

Stormwater Work Projects 2014



Riverview and Wilson Ln.

- Gravel would wash off of the Driveway at Quarry Rd and also Wilson Ln. The material would continuously plug the catch basin.



Riverview and Wilson Ln.

- The asphalt was cleaned, tack was applied and a larger asphalt berm was installed.



403 4th St.

- Existing asphalt berm was too small and failing. Water would flow over the berm and flood the driveway.



403 4th St.

- A taller and wider asphalt berm was installed to stop the overflow.



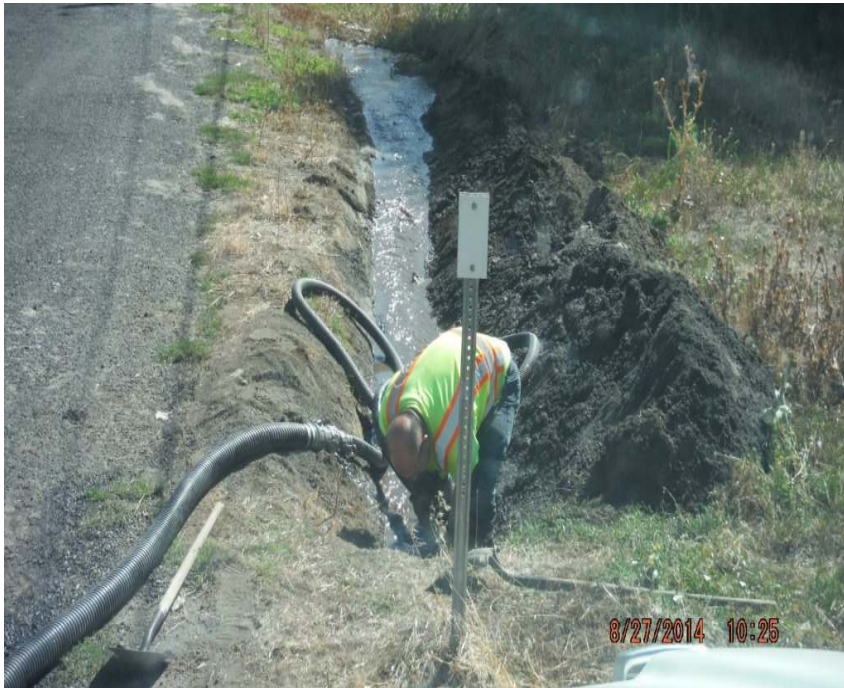
4th and Wilson

- Culvert outfall was overgrown and silted in. This caused the culvert and catch basin to plug and overflow, flooding next two residence's driveways.



4th and Wilson

- Outfall was excavated and a water truck was used to flush the culvert....culvert was 80% plugged!!



13th and Libby

- Avista discovered a small crack in the concrete storm line. While they were conducting maintenance on the gas line.



13th and Libby

- Asphalt emulsion was applied to help seal the crack. Then rubber belting was banded around the pipe as an extra precaution.



2432 Linda Ln.

- It was determined that the existing asphalt berm needed to be built up and extended.



Lolo Ln.

- Hillside and drainage ditch was eroding.



Lolo Ln.

- The ditch was excavated and fabric was laid out, new pit rock and 2 check dams were installed.



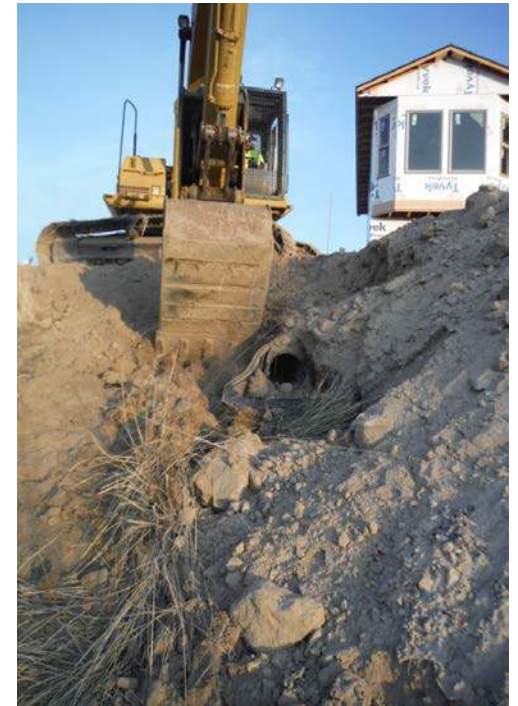
Lolo Ln.

- Material that was excavated from the ditch was placed on the hillside and compacted with the excavator. Disturbed area is scheduled to be Hydro Seeded.



