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**General Electric Company
Albany, New York**

Truck Route and Traffic Analysis Report

Appendix E to the Final (100%) Design Report for the OSD Remedy

Fletcher's Paint Works and Storage Facility
Superfund Site - Operable Unit 1
Milford, New Hampshire

December 31, 2007

Revised October 30, 2008

AR



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October 30, 2008

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Office of Site Remediation and Restoration
United States Environmental Protection Agency
One Congress Street, Suite 1100 (HBO)
Boston, Massachusetts 02114-2023

**Subject: Additional and/or Alternate Truck Staging Area
Fletcher's Paint Works and Storage Facility Superfund Site
CERCLA Docket No. 01-2001-0063
Milford, New Hampshire**

Dear Ms. Sprague:

As requested, the General Electric Company (GE) submitted a Final (100%) Design Report (Final Design Report) for the Operable Unit 1 (OU1) soil remedy on December 31, 2007. Appendix E of the Final Design Report contains the Truck Route and Traffic Analysis (TR/TA) Report, which discusses the routing of inbound trucks to one of two staging areas identified by the Town of Milford (Town) during an earlier design phase. Staging Area 1 was identified as the primary staging area and is located on Perry Street. Staging Area 2 was identified as an overflow staging area and is located on Heron Pond Road. Staging Areas 1 and 2 are both owned by the Town. More recently, the Town suggested another possible staging area located on the north side of Elm Street west of the site. This property is also owned by the Town and was formerly the location of the Police Department, but is now vacant. The use of this property as an additional and/or alternate truck staging area is the subject of this letter.

ARCADIS (U.S.), Inc. (ARCADIS) has evaluated the additional and/or alternate truck staging area. For this area to be used during implementation of the Operable Unit 1 (OU1) soil remedy, the following modifications would be needed, and are shown on the attached figure:

- The fencing and gate near the east corner of the building would need to be removed to allow trucks to drive around the existing building;
- The overhead electric line extending east from the building would need to be raised or, if not in use, temporarily removed to provide sufficient clearance for the trucks;
- The fencing near the north corner of the building would need to be removed to allow trucks to drive around the existing building;
- The debris near the northwest side of the building would need to be relocated to allow trucks to drive around the existing building;

- Gravel would need to be brought in to extend the driving surface in two areas where the existing pavement is not sufficient to accommodate the turn radius of the trucks; and
- The shrubs in the "island" next to Elm Street in front of the building would need to be pruned or removed to improve visibility during egress by the trucks.

The above modifications would need to be acceptable to the Town throughout the remedy implementation period. If acceptable to the Town, then GE proposes that the additional and/or alternate truck staging area would become Staging Area 1 and would be the primary truck staging area. The staging area identified in the Final Design Report as Staging Area 1 would become Staging Area 2 and would be the overflow staging area. The staging area identified in the Final Design Report as Staging Area 2 would become Staging Area 3 and would be the contingent overflow staging area. Revised pages to Appendix E of the Final Design Report are attached that would, if the modifications described above are acceptable to the Town, accomplish these changes.

Please contact me if you have any questions or need additional information regarding the additional and/or alternate truck staging area discussed herein.

Sincerely,



Paul Wm. Hare
Manager, Northeast/Midwest Regions

attachment

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**Truck Route and Traffic
Analysis Report**

Fletcher's Paint Works and
Storage Facility Superfund Site –
Operable Unit 1
Milford, New Hampshire

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Abbreviations	i
1. Introduction and Summary	1
1.1 Purpose and Objective	1
1.2 Previous Related Submittals	1
1.3 Executive Summary	2
2. Impact Analysis	3
2.1 Off-Site Disposal Remedy Description	3
2.2 Estimated Truck Traffic Associated with Remedy Implementation	4
2.2.1 Concurrent Excavation of Impacted Material from the Elm and Mill Street Areas and Transportation to the Applicable Off-Site Disposal Facility	4
2.2.2 Transportation of Clean Materials for Site Restoration	5
2.2.3 Summary	7
2.3 Truck Routes	7
2.4 Overview of Impacts Associated with Remedy Implementation	8
2.4.1 Truck Routes	8
2.4.2 Adjacent Properties	11
3. Recommendations and Analysis	13
3.1 Truck Route Recommendations	13
3.2 Capacity Analysis	14
3.3 Impact Summary	16
3.4 Impact Mitigation Recommendations	17
Figures	
E-1 Primary Truck Route – Elm Street Area to NH Route 101 East	
E-2 Primary Truck Route – Mill Street Area to NH Route 101 East	

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FOR EPA REVIEW

Truck Route and Traffic Analysis Report

Operable Unit 1 –
Fletcher's Paint Works
and Storage Facility
Superfund Site

- Elm Street to NH Route 13 to NH Route 101, with a reverse direction of NH Route 101 to NH Route 13 to Lincoln Street to Union Street to Garden Street to Cottage Street to Elm Street to avoid the downtown traffic circle.

