

## **TOWN OF GOSHEN PLANNING BOARD**

### **Request of Guildhall Sand & Gravel For An Excavation Permit Under RSA 155-E., February 7, 2012 (Final Revisions February 13, 2012)**

Public Hearing: January 17, 2012, continued to January 31, 2012.

Deliberation: February 7, 2012.

Members Participating: Allen Howe, John Wirkkala, Richard Moen, Ed Peckham, and Robert Bell.

#### **I. INTRODUCTION AND PROCEDURAL POSTURE.**

1. Guildhall Sand & Gravel (“the applicant”), a company with the same ownership as Carroll Concrete, has submitted an application for an excavation permit on land located on Lear Hill Road in Goshen, Tax Map 403, lots 4.1 and 4.2, and Map 204, Lot 15 – collectively often referred to as the “Davis Pit” or “Davis Site.” The initial application, including a letter from Mr. Shaun P. Carroll, Sr., dated November (sic) 13, 2011, first delivered to the Goshen Town Office on December 14, 2011.
2. The property was operated as an excavation before the Goshen Zoning Ordinance was adopted in 1970, thus it is not subject to a special exception under Section V(F) of that Ordinance. However, the excavation is not exempt from a permit under RSA 155-E, because no report was filed within the time required under RSA 155-E:2, I(d) (see also RSA 155-E:2, II(a)(3)).
3. The most recent gravel excavation permit for this site (attached) covered the July 29, 2008 through December 31, 2011 period.
4. At a Public Hearing on January 17, 2012, the company request for waivers from the provisions in Goshen’s Excavation Regulations Section III.3.A.4 and III.3.C.3 (Seal of an Engineer or Surveyor) and Section III.3.C.8 (Cross-sectional views) was granted. At the same January 17, 2012 hearing, the Board voted that the application was complete
5. A three-sheet plan prepared by Richard Fraser for Guildhall Sand & Gravel described the proposal for which this application is made. The sheets are labeled as follows: Sheet 1 - “RSA 155-E Site Plan (2011), Existing Conditions” dated 9/29/2011; Sheet 2 - “RSA 155-E Site Plan, Final Grading Plan/Reclamation Plan,” dated 9/29/2011; Sheet 3 – “Guildhall Sand & Gravel, LLC, Erosion and Sediment Control Details, Reclamation Details, & Misc. Permit Notes,” dated 9/29/2011. Sheet 3 provides information on typical Best Management Practices (BMPs).
6. The applicant was represented at the 2012 hearings by Shaun Carroll, Jr., owner-operator of the company, and by Richard Fraser, Certified Professional in Erosion and Sediment Control.
7. The Town of Goshen has adopted local excavation regulations. Thus the standards applicable to this proposal are those contained in RSA 155-E itself and in the Town of Goshen Excavation Regulations, April 2004.

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#### II. FINDINGS AND RULINGS OF THE BOARD.

8. *Application for Amendment or Renewal.* From a substantive standpoint, a renewal application is treated like an original application. The application was submitted as a renewal and was treated as such in these proceedings. According to Goshen's Excavation Regulations Section III.6.C: "*The Board shall not, either as part of a request for amendment or as part of a renewal application, address any request to change or alter a condition or limitation imposed by the Board as part of a prior hearing concerning the particular property, unless the applicant demonstrates to the satisfaction of the Board that there exists a material change of circumstances affecting the merits of the condition or limitation involved*". It is not simply enough for an application to request a change of condition or limitation. In the public hearing on January 31, 2012, Shaun Carroll, Jr., said that he was asking for nothing new in this permit from that which had been permitted in 2008. In the company's written 2011 application, however, there was a request for a maximum transportation vehicle trip count of 110 per day. Yet, this request did not demonstrate any material change in circumstance directly related to the reason (concern over impacts to public welfare) why the previous 77 truck per day limit was adopted.

During the February 7, 2012 hearing Mr. Peckham proposed increasing the number to 110 trucks per day, but provided no basis for a determination that there had been a material change in circumstances. Mr. Howe stated that he thought there was information that demonstrated a material change of circumstances that warranted an increase in the daily number of trucks above 77, but not up to the 110 requested. The town has adopted noise ordinances (Section III.R) and he believes some information submitted by the applicant during the Anderson special exception hearings might be adaptable to evaluation of noise issues at the Davis site since both the proposed Anderson site and the existing Davis site exit into Lear Hill Road in approximately the same location.

Mr. Howe introduced page 17 of the Epsilon Associates, Inc report titled "Sound Level Impact Assessment Report". He noted the statement "*A 25-ton haul truck was measured exiting the Davis excavation site with a full load. The Leq sound level at 50 feet was 69 dBA*". Mr. Howe explained the difference between a maximum sound and the Leq level, which "averages" the noise over a time period. He explained, you hear the truck coming, you hear it in front of you, then you hear it after it passes by. This type of sound is the Leq and at 69 dBA at 50 feet it would be less than the 75 decibel level at the property line specified in the excavation regulations.

Mr. Howe introduced a paragraph extracted from the May 11, 2010 ZBA minutes. It indicated that the model for the Anderson site haul trucks (110 per day) predicted 55 dBA at 22 Lear Hill Road. Section III.R.6.a specifies anything under 65 dBA during daytime hours would not be a violation. Thus Mr. Howe believed that Davis site would probably

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meet that standard. Yet the sound study data did indicate the addition of truck noise alone would cause an 11 dBA increase over ambient, which would violate Section III.R.6.b of 10 dBA over ambient. Mr. Howe discussed several points in a June 3, 2009 memo from Rob O'Neal, Epsilon Associates, Inc. with the subject "Additional Noise Analysis, Excavation Site, Goshen, NH". The memo indicated that the noise from the Sugar River at 22 Lear Hill Road was a constant 44 dBA. Mr. Howe speculated that the affect of the Sugar River would lessen as one moved away from the source (the Anderson site exit onto Lear Hill Road is closer to the 22 Lear Hill Road than the Davis site exit). Thus it is likely that an even a higher dBA over ambient at the exit to the Davis site exit onto Lear Hill Road, since the background noise from the Sugar River would be less and truck noise would be the same.

Thus while Mr. Howe thought the noise data indicated trucking at 110 per day from the Davis site might result in a violation of the town noise ordinance, he felt confident that the number of trucks could be increased above 77 per day and not be a violation.

Mr. Howe introduced a summary of the 2009 truck traffic exiting the Davis site. This was the last year that the Bridge site was active and permitted to run at 110 trucks per day. It included trucks carrying material from the Davis site, as well as from the Bridge site in Unity. Mr. Howe noted that on only a single day during 2009 did the number of trucks reach 110. On only five days did the number of trucks exceed 100 per day. Mr. Howe did note that on six days the 77 truck per day limit was reached and on quite a few other days the trucks per day were in the 70's. Mr. Howe noted that 86% of the days the number of trucks per day was less than 90.

Mr. Howe stated that nothing he has said here should be misinterpreted to mean that he has changed his mind about any of his statements and his position as a ZBA member hearing the Anderson special exception request. Based on all the above, Mr. Howe proposed an increase to 90 trucks per day at the Davis site. The proposal was passed by the board.

9. ***Operational Limitations.*** Those operational limitations contained in the prior permit that will become conditions of the new permit relate to the definition of "operation", days and hours of operation, haul truck round-trips per day, size of haul trucks, maximum annual excavation, dust and noise abatement, provisions for blasting, maintenance of buffers, and site safety.

One provision of the 2008 permit allowed one larger haul truck for the year 2008 only. As requested by the applicant, the current permit will only allow haul trucks that are not larger than 10-wheelers or tri-axles with a gross weight of not more than 65,000 or 73,000 pounds, respectively.

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The applicant requested “...a maximum transportation vehicle trip count of one hundred ten per day”. How much material would be excavated from the Davis Site annually, or over the period of the next three years, was not stated. At the January 31, 2012 hearing, the applicant showed the Board a chart depicting 1998-2011 excavation amounts by year from the site (attached). Since 2002, the amount removed has not exceeded about 55,000 cubic yards per year, and close to zero over the past two years.

The development of the 77 truck per day limitation condition is included in the Reasoning of Decision for the 2004 permit and will not be repeated here. In order to prevent injurious impacts to the public welfare, the 2004 and 2008 permits had established, as conditions of those permits, that the scope of the operation would continue to be limited to no more than 77 haul truck round trips per day and no more than 184,000 cubic yards of excavated material per year. As noted above, a material change of circumstances was apparent to a majority of the board and the 77 haul truck round trips per day was increased from 77 to 90. The 184,000 cubic yards of excavated material per year will apply to the new permit.

10. **Significant Changes Since the Previous Permit.** The 2008 permit had extensive provisions dealing with the use of the Davis site as a haul road for removal of excavated material from the abutting Bridge site in Unity. As the Unity Planning Board has recently made the Bridge site the subject of a reclamation-only permit, all provisions for use of the Davis site as a haul road for material excavated in Unity are no longer applicable.

In its application packet, the applicant includes a letter from Richard Fraser to Ridgley Mauch, New Hampshire DES, Alteration of Terrain Bureau, dated December 6, 2011. This letter includes the following statement:

*“Guildhall Sand & Gravel appears to have found/developed new avenues of market and utilizing the material at the Davis excavation site since the time the January 18, 2010 submittal was mailed to your office. As a result of bank run sand being exhausted at the Newport plant site recently, bank run sand has been trucked from the Davis site to the Newport location to accommodate sales of that material to Newport customers. Also, Foster Materials of Henniker, NH has found the sand to be good for the manufacture of their specialty products (bunker sand, equestrian sand, topdressing sand, etc). They have trucked material from the Davis site to their processing facility. Simply put, the site seems to have developed a new life. Whether or not it can be sustained... (sic) only time will tell.”*

11. **Scope of Operation Issues.** Plan Sheet 1 listed above depicts 29.5± acres as the “Area Remaining Open” by a gold polygon. This area includes roads and stockpile areas, as well as areas eligible for excavation. The “Areas Currently Open for Excavation,” totaling 16.5± acres, are depicted as two red ovals inside the gold polygon. A stippled red

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polygon depicts 5.9± acres identified as the “Area Eligible for Reclamation in 2012.” Finally, four stippled green-encircled areas depict a total of 13.17 acres, identified as “Reclaimed Areas.”

12. **Reclamation Plan.** In the written application, the applicant stated that the “... *estimated volumes of material to be removed annually is impossible to predict... the volume of commercial quality material is unknown. Best guess would be between 200,000 and 500,000 cubic yards. Phasing has historically been simply concurrent reclamation with excavation. This process will continue until the excavation site is fully depleted of commercial quality material and subsequently reclaimed.*”

Although the applicant has made some progress in reclamation and this application includes a plan sheet that depicts the anticipated “Final Grading/Reclamation Plan,” a timetable for completion and a date for final reclamation at the Davis site remain unknown.

