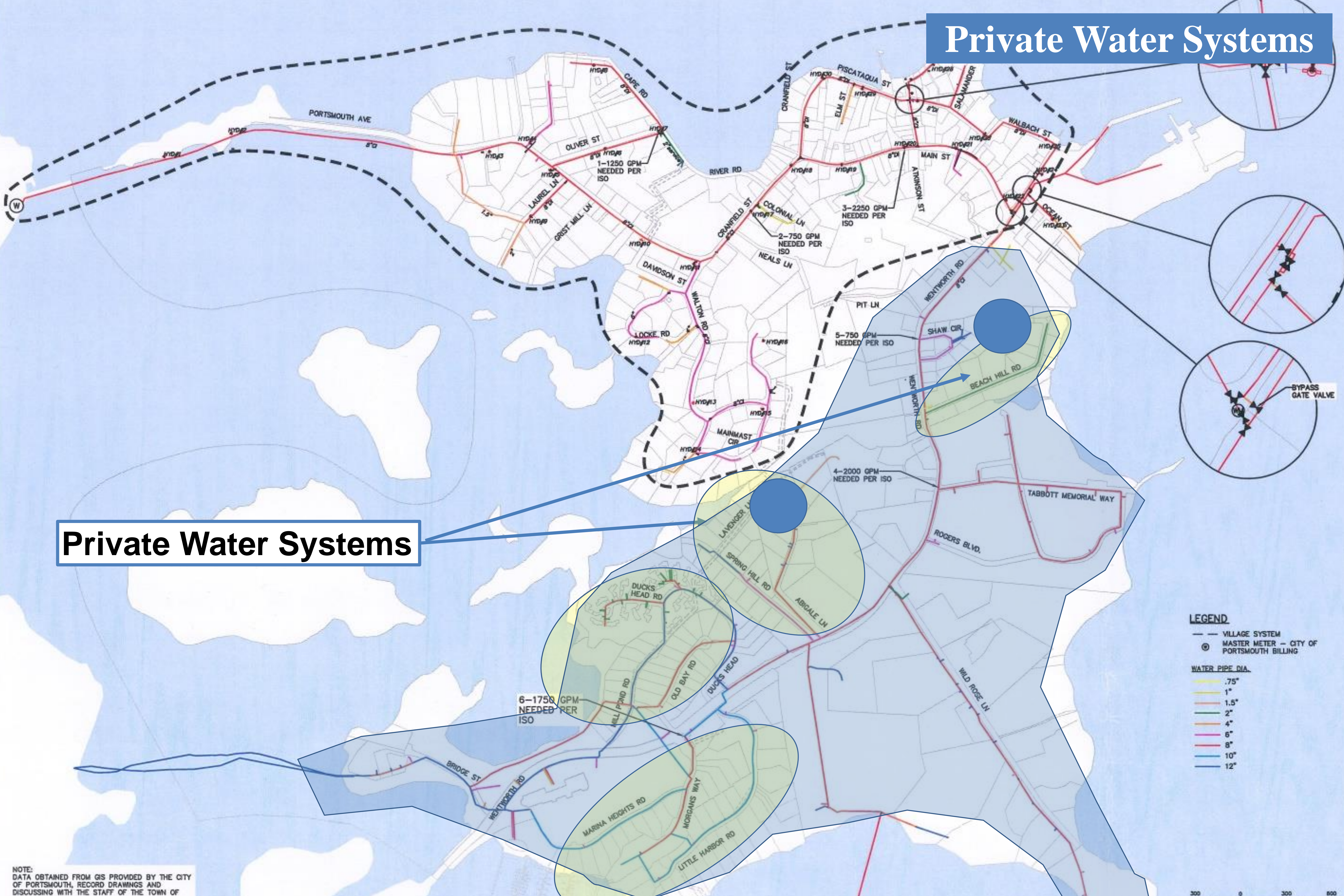
## Private Water Systems





# Private Water Systems

## Private Water Systems



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# Private Water System

- Town/City cannot loop on private water systems
- Private water systems piping unknown
- Need to meet City/Town standard
- Maintenance responsibility not clear





PIT LN

5-750 GPM  
NEEDED PER ISO

SHAW CIR

WENTWORTH RD

BEACH HILL RD

TABBOTT MEMORIAL WAY

ROGERS BLVD.