The Preliminary Traffic Report identified two routes from the Mill Street Area to the Elm Street Area. Those two routes included the following:

- North on Cottage Street to Elm Street; or
- West on Mill Street to West Street to Elm Street.

From Elm Street, the trucks would follow one of the routes identified above between the Elm Street Area and NH Route 101.

Further detail and maps of the above-listed truck routes are provided on Figures E-1 and E-2. These figures also display the locations of three Truck Staging Areas: consisting of a Primary Staging Area located on Elm Street; an Overflow Staging Area located on Perry Road; and a Contingent Overflow Staging Area located on Heron Pond Road. Use of the latter two staging areas may not be required for implementation of the OSD soil remedy.

2.4 Overview of Impacts Associated with Remedy Implementation

This section provides an overview of the anticipated impacts to the proposed truck routes and properties adjacent to the Elm and Mill Street Areas associated with the truck traffic required to implement the OSD soil remedy, as described in Section 2.2.

2.4.1 Truck Routes

As indicated in Section 2.2.3, approximately 5,526 truck trips will be required on public roadways to implement the OSD soil remedy, all of which will be long distance trips entering and leaving Milford. Approximately 2,728 truck trips are associated with the off-site transportation of impacted materials to applicable off-site disposal facilities, while approximately 2,798 truck trips are associated with the transportation of clean backfill/surface restoration materials to the Site.

It is currently anticipated that inbound trucks will be routed to the Primary Staging Area identified on Figures E-1 and E-2. However, should additional truck staging capacity be required during implementation of the OSD soil remedy, GE anticipates the use of the Overflow Staging Area and, if necessary, the Contingent Overflow Staging Area.

ARCADIS

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FOR EPA REVIEW

Truck Route and Traffic Analysis Report

Operable Unit 1 –
Fletcher's Paint Works
and Storage Facility
Superfund Site

The latter two staging areas were identified by the Town subsequent to the submittal of the *Preliminary (30%) Design Report for the LTTD Remedy* (Preliminary Design Report). Those staging areas and trucking routes to the Site were identified in the Preliminary Traffic Report included in Addendum No. 1 (and included for informational purposes in Attachment A herein).

Subsequent to submittal of the Final Design Report on December 31, 2007, the Town identified a third property for use as the potential primary truck staging area: the former Milford Police Department property located on the north side of Elm Street to the west of the Site. Based on the identification of the former Milford Police Department property, as well as comments received by EPA in its April 5, 2007 approval with modification letter for the Preliminary Design Report (regarding the proximity of a school to the staging area located on Heron Pond Road), and a further determination of the quantity of trucks required on a daily basis to implement the OSD soil remedy, it is currently anticipated that the former Milford Police Department property will be utilized as the Primary Staging Area for any trucks that do not travel directly to the Site, with the staging area located on Perry Road utilized as the Overflow Staging Area, if necessary. Finally, due to the proximity of the school to the staging area located on Heron Pond Road, this area will only be used as the Contingent Overflow Staging Area. Since all three staging Areas are located along the travel route to the Site (i.e., between NH Route 101 and the Site), the routing of the trucks to the staging area and from the staging area to the Site is considered a part of the inbound leg for trucks traveling to the Site.

As indicated later in this section, it is currently estimated that approximately 52 truck trips per day will be required to implement the OSD soil remedy. Since this includes both the inbound and outbound legs of the trip (i.e., one truck makes both an inbound and outbound truck trip to/from the Site), it can be further estimated that implementation of the OSD soil remedy will require approximately 26 trucks visiting the Site each working day. The Remedial Action Contractor will be responsible for phasing the arrival of the trucks to the Site for either loading of impacted materials for off-site disposal or off-loading clean backfill materials for site restoration. As a result, it is anticipated that the approximately 26 trucks traveling to the Site will be phased to arrive at the Site over the course of a 10 hour work day (which includes 8 hours of active trucking operations). Therefore, staging of 26 trucks at any one time will not be required. Instead, it is anticipated that the Primary Staging Area, which is approximately 2.5 acres, including approximately 14,300 square feet of pavement, is sufficiently large to stage 12 to 16 trucks, with another five or six trucks staged on-site (split between Mill Street and the portion of Keyes Drive adjacent to the Elm Street Area) for material loading/off-loading activities. Therefore, by phasing the arrival of

