

**POWERTON GENERATING
STATION RETROFIT
*Permit Applications***

ID No. W1978010008

April 2023

Ash Surge Basin Proposed Retrofit Construction Project
Metal Cleaning Basin Proposed Retrofit Construction Project

Safety is of the utmost importance to us, and we continue to follow public health guidance while putting the well-being of our team and communities first.

- No mask requirements in place in Illinois, but if you feel more comfortable wearing one today, please, we encourage you to do so.
- Hand sanitizer around the room.
- Plenty of room and extra seating so that those who are here with us today can socially distance.

In the unlikely event of an emergency, doors around the room are marked with exit signs that you may use.

If you would like to receive a summary of this meeting or be added to the Illinois Environmental Protection Agency's listserv, visit the sign in table to provide your contact information.



- ✓ Illinois Coal Ash & Other Environmental Rules
- ✓ Powerton Generating Station
- ✓ Proposed Retrofit Plans – Ash Surge Basin & Metal Cleaning Basin
- ✓ Question & Answer Session

- In 2015, the US EPA finalized the Federal CCR Rules to regulate coal ash landfills and surface impoundments at power plants.
- In 2019, the state passed a law to regulate coal ash stored in CCR surface impoundments at power plants throughout Illinois.
 - The law required that the Illinois Environmental Protection Agency propose, and that the Illinois Pollution Control Board adopt, state regulations for storage and disposal of coal ash produced from electric generating facilities through a new permitting program.
 - As required by the law, the Illinois EPA and the Board undertook a public rulemaking process that resulted in the Board adopting regulations at 35 IAC Part 845 – Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments (the Illinois Coal Ash Rules) in April 2021.
- Additionally, both the Ash Surge Basin and Metal Cleaning Basin are permitted as part of the Station's wastewater treatment system by the Illinois EPA under the NPDES permitting program.

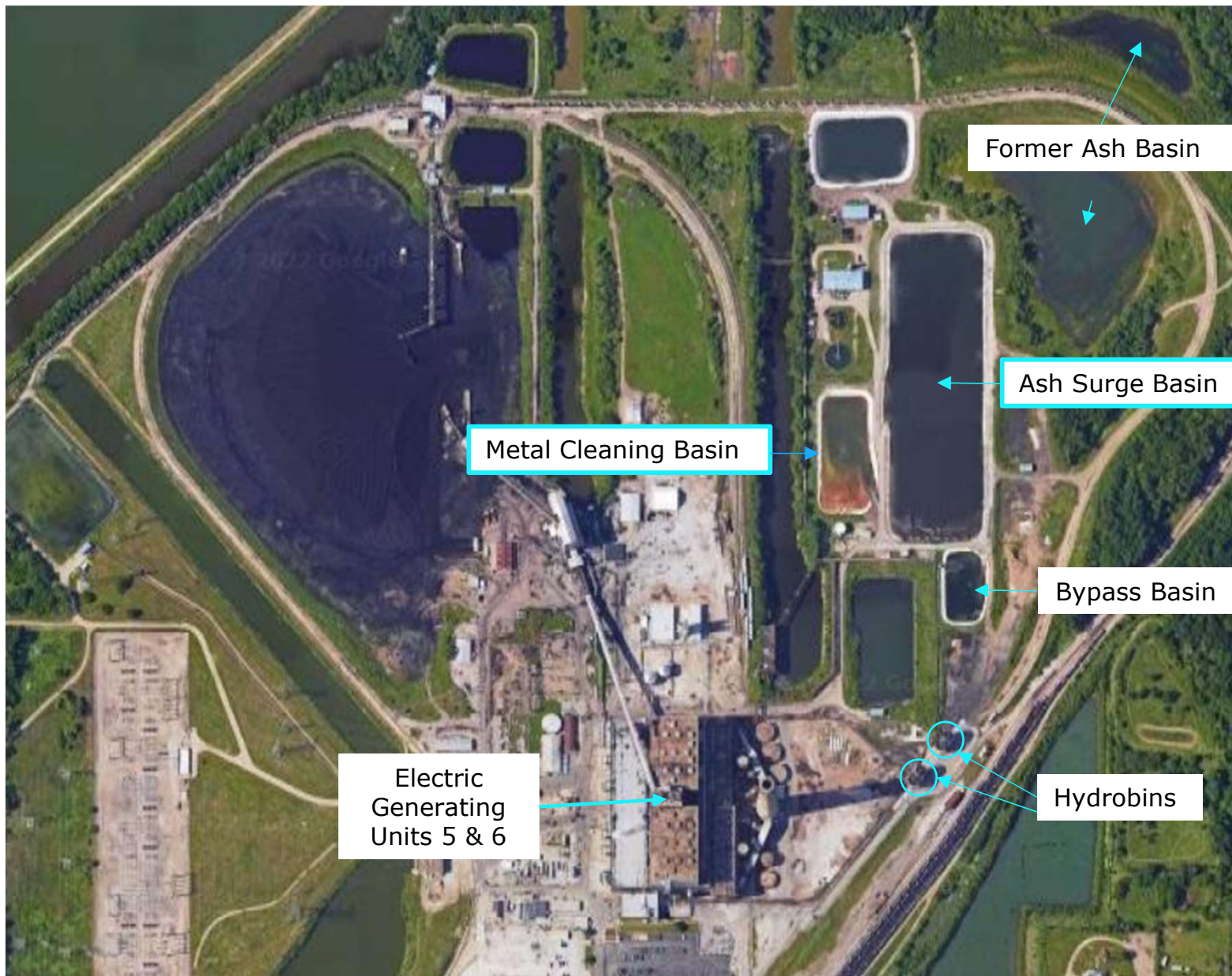
- The Illinois Coal Ash Rules define both CCR and CCR surface impoundments:

