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Zoning Board of Appeals Town Offices 459 Main Street Medfield, MA 02052

Ref: The Parc at Medfield

Comprehensive Permit

West Street

Dear Members of the Board:

We are in receipt of a comment memorandum dated June 30, 2012 from Professional Services Corporation (PSC), who has provided a review of the comprehensive permit application. We offer the following response to PSC's comments. For ease of review, we have restated those comments that require response.

# **SECTIONS I & II**

**Response:** Sections I and II of PSC's memo require no response.

### **SECTION III: CONTENTS OF THE APPLICATION**

#### PROJECT ELIGIBILITY LETTER

1. Comment: "A project eligibility/site approval letter was provided from DHCD on January 17, 2012 and is valid for a period of two years. Upon its review of the site, financial feasibility, the initial pro-forma, eligibility of the organization and site control, DHCD determined the project to be eligible under the Low Income Housing Tax Credit (LIHTC) Program. Upon issuance of a Comprehensive Permit, DHCD stipulates that final approval must be obtained pursuant to 760 CMR 56.04 (7) and LIHTC funds must be awarded prior to construction."

**Response:** No response required.

#### **EVIDENCE OF SITE CONTROL**

2. Comment: "The Applicant has demonstrated site control to the satisfaction of DHCD. A Purchase and Sale Agreement was provided in correspondence dated 14 March 2012 from Medfield North Meadows to Gatehouse Development Corp."

**Response:** No response required.

#### **EXISTING CONDITIONS PLANS**

3. Comment: "The plan set includes detailed Existing Conditions Site and Site Area Plans showing topography and vegetation, open spaces, property lines, existing buildings and structures, existing on-site utilities and infrastructure, existing public and private streets, wetlands, and buffers."

**Response:** No response required.

4. Comment: "The date(s) of the wetland and resource area demarcation should be provided. The Order of Resource Area Delineation referenced in the narrative should be identified on the plan."

**Response:** The wetlands delineation has evolved over the past 10 years through a course of three separate ANRAD filings, culminating with the issuance of an Order of Conditions for the previously approved Medfield Woods condominium comprehensive permit project. The latest Order of Resource Area Delineation was issued on May 20, 2010 and remains valid (a copy of which is included as Exhibit A). In accordance with M.G.L. Chapter 40B, the comprehensive permit site plan is preliminary. The date of the latest wetlands delineation will be added to final plans to be provided as part of the Building Permit process.

5. Comment: "Inspection of the Flood Insurance Rate Map for the Town of Medfield Massachusetts Norfolk County, Community Panel Number 250242 0005 B indicates that site lies within Zone C, which is classified by FEMA as "Areas of minimal flooding," and Zone B, which is classified as "areas between the limits of the 100-yr and 500-yr flood, or certain areas subject to the 100-year flooding with average depths less than one (1) foot, or where the contributing areas are less than one square mile." The local floodplain elevation of 125 is approximately two (2) feet higher than the FEMA elevation. The plans adequately delineate both the FEMA and local floodplain limits."

**Response:** No response required.

### **EXISTING SITE CONDITIONS REPORT**

6. Comment: "The submitted existing site conditions report is generally sufficient."

**Response:** No response required.

7. Comment: "The site has provided unrestricted access since its partial development in the 1980's, prior to that the site was reportedly used as a brickyard. If a first level Environmental Assessment in accordance with MGL Ch 21E is otherwise available, it should be furnished for record purposes."

**Response:** Phase I and Phase II Environmental Assessments have been completed. The narrative summary of each of these reports is included herein as Exhibit B and Exhibit C.

#### PRELIMINARY ARCHITECTURAL PLANS

8. Comment: "Preliminary Drawings - Preliminary architectural drawings, including typical plans and elevations for were submitted as part of the comprehensive permit filing and are generally sufficient. Information for housing types and bedroom mix data was also provided."

**Response:** No response required.

9. Comment: "The application has indicated that twelve of the ninety-six units are either MAAB (Massachusetts Architectural Access Board) compliant with respect to handicap access or hearing impaired residents."

**Response:** No response required.

10. Comment: "Public amenities, such as bike racks, exterior benches, trash receptacles should be identified on either the architectural or landscape design drawings."

**Response:** The Applicant will provide appropriate pedestrian amenities including bike racks, exterior benches and trash receptacles. In accordance with M.G.L. Chapter 40B, the comprehensive permit site plan is preliminary.

#### PROPOSED SITE DEVELOPMENT PLANS

11. Comment: "The site development plans are more detailed and the design has been more fully developed than is typical for Comprehensive Permit plans."

**Response:** No Response Required.

12. Comment: "Minor site modifications are required on the 120 North Meadows Road property to facilitate reconstruction and separation of the project site from the xxx. In the interests of administrative expediency, these minor modifications to the 120 North Meadows Road should be expressly authorized by the Comprehensive Permit."

**Response:** We agree that it would be appropriate for the Zoning Board to authorize the minor off-site work as part of this application. All such work lies within existing easement areas which provide the Applicant with the legal right to perform such work. As was discussed during the Medfield Woods application, these easements were specifically provided to de-couple the proposed development from the existing and still active commercial site to the north.

13. Comment: "A dumpster with enclosure is centered between Buildings #3 and #4. There does not appear to be a similar facility for the front portion of the project, which includes Buildings #1 and #2 and the clubhouse facility. This may be problematic with respect to phasing."

**Response:** The maintenance building and dumpster enclosure will be constructed with the first phase of the development, which, at this time, is expected to include Buildings #1 and #2 and the club house.

14. Comment: "A portion of the clubhouse and patio construction involves filling of BVW. We recommend that this element of the design be refined to minimize impacts on this resource area prior to construction."

**Response:** The area in question is not within BVW (bordering vegetated wetland). The proposed development proposes no filling of BVW whatsoever. Rather, the area in question is a shallow man-made swale which is periodically subject to shallow ponding from the easterly wetland. This shallow swale falls within the Bordering Land Subject to Flooding (BLSF) associated with the easterly pond. The proposed filling within this shallow swale will only displace approximately 550 cubic feet of BLSF volume, which is quite small, and which will be fully replicated on-site as shown on the Preliminary Site Plan.

An almost identical filling of BLSF in this same shallow swale was already approved by the Conservation Commission in the Order of Conditions issued in 2010 for the Medfield Woods Comprehensive permit project already approved for this site by the Town. The Applicant will explore any additional details associated with the proposed minor BLSF filling and replication with the Conservation Commission when the new Order of Conditions is filed.

15. Comment: "A reinforced turf fire lane has been proposed between Buildings #3 and #4. If an easement can be obtained from the 120 North Meadows Road property, the reinforced turf fire lane should extend to an access drive on that property providing a second means of access for both properties."

**Response:** As the Applicant has discussed with the Police and Fire Chief and as has been stated in past responses, the Applicant is willing to provide a gated reinforced turf fire lane from the rear village area to the adjacent commercial site at 120 North Meadows Road to serve as an additional emergency access point to the development. This will require, however, that the Zoning Board of Appeals amend the December 13, 2006 special permit amendment issued for 120 North Meadows Road (issued during the approval process for the aforementioned Medfield Woods comprehensive permit project). Within said amended Special Permit, the Zoning Board specifically precluded the requested emergency access. The Applicant does, however, have an easement system in-place, affording them the legal right to provide the requested access.

If the Zoning Board issues an amended special permit for 120 North Meadows Road, the Applicant will show the second emergency access lane on the final plans to be provided as part of the Building Permit process.

16. Comment: "Final approval of fire access to buildings, emergency response times, water pressure and volume, alarms, and other fire protection and safety related matters should be obtained from the Fire Department prior to construction."

**Response:** Physical access to the site for emergency personnel has been shown on the preliminary site plan (except that an additional emergency access point may be provided as discussed in comment #15). Water pressure, volume, alarms and fire suppression and protection systems will be approved by the Fire Department in accordance with the Building Code prior to construction.

17. Comment: "The geometry of the roads and all on-site driveways should accommodate the largest Fire Department's design vehicle. The design vehicle should be selected based upon consultation with the Fire Department."

**Response:** The fire department has provided turning data for their largest fire truck and the site access driveways are designed to accommodate it. Please refer to comment #18 below for addition discussion on this topic.

18. Comment: "In particular, the geometry of the drives providing access to Building 1 should be upgraded to accommodate fire apparatus."

Response: The driveway to Building #1 can be accessed by most emergency vehicles moving in a northerly direction. The largest fire truck, the 75-foot ladder truck, however, is slightly restricted by the configuration of the driveway entrance to the Building 1 parking lot. We have considered alternate design options and have met with the Fire Chief to discuss the concern. The driveway configuration provides the necessary turning radii if the fire truck can mount the northerly center landscape island. The Chief has agreed that as long as this northerly center landscape island is mountable, access will be adequate. The Applicant therefore agrees that the northerly center island will have sloped curbing as indicated on the preliminary site plan and further that they will obtain the Fire Chief's approval prior to construction with respect to the surface finish of the landscape island. No trees or shrubs will be planted in this island. Rather, landscape options such as cobble stones, reinforced turf, perennial only plantings, or some combination of the above will be employed to ensure adequate access by the Fire Department's ladder truck to the parking lot for Building 1.

The Fire Chief has also asked that the proposed deciduous tree on the north end of the southerly center driveway island be changed to an ornamental variety to prevent it from becoming excessively large. The Applicant would agree to such a change as a condition to be reflected on the final plans to be provided as part of the Building Permit process.

19. Comment: "The Applicant should confer with Police Officials and provide documentation indicating that they are satisfied with access and safety issues during construction and operation of the project. We anticipate that uniformed traffic officers will be required during certain phases of construction."

**Response:** The Applicant has met with the Police Chief, who has already provided comments to the Board and spoken at a public hearing. The Applicant will meet further with the Police Chief prior to construction to discuss the specifics of construction activities and the necessity for traffic officers. Given the ample access to the site and given that nearly all of the work will be performed a significant distance from West Street, traffic officers are only expected to be needed for any proposed work that will occur within the layout of West Street.

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<sup>&</sup>lt;sup>1</sup> Note that there is no impediment to any size emergency vehicle entering the Building 1 parking area from the northerly driveway.

20. Comment: "The plans indicate that the project will incorporate two permanent signs on either side of the entrance. Details on the size, illumination, style, and legend should be provided."

**Response:** Sign details have not been determined yet. In accordance with M.G.L. Chapter 40B, the comprehensive permit site plan is preliminary. Sign details will be provided as part of the Building Permit process. Please note, however, that the Applicant has not requested any waivers to Section 13 of the Zoning Bylaw (Sign Bylaw).

21. Comment: "The plans should note that construction will be performed in accordance with applicable laws and regulations regarding noise, vibration, dust and sedimentation."

**Response:** A note to this effect will be added to the final plans to be provided as part of the Building Permit process.

22. Comment: "Given the residential nature of many of the abutters across the street, we recommend that the Comprehensive Permit be conditioned to authorize the Building Inspector or other official to require securing and fencing or work areas during construction."

**Response:** The Applicant has no objection to a requirement for temporary security fencing for portions of the site under construction.

23. Comment: "The site is not expected to be completed in two construction phases. We recommend that the Comprehensive Permit be conditioned to require that a generalized Construction Phasing Plan be submitted prior to construction showing access and utilities for each phase. The first phase should be 'stand-alone' in terms of stormwater management, utilities and emergency access."

**Response:** The development will be completed in either one or two phases, depending on the availability of funding. If the site is developed in two phases, the front village area is planned to be the first phase of the development. In such case, all major utility systems, including water, sewer, gas, and underground electric, telephone and cable necessary to serve the first phase and to maintain such services to the existing commercial building north of the site, will be installed in the first phase. In addition, all stormwater basins and systems will be constructed in the first phase. The Applicant will identify the limits and sequence of phasing more specifically on the final plans to be provided as part of the Building Permit process.

### TRAFFIC AND CIRCULATION

24. Comment: "The Main Site Access Drive that extends between the site entrance and Building 3 (the Main Site Access Drive) will accommodate all on-site traffic. Sloped granite curb is proposed to extend past Building 1. We recommend that sloped granite curb be installed along the remainder of Main Site Access Drive. Sloped granite curb offers better visibility of the edge of traveled way and is more durable in terms of plow damage."

**Response:** Given the reduced traffic flows to the rear village area, the Applicant is of the opinion that sloped granite curbing is not warranted. It is our opinion that cape cod berm installed on the binder course is one of the best types of curbing for avoiding snow plow damage and that it will be suitable for the proposed use. The combination of cape cod berm and the adjacent landscaping will provide an excellent visibility demarcation for the edge of the travelled access driveway.

