

COPY



100 GROVE ST. | WORCESTER, MA 01605

November 29, 2017

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

EXHIBIT #11

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RECEIVED

**Subject: Proposed Site Improvements
88 Worcester Street
Special Permit and Site Plan Review**

NOV 29 2017

**PLANNING BOARD
GRAFTON, MA**

Dear Joe:

We received the following documents on November 10, 2017:

- Correspondence from Bowdich and Dewey, LLP to Graves Engineering, Inc. dated November 10, 2017, re: "Application for Modifications of Special Permits and Grant of Site Plan Review Approval and Signage Special Permits...", with enclosures.
- Full-size plans entitled Proposed Site Improvement Plans, 88 Worcester Street, Grafton, Massachusetts dated November 7, 2017 with Sheets 1, 2 and 4 revised November 8, 2017, prepared by MHF Design Consultants, Inc. for Petrogas Group New England, Inc. (16 sheets)
- Reduced-size plans entitled Proposed Site Improvement Plans, 88 Worcester Street, Grafton, Massachusetts dated November 7, 2017, prepared by MHF Design Consultants, Inc. for Petrogas Group New England, Inc. (16 sheets)
- Reduced-size architectural elevations dated September 28, 2017, prepared by Upland Architects, Inc. (1 sheet)
- Reduced-size signage and architectural plans dated October 25, 2017, prepared by Harbinger, Inc. (6 sheets)
- Bound document entitled Stormwater Management Report, Proposed Site Improvements, 88 Worcester Street, Grafton, Massachusetts dated November 7, 2017, prepared by MHF Design Consultants, Inc. for Petrogas Group New England, Inc.
- Bound document entitled Traffic Impact and Access Study, Retail Motor Fuel Outlet, 88 Worcester Street, Grafton, Massachusetts dated November 2017, prepared by Greenman-Pedersen, Inc. for Petrogas Group New England, Inc.

Graves Engineering, Inc. (GEI) has been requested to review and comment on the plans' and supporting documents conformance with applicable "Grafton Zoning By-Law" amended through May 8, 2017; Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook and standard engineering practices. Our scope of work excluded review of the fuel storage and dispensing equipment and signage, and we performed only a cursory review of the traffic study. As part of this review, GEI visited the site on November 21, 2017.

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Our comments follow:

Zoning By-Law

1. In the project narrative included with the Special Permit and Site Plan Approval Applications, details about the hours of operation, maximum number of employees on the largest shift, and frequency of shipping deliveries were not included. This information should be provided. (§1.3.3.3.c)
2. The plans must identify all properties within two hundred feet of the property. The property for Republic Plumbing Supply was not identified. The plans must include the approximate location of the buildings, driveways, and parking areas within two hundred feet of the property lines. The buildings within two hundred feet include but are not limited to Pepperoni Express, Republic Plumbing Supply, Unibank, Shell/Xtramart, the home at 1 Hitchings Road, Fitzzy's Car Wash, and Homefield Credit Union. (§1.3.3.3.d.11)
3. The Table of Zoning Regulations on Sheet 4 (Site Plan) should state the actual percentage of existing and proposed building cover instead of "<30%". The percentage of pavement must also be included. (§1.3.3.3.d.15)

Hydrology & MassDEP Stormwater Management Review

4. GEI reviewed the hydrology computations and found them to be in order.
5. Compliance with the MassDEP Stormwater Standards and Handbook is reasonable.
6. In the Stormwater Report, the narrative for Standard #3 references an underground Stormtech arch chamber and stone infiltration system. This should be revised to reference the rain garden.

General Engineering

7. The eastern driveway entrance should be moved farther to the east, perhaps approximately ten feet, to reduce the potential for conflicts between vehicles entering the site and vehicles leaving the eastern-most fueling positions and making a right turning maneuver toward Worcester Street.
8. On Sheet 2, there are unidentified lines (linetype consisting of a dash and three dots) north and west of the site. These lines need to be identified.
9. On Sheet 5, there are overlapping and unreadable notes on the left side of the page regarding wetland boundaries and sewer piping. The notes should be moved so they are legible.
10. On Sheets 5 and 6, there is an unidentified dashed line running through the road just below the "Worcester Street" text. This line should be identified or removed.
11. On Sheet 7, the "Schematic Rain Garden Area Detail" shows a bottom elevation of 508 feet on the diagram. This elevation needs to be revised to be consistent with the table of information also presented in this construction detail.


12. On Sheet 7, the "Overflow Weir Details" calls out "6 inches of crushed gravel base course" but does not specify the gravel size.
13. On Sheet 8, the "Light Fixture Detail" shows a pole height of 20 feet with 2.5 feet of base exposed. On Sheet 12 (Lighting Plan), the pole height is 15 feet on a two-foot base. The information needs to be consistent.
14. On Sheet 9, the "Trench Section for Storm Drain" construction detail is shown twice. One of these details could be removed.
15. On Sheet 9, Note 2 of the "Outlet Protection – Flat Detail" is incomplete and should be revised.
16. GEI performed a cursory review of the Traffic Impact and Access Study, with emphasis on crash rates, sight distances and traffic generation. The Study appeared to be in order. The Study found crash rates below State and District 3 rates, adequate sight distances and proposed traffic generation that would be less than traffic generation if the former fueling and service station use were resumed. The major factors that influenced the traffic generation rates were the number of fueling positions (eight existing and eight proposed), the trip generation rates (the proposed use is only slightly less than the existing use if the existing use were resumed) and the percent of pass-by trips (the number of pass-by trips would increase, thereby reducing the number of trips destined specifically to the site). GEI has no reason to dispute the Study's findings.

General Comments

17. GEI has not reviewed the plans with respect to the fuel storage and dispensing system. We understand that the Grafton Fire Department will review the proposed fuel storage and dispensing design.
18. GEI has not reviewed the plans with respect to signage. We understand that the Grafton Planning Board will review the proposed signage.
19. GEI did not review the application with respect to regulations administered by the Grafton Conservation Commission. Whereas the site is located within areas jurisdictional to the Commission, the design engineer should be aware of the existence of local wetland and stormwater regulations.

We trust this letter addresses your review requirements. Feel free to contact this office if you have any questions or comments.

Very truly yours,
Graves Engineering, Inc.



Jeffrey M. Walsh, P.E.
Vice President

cc: Joshua Lee Smith, Esq.; Bowditch and Dewey