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FOR EPA REVIEW

Truck Route and Traffic Analysis Report

Operable Unit 1 –
Fletcher's Paint Works
and Storage Facility
Superfund Site

trucks throughout the construction day, it is anticipated that the Primary Staging Area is sufficiently large to accommodate any trucks that need to be staged prior to traveling to the Site and that use of the Overflow and Contingent Overflow Staging Areas may not be required to implement the OSD soil remedy. Finally, it should be noted that trucks leaving the Site will travel directly to the appropriate off-site locations (i.e., disposal facility/clean fill source). These trucks will not return to the Primary Staging Area, so no capacity is required to stage any outbound trucks.

Section 4 of the Final Design Report for the OSD soil remedy indicated that the excavation and transportation of the impacted materials at the Elm and Mill Street Areas will be performed in two phases. In general, the excavation activities at both areas will generally proceed from the deeper excavations to the shallower excavations. More specifically, it is anticipated that the excavation activities at the Elm Street Area will proceed from the deeper excavations located in the northeast corner and central portions of the property (Phase 1 – 14,670 cy, which includes approximately 3,460 cy of material excavated for the soil cover and utility/tree planting corridors) to the shallower excavations located along Keyes Drive and Elm Street (Phase 2 – 6,920 cy, which includes approximately 510 cy of material excavated for the soil cover and utility/tree planting corridors), as shown on Figures D-1 and D-2 (included in Appendix D to the Final Design Report). Similarly, it is anticipated that the excavation activities at the Mill Street Area will proceed from the deeper excavations in the central portion of the property (Phase 1 – 8,560 cy) to the shallower excavations located along the western and eastern portions of the property (Phase 2 – 1,095 cy), as shown on Figures D-3 and D-4 (included in Appendix D to the Final Design Report).

The Project Construction Schedule provided in Appendix G of the Final Design Report indicates that the concurrent excavation activities for the Phase 1 excavations at the Elm and Mill Street Areas (approximately 23,230 cy) would be performed over a period of approximately 53 working days (i.e., intrusive activities will be performed 12 hours a day, 6 days a week). Further, the Phase 2 excavations at the Elm and Mill Street Areas (approximately 8,015 cy) would be performed over a period of approximately 26 working days. As also shown on that schedule, the backfilling activities would generally be performed concurrently with the excavation activities at the Site, but finishing slightly behind such excavation activities to accommodate verification of the limits of removal. Specifically, the limits of soil removal for each excavation area will be surveyed to verify achievement of the required excavation limits to achieve the soil cleanup levels (SCLs) specified in the Record of Decision (ROD) for OU-1. Additionally, confirmation sampling will be required in many completed excavations prior to backfill materials being placed in those excavations. In total, it is estimated that the concurrent excavation and off-site disposal activities at the Elm and Mill Street

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Truck Route and Traffic Analysis Report

Operable Unit 1 –
Fletcher's Paint Works
and Storage Facility
Superfund Site

Areas will be performed over a period of approximately 92 work days, or 107 calendar days. These estimated durations assume that the excavation and transportation activities will be performed to provide sufficient materials to maintain an excavation production rate of approximately 450 tons (i.e., 300 cy) per day. Based on the information provided above, it is assumed that approximately 5,526 truck trips will be spread evenly over 107 days for a total of approximately 52 truck trips per day between the Site and the off-site sources of clean materials and off-site disposal facilities.

Based on the traffic counts taken at the intersection of Elm Street and West Street (approximate average daily traffic [ADT] of 15,250), the addition of 52 trips per day would represent an increase of approximately 0.34% of traffic during any given day. It is not anticipated that this will represent a substantial impact to the overall intersection. This conclusion is supported by the detailed capacity analysis that was performed for the public roads adjacent to the Site and the staging areas as part of the final design of the OSD soil remedy, as further described in Section 3. As discussed therein, the capacity analysis was combined with the traffic data collected for the roads in the vicinity of the Site (provided in Attachments A through D of this report) to develop a detailed evaluation of potential impacts associated with the implementation of the OSD soil remedy and support an evaluation of the need for measures to mitigate such impacts.