25. Comment: "The Main Site Access Drive should be posted for "No Parking" to promote good general vehicular access and circulation and to ensure emergency vehicle access."

**Response:** The Applicant does not object to such a condition and will depict the requested signage on the final plans to be provided as part of the Building Permit process.

26. Comment: "Centerline (DYCL) pavement markings are recommended along the Main Site Access Drive."

**Response:** The Applicant does not object to such a condition and will depict the requested pavement markings on the final plans to be provided as part of the Building Permit process.

27. Comment: "It is unclear whether there will be a school bus stop on West Street, or within the project site. The School Department should be consulted regarding school bus operations. A dedicated turnout should be provided on West Street if applicable."

Response: The widened sidewalk area at its terminus with West Street is intended to serve as a bus stop waiting area. Based on comments previously provided by various Town officials and Boards, the Applicant has agreed to increase the size of the bus stop area. Since comprehensive permit plans are preliminary in nature, the Applicant will reflect the enlarged bus stop design on the final plans to be provided as part of the Building Permit process. A dedicated school bus turnout will not be provided as traffic on West Street should be stopped when children are boarding and un-boarding the school bus as is customary throughout town, even on major roadways. Thus, a turnout is not recommended.

28. Comment: "The mail facility location is not optimal. The location is not convenient for the residents of Buildings 1 and 2 and vehicles operated by the residents of Buildings 1 and 2 might improperly cross the centerline of the Main Site Access Drive to reach the mail facility. The mail facility location is also not convenient for residents of Buildings 3 and 4 who are most likely to pick up mail in the afternoon while entering the site and traveling northbound on the Main Site Access Drive."

**Response:** Based on the Applicant's experience is other developments, a central location, proximal to all of the buildings, is most appropriate. A location on the easterly side of the main driveway would unnecessarily crowd the clubhouse area. The volume of traffic at the proposed location is extremely light and it is therefore our opinion that the placement shown on the preliminary site plan is adequate for the facility.

29. Comment: "Although the curvilinear layout of the Main Site Access Drive is a viable traffic calming measure, a raised crosswalk in front of the clubhouse would further limit speed and enhance pedestrian safety."

**Response:** A raised crosswalk causes other concerns, such as issues with snow plowing and aesthetics. The extremely light volume of traffic at this location mitigates pedestrian safety concerns. However, the Applicant does not object to a condition that would require a color change at this crosswalk for additional visual distinction. This can be accomplished through the use of a different color pavement, solid painting of the crosswalk, or other similar approaches. If desired, this can be depicted on the final plans to be provided as part of the Building Permit process.

### **UTILITIES**

30. Comment: "Cement lined, bituminous coated, ductile iron watermain Class 52 (CLDIP) should be specified. The water distribution system should fully comply with Water Department requirements. Fire flow test information should be researched and a fire flow test taken if no nearby locations are available."

**Response:** Utility Note #1 on sheet C-8 specifies the use of thickness class 52, cement lined ductile iron pipe for water mains. A fire flow test has been taken, which found 1,455 gpm of flow available with a residual pressure of 75-80 psi, which is more than adequate for this development. Final calculations of total available fire flow and other fire suppression system sizing data will be provided on the final plans to be provided as part of the Building Permit process.

31. Comment: "Hydrant locations should be reviewed with the Fire Department."

**Response:** The Applicant met with Chief Kingsbury on March 9, 2012, at which time fire hydrant placement was reviewed. The Chief has asked that the location of the hydrant in the front village and that the location of the hydrant near the clubhouse be adjusted. The Applicant has agreed to these changes and asks that the Board include a condition that the Applicant satisfy the Fire Chief as to the location of fire hydrants, and that such revised locations be depicted on the final plans to be provided as part of the Building Permit process.

32. Comment: "The 8-inch sewer from Building #4 beneath the parking area and to SMH E has less than 6-inches of cover. The depths of the entire system upgradient of SMH-D should be checked including the laterals from the maintenance building as well as Buildings #3 and #4."

Response: The sewer line from SMH D to SMH F has at least 1.8 feet of cover, which is adequate. The sewer line from SMH D to SMH E has a minimum of one foot of cover and is also adequate. There is one relatively small area along the middle of the pipeline from SMH E to Building #4 with less than one foot of cover. Upon further review of this area, the Applicant hereby agrees to raise the entire rear village area by approximately one-half foot, which would provide a minimum of one foot of cover over all sewer lines. Such depths are often found in residential applications. In order to memorialize this understanding, the Applicant would be willing to agree to a condition that the grades of the rear village will be raised by approximately one-half foot and that the sewer lines in the development will have a minimum of 1.0 feet of cover. These final grading adjustments will be depicted on the final plans to be provided as part of the Building Permit process.

33. Comment: "It appears likely that a sewer lift station with pump and associated emergency power will be required for the rear of the project. If emergency power is required, a gas fired generator is recommended to preclude potential diesel spills. The generator should be visually and acoustically shielded."

**Response:** The Applicant does not intend to implement a sewer pump station into the site design. Minor adjustments will be made, if necessary, when the final grading plan is completed to ensure that all sewer pipes have a minimum of one foot or more of cover. Raising the grade of the rear village by approximately one-half foot positively eliminates any possibility of a need for a sewer pump station for the proposed development. These final grading plans will be included in the plans to be provided as part of the Building Permit process

34. Comment: "The new 4-inch sewer force main serving 120 North Meadows Road should be encased or sleeved in proximity to Stormwater Basin #4."

**Response:** The Applicant is agreeable to imposing this requirement as a condition of approval, with the final design to be depicted on the final plans to be provided as part of the Building Permit process.

35. Comment: "An easement should be provided across the project site to the benefit of 120 North Meadows Road property and should extend along the sewer forcemain and along the gravity sewer lines from the 120 North Meadows Road property to West Street."

**Response:** As is shown on sheet C-2, a temporary utility easement is already in place running to the benefit of 120 North Meadows Road. Per the recorded easement document and per the existing agreement between the property owners, once the final site is constructed, the temporary easement will be abandoned and a new, permanent utility easement will be granted to 120 North Meadows Road over the water main, sewer force main, gravity sewer main, gas service, and underground electric, telephone, and cable services that all pass through this site to 120 North Meadows Road.

36. Comment: "The existing pump station generator on the 120 North Meadows Road site should be visually and acoustically shielded due to its proximity to Buildings 3 and 4."

**Response:** The Applicant is agreeable to surrounding the existing pump station and generator with acoustical shielding on the easterly, southerly, and westerly sides, leaving the north side open for the owner of 120 North Meadows Road to access. The details of this shielding will be depicted on the final plans to be provided as part of the Building Permit process.

37. Comment: "A Site Lighting Plan should be developed prior to construction using a maximum pole height of 16 to 18 feet. Light fixtures should be consistent with residential scale and style typically acceptable in the town. Light fixtures should preclude point sources of light that are visible to motorists and to the residents on the south side of West Street."

**Response:** The Applicant is agreeable to a condition that pole height not exceed 20 feet (so that fewer light fixtures will be needed to light the site) and furthermore that light fixtures be consistent with residential scale and style typically acceptable to the Town and which precludes point sources of light that are visible to motorists and to the residents on the south side of West Street. In addition, the existing mature tree line across the front of the site will completely shield most of these new lights from the existing homes on the opposite side of West Street.

38. Comment: "A photometric plan should be provided prior to construction."

**Response:** The Applicant is agreeable to a condition that requires that a photometric analysis of the proposed driveway and parking lot lighting system be included in the final plans to be provided as part of the Building Permit process.

#### **GRADING AND DRAINAGE**

39. Comment: "A portion of the project grading will extend off-site to the 120 North Meadows Road commercial site. Also, some of the runoff will be collected into their stormdrain system. Grading and utility easements may be required or otherwise provided in legal documents applicable to the separation of these properties."

**Response:** A comprehensive grant of cross-easements is already in place and was specifically prepared in anticipation of the comprehensive permit development of this site and taking into account the minor off-site work shown on the preliminary site plan. The general configuration and location of these various easements are depicted on sheets C-2 and C-3 of the preliminary site plan. The proposed design segregates the two site's stormwater management systems. In fact, the proposed design will reduce the amount of stormwater flowing into the 120 North Meadows stormwater systems and there will be no direct interconnection between the proposed development's stormwater management system and the existing stormwater management systems on 120 North Meadows Road.

40. Comment: "Basin #1, adjacent to Building #1 will surcharge the upgradient system under all storm events. Under the 10-year and greater storm, settled solids in the forebay will resuspend and likely wash through the main basin impoundment area and into the wetland system."

Response: Sediment forebays are often located within stormwater basins and it is therefore not unusual for there to be some submergence during a large storm event. Re-suspension of settled sediment, however, would require substantially turbulent flow conditions. In the 10-year storm event only a portion of the forebay would be submerged and only by a few inches. Even in the 100 year storm, the maximum depth of water in the sediment forebay is 0.7 feet. The sediment forebay is intended to pond, which is why a stone checkdam is located at the downstream end of the forebay. This checkdam will trap sediment and will prevent re-suspension. In addition, the deep sump manhole will have the capacity to trap additional sediment prior to flows entering the infiltration basin. Peak discharge rates from Basin #1 are also extremely small. In the 10-year storm event, the peak discharge is 0.02 cfs. Even in the 100-year storm event the peak discharge is only 0.18 cfs and these flow rates assume no ongoing infiltration

through the basin during the storm event, so discharge flow rates would therefore be less than calculated. Such small discharge flow rates will ensure that flow patterns through the flat shallow basin will be such that re-suspension of settled solids will not occur.

41. Comment: "Given the proximity of the project to several DEP Resource Areas, including bank, bordering vegetated wetland, land under water, bordering land subject to flooding, as well as the Zone II of one or more drinking water supply wells (based on MassGIS), structural oil-water separation devices should be added to capture hydrocarbons from pavement flows prior to entering the basins. We recommend that CB-2 should be upgraded to a Stormceptor unit, similar to the unit near the mail facility."

**Response:** The water quality volume, which essentially represents the so-called "first flush" of runoff where the vast majority of pollutants from paved surfaces is captured, is treated and entirely infiltrated and will therefore not discharge to the resource areas described above (i.e. wetland areas). Furthermore, each treatment train that captures pavement runoff has been designed to include an oil-water separating structure, which is a manhole with the equivalent design as a hooded deep sump catch basin, prior to the infiltration basin. Each treatment train that captures pavement runoff exceeds the TSS removal required by MassDEP and federal regulations. CB-2 is simply a collection device designed to reduce the overland distance that runoff has to travel across paved surfaces before it enters the sediment forebay for Stormwater Basin #1 and is not included in the TSS removal calculations for Stormwater Basin #1. It is our opinion that a costly proprietary oil-water separator in this location is unnecessary. Furthermore, manhole-style proprietary separators generally cannot accommodate the inlet configurations we have implemented to reduce unnecessary site fill (i.e. dual pipe inlets and outlets).

42. Comment: "The project appears to involve filling within a flood plain. A compensatory flood storage area is indicated behind Building #3. Computations verifying that the compensatory volume has been provided on a foot-by-foot basis are required but can be deferred until the Notice of Intent is submitted."

**Response:** It is important to note that no filling is proposed within a FEMA "flood plain." Rather, a shallow swale which runs into the area of the proposed club house is classified as a bordering land subject to flooding (BLSF) under the Wetlands Protection Act and is only associated with the artificially perched water levels from the upper easterly pond<sup>2</sup> (not from the Charles River wetlands system). The proposed compensatory flood storage area behind Building #3 is

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<sup>&</sup>lt;sup>2</sup> The upper easterly wetland/pond is artificially elevated due to the manmade outlet structure.

provided to compensate for the minor filling of approximately 550 cubic feet of this shallow swale to accommodate the proposed club house. A nearly identical fill proposal was already approved by the Conservation Commission for the previously approved Medfield Woods comprehensive permit development on the site. As suggested, when the Notice of Intent is filed, a foot-by-foot summary of the proposed BLSF fill and compensatory replication will be provided to the Conservation Commission.

43. Comment: "The parking areas in front of Building #1 and adjacent to the clubhouse flow overland to the sediment forebay near the project entrance. Given the minimal 3-foot grass strip between the pavement and the forebay, there will be essentially no pollutant removal of hydrocarbons or nitrogen loading. A longer vegetated strip could be considered for improved pollutant removal and nutrient uptake, similar to the design west of Building #2."

**Response:** The only practical way to widen the referenced grass strip would be to reconfigure the sediment forebay with steeper sideslopes by moving it further away from the edge of the parking lot or by making the sediment forebay smaller. This may entail steepening the slopes along the main entry driveway sidewalk and may also require the removal of additional trees along the West Street frontage. Any reduction in forebay size to accommodate a wider grass strip would reduce treatment through the forebay and would be counter-productive. We also believe that any very minor gain in stormwater treatment associated with such a modification would be counter-productive to our goal of making these forebays an integral part of the pedestrian friendly landscape and to preserving the screen across the front of the site to the maximum extent practicable.

