

Mitchell Project Construction Guidelines

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Site Notes

Site design was completed by Hedin Environmental. A one-time site stake-out will be performed by DEM Surveying at the request of the contractor. This stakeout will include the pipeline and all treatment system elements. It is the responsibility of the contractor to install all system elements at the elevations specified. It is the responsibility of the contractor to maintain benchmarks and stakes as needed during construction.

All elevations noted below were taken from the aerial mapping and site survey. Elevations are in feet from mean sea level (MSL).

E&S Control

The contractor is responsible for installing, maintaining, and removing all E&S control measures. All disturbed areas of the site will be reseeded as soon as possible after disturbance. Temporary E&S measures will be removed after 70% vegetative success has been demonstrated.

Discharge Collection

Two discharges will be collected and piped to the treatment system location. M1 is further north, and originates at an elevation of 1675.48'. M2 is approximately 350' south of M1 and originates at an elevation of 1671.18'.

At each discharge, a small dam will be constructed. The dam will be constructed of the best available local material and covered with geotextile and 8" of AASHTO #1 aggregate.

Type 2 geotextile will be placed in the discharge channels. 10" perforated SDR35 pipes will be placed on the geotextile and covered with non-calcareous AASHTO#1 aggregate to an elevation of 1675'. The upstream ends of the perforated pipes must be capped prior to placement. The

entire pipe must be covered with aggregate. The perforated pipes will connect to the 10" solid SDR35 pipeline to the treatment system area.

Pipeline Installation

The pipeline from the discharges to the splitter box will be installed at or near grade for its entire length. At the second discharge location (M2), the elevation of the bottom invert of the pipe will be 1672'. At the splitter box, the bottom invert of the pipe will tie into the box at an elevation of 1665'. The pipeline will be installed at a constant grade of 0.4%. 10" SDR35 pipe will be used.

The path for the pipeline will be cleared of all vegetation. The pipe will be placed on the surface clearing has taken place. At least 1' of fill will be placed over the top of the pipe and seeded, mulched, limed, and fertilized as soon as possible.

At the road crossing, the 10" SDR35 pipe will be placed inside a metal sleeve pipe of a larger diameter. At least 1 foot of fill must be placed over the sleeve pipe.

Flow Splitter Box Installation

A flow splitter box from Lee Supply will be installed near the treatment system location. The box will be equipped to supply 4 limestone treatment cells, but three of the supply pipes will be capped for possible future use.

The box will be equipped with a 10" inflow and a 10" overflow and four 4" supply pipes. The box will be installed with a bottom elevation of 1665' and a top elevation of 1668'. The location of the box will be excavated and the bottom of the excavation will be properly smoothed and compacted. A 10" SDR35 pipe will be installed from the overflow port and will discharge to the surface as shown on the drawings.

All but one of the 4" discharge pipes from the box will be capped both inside and outside the box prior to box installation. These pipes will be used later if more limestone cells are installed. The pipe nearest the overflow pipe should be used for this treatment cell.

After installation, fill will be placed around the box to an elevation of 1667.5'.

Site Preparation for Limestone Cell

The finished inside bottom of the limestone cell will be at elevation 1658'. The site must be prepared to allow for 2" of clean, compacted 2B stone to be placed in an area 48' in diameter to a finished top elevation of 1657' and 7" (1657.58'). Around the perimeter of the tank, the concrete is 1 foot thick with a 4" base of 2B. Therefore, the bottom of the excavation is at 1656.67' and the top of the 4" lift of 2B stone is at 1656'. The perimeter of the tank must be equipped with a

4" perforated drain pipe that is bedded in clean 2B stone. The stone must surround the pipe on all sides to form a 1' by 1' trench with the pipe located in the center of the trench.

Prior to placement of the tank, the bottom of excavation/fill will be established at the elevations above. Where fill will be required, best available on-site materials will be used and will be properly compacted. 2B stone will then be placed to the depths and elevations stated above.

Groffdale Concrete Walls, Inc. will install the tank when site preparation is complete. They should be notified as much in advance as possible of our desired installation date.

After the tank has been installed, on-site soil material must be placed on the outside of the tank to a final elevation of 1662. The fill must be placed so that no damage is done to the walls. The fill shall have a slope of 2.5:1 away from the tank and shall tie back in to original ground elevation.

Siphon Installation

A 14-108 custom model siphon from Fluid Dynamic Siphons will be used to flush the limestone cell. An 18" SDR35 pipe will be used to connect the limestone tank to the siphon tank. The bottom of the siphon trap will be placed at an elevation of 1652.3', such that the trigger elevation of the siphon is at 1665.5'.

SIPHON TANK.

An 18" black plastic pipe will lead from the siphon trap exit to the settling pond. This pipe shall be smooth on the inside and corrugated on the outside. This pipe will be covered with at least 1' of fill at all locations. At each pipe joint, U-straps will be placed over the ends of each pipe and driven into the ground to a depth of at least 3' in order to hold the pipe in place.

Pond Installation

The siphon discharge pipe will lead to a rock energy dissipater. This dissipater will be 15' in diameter and contain 2' of R5 aggregate. The energy dissipater must be at least 2' deep at the center. The discharge elevation of the energy dissipater should be 1605.5'.

The pond will be constructed with a top-of-berm elevation of 1606'. An internal berm will be placed across the center point of the pond with an elevation of 1604'. The bottom of the pond will be at 1600'. The exit spillway of the pond will have an invert elevation of 1605'.

The exit spillway to the pond will have bottom width of 8' and will be lined with Type 2 geotextile after it is shaped. 1' of R3 aggregate will be placed on the bottom and side slopes of the channel.