On October 5, 2011, and December 6, 2011, Mr. Howe and Mr. Wirkkala attended Unity Planning Board hearings at which Newport Sand & Gravel applied for a permit to complete reclamation at the Bridge excavation site. At the December 6, 2011 hearing, Mr. Howe made a suggestion that the Unity Planning Board might consider cooperating with the Goshen Planning Board to coordinate reclamation along the cross-boundary sections of the Bridge and Davis sites. This suggestion was rebuffed by the Unity Planning Board at the urging of Mr. Fraser and Mr. Carroll, Jr. The Unity Planning Board instead elected to make the Bridge site the subject of a stand-alone Unity reclamation permit. At this time, there is no timetable for completing reclamation of the western section of the Davis site that abuts the Bridge site.

At the public hearing on January 31, 2012, Board members asked a number of questions about the timing of final reclamation at the Davis site. Board members were interested in knowing if any approximate date for final reclamation could be estimated.

Mr. Howe cited RSA 155-E:5-a, which deals with “Incremental Reclamation.” He raised a question as to whether there was at present or might be, in the future, a situation at Davis where reclamation under this law would be required. Mr. Fraser expressed the opinion that the removal of any small amount of material under this statute might be considered “commercially useful,” thereby meaning that reclamation could not be required at this excavation site. Mr. Howe expressed an interest in exploring the possibility of establishing “triggers” that would require reclamation under certain circumstances. Because the applicant objected to this approach, and the other Board members expressed no opinion on it, Mr. Howe said he would go no further in exploring this possibility.

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Mr. Howe asked whether the applicant could provide any timetable at all for reclamation, as required by RSA 155-E. The applicant demurred, saying that because of a multitude of uncertainties, this was not possible.

Mr. Moen requested information about the material remaining along the western side of the property, which abuts the Bridge site in Unity. He asked what estimates for volumes of material remaining had been made. Mr. Fraser said that he had a computer program that allowed him to give only a rough figure. He said that there was perhaps something around 500,000 cubic yards remaining on the entire site. Mr. Moen then attempted to do a calculation of the possible years of active excavation that would remain before full reclamation. It was calculated that if there had been 10,000 cubic yards removed during the last three years, and excavation were to continue at this current rate, then 150 more years would be necessary before the pit could reach a point of full depletion and final reclamation could occur.

Mr. Wirkkala expressed his hope that the pit might, in an incremental fashion, be moving toward final reclamation, however slowly. With that end in mind, he expressed an opinion that it was time to provide updated test pit data regarding the seasonal high water table. Engineer Ross Stevens had included November 1997 data for four test pits on his 1998 map of the Davis site, but these pits had not been monitored since then. Mr. Wirkkala had received the opinion of Ridgley Mauch of the NH DES, that it would be “prudent” for the Board to be given updated data after so many years. Mr. Carroll agreed to comply with Mr. Wirkkala’s request and provide test pit data as part of this permit.

Mr. Carroll stated that although there are 5.9± acres depicted on Sheet 1 as “Eligible for Reclamation in 2012,” he was not committing to completing the reclamation of this area during this year.

- 13. Reclamation Bond.** The amount of the reclamation bond currently on file, in accord with the 2008 permit, is \$84,456. This amount was established by the Planning Board in 2001, based on a recommendation by Carol Ogilvie, Senior Planner from the Southwest Region Planning Commission (attached to the 2008 permit) and by Town Counsel Bernard Waugh, Jr. The Board contacted Deb Weymouth, Natural Resources Conservation Service (NRCS), and was informed that while they had technical expertise on gravel pit restoration, they could not assist in determining reclamation bond amounts. In response to a notice posted by the Board Chairperson on the State of New Hampshire Office of Energy and Planning list-server, two responses specific to gravel pit restoration bonds were received (attached to the 2008 permit). The Woodstock, New Hampshire Planning Board, which has a gravel pit owner on the board, uses a figure of \$10,000 per acre for a restoration bond. The Belmont, New Hampshire, Planner provided a figure of about \$6,900 per acre, but also included a more specific breakdown prepared by

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Northpoint Engineering. Based on the breakdown it was apparent that about half the amount was for purchasing of topsoil to provide four inches of coverage per restored acre. If available, four inches of topsoil is specified in NRCS guidelines for gravel pit restoration. Goshen's Excavation Regulations also specify use of topsoil. Yet in a prior decision, the Board regarded Guildhall's excavation site, which existed prior to the adoption of a Town Zoning Ordinance, as exempt from the requirement that topsoil must be used for reclamation (March 10, 2004 Reasoning of Decision, page 8). The current \$84,456 bond for 29.5± open acres equates to about \$2,860 per acre. Given the above facts, the Board felt the current bond of \$84,456 should be maintained. Mr. Carroll was accepting of that conclusion.

14. ***Reporting and Review Procedure Issues.*** For the prior permit, the applicant and the Board established the mid-September through mid-October period for the Board's annual site inspection. As established in prior permits a record of daily truck counts shall be included as part of an annual report to be submitted to the Planning Board.

### **III. ACTION OF THE BOARD.**

It was moved by Mr. Moen, and seconded by Mr. Peckham to issue an excavation permit to Guildhall Sand and Gravel, LLC, to be worded as follows: (Permit Attached)  
***Adopted on February 7, 2012.***

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#### **ATTACHMENTS**

1. July 29, 2008 through December 31, 2011, Excavation Permit for the Davis Site on Lear Hill Road.
2. July 29, 2008 through December 31, 2011 Reasoning of Decision for the Excavation Permit for the Davis Site on Lear Hill Road.
3. Entire “RSA 155-E Excavation Permit Application (2011 Renewal)” for the Davis Excavation Site, Lear Hill Road, Goshen (NH), submitted by Guildhall Sand & Gravel, LLC, as delivered to the Goshen Planning Board at the Goshen Town Office on December 14, 2011, consisting of six-section booklet and three plan sheets.
4. A chart received from the applicant on September 23, 2011 that depicts the annual cubic yards of excavated material taken from the Davis Site, 1998 through 2011.
5. The cover page and page 17 from the report titled “Sound Level Impact Assessment Report” by Epsilon Associates, Inc. dated February 24, 2009.
6. A paragraph extracted from the May 11, 2010 Zoning Board of Adjustment minutes.
7. A June 3, 2009 memo from Rob O’Neal, Epsilon Associates, Inc., with the subject “Additional Noise Analysis, Excavation Site, Goshen, NH”.
8. A one page spreadsheet summary prepared by Chairman Howe of the data for the 2009 removals from the Bridges site and Davis site.

## Excavation Permit

Guildhall Sand & Gravel, LLC

Lear Hill (Davis) Excavation Site, Goshen, New Hampshire, August 26, 2008

(Final revisions September 3, 2008)

Guildhall Sand & Gravel is issued a permit pursuant to RSA Chapter 155-E to excavate at its Lear Hill Road site in Goshen, New Hampshire – formerly the “Davis Pit” or “Davis Site” – consisting of map 403, lots 4.1 and 4.2 and map 204, lot 15, during the period beginning July 29, 2008 and ending December 31, 2011. Section III.8.B of the Goshen Excavation Regulations specifies that “*The permit shall be valid for three (3) years...*”. The Board has chosen to waive this requirement to avoid permit expiration during mid-season, as would occur if the permit expiration date was August 26, 2011.

Excavation shall be subject to the following list of stipulations, the violation of any of which may subject the applicant to enforcement under RSA 155-E:10, including suspension or revocation:

1. **Conformity With Plans.** The excavation shall be performed in conformity with the written plans and oral testimony submitted by the applicant, and the reiteration of some aspects of those plans in this list of stipulations shall not be deemed to excuse or justify non-compliance with remaining aspects. No material changes in those plans, including transfer of ownership of the site, shall be made unless the applicant receives approval from the Goshen Planning Board for an amendment, using the procedure prescribed by RSA 155-E:6 and Goshen Excavation Regulations section III.6.
2. **Posting of Permit.** As required by RSA 155-E:8, a copy of this permit must be prominently posted at the excavation site.
3. **Hours of Operation.** Hours of operation on the site are limited to weekdays from 7:00 a.m. to 5:30 p.m. Operation on weekends (Saturdays and Sundays) and on state and national holidays shall be on an “emergency basis” only.
  - a. The term “operation” includes the operation of any heavy motorized equipment or vehicles or the use of back-up warning devices or other noise-generating devices. It includes excavation activities, including the moving of any excavated material through, on or from the site, as well as any noise-generating activity ancillary to excavation, including land clearing or reclamation, which generates noise from power equipment such as bulldozers or chainsaws, whether such activities are performed by Guildhall Sand & Gravel employees, by contract personnel, or by any other parties. The term does not include the use of personal passenger vehicles to access or inspect the site, normal conversation, or routine Saturday morning (8:00 a.m. to 12:00 noon) maintenance of equipment left on site, which does not involve any moving of equipment.
  - b. The applicant may begin the warming up of the loader engine at 6:45 a.m. on weekdays, as long as the loader is located in such a place that noise from this preparatory activity will not be noticeable to abutters and neighbors.
  - c. The term “emergency” means a crisis or accident that requires the use of equipment or material to rescue or protect personal lives or property. Any operation which

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Guildhall Sand & Gravel, LLC

Lear Hill (Davis) Excavation Site, Goshen, New Hampshire, August 26, 2008

(Final revisions September 3, 2008)

occurs under the “emergency” provision shall be reported to the Goshen Board of Selectmen, with a written explanation of the emergency, within seven days.

4. ***Scope of Operation.*** The scope of the operation shall be limited as follows:
- a. As represented by the applicant any new excavation areas shall be within the gold polygon on the plan sheet 2 entitled “Updated RSA 485-A:17/RSA 155-E Site Plan, Final Grading Plan,” dated 10/19/2007, Rev. No. 2, 03/28/08, prepared by Richard Fraser for Guildhall Sand & Gravel, LLC.
  - b. Also as represented by the applicant on the plan sheet 1 entitled “RSA 155-E Site Plan, Existing Conditions”, there shall be a total of not more than 22.10 acres of open excavation area. This area is depicted on the plan sheet by a gold polygon without stippling. A third plan sheet, labeled “Davis SheetBS.dwg” depicts this area without contour lines.
  - c. Earth hauling using the Davis Site haul road shall not exceed a cumulative total of 110 round-trips by haul trucks during any single day carrying material excavated at the Davis site in Goshen and the Bridge site in Unity with no more that 77 carrying material excavated at the Davis Site. It is the Board’s intent via this condition to regulate all use of the Davis Site as a haul road no matter where the material being trucked originated. Sales to third parties shall be included within this limitation. Records of all daily trips by all trucks using the Davis Site haul road, those in the employ of the applicant, as well as those which are not shall be maintained by the applicant and shall be available for inspection by the Planning Board upon request. These records will maintain a daily count of trucks carrying material excavated at the Davis Site, including sales to third parties, and a separate count of trucks carrying material excavated at the Bridge site in Unity and using the Davis Site as a gravel haul road.
  - d. The above use of the Davis Site as a gravel haul road for material excavated from the Bridge Pit in Unity is adopted with this condition to be reviewed and altered or reaffirmed by the Board annually. The review shall occur in conjunction with the annual site visit and be completed by the end of each calendar year. The condition may also be reviewed and altered as part of any subsequent renewal application for the Davis Site. The Board decided that the initial trial period will commence on the date of permit approval and extend until December 31, 2009.
  - e. The total amount excavated from the Davis Site in any one year shall not exceed 184,000 cubic yards.
  - f. Any on-premises sales to any third party shall be conducted in such a manner that these sales shall be considered a part of the daily truck load limitation imposed by this permit for the Davis site. Such third parties as are engaged in such sales shall also observe the safety and community concerns regarding noise as exist in these regulations under paragraph 6, “Noise Control,” paragraph 7, “Truck Traffic and

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Guildhall Sand & Gravel, LLC

Lear Hill (Davis) Excavation Site, Goshen, New Hampshire, August 26, 2008

(Final revisions September 3, 2008)

Highway Safety,” and paragraph 8, “Excavation Site Safety” shall be observed. The applicant shall be responsible for compliance by third parties.