An overriding basis for the stormwater management systems throughout the site are the use of vegetated "green" systems including sediment forebays and vegetated infiltration basins. The sediment forebay is only one step in the pretreatment system. The proposed deep sump manhole will provide pre-treatment, capturing and retaining sediment and hydrocarbons and other floatable debris. With respect to nutrient removal, as has been documented in previous responses, vegetated stormwater infiltration basins are amongst the most effective techniques for removing nutrients from stormwater runoff. The proposed design includes extensive stormwater infiltration systems which will result in excellent nutrient removal throughout the site, which meet or exceed all water quality requirement and DEP Best Management Practices (BMP).

44. Comment: "The entirety of the Building #3 and Building #4 parking lot pavement flows are collected into a central sediment forebay near the maintenance building. Similar to the concerns with the forebay near the project entrance, this collection point provides very little vegetated grass strips to improve water quality. Replacing the Deep Sump MH4 near the corner of Building #4 with a structural oil-water separation unit could be considered."

**Response:** As is discussed above, and as is the case throughout the site, the stormwater basin #4 treatment train exceeds the TSS removal requirements of the MassDEP stormwater standards. In addition, the proposed deep sump manhole will capture and trap hydrocarbons and other floating debris along with sediment. Deep sump catch basins employ essentially the same technique for hydrocarbon removal as proprietary separators, which is to simply employ some type of outlet tee to trap floatable particulates and substances. The applicant would agree to use the Eliminator (or equal), which is an outlet hood which forms a tight seal to the outlet pipe and which is more effective at trapping and retaining hydrocarbons and floatable debris than the traditional cast iron hood. In addition, given the use of a stormwater infiltration basin as the principal BMP, the proposed system will achieve excellent pollutant and nutrient removal.

45. Comment: "The roofwater collection systems designed around the building perimeters are generally shallow, in some instances less than one foot deep. Increasing the cover over these pipes would help ensure proper operation during winter conditions."

**Response:** The proposed roof runoff piping has been designed with as much cover as is practicable given the elevation of the stormwater basins to which they discharge. The only effective way to increase cover would be to raise the buildings, which, in effect, would require raising much of the site. It is our opinion that this would result in the unnecessary import of fill onto the site. Precipitation during cold winter months is generally in the form of snow. Temperatures warm enough to generate significant quantities of rain would generally prevent the drain pipes from freezing. In addition, the proposed roof drain pipes will be at least 8-inches in diameter, which is a size generally sufficient to deter significant ice accumulation. Roof runoff piping is often a shallow system since it is typically only needed during warm seasons.

46. Comment: "In the HydroCAD calculations, the calculated time-of-concentration should generally be at least twice as large as the dt used to approximate the SCS curve. Subcatchments' 15X and 19X time-of-concentration values should be adjusted."

**Response:** The Applicant has no objection to a condition which would require these two time-of concentrations to be increased to at least 2 minutes in the final design calculations, which will be provided to the Building Inspector with the final plans to be provided as part of the Building Permit process.

47. Comment: "The storage volume for Basin #4 (behind Building #4) is calculated in the report, using two separate storage volumes (identified in the calculations as Pond 14X). It is not clear where the second volume, from elevation 127.50 to 129.0 is provided in the design."

**Response:** The referenced second storage volume represents the volume contained within the sediment forebay. This is done to more accurately reflect the stage-discharge of the entire basin system, which includes some shallow ponding in the sediment forebays during the larger storm events. Stormwater basin #1 employs the same calculation methodology for peak rate calculation. Note, however, that the peak rate calculations and basin water level calculations are quite conservative because there is no consideration for ongoing infiltration through the bottom of the infiltration basin in the calculations.

48. Comment: "Snow storage areas should be designated on the plan and should be located outside paved or on adjacent grassed areas that maximize recharge. In order to maintain the function of the stormwater management system, sediment forebays should never be utilized for snow storage."

**Response:** The Applicant does not object to a condition stipulating that the final plans to be provided as part of the Building Permit process depict the location of snow storage areas. In general, snow storage areas will be in the numerous landscape areas along and around paved driveways and parking areas. Much of the snow is windrowed in long, low piles/rows along the edge of paved areas but certain portions of the site, may, at times, contain piles. The Long Term Pollution Prevention plan stipulates that snow may not be pushed into any stormwater BMP.

49. Comment: "The existing spillway structure and 18-inch cross-culverts should be retrofitted with safety bars to preclude access. In general, any outlet of 12-inches or greater should be similarly secured."

**Response:** The Applicant has no objection to a condition requiring that any stormwater pipeline outfall 15-inches are larger contain security bars and that the design of such features be depicted on the final plans to be provided as part of the Building Permit process.

#### PLANTING PLAN

50. Comment: "The number of shade trees should be increased if economically practicable."

**Response:** The preliminary site plan already proposes to install more than 50 shade trees. The final landscape design, which will be prepared at the time of construction, may include additional trees. The Applicant considers the number of shade trees depicted on the preliminary site plan to be a minimum figure.

51. Comment: "Given the water resource sensitivity of the site, the landscape plan should be refined prior to construction to reduce the extent of turf grass if appropriate in order to limit water use as well as fertilizer application. These refinements should also include specifying drought tolerant grass mixtures and a minimum depth of loam or plantable soil borrow of 6 inches."

**Response:** The applicant agrees to utilize drought tolerant grass mixtures and to utilize a minimum depth of loam of plantable soil of 6 inches.

52. Comment: "Given the water resource sensitivity of the site, a landscape management plan should be prepared prior to construction that establishes requirements for limiting water use for irrigation and limiting the application of fertilizers."

**Response:** The Long-Term Pollution Prevention Plan included within the stormwater report contains limitations regarding landscape maintenance practices so that the application of fertilizers, herbicides and pesticides will be kept to an appropriate minimum necessary to achieve a healthy landscape. The proposed development intends to install its own irrigation wells. The proposed stormwater management systems, which include extensive infiltration practices, will support groundwater recharge practices by significantly improving average annual recharge as compared to existing conditions.

53. Comment: "Although the west portion of the site has been altered, there are some mature shade trees east of the existing site driveway. Prior to construction, a Landscape Architect or other qualified professional should walk the site with representatives of the Town and identify any existing mature shade trees that can be preserved. These trees should be protected with snow fence or other physical barrier during construction."

**Response:** Given the configuration of the site and the necessary cuts and fills and excavations for buildings, utilities, and other proposed features, it is unlikely that any of the existing small shade trees <u>on the interior</u> of the site can be preserved. There are many existing shade trees, however, along the perimeter of the site, that will be preserved, especially along the site frontage along West Street where as much of the existing dense tree line as is practicable will be preserved. The Applicant would not object to a condition stipulating that prior to construction, the Applicant employ a landscape architect or other qualified professional to

determine which existing trees within and around the site can be preserved. The Applicant would also agree to protect existing trees to remain with snow fence or other physical barriers during construction activities.

#### **PROJECT IMPACTS**

54. Comment: "The local Conservation Bylaw stipulates a 50-foot No-Disturb area within the 100-foot state jurisdictional buffer. The current design requires alteration of this area. Recommendations of the Conservation Commission for restoration of areas within 50 feet of the wetland edge should be indicated on the drawings."

Response: Please note that the Conservation Commission has already provided comment on this topic and the Applicant offered a response from this office dated May 8, 2012. The site is already heavily disturbed, and much of the 50-foot No-Disturb buffer area currently contains paved areas and other manmade disturbances, some of which lie only within a few feet of bordering vegetated wetlands. The proposed redevelopment of the site will remove significant quantities of paved surfaces within the 50-foot No-Disturb buffer and convert it to vegetated surfaces, resulting in a net decrease in impervious coverage within Medfield's "50-foot No Disturb" area and a net shift of impervious surfaces away from the edge of wetlands. In total, the proposed development will significantly improve conditions within the heavily disturbed buffer areas on the site and will also implement other improvements that will benefit wetland areas by installing a new stormwater management system meeting or exceeding all state and federal regulations.

55. Comment: "Prior to construction, the location of temporary stilling basins should be identified to control surface runoff during construction."

**Response:** None of the watershed areas associated with this project are large enough to require a construction-stage stilling basin. Rather, in accordance with the requirements of the EPA Construction General Permit (CGP), perimeter erosion controls will be employed. The specifics of proposed erosion control techniques will be provided as part of the Building Permit process and will be discussed at length with the Conservation Commission during the Notice of Intent proceedings.

56. Comment: "Prior to construction, the location of a dedicated equipment fueling area should be identified for each construction phase. The fueling area should be on pavement or should be provided with some type of containment."

**Response:** The Applicant would agree to a condition that the final stormwater pollution prevention plan, which will be provided to the Conservation Commission at the time of filing of the Notice of Intent, address equipment fueling areas in accordance with the requirements of the EPA CGP.

57. Comment: "Construction of the foundations and utilities will require significant dewatering. The preliminary stormwater report defers details of the NPDES until final design; however construction-stage erosion control is an important component of the phased construction and should be addressed at least conceptually in the drawings."

**Response:** While the specifics of the foundation design are not finalized since comprehensive permit plans are preliminary in nature, each of the buildings are slab-on-grade with a proposed elevation at least six feet (and up to 9.5 feet) higher than seasonal-high-groundwater. Thus footings and foundation walls are not likely to require dewatering. In addition, the proposed stormwater management system, gas lines, and electric and telephone lines are quite shallow and will not require dewatering. Based on the groundwater elevations observed over the last ten years, even the sewer and water mains will be above high groundwater. As such, dewatering is not likely to be required for any of the proposed construction activities.

The preliminary site plan does depict the general location of perimeter erosion controls on sheets C-2 and C-3 and also stipulates that a rip-rap construction entrance will be provided. When the final design is prepared for the Conservation Commission and Building Inspector, a complete construction-stage stormwater pollution prevention plan (SWPPP) meeting the requirements of the EPA Construction General Permit and Standard 8 of the MassDEP stormwater standards will be provided to these parties.

58. Comment: "In order to avoid impacting peak traffic on West Street, construction truck traffic should be restricted to the hours of 9:00 AM to 4:00 PM on weekdays."

**Response:** The traffic study has confirmed that the proposed development will not significantly affect traffic patterns in the area. The truck traffic hours suggested are too restrictive and generally inconsistent with standard practices for a development of this type. The Applicant would agree to restricting truck traffic to the hours of 7:00 am to 5:00 pm, Monday through Saturday, as this is typical and appropriate for this type of activity.

59. Comment: "At least one of the properties across West Street (Maloney property) will likely experience headlight glare from vehicles exiting the project site drive. Planting or fencing should be provided if requested by the property owner."

**Response:** The house across from the proposed entrance already has two deciduous trees in front of it, but the Applicant will work with the property owner to provide reasonable additional planting or fencing, if they express a desire for additional buffering.

#### **WAIVERS**

- 60. Comment: "A list of Waivers Requested From Local Requirements was provided in Tab #6, including the zoning bylaws, comprehensive permit rules, board of appeals, Town bylaw, Earth removal regulations, Wetlands bylaw, water and sewer use bylaw, water department, subdivision rules and regulations, board of health regulations for stormwater and runoff, board of health minimum standards for private or semi-public water supply, and local fee schedules.
  - a. The request for relief from Zoning By-law Section 6.2.6 should specify that the request is exclusive of Federal regulations for disturbance within floodplains.

**Response:** The Applicant agrees that the requested waiver from Zoning Bylaw Section 6.2.6 is exclusive of Federal regulations for disturbance within floodplains.

b. The request for relief from Zoning By-law Section 10.5.1.1 requests that top of foundation walls be constructed down to elevation 125. The adjacent Bordering Land Subject to flooding elevation is estimated to be elevation 127.0 with observed seasonal high water extending to 126.5. The request should be modified to construct top of foundation wall no lower than elevation 127.

**Response:** As the preliminary plans note, the lowest proposed finished floor (and thus, the lowest top of floor elevation) is at elevation 129.6 (maintenance building) and that the lowest occupied residential building has a finished floor elevation of 131.0 (Building #4). Thus, and as recommended by PSC, please consider this as a request to modify the waiver request under 10.5.1.1 to read:

"Allow top of foundation wall to be no less than 127 feet above Mean Sea Level, since all buildings are slab-on-grade with no basements."

c. The project will require variances from various provisions of the Zoning Bylaw. Specific variances should be better identified.

