EA Engineering, P.C.
EA Science and Technology

6712 Brooklawn Parkway, Suite 104
Syracuse, New York 13211-2158
Telephone: 315-431-4610
www.eaest.com

6 December 2016

Mr. Payson Long
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, NY 12233-7017

RE: Dzus Fastener Company OU-3 Interim Remedial Measure Letter Work Plan
Contract/WA No: D007624-33
Site/Spill No/Pin: Dzus Fastener Company Inc. (Site No. 152033)

Dear Mr. Long:

This Letter Work Plan describes the activities proposed for the Dzus Fastener Company, Inc. (Dzus) interim remedial measure (IRM). The Dzus site (152033) is located in the City of West Islip, Suffolk County, New York (**Figure 1**). The IRM will be conducted to address soil and sediment buildup along Willetts Creek, located downstream of the Dzus site. Soil and sediment buildup at two footbridges along Willetts Creek is restricting drainage, resulting in the areas to flood during storm events.

As requested by the New York State Department of Environmental Conservation (NYSDEC), EA Engineering, P.C. and Its Affiliate EA Science and Technology (EA) has developed this IRM Letter Work Plan for removal of soil and sediment along Willetts Creek. Soil samples from this area have concentrations of inorganic contaminants of concern (COCs) (primarily cadmium [Cd] and chromium (III) [Cr]) greater than the NYSDEC Part 375 residential soil cleanup objectives (New York Code of Rules and Regulations 2006).

## SITE DESCRIPTION

The subject site is located at 425 Union Boulevard, West Islip, Suffolk County, New York. The Dzus site is one acre in size and is located in a mixed residential, commercial, and industrial area (**Figure 1**). The site is bounded by Union Boulevard to the south, the former Dzus facility and Beach Street to the west, and Long Island railroad tracks to the north. Immediately to the east of the site is Willetts Creek which flows 0.7 miles (3,900 ft) from the former Dzus site south into Lake Capri, an 8-acre man-made lake. Lake Capri drains into the tidal portion of Willetts Creek through a culvert located under Montauk Highway (**Figure 2**).

## SITE BACKGROUND

Dzus (incorporated in the State of New York under the name Dzus Fastener Company, Inc. in 1936) has produced fasteners and springs since 1932. Wastes from metal plating, tumbling, electroplating, chromic acid, anodizing, and special finishing operations consisted of oils,

heavy metals, volatile organic compounds, and salts. Leaching pools onsite were used for the disposal of hazardous wastes.

A Phase I Investigation was completed by NYSDEC in 1984, and a Phase II Investigation report was submitted by Dzus in August of 1990. An IRM was completed by Dzus in October 1990, during which approximately 1,960 cubic yards (cy) of contaminated soil from the area of the industrial leach field were removed. Soils and groundwater were contaminated with Cd, Cr, cyanide, and organic compounds.

The facility changed its name from Dzus Fastener Company, Inc. to DFCI Solutions, Inc. in 2001, but operations have remained the same since its construction at this location in 1937. Operations included the design and manufacture of ¼-turn fasteners, quick acting latches and panel strips in steel, stainless steel, aluminum and plastic for use in military and commercial aerospace, transportation, electronics, air handling, refrigeration, motor control and computer industries to secure access panels, covers or detachable components. In 2015, DFCI Solution, Inc. ceased operations and moved all equipment out of the facility.

**Operable Units**

The Site consists of three operable units. An operable unit (OU) represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, and threat of release or exposure pathway resulting from the site contamination.

OU1 consisted of the leaching pools (the source) and areas of soil contamination at the facility. A Record of Decision (ROD) for OU1 was issued for the Dzus site by NYSDEC in March 1995. The selected remedy consisted of *in situ* stabilization/solidification for onsite soils containing Cd at concentrations greater than 10 parts per million. Three areas on the western portion of the facility were excavated and mixed with the soils to be treated on the eastern portion of the facility property. Additional remedial components included design and installation of a final topsoil/asphalt cover at the eastern portion of the facility which would protect the stabilized area from erosion, and implementation of institutional controls in the form of a deed restriction at the Dzus site.

