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October 16, 2020

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

Attn: John Cashell
Town Planner

Re: *Technical Planning Review Report No. 2*
Site Plan – Carleton Drive (G. Mello)
H.L. Graham Project No. 95-00136-79

Dear Board:

This letter report is in response to our review of revised plans and documents submitted for the above referenced matter. Specifically we have received and reviewed the following materials:

- A copy of a letter with enclosures to the Board dated May 27, 2020 from Rebecca L. Brown, P.E. of Greenman-Pedersen, Inc.
- A copy of a letter with enclosures to the Board dated March 3, 2020 from Rebecca L. Brown, P.E. of Greenman-Pedersen, Inc.
- A copy of a letter to the Board dated May 12, 2020 from Scott P. Cameron, P.E. of The Morin-Cameron Group, Inc.
- A set of 24"x36" prints of plans (16 sheets) entitled "G. Mello Disposal Corp. Solid Waste Transfer Station, Carleton Drive, Georgetown, Massachusetts" submitted by the Morin-Cameron Group, Inc. The first 13 sheets of the plan set proposed by The Morin-Cameron Group, Inc. show a revision date of 5/12/20 (Rev. No. 2). The last 3 sheets of the plan set are dated June 24, 2019. These 3 architectural sheets were prepared by RKB of Braintree, MA.
- A 1/4" x 8" x 11" bound document entitled, "Stormwater Management Report, Proposed Transfer Station, Land Off Carleton Drive, Georgetown, Massachusetts", last revised May 12, 2020 and prepared by the Morin-Cameron Group, Inc.



We have organized this letter report in the same format under several headings as our last review letter of January 2, 2020. Although it makes for a long letter we are repeating for the Board's convenience our initial comment in standard text and our comments of this report in **bold text**. We have not brought in the written responses to our January 2, 2020 report by Greenman-Pedersen, Inc. (GPI) or the Morin-Cameron Group, Inc. (MCG). The Board will have to look at those letters on the side.

Comments for this review report follow:

A. Site Plan Approval Application

1. Exhibit A, under paragraph II. Project, reads that, "The Applicant proposes a permitted capacity of 500 tons per day (108,900) tons per year) ... ". Exhibit B, at Table 1 states, "500 tons per day (tpd) average 550 tpd max, 177,500 tons annually". This latter figure would equate to a 355-day annual operation of 6 days per week with 10 holidays. These latter figures would seem to be the more accurate figures to use in any approval by the Board, which would permit a 6-day per week operation or 355 operating days per year. Note that the operating hours as stated in the referenced table are foot noted to permit shipping, processing and maintenance activity ... outside the indicated hours of operation. This is an important provision for both the Board's consideration and Applicant's operation as it may allow some of the 18-wheeler shipping activity to occur outside of peak hour traffic flows that would impact Carleton Drive businesses and residents as well as residential facility users.

No further comment.

2. The Board I any Condition Approval action should consider **CONDITONS** regarding Noise, Litter, Vermin, Odor and Bird Hazard Controls consistent with the statements offered at Exhibit B, Table 1.

No further comment.

3. At Exhibit B, Table 1, under Water Quality Controls, it is sated that "... Concrete typing floor acts as a containment barrier preventing water from infiltrating into the ground and from exiting the building". The plans do not address the collection and removal of this liquid. It cannot be directed to either the subsurface infiltration systems or the septic leach field. The plans should provide a tight tank appropriately sized for this liquid. Any approval by the Board should include a **CONDITON** that this liquid be contained in a tight tank and that a contract with a service hauler for disposal be provided.

MCG's response was that a "... tight tank will be designed". What is the reason for not doing that design now and including it in the plans? The Board should still consider a **CONDITON that a contract with a service hauler be required to dispose of this liquid.**

4. This document includes a Proposed Operation and Maintenance Plan dated February 6, 2019 prepared by Cornerstone Construction Services, LLC of Woburn, MA and said to have been developed in accordance with 310 CMR 19.200. When finalized, it should be included by reference in any **CONTIONNAL** approval by the Board. We presume that compliance with this regulation will be monitored by the State and Town Building Inspector. The following comments are offered from our review of this document:

No further comment.

- a. Under the heading of Equipment, the regulation requires that "all compactor or other processing units be in duplicate with each unit capable of handling the expected design tons per day". the document suggests "...Mello owns additional equipment which is available for transport to the Facility for use in the daily operation, as necessary". Is this to mean the second (required) compactor will not be installed?