**Response:** Pursuant to M.G.L. Chapter 40B, the "variance" procedure stipulated by M.G.L. Chapter 40A does not apply to comprehensive permit projects. Rather, "waivers" or "exceptions" are requested. All of

these have been specifically identified in Section A of the "Requested Waivers from Local Requirements" submitted in the application package.

d. Although the project is not a subdivision, many of the technical and design standards of the Rules & Regulations would apply to the Proposed Project. Required waivers should be better identified in Tab #6-F.

**Response:** The subdivision control only applies to "subdivisions" as defined in M.G.L. Chapter 41, Section 81L (the Subdivision Control Law). The proposed development is not a subdivision within the meaning of the Subdivision Control Law and as such, the Medfield subdivision regulations have no jurisdiction. Further, the driveway and all of the on-site infrastructure are privately owned and maintained. There are no proposed subdivision roadways involved and applying such standards to an internal private driveway would not be appropriate as the character of the internal private drive is very different from a public roadway which the Town would maintain.

e. We recommended that the water main construction review and approval from the Board of Water and Sewerage not be waived as requested under Tab #6-I."

**Response:** Pursuant to M.G.L. Chapter 40B, the Zoning Board of Appeals is the permit granting authority for this development. Any comments or reviews to be undertaken by the Water Department must be through the comprehensive permit process as stipulated by state regulation.

#### RELATED PERMITS AND APPROVALS

61. Comment: "The project will result in the disturbance of more than one acre of land, and thus will require the Applicant to obtain coverage under the federal Construction General Permit (CGP). The CGP outlines a set of provisions construction operators must follow to comply with the requirements of the NPDES stormwater regulations."

**Response:** The Applicant will obtain coverage under the EPA Construction General Permit in full compliance with its provisions prior to construction.

62. Comment: "A one-time certification statement will be required for DEP for the project for flows in excess of 15,000 GPD. The calculated Title V design flow was separately calculated as 21,365 GPD."

**Response:** The Applicant will submit the required one-time certification statement to DEP in full compliance with MassDEP's sewer regulations. This will occur after the comprehensive permit process is completed.

Zoning Board of Appeals July 18, 2012 Page 22 of 25

Please do not hesitate to contact me if you have any questions or comments.

Sincerely,

MERRIKIN ENGINEERING, LLP

Daniel J. Merrikin P.E.

cc: File

The Parc at Medfield Limited Partnership (by email only)

# **EXHIBIT A**

ORDER OF RESOURCE AREA DELINEATION ISSUED MAY 20, 2010



## Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands

WPA Form 4B - Order of Resource Area Delineation Massachusetts Wetlands Protection Act M.G.L. c. 131 S40 and the Medfield Wetlands Bylaw, Article 1x

Provided by MassDEP: MassDEP File #:214-0566 eDEP Transaction #:122955 City/Town:MEDFIELD

#### A. General Information

- 1. Conservation Commission MEDFIELD
- 2. This Issuance is for (Check one):
  - a. V Order of Resource Area Delineation
  - b. 

    Amended Order of Resource Area Delineation

3	An	plicant	· De	tails
J.	$\Delta \nu$	pucaui		tans

a. First Name b. Last Name

c. Organization MEDFIELD NORTHMEADOWS, LLC d. Mailing Address 21A HIGHLAND CIRCLE, SUITE 200

e. City/Town NEEDHAM f. State MA g. ZIP 02494

4. Property Owner (if different from applicant):

a. First Name b. Last Name

c. Organization MEDFIELD NORTHMEADOWS, LLC
d. Mailing Address 21A HIGHLAND CIRCLE, SUITE 200

e. City/Town NEEDHAM f. State MA g. ZIP 02494

5. Project Location

a. Street Address LOT 2, PARCEL A1 WEST ST.

b. City/Town MEDFIELD c. Zip 02052 d. Assessors Map/Plat# 41 & 48 e. Parcel/Lot# 146 & 066 f. Latitude 42.19097N g. Longitude 71.3274W

6. Dates

a. Date ANRAD Filed 3/31/2010 b. Date Public Hearing Closed 5/6/2010 c. Date Of Issuance 5/20/2010

7. Final Approved Plans and Other Documents

Plan Title	Plan Prepared By	Plan Signed By	Plan Final Date	Plan Scale
WEST STREET A.N.R.A.D. PLAN OF LAND IN MEDFIELD, MA	MERRIKIN ENGINEERING, LLP	DANIEL J. MERRIKIN, # 43309	5/11/2010	1" = 30'

#### B. Order of Delineation

- 1. The Conservation Commission has determined the following (check whichever is applicable)
- a.  $\overline{V}$  Accurate: The boundaries described on the referenced plan(s) above and in the Abbreviated Notice of Resource Area Delineation are accurately drawn for the following resource area(s):
  - 1. ▼ Bordering Vegetated Wetlands
  - 2. To Other resource area(s), specifically
    - a.BORDERING LAND SUBJECT TO FLOODING
- b. Modified: The boundaries described on the plan(s) referenced above, as modified by the Conservation Commission from the plans contained in the Abbreviated Notice of Resource Area Delineation, are accurately drawn from the following resource area(s):
  - 1. 
    ☐ Bordering Vegetated Wetlands
  - 2. Ther resource area(s), specifically

a.



# Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands

# WPA Form 4B - Order of Resource Area Delineation Massachusetts Wetlands Protection Act M.G.L. c. 131 S40

Provided by MassDEP: MassDEP File #:214-0566 eDEP Transaction #:122955 City/Town:MEDFIELD

c.  $\Gamma$  Inaccurate:: The boundaries described on the referenced plan(s) and in the Abbreviated Notice of Recource Area Delineation were found to be inaccurate and cannot be confirmed for the following resource area(s):

- 1. ☐ Bordering Vegetated Wetlands
- 2. ☐ Other resource area(s), specifically
- 3. The boundaries were determined to be inaccurate because:

### C. Findings

This Order of Resource Area Delineation determines that the boundaries of those resource areas noted above, have been delineated and approved by the Commission and are binding as to all decisions rendered pursuant to the Massachusetts Wetlands Protection Act (M.G.L. c.131, S 40) and its regulations (310 CMR 10.00). This Order does not, however, determine the boundaries of any resource area or Buffer Zone to any resource area not specifically noted above, regardless of whether such boundaries are contained on the plans attached to this Order or to the Abbreviated Notice of Resource Area Delineation. This Order must be signed by a majority of the Conservation Commission. The Order must be sent by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate DEP Regional Office (see http://www.mass.gov/dep/about/region/findyour.htm).

### D. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate DEP Regional Office to issue a Superseding Order of Resource Area Delineation. When requested to issue a Superseding Order of Resource Area Delineation, the Department's review is limited to the objections to the resource area delineation(s) stated in the appeal request. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant. Any appellants seeking to appeal the Department???s Superseding Order of Resource Area Delineation will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order or Determination, or providing written information to the Department prior to issuance of a Superseding Order or Determination. The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act, (M.G.L. c. 131, S 40) and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal bylaw or ordinance, and not on the Massachusetts Wetlands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.



# **Massachusetts Department of Environmental Protection** Bureau of Resource Protection - Wetlands

# WPA Form 4B - Order of Resource Area Delineation

Massachusetts Wetlands Protection Act M.G.L. c. 131 S40

Provided by MassDEP: MassDEP File #:214-0566 eDEP Transaction #:122955 City/Town:MEDFIELD

E. Signatures	1. Date of Original Order		
E. Signatures	2. No. of Signatures required 4		
Miller Rilling	Robert Ayla		
- Organo M			
This Order is valid for three years from the date of	issuance.		
	source Area Delineation, this Order does not extend the issuance date of the expire on the date of the Original Final Order unless extended in writing by		
This Order is issued to the applicant and the property own	ner (if different) as follows:		
3. <b>▼</b> By hand delivery on	4. ☐ By certified mail, return receipt requested on		
a. Date May 21, 2010	a. Date		

# **EXHIBIT B**

PHASE II ENVIRONMENTAL SITE ASSESSMENT
NARRATIVE EXCERPT
Dated February 9, 2012



# PHASE II ENVIRONMENTAL SITE ASSESSMENT

PARCEL A1 AND LOT 2

**MEDFIELD** 

MASSACHUSETTS

for

The Parcel at Medfield Limited Partnership



February 9, 2012

The Parcel at Medfield Limited Partnership 120 Forbes Boulevard, Suite 180 Mansfield, MA 02048

Attention:

Mr. Brian McMillin

Reference:

Parcel A1 and Lot 2; Medfield, Massachusetts Phase II Environmental Site Assessment

Ladies and Gentlemen:

In response to your recent request, we are pleased to present the results of our Phase II Environmental Site Assessment of the subject site identified as Parcel A1 and Lot 2 located along West Street in Medfield, Massachusetts. Refer to the Project Location Plan (**Figure 1**) for the general site locus.

This report was prepared in accordance with our proposal for geoenvironmental services dated December 19, 2011 and the subsequent authorization of The Parcel at Medfield Limited Partnership. These services are subject to the limitations contained in **Appendix A**.

The environmental site assessment was generally conducted pursuant to the provisions contained in the following: (i) Massachusetts Oil and Hazardous Materials (OHM) Release Prevention and Response Act (MGL Chapter 21E); (ii) ASTM E 1903-97(02) Standard Guide for Environmental Site Assessment: Phase II Environmental Site Assessment Process, and (iii) Massachusetts Contingency Plan (MCP) 310 CMR 40.0000.

#### Purpose and Scope

The results of our Phase I investigation are documented in our report titled "Phase I Environmental Site Assessment (ESA) Report, Parcel A1 and Lot 2, Medfield, Massachusetts" dated December 8, 2011. The Phase I ESA identified three (3) Recognized Environmental Conditions (RECs) in connection with the subject site.

Based on a review of an environmental report prepared for 71 West Street, the property occupied by Wills Hardware, Inc. located at 75 West Street was a former machine company identified as the Metropolitan Machine Company. This property is located approximately 200 feet to the east of the subject site and in an apparent upgradient direction to the subject site. Therefore, due to the location of the former machine shop, it was considered an REC.

Secondly, Chief William Kingsbury of the Medfield Fire Department indicated that there are two (2) 6,000-gallon USTs containing No. 2 fuel oil at 93 West Street, which is located in an apparent upgradient direction and adjacent to the western portion of the subject site. Chief William Kingsbury further indicated that the USTs were installed in 1982 and 1987. Due to the age and location of these two (2) USTs with respect to the subject site, these two (2) USTs were considered RECs.

Finally, RTN 3-24796 which is associated with a release of TCE to groundwater was identified at 71 West Street, which is located approximately 500 feet to the east and upgradient to the subject site was considered an REC. Based on the relative topographic elevation with respect to the subject site, the



The Parcel at Medfield Limited Partnership February 9, 2012 Page 2

location of the release site, the nature of the release, and the status of response actions, including that a Permanent Solution and a condition of No Significant Risk have not been achieved for the release, this site was considered an REC with respect to the subject site.

Therefore, to assess the above RECs, a subsurface investigation was conducted at the subject site including the completion of soil borings, installation of groundwater monitoring wells, as well as soil and groundwater analysis.

Our scope of services consisted of the following tasks: (i) a subsurface investigation consisting of the advancement of seven soil borings; (ii) installation of groundwater monitoring wells in four of the completed borings; (iii) visual and olfactory observations of soil samples obtained from the borings and headspace screening of the soil samples for the presence of total volatile organic compounds (TVOC); (iv) chemical analysis of selected soil samples; (v) development and sampling of four groundwater monitoring wells; (vi) chemical analysis of four groundwater samples; and (vii) summarizing the results of the above tasks in a Phase II Environmental Site Assessment Report.

#### **Site and Locus Description**

Fronting onto West Street to the south, the subject site is bounded by commercial property to the north and west, and undeveloped land to the east. The subject site consists of two (2) contiguous parcels of land identified as Parcel A1 and Lot 2. The parcel identified as Parcel A1 occupies an area of about 1.43-acres of land and Lot 2 occupies an area of about 7.79-acres of land. A foundation wall and an asphalt paved driveway occupy a portion of the subject site parcels.

Historically, the subject site has been undeveloped with the exception of a foundation wall located on the northern portion of the subject site. In general, the area within 500 feet of the subject site is occupied by residential, commercial and light industrial properties.

Existing site conditions are shown on the attached **Figure 2**, Subsurface Exploration Plan, which is based on an 80-scale drawing entitled "Plan of Land in Medfield, MA" dated June 29, 2004 and prepared by Francis X. Desimone.

#### **Subsurface Investigations**

On January 4 and 5, 2012, seven (7) soil borings were performed across the subject site by Carr-Dee Corp. of Medford, Massachusetts under contract to McPhail Associates. The boring locations are shown on the attached **Figure 2**. The results of each individual borehole is presented on Carr-Dee's boring logs enclosed in **Appendix B**.

