June 9, 2016

GCG Associates, Inc.
Civil Engineering and Land Surveying
84 Main Street
Wilmington, MA 01887

RE: Colbea Enterprises, LLC
125 Union Street
Ashland, MA
AEI Project #: 1741.214

In response to your Engineering Review of the Site Plans and Special Permit and Variance, for 125 Union Street, Ashland, MA (May 5, 2016 submittal), we offer the following responses;

General Comments:

Plan

Plan Sheet D-1 – Site Demolition Plan

1. The limit of Homer Avenue asphalt sidewalk to be removed should be specified on the plan. **(Resolved.)**

   As noted.

2. The 'existing concrete ***curb*** to be replaced' label along Union Street should be verified. **(Resolved.)**

   As noted.

Plan Sheet C-1 – Site Improvement Plan

1. The proposed Homer Avenue concrete sidewalk limit should be specified on the plan. **(Resolved.)**

   As noted.

2. Existing crosswalks and travel lanes/pavement marking for Union Street and Homer Avenue should be shown on the plan. **(Resolved.)**

   As noted.

3. Proposed handicap ramp locations should be specified on the plan, handicap ramp(s) should line up with the existing crosswalks on Union Street and Homer Avenue. Ramp(s) connects to the crosswalk(s) should be equipped with detectable warning panel. **(Resolved.)**

   As noted.

4. 282-3.1.2 – the proposed Drive-Thru use in Industrial Zoning District requires a Special Permit from the Zoning Board of Appeals (ZBA). The applicant has filed a Special Permit Application for the proposed use and Section 282-4.1.1 Building Setback.

   (ZBA hearing is tentatively scheduled for 6/28/16.)

5. 282-4.1.1 – The proposed building and canopy setback do not meet the minimum front and sides yards requirements. The applicant has requested a ZBA Special Permit for the building setback. General Notes 15 and 16 and General Utility Note 11 reference proprietary rights of the Engineer of Record. The Engineer of Record should be identified on the plan.

   (ZBA hearing is tentatively scheduled for 6/28/16.)

6. 282 – 5.1.2 – Parking requirements calculations should include break down calculations for the leasable floor area. The proposed building consists of 2,940 square feet ground floor area is 4,410 square feet. The parking calculations were based on 2,080 square feet (47%) leasable floor area, based on retail business parking requirements of 1 space per 180square feet of leasable area the required spaces should be 11.55. Calculations should be verified, clarification for the 47% leasable floor area should be provided. **(The plan stated 2,940 square feet ground floor and 1,470 square feet basement, please justify the 2,080 square feet leasable area for the parking calculation. There is 2,330 square feet of wasted/un-leasable area.)**

   The leasable area has been updated on the site plan to 2,696 sf. The leasable area is calculated by subtracting stairs, utility and storage areas from the total gross building area. New required parking = 15 spaces, 11 parking spaces provided + 8 spaces at pumps. **A waiver to provide 11 parking spaces in lieu of the required 15 parking spaces is being requested.**

7. 282-5.1.3 – the proposed southwesterly parking spaces is located within the 10 setback of Union Street Right–of-Way. **(Resolved.)**

   As noted.

8. 282-5.1.4.2 – This section requires not more than one entrance and one from such lots per two hundred feet of street frontage on Union Street, and a single entrance exit on Homer Avenue. **(Waiver is required.)**

   The existing driveways are to remain. **A waiver to allow the existing curb cuts to remain is being requested.**

9. 282-5.1.4.5 – Plan should show sufficient stacking space for the drive-thru facility. **(Resolved.)**

   As noted.

10. 282-5.1.6.3.b – For parking areas of eight cars or more, there shall not be more than one entrance and one exit from such lots per two hundred feet street frontage thereof. The site existing has two entrances and exits along Union Street's 167.5 frontage. The plan proposed to maintain the existing curb cuts. **(Waiver is required.)**

    The existing curb cuts are to remain. **A waiver to allow the existing curb cuts to remain is being requested.**

11. 282-5.1.4.6 – The plan calls for a new Dunkin' Donuts Drive-Thru menu board, and is a fast food drive-thru facility, the plan should show the required minimum four spaces between the pick-up window and order point, at least four spaces provided in advance of the menu board, one space at the order point, and one soave at the menu board. The menu board(s) should match with the proposed Signage Plan SG-2. **(Assuming the order point is located in the Menu board, there are sufficient spaces for the queues. Order point location should be called out on the plan.)**

    A note indicating that the Order point location is at the menu board has been added to the plan.