The regulations we reviewed certainly implied that some duplicate equipment would be built-in to the process on site. MCG's response suggests standby equipment will be provided for installation within 24 hours of breakdown. Does this satisfy the regulations? Maybe the Board just defers this compliance issue to the State?

- b. Under the heading of Staffing, the document suggests that there will be seven (7) employees at the site during operations. The plans propose five (5) parking spaces for employees. The traffic report plans for five (5) employees (pg. 15 of the TIAS).

The revised plans adequately address this comment.

- c. Under the heading of Fire Protection, a separate area ".... away from ... buildings..." is to be provided for quick dumping quenching or snuffing of hot loads. That area should be depicted on the plan.

The revised plans adequately address this comment.

- d. Under the heading of Recycling Operations, what provisions are proposed to prevent material (e.g. par) in roll-off containers in the residential drop-off area from becoming wind-blown litter?

Supplemental documents submitted appear to adequately address this comment.

- 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.

No further comment.

- 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.

No further comment.

B. Traffic Impact and Access Study (TIAS)

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 STR counts at the "existing driveway" of the transfer station to develop Tripp Generation numbers.

The March report based the Trip Distribution on travel patters 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 users on the average day.

The differences in these two approaches obviously impacts Trip Generation, Trip Distribution, Capacity and Query analyses. The April report was much more specific relative to observing truck and vehicles individually. We are inclined then 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 umbers of proposed vehicle trips to the new facility for the Planning Board to focus on.

GPI's response acknowledged. No further comment.

2. A few minor editorial noted in these report include:

- The graphic representation of the location of the site should be on the opposite side of Carleton Drive of the various figures in the reports.

Revised documents adequately address this comment.

- The I-95 NB OFF-RAMP on the northerly side of Route 133 should be labeled ON/OFF-RAMP.

Revised documents adequately address this comment.

- Several references in the reports are made to Weekday AM Peak Hour entering vehicle trip of 35, which should be 45.

Revised documents adequately address this comment.

- Figure 5 in the updated report should, we believe, be labeled Figure A-4.

Revised documents adequately address this comment.

- One Page 2 of the initial report, land uses along Route 33 near the site are characterized as industrial uses. This is true of the uses in Carleton Drive but not along Route 133, which are largely residential.

GPI's response acknowledged. No further comment.

3. As the existing transfer station processes 50± tons per day and the proposed station will be permitted for 500± tons per day, one might immediately think that the traffic would increase ten fold.

The reports suggest "... the proposed facility is not expected to result in a measurable increase in residential volume on weekdays ..." and "... assumed to process 300 residential vehicles on a peak weekday". So where is the increased tonnage expected to come from? Table 1 on Page 3 of the April report provides this answer.

Heavy vehicle trips are proposed to approximately triple on a daily Weekday, to increase by approximately 5 times on a Weekday AM peak hour and to more than triple on a Saturday Midday peak hour. The Trip Generation section, second paragraph, Page 15 of the March report further defines the expected truck traffic "... on a typical weekday" as:

60 roll-off container trucks
50 small commercial trucks
10 packer trucks
20 transfer trailers

This significant amount of truck traffic to/from the site brings forward the following concerns:

- Deterioration of Carleton Drive and responsibility for potential repairs and/or resurfacing.
- Noise from residents and business along Carleton Drive.
- Traffic conflicts on Carleton Drive at Route 133.

Carleton Drive appears to be in reasonable 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 33 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 repairs.

GPI's bottom line response to this comment is that the Applicant will be paying taxes to the Town, which in turn could be used to repair and maintain Carleton Drive. This may be the case unless some legal agreement can be reached between the Town and Applicant prior to approval that obligates them to improvements prior to occupancy and repairs and maintenance after occupancy. The Board may wish to consult the Town attorney on this matter? With or without such agreement a pre-Mello road survey with pictures may be a CONDITION consideration for the benefit of both the Town and Applicant. We remain

concerned that 140± trucks per typical weekday, 14% of which are estimated to be transfer trailers and 7% of which are estimated to be packer trucks, are very likely to cause considerable damage to the surface and pavement edges of this roadway nearing its expected life span.

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

No further comment.

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 TI-1 the potential conflict suggested where an 28-wheeler needs the first 105' 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 buss 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 conditional approval should probably consider specific language in regard to this matter.

