

# PEFT, LLC

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January 4, 2021

**To: University of Michigan**

Attn; Susan Gott, Chris Allen, Mike Rein

RE: Proposed Valhalla Site Plan, City of Ann Arbor

All; As the Valhalla project is progressing, we wanted to provide you with this update. As previously mentioned in our Sept 22, 2020 letter, the Site Plan is not a construction plan and many details will be further developed and refined in future construction level plans. This letter is to provide an update on various fine points as the project is refined and moves through the annexation process and towards City Council Approval.

What follows is an update on the details of the design as they relate to the questions and concerns previously expressed from the University of Michigan personnel:

**Stormwater Management Plan (as currently designed and approved in accordance with the current rules of the WCWRC).**

*A few of the site stormwater design features include:*

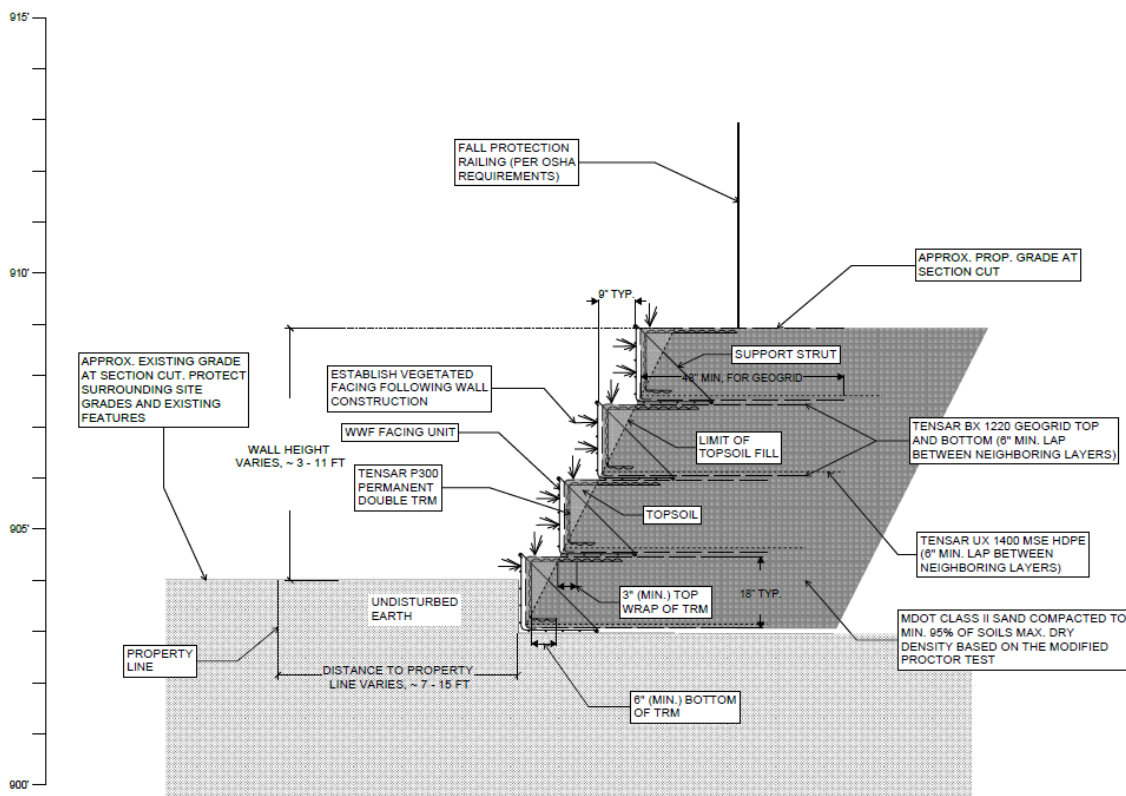
- *Additional Stormwater detention*
  - *This design incorporates holding/detaining a volume of 120% of a 100 - year storm event where as the site currently has no stormwater management*
  - *There is additional free-board stormwater volume provided above the 100-year volume.*
  - *Proposed green roofs and bio-retention areas provide additional stormwater volume*

- The stormwater pumping station will have power redundancy with its own emergency back-up generator, therefore functionality is maintained during power outages
- Duplex pumps will be provided in the pump station to maintain mechanical redundancy and functionality if one of the pumps fail (any pump failure will trigger an alarm). Pumping station will be maintained by the city.

**Retaining walls will be constructed on the development's property and not require easements from the University of Michigan.**

*SME has been added to the team to provide geotechnical services on the project. SME, Atwell and McIntosh Portis have been working together to further detail the proposed retaining walls and grading on the site.*

