

# Neal Mitchell Associates

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Mr. Joseph Laydon  
Town Planner  
Grafton Memorial Municipal Center  
30 Providence Road  
Grafton, MA 01519

## **RE: Meadow Lane Retaining Wall Replacement**

Dear Mr. Laydon:

The proposed replacement wall has been designed, and then based on this design the plans were prepared by **Land Planning, Inc.** The plans are stamped by Norman G. Hill PE (Civil #31887). The basic design and my analysis of that design is based on gravity wall considerations. However, this wall uses a proprietary block (ReCon) and a design which considers the wall as a segmented gravity wall.

The components that are used in this segmented wall are sold by ReCon, and the concrete blocks that were used in this design were of varying lengths that are interconnected by keyways to form a battered gravity wall. The manufacturers of this block have developed a propriety analysis program that is based on the NMCA and AASHTO considerations for wall of this type. I used this ReCon software program to check this design.

The design, as drawn, complies with the manufacturers recommended block sizes based on wall height. Therefore, these walls are compliant with the manufacturer's criteria, so they represent the standard practice for the design of segmented gravity walls. **This letter certifies that these walls are properly designed and drawn.**

In the job notes on the plans there is a section titled "Reinforced Backfill Placement" that references the use of geogrids. Geogrids are not used in this design, but the procedures for soil compaction procedures and tests is applicable to this design so this section does not need to be altered.

This design calls for a 6" cocoon of concrete to be placed around the reinforced concrete pipe. The cocoon is being used as a pad between the ReCon blocks and the pipe. I suggest the use of #4 reinforcing rods (Each-Way @ 6" oc on all three sides of the cocoon), as reinforcement in this concrete cocoon. This suggestion is based on the fact that the existing pipe has been crushed so I believe that this additional reinforcement makes good sense. This change only requires a note on the present plans.

Please call me if you have any questions.

Sincerely,

  


Neal B. Mitchell, Jr. PE SE  
MA #18222