

I have no connections of any kind with contractors. Call me if you don't understand these notes. While a good contractor should cover every point, it's just not reality.

Asking for a quote. These tips may help

1. Do your own due diligence. Call references.
2. Need water test before committing, to prove the need for sewer replacement, no charge if fails, as they get the work. Water test: they fill drains up to the level of the floor, to see if goes down over 15 minutes period.
3. Can you avoid going under the slab?
4. How many access holes both inside house and outside are required
5. What is your max length of tunnel before need another access hole
6. Define how it is priced: \$/ft of tunnel for later measure or lump sum now based on their "guess"
7. Cost/ft for portions routed outside the foundation
8. If job cost is priced/ft, who will measure that before backfilling tunnels
9. Does the price measure exclude the access holes. It should.
10. Will they take photos progressively of the new pipes along the tunnels so you can see what they have installed
11. Include replace toilet flange (as seen under the toilet)
12. If breaking thru concrete floor, explain the repair to me (rebar drilled dowels, epoxy, 4" thick floor)
13. Is a Licensed plumber to be here while working on new pipe installation
14. What protection of grass (plastic?)
15. Ask what tools are used to compress the soil upon backfilling. Hand tamper? Electric impact gun tamper? A lot of dirt just will not go back in the tunnels.
16. Require stainless steel pipe hanger cradles and rods. 4 feet max hanger spacing. (not magnetic).
17. Require pipe hangers within 6" of upward pipe fittings
18. Require water test again before backfilling
19. Who repairs broken sprinkler pipes
20. Remove all old cast iron pipes and excess dirt from property...about 20% of the dirt will be hauled off
21. Want City plumbing inspection
22. Another water test upon completion before final payment
23. Agree on description of interim completion stages requiring payments.
24. Get committed start date and also a completion date (allowing for a few extra days for the unforeseen)
25. No payment more than \$1000 up front
26. Is the price cash or credit card
27. Ask for contractor's home address. Just in case you need it. If unwilling, don't use them.
28. Get a written contract

And once the job starts.....

Even though the points above should be in your contract, don't assume the details get to the guy doing the work. Read on....

1. It's a stretch to expect removed bushes to live, but ask them to bury them inside the dirt piles and you may have success. Otherwise, they will leave them with roots exposed and they will die.
2. Ask to see the manufacturers boxes of pipe hanger cradles (pic below), nuts, washers and hanger rods with labels to verify stainless steel AT THE BEGINNING OF THE JOB, to avoid "can't find them" excuse at the time of need, which will then delay the work. Rods may be

slightly magnetic, but pipe hanger cradles, nuts, washers should be totally non-magnetic. Check, check, check...don't assume!

3. Also ask them to bring you the couplings in #2 above AT THE BEGINNING OF THE JOB, to avoid delays – see #7
4. New hangers may be installed very close or touching buried copper water lines and these must be kept apart otherwise corrosion may happen on the copper pipes. Ask if plastic foam pipe insulation will do that separation. Ask for photos after installation.
5. Remove all old cast iron pipes from the excavation tunnels – and ask is that the plumber or the diggers job to avoid a later minor dispute as to who takes them away.
6. It is not unusual for the tunnel to have water in it...just natural ground water level.
7. Ask plumber to show you that long outside runs have a min 1/8" to 1 foot slope. $\frac{1}{4}$ " is better.
8. The banded couplings (see pic below) to connect pvc pipe to cast iron MUST be rated for below ground. Examples: Fernco model 1056-33RC stainless shielded couplings, or alternate MIFAB MI-XHUB. Specifically do NOT use Fernco 3000 series ProFlex couplings (yellow or pink labels and only one band on each end) (Home Depot and other carry these) as these are NOT approved to go in the ground. ASK to see them, before using. For the plumber to say that if the City inspector say ok, then it must be ok, is NOT ok! The inspector only cares that it is watertight today, and does not care if it might fail next year because the wrong type couplings were used.
9. Confirm the contractor requested City plumbing inspection
10. Ask for the green tag issued by the City inspector and ask for proof that it was entered in the City data bank (a screen shot from the inspector will suffice)
11. Insist on removing cast iron pipes from tunnels, otherwise later possible interference with new piers. If they had to break a hole in concrete floor, insist backfill is only soil, not concrete debris
12. Water test before backfill
13. Another water test after backfill upon completion
14. Haul away all excess materials and pipes
15. Ask them to tell you this is what they will do for concrete floor repair: need minimum 4" final thickness, require 6" holes drilled in old concrete and rebar placed about 12" apart, splices overlapped 6" and epoxy (available from Home Depot) squirted in concrete holes and then rebar dowels pushed in thru the epoxy.
16. Express that new concrete floor finish be as smooth as the surrounding floor
17. Ask for final lien waiver (that all bills are all paid) and upon receipt, make final payment.

Left, is pipe coupling. Right is a pipe hanger to support pipe when dirt settles