- "Coal combustion residuals" or "CCR" means fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers.

- "CCR surface impoundment" or "impoundment" means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the surface impoundment treats, stores, or disposes of CCR.

- We're here today to present plans regarding a specific aspect of the Illinois Coal Ash Rules – the planned retrofits of the Ash Surge Basin and the Metal Cleaning Basin at Powerton Generating Station.

Public Meetings were held in May 2022 to discuss the planned closure of the Former Ash Basin (FAB) and retrofit of the Bypass Basin. Construction permit applications for those basins were submitted to Illinois EPA in June 2022 for the Bypass Basin and July 2022 for the FAB. The Agency has not yet acted on those applications.



Ash Surge Basin

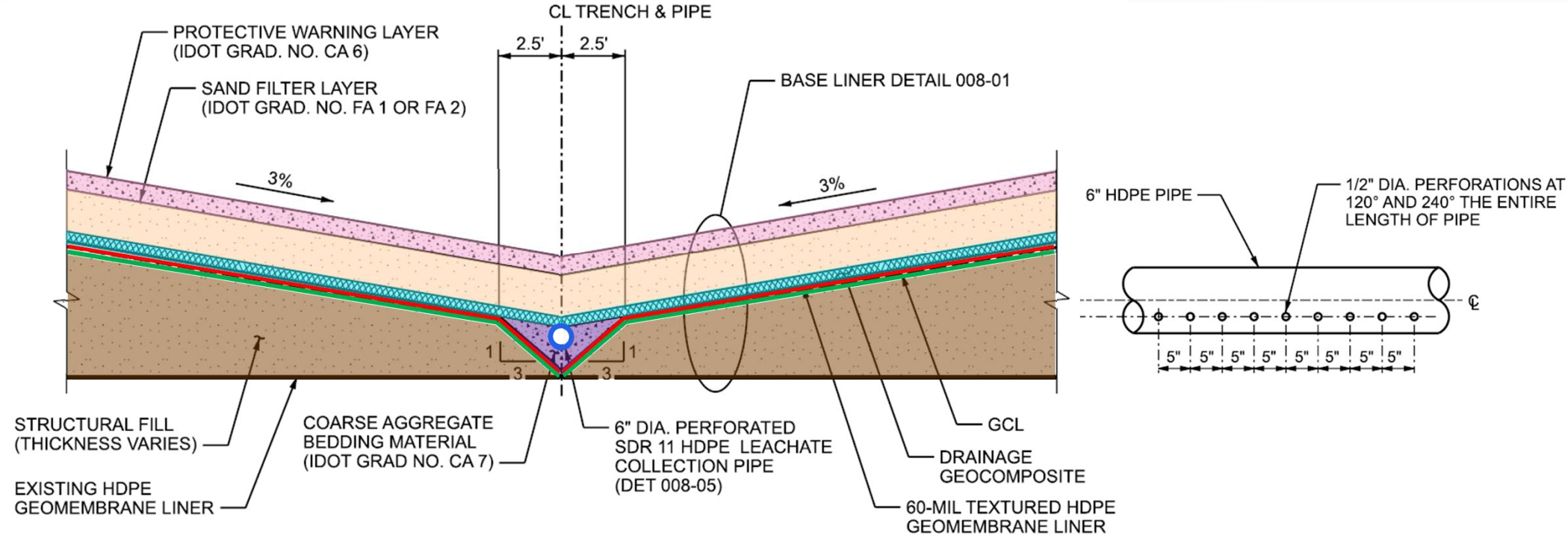
- The Ash Surge Basin (ASB) is used as the primary settling basin for CCR and other process wastewaters at Powerton Station.
- The ASB is approximately 8 acres in size and was originally built in 1978 with a Hypalon membrane liner.
- The ASB was relined with a high-density polyethylene (HDPE) geomembrane liner in 2013.
- CCR stored in the ASB is slag, or bottom ash, which is the non-combustible residue that settles to the bottom of the power plant's boilers.
- A demonstration for a "Site-Specific Alternative Deadline to Initiate Closure" was submitted to the USEPA in November 2020, allowing for the continued operation of the ASB until the Bypass Basin is retrofitted.