OU2 is comprised of the offsite contamination, including sediment and water contamination of Willetts Creek and Lake Capri. A ROD for OU2 was issued for the site by NYSDEC in October 1997. The selected remedy included dredging, dewatering, and offsite disposal of contaminated sediments from Lake Capri with levels of Cd exceeding 9 parts per million (ppm); excavation and offsite disposal of approximately 100 cy of sediment from Willetts Creek (corresponding to levels of Cd exceeding 9 ppm); a long-term monitoring program to evaluate the effectiveness of the onsite remedy; and to verify that any existing groundwater plume does not impact public health or environment. Subsequent post-remedial monitoring of the wetland sediments in the Willetts Creek area found levels of Cd in sediments above 9 ppm.

OU3 encompasses the area of offsite impacted wetlands located behind a strip mall on Union Boulevard and inclusive of the Willetts Creek channel found to be contaminated during routine post-remedial action effectiveness sampling. OU3 is the focus of the current remedial investigation/feasibility study as well as IRM site activities.

**PREVIOUS INVESTIGATIONS**

Investigations of OU3 sediments were conducted in April 2013, November 2013, and October 2014. During the April 2013 sampling event, surficial sediment samples were collected at approximately 100-foot (ft) intervals in Willetts Creek between Lake Capri and Union Boulevard. The results showed that multiple locations were at or above the cleanup goal of 9 ppm as established in the OU2 ROD, primarily in the area from the wetland behind the strip mall to approximately 300 ft downstream of the foot bridge at Burling Lane.

Sediment samples from twelve outfalls were also collected, two of which had Cd concentrations exceeding NYSDEC Class C sediment guidance values (5 ppm). These two outfalls are located in depositional areas which receive sediments during water level rises in the creek, suggesting the outfalls are not the source of Cd contamination observed during the April 2013 sampling effort.

Transects, perpendicular to the creek, were established at a subset of the locations sampled in April 2013. These transects were sampled in November 2013 along with two background samples (both were non-detect for Cd) collected north of Orinoco Drive. Cd concentrations were highest (> 8,000 ppm) in the wetland area south of the strip mall on Union Boulevard. Elevated Cd concentrations were primarily observed along Willetts Creek from the wetland to approximately 300 ft downstream of the foot bridge at Burling Lane. Further downstream results indicates sporadic elevated Cd in isolated depositional areas.

Samples were collected in October 2014 to assess the surface soils in the Beach Street Middle School athletic fields. A significant summer storm in August 2014 produced as much as 12 inches of rain in less than 24 hours in Nassau and Suffolk Counties resulting in widespread flooding. The week following the storm Dzus site reconnaissance showed evidence that Willetts Creek had partially flooded the athletic fields. Additional samples were collected in Willetts Creek and athletic fields to further assess the horizontal and vertical extent of Cd contamination in the wetland area resulting from storm-driven sediment mobilization.

Eight surface soil samples were collected from the Beach Street Middle School athletic fields adjacent to Willetts Creek Bank. Three samples were above the NYSDEC residential soil cleanup objective for Cd (2.5 ppm). Two sub-surface soil samples were also collected from the athletic fields. Both of these samples also exceeded the residential soil cleanup objective for Cd.

Between June and August 2016, EA conducted a supplemental remedial investigation to determine the nature and extent of contamination of Cd and Cr in areas adjacent to Willetts Creek. EA sampled soil and sediment from residential yards, the Beach Street Middle School

athletic fields, and grassy areas at West Islip High School. EA also sampled fill at a shopping plaza near-by the Dzus site, characterized sediment in tidal portions of Willetts Creek and performed visual inspection and sampling of outfalls/culvert pipes within Willetts Creek.

## INTERIM REMEDIAL MEASURE OVERVIEW

The IRM objectives for the Dzus site include excavation and offsite disposal of sediment and soils from two foot bridges located along Willets Creek. The current buildup of sediment is causing the footbridges to flood during storm events. There are two footbridges to be addressed during this IRM; adjacent to the Beach Street Middle School and West Islip High School athletic fields. EA will serve as the contractor and will hire subcontractors (remedial subcontractor and analytical laboratory) to complete the IRM. A preliminary site layout for site preparation and IRM activities is shown on **Figure 3** and **Figure 4**. The following preliminary activities may be completed as part of the IRM:

- Remedial subcontractor bid solicitation (scope of work, bid sheet, specifications and drawings)
- Preparation and review of planning documents (work plans/schedule)
- Initiate coordination with the Town of Islip Department of Environmental Control and West Islip School District representatives to confirm work hours and truck routes.
- Coordinate with owners/operators of underground utilities.