4-2000 GPM  
NEEDED PER ISO

LAVENGER LN

SPRING HILL RD

ABIGALE LN

MAINMAST CIR

LOCKE RD

WALTON RD

DUCK'S HEAD RD

RD

HEAD



# Goals of Program

- Improve systems to City/Town Standard
- Transfer ownership and maintenance of system to City
- Complete loops if possible.



# Proposed Work

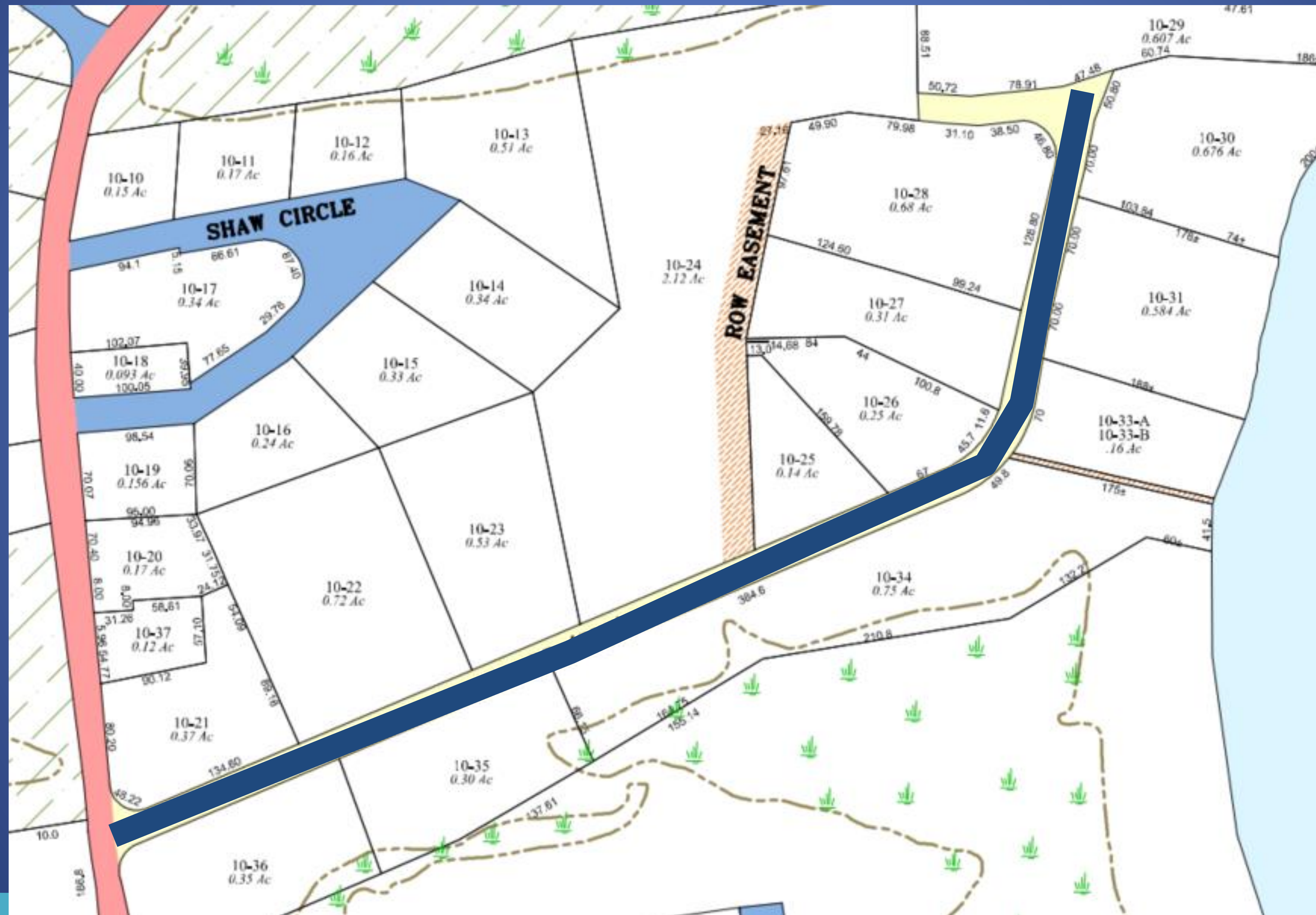


# Proposed Work

- New 8” DI water main
- New water services to edge of road ROW
- Temporary water, if needed
- Pavement overlay
- One (1) hydrant