Metal Cleaning Basin

- The Metal Cleaning Basin (MCB) is used to collect and treat boiler cleaning wash waters during boiler outages. Outside of outages, the MCB is also occasionally used to temporarily store fly and bottom ash from maintenance activities. The MCB does not store wash waters and ash at the same time.
- The MCB is approximately 2.3 acres in size and was originally built in 1978 with a Hypalon membrane liner.
- The MCB was relined with a high-density polyethylene (HDPE) geomembrane liner in 2010.
- CCR stored in the MCB include fly ash and bottom ash/slag (short term).

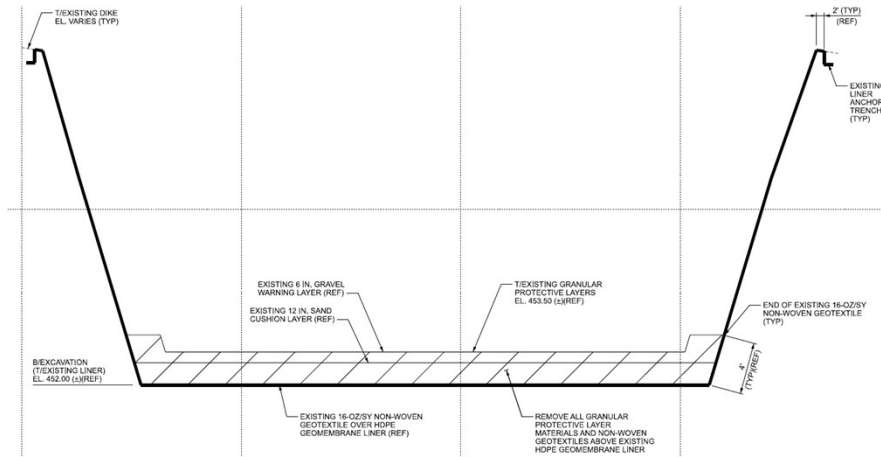
- While both basins have (intact) 60-mil HDPE geomembrane liners, neither basin has a composite liner system as required under both IL and federal regulations.
- MWG's current plans are to retrofit the Ash Surge Basin once the Bypass Basin is retrofitted and placed back into service, and to retrofit the Metal Cleaning Basin as soon as a permit is received.
- This plan allows for continued operation of Powerton Station as a reliable source of electricity.

Retrofitted CCR Surface Impoundments Alternative Liner Requirements

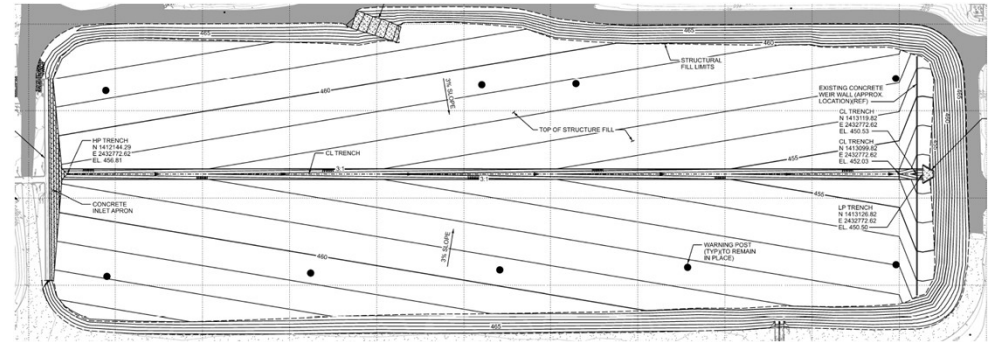


Component	Layer / Feature	Description	Reference(s)
Basin Floor	Structural Fill	Fill material to establish 3% slope for LCRS	845.420(a)(3)
Composite Liner System	Geosynthetic Clay Liner (GCL)	Bottom component of new composite liner system	845.410(a) & (b) 845.400(c)
	60-mil HDPE Geomembrane Liner	Top component of new composite liner system	845.410(a) & (b) 845.400(c)
Leachate Collection & Removal System (LCRS)	Drainage Geocomposite	Directs leachate to leachate collection pipe	845.420(a)(4)(B)
	Perf. HDPE Leachate Collection Pipe	Collects and directs leachate to discharge pipe or sump pump	845.420(a)(7)
	Coarse Aggregate Bedding Material	Prevents finer particles from clogging the leachate collection pipe	845.420(a)(6)
	Sand Filter Layer	Limits intrusion of finer CCR particles into LCRS	845.420(a)(2)
	Protective Warning Layer	Protects liner and LCRS components	845.420(a)(8)