2.4.2 Adjacent Properties

During implementation of the OSD soil remedy at the Elm and Mill Street Areas, the normal traffic and pedestrian patterns associated with Elm Street and Mill Street is expected to be impacted. It is anticipated that one lane of Elm Street will have to close for a short duration to facilitate excavation of soils and the replacement of the portion of the storm sewer utility under Cottage Street and Elm Street as described in Section 3.6 of the Final Design Report. As indicated in the Final Design Report, the remedial action will be performed in such a manner that the northern (i.e., west-bound) lane of Elm Street will not be closed concurrently with Mill Street. When the northern lane of Elm Street is closed, two-way traffic on Elm Street will be maintained utilizing one lane with traffic being maintained by flaggers or temporary signals. Pedestrians on Elm Street will have to be re-routed to the opposite (i.e., south) side of the street both east and west of the work area at adjacent intersections. Mill Street traffic will be detoured during excavation, backfilling and restoration of the Mill Street Area (including reconstruction/realignment of Mill Street). For additional information on the above-referenced maintenance of traffic plans, see Technical Drawings T-1 to T-5, which are included in Appendix B of the Final Design Report.

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Truck Route and Traffic Analysis Report

Operable Unit 1 –
Fletcher's Paint Works
and Storage Facility
Superfund Site

The adjacent properties that may be impacted the greatest during the remedy are Keyes Field (Parcel 25-133) and the business/residence adjacent to the Elm Street Area (Parcel 25-11), as well as the four residences on Mill Street located immediately across the street from the Mill Street Area (Parcels 25-93, 25-93A, 25-94, and 25-109). As indicated in the Final Design Report, GE and the Town are currently engaged in discussions regarding alternate access to Keyes Field via an easement through the former Permattach property. The business at Parcel 25-11 is accessed directly from Elm Street, and will not be impacted. The Final Design Report contains provisions for maintaining access to residences at Parcels 25-11 and 25-109, and for providing alternate and/or temporary access to the residences at Parcels 25-93, 25-93A, and 25-94.

Properties located along the truck routes may experience some minor impact as the trucks pass by. The impacts are expected to include engine and tire noise, engine exhaust emissions and visual impacts of large dump trucks. These impacts are not considered significant since the anticipated truck volume is low (approximately 52 truck trips per day or approximately 6.5 truck trips per hour).

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Truck Route and Traffic Analysis Report

Operable Unit 1 –
Fletcher's Paint Works
and Storage Facility
Superfund Site

3. Recommendations and Analysis

This section provides: a recommendation of the truck routes to and from the Site; capacity analyses determining the levels of service and impact to those levels for significant intersections along the truck routes; a description of the potential impacts to the roadways and properties adjacent to the Site; and an evaluation of the need for measures to mitigate potential impacts created by the implementation of the OSD soil remedy at the Elm and Mill Street Areas.

3.1 Truck Route Recommendations

As indicated in Section 2.3, the Preliminary Traffic Report included in Attachment A identified primary and secondary haul routes depicted for each site and the original two staging areas (which now represent the Overflow Staging Area and Contingent Overflow Staging Area). In letters dated May 15 and October 31, 2007, the Town provided comments on the truck routes presented in the Preliminary Design Report and the Intermediate OSD Design Report. Those comments indicated the Town's desire that the "Oval" located in the center of town be excluded from any trucking routes used for the implementation of the OSD soil remedy. As indicated in Section 2.3, one of the routes from the Elm Street Area included travel east on Elm Street to the Oval, turning south on Route 13. The Town also indicated a preference that the staging area on Heron Pond Road (i.e., the current Contingent Overflow Staging Area) not be used during implementation of the OSD soil remedy.

In response to the Town's comments, the truck route through the Oval was eliminated from further consideration. Also, as indicated in Section 2.4.1, a new Primary Staging Area was identified at the location of the former Milford Police Department on Elm Street to the west of the Site, which should be sufficient to handle the truck queues associated with implementation of the OSD soil remedy. Therefore, use of the staging areas located on Perry Road (Overflow Staging Area) and Heron Pond Road (Contingent Overflow Staging Area) may not be necessary to implement the OSD soil remedy. In summary, the recommended routes from/to the Site and to/from the Primary Staging Area are as follows (see Figures E-1 and E-2):

- From the Elm Street Area - Exit the Elm Street Area traveling west on Elm Street, turning east on NH Route 101;
- From the Mill Street Area - Exit the Mill Street Area traveling west on Mill Street, turning north on West Street, turning west on Elm Street, turning east on NH Route 101;