# Replace Piping



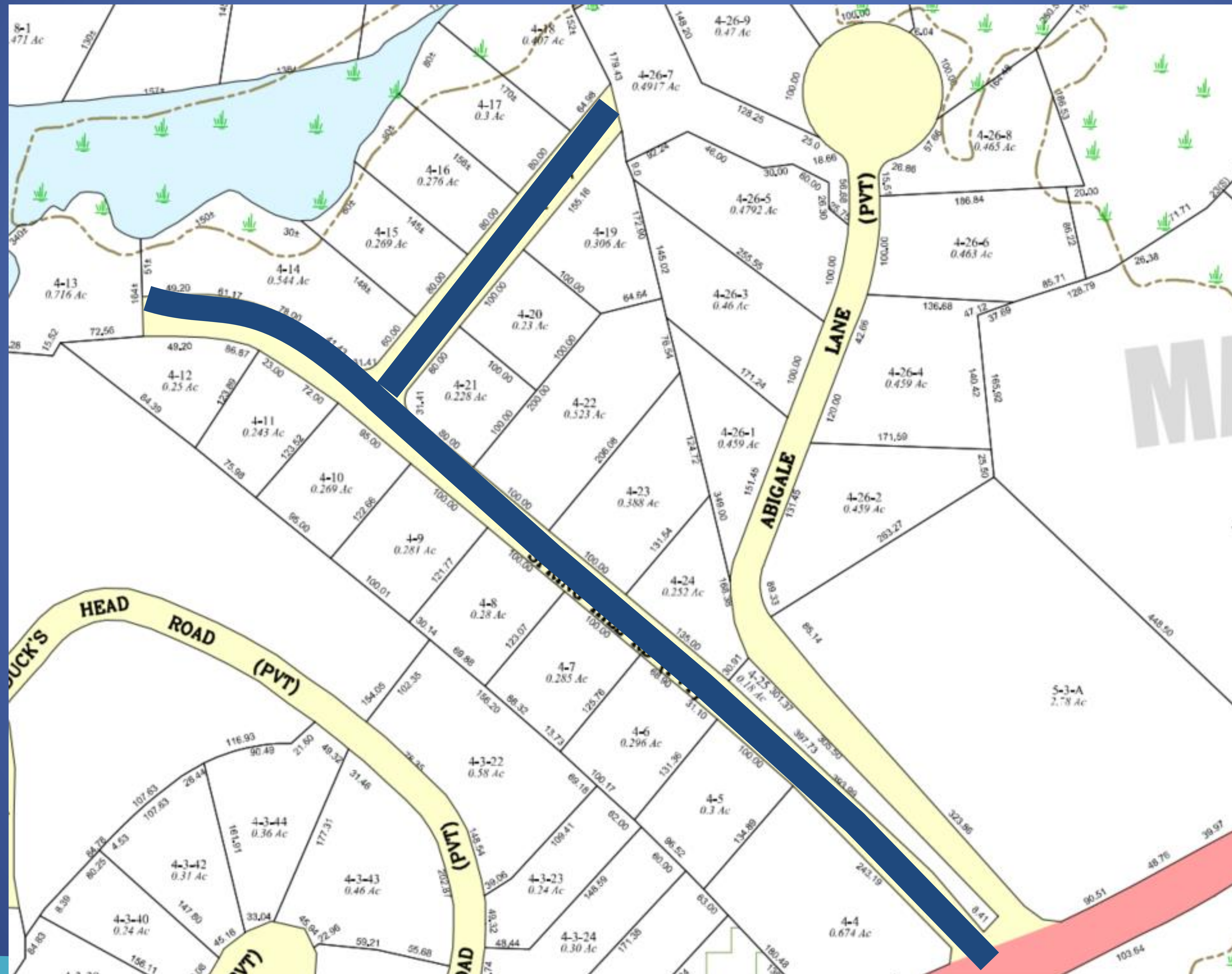


# Beach Hill Road

- 12 Properties
- 1,100 feet
- Legal/Easements by HOA
- Planning Cost = \$25,000
- 20-years
  - \$150 to \$200 per month