Once preliminary activities have been completed, site work will be performed in the following general sequence.

### Mobilization

The remedial subcontractor will mobilize all equipment and personnel to the IRM location necessary to begin remediation activities. The remedial contractor will continue to coordinate with the Town of Islip and West Islip School District personnel as necessary, verify existing site conditions, and contact Dig Safely New York for utility clearance.

### Site Preparation

Prior to commencement of excavation activities, the remedial subcontractor will:

- Install temporary chain-link security fencing at each work area which will include signage indicating the site is a construction zone.
- Install temporary erosion controls (silt fence within the creek downgradient of each foot bridge)

- Construct additional remedial support areas as necessary, including staging and decontamination areas.

- Remove brush/trees as needed to access the creek. Brush will be removed from the site.

**Soil Excavation and Disposal of Creek Sediment**

The remedial subcontractor will conduct mechanical excavation within the proposed boundaries identified by EA and the NYSDEC representative. The extents of the proposed excavations are specified on **Figure 3** and **Figure 4**. Excavation will be completed with the combinations of a vacuum truck and mini-excavator as determined in the field by site conditions (moisture/liquid percentage). All excavated material will be placed into onsite roll-off containers for temporary storage. If the excavated material is dry enough for offsite transportation, it will be transferred to a dump truck. If the moisture content is too high and will not allow for offsite transportation, an additive (quick lime) will be mixed into the sediment within the roll off. The quick lime will absorb/evaporate the any moisture allowing the sediment to harden. Excavated soil and sediment will then be transported into a dump truck for offsite disposal at an off-island facility.

Hours of truck operation will be from 7:00 am – 5:00 pm except for the following time periods:

- West Islip High School: No truck traffic between 6:45 am – 7:20 am and 2:00 pm – 2:25 pm.

- Beach Street Middle School: No truck traffic between 7:25 am – 8:05 am and 2:20 pm – 2:50 pm.

EA has proposed the truck routes detailed on **Figure 5**.

**Burling Lane Foot Bridge Soil/Sediment Removal**

The removal actions at the IRM location include the removal of 120 cy of sediment from Willetts Creek with mechanical excavation. The sediment removal will occur upstream, within the culverts, and downstream of the footbridge. The area for sediment removal upstream and downstream will extend a minimum of 15 ft from the foot bridge and will cover the entire width (estimated at 40 ft). There are a total of seven 36-inch diameter 10-ft long culverts that make up the foot bridge. Sediment shall be removed from within the culverts, to the extent needed to fully expose the culvert material; however, personnel shall not enter the culverts. The average depth of the sediment at this location is 2-ft thick.

Following removal of the sediment within the stream, approximately 17 cy of soil along the banks of the stream shall be removed. The soil depth along the stream banks range from 1 to 2-ft thick and are underline by a course grained sand and gravel, native to the area. Confirmatory

samples will be collected following soil removal to ensure the area meets restricted-residential SCOs. This soil will be placed into a lined roll-off box for offsite disposal with a mini-excavator.

**Edmore Lane Foot Bridge Sediment/Soil Removal**

The removal actions at the IRM location include the removal of 93 cy of sediment from the Willetts Creek with mechanical excavation. The sediment removal will occur upstream within the box culvert and downstream of the foot bridge. The area for sediment removal upstream and downstream will extend a minimum of 15 ft from the foot bridge and will cover the entire width (estimated at 40 ft). The box culvert that makes up the foot bridge is 20-ft wide and 10-ft long. Sediment shall be removed from within the box culvert; however, personnel shall not enter the culverts. The average depth of the sediment at this location is 2-ft thick.

**Backfill/Restoration**

Confirmatory samples will be collected at soil areas around the foot bridges to ensure that the area meets the restricted-residential SCOs.

Following sediment removal at both foot bridges, the remedial subcontractor shall excavate a settling pond upstream that is approximately 1-ft deep by 5-ft long that covers the width of the stream (**Diagram 1**). The purpose of this upstream settling pond is to limit future sediment buildup in the culverts. Following completion of the excavated area, a check dam consisting of 17 cy of rip rap will be built on the downstream edge of the settling pond.