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Truck Route and Traffic Analysis Report

Operable Unit 1 –
Fletcher's Paint Works
and Storage Facility
Superfund Site

- To the Elm Street Area - Traveling west on NH Route 101, turning east on Elm Street, turning north into the Elm Street Area;
- To the Mill Street Area - Traveling west on NH Route 101, turning east on Elm Street, turning south on West Street, turning east on Mill Street to the Mill Street Area;
- To Primary Staging Area - Trucks would follow the above two routes, stopping at the former Milford Police Department property located on Elm Street on their way to the Site (as previously indicated, the Primary Staging Area will only be used for trucks inbound to the Site);
- To the Elm Street Area from the Primary Staging Area - Traveling east on Elm Street, turning north into the Elm Street Area; and
- To the Mill Street Area from the Primary Staging Area - Traveling east on Elm Street, turning south on West Street, turning east on Mill Street to the Mill Street Area.

3.2 Capacity Analysis

To measure the impact associated with implementing the OSD soil remedy on the existing vehicular traffic in the vicinity of the Site, capacity analyses were performed at key intersections along the truck routes utilizing the computer program Synchro under both projected existing and projected remedial action conditions in 2009. Capacity analyses take into consideration a number of variables in determining delay such as vehicle volume, lane width, number of lanes, vertical grades, signal timing, signal phasing, traffic control, turn lane lengths, and other geometric information. The analyses measured the actual impact in terms of level of service (LOS) at the key intersections. LOS is a measure of delay of the intersection in seconds (sec). Below is a table of the LOS and the delay in seconds for each level, with LOS A being the best in terms of delay and LOS F being the worst in terms of delay.

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Truck Route and Traffic Analysis Report

Operable Unit 1 –
Fletcher's Paint Works
and Storage Facility
Superfund Site

Table 1 – Levels of Service

LOS	Signalized Intersection	Unsignalized Intersection
A	≤10 sec	≤10 sec
B	10-20 sec	10-15 sec
C	20-35 sec	15-25 sec
D	35-55 sec	25-35 sec
E	55-80 sec	35-50 sec
F	≥80 sec	≥50 sec

Capacity analyses were performed for the four major intersections located along the recommended truck routes that would be impacted by implementation of the OSD soil remedy, including: Mill/Knight Street and West Street; Elm Street and West Street; Elm Street and Old Wilton Road; and Elm Street and NH Route 101. The assumptions for the capacity analyses were that trucks would be traveling to both the Elm and Mill Street Areas concurrently. The analyses were performed for the peak hours identified for weekday mornings, weekday afternoons/evenings, and Saturday midday, as determined through a review of the traffic counts obtained in 2006 during the preliminary design phase (see Attachment C). The existing counts were projected to 2009, which is the anticipated year during which the OSD soil remedy would be implemented, utilizing the existing count information that is located in Attachment D.

The Final Design Report estimated that a total of 5,526 truck trips will be needed over a 107-day period during the implementation of the OSD soil remedy. Of the 5,526 truck trips, 3,594 trips are anticipated trips to/from the Elm Street Area and 1,932 trips are anticipated trips to/from the Mill Street Area. Based on an 8-hour day, this represents approximately 52 truck trips per day with 34 trips to/from the Elm Street Area and 18 trips to/from Mill Street Area. The result is a total of approximately 6.5 trips per hour to/from the Site. The truck trips associated with remedy implementation were distributed along the haul routes per the traffic split diagram located in Attachment D. All of the projected 2009 existing and projected remedial action traffic counts are summarized in tables and charts located in Attachments B through E.

Tables 2 and 3 below summarize the results of the capacity analyses that were completed for the signalized (Table 2) and unsignalized (Table 3) intersections located along the truck routes between NH Route 101 and the Site. Capacity analyses were also performed for the intersection of Elm Street and Old Wilton Road for trucks utilizing Staging Area 1. As a conservative measure, the analysis for this intersection was completed assuming the five vehicles per hour were traveling to/from the staging area (even though it is not anticipated that the staging area will be needed for each of

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Truck Route and Traffic Analysis Report

Operable Unit 1 –
Fletcher's Paint Works
and Storage Facility
Superfund Site

the 26 trucks traveling to/from the Site on a daily basis, as described in Section 2.4.1). Due to the low hourly volume of truck trips, there is not a significant change in the delay of any intersection and the expected impact to the haul routes will be negligible.

