



# GRAHAM ASSOCIATES, INC.

CIVIL ENGINEERS  
PROFESSIONAL SERVICES SINCE 1984

TWO CENTRAL STREET  
IPSWICH, MA 01938

PH: 978-356-2756  
FAX: 978-356-4880  
EMAIL: hl.graham@verizon.net

January 2, 2020

Town of Georgetown  
Planning Board  
1 Library Street  
Georgetown, MA 01833

Attn: John Cashell  
Town Planner

Re: *Technical Planning Review Report No. 1*  
*Site Plan – Carleton Drive (G. Mello)*  
*H.L. Graham Project No. 95-00136-79*

Dear Board:

On December 18, 2019 I received revised plans to replace the "75%" plans I had received November 21, 2019. Also received November 21 was the application packet, drainage report and traffic report. Our initial review comments on the submitted material follows.

I plan to attend your January 8, 2020 meeting and can elaborate on this report as needed.

Very truly yours,

**H.L. GRAHAM ASSOCIATES, INC.**

H.L. Graham, P.E.  
President  
Technical Review Agent  
Georgetown Planning Board

HLG/gb  
Enclosure

cc: Harry LaCortiglia  
Bob Watts  
Matilda Evangelista  
Joanne Laut  
Bruce Fried

- c. Under the heading of Fire Protection, a separate area "... away from ... buildings..." is to be provided for quick dumping and quenching or snuffing of hot loads. That area should be depicted on the plan.
- d. Under the heading of Recycling Operations, what provisions are proposed to prevent material (e.g. paper) in roll-off containers in the residential drop-off area from becoming wind-blown litter?
- e. Under the heading Screening and/or Fencing, the Board should consider a CONDITION in any approval action making Mello responsible for disposal of any rubbish or recycle material left outside their locked gate at Carleton Drive.
- f. Under the heading of Inspections, the Board should be listed as a recipient of copies of the required inspection reports proposed to be carried out on a semi-annual basis.

**B. Traffic Impact and Access Study (TIAS)**

The following comments are the result of our review of the Traffic Impact and Access Study prepared by Greenman-Pederson, Inc. (GPI). The initial (25± page) report is dated March 19 2019. The updated (13± page) report is dated April 26, 2019.

1. As we interpret the two above-mentioned reports we perceive the difference to be as follows.

The March report used TMC's and ATR counts in the "study area" along with "empirical data ... provided by the proponent" to develop Trip Generation numbers. The April report used TMC's and ATR counts at the "existing driveway" of the existing transfer station to develop Trip Generation numbers.

The March report based the Trip Distribution on travel patterns in the "study area" and assumed an estimated 200 residential users per average day. The April report based Trip Distribution on observed data at the "existing driveway". This second study also revealed that residential trips at existing facility was closer to 300 vs. 200 on the average day.

The differences in these two approaches obviously impacts Trip Generation, Trip Distribution, Capacity and Queue analyses. The April report was much more specific relative to observing truck and vehicles individually. We are inclined to consider Table 1 on Page 3 of the April report to trump Table 5 on Page 16 of the March report. We are also inclined to accept Fig. 5 (intended we believe to have been labeled Fig. A-4) of the April report to be more representative than Fig. 5 on Page 19 of the March report.

The Trip Generation Summary Table 1, Page 3 of the April report and the proposed Trip column of that table are, we believe, the important numbers of proposed vehicle trips to the new facility for the Planning Board to focus on.

Carleton Drive appears to be in reasonably good condition with some exceptions. The pavement is deteriorated at the corners of Carleton Drive where it meets Route 133. The first few hundred feet of Carleton Drive off Route 133 has required some pothole patching. The shoulders along both sides of Carleton Drive, especially the southerly side, are narrow with some pavement edge raveling. Increased and significant heavy truck traffic could accelerate deterioration of the road and shoulders and the Town would be looked to for repairs.

The sole resident and numerous established businesses along Carleton Drive will experience an increase in noise from the proposed increase in truck traffic.

Traffic conflicts at the intersection of Carleton Drive and Route 133 will occur during peak use times as the larger west bound transfer trailer trucks turn into Carleton Drive from Route 133. According to the April report under Trip Distribution on Page 3, 70% of the truck traffic will travel to/from the east on Route 133. The Truck Turning Movements attachments in the April report demonstrates on Figure T-1 the potential conflict suggested where an 18-wheeler needs the first 150'± or more of the full width of Carleton Drive to make this 145°± right turn from Route 133 into Carleton Drive.

The April report on Page 7 under Truck Turning Maneuvers suggests that "As the arrival of these vehicle [meaning the oversized WB-50/WB-65 trucks] will be in control of G Mello Transfer Station, these vehicles can be scheduled to arrive during off-peak hours to avoid conflicts with vehicles exiting the site or school bus pick-up and drop-off times on Carleton Drive". It will also be important to schedule the movement of these vehicles to/from this site well outside the hours when the existing Carleton Drive businesses have shift changes. This issue may be one of the more important issues for the Board to consider. Any CONTIONAL APPROVAL should probably consider specific language in regard to this matter.