The excavated stream banks shall be stabilized with soil erosion control blankets. It is estimated that 300 square feet of stream bank will be required to be stabilized.

Following completion of the IRM, areas where soil was removed will be backfilled with certified clean top-soil to existing ground surface elevations. It is also anticipated that topsoil will be required to repair truck ruts. New topsoil will be seeded and mulched. Subsequent overseeding may be required in the Spring of 2017.

The remedial subcontractor shall implement site restoration activities to restore areas disturbed during the implementation of the IRM to pre-IRM conditions. Access to the stream will be through grassy areas located on the school's property. It is anticipated that topsoil will be required to be imported to smooth out ruts created by truck traffic.

**Disposal Sampling**

Prior to disposal, composite samples will be collected from the lined roll-off containers and tested for COC concentrations and for disposal requirements as dictated by the disposal facility.

**SCHEDULE**

It is anticipated that mobilization for IRM activities will be initiated in January 2017 and will be completed within 2 weeks of mobilization. The major tasks and anticipated time frames are listed below:

- Mobilization – 0.5 day
- Site Preparation/Fencing – 0.5 day
- Soil/Sediment Removal and Disposal – 7 days
- Backfill/Restoration – 2 days.

Please feel free to contact me if you have any questions or concerns at (315) 565-6554.

Sincerely,

EA SCIENCE AND TECHNOLOGY

Frank DeSantis Jr.
Project Manager

EA ENGINEERING, P.C.