- g. As represented by the applicant, no fuels shall be stored on site except in the present location near the Davis garage.
  - h. Overnight storage of explosives or blasting agents, whether supervised or not, is prohibited. Explosives shall be used in accordance with the Goshen Excavation Regulations, section III.4-a.V.
  - i. The company shall provide an emergency contact number for the general public and town officials, such that a responsible company person may be contacted at any time on all matters involving an emergency at the excavation site. An emergency number shall be posted at the excavation site which shall also include the number for the Goshen Police. The company shall give the Goshen Police Department contact numbers of responsible individuals who may be contacted in the event of any off-hours emergency.
5. **Dust Control.** Dust shall be reasonably controlled so as not to adversely affect the use or enjoyment of adjoining properties. In particular, the following measures shall be employed at a minimum:
- a. The applicant has verbally assured the Board that dust will be controlled. If the Select Board finds that trucks exiting the Davis Site are resulting in the loss of excavated material on the roadway described above, they shall contact the company to: 1) arrive at a mutually satisfactory method for clearing the roadway and 2) implement corrective action to prevent reoccurrence of the problem. Clearing of the roadway shall occur during permitted operation hours, as needed, subject, however, to the Selectmen’s authority to regulate highways under RSA 41:11.
  - b. The use of a water truck on unpaved haul routes within the pit during permitted operation hours, as needed.
  - c. The use of calcium chloride or the equivalent on unpaved haul routes, as needed.
6. **Noise Control.** Noise shall be reasonably controlled so as not to adversely affect the use or enjoyment of adjoining properties. In particular, the following measures shall be employed at a minimum:
- a. The use of a discretionary backup beeper on the loader.
  - b. The maximum use of hand signals or other silent means, rather than vehicle horns, for communicating among personnel within the excavation site.
  - c. The directing of the flow of traffic such as to minimize the need for vehicles to back up within the excavation site.
  - d. Compliance with the “hours of operation” as set forth in paragraph 3 above.

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Guildhall Sand & Gravel, LLC

Lear Hill (Davis) Excavation Site, Goshen, New Hampshire, August 26, 2008

(Final revisions September 3, 2008)

7. ***Truck Traffic and Highway Safety.*** In addition to the scope of operation limitations stated in paragraph 4 above, the following measures shall be required to control traffic impacts:

- a. Haul trucks carrying material excavated at the Davis Site shall be no larger than a 14-wheeler tri-axle with a gross weight of not more than 76,000 pounds. There shall be no 18-wheelers, tandem, or tractor-trailer haul vehicles. All vehicles shall comply with road and bridge weight limits.

The Board has granted an exception to the 18-wheeler prohibition to allow one (1) such truck to carry material excavated at the Davis Site during the remainder of 2008. The present Unity permit for the Bridge property limits truck size to 14-wheelers. If Unity were to approve use of 18-wheeler trucks in the Bridge Site for 2008, the Board will grant the above limited exception to truck size for material excavated at the Bridge Site and exiting the Davis Site in Goshen.

- b. All trucking using the Davis Site as a gravel haul road must adhere to the operational limits and standards for trucking, including days and hours of operation, as specified for the Davis Site permit.
- c. The applicant shall notify all employees, contractors, and other haul truck operators that they must bring their vehicles to a complete stop before proceeding from the access road onto Lear Hill Road and that they shall adhere to posted speed limits on public highways.
8. ***Excavation Site Safety.*** The following measures, at a minimum, shall be taken to assure safety at the excavation:
- a. The applicant shall construct and maintain berms according to Mine Safety and Health Administration (MSHA) standards at all steep slope locations.
- b. Orange construction fencing at least four feet high shall be erected at the top of any temporary slopes which equal or exceed a 1:1 slope.
- c. The applicant shall maintain "No Trespassing" signs around the perimeter of the excavation site at all times to discourage any unauthorized trespass.
9. ***Buffers And Visual Impact.*** The following measures shall be required:

The line of trees along the access road, which currently provide a visual barrier to the Landry property, shall not be removed, nor shall any other existing trees be removed within the buffer areas required by RSA 155-E:4-a, I, II, and III and by Goshen Excavation Regulations section III.4-a, A, B, and C.

Notwithstanding the foregoing, in order to create a uniform topography between adjacent properties or to prepare an area for imminent reclamation activities, the applicant may remove the vegetation and excavate the underlying earth materials in the buffer areas on the Davis Site that are adjacent to properties owned or leased by the applicant, Newport

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Sand & Gravel Co., Inc., Carroll Concrete Company or other companies that are subsidiaries of or affiliated with any of the foregoing entities, including but not limited to the buffer area between the Davis Site and the Bridge Site.

10. **Reclamation.** In addition to the open area limitation in paragraph 4(b) above, the following measures are required:

- a. The applicant shall continue to maintain a reclamation bond in the amount of \$84,456. The reclamation bond shall state that it is to secure the applicant's obligation to perform the reclamation activities as required under an excavation permit granted pursuant to RSA Ch. 155-E for Tax Map 403, lots 4.1 and 4.2 and Map 204, lot 15. A copy of this decision and permit shall be attached and cross-referenced. The bond shall be of a self-calling variety, which does not automatically expire on a particular date, but instead makes the amount available for the use of the Town upon a particular date unless released by the Town or extended by the applicant. The Town's attorney shall review the security instrument for legal considerations, at the applicant's expense.
- b. The applicant will convene a meeting on or before December 31, 2009 to involve the company, the Planning Board, and the Natural Resources Conservation Service (NRCS) to review and approve the company's reclamation plan. The required outcome of the meeting is to obtain NRCS written approval of the company's reclamation plan for the 22.10 acres open to excavation under this permit. As represented by the applicant, reclamation will generally follow procedures in the document "Vegetating New Hampshire Gravel Pits" and in Goshen's Excavation Regulations. The Board has previously determined that Guildhall's excavation site, which existed prior to the adoption of a Town Zoning Ordinance, is exempt from the requirement that topsoil must be used for reclamation. Any other deviations from those procedures must be reviewed and approved by the NRCS and the Goshen Planning Board.
- c. As represented by the applicant, no bio-solids or sludge shall be used in the reclamation of this site.
- d. Using test pit data, written assurance will be provided that after final grading the new restored surface will be at least 12 inches above the seasonal high water table.

11. **Reporting and Review Procedures.** The operation shall be subject to reporting and an annual site inspection as follows:

- a. The company shall immediately notify the Goshen Planning Board of any inability to perform any conditions of this permit. Any alteration of any condition of this permit, express or implied, shall require a permit amendment as set forth in paragraph 1 above.
- b. The applicant shall copy the Board on all correspondence between Guildhall Sand & Gravel and any governmental agencies. In particular, the company shall provide the

## **Excavation Permit**

Guildhall Sand & Gravel, LLC

Lear Hill (Davis) Excavation Site, Goshen, New Hampshire, August 26, 2008

(Final revisions September 3, 2008)

Board copies of Guildhall's biennial filing with the Department of Environmental Services and the engineering plan which Guildhall submits to the state every six years, as well as the annual "Notice of Intent to Excavate" form and the annual "Report of Excavated Material" report filed with the Goshen Board of Selectmen. In addition, Guildhall shall also copy the Goshen Planning Board on all correspondence between the Unity Planning Board and Carroll Concrete or its subsidiaries regarding the Bridge site in Unity. This includes, but is not limited to, any application for a permit or permit amendment submitted by the company, any permit or permit amendment granted by Unity, and all "Notice of Intent to Excavate" forms and "Report of Excavated Material" forms filed for the Bridge site.

- c. The protocol for tabulating daily trips by all trucks using the Davis Site haul road to move excavated material shall ensure that: 1) loaded trucks are counted before they exit the site, 2) daily records are maintained for annual reporting, 3) daily records provide for distinguishing whether a truckload originated at the Davis Site or at the Bridge site in Unity, and 4) daily records are available for Planning Board or Select Board review upon request.
- d. The applicant shall submit an annual report to the Goshen Planning Board no later than October 1 of each year. This report shall note the extent of company compliance with the terms and conditions of this excavation permit and the reclamation plan. The report shall include at a minimum the monthly tally of haul truck-loads and cubic yards and pounds of excavated material originating from the Davis Site separate from a similar monthly tally of trucks-loads and cubic yards and pounds of excavated material for trucks simply using the Davis Site as a gravel haul road. The report shall also include the total annual cubic yards and pounds of "sugar" sand and the total annual cubic yards and pounds of other excavation materials combined that were excavated from the Davis Site. The report will include an updated chart depicting total cubic yards excavated annually from the Davis Site between 1998 and the present year.
- e. The applicant shall also annually, before the Board's annual site visit, submit an updated sketch map that shows with reasonable accuracy all changes in the location of haul roads, berms, fences, and physical features. This map shall indicate all areas worked during the production season just ending, and shall be in sufficient detail for the Board to view changes and assure compliance with the total open area requirement set forth in paragraph 4(b) above.
- f. The Goshen Planning Board will, under normal circumstances, conduct an annual inspection of the site between mid-September and mid-October of each year. The company shall provide a representative to accompany the Board during the annual inspection. Following the annual site inspection, the Board will prepare a letter to the applicant that confirms compliance with the terms and conditions of the permit or

## **Excavation Permit**

Guildhall Sand & Gravel, LLC

Lear Hill (Davis) Excavation Site, Goshen, New Hampshire, August 26, 2008

(Final revisions September 3, 2008)

identifies each item of the Excavation Permit that the Board believes to be out of compliance.

12. ***Complete Permit.*** All representations or statements of regulatory intent made by the Goshen Planning Board are merged into and incorporated into this permit and the accompanying written decision of the Board, which alone express the intent of the Board and the obligations of the applicant. The plain meaning of the conditions and stipulations contained herein shall not be deemed modified, construed, or altered by any prior or future statement, written or oral, made by the Goshen Planning Board or its members, or by the applicant or its agents, except following a request for amendment submitted under RSA 155-E:6 and Goshen Excavation Regulations section III.6 and a favorable Board decision on such.