Table 2 - Delay in Seconds/Level of Service at Signalized Intersections

Intersection	Projected 2009 LOS Non-Construction Conditions			Projected 2009 LOS Construction Conditions		
	AM	PM	SAT	AM	PM	SAT
Elm Street/NH Route 101	26.0/C	46.9/D	20.7/C	26.4/C	46.9/D	21.2/C
Elm Street/West Street	13.7/B	14.1/B	10.7/B	13.8/B	14.1/B	10.8/B

Table 3 - Delay in Seconds/Level of Service at Unsignalized Intersections

Stopped Approach	Intersecting Street	Projected 2009 LOS Non-Construction Conditions			Projected 2009 LOS Construction Conditions		
		AM	PM	SAT	AM	PM	SAT
Old Wilton Road NEB	Elm Street	12.6/B	11.8/B	12.9/B	12.7/B	11.9/B	13.0/B
Knight Street EB	West Street	13.2/B	10.9/B	11.3/B	13.3/B	11.0/B	11.3/B
Knight Street WB	West Street	15.1/C	10.9/B	10.7/B	15.1/C	10.9/B	10.7/B

As indicated in the tables above and documented in the capacity analyses located in Attachment E, none of the evaluated intersections will have a significant decrease in LOS during implementation of the OSD soil remedy due to trucks traveling to/from the Site and/or NH Route 101. The complete capacity analyses for the projected existing and remedial action conditions in 2009 during workday morning, workday afternoon/evening and Saturday midday peak hours can be found in Attachment E.

3.3 Impact Summary

The overall impact associated with implementation of the OSD soil remedy to the areas surrounding the truck routes would be negligible. This conclusion is based on the minimal delay differences in the capacity analyses, the minimal truck volumes per hour associated with remedy implementation, the truck routes being located primarily on major thoroughfares and the minimal residential areas adjacent to the haul routes.

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Truck Route and Traffic Analysis Report

Operable Unit 1 –
Fletcher's Paint Works
and Storage Facility
Superfund Site

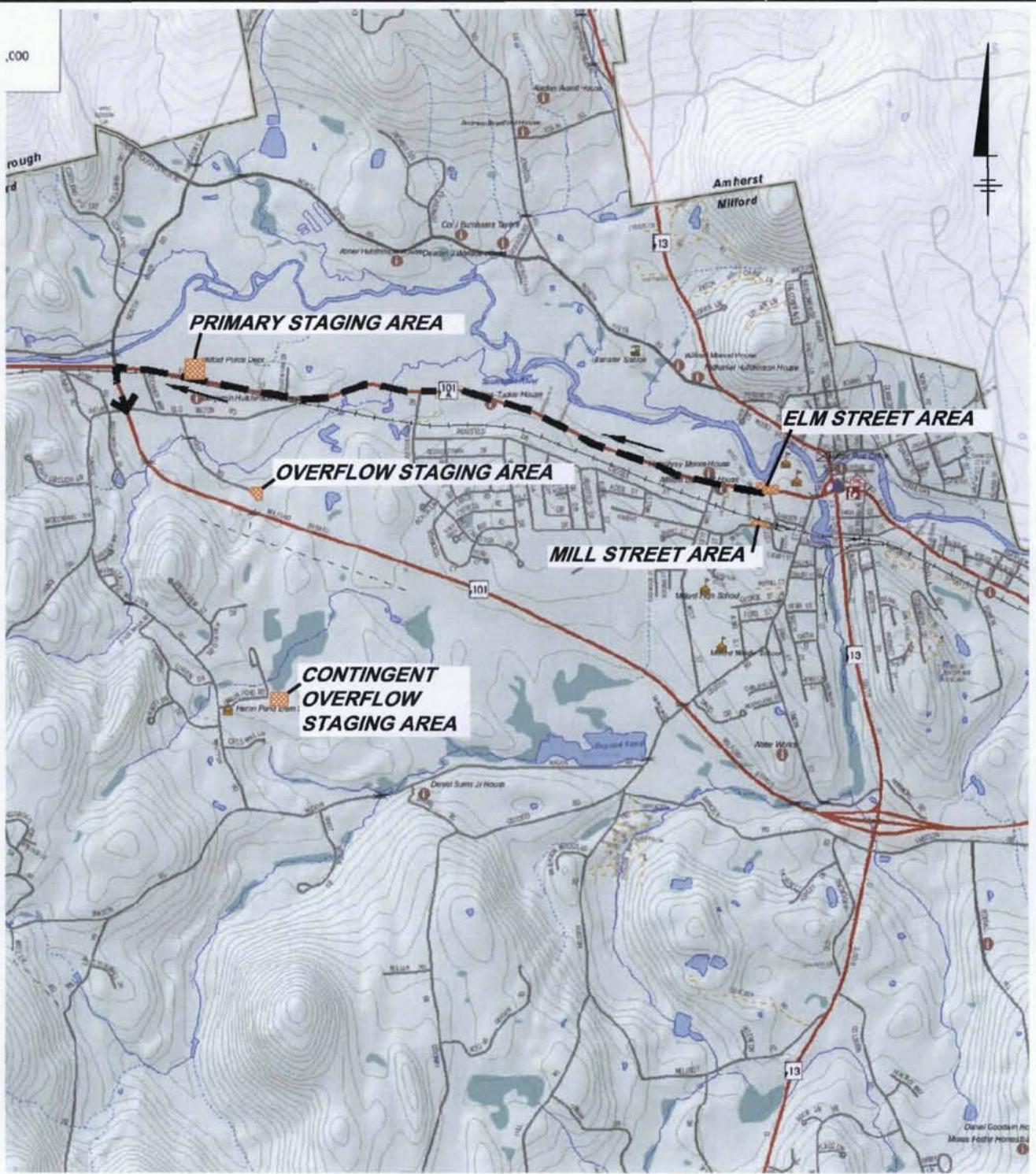
All of the intersections that were analyzed will operate at a LOS of B or C except the workday afternoon/evening peak hour at the intersection of Elm Street and NH Route 101 which is projected to have a LOS of D under non-construction conditions in 2009. However, by optimizing the times of the signal phases, the Elm Street/NH Route 101 intersection delay could be reduced from 46.9 seconds (a LOS of D) to 29.8 seconds (a LOS of C) under non-construction conditions. Most importantly, the projected LOS at each intersection under projected construction conditions in 2009 all fall within the same category as the projected LOS under non-construction conditions. Therefore, implementation of the OSD soil remedy is expected to have negligible impact on the LOS at the intersections along the truck routes.

