

MEMORANDUM

To: Chief David Parenti**Date:** 5/23/24**From:** Amy J. Dunlap**Project:** Northborough Fire
Station**Job No:** 22314**Subject:** Feasibility of eliminating the retaining wall in the Fire Station design

In response to a comment from a Town resident, HKT asked our civil engineer, Pare Corporation, to review the existing grading at 61 + 65 West Main Street / 10 Monroe Street to determine if it was feasible to regrade the site in a way to eliminate the retaining walls and slope the grade further back on the site. Pare has reviewed the grades in the existing survey again in response to this question and made some preliminary observations summarized in this memo.

Because the adjacent residential properties to the southwest are approximately 37 feet higher than the western parking area which is only 60 feet away in the current design, there is not adequate space to grade down from the adjacent properties on the west side at the maximum 3:1 slope. A retaining wall is the only option on the west side of the property.

As for the south wall at the back of the property, technically, from the grade at the furthest southwest reach of the property line to the parking area, it would be possible to regrade at a 3:1 slope to avoid the south wall. However, the entire back slope of the property would need to be re-graded to achieve this and retaining walls at the west and east property lines would still be required. These retaining walls would extend further back along the property line than currently shown since the existing grades at the abutters' properties do not allow grading at a 3:1 or less slope as would be required to eliminate retaining walls. This approach would impact the project in other ways:

- The limit of disturbance would be extended approximately 380 feet.
- The limit of disturbance area would be increased by approximately 40%.
- The vegetation would need to be cleared from the entire property to allow for regrading. Clearing the trees which currently stabilize the large slope would:
 - Remove the natural buffer to abutters. Clearing of vegetation would be up to the adjacent property lines.
 - Change the groundcover and stormwater calculations requiring larger stormwater management systems to reduce flows.

Again, eliminating the south retaining wall would not eliminate retaining walls entirely as they would still be required along the west and east property lines and those walls would extend further back along the property lines.

The Design Team believes the approach described would add project cost. This approach would also adversely impact the abutters by clearing the existing vegetated buffer.