12. 282-5.2 – Loading area is required. Loading area should be provided for re-filling the underground fuel storage tanks. Parking spaces on top of the storage tanks are not recommended.**(Proposed loading area is only 32 feet in length, 65 feet length is required. Plan should show direction of the loading vehicle path and post restriction for loading vehicle onto street. Plan should show loading area for building uses.)**

    Loading area has been updated to the required size. Given that the fuel truck will load at

off peak hours, the proposed loading area will be utilized for both re-fueling the tanks and building use. A Q-3 Truck turning Plan has been provided.

13. 282-5.3.7 – The proposed signage exceed the maximum of signs allowed. This is an existing non-conforming situation. The applicant has requested a ZBA variance relief, the applicant has proposed 10 signs with total area of 251.9 square feet (currently there are seven signs on site with total sign area of 129.7 square feet).
    (ZBA hearing is tentatively scheduled for 6/28/16.)

14. 282-5.4.1.2 – Landscape screening is required along front lot line (six feet minimum required), existing non-conforming condition. **(A 3 feet width island including curbing on both sides has been proposed. Curbing material should be specified on the plan. There is no screening feature proposed in the 2 feet wide green strip. Reducing the un-leasable building area should be considered. Waiver is required.)**

    A note has been added to the plan specifying the curb material. **A screening waiver is being requested.**

15. 282-5.4.2.3 – Verify the existing uses of the abutting property (East side abutter), if the property is currently in residential uses, than a six feet wide landscape buffer is required. There is currently no landscape buffer at the southerly portion of the property line between Lot 14-423, this is an existing non-conforming situation. **(A 6 feet high stockade fence has been proposed, waiver is required.)**

    A waiver to maintain the 6' stockade fence as a buffer is being requested.

16. 282-5.4.2.3 – Buffer area along Union Street line is required. This is an existing non-conforming situation. However, the existing fuel pump traffic is parallel to the Union Street sidewalk and the proposed pump station is perpendicular (head on) to the sidewalk pedestrian should be provided. Landscape feature should be incorporated to minimize headlight glare onto Union Street. **(A 3 feet width island buffer has been proposed. Waiver is required.)**

    A waiver to allow a 3' green space as a buffer along Union Street is being requested.

17. 282-5.4.4 – Parking areas containing eight or more spaces shall contain or bordered by at least one tree per eight spaces. Such trees shall be in any case not further than five feet from the parking cell. **(Reducing the un-leasable building area should be considered. Waiver is required.)**

    We are unable to provide the trees at the location required. The trees have been added to the north of the site. **A waiver to provide trees greater than 5' from the parking cell is being requested.**

18. 282-6.2.1 – Driveway(s) sight distance in each travel direction should be provided; the driveways are existing and may not meet the 400 feet of visibility requirements. The westerly Union Street driveway is located within ten feet of a side lot line. The easterly Union Street driveway is located within fifty feet of the intersection of side lines of intersecting streets. The two curb openings occupied more than forty percent of the lot frontage on Union Street. The driveways and curb cuts are existing non-conforming situations. **(Sight distance should be shown for the Homer Avenue access.)**

    Sight distance on Homer Avenue has been added to the site plan.

19. 282-6.2.2 – Plan should show the required off street queues space (two spaces per filling station) for each pump. The proposed pumps are located within forty feet of a street line. The existing pumps do not meet the forty feet setback. **(There is insufficient space for traffic maneuvering the pumps, a traffic study is recommended.)**

    The existing pumps are approximately 19' from the front property line, the proposed pumps are approximately 30' from the front property line. This non-conforming aspect of the site is being made less non-conforming. Adequate distance for safe circulation has been provided on all sides of the proposed canopy layout. We do not see the need for a traffic study. **A waiver to allow the pumps as proposed is being requested.**

20. 282-8.1.4 – The proposed basement is below the 180 floodplain elevations. The proposed first floor finish elevation is at elevation 180.15', 0.15 feet above the 100-year flood elevation. Basement should be flood proved and electrical and furnace system should be set above the flood elevation for safety. **(Asphalt damp proofing will not prevent flood water entering from the first floor and create an electrical hazard during 100- year flood event.)**

    The proposed building will be designed to provide the basement with added protection against flooding impacts. The design is being reviewed for an alternate location for the electrical service.