# Replace Piping





# Spring Hill Road

- 20 Properties
- 1,500 feet
- Legal/Easements by HOA
- Planning Cost = \$30,000
- 20-years
  - \$150 to \$200 per month

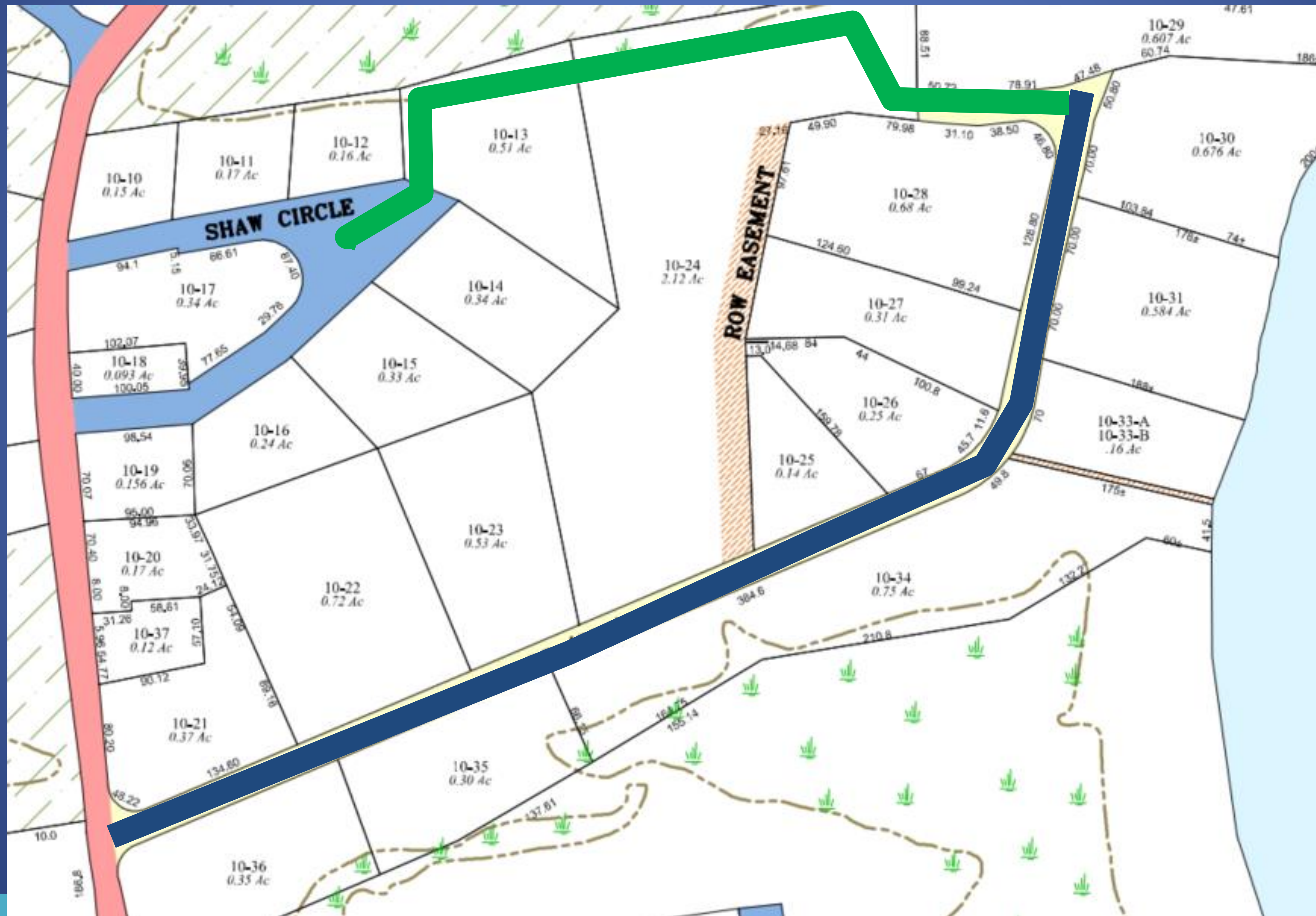


# Project Schedule

- MOU - Jan/Feb
  - Commit to preliminary efforts and cost
- Easements and Design - April
- Finalize betterment and bid - Summer
- Construct - Summer/Fall
- Apply to City – Winter 2020/21



# Potential Looping





This is a detailed plat map of a portion of Section 4, Township 14N, Range 10E. The map shows 48 numbered lots, each with its area in acres. The lots are arranged in a grid-like pattern, with some irregular shapes. The map includes two private roads: Abigale Lane (PVT) and Duck's Head Road (PVT). A green line indicates a proposed road extension from the north to the intersection of Abigale Lane and Duck's Head Road. A blue line highlights a specific lot, 4-20, which is 0.23 Ac. The map also shows a large yellow circular area in the upper right and a red area in the lower right. A large 'M' watermark is visible on the right side.