GPI in their May 27, 2020 response dedicates more than a typewritten page response to this previous comment. They have included their March 3, 2020 letter and five (5) Truck Turning Figures based on survey data performed by MCG as we recommended. The conclusion of their assessment was that only one truck turning movement being a transfer trailer truck making a right turn-in to Carleton Drive from Route 133 required the need to cross into the opposing travel lane on Carleton Drive. They justify acceptance of this conflicting traffic condition by making five noted points. I do not necessarily disagree with any of the rationale offered. However there is one, probably the most important, point offered as bullet five. The Board in any approval action should build in a CONDITION requiring G. Mello to control the timing of the arrival (and departure) of these large trucks west bound on Route 133 turning right into Carleton Drive so as to minimize conflicts at the subject intersection. The Board might go further by suggesting in the CONDITION that failure to adequately prevent these conflicts shall be good cause for G. Mello to be required to provide a traffic detail(s) to regulate traffic movements at the intersection. Said detail(s) would be at the expense of G. Mello. The Georgetown Police Department would be the entity in determining the need or not for the detail(s) and when they are needed.

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 in 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 <i>F</i>
Weekday	F	F <i>F</i>
Saturday Midday	C	F <i>D</i>

These are not particularly attractive LOS classification for either the existing conditions or those proposed. If the new facility does locate as proposed, anything that can be done to prevent deterioration of traffic flow at this intersection should be implemented.

GPI provides a detailed response to this comment.

Several statements stand out in their response. The Board should note the following statements:

- **".... drivers existing Carleton Drive are expected to experience an average of approximately 75 seconds of delay during the weekday AM peak hour and 93 seconds of delay during the weekday PM peak hour."**
- **"The 95th percentile queues exiting Carleton Drive onto Route 133 are not expected to exceed two vehicles during any of the analysis time periods"**
- **".... and queues on Route 133 are not expected to exceed a single vehicle."**

5. The April report presents a Truck Turning Movements section that was not include in the March report.

Our first critique of this information is that it is cased on truck tracking over an aerial overlay. We consider this to be a most important piece of information for the Board to understand as to how certain truck maneuvers might impact the flow of traffic at the Carleton Drive/Route 133 intersection. As such we do not consider the aerial overlay to be appropriate. We recommend these depictions be provided to the Board on a to-scale surveyed base plan of the intersection that defines the centerline paint marking of Route 133, the pavement edges of both roadways, and the material composition and edges of shoulders on both roadways.

As presented the Board can see on Fig T-1 that a WB-65 westbound truck turning into Carleton Drive would use the first 150' or more of the full width of Carleton Drive to make this maneuver. Any of that space (queue length for 6± cars) taken up by vehicles would have to be vacated before this truck could begin this maneuver. This condition highlights the importance of scheduling the arrivals (and departures) of these type vehicles during non-peak operating hours of the proposed facility and/o the shift change hours of the existing Carleton Drive businesses.

An additional figure should be presented to show the location where any vehicle exiting Carleton Drive would have to be stop to allow the above critical maneuver to occur.

See responses to B.3. above.

6. We found no mentions in either report of the condition where eastbound vehicles stopped on Route 133 and waiting to run into Carleton Drive, present potential conflict for through traffic. The LOS data previously discussed implies as LOS A for this condition? Does it assume through traffic would pass to the right around the waiting vehicles"? The pavement in this area is not striped to suggest this because it is not wide enough to suggest this because it is not wide enough to safely do so. We see this area and this condition as a safety matter and recommend the Board request the traffic engineer's address same.

Based on GPI's analysis, this condition would be quite infrequent. They do suggest too that the 20 foot wide pavement ".... allows adequate space for a through vehicle to bypass a left-turning vehicle". Our concern remains that if this is to be an acceptable maneuver for a through vehicle, then shouldn't the pavement be striped as such and signage be installed as well? If the 20' pavement width does not meet MassDOT design guidelines, then the pavement for the appropriate length should be widened?

C. Plans Review

1. Our first comment is not so much about whether the plan fits the site but rather about whether the operation fits the plan.

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 staking of waiting vehicles along the internal entry drive without blocking the residential drop-off area? The scaled distance between the residential drop-off entries drive and the scale house is about 500' (400' to the exist drive). This would accommodate 8-10 tractor-trailer type trucks.

Based on estimates of numbers of vehicles/trucks per unit of time, weigh-in times and movement through the scale areas, other servicing rates and available staging areas, GPI has suggested that there should be no problem with queue storage that would impact the residential drop-off entry/exit driveways. Should their estimates not prove out, the issue would most likely be confined to an internal site problem, which G. Mello would have to remedy.