## **TOWN OF GOSHEN PLANNING BOARD**

### **Request of Guildhall Sand & Gravel For An Excavation Permit Under RSA 155-E., August 26, 2008 (Final Revisions September 2, 2008)**

Public Hearing: November 27, 2007, continued in 2008 to March 4, April 1, May 6, May 27, June 3, June 12, and July 15.

Deliberations: July 15, July 29, and August 26, 2008

Members Participating: Allen Howe, John Wirkkala, Jonathan Purick, Richard Moen, John Scranton, and Melanie Bell.

#### **I. INTRODUCTION AND PROCEDURAL POSTURE.**

1. Guildhall Sand & Gravel (“the applicant”), a company with the same ownership as Carroll Concrete, has submitted an application for an excavation permit on land located on Lear Hill Road in Goshen, Tax Map 403, lots 4.1 and 4.2, and Map 204, Lot 15 – collectively often referred to as the “Davis Pit” or “Davis Site.” The initial application, including a letter from Mr. Shaun P. Carroll, Sr., dated October 26, 2007, was first delivered to the Goshen Town Office on November 14, 2007.
2. The property was operated as an excavation before the Goshen Zoning Ordinance was adopted in 1970, thus it is not subject to a special exception under Section V(F) of that Ordinance. However, the excavation is not exempt from a permit under RSA 155-E, because no report was filed within the time required under RSA 155-E:2, I(d) (see also RSA 155-E:2, II(a)(3)).
3. It is the Board’s position based on a May 27, 2008 legal opinion from Attorney H. Bernard Waugh, Jr. (attached) that use of the Davis Site haul road for excavated materials originating off-site from the Bridge Site in Unity could be subject to whatever limitations are included in the 155-E permit for the Davis Site. If no 155-E permit existed for the Davis Site, then use of the site solely for a gravel haul road could require a special exception from the Goshen Zoning Board of Adjustment.
4. The most recent gravel excavation permit for this site (attached) covered the July 12, 2004 through July 12, 2007 period. It was extended during litigation, as described below, but had expired by the date the new application was received by the Town.
5. At a Public Hearing the company requested and was granted waivers for the provisions in Goshen’s Excavation Regulations Section III.3.A.4 and III.3.C.3 (Seal of an Engineer or Surveyor) and Section III.3.C.8 (Cross-sectional views). Initially the Board found the application to be incomplete and provided specific items to be addressed at the 11/27/2007 and 3/4/2008 hearing dates. The applicant subsequently addressed the missing items through updated maps, revised application narrative, supplementary written submissions, and verbal commitment to address reclamation plan specifics via a condition in the permit. The Board voted to accept the application as complete on May 27, 2008.

## TOWN OF GOSHEN PLANNING BOARD

### Request of Guildhall Sand & Gravel For An Excavation Permit Under RSA 155-E., August 26, 2008 (Final Revisions September 2, 2008)

6. The final two-sheet plan prepared by Richard Fraser for Guildhall Sand & Gravel describing the proposal for which application is made are labeled as follows: Sheet 1 - "RSA 155-E Site Plan, Existing Conditions" dated 10/19/2007, rev 3/28/2008; Sheet 2 - "Updated RSA 485-A:17/RSA 155-E Site Plan, Final Grading Plan," dated 10/19/2007, rev 3/28/2008. A third sheet dated 4/11/2008 (Davis SheetBS.dwg) was prepared by Guildhall Sand & Gravel at the Board's request to delineate reclaimed areas, areas brought to final grade, and areas open to excavation as they exist at the time of the application.
7. The applicant was represented at the 2007 and 2008 hearings by Shaun Carroll, Jr., owner-operator of the company, and/or by Richard Fraser of the company and by Attorney Timothy Britain of the law firm Cleveland, Waters, and Bass.
8. The Town of Goshen has adopted local excavation regulations. Thus the standards applicable to this proposal are those contained in RSA 155-E itself and in the Town of Goshen Excavation Regulations, April 2004.

## II. FINDINGS AND RULINGS OF THE BOARD.

9. **Permit Status.** During the time period when Guildhall Sand and Gravel and the Town of Goshen were involved in litigation before the New Hampshire Supreme Court regarding the Town's excavation regulations, an agreement between counsel (which is evidenced by a letter from Attorney Britain to Attorney Waugh dated May 24, 2007, and Attorney Waugh's response dated June 12, 2007) was reached that specified the old permit would continue until a new permit is issued "*it being a condition of the extension that Guildhall will submit a complete application for a new permit within 90 days after the Supreme Court releases a decision on the pending appeal*".

The Supreme Court's July 20, 2007 decision stated "...we conclude that RSA chapter 155-E authorizes municipalities, in the context of excavations that require a permit, to impose regulations more stringent than those contained in the statute. The Town's ordinance does just that and is therefore not preempted."

Ninety days after the July 20, 2007 Supreme Court decision date was October 18, 2007. On November 27, 2007 the Board determined that at the time the present application was submitted (November 14, 2007), the excavation site's most recent permit had expired.

10. **Application for Amendment or Renewal.** From a substantive standpoint, a renewal application is treated like an original application. The application was submitted as a renewal and was treated as such in these proceedings. According to Goshen's Excavation Regulations Section III.6.C: "*The Board shall not, either as part of a request for amendment or as part of a renewal application, address any request to change or alter a condition or limitation imposed by the Board as part of a prior hearing concerning the*

## TOWN OF GOSHEN PLANNING BOARD

### Request of Guildhall Sand & Gravel For An Excavation Permit Under RSA 155-E., August 26, 2008 (Final Revisions September 2, 2008)

*particular property, unless the applicant demonstrates to the satisfaction of the Board that there exists a material change of circumstances affecting the merits of the condition or limitation involved*". It is not simply enough for an application to request a change of condition or limitation. The applicant did submit some information (see below) related to historical truckloads per day. Yet the information did not demonstrate any material change in circumstance directly related to the reason (concern over impacts to public welfare) why the previous 77 truck per day limit was adopted

11. **Operational Limitations.** Those operational limitations contained in the prior permit that will become conditions of the new permit relate to the definition of "operation", days and hours of operation, haul truck round-trips per day, size of haul trucks, maximum annual excavation, dust and noise abatement, provisions for blasting, maintenance of buffers, and site safety.

The applicant requested "...a maximum transportation vehicle trip count of one hundred ten per day". It was stated in supplementary materials presented to the Board by Mr. Carroll on 4/1/2008 (attached) that "*The company will process typically 200,000 cubic yards of material at the Newport aggregate processing plant during an up economy.*" How much of that material would come from the Davis Site was not stated. A chart depicting 1998-2007 excavation by year from the site (attached) was also provided to the Board by the applicant on 4/17/2008. The maximum removal never reached 200,000 cubic yards per year and since the year 2003 hasn't exceeded about 55,000 cubic yards per year.

The development of the 77 truck per day limit condition is included in the Reasoning of Decision for the 2004 permit (attached) and will not be repeated here. On June 12, 2008 Mr. Carroll presented to the Board tabular information titled "*Load Count Data*" (attached). Data for 1996 through 2001 showed an annual truckload per day average that ranged from as low as 64.39 in 1996 to as high as 83.32 in 2001. The truckload per day average over the entire 1996 through 2001 period was calculated by the Board Chair as 80.10. Although the daily truckload range within a month and year often exceeded the annual truckload per day average for that year, without a frequency distribution one could not assess if the high end of the range was common or infrequent.

The previous permit had, in order to prevent injurious impacts to the public welfare, established as a condition of the permit, that the scope of the operation would continue to be limited to no more than 77 haul truck round trips per day and no more than 184,000 cubic yards of excavated material per year. As noted above, since no material change of circumstances has been demonstrated relative to these previously imposed conditions, the 77 haul truck round trips per day limit and 184,000 cubic yards of excavated material per year will apply to the new permit.

**TOWN OF GOSHEN PLANNING BOARD**

**Request of Guildhall Sand & Gravel  
For An Excavation Permit Under RSA 155-E., August 26, 2008  
(Final Revisions September 2, 2008)**

12. *Use of the Davis Site as a Haul Road.* The Board should take into consideration the entire use of the Davis Site in making a decision on renewal of the application for that site. The applicant has been issued a gravel excavation permit from Unity for excavation on property owned by Ernest Bridge and located at 392 Lear Hill Rd, Map 9 Lot 683. The permit was granted for a period not to exceed five years and ending October 18, 2011. The above Unity property abuts the Unity-Goshen Town line at the Davis Site in Goshen. Excavated material from the above Unity Site will be trucked through the Davis Site to reach public highways. The Unity permit specifies a 110 truckload per day limit, but imposes no annual limitation on the amount of materials that Newport Sand and Gravel may remove from the Bridge Site. Truck size is limited to 14 wheelers, although there is a provision for requesting use of larger trucks should Newport Sand and Gravel, Carroll Concrete, or an affiliated company be awarded a contract with respect to closure of the Unity Landfill.

If the Davis Site permit were renewed with the previous 77 truckload per day limit, the potential cumulative impact at the Davis Site would be 187 truckloads per day (110 from Unity and 77 from Goshen). The Board expressed concern that this level of use would be excessive. The Board recognizes that if trucks from the Unity pit were to enter onto public highways in Unity, the Goshen Planning Board would have no jurisdiction over them. The Board also believes that the impact of gravel trucks traveling from the Unity pit via Lear Hill Road to Goshen and Route 10 would have at least as much impact on Goshen highways and residents as the same trucks accessing public roads via the Davis Site. Therefore, the Board concludes a reasonable number of trucks originating in the Unity Pit should be allowed to use the Davis Pit as a haul road so long as those trucks are not in addition to the permitted trucking from the Davis Site itself.

Mr. Carroll volunteered at the June 3, 2008 hearing to accept a condition in the Davis Site permit that would limit the total truckloads per day exiting the Davis Site to 110 with no more than 77 carrying material excavated at the Davis Site.

This condition of the Davis Site permit would preserve the historic level of gravel trucking originating from the Davis Site (i.e., the 77 truckload per day limit for the Davis Site is not being changed) and it would cap the potential maximum trucking through the Davis Site at 110 truckloads per day, which is more favorable to Goshen residents than no limit at all.

The Board decided this compromise position was acceptable and has adopted the above condition as part of the Davis Site permit to be reviewed and altered or reaffirmed by the Board annually. Yet the Board still believes it has authority to regulate use of the Davis Site as a haul road and may elect to do so for a future permit.

All trucking using the Davis Site as a gravel haul road must adhere to the operational limits and standards for trucking, including days and hours of operation, as specified for

## TOWN OF GOSHEN PLANNING BOARD

### Request of Guildhall Sand & Gravel For An Excavation Permit Under RSA 155-E., August 26, 2008 (Final Revisions September 2, 2008)

the Davis Site permit unless a specific exception is granted by the Goshen Planning Board.