Lot Number	Area (Ac)
4-1	471
4-2	0.47
4-3	0.3
4-4	0.674
4-5	0.3
4-6	0.296
4-7	0.285
4-8	0.28
4-9	0.281
4-10	0.269
4-11	0.243
4-12	0.25
4-13	0.716
4-14	0.544
4-15	0.269
4-16	0.276
4-17	0.3
4-18	0.407
4-19	0.306
4-20	0.23
4-21	0.228
4-22	0.523
4-23	0.388
4-24	0.253
4-25	0.18
4-26-1	0.459
4-26-2	0.459
4-26-3	0.46
4-26-4	0.459
4-26-5	0.4792
4-26-6	0.463
4-26-7	0.4917
4-26-8	0.463
4-26-9	0.47
4-3-40	0.24
4-3-42	0.31
4-3-44	0.36
4-3-22	0.58
4-3-23	0.24
4-3-24	0.30
4-3-43	0.46
4-3-41	0.31
4-3-44	0.36
4-3-45	0.36
4-3-46	0.36
4-3-47	0.36
4-3-48	0.36
4-3-49	0.36
4-3-50	0.36
4-3-51	0.36
4-3-52	0.36
4-3-53	0.36
4-3-54	0.36
4-3-55	0.36
4-3-56	0.36
4-3-57	0.36
4-3-58	0.36
4-3-59	0.36
4-3-60	0.36
4-3-61	0.36
4-3-62	0.36
4-3-63	0.36
4-3-64	0.36
4-3-65	0.36
4-3-66	0.36
4-3-67	0.36
4-3-68	0.36
4-3-69	0.36
4-3-70	0.36
4-3-71	0.36
4-3-72	0.36
4-3-73	0.36
4-3-74	0.36
4-3-75	0.36
4-3-76	0.36
4-3-77	0.36
4-3-78	0.36
4-3-79	0.36
4-3-80	0.36
4-3-81	0.36
4-3-82	0.36
4-3-83	0.36
4-3-84	0.36
4-3-85	0.36
4-3-86	0.36
4-3-87	0.36
4-3-88	0.36
4-3-89	0.36
4-3-90	0.36
4-3-91	0.36
4-3-92	0.36
4-3-93	0.36
4-3-94	0.36
4-3-95	0.36
4-3-96	0.36
4-3-97	0.36
4-3-98	0.36
4-3-99	0.36
4-3-100	0.36
4-3-101	0.36
4-3-102	0.36
4-3-103	0.36
4-3-104	0.36
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4-3-106	0.36
4-3-107	0.36
4-3-108	0.36
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4-3-111	0.36
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4-3-121	0.36
4-3-122	0.36
4-3-123	0.36
4-3-124	0.36
4-3-125	0.36
4-3-126	0.36
4-3-127	0.36
4-3-128	0.36
4-3-129	0.36
4-3-130	0.36
4-3-131	0.36
4-3-132	0.36
4-3-133	0.36
4-3-134	0.36
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4-3-137	0.36
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4-3-139	0.36
4-3-140	0.36
4-3-141	0.36
4-3-142	0.36
4-3-143	0.36
4-3-144	0.36
4-3-145	0.36
4-3-146	0.36
4-3-147	0.36
4-3-148	0.36
4-3-149	0.36
4-3-150	0.36
4-3-151	



# Looping

- Loops are not required to complete replacement work
- If MOU executed
  - Town will pursue easements for loops
- If replacement work proceeds, Town will construct loops if easements and funding allow



# Tonight's Ask

- Commit to Planning/Design Costs?
  - \$25,000 - Beach Hill
  - \$30,000 - Spring Hill/Lavenger
- If loops do not move forward would you still proceed?
  - Pipe will be to standard and City will take over.



# Questions and Answers