Elm Street roadway work is expected to have an impact on pedestrians and the motoring public when the crossing near Keyes Field is closed and two-way traffic is maintained in one lane. Mill Street roadway work is expected to have an impact on the motoring public and residential access when the detour of Mill Street is in effect. As a result, a maintenance of traffic plan has been developed to mitigate these expected impacts. Please refer to the T-series of Technical Drawings located in Appendix B of the Final Design Report for the maintenance of traffic plan.

3.4 Impact Mitigation Recommendations

No mitigation is required along any of the truck routes since implementation of the OSD soil remedy will not impact the LOS at any of the intersections along the truck routes, as indicated in Section 3.3. Regarding impacts to adjacent roadways associated with remedy implementation, the Final Design Report indicates that the excavation work proposed for Mill Street and the northern (*i.e.*, west-bound) lane of Elm Street will not be performed concurrently. Further, the Elm Street roadway work shall be in accordance with the T-series of Technical Drawings located in Appendix B of the Final Design Report and, to the extent practicable, will be performed during a period of time that minimizes the inconvenience to pedestrians and motoring public. The Mill Street detour shall also be completed per the T-series of Technical Drawings. In addition, the remedial design includes the possible phasing of the Mill Street remedial action such that access to the adjacent residences might be minimized. In summary, the overall impacts to vehicular and pedestrian traffic in the vicinity of the Site are considered minimal since the impacts associated with implementation of the OSD soil remedy are typical for projects of this size and the impact to the roadway network and traffic flows from the truck traffic associated with the implementation of the OSD soil remedy is negligible.

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NOTE:

1. TRUCK ROUTE AND TRAFFIC ANALYSIS PRELIMINARY REPORT DEVELOPED BY VANASSE HANGEN BRUSTLIN, INC. DATED MAY 10, 2006.

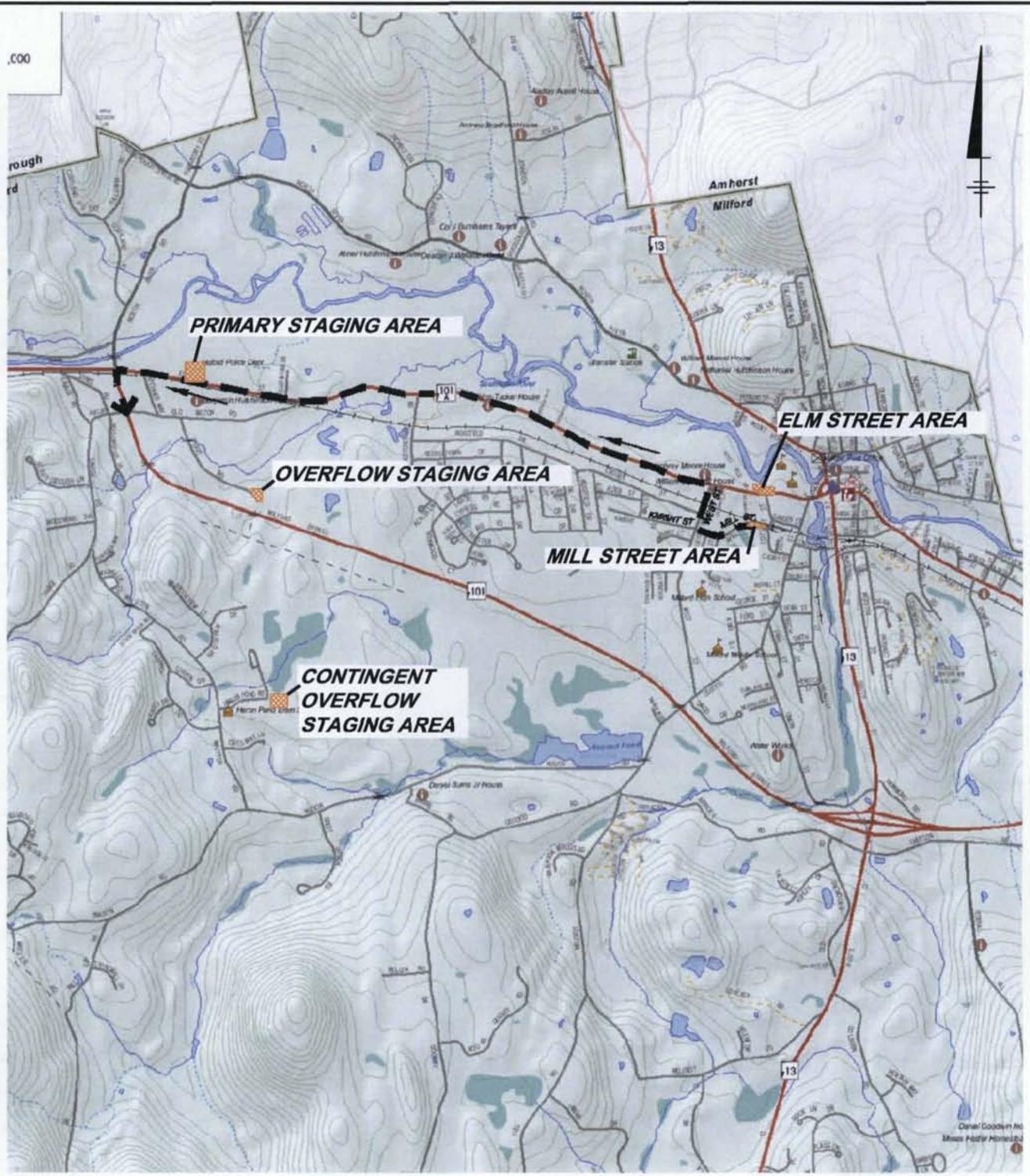
GENERAL ELECTRIC COMPANY
 FLETCHER'S PAINT WORKS AND STORAGE FACILITY
 SUPERFUND SITE - MILFORD, NEW HAMPSHIRE
 FINAL (100%) DESIGN REPORT

**PRIMARY TRUCK ROUTE - ELM STREET
 AREA TO NH ROUTE 101 EAST**

 **ARCADIS**

FIGURE
 E-1

CITY: SYRACUSE DIV/GROUP: 141 DB: GMS LAF NES LD: PIC: TM: LTR: ON-OFF-REF
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NOTE:

1. TRUCK ROUTE AND TRAFFIC ANALYSIS PRELIMINARY REPORT DEVELOPED BY VANASSE HANGEN BRUSTLIN, INC. DATED MAY 10, 2006.

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 SUPERFUND SITE - MILFORD, NEW HAMPSHIRE
 FINAL (100%) DESIGN REPORT**

**PRIMARY TRUCK ROUTE - MILL STREET
 AREA TO NH ROUTE 101 EAST**

	FIGURE E-2
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