Remington Way

- Outfall needed to be extended into the bottom of the draw and piped into a new bubble up.



Colt Canyon

- Original outfall had eroded and started to washout the hillside.



Colt Canyon

- Piping had to be removed and installed within the drainage easement and eventually piped into a new bubble up in the bottom of the draw.



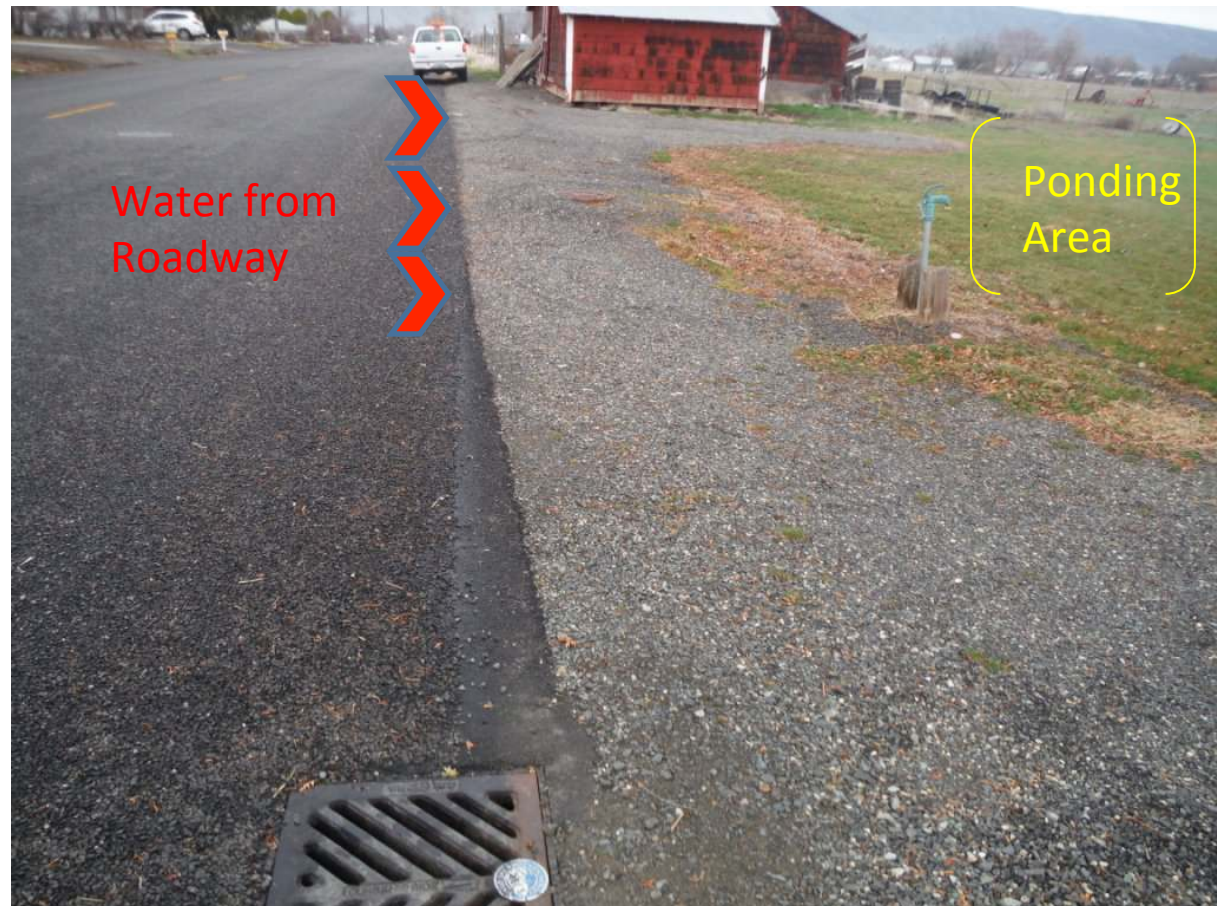
Colt Canyon

- Due to the steep and remote location of the project an access road was constructed in the draw. This was used for material placement and future system service.



2683 Critchfield (Bolen)

Received a customer complaint that water from the roadway was ponding on his property and not making it to the Catch Basin on the roadway



2683 Critchfield (Bolen)

Installed gravel berm
to keep water on the
roadway until it reached
the existing catch basin.



2683 Critchfield (Bolen)



1808 Valleyveiw (Knight)

Same as the previous, received a complaint of water sheeting off the roadway and flooding the customer's garage.



1808 Valleyveiw (Knight)

A gravel berm was installed to keep the water on the roadway until it could reach the Catch Basin downstream from the customer's residence.



