Bristol East Water Line: Main Street Design Update

Holley Hall, Bristol, Vermont | Wednesday, October 21, 2026
Presenter: Steve Palmer, VTM Engineering

> **About this transcript:** This transcript and summary were produced with AI from the meeting's audio recording and then reviewed and edited by the Town. Automated transcription can mishear words, names and numbers. The video recording is the official record of what was said. If something here doesn't match the video, the video governs.

This presentation was given at Holley Hall the same evening as the Wastewater 101 workshop. Steve walked through where the Town's water line replacement program stands and what the next two construction seasons mean for downtown Main Street, then took questions from residents and business owners.

Summary

Figures and dates below are as Steve Palmer stated them at the meeting. Final schedules will come from the contractor.

Why the work is happening. Steve said Bristol's water system loses about 100 million gallons a year [figure as stated; not verified], roughly twice what the Town uses. More than half of the distribution system was installed in 1905 using unlined cast iron pipe, well past its expected life. There are also fire flow problems in much of town.

The four phases. A 2022 master plan split the work into four phases so the town wouldn't be torn up all at once and funding could be found in pieces. Phase 1 (Pine Street) is done. Phase 2 (Bristol West, everything west of North Street) is nearly done. Phase 3 is Bristol East: Main Street and East Street out toward Lord's Prayer Rock.

Funding. The Bristol East phase carries 50% loan forgiveness through federal funding. Steve described it as a 50% grant: on a $3.5 million project, he said, the Town would be responsible for half.

Spring 2027. Work starts in April and reaches the east side of the Main, North and West Street intersection. The stretch along the park, plus School Street and Park Street, has to be finished before July 1 so summer events, kids on the playground and downtown businesses aren't in a construction zone all summer. The intersection itself won't be dug up. A horizontal drill rig will bore the new pipe underneath it, because of a 48-inch stormwater line about 12.5 feet down and fiber optic lines running through it. Steve expects two-way traffic on West Street.

2028. Bristol East goes out to bid next fall. Construction picks up on Main Street and runs as open cut down to Lord's Prayer Rock, with at least one lane of traffic kept open. Steve estimated the downtown Main Street block at about 6 weeks. The new line runs just outside the parking stalls so sidewalks aren't dug up, but about half the parking on that block will be lost during the work. Existing loops installed around 1980 and building service lines won't be replaced. Sections near the elementary school can only be done when school is out.

Night work is an open question. Street crossings will probably be done at night. Whether more of the work happens at night is something Steve wants community input on before the bid documents are written. He described it as a trade-off between residents who live downtown and businesses that need daytime parking and customers.

Water shutoffs. Almost every building will have at least one shutoff. Steve and Jill Marsano of VTUMS, the Town's water operator, will plan valves to limit them, with attention to restaurants and buildings with fire suppression systems.

Next steps. Another public meeting is planned for late winter or early spring, a month or two before construction, with the contractor and a schedule. Questions in the meantime go to the Town Administrator.

Transcript

Lightly edited for readability. Audience members are not identified by name. Words the recording didn't capture clearly are marked [unclear] or [inaudible].

Steve Palmer: This project started right around 2020. You have a leakage rate here. You're losing 100 million gallons of water.

And it's because you have a very, very old distribution system. That's the bottom line.

Audience member: A year?

Steve Palmer: 100 million gallons a year [figure as stated; not verified]. You're losing twice as much water as you use. The American Water Works Association says the average municipal loss is about 15 to 20 percent. You're at a couple hundred percent.

Bristol hired an engineering firm to come in and do a preliminary engineering study, essentially figure out what's going on. Boiling that down, the biggest issue was that more than half of your distribution system was put in in 1905. It's now 120-some years old.

Average life expectancy for a system like that is probably 70 to 80 years. You're well beyond it. The summary of the PER was that the starting point is replacing all the 1905 mains.

We've also done a lot of hydrant flow testing. There are some very serious fire flow issues in a large part of your town.

I'll show you some of the piping. All the 1905 piping was unlined pipe. That means it's cast iron pipe with no lining on the inside. You can imagine them rusting.

But they're also collecting a ton of minerals. If you've got high iron and manganese and a bunch of other things, they collect in those pipes. You could barely see through a lot of the pipes we were pulling out of the ground.

In 2022 we worked on a master plan. The project was so large we realized we couldn't do it in one phase. Number one, you'd be tearing up the entire town at one time, which wasn't going to happen.