4. Both the March and April reports present estimated Capacity and Queue analyses for the various intersections in the study area. The intersection of greatest concern as would be expected is Carleton Drive with Route 133.

The following is a summary of the Level of Service (LOS) estimates for Carleton Drive Southbound at that intersection with the LOS of the March report in standard text and the April report in bold italic text.

	<u>2019 Existing</u>	<u>2026 Build</u>
Weekday AM	D	F <b><i>F</i></b>
Weekday PM	F	F <b><i>F</i></b>
Saturday Midday	C	F <b><i>D</i></b>



Based on our review of the TIAS, the projected Weekday AM Peak Hour Heavy Vehicle trip count is 20 entering vehicles and 17 exiting vehicles. Is the plan, which is designed to fit the site, have adequate space to not only provide maneuvering in and out of the building, but also lineal space to provide queuing of waiting vehicles along the internal entry drive without blocking the residential drop-off area? The scaled distance between the residential drop-off entry drive and the scale house is about 500' (400' to the exist drive). This would accommodate 8-10 tractor-trailer type trucks.

2. As previously mentioned where on the site is the required "hot load" area? It should be identified on the plan.
3. The plans call for and detail wood post and beam guardrail. Is this the most appropriate guardrail material for this type of site use?
4. The plans call for a pavement section (on Sheet D-3), which shows 1½" surface course on one detail and 2½" "surface course on a second detail? These sections also call for only 2½" of binder. For this use, at least 4" of binder (in two courses) should be considered, especially since all pavement will be over placed fill.
5. A detail should be provided for the proposed "modular block gravity retaining wall with guardrail". The guardrail (detail) previously mentioned does not show it placed on top of or at the face of a wall.

Sections should be provided to show how the retaining wall, curb (CCB), guardrail, paving and grading work together around the site.

6. The plans call for a proposed retaining wall where residents might toss their trash and recycle materials into open containers. The plans should detail this area and wall to show how this 4' high wall is constructed to be user safe.
7. Common sense would say that the residential trash and recycle containers would fill up only at the westerly ends where users would dump materials? How is full use of each container going to be accomplished?
8. As the TIAS suggests, as many as 100 passenger vehicles might be expected during the Saturday Midday Peak Hour. With only ten parking spaces available, what queuing of arriving vehicles is expected along the entry drive during this busy time? Again, does the proposed operation fit into the plan?
9. The architects and civil plans call for bollards at building corners. The civil plans are missing bollards shown on the architect's plans at the corners of the men's restroom and the electrical room (northwesterly building corner).

We recommend two additional bollards at the easterly end of the retaining wall extending easterly from the easterly side of the building.

2. The post-development calculations should be revised as follows:

- The "woods/grass comb" designation should not be greater than that of the existing conditions, wetland replication notwithstanding.
- It appears that the paved area in post-development subcatchment PS9 is somewhat underestimated.
- In some cases the orifice size and invert elevations at Ponds 1P, 2P, 3P and 5P do not match those shown on the plans.

3. Data obtained in soil testing performed in the infiltration basins and the detention basin should be provided and shown in the details for these stormwater management facilities.

E. Conclusions

1. There are a lot of detailed comments within this report which we recommend be worked through by the Applicant and his team to the satisfaction of the Board. There are a few comments within this report, which we suggest are more serious in nature, which should be dealt with up-front before the details are addressed.
2. We have mentioned our concern as to whether or not this 3.5± acre site (clear of wetland and restrictive wetland buffer zones) is really large enough for the proposed 500 ton per day processing operation. We have mentioned whether or not the site itself can accommodate the proposed peak hour vehicle trips of 20 larger trucks along with the other proposed peak hour traffic.
3. We have mentioned herein our concern about the proposed increase in traffic on Carleton Drive and at the intersection of Carleton Drive and Route 133.

First we are concerned about the increase in heavy truck traffic and the deterioration of the road and shoulders. The traffic report suggests that some 280 heavy vehicle trips per day (Weekday) may be expected along with some 610-passenger vehicle trips per day (Weekday). Before operation even begins, a significant amount of fill, perhaps on the order of 30,000-35,000 cubic yards, will have to be brought in to bring the site up to the proposed grade. Unless there are some provisions established between the Town and Applicant to address this issue, future road repairs will fall to the Town.

Our second concern with the proposed increase in traffic is the impact it may have on the existing businesses on Carleton Drive. That concern would be the conflict of transfer station traffic with the businesses shift change traffic as well as the impact of transfer station traffic, particularly heavy truck traffic and maneuvering, on the LOS at the Carleton Drive and Route 133 intersection.