13. **Scope of Operation Issues.** Plan Sheet 1 listed above depicts via a non-stippled gold polygon 22.10 acres that will be open to excavation during this permit period. Additional acreage has been brought to final grade and is depicted as the gold polygon with stippling.
14. **Reclamation Bond.** The amount of the reclamation bond currently on file, in accord with the 2004 permit, is \$84,456. This amount was established by the Planning Board in 2001, based on a recommendation by Carol Ogilvie, Senior Planner from the Southwest Region Planning Commission (attached) and by Town Counsel Bernard Waugh, Jr. The Board contacted Deb Weymouth, Natural Resources Conservation Service (NRCS), and was informed that while they had technical expertise on gravel pit restoration, they could not assist in determining reclamation bond amounts. In response to a notice posted by the Board Chairperson on the State of New Hampshire Office of Energy and Planning list-server, two responses specific to gravel pit restoration bonds were received (attached). The Woodstock, New Hampshire Planning Board, which has a gravel pit owner on the board, uses a figure of \$10,000 per acre for a restoration bond. The Belmont New Hampshire Planner provided a figure of about \$6,900 per acre, but also included a more specific breakdown prepared by Northpoint Engineering. Based on the breakdown it was apparent that about half the amount was for purchasing of topsoil to provide four inches of coverage per restored acre. If available, four inches of topsoil is specified in NRCS guidelines for gravel pit restoration. Goshen's Excavation Regulations also specify use of topsoil. Yet in a prior decision, the Board regarded Guildhall's excavation site, which existed prior to the adoption of a Town Zoning Ordinance, as exempt from the requirement that topsoil must be used for reclamation (March 10, 2004 Reasoning of Decision, page 8). The \$84,456 bond for 22.10 open acres equates to about \$3,800 per acre. Given the above facts, the Board felt the current bond of \$84,456 would be adequate. Mr. Carroll was accepting of that conclusion.
15. **Reclamation Plan.** The applicant's reclamation plan primarily cites the NRCS Technical Note PM-NH-21, Vegetating New Hampshire Sand and Gravel Pits. Mr. Carroll submitted an unsigned letter from Theodore Kelsey dated April 5, 2008 (attached) which explains that the warm season grasses used in gravel pit reclamation are native to North America and also describes how they became common in New Hampshire. Mr. Carroll also provided a letter (attached) in which he cites Ted Kelsey as recommending the site not be mowed and that it be allowed to naturally revert to a "more natural state."

Per Goshen's Excavation Regulations Section III.7.D "*If the Board deems it necessary, it shall require a representative of the NRCS, an engineer, or other expert(s) to review plans or to conduct impact studies and shall request the Town's Counsel to review the*

## TOWN OF GOSHEN PLANNING BOARD

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*final permit, at the applicant's expense in accordance with RSA 155-E:11, III.*" Throughout the hearing the Board expressed a desire to have an independent technical expert review the reclamation plan. The NRCS is available to provide technical expertise on gravel pit restoration free of charge. The Board would like to take advantage of this no-cost service to obtain technical expertise for restoration plan review for the 22.10 acres open to excavation under this application. At the May 27, 2008 hearing Mr. Carroll verbally agreed to the cooperative approach to restoration that would involve the expertise from his company, oversight by the Planning Board, and technical expertise of the NRCS. Since the request for NRCS assistance must come from the property owner, Mr. Carroll or his representative must contact the NRCS to request this assistance. Thus one condition of this permit is that Mr. Carroll convenes a meeting to involve the company, the Goshen Planning Board, and the NRCS to review and approve the restoration plan.

As noted above, the Board determined for the previous permit that Guildhall's excavation site, which existed prior to the adoption of a Town Zoning Ordinance, is exempt from that ordinance's requirement that topsoil must be used for reclamation.

16. There was a particular product that Mr. Carroll called "sugar" sand that is available on the site. The Board wanted to monitor extraction of this material from the site. The April 1, 2008 submission from Mr. Carroll (attached) specifies the maximum time to complete all reclamation would be 2030. Given an estimate of only 570,000 cubic yards yet to be excavated, 2030 seemed like a long time before final reclamation is accomplished. The Board wishes to monitor excavation more closely over the next permit cycle.
17. ***Reporting and Review Procedure Issues.*** The applicant and the Board established the mid-September through mid-October period for the Board's annual site inspection. This "window" provided more scheduling flexibility and might ensure more temperate weather than the last half of October schedule. A daily count of the truckloads of material excavated at the Davis Site shall be tabulated separately from the daily count of the truckloads simply using the Davis Site as a gravel haul road. This daily count record shall be submitted as part of an annual report to be submitted to the Planning Board.

### III. ACTION OF THE BOARD.

It was moved by Allen Howe, and seconded by Melanie Bell to issue an excavation permit to Guildhall Sand and Gravel, LLC, to be worded as follows: (Permit Attached)  
***Adopted on August 26, 2008.***

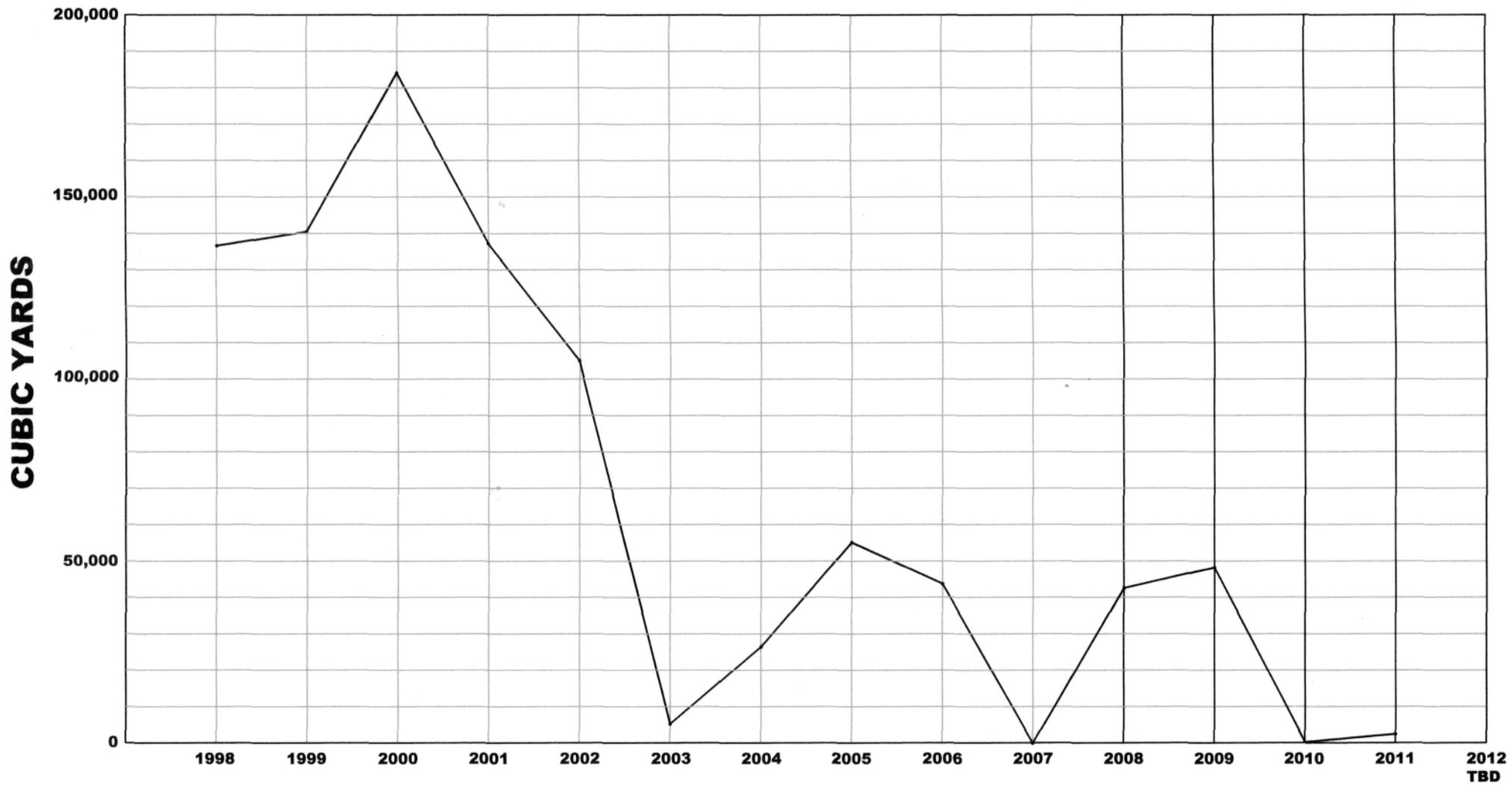
## TOWN OF GOSHEN PLANNING BOARD

### Request of Guildhall Sand & Gravel For An Excavation Permit Under RSA 155-E., August 26, 2008 (Final Revisions September 2, 2008)

#### ATTACHMENTS

1. July 12, 2004 through July 12, 2007 Excavation Permit for the Davis Site on Lear Hill Road.
2. July 12, 2004 through July 12, 2007 Reasoning of Decision for the Excavation Permit Davis Site on Lear Hill Road.
3. Letter from H. Bernard Waugh to the Goshen Planning Board dated May 27, 2008.
4. Materials presented to the Goshen Planning Board by Shaun Carroll at the April 1, 2008 hearing. The document addresses the Board's outstanding issues as specified in the supplement to the March 4, 2008 hearing minutes.
5. A chart received from the applicant on April 17, 2008 that depicts the annual cubic yards of excavated material taken from the Davis Site, 1998 through 2007.
6. Memorandum dated July 2, 2001 from Carol Ogilvie, Senior Planner, Southwest Region Planning Commission, to John Wirkkala, Chariman, Goshen Planning Board, regarding Guildhall Bond Estimate.
7. Emails from Anne-Marie Perry, Woodstock Planning Board, and Candace Daigle, Belmont Town Planner, to Allen Howe about gravel pit reclamation bonds and an attachment from Northpoint Engineering with a breakdown of estimated per acre reclamation costs.
8. An unsigned letter from Theodore Kelsey dated 4/5/2008 provided to the Board by Mr. Carroll on 4/17/2008. The letter describes the origins of grass species used in gravel pit reclamation, as well as a brief statement about seeding on slopes over 25%.
9. A May 27, 2008 letter from Shaun P. Carroll, Jr. regarding site reclamation, including mowing.
10. A document titled "*Load Count Data*", provide by Mr. Carroll on June 12, 2008.