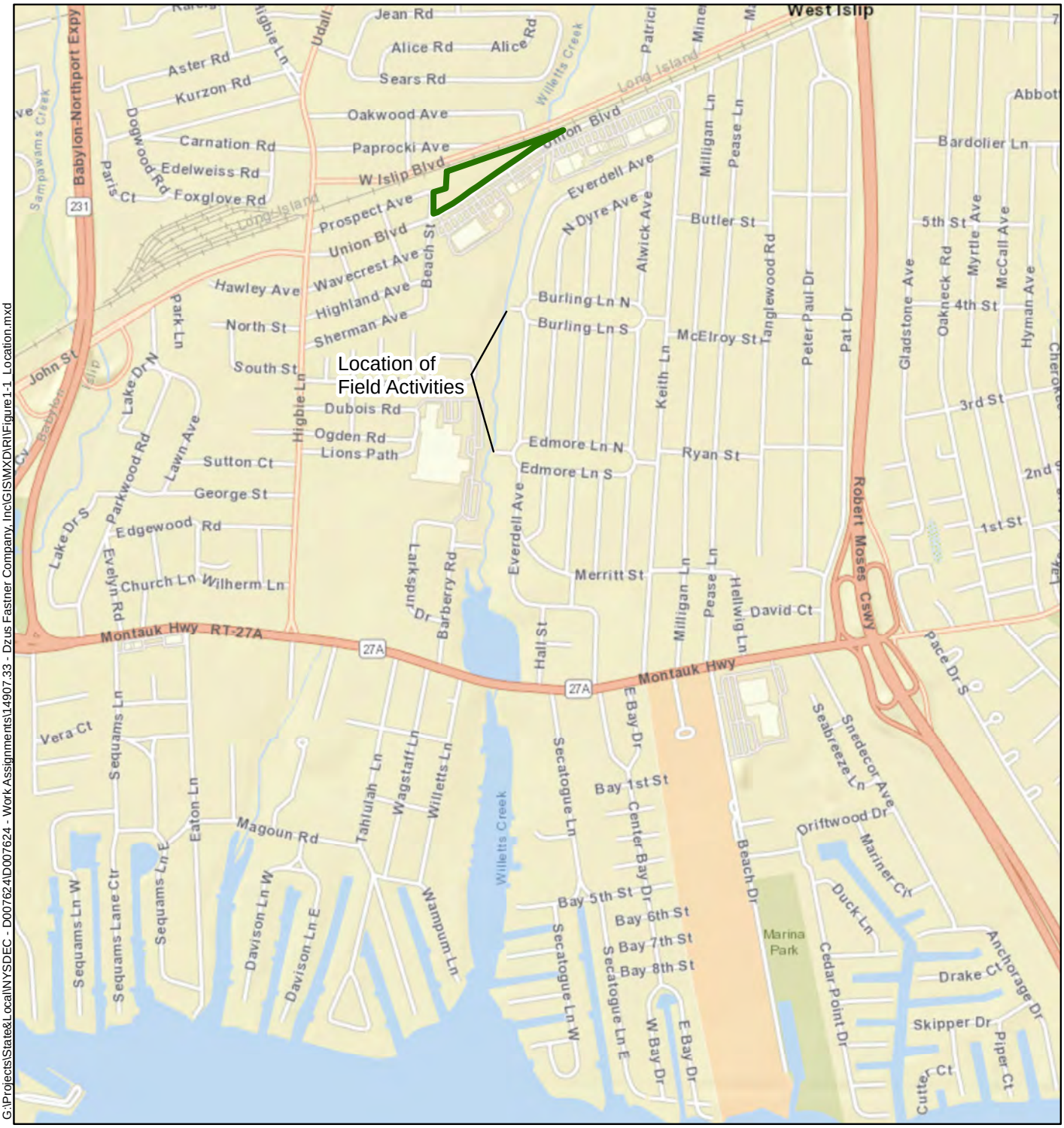
Donald Conan, P.E.
President

Attachments

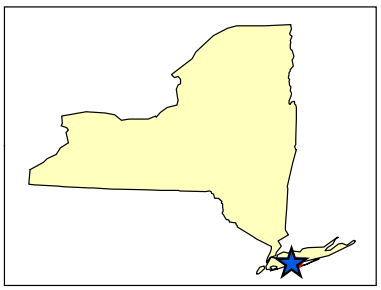
*This page intentionally left blank*

# Figures

*This page intentionally left blank*




G:\Projects\State&Local\NYSDEC - D007624\D007624 - Work Assignments\14907.33 - Dzus Fastner Company, Inc\GIS\MXD\RI\Figure1-1_Location.mxd