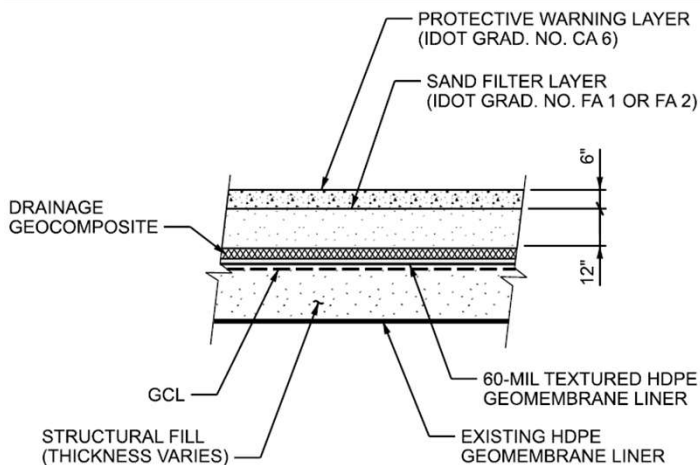
1. Material Removal & Decontamination



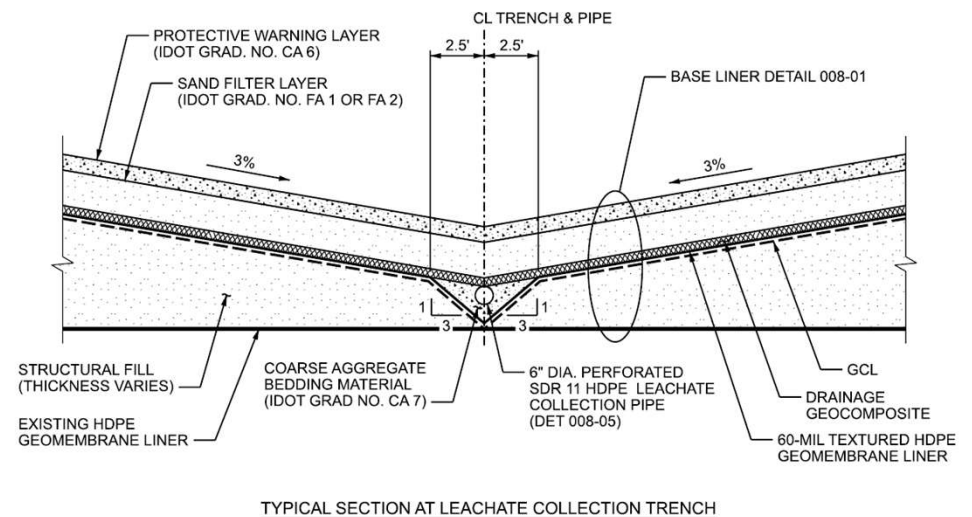
2. Place Structural Fill