# DAVIS EXCAVATION SITE MATERIAL EXTRACTION RATE BY YEAR



ALH

## SOUND LEVEL IMPACT ASSESSMENT REPORT

Newport Sand & Gravel Excavation Site  
Town of Goshen, Sullivan County, New Hampshire

*Prepared for:*

Newport Sand & Gravel Co., Inc.  
8 Reeds Mill Road  
Newport, NH 03773

*Prepared by:*

Epsilon Associates, Inc.  
3 Clock Tower Place  
Maynard, MA 01754

February 24, 2009

## 5.0 REFERENCE SOUND LEVEL DATA

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The key potential sources of operational noise during excavation at the Newport Sand & Gravel site will be a front-end loader and haul trucks used to transport product. No drilling, blasting, or rock crushing will take place at this site. The primary noise source from the loader and haul trucks will be the diesel engine used to power the equipment. In addition, there is the potential noise from dumping of material into the trucks. On-site noise sources during site reclamation may include a front-end loader, an excavator, and a bulldozer. During reclamation two out of three of these sources will operate at the same time. Excavation and reclamation may be concurrent at times. This means that there could be three (3) earth-moving diesel-engine type machines operating at any given time: a loader for excavation, and two of the following for reclamation: a loader, an excavator, or a dozer. Reference sound level data for excavation activities were measured at the Davis site, and were used to predict sound levels at the proposed Newport Sand & Gravel site. Both broadband (A-weighted) and octave band (frequency-specific) data were collected. These data were used to estimate impacts at the nearest sensitive locations. This section discusses these reference sound level data.

Sound levels from a Caterpillar 980G front-end loader with a 5.5 cubic yard bucket were measured at a distance of 100 feet as it worked the face. The  $L_{eq}$  for the Caterpillar 980G engine noise at 100 feet was measured to be 70 dBA. A 25-ton haul truck was measured exiting the Davis excavation site with a full load. The  $L_{eq}$  sound level at 50 feet was 69 dBA. The first drop of material from the loader into an empty haul truck produced a maximum sound level of 88 dBA at 50 feet. The second drop of material into the haul truck was 10 dBA lower at 78 dBA. The worst-case "first drop" of material was used to calculate noise impacts on area residents. In summary:

- |                              |           |   |                  |
|------------------------------|-----------|---|------------------|
| 1) Front-end loader engine:  | $L_{eq}$  | = | 70 dBA @ 100 ft. |
| 2) Haul truck engine:        | $L_{eq}$  | = | 69 dBA @ 50 ft.  |
| 3) Material drop into truck: | $L_{max}$ | = | 88 dBA @ 50 ft.  |

Sound levels were not measured for an excavator or a bulldozer. The reference sound level for the front-end loader was used to characterize those machines, under the assumption that the overall sound levels would not differ considerably.

From May 11, 2010 Zoning Board of Adjustment rehearing minutes (note that the minutes incorrectly attribute the response to Mr. Cloutier, another expert witness, and not Mr. O'Neal who conducted the sound level analysis):

***“In response to Mr. Howe’s questions Mr. Cloutier clarified that the modeled 55 dBA at 22 Lear Hill Road is due to NS&G haul trucks only and is 11 dBA over ambient of 44 dBA. When the worst case truck traffic is added to the ambient sound level, the total would be 58 dBA at 22 Lear Hill Road. Mr. Cloutier noted that haul truck noise on the haul road and on public highways was not modeled.”***

## MEMORANDUM

Date: June 3, 2009

To: Shaun Carroll, Jr., Newport Sand & Gravel  
Tim Britain, Cleveland, Waters and Bass, P.A.

From: Rob O'Neal, Epsilon Associates, Inc.

Subject: Additional Noise Analysis, Excavation Site, Goshen, NH

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Based on questions from members of the Goshen Zoning Board of Adjustment (ZBA) and the Goshen Planning Board at their joint meetings of February 10, March 3, and April 14, 2009, additional noise analysis was done for the proposed excavation site off Lear Hill Road in Goshen, NH. This memo summarizes the results of additional sound level measurements and modeling conducted around the site, and should be considered a supplement to the Sound Level Impact Assessment Report dated February 24, 2009 prepared by Epsilon Associates, Inc.

The focus of the additional analysis was on noise from truck activity along Lear Hill Road, and potential impacts from the Project on residences located somewhat distant from Route 10 which might experience a lower background sound level. A full day of sound level measurement data were collected at three new residential locations. They are shown in the attached Figure 1 and described below.

- ◆ Location 4 → 22 Lear Hill Road. The sound level meter was set up on the house's western property line at the same setback from Lear Hill Road as the front of the house (approximately 25 feet).
- ◆ Location 5 → 134 Washington Road (Route 31). The sound level meter was set up in the side yard near the house. This location is elevated approximately 150 feet above Route 10 and 500 feet east of Route 10.
- ◆ Location 6 → 349 Cross Road. The sound level meter was set up in the side yard away from the house. This location is elevated approximately 330 feet above Route 10 and 4,550 feet east of Route 10.

**Epsilon**

Sound levels were measured for 10 consecutive hours from 7:00 a.m. to 5:00 p.m. on Friday May 1, 2009. These hours match the proposed excavation site hours. The Davis Pit was not yet open for the season. There was no activity in the excavation site or any truck traffic associated with the Davis Pit during the course of the measurement program. The weather on May 1 saw temperatures ranging from 52° F in the morning to 70° F in the afternoon. Skies were overcast or mostly cloudy with a brief shower between 1:15 and 1:30 p.m. Winds were from the southwest at 2-6 mph.

The results of the sound level measurements are shown graphically in Figures 2, 3, and 4 for the three locations. They are also shown in tabular format in Table 1. A few observations for each location are discussed below.

- ◆ Location 4 → 22 Lear Hill Road. The quietest background sound levels (L90) were unchanged all day at 44 dBA. This is due to the water noise from the South Branch of the Sugar River. A combination of trucks, buses, cars, and SUVs on Lear Hill Road and nearby Route 10 were responsible for the maximum sound levels which were between 67 and 82 dBA throughout the day. Numerous 10-wheel trucks currently travel Lear Hill Road and Route 10 unrelated to Newport Sand & Gravel – these were observed and measured on May 1.
- ◆ Location 5 → 134 Washington Road (Route 31). The quietest background sound levels (L90) ranged from 35 to 40 dBA throughout the day. A variety of trucks, buses, cars, and SUVs on Washington Road (Route 31) and Route 10 were responsible for the maximum sound levels which were between 64 and 76 dBA throughout the day.
- ◆ Location 6 → 349 Cross Road. The quietest background sound levels (L90) ranged from 29 to 39 dBA throughout the day. Vehicular traffic noise from Routes 10 and 31 were inaudible or indistinguishable at this site. Occasional local traffic on Cross Road was responsible for the maximum sound levels which were between 55 and 84 dBA throughout the day. A delivery of stone to the resident at 349 Cross Road between 1 p.m. and 2 p.m. resulted in the maximum sound level of 84 dBA.

As expected, as one moves further away from vehicular traffic on Route 10, and to a lesser degree on Route 31, the sound levels decrease. However, this concept also holds true for any sound levels generated from the excavation site. To evaluate this, the same software package (Cadna/A) used in the February 24, 2009 Sound Level Impact Assessment Report, was used to calculate expected sound levels from Newport Sand & Gravel activities at the two new elevated locations. The 22 Lear Hill Road residence already had predictive data. That site evaluation was updated using the new ambient measurements from May 1, 2009. The results are shown in Table 2 below.

The results in Table 2 show that all impacts from the excavation site will be well below the Town of Goshen Noise Standards. These include both the absolute standard and relative increase standard. In addition, any Newport Sand & Gravel truck traffic on the public roads will be at or below current noise levels. At 22 Lear Hill Road, current hourly average sound levels (Leq) are 55 dBA. During the worst-case hour, (most truck trips by Newport Sand & Gravel), the worst-case truck traffic impacts are predicted to be the same at 55 dBA [see page 20, section 6.2 of the February 24, 2009 Sound Level Impact Assessment Report, Epsilon Associates, Inc.]. Newport Sand & Gravel truck traffic impacts at the more remote, elevated locations on Washington Road and Cross Road will be negligible.

Table 1. Measured Sound Levels – Locations 4, 5, and 6  
 Friday May 1, 2009

Hour	Time (start)	Location 4 – 22 Lear Hill Rd			Location 5 – 134 Washington Rd			Location 6 – 349 Cross Rd		
		Lmax (dBA)	Leq (dBA)	L90 (dBA)	Lmax (dBA)	Leq (dBA)	L90 (dBA)	Lmax (dBA)	Leq (dBA)	L90 (dBA)
1	7:00	72	52	44	65	49	40	56	44	39
2	8:00	78	53	44	69	49	37	64	43	36
3	9:00	79	54	44	64	48	39	55	42	38
4	10:00	67	51	44	66	49	37	67	43	38
5	11:00	70	50	44	70	49	36	55	40	34
6	12:00	73	54	44	67	49	37	58	40	34
7	13:00	70	50	44	69	50	36	84	54	32
8	14:00	70	51	44	74	52	35	59	39	29
9	15:00	82	55	44	76	52	37	67	40	31
10	16:00	76	53	44	68	50	37	60	38	31

Table 2 Evaluation of Sound Levels (all Sound Levels in dBA)

Scenario	22 Lear Hill Rd	134 Washington Rd	349 Cross Rd
Distance to closest portion of excavation area	1,610 feet	3,150 feet	5,400 feet
Worst-case Project Sound Level from excavation area	25	38	27 <sup>7</sup>
Existing Lowest L <sub>90</sub> (Table 1) – “Residual Ambient Sound Level”	44 <sup>1</sup>	36 <sup>2</sup>	31 <sup>3</sup>
Total Future Sound Levels (Existing plus Project Excavation Area) <sup>4</sup>	44	40	32
Total Future ≤ 65 dBA <sup>5</sup>	Yes	Yes	Yes
Increase over Ambient	0 dBA	4 dBA	1 dBA
Increase ≤ 10 dBA <sup>6</sup>	Yes	Yes	Yes

<sup>1</sup> = Second lowest hour of 10 hours measured at Location 4.

<sup>2</sup> = Second lowest hour of 10 hours measured at Location 5.