**Legend**

Facility Boundary

0 0.125 0.25 0.5
Miles

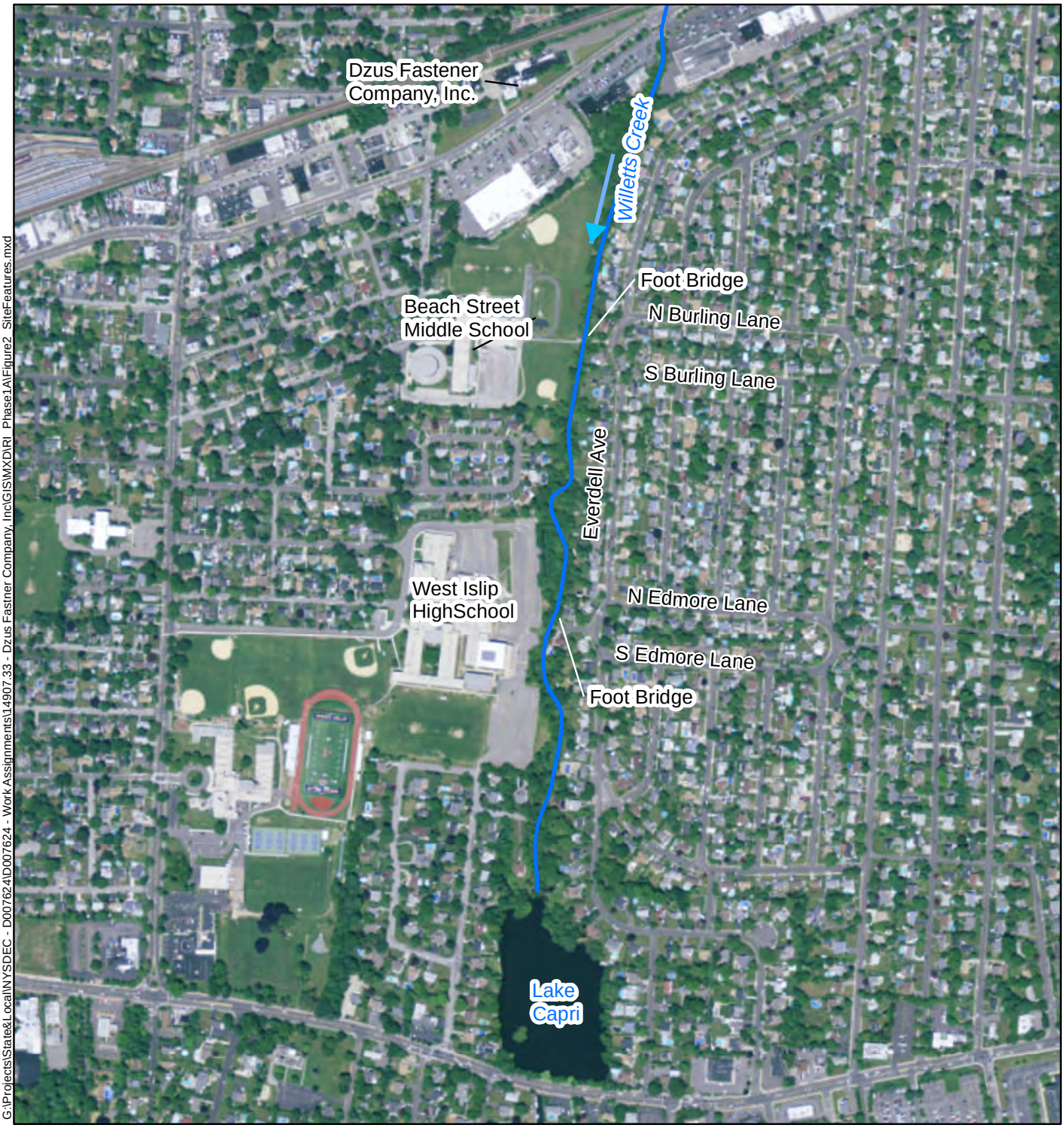
1 inch = 0.25 miles

N

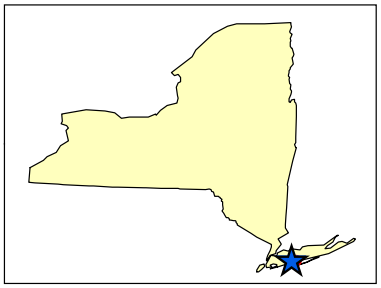
# Figure 1-1
## General Site Location
Dzus Fastener Company, Inc.
West Islip, NY

Map Date: 12/5/2016
Projection: NAD83 State Plane New York Long Island

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation




G:\Projects\State&Local\NYSDEC - D007624\D007624 - Work Assignments\14907.33 - Dzus Fastner Company, Inc\GIS\MXD\RI Phase1A\Figure2 SiteFeatures.mxd