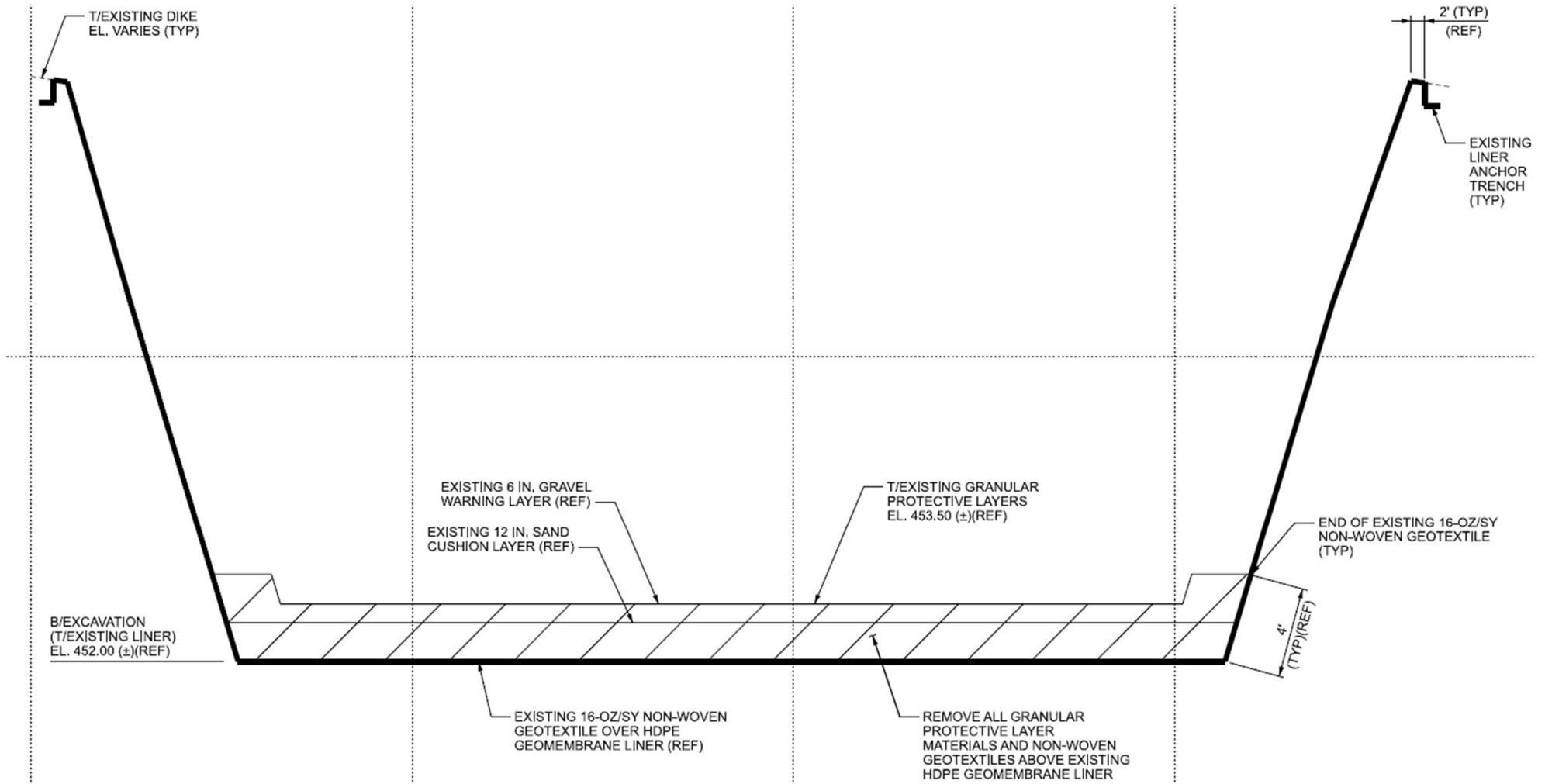
3. Install New Composite Liner



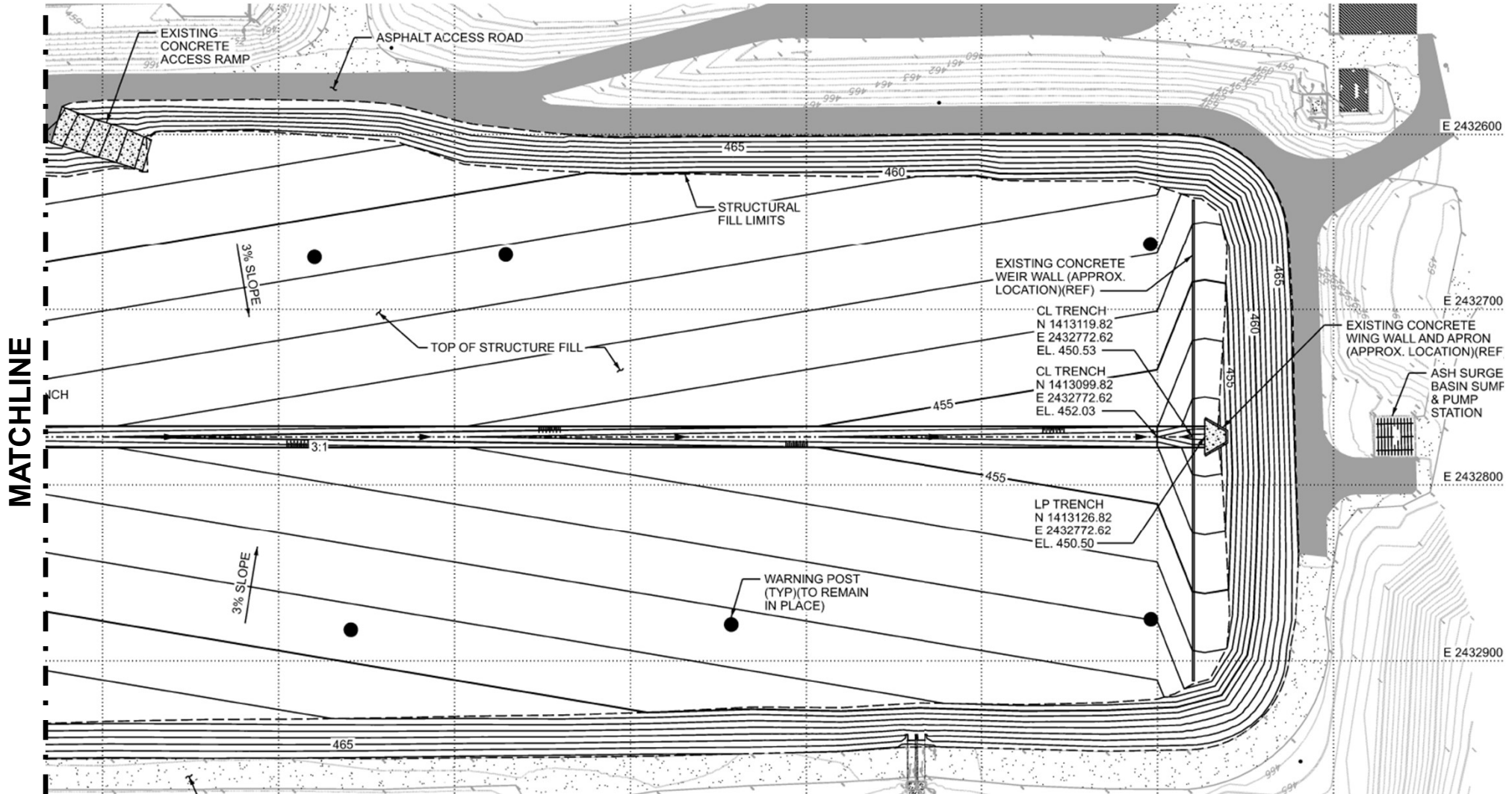
4. Install New Leachate Collection System