21. 282-8.1.4 – The eight parking spaces at the fuel dispensing island should be shown on the plan, parking aisle dimensions should be included on the plan. Aisle width for the three southeasterly parking spaces is approximately twenty feet. Plan should show and prove adequate maneuver spaces for parked vehicle. **(There are no queues spaces provide on the plan.)**

    A Q-2 Dispenser Queue Plan has been provided.

Plan Sheet C-2 – Site Grading Plan

1. The proposed infiltration basin should equipped with an emergency overflow with erosion protection (rip-rap lined). Maintenance access path should be provided around the basin **(Resolved.)**

   As noted.

2. There appears to be filling in the easterly portion of the proposed building with existing grade below 180. The fill volume should be included in the Cut and Fill calculations. **(Resolved.)**

   As noted.

3. The southerly pavement area (south of canopy) is graded with surface runoff sheet flow to Union Street; this area should be graded to drain an oil/grit separator for treatment. This area is next to the fuel tanks refill/loading area, any chemical spill within this area would drain directly to the street catch basin. **(A 1,470 square feet area remains untreated and drains toward Union Street, new catch basin #4 should be connected to the oil/grit separator for treatment. GCG recommends re-grading the 1,470 square feet area and direct the surface runoff to catch basin #4.)**

   The grading and drainage design has been updated. Due to the re-grading of the southwest driveway, catch basin #3 has been relocated and piped into Chamber system #1.

4. Catch Basin #1 connects directly to Catch Basin #2, MassDEP requires catch basins be designed as off line system in order to qualify for 25% TSS removal, a drainage manhole should be added to meet the requirements. **(Resolved.)**

   As noted.

5. The SC-740 Chamber System does not meet the two feet separation to the estimated seasonal high ground water. **(Please verify the seasonal high water table separation to chamber system #2, there is no soil test pit to verify the seasonal high water table for chamber system #1.)**

   Chamber system #2 consists of SC-310 Chambers which do meet the required two feet minimum separation to the seasonal high ground water.
   Due to the fact that the proposed Chamber system #1 will be installed at the location of the existing canopy and fueling pumps, it would require the facility to be close down to perform soil testing. Seasonal high ground water table will be confirmed prior to install

the infiltration system. A note has been added to the plan.

6. The two Chamber infiltration systems are Shallow UIC Class V Injection Wells (310 CMR 27.00), MassDEP registration is required. A 10' minimum setback to the property line is required for the Chambers and Oil Separator unit. (Reference – Standard Design Guidelines for Shallow UIC Class V Injection Wells). **(Resolved.)**

   As noted.

7. Clean out/inspection port for each chamber system and isolator row should be specified on the plan.

   The inspection ports have been added to the plan.

Plan Sheet C-3 – Site Utility Plan

1. Sewer service and grease trap inverts should be shown on the plan grease trap outlet pipe diameter should be called out on the plan. **(Resolved.)**

   As noted.

2. Drain pipe diameter, length and slope should be labelled on the plan. Inverts for the roof drain flared end section and the forebay inlet pipe from oil/grit separator should be specified on the plan. **(6 inches diameter roof drain collection pipe slope should be called out; calculations showing the pipe has capacity to handle the roof runoff should be provided.)**

   Plan has been updated and calculations have been attached to the stormwater report.

Plan Sheet L-1 – Site Landscape Plan

1. 282-5.4.5 – The proposed landscape plan does not meet the screening and planting requirements. There is no landscape buffer along Union Street. Interior landscaping area is required in parking areas containing eight or more spaces. This is an existing non-conforming condition. **(There is no landscaping screening provided along union Street, Waiver is required.)**

   Due to the configuration of the facility and site restrains we cannot provide any additional interior landscaping beyond the existing non-conforming conditions. A 3' landscape buffer strip has been added along Union Street. **A waiver to allow a 3' green space as a buffer along Union Street is being requested.**

Plan Sheet ER-1 – Site Erosion and Sediment Control Plan

1. The minimum length for temporary gravel construction entrance exit should be fifty feet. **(Resolved.)**

   As noted.

2. Silt sack should be specified to protect the on-site catch basins during construction. The double catch basin inlet for the northerly oil/grit separator should be shown on the plan with temporary silt sack protection. **(Resolved.)**

   As noted.

3. The existing catch basin located at the northwest corner of Homer Avenue and Union Street intersection should be protected with silt sack during construction, silt sack details and specification should be specified on the plan. **(Resolved.)**

   As noted.