2. As previously mentioned where on the site is the required "hot load" area? It should be identified on the plan.

This comment has been adequately addressed.

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?

This comment has been adequately addressed.

4. The plans call for a pavement section (on Sheet D-3) which 1½" surface course on one detail and 2½" "surface course on a second detail? These sections also call for any 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.

This comment has been adequately addressed.

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 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.

This comment has been adequately addressed.

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.

This comment has been adequately addressed.

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?

This comment has been adequately addressed.

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 stacking of arriving vehicles is expected along the entry drive during this busy time? Again, does the proposed operation fit into the plan?

Again, based on GPI's estimates of numbers of vehicles per unit of time arriving at the site and servicing rates, GPI has suggested that adequate queue storage is available in the site as designed. Again, should their estimates be flawed, the issue would most likely remain an internal site problem which G. Mello would have to remedy.

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.

This comment has been adequately addressed.

10. What is the purpose of the 24' wide drive along the southerly end of the building?

This comment has been adequately addressed.

11. Sheet C-3 shows tow rectangles scaling $10' \pm \times 80' \pm$ off the northerly end of the building. What do these figures represent?

This comment has been adequately addressed.

12. Consideration should be given to the access to the two restrooms. As shown a user would open or close the door with little space between the doorway and public drop of traffic coming around the corner.

This comment has been adequately addressed.

13. Lighting as shown on the plan as provided luminaries on 25' tall poles (Sheet L3) appear to be adequate except in one area being the northwestern corner of the site?

This comment has been adequately addressed.

14. The plans do not show where snow storage is planned. A good part of the site is lined with guardrail and wall, which could make this exercise quite challenging?

This comment has been adequately addressed.

15. Sheet C-4 shows a long run planned for the roof drains off the easterly side of the building. Consideration should be given to taking them onto Infiltration System 3P?

This comment has been adequately addressed.

16. The plans call for a detail on Sheet D-1 of the proposed grass/gravel combo filter strip 97 D-3 supposed to represent this proposed MP? Please revisit.

This comment has been adequately addressed.

17. The details presented on Sheet D-1 through D-4 should be revisited. As previously mentioned there are details and sections, which should be added. There are details, which are not pertinent, and there are errant references to other sites e.g. Parker Street" and Boston Way".

This comment has been adequately addressed.

18. We will need to review in the field with the design engineer the potential drainage impact to the abutter to the west as a result of filing of this lot and construction of the proposed retaining wall along the common property line with the abutter. Development of this site cannot cause any impoundment of drainage on the abutter.

This comment has been adequately addressed.

D. Stormwater Management Report

The following comments are the result of our review of the Stormwater Management Report dated October 9, 2019 and prepared by The Morin-Cameron Group, Inc.

1. The pre-development calculations should be revised as follows:
 - The pre- and post-development watershed maps should be revised to include runoff from the adjacent property at 16 Carleton Drive.
 - The area designated as "gravel surface" is considerably larger than the area of the existing gravel access drive. The areas where there are stockpiles of material should be assigned a Cn value in the "<50% grass cover" designation.

This comment has been adequately addressed.

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.

This comment has been adequately addressed.

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.

This comment has been adequately addressed.

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.

These detailed comments have been 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.

If the estimates presented by GPI are correct, these concerns are resolved. If not, these concerns will be an internal site issues for G. Mello to address.

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 the 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. The concern would be the conflict of transfer station traffic with the business 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.

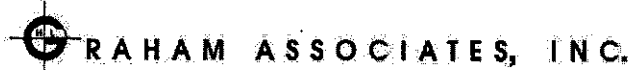
Lastly there will be an increase in noise, again particularly noise generated by truck traffic, on the sole resident and established businesses abutting Carleton Drive.

We have expressed our remaining concerns herein.

4. The application and plans should address the collection and removal of liquid wastes from the tipping floor area.

This comment remains open as discussed herein.

5. The topographical information presented in the plans does not extend westerly off site. Accordingly, we cannot discern whether or not the proposed filling of this site will impact the existing overland flow of drainage from westerly to easterly, potentially causing a drainage issue for the abutter to the west. This concern must be addressed.



This comment has been adequately addressed.

This concludes our second review and report. Should you have any questions, please contact me.

Very truly yours,

H.L. GRAHAM ASSOCIATES, INC.



H.L. Graham, P.E.

President

Technical Review Agent

Georgetown Planning Board

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