Each of the boreholes except B-2(OW) was terminated at a depth of 17 feet below the existing ground surface in the natural outwash or glacial till deposits. Boring B-2(OW) was terminated at a depth of 12.7 feet below ground surface due to refusal on a boulder. Borings B-1(OW), B-2(OW), B-3 and B-4 were performed using truck-mounted drilling equipment and borings B-5(OW), B-6 and B-7(OW) were performed using truck-mounted drilling equipment. Each of the borings was advanced utilizing hollow-stem augers and/or standard casing. Typically, standard 1-3/8 inch I.D. split spoon samples and standard penetration tests were obtained in general accordance with the procedures described in ASTM D1586. Two-inch diameter PVC monitoring wells with slotted screens set to intercept the top of the water table were installed in four (4) of the completed boreholes.



The Parcel at Medfield Limited Partnership February 9, 2012 Page 3

Ground surface elevations at the each of the borings was measured by conducting a rod and level survey, in order to provide information relative to groundwater elevation beneath the subject site. The level survey was performed by McPhail Associates, LLC utilizing a drain manhole cover located on the subject site as an arbitrary vertical control point of Elevation +100.

#### **Subsurface Conditions**

Detailed descriptions of the subsurface conditions encountered within each of the borings are presented on Carr-Dee Corp.'s boring logs contained in **Appendix B** of this report. Following is a discussion of the generalized subsurface conditions encountered across the site, which are inferred primarily from the borings but also from our knowledge of the geology of the local area.

At borings B-1(OW), B-2(OW), B-3 and B-4, the ground surface was observed to consist of a 0.3 to 0.5-foot thick asphalt layer. At borings B-5(OW), B-6 and B-7(OW), the ground surface consisted of a 0.1 to 0.4-inch thick topsoil deposit.

In general, below the asphalt pavement or topsoil in borings B-1(OW), B-2(OW), B-3, B-4 and B-5(OW) is a fill layer ranging from about 7 to 11 feet in thickness. A fill deposit was not observed in borings B-6 and B-7(OW), which were located on the southern portion of the subject site. The fill layer was observed to typically consist of a compact to dense light brown to dark grey gravelly sand with a trace of silt to sand with some gravel and silt. Varying amounts of wood and concrete were observed in the fill deposit in borings B-1 and B-3, respectively.

Within borings B-1(OW) and B-3, the fill deposit was observed to be underlain by an organic deposit that typically varies from a loose dark brown sandy organic silt with peat fibers to organic silt with peat fibers. Based on our observations the organic deposit is about 1 to 2 feet in thickness.

Underlying topsoil, fill or organic deposits, each boring encountered a natural outwash deposit at depths to at least 17 feet below ground surface. Borings B-1(OW), B-3, B-4, B-5(OW) and B-7(OW) were terminated in the natural glacial outwash deposit. In general, the outwash deposit was observed to consist of a compact to very dense gray to brown sand and gravel with trace silt to sand with a trace of gravel and silt.

Below the natural outwash deposit in borings B-2(OW) and B-6, a natural glacial till deposit was encountered at depths ranging from 11 to 16 feet below the existing ground surface and these borings were terminated in the natural glacial till deposit at depths ranging from 12.7 to 17 feet below the existing ground surface.

At the time the borings were performed, groundwater was encountered within boreholes at depths ranging from about 4.5 to 9 feet below the existing ground surface. Groundwater levels observed within observation wells B-1(OW), B-2(OW), B-5(OW) and B-7(OW) were observed to vary from about 4.4 to 9.4 feet below the existing ground surface, corresponding to elevations ranging from about +88.3 in observation well B-5(OW) to +95.9 in observation well B-7(OW). Based on our gauging of the newlly installed groundwater monitoring wells, groundwater flow at the subject site is towards the south.

It is anticipated that future groundwater conditions across the site may vary from those reported herein due to factors such as normal seasonal changes, periods of heavy precipitation, and alterations to existing drainage patterns. Groundwater monitoring reports are included in **Appendix C**.



The Parcel at Medfield Limited Partnership February 9, 2012 Page 4

### **MCP Reporting Provisions**

The Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, which was first implemented on October 1, 1993, established "...requirements and procedures for notifying the Department of releases and threats of release of oil and/or hazardous material." The MCP defined categories for soil and groundwater at sites under investigation. The MCP also established Reportable Concentrations for oil and hazardous materials in soil and groundwater for the defined categories. The soils at the site under investigation are classified as RCS-1 since the site is located within 500 feet of residential property. Groundwater at the site is classified as RCGW-2 since the site is not located in an MCP drinking water resource area.

#### Soil Screening Results

Soil samples obtained from the borings were screened for the presence of Total Volatile Organic Compounds (TVOC). The TVOC screening results are summarized in **Table 1**. The headspace screening was performed in accordance with DEP's "Jar Headspace Analytical Screening Procedure," Attachment II to the Interim Remediation Waste Management Policy for Petroleum Contaminated Soils, #WSC-94-400. The screening was performed with MiniRAE 3000 Photoionization Detector calibrated to benzene equivalent VOCs.

A total of 44 soil samples were screened for the presence of TVOC. The soil samples exhibited levels of TVOC ranging from 0 parts per million (ppm) to 7.6 ppm with no visual or olfactory indications of the presence of OHM. In the absence of visual or olfactory indications of the presence of OHM, TVOC results below 10 ppm are not considered likely to indicate the presence of a release of OHM.

#### Soil Chemical Test Results

As indicated above, the subject site is located within 500 feet of residential property. Thus, RCS-1 notification thresholds are considered to be applicable to the soil at the subject site. Accordingly, the results of the soil chemical testing were compared with the applicable Reportable Concentrations contained in Section 40.1600 of the MCP for soil category RCS-1.

The results of TVOC screening, visual, and olfactory screening, together with the site history documented during our Phase I ESA dated December 8, 2011, were used to support the selection of soil samples that were submitted to the laboratory for chemical testing. Select soil samples were analyzed for the presence of polynuclear aromatic hydrocarbons (PAHs), extractable petroleum hydrocarbons (EPH) and volatile organic compounds (VOCs). Chemical test results are summarized in **Table 2**. Laboratory data is included in **Appendix D**.

### **EPH and PAHs**

To further assess the two (2) USTs containing No. 2 fuel oil at 93 West Street, which is located adjacent to the western portion of the subject site, soil samples obtained from borings B-1 at a depth ranging from 5 to 7 feet below ground surface and B-3 at a depth ranging from 7 to 9 feet below ground surface were submitted for chemical analysis for the presence of EPHs and PAHs. The test results indicated concentrations of EPHs and PAHs in samples analyzed at concentrations below the laboratory method detection limits which are less than the applicable RCS-1 reporting thresholds.



The Parcel at Medfield Limited Partnership February 9, 2012 Page 5

## **VOCs**

To assess possible impacts to groundwater due to the former presence of a machine shop located approximately 200 feet to the east of the subject site at 75 West Street and due to the location and current DEP status of the RTN 3-24796 release, soil samples obtained from borings B-1 at a depth ranging from 5 to 7 feet below ground surface, B-4 at a depth ranging from 9 to 11 feet below ground surface and B-7 at a depth ranging from 9 to 11 feet below ground surface were submitted for chemical analysis for the presence of VOCs. The test results did not indicate concentrations of VOCs in samples analyzed above laboratory method detection limits.

Further, a soil sample obtained from boring B-7 at a depth ranging from 0 to 2 feet below ground surface was tested for the presence of VOCs due to an elevated TVOC reading. The test results did not indicate levels of VOCs above laboratory detection limits.

### Well Development and Sampling

On January 5, 2012, McPhail Associates, LLC developed the groundwater monitoring wells identified as B-1(OW), B-2(OW), B-5(OW) and B-7(OW). On January 9, 2012, McPhail Associates, LLC returned to the site to sample the above monitoring wells.

Groundwater conditions observed during well development and sampling of monitoring wells B-1(OW), B-2(OW), B-5(OW) and B-7(OW) did not indicate the presence of visual or olfactory evidence of contamination. Specifically, no separate-phase petroleum product or petroleum "sheen" were observed.

#### **Groundwater Chemical Test Results**

The groundwater samples obtained from monitoring wells B-1(OW) and B-5(OW) were submitted for chemical testing for the presence of EPHs and VPHs to further assess possible impacts to groundwater due to the presence of two (2) 6,000-gallon USTs containing No. 2 fuel oil at 93 West Street. The chemical analysis results of the groundwater samples obtained from monitoring wells B-1(OW) and B-5(OW) did not indicate concentrations of EPHs or VPHs above laboratory detection limits.

The groundwater samples obtained from monitoring wells B-1(OW), B-2(OW), B-5(OW) and B-7(OW) were submitted for chemical testing for the presence of VOCs to assess possible impacts to groundwater due to the former presence of a machine shop located approximately 200 feet to the west of the subject site and the RTN 3-24796 release of TCE to groundwater at 71 West Street located approximately 500 feet to the east and upgradient to the subject site. The chemical analysis results of the groundwater samples obtained from monitoring wells B-1(OW), B-2(OW), B-5(OW) and B-7(OW) did not indicate the presence of VOCs above laboratory detection limits.

Chemical test results for groundwater are summarized in **Table 3**. Laboratory data is included in **Appendix E**.



The Parcel at Medfield Limited Partnership February 9, 2012 Page 6

#### **Summary and Conclusions**

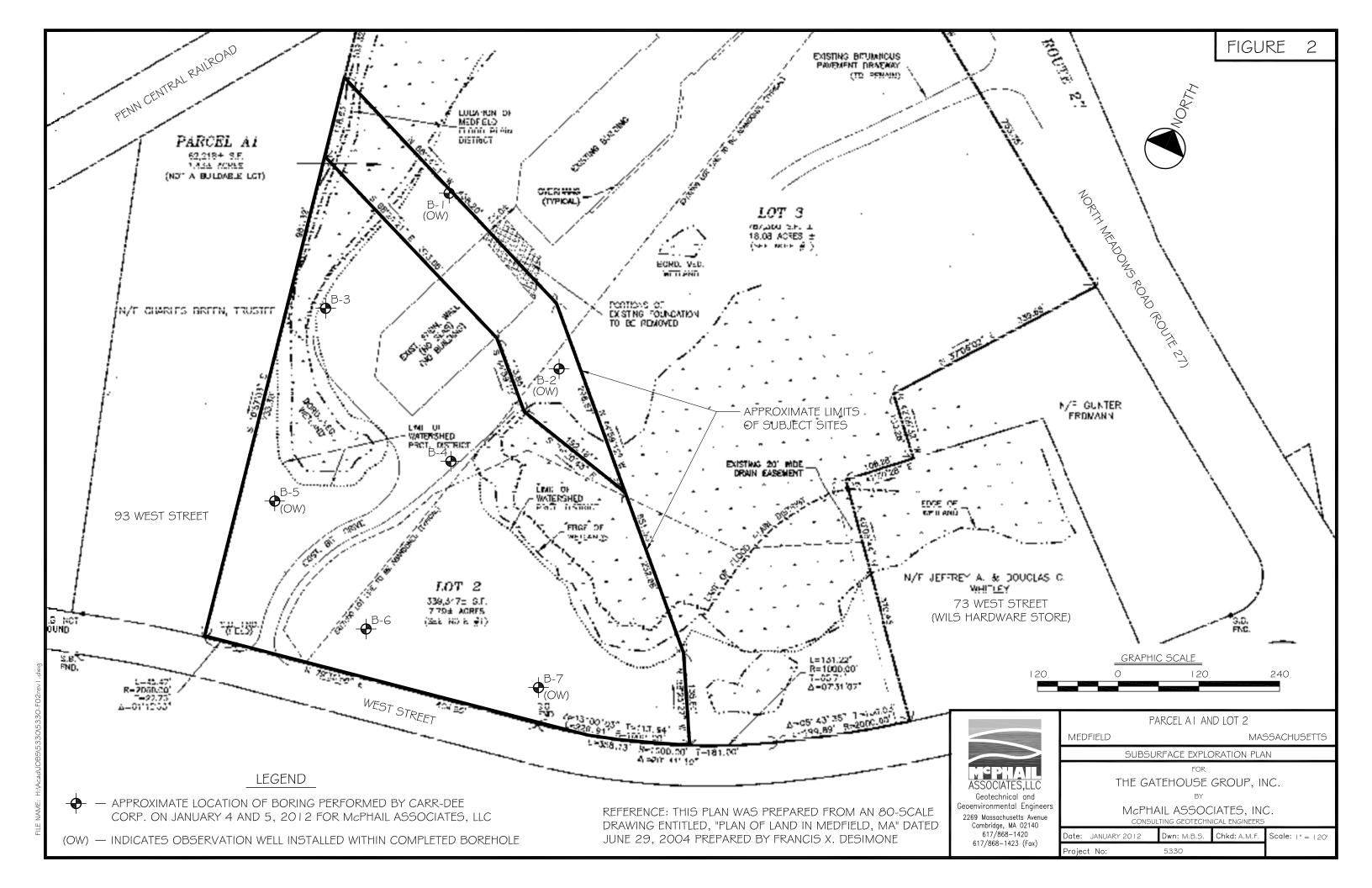
As documented in our report titled "Phase I Environmental Site Assessment Report, Parcel A1 and Lot 2, Medfield, Massachusetts" dated December 8, 2011, we identified the following RECs in connection with the subject site including the following: (1) the property occupied by Wills Hardware, Inc. at 75 West Street located approximately 200 feet to the east of the subject site was a former machine company; (2) Based on the age and location of two (2) 6,000-gallon USTs containing No. 2 fuel oil at 93 West Street; and 3) due to the location and status of the RTN 3-24796 release of TCE to groundwater at 71 West Street, which is located approximately 500 feet to the east and upgradient to the subject site.