4. Post Construction Phase – Note #8, snow storage location is not specified in the plan. A separate long term Operation and Maintenance Plan should be required. **(Please verify any conflicts between the snow storage area and the landscape plan.)**

   Plan has been updated.

Plan Sheet 1 – Lighting Plan

1. 282-8.6.10.3 – The photometric lighting plan shows illumination spilled over onto Lot14-423 (west side abutter), some illumination over the Homer Avenue and Union Street sidewalks is acceptable. **(Illumination spill remains onto Lot 14-423.)**

   Per the Lighting Consulting Company, the lights are shielded and are at the lowest LED count they are available in. We are unable to reduce spill without causing an unsafe environment onsite, taking lights out can run to the risk of being unsafe for customers pumping fuel.

2. 282-8.6.10.7 – The proposed light fixture should be mounted no higher than fifteen feet. (Site Light detail, Plan sheet SD-1, specified 18' mounted height). (**Resolved.)**

   As noted.

Plan Sheet SG-1 & SG-2 – Existing Signage Plan and Proposed Signage Plan, respectively

1. 282-8.5.3.7 – The existing and proposed number of signs exceeded the maximum number of signs regulated in this section. This is an existing non-conforming situation. The applicant has requested a Zoning Board of Appeals variance relief, the applicant has proposed 10 signs with total area of 251.9 square feet (currently there are seven signs on site with total sign area of 129.7 square feet). (ZBA hearing is tentatively scheduled for 6/28/16)

   As noted.

Plan Sheet SD-1 – Site Detail Sheet

1. 1.282-8.6.10.7 – The proposed site light detail exceeded the fifteen feet maximum mounting height. (**Resolved.)**

   As noted.

2. Handicap curb ramp detail with detectable warning panel in front of the existing crosswalk for Homer Avenue and Union Street sidewalk should be included on the plan. (**Resolved.)**

   As noted.

3. Roadway sidewalk detail with existing granite curbing for the Homer Avenue and Union Street sidewalk should be included on the plan. **(A sidewalk detail with granite curb should be provided for the sidewalks within the streets Right-of-Way, sidewalk should be in compliance with the ADA Ashland Department of Public Works requirements.)**

   A concrete sidewalk replacement detail has been added to detail sheet SD-1.

Plan Sheet SD-3 – Site Detail Sheet

1. Oil/Grit Separator outlet pipe diameter should be specified on this detail drawing or called out on the utility plan.**(Outlet pipe diameter for oil/grit separator #2 should be specified.)**

   Oil/ grit Separator #2 detail has been updated.

2. Oil/Grit Separator access ports should be equipped with manhole frame and cover and raised to the finish grade.**(DMH frame and grate for oil/grit separator #2 should be specified.)**

Oil/ grit Separator #2 detail has been updated.

3. There is no sewer manhole proposed on this site, drainage manhole detail should be added. **(Resolved.)**

As noted.

Plan Sheet Q-1- Drive Thru Queue Plan

1. **(282-5.2.3 – Loading vehicle travel direction should be provided to assure no backing onto street.)**

A Q-3 Truck turning Plan has been provided.

2. **(282-6.2.2 – Queues spaces for gas pumps is required)**

A Q-2 Dispenser Queue Plan has been provided.

3. **GCG recommends a traffic study to show sufficient maneuvering space for the site layout.**
The existing pumps are approximately 19' from the front property line, the proposed pumps are approximately 30' from the front property line. This non-conforming aspect of the site is being made less non-conforming. 27' – 30' aisle widths have been provided to provide adequate distance for safe circulation on all sides of the proposed canopy layout. We do not see the need for a traffic study.

Stormwater Report

Massachusetts Stormwater management Standards Analysis:

1. Standard 4 – Proposed catch basins #1 and #2 are connected in line. MassDEP requires Deep Sump Catch Basin to be designed as off-line system for 25% TSS removal credit. **(Resolved.)**

As noted.

2. Standard 7 – The proposed work is considered redevelopment project, a Checklist for Redevelopment Projects should be submitted. (Volume 2 – Chapter 3)**(Not submitted)**

The Checklist for Stormwater Report has been attached to the package.

3. Standard 9 – A long term Operation and Maintenance (O&M) plan is required, the plan should cover the maintenance of the catch basins, oil/grit separators, underground chamber infiltration system, sediment forebay, infiltration basin, spill prevention, street sweeping, and snow storage location. O&M sample log, cost estimate. O&M responsible party and signature should be included in the plan. **(Maintenance Log attachment is missing.)**

   The Maintenance Log has been attached to the package.