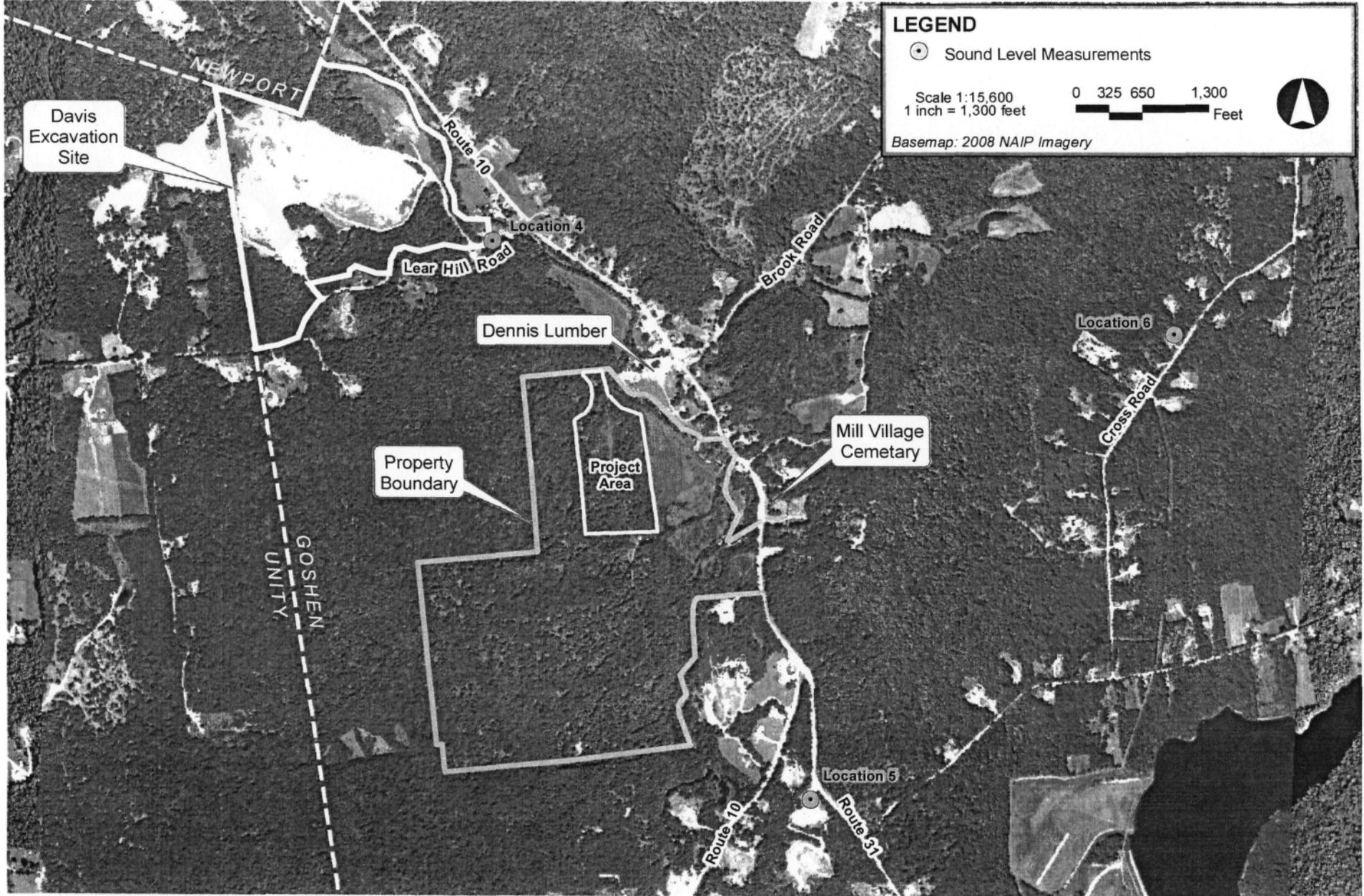
<sup>3</sup> = Second lowest hour of 10 hours measured at Location 6.

<sup>4</sup> = Logarithmic addition of sound levels in two rows above. See page 3 of Sound Level Impact Assessment Report, Newport Sand & Gravel Excavation Site, prepared by Epsilon Associates, Inc., February 24, 2009 for more detail.

<sup>5</sup> = Town of Goshen Noise Standard: Maximum Allowable Hourly-Equivalent Sound Level (L<sub>Aeq1Hr</sub>) during daytime.

<sup>6</sup> = Town of Goshen Noise Standard: Maximum Allowable Increase over Residual Ambient (L<sub>90</sub>) is 10 dBA.

<sup>7</sup> = Impact actually less than 27 dBA as topographic data not available that far from site so shielding from terrain not fully taken into account.



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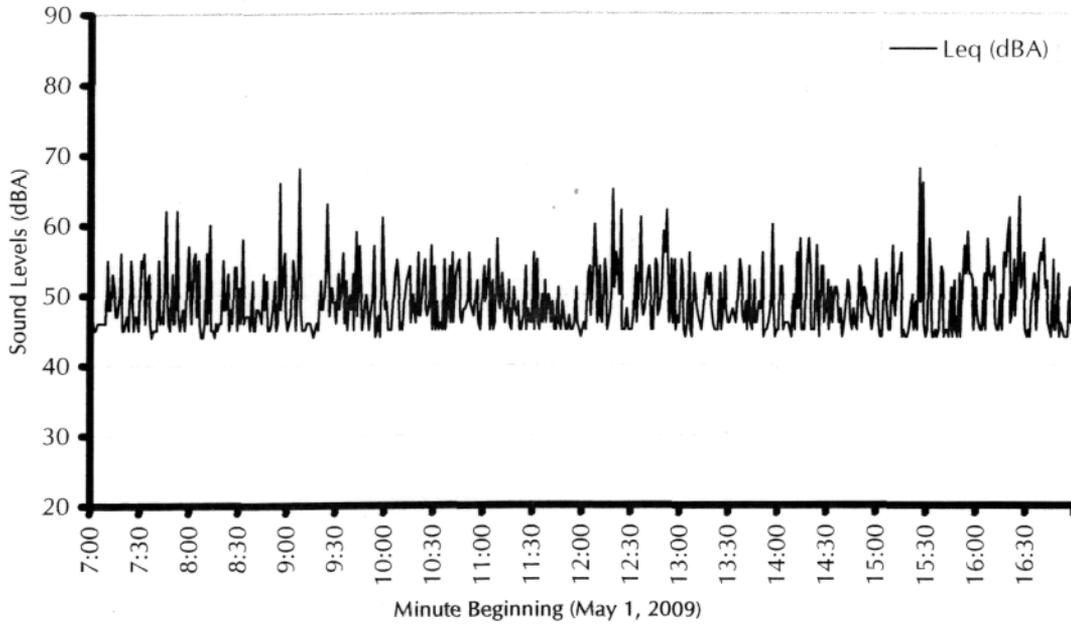


**Figure 1**  
Sound Level Measurement Locations - May 2009

Figure 2

Sound Level Data for Location 4  
22 Lear Hill Road

Measured 1- Minute  $L_{eq}$  Levels



Measured 1- Hour Sound Levels

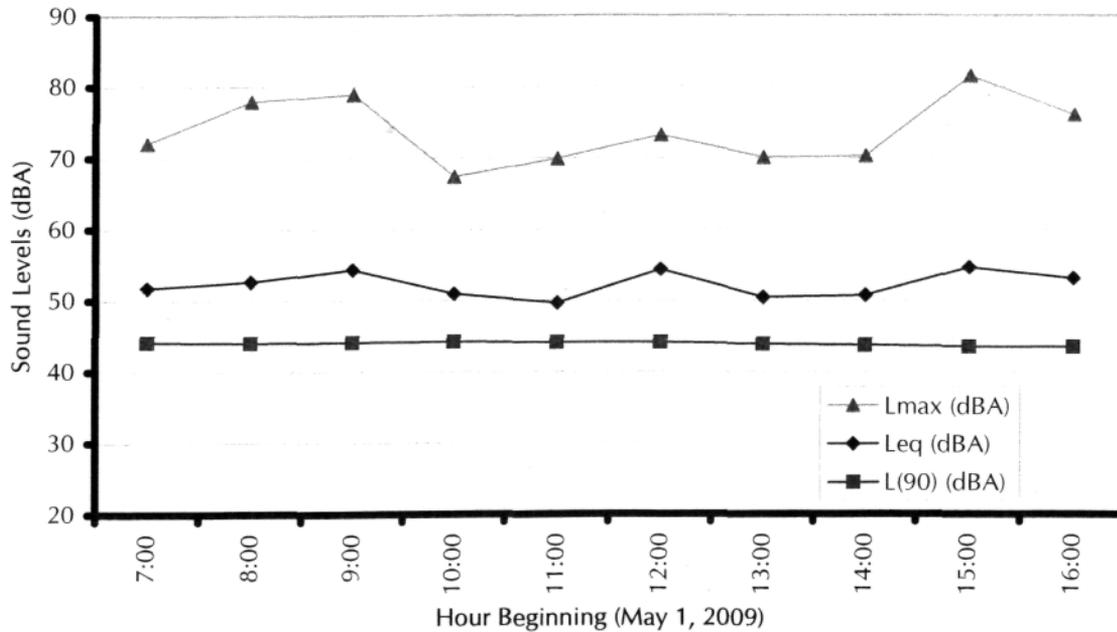
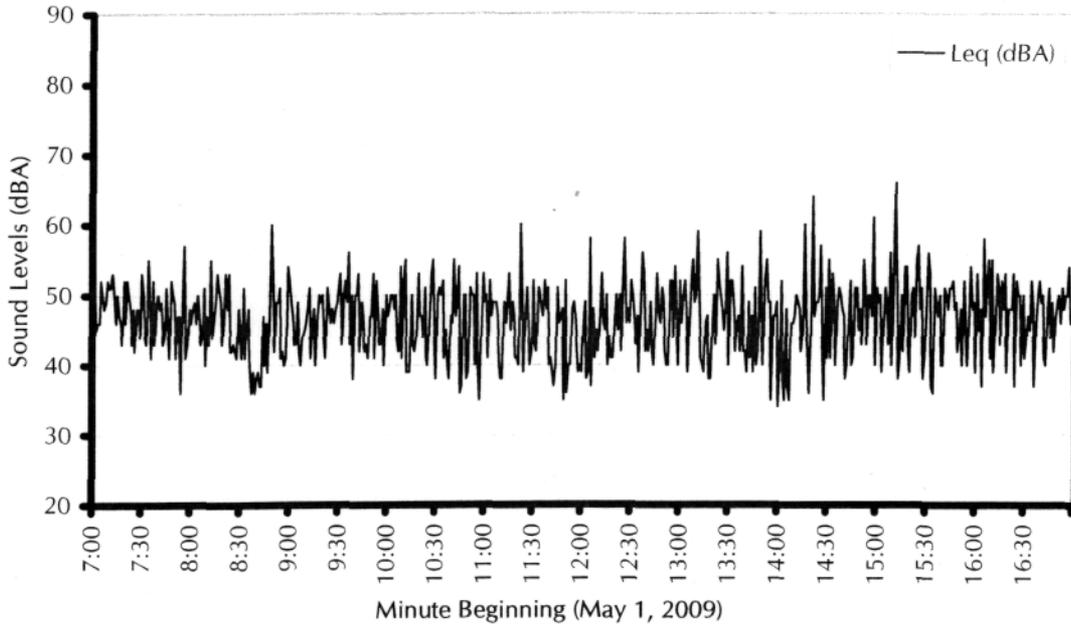


Figure 3

Sound Level Data for Location 5  
134 Washington Road (Route 31)