To further assess the above RECs, McPhail completed a supplemental investigation that included the advancement of soil borings, installation of groundwater monitoring wells, visual and olfactory observations of soil samples obtained from the borings, headspace screening of the soil samples for the presence of TVOC, and chemical analysis of soil and groundwater samples to assess possible impacts to soil and groundwater at the subject site.

To further assess RECs 1 and 3, chemical analysis of soil and groundwater samples obtained from the subject site indicated did not indicate the presence of VOCs in soil or groundwater above laboratory detection limits. Therefore, the former presence of a machine shop located approximately 200 feet to the west of the subject site and the RTN 3-24796 release of TCE to groundwater at 71 West Street located approximately 500 feet to the east and upgradient to the subject site are not considered RECs.

To further assess REC 2, chemical analysis of soil and groundwater samples obtained from the western boundary of the subject site indicated did not indicate the presence of EPHs or VPHs in soil or groundwater above laboratory detection limits. Therefore, the presence of two (2) 6,000-gallon USTs containing No. 2 fuel oil at 93 West Street is not considered an REC.

In summary, based on our scope of work conducted as part of this Phase II Environmental Site Assessment, no further investigations are necessary at this time.



Zoning Board of Appeals July 18, 2012 Page 25 of 25

# **EXHIBIT C**

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT
NARRATIVE EXCERPT
DATED DECEMBER 8, 2011



# PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

PARCEL A1 & LOT 2

**WEST STREET** 

**MEDFIELD MASSACHUSETTS** 

for

The Gatehouse Group, Inc.



December 8, 2011

The Gatehouse Group, Inc. 120 Forbes Boulevard, Suite 180 Mansfield, MA 02048

Attention: Mr. Brian McMillin

Reference: Parcel A1 and Lot 2; Medfield, MA

Phase I Environmental Site Assessment

#### Ladies and Gentlemen:

Enclosed herewith is our Phase I Environmental Site Assessment (ESA) Report prepared for the property identified as Parcel A1 and Lot 2, located along West Street in Medfield, Massachusetts. The general site locus is shown on the Figure 1, and the boundaries of the subject site are shown on the Figure 2.

This report was prepared by McPhail Associates, Inc. in accordance with our proposal dated October 18, 2011, with the subsequent authorization of Mr. Brian McMillin of The Gatehouse Group, Inc. and is subject to the limitations contained in Appendix A.

This environmental site assessment was conducted in general accordance with the provisions contained in the following: (1) Massachusetts Oil and Hazardous Materials (OHM) Release Prevention and Response Act (MGL Chapter 21E); (2) Massachusetts Contingency Plan (MCP) 310 CMR 40.0000; and (3) ASTM E1527-05 Standard Guide for Environmental Site Assessment: Phase I Environmental Site Assessment Process, as referred to in 40 CFR Part 312 (the All Appropriate Inquiries Rule).

The objective of the environmental investigation was to assess the subject site for the potential presence of Recognized Environmental Conditions (RECs), as defined by ASTM, at the subject site or on nearby property that may pose a threat to the subject site.

Our scope of work included the following: (i) a review of previous reports completed for the subject site; (ii) a visual reconnaissance of the site and the surrounding area; (iii) an assessment of the site history relative to the possible presence of oil and hazardous materials (OHM); (iv) a database search of Federal records including the National Priorities List, the CERCLA List and the RCRIS Handlers List by EDR Inc.; (v) a records search at the municipal offices of the Town of Medfield for records of permits issued for the storage and/or use of OHM at the site; (vi) a search of the Massachusetts Department of Environmental Protection (DEP) online database and files for records of storage or incidents involving releases of oil and/or hazardous materials at and in the vicinity of the subject site; and (vii) documenting the results in a Phase I ESA report.

The conclusions presented herein and our professional opinions are based solely on the scope of work conducted. The scope of our Phase I ESA did not include an investigation of the property for the presence of mold, urea formaldehyde foam insulation (UFFI), lead-based paint, asbestos-containing materials, radon gas or other naturally occurring substances. Further, our scope of services excluded a title or environmental lien search.



Fronting onto West Street to the south, the subject site is bounded by commercial property to the north and west, and undeveloped land to the east. The subject site consists of two (2) contiguous parcels of land identified as Parcel A1 and Lot 2. The parcel identified as Parcel A1 occupies an area of about 1.43-acres of land and Lot 2 occupies an area of about 7.79-acres of land. A foundation wall and an asphalt paved driveway occupy a portion of the subject site parcels. The limits of the subject site are shown on Figure 2.

The site is located in a residential, commercial and light industrial area in the Town of Medfield. Our review of DEP's Priority Resources Map indicated the subject site is located within the boundaries of a Zone II groundwater resource area as defined by the Massachusetts Department of Environmental Protection.

A reconnaissance of the subject site and surrounding properties was performed by a representative of McPhail Associates, Inc. on October 24, 2011. Surficial observations of readily observable portions of the subject site did not identify RECs. Surficial observations of readily observable portions of nearby properties also did not identify RECs with respect to the subject site.

A review of historical records indicated that the subject site has been undeveloped with the exception of a foundation wall located on the northern portion of the subject site. Surrounding properties have historically been occupied by residential, commercial and light industrial buildings since at least 1995. According to a report entitled "Downgradient Property Status Report, 71 West Street, Medfield, Massachusetts, Release Tracking Number 3-24796" dated June 2005 and prepared by EBI Consulting, the property currently occupied by Wills Hardware, Inc. at 75 West Street was a former machine company identified as the Metropolitan Machine Company. This property is located approximately 200 feet to the east of the subject site and in an apparent upgradient direction to the subject site. Therefore, due to the location of the former machine shop, it is considered an REC.

A review of local, state and federal databases searched by EDR of Milford, Connecticut indicated that the subject site is not listed in the databases researched by EDR, and is not a DEP-listed release site. Most properties listed in federal or state databases searched by EDR are not considered to be RECs with respect to the subject site based on their distances from the subject site, the types of releases, and the remedial activities undertaken. However, the RTN 3-24796 release of TCE to groundwater was identified at 71 West Street, which is located approximately 500 feet to the east and upgradient to the subject site. Based on the relative topographic elevation with respect to the subject site, the location of the release site, the nature of the release, and the status of response actions, including that a Permanent Solution and a condition of No Significant Risk have not been achieved for the release, this site is considered an REC with respect to the subject site.

A search for records pertaining to the storage of oil and hazardous materials at the subject site and surrounding properties was conducted at the municipal offices of the Town of Medfield including the Assessors' Office, the Clerk's Office, the Health Department, the Building Department, and the Fire Department Fire Prevention Division. Chief William Kingsbury of the Medfield Fire Department indicated that there are two (2) 6,000-gallon USTs containing No. 2 fuel oil at 93 West Street, which is located in an apparent upgradient direction and adjacent to the western portion of the subject site. Chief William Kingsbury further indicated that the USTs were installed in 1982 and 1987. Due to the age and location of these two (2) USTs with respect to the subject site, these two (2) USTs are considered RECs.

In conclusion, we have performed an Environmental Site Assessment in general conformance with the



scope and limitations of ASTM E1527-05 for the subject site identified as Parcel A1 and Lot 2 located along West Street in Medfield, Massachusetts. Any exceptions to, or deletions from this practice are described in the Data Gap section of this report. This assessment has identified three Recognized Environmental Conditions (RECs) in connection with the subject site. Based on a review of an environmental report prepared for 71 West Street, the property occupied by Wills Hardware, Inc. located at 75 West Street was a former machine company identified as the Metropolitan Machine Company. This property is located approximately 200 feet to the east of the subject site and in an apparent upgradient direction to the subject site. Therefore, due to the location of the former machine shop, it is considered an REC.

Secondly, Chief William Kingsbury of the Medfield Fire Department indicated that there are two (2) 6,000-gallon USTs containing No. 2 fuel oil at 93 West Street, which is located in an apparent upgradient direction and adjacent to the western portion of the subject site. Chief William Kingsbury further indicated that the USTs were installed in 1982 and 1987. Due to the age and location of these two (2) USTs with respect to the subject site, these two (2) USTs are considered RECs.

Finally, the RTN 3-24796 release of TCE to groundwater was identified at 71 West Street, which is located approximately 500 feet to the east and upgradient to the subject site. Based on the relative topographic elevation with respect to the subject site, the location of the release site, the nature of the release, and the status of response actions, including that a Permanent Solution and a condition of No Significant Risk have not been achieved for the release, this site is considered an REC with respect to the subject site.

We recommend a Phase II investigation consisting of test borings and the installation of groundwater observation wells, as well as chemical analysis of soil and groundwater samples to further assess the possible impacts of the REC to soil and groundwater at the subject site.

We trust that the above is sufficient for your present requirements. Should you have any questions concerning this report, please do not hesitate to call us.

Very truly yours,

McPHAIL ASSOCIATES, INC.

Amy M. Falconeiri

Ambrose J. Donovan, L.S.P.



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### PURPOSE AND SCOPE

The purpose of this report is to present the results of a Phase I Environmental Site Assessment (ESA) conducted to assess the potential presence of Recognized Environmental Conditions at the Parcel A1 & Lot 2 located along West Street in Medfield, Massachusetts, hereinafter referred to as the subject site. Refer to the **Project Location Plan**, **Figure 1**, for the general site locus. The limits of the subject site, which define the limits of our investigation, are shown on the enclosed **Site Plan**, **Figure 2**.

These services were performed and this report was prepared in accordance with our proposal dated October 18, 2011 and the subsequent authorization of The Gatehouse Group, Inc. These services are subject to the limitations in **Appendix A**.

The Phase I ESA was conducted for the above mentioned property pursuant to the Massachusetts Oil and Hazardous Materials (OHM) Release Prevention and Response Act (MGL Chapter 21E), the Massachusetts Contingency Plan 310 CMR 40.0000 (MCP), and the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process (ASTM E 1527-05) as referenced in 40 CFR Part 312 (the All Appropriate Inquiries Rule).

Our scope of services for this Phase I ESA consisted of the following: (i) a review of previous environmental reports prepared by others; (ii) a visual reconnaissance of the subject site and the surrounding area; (iii) an assessment of the subject site history relative to the possible presence of OHM; (iv) a search of Federal databases and records, including the National Priorities List, the CERCLA List and the RCRA Handlers List by EDR Inc.; (v) a search of information from the Medfield municipal offices for records regarding the storage and/or use of OHM at the subject site; (vi) a review of the Massachusetts Department of Environmental Protection (DEP) databases and on-line files relative to the storage of or incidents involving releases of OHM on or in the vicinity of the subject site; and (vii) assessing the above and documenting the results in a Phase I Environmental Site Assessment Report.

Excluded from our Phase I ESA scope of work were a title search, an environmental lien search, an assessment for the presence of lead-based paint, mold, mildew, asbestos containing materials, or other naturally occurring pollutants such as radon gas. In addition, our scope of services did not include subsurface investigations with sampling and chemical testing of soil and/or groundwater. Further, no attempt was made to check on the compliance of present or past owners of the site with federal, state or local laws and regulations except as documented herein.



The objectives of this Phase I ESA, as defined in the ASTM E 1527-05 Standard, are to assess the subject site for the potential presence of Recognized Environmental Conditions at the subject site or at surrounding properties that may potentially pose a threat of impact to the subject site.

The term Recognized Environmental Condition (REC) is defined by ASTM E 1527-05 as the presence or likely presence of any hazardous substance or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property, or into the ground, groundwater or surface water of the property. In addition, ASTM E 1527-05 indicates that the term REC does not include conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies.