4. Standard 10 – Illicit discharge should be addressed on the report by the applicant. **(Applicant should submit a no illicit discharge statement.)**

   A no illicit discharge statement has been added to the Stormwater report.

5. Proposed Watershed Plan – the watershed area adjacent to the Union Street labelled drains to CB#1, it appears this area drains to Union Street. **(Resolved.)**

   As noted.

6. Cut and Fill Map – there is fill area located at the easterly side of the proposed building should be included in the cut and fill calculations. **(Resolved.)**

   As noted.

HydroCAD Report

1. The proposed SC-740 Chamber System does not meet the two feet separation to seasonal high water table requirements. **(Please verify the separation for the Chamber System #2, additional test pits should be provided for Chamber System #1 location.)**

   Chamber system #2 consists of SC-310 Chambers which do meet the required two feet minimum separation to the seasonal high ground water.
   Due to the fact that the proposed Chamber system #1 will be installed at the location of the existing canopy and fueling pumps, it would require the facility to be close down to perform soil testing. Seasonal high ground water table will be confirmed prior to install the infiltration system. A note has been added to the plan.

2. Coverage over the SC-740 Chamber system should be verify, a minimum of 18 inches plus the proposed pavement thickness is required. **(Resolved.)**

   As noted.

3. Both underground Chamber infiltration systems are considered Shallow UIC Class V Injection Well (310 CMR 27.00), please verify the system and oil/water separator setback requirements. (Minimum 10 feet separation to the property line is required, please verify other setback requirements.)**(Resolved.)**

   As noted.

4. Isolator row sizing calculations for the two chamber systems should be included in the report. **(Resolved.)**

   As noted.

5. Sediment forebay sizing calculations should be submitted for review. **(Resolved.)**

   As noted.

6. Mounding calculations for the chamber systems are required. **(Resolved.)**

   As noted.

7. Oil/Grit Separator sizing calculations should be submitted for review. MassDep requires the first chamber to provide the pool storage volume for the water quality volume (WQV).

   Oil / Grit Separator sizing calculations are provided on the stormwater report.

8. Catch basin should be designed as off-line system to qualify for 25% TSS removal, catch basin to drainage manhole connection is recommended. **(Resolved.)**

   As noted.

9. Infiltration Basin and Chamber System should be designed to draw down within 72 hours, calculations support should be submitted. **(Resolved.)**

   As noted.

10. Infiltration basin should be equipped with an emergency spillway with erosion protection per Stormwater Management Handbook. **(Spillway sizing calculations and erosion protection is required.)**

    Spillway sizing calculations will be provided.

11. Vehicle access path should be provided for the infiltration basin. **(Please verify landscape plan conflicts with rear access path and accessibility around the pond.)**

    Due to the site configuration, we are unable to provide a vehicle access path for the infiltration basin without affecting the sites stormwater drainage system. The basin will be maintenance by hand.

CHAPTER 282 - ZONING

Note: Zoning is reviewed with respect to sections 8.1 – Floodplain Overlay District (FPOD) and 9.4 – Site Plan Review
The site is located within a FPOD with the 100-year base flood elevation at 108.0 per FIRM Map number 25017C0514F, dated July 7, 2014

282-8.1.1 The proposed cut and fill calculations did not account for the easterly building fill area.

The Cut and Fill calculations have been updated.

282-8.1.1 Hazard protections – the proposed basement is entirely below the flood elevation 180.0, and the proposed first floor elevation 180.15 is less than two inches above the 100-year flood elevation. The basement floor plan (Plan sheet A1.0) called out electrical panel on the basement wall. The proposed plan should show prevention for flood water entering the basement and safe guard the electrical system.

The proposed building will be designed to provide the basement with added protection against flooding impacts. The design is being reviewed for an alternate location for the electrical service.

282-8.1.3 The proposed works is within the 100-year floodplain and requires filing with the Ashland Conservation Commission and MassDEP.

As noted.

282.9.4.4 The location of the parking spaces at the gas station should be shown on the plan, the travel flow compatibility for the proposed parking spaces and loading area should be demonstrated.

The eight spaces and parking aisle dimensions at the fuel islands have been added to the site plan. The three parking spaces have been modified and reduced to one space.

282-9.4.1.1 A construction timetable should be included in the application.

As noted.

Sincerely,

Alan J. Micale, P.E.
Vice President