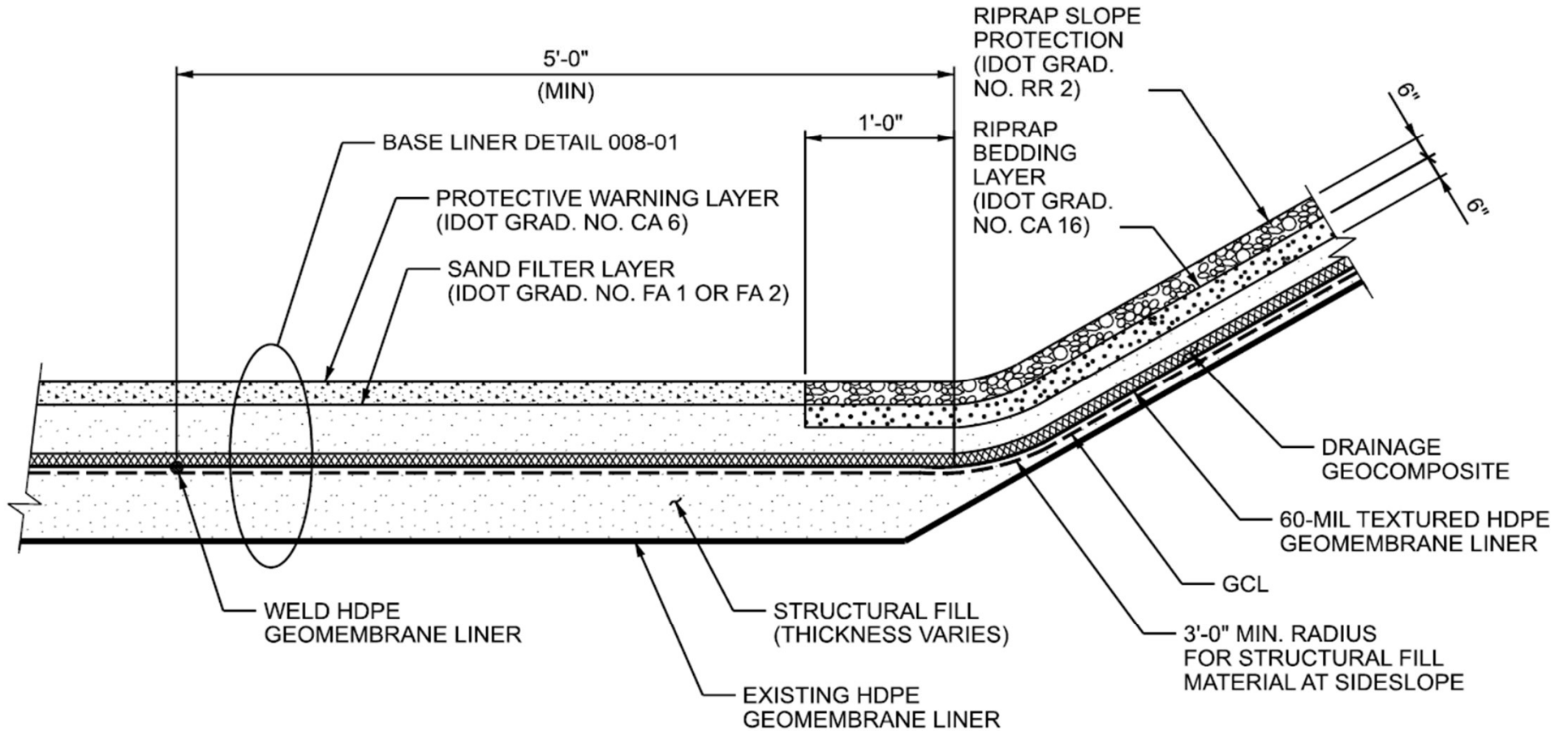
1. Material Removal & Decontamination (Ash Surge Basin)