Our professional opinion is based solely on the scope of work conducted and pertains to the subject site limits as shown on **Figure 2** and defined herein.

# SITE AND LOCUS DESCRIPTION

#### **Location and Description**

Fronting onto West Street to the south, the subject site is bounded by commercial property to the north and west, and undeveloped land to the east. The subject site consists of two (2) contiguous parcels of land identified as Parcel A1 and Lot 2. The parcel identified as Parcel A1 occupies an area of about 1.43-acres of land and Lot 2 occupies an area of about 7.79-acres of land. A foundation wall and an asphalt paved driveway occupy a portion of the subject site parcels.

The limits of the subject site are shown on **Figure 2**, which was prepared from an 80-scale drawing entitled "Plan of Land in Medfield, MA" dated June 29, 2004 and prepared by Francis X. Desimone of Medway, Massachusetts.

The subject site is located at -71.325300 degrees west and 42.191700 degrees north, respectively, and at UTM coordinates 307,922.7 meters east and 4,673,464.5 meters north in Zone 19.

#### **Site and Vicinity General Characteristics**

The subject site is located in an area of the municipality of Medfield that is generally occupied by residential, commercial and light industrial properties.



As noted above, the parcel identified as Parcel A1 occupies an area of about 1.43-acres of land and Lot 2 occupies an area of about 7.79-acres of land. A foundation wall and an asphalt paved driveway occupy a portion of the subject site. Access to the subject site is provided off West Street.

Public utilities including municipal water, sewer and natural gas service the surrounding area. The topography of the subject site is relatively level

Based on an on-line edition of the Massachusetts Geographic Information Systems DEP Priority Resources Map viewed on October 24, 2011, and included in **Appendix B**, the subject site is located within the boundaries of a Zone II Groundwater Resource area as defined by the Massachusetts Department of Environmental Protection. The map does not indicate public or private drinking water supply wells, Areas of Critical Environmental Concern, fish habitats, habitats of Species of Special Concern or Threatened or Endangered Species on the subject site or within specified distances of the subject site. There are small water bodies and wetland areas on the subject site. There are no solid waste sites (landfills) noted as being located within 1,000 feet of the subject site. Based on EDR's search of FEMA Flood Plain Maps, the subject site is not located within a 100 year or 500 year flood plain.

Areas identified as Protected Open Space is located approximately 150 feet to the northwest of the subject property.

#### **Current Use of Property**

The subject site is currently occupied by a foundation wall, an asphalt paved access road, undeveloped land and wetlands.

PREVIOUS ENVIRONMENTAL REPORTS

Previous environmental reports prepared for the subject site that were reviewed include: (i) "Phase I Environmental Site Investigation, Medfield Business Park, 120 North Meadows Road, Medfield, Massachusetts" dated December 1989 and prepared by Kurz Associates, Inc. (Kurz); and (ii) "Transaction Screen Environmental Site Assessment, 120 North Meadows Road, Medfield, Massachusetts 02052" dated June 11, 2004 and prepared by Roberts Consulting, Inc.

The report entitled "Phase I Environmental Site Investigation, Medfield Business Park, 120 North Meadows Road, Medfield, Massachusetts" dated December 1989 and prepared by Kurz Associates, Inc. was prepared for the property with the address of 120 North Meadows Road, which included the subject site at that time. The report indicated that four (4) soil borings were performed in the vicinity of the building located on 120 North Meadows Road to access soil and groundwater



conditions. The report indicated that soil samples obtained from the borings were screened with a photoionization detector, which did not indicate the presence of Volatile Organic Compounds (VOCS). In addition, VOC analysis was conducted on groundwater samples obtained from the site. According to the Kurz report, the groundwater results did not detect the presence of VOCs.

Further, the Kurz report indicated that a 500-gallon heating oil Underground Storage Tank (UST) and a 275-gallon waste oil Aboveground Storage Tank (AST) are located at Ricks Auto Body, which is located approximately 1,000 feet to the east of the subject site. The Kurz report further indicates that a 1,000-gallon UST is located at Sam White & Sons Nursery, which is located approximately 1,000 feet to the northeast of the subject site and a 1,000-gallon UST is located at the former Metropolitan Machine Company, which was located approximately 200 feet to the east of the subject site.

The report entitled "Transaction Screen Environmental Site Assessment, 120 North Meadows Road, Medfield, Massachusetts 02052" dated June 11, 2004 and prepared by Roberts Consulting, Inc. (Roberts) indicated that a 500-gallon fuel oil UST was removed from 120 North Meadows Road without incident. The Roberts report concluded that no RECs were identified during their assessment.

#### SITE RECONNAISSANCE

#### **Methodology and Limiting Conditions**

A walk over and visual reconnaissance of the subject site was performed by a representative of McPhail Associates, Inc. on October 24, 2011. Observations of readily visible portions of adjacent and nearby properties were also made. However, in general, these observations were made from outside the boundaries of these properties. Photographs taken during our site visit on October 24, 2011 are included in **Appendix B**.

#### **Interior and Exterior Observations**

#### Subject Site

As indicated above, the subject site consists of two (2) contiguous parcels of land identified as Parcel A1 and Lot 2. The parcel identified as Parcel A1 occupies an area of about 1.43-acres of land and Lot 2 occupies an area of about 7.79-acres of land.

A majority of the subject site was observed to be occupied by wooded areas and wetlands. A foundation wall and an asphalt paved driveway occupy a portion of the subject site parcels. Vegetation was observed in



the existing foundation. Street lights were observed along the access road. Miscellaneous household trash including a couch, cardboard, grass clippings and black plastic bags filled with unidentified items were observed along the access road. No stains or odors were observed at the subject site.

In summary, no surficial indications of RECs were observed at the subject site.

#### Surrounding Property

In summary, no surficial indications of RECs were observed on adjacent or nearby properties. Visual observations of surrounding properties were made from outside the property limits.

The properties located to the south of the subject site and on the opposite side of West Street were observed to be occupied by residential properties consisting of single-family houses. No stains or odors were observed in the vicinity of the residential properties located to the south of the subject site.

The property located to the west of the subject site at 93 West Street was observed to be occupied by a multi-unit single-story commercial structure, The units were observed to be occupied by Breen Design Build, Comark-Microcomputer Manufacturing, O'Briens & Sons, Paulette Ballet, Precision Sensing, Yankee Scientific, and 93 West FAB. No stains or odors were observed in the vicinity of the commercial property located to the west of the subject site.

The property located to the north of the subject site is occupied by a 1 to 2-story concrete structure formerly occupied by Potpourri, a craft distributor. The building was observed to be currently occupied by R.H. Keleher Company, a pipe hanger and support system supply company. Remaining portions of this property were observed to be occupied by asphalt paved access roads and parking lots with landscaped borders. A generator was observed to be located along the western portion of this building. No stains or odors were observed in the vicinity of this property.

The property located to the east of the subject site was observed to be occupied by undeveloped land. This property was observed to contain wetlands. No stains or odors were observed in the vicinity of the property located to the east of the subject site. Will's Hardware, Inc. and a hot dog stand are located further to the east of the subject site at 75 West Street. Four (4) 275-gallon aboveground storage tanks (ASTs) and two (2) dumpsters were observed on this property. No stains or odors were observed in the vicinity of 75 West Street. No RECs were observed on the property located to the east of the subject site.



In summary, based on our visual observations of conditions of surrounding properties, we did not observe evidence which would indicate the presence of an REC.

# SITE HISTORY AND USAGE

Our research into the history of the subject site included a request for Sanborn Fire Insurance Maps, historic USGS Topographic Maps, historic Aerial Photographs, and a City Directory Search from EDR. Copies of the historical documentation available are included in **Appendix C**.

#### Sanborn/Historical Maps

According to EDR, Sanborn Maps were not available for the subject site or surrounding properties.

#### **City Directories**

Our review of Cole and Polk City Directories supplied by EDR for 1998, 2002 and 2008 indicated that 120 North Meadows Road, which is located to the north of the subject site had been occupied by Potpourri Collection, Inc. in 1990 and 2002, The Stitchery in 1990, Old Colony Advertising in 2002 and a six occupant office building in 2008.

Will's Hardware located approximately 200 feet to the east of the subject site is indicated in the City Directory as having occupied 75 West Street since at least 2008.

The City Directory indicates that 71 West Street, which is located approximately 750 feet to the east of the subject site, had been occupied by MPM Corp. in 1990, ACOM International, Inc. and HTI Engineering, Inc. in 2002 and The Paint Project in 2008.

The City Directory indicates that 72, 74, 75 and 76 West Street, which are properties located to the south of the subject site, have been occupied by residences in 1990, 2002 and/or 2008.

#### **Aerial Photographs**

Our review of aerial photographs of the subject site area supplied by EDR included photographs dated 2008, 2006, 1995, 1985, 1980, 1978, 1969, 1960 and 1957. Aerial photographs dated 2008, 2006 and 1995 indicate the current configuration of the existing foundation at the subject site and buildings on surrounding properties. The earlier aerial photographs show the subject site and the properties located to the north, east and west of the subject site as undeveloped land. The 1978 aerial photograph indicates the existing residential structures located to the south of the subject site on the opposite side of West Street. The 1969, 1960 and 1957 aerial photographs indicated the property located to the south of the subject site as undeveloped land.



#### **Topographic Maps**

Historic USGS topographic maps of the subject site area dated 1985, 1979, 1970, 1957, 1946 and 1891, and supplied by EDR indicated that, in general, the topography of the area surrounding the subject site is generally level. The topographic maps indicate that the subject site is occupied by undeveloped land during those times.

#### **Other Historical Sources**

Other historical sources were used in our review of the history of the Parcel A1 & Lot 2 located along West Street. According to a report entitled "Downgradient Property Status Report, 71 West Street, Medfield, Massachusetts, Release Tracking Number 3-24796" dated June 2005 and prepared by EBI Consulting, the property occupied by Wills Hardware, Inc. located at 75 West Street was a former machine company identified as the Metropolitan Machine Company. This property is located approximately 200 feet to the east of the subject site and in an apparent upgradient direction to the subject site. Therefore, due to the location of the former machine shop, it is considered an REC.

# **EVALUATION OF DATA FAILURE**

In accordance with ASTM E1527-05, Article 8.3.2 and Article 8.3.2.1 the uses of the property shall be identified back to the property's first developed use, or back to 1940, whichever is earlier, and the maximum interval between historical sources is 5 years.

During the time period between the initial development of the subject site to the present time, some intervals between historical sources exceeded 5 years; therefore, data failure was encountered. However, the indicated use of the subject site between sources appears to have been consistent and, therefore, the data failure is not considered to constitute a significant data gap.

#### **INTERVIEWS**

As part of our research into the historical use of the subject site, a User Questionnaire as contained in Appendix X of ASTM E 1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process was submitted to Mr. Brian J. McMillin of Gatehouse Development Corporation, who completed and returned the questionnaire to McPhail Associates. According to Mr. McMillin's knowledge of the property, there are no environmental cleanup liens filed or recorded against the subject site, or no Activity and Use Limitations, engineering controls, land use restrictions, or institutional controls in place or recorded in a Registry under federal, state or local law. To the extent of his knowledge of the property, Mr. McMillin confirmed that the subject site has been occupied by undeveloped land in the recent past. However, Mr. McMillin indicated



that there may be a Chapter 40B housing restriction. Mr. McMillin indicated that he did not know of specific chemicals that are present or once were present on the property, spills or other chemical releases that may have occurred on the property or of any environmental cleanups that may have taken place at the property. Further, Mr. McMillin indicated that the purchase price "reasonably reflects the fair market value of the property." A copy of the user questionnaire is enclosed in **Appendix E**.

### ENVIRONMENTAL DATABASE REPORT

Research of Federal and State records was conducted by EDR Inc. of Milford, Connecticut, and is summarized in a database report dated October 19, 2011. The report includes a records search of federal and state database information indicating potential environmental matters within ASTM-established minimum search distances. A copy of the EDR database report is included in **Appendix D**.

Based upon information provided by EDR, the subject site is not listed in the databases searched by EDR.

Based upon information provided by EDR, no U.S. Environmental Protection Agency (EPA) National Priorities List (NPL) sites or Proposed NPL sites are located within a 1-mile radius of the subject site.

The EDR report indicates that there are no Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) or Resource Conservation and Recovery Act (RCRA) Corrective Action Activity (CORRACTS) sites located within 0.5-miles of the subject site.

The EDR report also indicates that there are no CERCLIS-No Further Remedial Action Planned (NFRAP) sites within 0.5-miles of the subject site.