Asotin County Fairgrounds

Staff from the Fairgrounds reported a large sink hole behind the hog barn.



Asotin County Fairgrounds

It was determined that when the electrical conduit was run to another building behind the problem area, it was bored through the existing stormwater pipe.



Asotin County Fairgrounds



Asotin County Fairgrounds

The pipe was repaired and the conduit shifted over the top of the stormwater pipe.



Asotin County Fairgrounds

It was then backfilled, compacted and patched back with asphalt.



18th Ave. Abandoned Line Exploration

As part of the 18th Ave. Stormwater Retrofit Project, we were charged with exploring an old abandoned PUD drainage line. This line needed to be located, its manholes uncovered, and inspected to ascertain if it was feasible to utilize the existing line for the project.



18th Ave. Abandoned Line Exploration

After locating all of the manholes that were covered by pavement, we dug them up and began checking the pipes for integrity and condition. The City of Clarkston assisted us by utilizing their camera truck to do most of the line exploration.



18th Ave. Abandoned Line Exploration

HOWEVER....

There were some sections of line that were not able to be accessed with a vehicle due to topography. Because we did not have a self contained camera, we used one from PUD, that needed a power source for operation.

Backpacking anyone??



New Equipment

Thanks to the support of the management team however, we now have a self contained, state of the art, camera system. This new system will make field exploration and inspection much more efficient and less labor intensive.



Money Savings

A customer wanted to tear out his driveway and have it repaired because he thought the problem stemmed from a failure of the nearby underground Stormwater System.

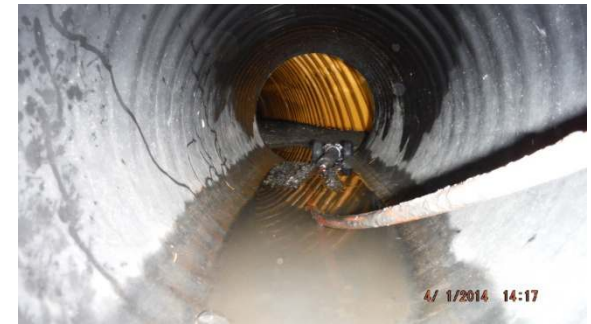


C.S.I.

Utilizing the camera system, we were able to ascertain that the Stormwater system near his driveway was sound and sealed, with no defects found. We were furthermore able to show him the picture evidence of the sealed system.

It was more likely that the problem occurred due to poor compaction when the concrete drive was installed.

If we hadn't had the camera, do you think it would have played out this way?



15th & Maple

Sometimes you do get lucky! This Catch Basin was slated to be inspected in the 2nd half of County system inspections during the winter of 2014-15. However when the overlay project started and it was ground down, we found that a failure was developing, that had not yet shown itself.

They like it a lot better when we fix these things before it makes a hole in NEW pavement.



15th & Maple

A little water, and a pickup load of cement....

VIOLA'