2. Place Structural Fill (Ash Surge Basin)

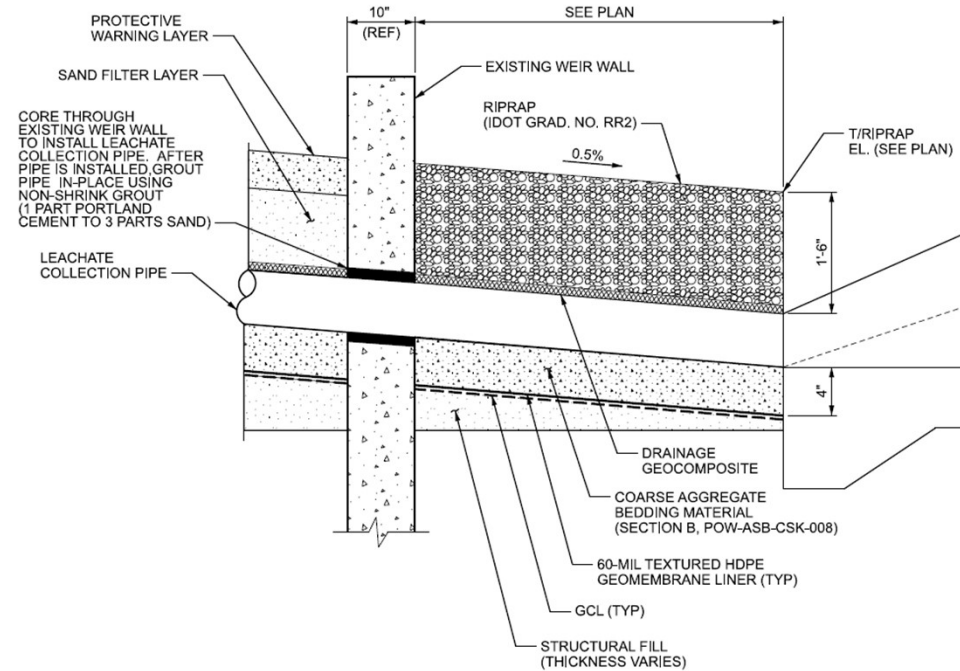
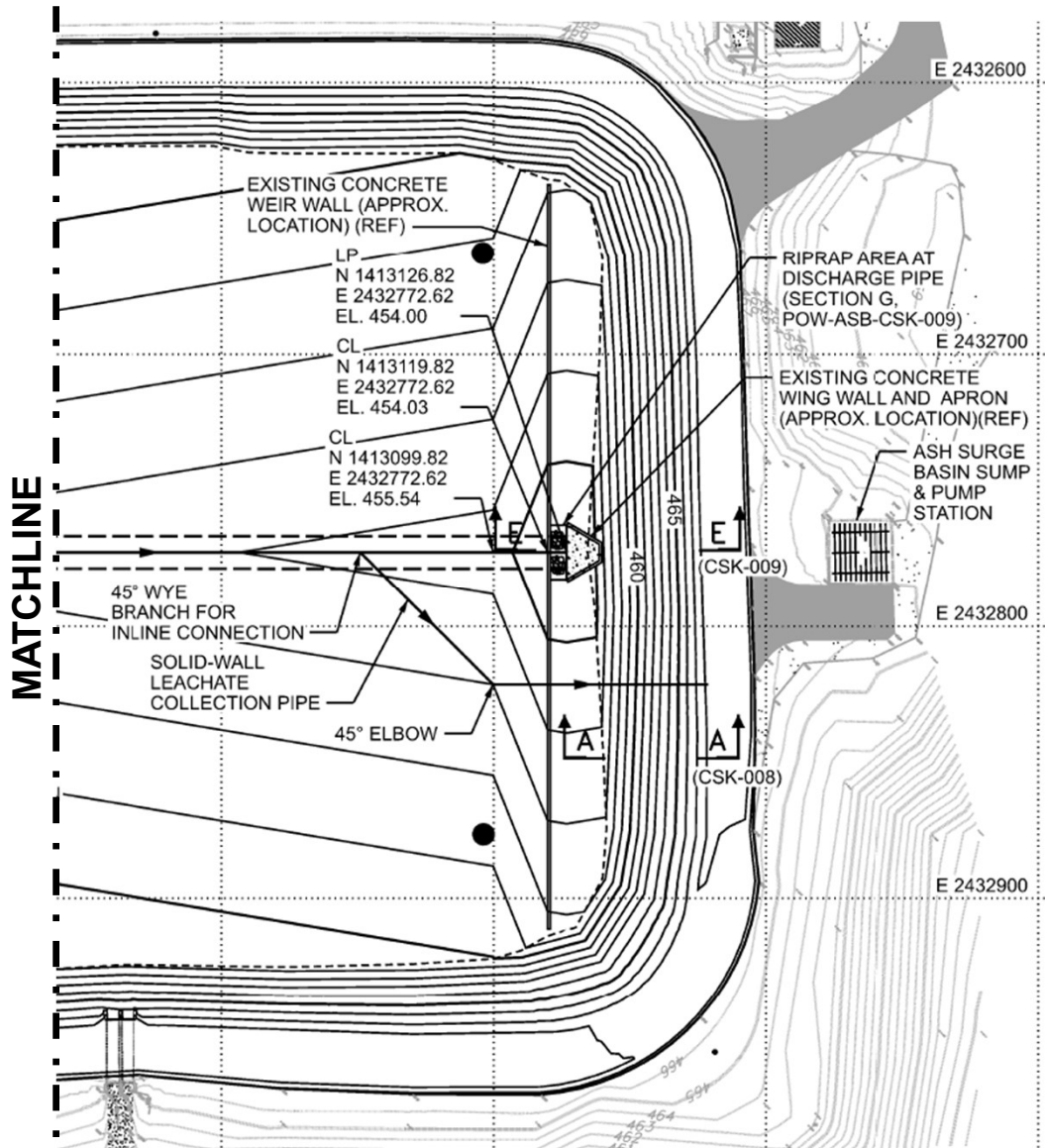