We needed a phased approach we could control. We needed to find the funding. We were talking about 12 to 14 million dollars, which isn't going to happen overnight in a small town. We had to work with the state and the feds and find out what we could get. Could we get grants?

So working with the Selectboard, which is also, by the way, your Water Commission, we decided to split this into four phases. The first phase was dictated by Pine Street. They needed to get it paved.

The street was in horrible condition. You probably used to go up there on a regular basis, when everybody brought their trash up to where the town garage is today.

They needed to get it paved, so they said, "Let's just start with this one." It's fairly easy. We got some state and federal funding for that, too.

Audience member: Where does Main Street fit in?

Steve Palmer: We're getting there. Everything in blue on the west side is the phase we're in right now. I call it Bristol West because it's everything west of North Street.

Bristol East is everything in red. For the most part, it's everything east of North Street. That's all of Main Street and East Street, all the way out toward Lord's Prayer Rock. Is there a pointer?

Everything right in here. That's Main Street right there, by the red light. This is the Main Street section, and East Street. Those are the pieces that are going to affect you folks the most, and that's what I'm going to focus on.

Phase 1's done. Phase 2 is wrapping up, with just some [unclear] left. Phase 3, the design is at 90%. We've already got the funding lined up for this, by the way.

Long story short, the feds gave you a 50% grant [50% loan forgiveness] on this project. If it turns out to be a $3.5 million project, you're only on the hook for half of that, which is awesome.

[unclear] Next spring we're going to start on [unclear]. That's going to have some impact on you, not as much as Bristol East, but there's still impact.

You can see what's happening here. We have to come all the way through the intersection here at Main and North. And there's a reason for that. At some point in Bristol East we'll probably have to do some detouring, and we want this intersection already done before then.

Audience member: Just to the traffic light?

Steve Palmer: Just to the other side, almost right in front of your building. I'll show you how we're going to do that. It's going to be done next spring. We're going to start in April.

I can't tell you exactly when each piece will happen today. There's going to be a lot of communication with you.

Audience member: Is it going to be like Waterbury a few years ago?

Steve Palmer: I'm going to hope not, and not like Burlington either.

Our goal really is to limit the impact on you. There is going to be impact, no doubt. These are pretty invasive projects. You've been around town.

We're digging a seven-foot hole through the middle of town. That's really what it amounts to. We're affecting parking, we're affecting traffic. There's no way around having impact.

I'm not going to sugarcoat it. I'll tell people exactly the way it is.

Audience member: I want to know how bad it is.

Steve Palmer: The goal next year is to get to the east side of the intersection, and we're going to end it right there, almost right in front of your building.

Audience member: When you point with the laser where you're going to end it, I can't really tell where that is.

Steve Palmer: There are some pictures coming. Here it is. This will make more sense. Here's the parking area. Past the light, at this end, we'll get there.

Audience member: Just past the traffic light.

Steve Palmer: Yeah, and we're coming right down this side of the road. Our goal is to limit the impact to traffic. I want to keep traffic moving to the extent we can.

Audience member: Do they keep traffic open?

Steve Palmer: On West Street, yes. We're going to work our way right down this side of the road. We may have a traffic shift in here, but our goal is to have two-way traffic.

Audience member: What do you do in front of the park?

Steve Palmer: Coming through the park, I realize you have a whole bunch of things that start July 1st. School's out as well. So one of the constraints we put on the contractor...

Audience member: Like the outhouse race.

Steve Palmer: You're right. One of the constraints we put on the contractor is that this section along the park, plus School Street and Park Street, so wrapping all the way back around the park, has to be done before July 1st. I know you have all these activities coming.

That was a constraint from the Selectboard. They said, "We need this done early in the year. We don't want kids out of school using the playground with all this equipment around, and we want the businesses to be able to have a good summer, even if there's some interruption early in the year."

We're going to have a lot of communication with you as we get toward spring about the timing, so you can do some planning, too.

Audience member: Yeah.

Steve Palmer: Here's a better shot. We're coming through this section. This section has a ton of deep utilities in it. It's like a spaghetti network of utilities.

Our plan right now is to directionally bore this so we don't have to rip up the intersection. We'll bring in a drill rig that horizontally bores this section of pipe underneath the street.

We'll bring it up over to the left in front of the park, and then connect back at both ends. You've got a stormwater line in there that's 12 and a half feet deep.

