June 24, 2020

Ms. Susan Montenegro
City Manager
City of Leslie
602 West Bellevue Street
Leslie, MI 49251

## RE: City of Leslie Mill Street Over Huntoon Creek Reconstruction and Bridge Replacement Project (JN 129384, CS

 MCS 33000Dear Ms. Montenegro:
As discussed in the meeting on June 23, 2020 between the MDOT Lansing TSC, City of Leslie, Davis Construction and C2AE, we have continued to explore possible options to address the cross slopes that are slightly greater than a 1:3 in the southern greenbelt area (between the sidewalk and the headwall on the south side of Mill Street) as well as other City of Leslie concerns.

In addition to the four (4) options that were previously presented to the City in March 2020 and restated in the June 4, 2020 correspondence, C2AE has worked in conjunction with MDOT on the following additional options that can be implemented to the reduce the slope in the greenbelt area:

1. The proposed road could be lowered by 0.5 -feet, which will result in a $1: 3$ slope in the southern greenbelt area. This option will require notification to EGLE regarding the joint permit. Additionally, this option will reduce the cover over the insulated water main at the box culvert from 4.5-feet to 4-feet, which will require an amendment to the Act 399 permit. This option may be implemented in conjunction with other proposed solutions presented to flatten the slope further.
2. Build a secondary headwall along the back of the existing headwall. The secondary headwall would be constructed 0.5 -feet higher than the existing headwall, which will result in a 1:3 slope from the back of the sidewalk to the proposed secondary headwall. The proposed decorative fence would be installed on the existing headwall/wing walls.
3. A 1-foot concrete extension (cap) can be constructed on the head walls and wing walls, without requiring additional soil anchors, to flatten the slope in the southern greenbelt area. A 1-foot cap will result in an approximate slope of $1: 3.6$. This option would need to be confirmed with Northern Concrete that no additional modifications would be necessary.
4. Although previously presented, addition rip rap can be added at the wing walls and headwalls at a slope of $1: 1$ to $1: 2$ to allow for a turf slope that will be flatter than 1:3.

All parties are eager to move forward with the construction phase to complete this project. We plan to review the above additional options during the meeting on Thursday 6/25/20 at 10:00 am.

Sincerely,

## C2AE

William J. Nimble,
William J. Nimble, PE
Government Leader


Roger F. Marks, PE
Infrastructure Group Leader
Cc: Ron Bogart (City), Christopher Gembel, PE (MDOT), Greg Kray, PE (C2AE)