The EDR report further indicated that there are no Large Quantity Generators (LQG) of hazardous waste within 0.25-miles of the subject site listed in the Resource Conservation and Recovery Information System (RCRIS). However, there are two (2) Small Quantity Generators (SQGs) of hazardous waste within 0.25-miles of the subject site. These sites are identified as Comark Corp. located at 93 West Street which abuts the subject site to the west, and Ricks Auto Body Inc. located at 100 North Meadows Road, which is approximately 500 feet to the north of the subject site. According to the EDR report, there are no violations on record for either of these SQG sites.

The EDR report indicated that there is one (1) RCRA Conditionally Exempt Small Quantity Generator (CESQG) site located within 0.25-miles of the subject site. An CESQG generates less than 100 kilograms (kg) of hazardous waste or less than 1 kg of acutely



hazardous waste in a calendar month and store less than 1,000 kg and 1 kg on site, respectively. The CESQG site identified as White Sam and Sons, with an address of 16 West Mill Street, is located approximately 1,000 feet to the north of the subject site. According to the EDR report, there are no violations on record for this CESQG site.

Based on the absence of violations, these RCRA SQGs and CESQG are not considered RECs.

The EDR report further indicated that there are no RCRA Non-Generator (NonGen) sites that are located within 0.25-miles of the subject site.

According to EDR's search of the US Brownfields list, there are no US Brownfield sites within 0.5-miles of the subject site.

EDR also reported there are no State Solid Waste Facility/Landfill Sites within 0.5-miles of the subject site.

The databases reviewed by EDR indicated that there are no Manufactured Gas Plant (MGP) sites located within 1-mile of the subject site.

EDR reported that there are 15 DEP-listed release sites, including State Hazardous Waste Sites (SHWS), Leaking Underground Storage Tank (LUST) sites, Leaking Aboveground Storage Tank (LAST) sites, and Institutional Control sites (Activity and Use Limitations or AUL) located within one-mile of the subject site. Based on the EDR review of DEP's Release database, the subject site is not a DEP listed release site. The EDR report indicates that most of the release sites listed are located at a distance greater than 0.25-miles from the subject site. Due to their distance from the subject site, the types of releases, and the remedial activities undertaken most of these sites are not considered to pose a threat of impact to the subject site. However, two of the releases, based on their proximity to the subject site, may have the potential to impact the subject site and were therefore further assessed for their potential to be RECs. The two (2) releases are discussed in greater detail in the Massachusetts DEP Records Review section below.

A review of EDR's list of "orphan sites," that is those sites with inadequate address information, did not indicate other properties that were considered likely to present a threat of impact to the subject property. Therefore, the orphans are not considered to be RECs.

#### MUNICIPAL RECORD REVIEW

Our municipal record review focused on information relevant to the potential use, storage, generation or disposal of OHM at the subject site and surrounding properties, and included inquiries of the Town of Medfield Assessors' database, Town of Medfield Clerk's Office, Town of Medfield Board of Health, Town of Medfield Building Department, and



the Town of Medfield Fire Department - Fire Prevention Division. Copies of relevant information obtained from these sources are included in **Appendix F**.

#### 1. Medfield Assessors' Office

According to the Assessors Office, the subject site consists of two parcels of land. According to the Assessors' databases, Parcel A1 is identified as Map ID 48-066 and occupies 1.43 acres of land. The Assessor's database indicates that Lot 2 is identified as Map ID 41-146 and occupies 7.8 acres of land.

#### 2. Medfield Clerk's Office

According to the Town Clerk's Office, there are no records for the storage of oil or hazardous materials at the subject site. The representative at the Clerk's Office indicated that the closest site to the subject site with records of oil or hazardous materials storage is located along West Mill Street. West Mill Street is located over 1,250 feet to the northeast of the subject site and on the opposite side of North Meadows Road. Based on the location of this site with respect to the subject site, it is not considered an REC.

#### 3. Medfield Board of Health

According to Ms. Nancy Bennotti of the Medfield Board of Health, there are no files on record for the subject site.

However, the Medfield Board of Health did contain a file for 120 North Meadows Road, which is located adjacent to the northern portion of the subject site. The file for 120 North Meadows Road contained an Abbreviated Notice of Resource Area Delineation and a WPA Form 2 dated January 31, 2005 for a subsurface investigation consisting of borings and test pits.

#### 4. Medfield Building Department

According to a representative from the Town of Medfield Building Department, the Building Department does not contain information for the subject site.

#### 5. Medfield Fire Department (MFD)

According to Chief William Kingsbury of the MFD, there are no USTs located at the subject site.

Chief William Kingsbury indicated that there are two (2) 6,000-gallon USTs containing No. 2 fuel oil at 93 West Street, which is located adjacent to the western portion of the subject site. Chief William Kingsbury further indicated that the USTs were installed in 1982 and



1987. Due to the age and location of these two (2) USTs with respect to the subject site, these two (2) USTs are considered RECs.

Chief William Kingsbury indicated that there is one (1) Aboveground Storage Tank (AST) containing fuel oil for an associated generator at 120 North Meadows Road, which is located adjacent to the northern portion of the subject site. No stains or odors were noted in the vicinity of a generator located on the 120 North Meadows Road property during our site reconnaissance on October 24, 2011. Therefore, this AST is not considered an REC.

Further, Chief William Kingsbury indicated that there are four (4) ASTs containing fuel oil at Wills Hardware, Inc. with an address of 75 West Street, which is located approximately 800 feet to the northeast of the subject site. These four (4) ASTs are located on the exterior of the northeastern portion of this building. De minimis stains were noted in the vicinity of the ASTs located on the 75 West Street property during our site reconnaissance on October 24, 2011. Based on the distance of these four (4) ASTs with respect to the subject site, they are not considered RECs.

# SITE REGULATORY STATUS

The current Massachusetts DEP database, as searched on-line on November 3, 2011, indicates that the subject site located on West Street in Medfield, Massachusetts is not listed in DEP's database of release sites.

# DEP RECORDS REVIEW

As noted above, according to the EDR review of state databases completed on October 19, 2011, a total of 15 DEP-listed release sites are located within the ASTM search radius of one mile from the subject site. These release sites include 13 sites within one mile of the subject site at which hazardous waste has been released (SHWS), one LUST site, 2 LAST sites, and one INST Control site within 0.5-miles of the subject site. Note that some sites may be listed in more than one of these categories. Two (2) Registered UST sites are listed within 0.25-miles of the subject site.

Most of the DEP-listed release sites are located at distances greater than 600 feet from the subject site and many of them are at lower elevations. Based on the response actions performed, the distances from the subject site and local topography, most of these sites are not considered likely to pose a threat of impact to the subject site, and therefore are not considered RECs with respect to the subject site. However, the following releases, based on their proximity, may have the potential to affect the subject site and files available at the Massachusetts DEP Central Regional Office were reviewed to assess the potential of these sites to be RECs with respect to the subject site.



In addition, DEP's database of Registered UST sites was reviewed for specific UST sites to assess the potential of these sites to be RECs with respect to the subject site.

#### 1. 71 West Street Release Tracking Number (RTN) 3-3021361

This release site is located approximately 500 feet to the east of the subject site. According to the EDR report, this site is located topographically up-gradient with respect to the subject site. Based upon our review of DEP's on-line files, a release of No. 2 fuel oil from leaking aboveground storage tank (AST) and associated piping triggered a two-hour release notification to the DEP on December 28, 2001. The DEP on-line database indicates that Release Notification Forms (RNFs) were submitted to the DEP on February 19, 2002, February 28, 2002, October 10, 2002 and September 26, 2006. The DEP database indicates that a Phase I Initial Site Investigation Report and a Phase II Scope of Work Report were submitted to the DEP on December 27, 2002. Further, the DEP database indicates that a Tier Classification, an Immediate Response Action (IRA) and a Class A-2 Response Action Outcome (RAO) were submitted to the DEP on April 30, 2003, August 3, 2004 and August 10, 2004, respectively.

Based on the relative topographic elevation with respect to the subject site, the location of the release site, the nature of the release, and the status of response actions, including that a Permanent Solution and a condition of No Significant Risk has been achieved for the release, this site is not considered an REC with respect to the subject site.

#### 2. 71 West Street Release Tracking Number (RTN) 3-3024796

This release site is located approximately 500 feet to the east of the subject site. According to the EDR report, this site is located topographically up-gradient with respect to the subject site. Based upon our review of DEP's on-line files, a release of trichloroethylene (TCE) in groundwater triggered a 120-day release notification to the DEP on April 22, 2005. The DEP on-line database indicates that an RNF was submitted to the DEP on April 22, 2005. Finally, the DEP database indicates that a Down-gradient Property Status (DPS) was submitted to the DEP on June 7, 2005.

According to a report entitled "Downgradient Property Status Report, 71 West Street, Medfield, Massachusetts, Release Tracking Number 3-24796" dated June 2005 and prepared by EBI Consulting, TCE was detected at a concentration of 9.6 micrograms per liter (ug/l) in a groundwater sample obtained from a monitoring well located to the east of the existing building. The RCGW-1 standard for TCE is 5 ug/l. The report indicates that the source of this release may have been from the former machine shop located at 75 West Street or the auto body shop located at 100 North Meadows Road. Based on the relative topographic



elevation with respect to the subject site, the location of the release site, the nature of the release, and the status of response actions, including that a Permanent Solution and a condition of No Significant Risk has not been achieved for the release, this site is considered an REC with respect to the subject site.

<u>Massachusetts DEP On-Line Database of Underground Storage Tanks</u> (USTs)

Our review of the Massachusetts DEP's UST Registry on-line database on November 11, 2011 did not identify records of USTs at the subject site or abutting properties. According to DEP's UST database, the closest USTs are associated with facilities located on West Mill Street, approximately 1,000 feet to the northeast of the subject site. Further, the UST database indicates that the USTs located on West Mill Street have been removed. Given the nature of the tanks and their location in an apparent cross-gradient direction, these tanks are not considered to be an REC.

#### **DATA GAPS**

In accordance with ASTM E 1527-05, the Phase I report shall identify and comment on any significant data gaps that affect the ability of the environmental professional to identify RECs.

No significant data gaps were identified during the completion of this assessment.

# SUMMARY AND CONCLUSIONS

A Phase I Environmental Site Assessment has been completed for the Parcel A1 & Lot 2 located at West Street in Medfield, Massachusetts. The purpose of this report was to document the presence of RECs with respect to the subject site. This report has been prepared in a manner that conforms with the ASTM E1527-05 standard for Phase I Environmental Site Assessment (ESA) reporting, as referenced in 40 CMR Part 312 (the All Appropriate Inquiries Rule).

Our assessment included a visual reconnaissance of the subject site and the surrounding areas, a review of the site history relative to the possible presence of oil and hazardous materials, a review of readily available municipal, state and federal records, and a review of a database search completed by EDR Sanborn, Inc. of Milford, Connecticut in accordance with the applicable ASTM E1527-05 criteria.

We have performed a *Phase I Environmental Site Assessment* in general conformance with the scope and limitations of ASTM Practice E 1527-05 for the Parcel A1 & Lot 2 located at West Street in Medfield, Massachusetts. This assessment has identified three *Recognized Environmental Conditions* in connection with the *Subject Site*. According to a review of an environmental report prepared for 71 West Street



by EBI Consulting, the property currently occupied by Wills Hardware, Inc. at 75 West Street was a former machine company identified as the Metropolitan Machine Company. This property is located approximately 200 feet to the east of the subject site and in an apparent upgradient direction to the subject site. Therefore, due to the location of the former machine shop, it is considered an REC.

Secondly, Chief William Kingsbury of the Medfield Fire Department indicated that there are two (2) 6,000-gallon USTs containing No. 2 fuel oil at 93 West Street, which is located adjacent to the western portion of the subject site and in an apparent topographically upgradient direction to the subject site. Chief William Kingsbury further indicated that the USTs were installed in 1982 and 1987. Due to the age and location of these two (2) USTs with respect to the subject site, these two (2) USTs are considered RECs.

Finally, the RTN 3-24796 release of TCE to groundwater at 71 West Street is located approximately 500 feet to the east and upgradient to the subject site. Based on the relative topographic elevation with respect to the subject site, the location of the release site, the nature of the release, and the status of response actions, including that a Permanent Solution and a condition of No Significant Risk have not been achieved for the release, this release site is considered an REC with respect to the subject site.

We recommend a Phase II investigation consisting of test borings and the installation of groundwater observation wells, as well as chemical analysis of soil and groundwater samples to further assess the possible impacts of the REC to soil and groundwater at the subject site.



# ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312. Further, I have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the subject site. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in CFR Part 312.

Ambrose J. Donovan, P.E., L.S.P Environmental Professional