Audience member: Stormwater.

Steve Palmer: Yeah. There's a 48-inch stormwater line that comes down North Street and goes right through this intersection, along with fiber optics running in both directions.

Audience member: So you're saying you're not going to dig up the street, you're going to do something else?

Steve Palmer: Just through this intersection, correct. We're going to have a horizontal drill rig. We're meeting with the drilling contractor in about two weeks, and we'll decide which side they drill from.

It would be very difficult and costly if we had to open cut that. Not only that, it would be a heck of a disruption to traffic. You can imagine what going through that intersection would be like. Those of you who were here when the [stormwater] system went in years ago probably went through some of that.

Audience member: So can you walk through there, too?

Steve Palmer: That's the goal.

There will be some equipment set up right in front of it and near your shop. One of the things I'm going to work out with the contractor is a plan for how long. That's one of the reasons we're meeting with the directional drilling contractor.

So I can talk with you folks and say, okay, we're going to occupy this area for this amount of time, and here's our plan.

Audience member: Like with a bulldozer?

Steve Palmer: Well, with the horizontal drill rig. And we'll have to block some of the entrance, for instance the west entrance to Shaw's, up by the drugstore.

Audience member: I live right there. What time are you starting?

Steve Palmer: That's a great question. That's one of the discussions we want to have tonight. Some of this might make more sense to do at night, which is not an easy thing on the residents there.

So, Bristol East. Here's the Bristol East project. We'll finish next summer right here in front of Cubbers. That's the end of this stretch coming this way.

In '28, we pick it up right there and come all the way down the street to Lord's Prayer Rock. That section will be open cut.

Audience member: That's in '28?

Steve Palmer: That will be in '28.

Audience member: So that whole stretch is going to be one lane for a while?

Steve Palmer: Yes, that's what I'm envisioning.

Let me jump ahead a little. I know you can't see this very well. We're picking up right here and coming right down the outside of the parking lot. The goal is to keep at least one lane of traffic going.

Audience member: Do you have to cut across to the south side?

Steve Palmer: You already have existing loops, so let me explain. In 1905, they ran the existing line right down the middle of the street. In 1980, they came in, tied into it and ran loops on both sides.

We're not going to change the entrances to any of your buildings. We're not going to change any of the services. We're going to tie into both of those loops.

This is one of the discussions still to come. I said we're at the 90% design mark, and that's true. Jill [Marsano, VTUMS] and I are going to sit down and have a long discussion about these loops and how we minimize service disruption to everyone in these buildings while we install the new system.

Audience member: What should we expect that year? What's the sidewalk going to look like that summer? Will we have access to the sidewalk?

Steve Palmer: That's a really good question. I designed this intentionally so we didn't have to disturb the sidewalks. That was one of the design constraints I put on myself.

And that's why we're also not replacing these loops. The loops are maybe 45 years old. You've still got 40 or 50 years of life out of them, and out of the services going into your buildings.

If we replaced those loops and the services into all your buildings, this would be a much bigger project and a lot more interruption for all of you.

Audience member: I'm just curious. Will there be a period of time where the sidewalk is inaccessible?

Steve Palmer: I'm trying not to do that. You see the parking stalls right there? We're trying to stay right on the outside of those stalls so we don't have to go into the sidewalks. I don't want to dig up any of the sidewalks. That's the goal.

Audience member: But we are going to lose about half the parking.

Steve Palmer: Undoubtedly. So there has to be coordination between the construction side and everybody trying to run their businesses.

That's one of the discussions I had with the Selectboard a week ago [at the October 12 Selectboard meeting]. I asked, do you think folks would be open to nighttime construction? And I realize what that means to people who live there.

It's not an easy thing. It's loud. There are backup alarms. There's lots of noise. We're cutting asphalt.

I haven't bid that part of the project yet. So I can put anything in those bid specs that I get back from the Selectboard and the public that seems reasonable.

I think there will probably be some compromise. I'm not asking anybody for an answer tonight. I'm just saying this is coming. We're going to bid this next phase next fall.

It would be great to have community input, and I hope there is.

Audience member: [unclear]

Steve Palmer: [unclear] probably wouldn't like that.

Audience member: Again, I'd just like communication on this. The only reason I know about this water project is that two people showed up at my door and asked to access my building. Honestly, I was kind of freaked out and offended. That was how I learned about it.