Measured 1- Minute  $L_{eq}$  Levels



Measured 1- Hour Sound Levels

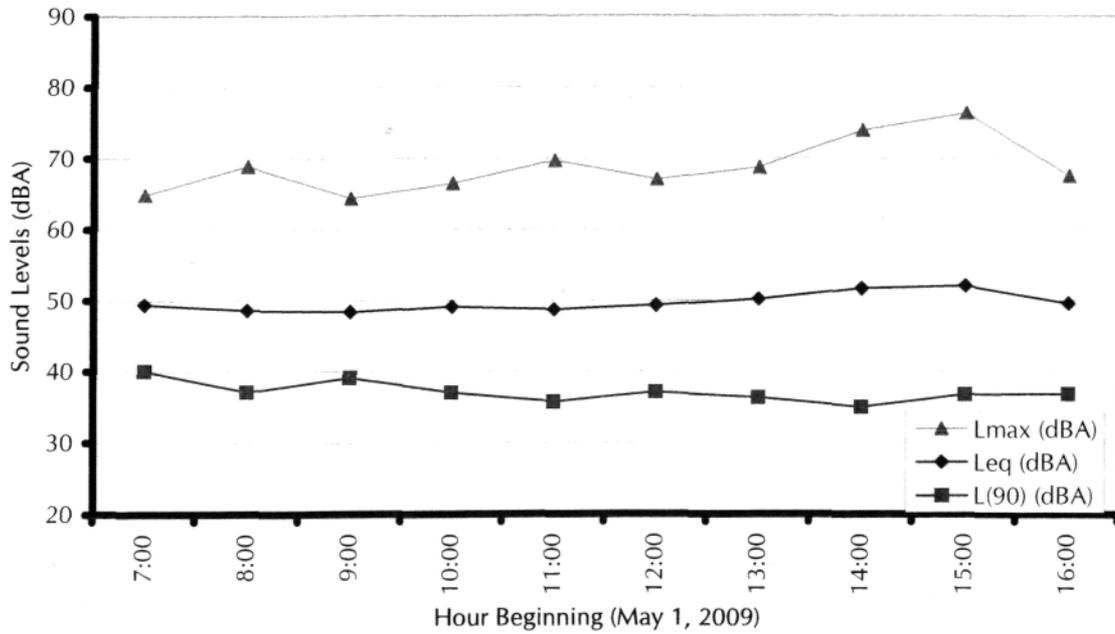
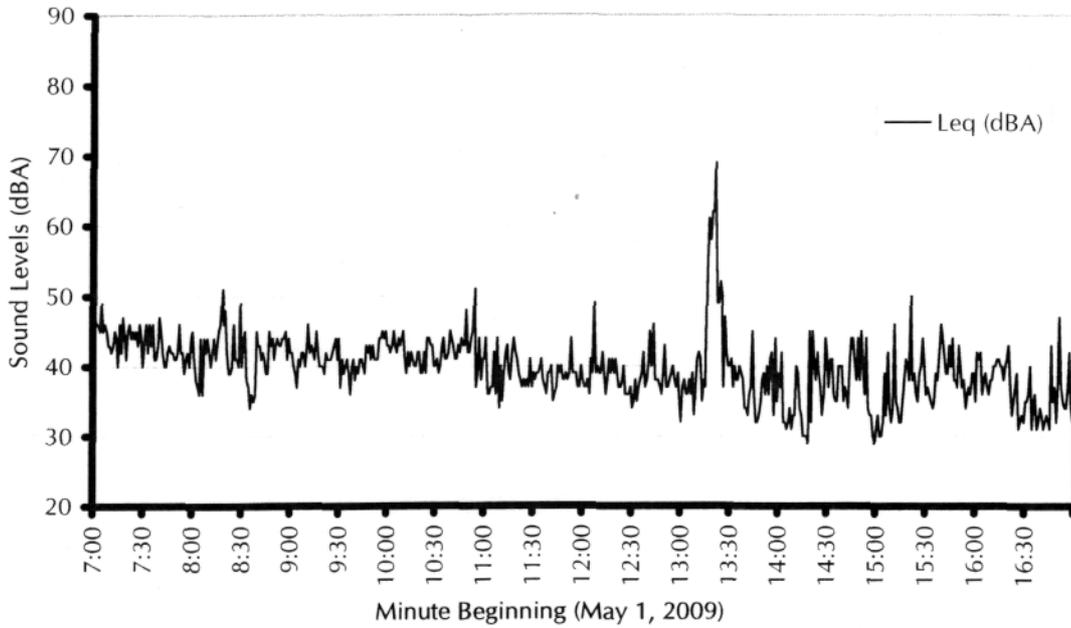


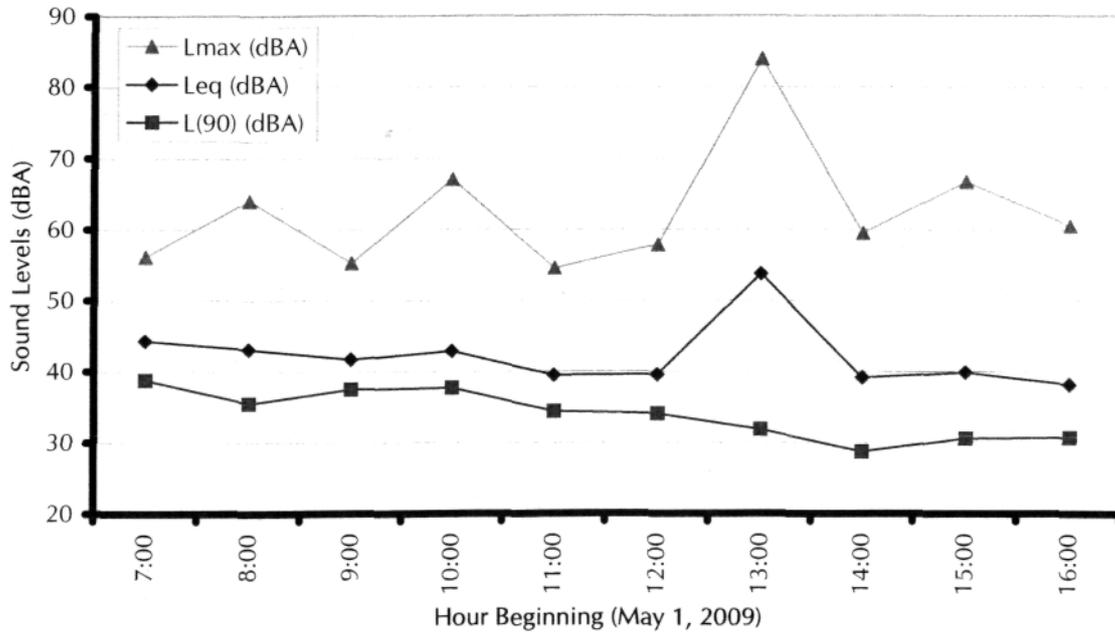
Figure 4

Sound Level Data for Location 6  
349 Cross Road

Measured 1- Minute  $L_{eq}$  Levels



Measured 1- Hour Sound Levels



Original Data

2009

Sorted by Total Loads

Date	Bridges Loads	Davis Loads	Total Loads
22-Jun	78		78
23-Jun	99		99
24-Jun	104		104
25-Jun	101		101
26-Jun	89		89
29-Jun	97		97
30-Jun	80		80
1-Jul	72		72
2-Jul	79		79
6-Jul	70		70
7-Jul	98		98
8-Jul	85	25	110
9-Jul		77	77
10-Jul		72	72
13-Jul		68	68
14-Jul		59	59
15-Jul		73	73
16-Jul	49	55	104
17-Jul	64		64
20-Jul	105		105
21-Jul	89		89
22-Jul		73	73
23-Jul		67	67
24-Jul		76	76
27-Jul	54		54
28-Jul	56		56
27-Jul		58	58
30-Jul		73	73
31-Jul		40	40
3-Aug		73	73
4-Aug		74	74
5-Aug		77	77
6-Aug		75	75
7-Aug		66	66
10-Aug		77	77
11-Aug		77	77
12-Aug		71	71
13-Aug		73	73
14-Aug		77	77
17-Aug		74	74
18-Aug		73	73
19-Aug		75	75
20-Aug		76	76
21-Aug		77	77
24-Aug		72	72
25-Aug		70	70
26-Aug		76	76
27-Aug		76	76
28-Aug		62	62
31-Aug		76	76
8-Sep		71	71
9-Sep		73	73
10-Sep		76	76
11-Sep		62	62
14-Sep	37		37
18-Sep		69	69
21-Sep		73	73
22-Sep		47	47
Total Trucks	1506	2834	4340
Count	19	41	60

Date	Bridges Loads	Davis Loads	Total Loads	Days	Percent of Days
14-Sep	37		37	1	1.7%
31-Jul		40	40	2	3.4%
22-Sep		47	47	3	5.2%
27-Jul	54		54	4	6.9%
28-Jul	56		56	5	8.6%
27-Jul		58	58	6	10.3%
14-Jul		59	59	7	12.1%
28-Aug		62	62	8	13.8%
11-Sep		62	62	9	15.5%
17-Jul	64		64	10	17.2%
7-Aug		66	66	11	19.0%
23-Jul		67	67	12	20.7%
13-Jul		68	68	13	22.4%
18-Sep		69	69	14	24.1%
6-Jul	70		70	15	25.9%
25-Aug		70	70	16	27.6%
12-Aug		71	71	17	29.3%
8-Sep		71	71	18	31.0%
1-Jul	72		72	19	32.8%
10-Jul		72	72	20	34.5%
24-Aug		72	72	21	36.2%
15-Jul		73	73	22	37.9%
22-Jul		73	73	23	39.7%
30-Jul		73	73	24	41.4%
3-Aug		73	73	25	43.1%
13-Aug		73	73	26	44.8%
18-Aug		73	73	27	46.6%
9-Sep		73	73	28	48.3%
21-Sep		73	73	29	50.0%
4-Aug		74	74	30	51.7%
17-Aug		74	74	31	53.4%
6-Aug		75	75	32	55.2%
19-Aug		75	75	33	56.9%
24-Jul		76	76	34	58.6%
20-Aug		76	76	35	60.3%
26-Aug		76	76	36	62.1%
27-Aug		76	76	37	63.8%
31-Aug		76	76	38	65.5%
10-Sep		76	76	39	67.2%
9-Jul		77	77	40	69.0%
5-Aug		77	77	41	70.7%
10-Aug		77	77	42	72.4%
11-Aug		77	77	43	74.1%
14-Aug		77	77	44	75.9%
21-Aug		77	77	45	77.6%
22-Jun	78		78	46	79.3%
2-Jul	79		79	47	81.0%
30-Jun	80		80	48	82.8%
26-Jun	89		89	49	84.5%
21-Jul	89		89	50	86.2%
29-Jun	97		97	51	87.9%
7-Jul	98		98	52	89.7%
23-Jun	99		99	53	91.4%
25-Jun	101		101	54	93.1%
24-Jun	104		104	55	94.8%
16-Jul	49	55	104	56	96.6%
20-Jul	105		105	57	98.3%
8-Jul	85	25	110	58	100.0%
Total Trucks	1506	2834	4340		
Count	19	41	60		