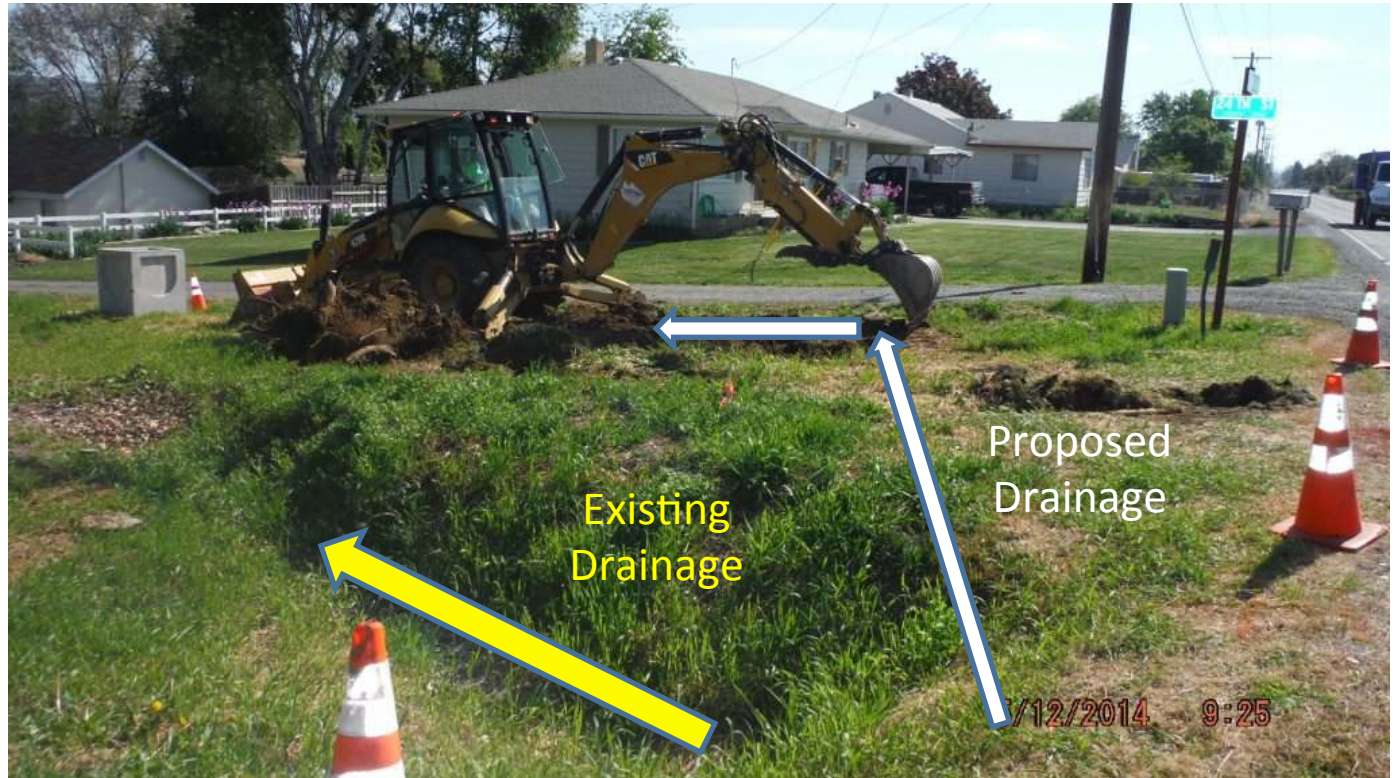
Problem Solved!



6th Ave. & 24th St.

This customer was planning on putting in a driveway and making improvements to his property, directly in the path of our existing surface drainage system.

He requested that we install a system to redirect the drainage back into the right-of-way and around his property.



6th Ave. & 24th St.

We dug down and around the existing culvert and installed a vault at that location to make the turn.

We then installed another vault adjacent to 24th St. to make the turn back along side the roadway.

The pipe then daylights out to the existing drainage along the road right-of-way.



6th Ave. & 24th St.

After completing the project, it was hydro-seeded to negate runoff issues with the disturbed soil area.



Nicklaus Dr.

A curb drain had been installed at the base of the curb and drained out through a pipe on the back side of the curb into the existing drainage.



Nicklaus Dr.

Over the course of time and constant water flow, the pipe outlet eroded away a considerable sized hole.

The hole was so deep in fact that it had exposed the underground utilities that run under the pipe outlet.



Nicklaus Dr.

We brought in fill and compacted it to form the swale which once was in place.



We then filled and sealed the existing drain in the curb line, and constructed a concrete spill way for the water to transition into the swale.



Fabric and rock was laid into place completing the project.



Nicklaus Dr.

A riser for a PUD water valve was dead center in the low area where the spillway needed to be.

So.....

We incorporated it into the project!



3rd Ave. & Deer Pointe Dr.

A cross drain across the roadway was installed improperly and was causing a traffic hazard.

Not only was the cross drain starting to break apart, but cars were bottoming out when they drove across the drain.



3rd Ave. & Deer Pointe Dr.

It was decided that a concrete cross drain was not needed at this location. So it was to be put back into a slight asphalt swale to carry the water from one curb line, across the roadway to the other.

However, the curbs and spandles needed to be torn out and replaced to create a “spill curb” on both corners. This would allow the water to exit the uphill curb, and enter the downhill curb.



3rd Ave. & Deer Pointe Dr.

The asphalt was saw cut to provide room for removal.

The curbs were removed, formed and replaced.



3rd Ave. & Deer Pointe Dr.

With the County Road Crew's help,
we paved the cross drain back and
completed the project.