Steve Palmer: Right.

Audience member: No one's said anything since then.

Steve Palmer: I recognize people don't read a lot of the Front Porch Forum posts.

Audience member: I do read a lot of it.

Steve Palmer: We've put a lot out there for Bristol West. We haven't so much yet for Bristol East. That's coming.

I don't think people understand yet what this means, the disruption and the issues that are coming. We're doing the best we can.

Look, I managed the downtown Winooski redevelopment project. We had all of these same problems multiplied by 50, and we got through that project by working with all the business owners.

It's not perfect. You're going to say, "Steve, I've got deliveries at a certain time. Can you help me get the trash truck in here?" Yes. Those are things we sit down with you and work out. I still have to make the project function, too. I want to get out of your way.

Audience member: [unclear] Is the Town not part of this?

Steve Palmer: I'm working for the Town. In all these cases, the Town is ultimately my customer, and at the end of the day they're working for you. That's how this works.

So we're all working for you, on behalf of the residents and businesses here. You need the system replaced. The challenge for this one block is how we do it with the least interruption to you.

Audience member: What are the official channels of communication? Is Front Porch Forum understood to be the official channel for the project?

Steve Palmer: No.

Audience member: I live on a street that's already been through it. There was a notice on Front Porch Forum inviting anyone on these streets to a meeting at the Town Hall to learn more about the project, with contact email addresses.

I wasn't sure how disruptive it would be for my household. There were two partial days where the water was shut off. It was less disruptive than I expected. I wondered if I'd have to shower at somebody else's house. If I were a business, I'd wonder whether that could happen on a day you're open.

Steve Palmer: Yep. Or at night.

I don't understand everybody's business. So it's important we get feedback from you as a business community. Would it be better for us to work at night, or not? What's least disruptive to you?

I can't give you a schedule and timing until we have a contractor on board. But when I bid it, which is for 2028, I can put very specific requirements in the bid documents: this is going to be night work, and so on.

And then we can require schedules from them. As things evolve, weather changes and schedules shift, we'll keep communicating with people.

We have water shutoffs. That's a big deal for us. We don't like doing them.

Almost everybody will have at least one water shutoff at some point. That's one of the things Jill and I are going to work on: making sure we have adequate valves to limit disruption to businesses. Some buildings have fire suppression systems, and that's a big deal. Someone has to come in and reset the system. It's not just a simple outage. And if you have to take the system down, you get into boil water notices, and for a restaurant that's a big deal.

Audience member: [unclear]

Steve Palmer: I'll get there.

Here we go. The existing line runs right down the center. We're going to bring the new line right down this side. There will be one or two street crossings as well. Those will probably be done at night, because I can't see maintaining traffic otherwise.

Audience member: Like a crosswalk afterward?

Steve Palmer: No, I just mean we need to get a water line across the street. Sorry, I should have been clear. Not pedestrians crossing.

We'll have traffic control people here to help with that. That's part of the deal.

Next spring there's also some work that has to happen at this end of the intersection, almost right in front of your building, a little closer to the red light, in the middle of the road. One of the things we're going to talk about this fall and winter is timing. Are we going to do that at night or during the day? How will we handle traffic?

And just a heads up, this line heads right down this side of the road, around the corner and all the way up to Lord's Prayer Rock.

Audience member: On the north side.

Steve Palmer: Correct.

I think it's helpful to show you why we're doing this. Take a look at some of this. It's pretty interesting. You've got a lot of history here.

There's some wooden water line. Those are things we dug up in the last couple of months, right here in town. That wooden water line came off [unclear] Street.

Audience member: I understand this needs to get done.

Steve Palmer: Yeah. Trust me, we're all here to work with you. The Selectboard had a lot of concerns at our meeting [October 12]: "Steve, how can we limit the disruption to the business community as much as we can?" Recognizing this is pretty invasive.

Audience member: I kind of knew what was happening, from when you came by and talked to me. But I think there are a lot of people who don't really know the extent of it.

Steve Palmer: Good.

Audience member: Because it's like Main Street's going to be ripped up for a couple years.

Steve Palmer: I think the work along Main Street in front of your block is probably a six-week endeavor.

Audience member: Oh, okay.

Audience member: But the whole stretch, all the way down to Lord's Prayer Rock, is going to take about two years?