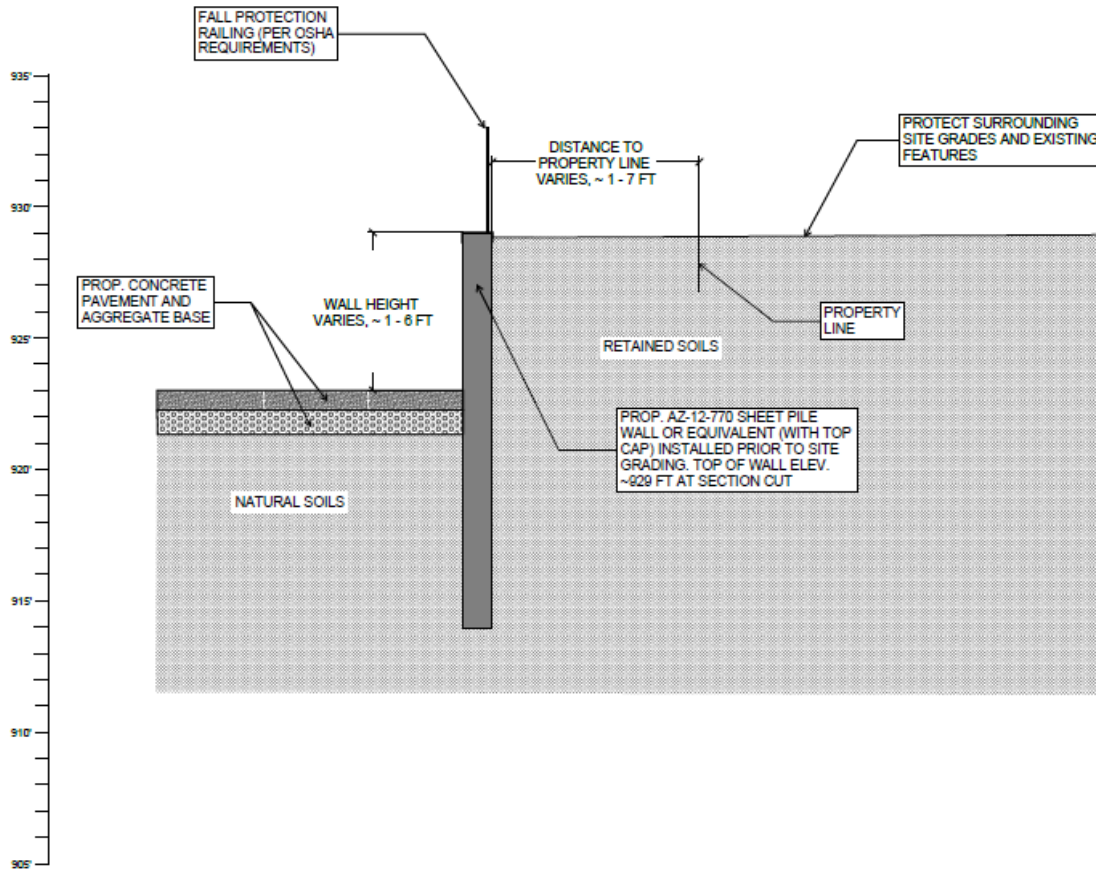
*The retaining wall on the north side of the property is proposed to be a Mechanically Stabilized Earth (MSE) system - see image below for conceptual design*



**SECTION A-A': MSE SLOPE (TYP. DETAIL)**

NOT TO SCALE

The retaining wall along the south side of the project is proposed to be constructed as a sheet pile wall. - see image below for conceptual design .As the wall has limited height (1-6'); wall tie backs are not required.



SECTION B-B': SHEET PILE WALL

NOT TO SCALE

**Grading work is to be done on the development's property and not require easements from the University of Michigan.**

*Detailed Grading Plans will be provided during the submittal of Construction/Engineering drawings after approval of the site plan.*

**Living adjacent to an active golf course and driving range - Should pedestrian fencing and/or golf ball screen protective netting be proposed?**

*A metal pedestrian fence like the fence along the frontage of the UM Driving range on Old S. Main Street will be added to our site boundary. See conceptual design below:*



*As the buildings have significant setbacks to property lines, golf ball netting is not proposed. See attached MKSK exhibit for additional details on ball trajectories.*

**Pump Stations (Sanitary and Storm). Are they needed? What happens in the event of failure?**

*Detailed pump station designs will be provided during the submittal of Construction/Engineering drawings after approval of the site plan. The pump stations will have redundancy through duplex pumps, and back-up generators and will be connected to monitored alarms systems.*

## **Sanitary Sewer Capacity - Is it sufficient for a project of this size?**

*YES. A copy of the City of Ann Arbor (Troy Baughman) review is shown below:*

**DATE:** October 28, 2019  
**TO:** Matt Kowalski, City Planner  
Anne Warrow, P.E, Project Manager  
**FROM:** Troy Baughman, P.E., Project Manager <sup>TB</sup>  
Public Services Area – Systems Planning  
**RE:** Valhalla Ann Arbor Site Plan  
Sanitary Sewer Capacity Analysis  
File No. SP19-018

### **Sanitary Capacity Analysis**

The City's hydraulic model was used to analyze the impacts to the downstream sanitary sewer system as a result of the proposed development. Results from this analysis show sufficient dry weather capacity exists to support the proposed development flows. However, the project will still need to comply with the Developer Offset Mitigation Program due to wet weather capacity constraints that exist in the downstream system.

### **Proposed Sanitary Sewer Lift Station**

Plans for the proposed sanitary sewer lift station shall be submitted to the Wastewater Treatment Plant for review and approval.

As the project continues to progress through the site plan approval process, the design team will provide additional designs and narratives at a site plan level of detail. We anticipate making a revised site plan submittal to the City prior to City Council action. When that site plan submittal is made the project team will provide a copy to the University of Michigan.

After site plan approval, the design team can also provide U of M copies of the detailed construction drawings as they are processed through the detailed City review processes.

**Sincerely,**

**PEFT DEVELOPMENT**