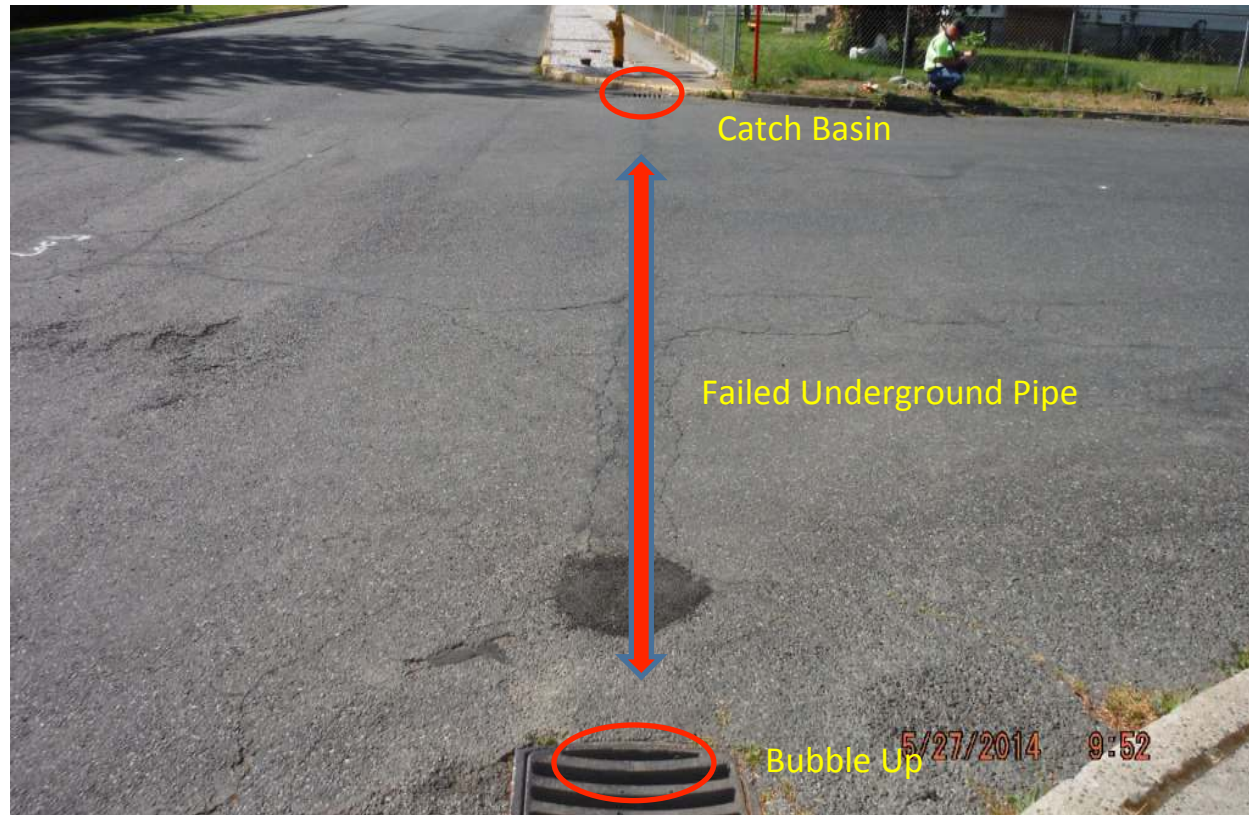


Poplar & Riverview

Last winter during our system inspections, we found a couple suspect areas in the County and the City of Clarkston that had sink holes developing. These areas were slated to be cut out and inspected to ascertain if the reasoning for the sinkhole was infiltration or failure.

A couple of months later, the Clarkston Road Crew found that one of the problem areas had developed a much larger hole, and it was evident that there was pipe failure underneath.

They temporarily filled the hole for traffic safety until the repair work could be carried out.



Poplar & Riverview

It was decided that both structures and the failed underground pipe would be removed and replaced with a cross swale similar to the one we had just done on Deer Pointe.

First the pavement was saw cut and removed.

And we found some “Old City of Clarkston” pavement underneath.



Poplar & Riverview

Next the existing structures were removed, along with the failed underground piping.

As you can see, the piping was in very bad shape.



Poplar & Riverview

After setting grade on the drain line, the area was backfilled and compacted in preparation for asphalt.

With the City of Clarkston Road Crew's help, we paved the cross drain back, and completed the project.



Poplar & Riverview



Swallows Crest Ct.

The 2 Catch Basins that spill into this drainage had been creating tremendous undercuts into the hillside where they spilled out approximately 15ft behind the curb lines.

In addition, homeowners had been creating a hazard by covering these unsightly voids with brush.



Swallows Crest Ct.

It was decided that the best solution to this problem would be to pipe both Catch Basins into a Bubble Up structure at the bottom of the natural drainage.



Swallows Crest Ct.

Both areas were excavated in preparation for the structures and piping.



Swallows Crest Ct.

The piping and the
structures were installed
with the help of the County
Road Crew.



Swallows Crest Ct.

After completion of the job,
the area was hydro-seeded
to negate any runoff caused
by disturbance of the soil.



Thank you for the opportunity to serve
you!