3. Install New Composite Liner (Ash Surge Basin)

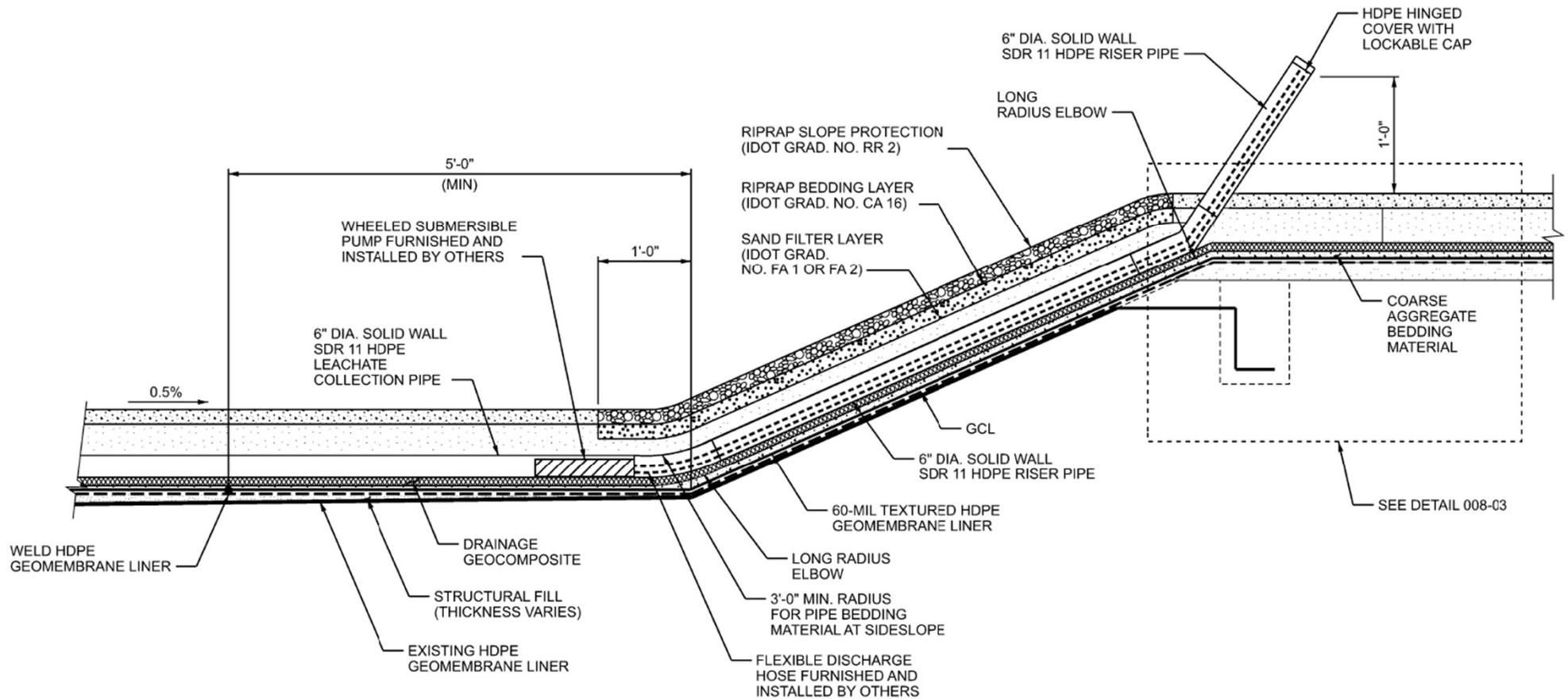


TYPICAL SLOPE TRANSITION DETAIL

4. Install New Leachate Collection System (Ash Surge Basin)



4. Install New Leachate Collection System (Ash Surge Basin)



- MWG estimates that after receipt of a construction permit, it will take approximately 13 months to retrofit the Ash Surge Basin and approximately 8 months to retrofit the Metal Cleaning Basin. More detailed planning level schedules are included in each basin's Retrofit Plan.
- Once retrofitted, each basin will continue to be used for its current purpose - the Ash Surge Basin will be used to store CCR remaining in the decant water from the Station's hydrobins and the Metal Cleaning Basin will be used to treat boiler wash waters and/or for temporary storage of ash.
- Groundwater monitoring will continue during the operating life and required post-closure care period for the retrofitted Ash Surge and Metal Cleaning Basins.

Public Website: midwestgenerationllc.com