Steve Palmer: I would hope we do East Street all in one summer. But there are other sections, like the elementary school, that we can only do when school's out.

Audience member: But even from the traffic light west, the whole thing?

Steve Palmer: That's right. You're going to see construction come through next spring on that section. Like I said, we have to be done with that section before July 1st. So we're going to come to your side of the intersection.

Audience member: So by the time they get to Main Street, we'll be semi-used to it.

Steve Palmer: Well, there's a tug of war. The people who live there will say, "No, I don't want people working here at night, because I've got to get up in the morning for work." And the businesses will say, "But we need the parking, and we need people to feel comfortable coming in, because with construction signs all over, nobody's going to stop."

Audience member: What other towns have you done this in?

Steve Palmer: A lot of different towns, but Winooski was the largest. I think that was the largest downtown redevelopment project done in Vermont until Burlington did theirs.

You name it: Richmond, [unclear], Hinesburg. I think the biggest key is communication. Everybody talking, and someone to go to when you have a problem.

Like, "I've got a gathering at this time," or "I've got pickups and deliveries that have to happen at certain times, and you've got the whole intersection blocked. How am I going to do that?"

How do I get people into my business? Is there going to be signage on the sidewalk for customers? Is there going to be a fence so people, little kids, can't wander into the construction zone?

I just wanted to give you a heads up. We had a captive audience tonight from downtown.

Audience member: It's crazy there aren't more people here.

Steve Palmer: I'm hoping you'll go out and talk to people. I'm not going to have all the answers tonight. But the next time we sit down, which will probably be toward spring, hopefully folks will come in with a lot of questions, and we'll have a lot more answers about timing for the phase we're doing next spring.

That's going to be April, May and June. For us to finish that section by July 1st, it has to be.

Audience member: How long does it take for people to just forget about it once projects like this are finished?

That's a good question. Let's not let everyone just forget about it. It's got to get done.

Audience member: When you say done, does that mean the road is paved, or will it get ripped up again?

Steve Palmer: Main Street would be paved, and you'd be back in business without me messing with you at all. My goal is to shorten, as much as we can, the construction on that one block where we'll have the most impact on you. That's the hardest part of this whole project, that one block.

It really is. From a traffic standpoint, a business disruption standpoint, a people-living-there standpoint. And you can see the tug of war between everyone who'd want it done at different times. It's not going to be perfect.

Audience member: How does nighttime versus daytime play out? Could there be a schedule of some nighttime, some daytime?

Steve Palmer: There's some work we have to do at night. For instance, if we're crossing West Street or Main Street with a water line.

Audience member: Like last summer.

Steve Palmer: Yeah, that's probably going to happen at night. I don't see another way for the public to travel through there safely and get that much traffic through. Some of that will have to happen. But does the whole project have to be that way? Probably not.

And we've got to tie back in. There's an existing loop that runs underneath that stormwater line, and the whole system needs to be looped. That's something we'll plan for.

There are some as-built drawings from [unclear].

Audience member: But you don't know for sure what's there.

Steve Palmer: And then you find out you don't have the materials to fix it, and people don't have water. That's bad.

Audience member: Can't do that.

Steve Palmer: So we'll probably go in on a day, it might be a weekend, a Saturday, and do some exploratory digging to find out what's there. Then we'll make a plan for how we come back and do it. Questions?

Audience member: Thank you.

Steve Palmer: If you have questions, send them to the Town, to the Town Administrator, and they'll bring them back to me. I think that's a good way to communicate.

We're going to be talking about setting up a meeting with the public. I think it makes more sense when we're a little further along, say late winter or early spring, a month or two before the work starts. I'll have a schedule from the contractor, and I'll bring the contractor to the meeting too, so they can talk through exactly how they're going to do it and answer your questions about impacts and timing, night and day, weekends, all of it.

Audience member: Thank you.

Audience member: And if there's something we can do to help get the word out, we're happy to.

Steve Palmer: Well, that's a great support-your-local-business campaign. Because you're going to be affected. I can tell you from going through a lot of these projects: when people see construction signs, they don't want any part of it.

So we'll have to talk about parking, where we put people, where your customers go and how they get here once they're parked.

Can we work with the grocery store? They have limited parking, too, to some degree. Can we get some employees to park in other places for a month? Whatever it takes.

Audience member: We're pretty fortunate to have the store for parking.

Steve Palmer: Thank you very much. Thanks for coming.