**Legend**

Willetts Creek

Figure 2

**Site Features**
**Dzus Fastener Company, Inc.**
**West Islip, NY**

Map Date: 6/26/2016
Projection: NAD83 State Plane New York Long Island

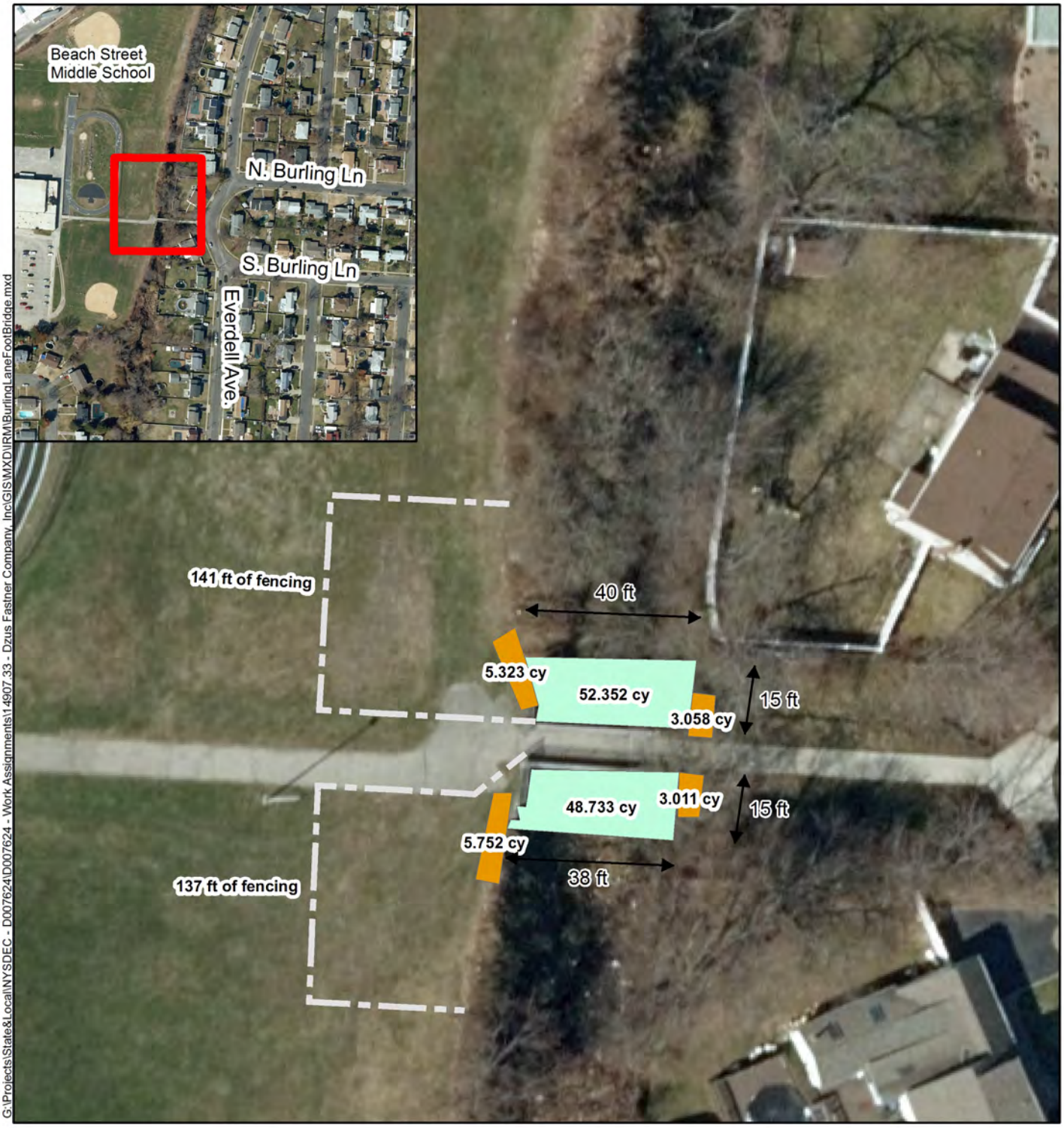
0 0.125 0.25
Miles

1 inch = 0.124 miles

N

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

EA




G:\Projects\State&Local\NYSDEC - D007624\D007624 - Work Assignments\114907.33 - Dzus Fastner Company, Inc\GIS\MXD\IRM\BurlingLaneFootBridge.mxd

**Figure 3**
**Proposed Removal Area Burling Lane Foot Bridge**
**Dzus Fastener Company, Inc.**
**West Islip, NY**

**Media**

- Sed
- Soil
- Fencing

Map Date: 9/19/2016
Projection: NAD83 UTM Zone 18N

0 12.5 25
Feet

1 inch = 33.333 feet

N

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

EA


G:\Projects\State&Local\NYSDEC - D007624\D007624 - Work Assignments\114907.33 - Dzus Fastner Company, Inc\GIS\MXD\IRM\EdmoreLaneFootBridge.mxd

**Figure 4**
**Proposed Removal Area Edmore Lane Foot Bridge**
**Dzus Fastener Company, Inc.**
**West Islip, NY**

**Media**

Sed

Fencing

Map Date: 9/19/2016
Projection: NAD83 UTM Zone 18N

0 12.5 25
Feet

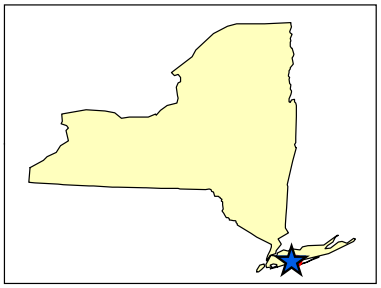
1 inch = 22.156 feet

N

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

EA


G:\Projects\State&Local\NYSDEC - D007624\D007624 - Work Assignments\14907.33 - Dzus Fastner Company, Inc\GIS\MXD\IRM\TruckRoute.mxd



0 0.15 0.3
Miles

1 inch = 0.15 miles

N

Legend

- Edmure Lane Footbridge
- Burling Lane Footbridge
- Truck Route

Figure 5
Truck Route
Dzus Fastener Company, Inc.
West Islip, NY

Map Date: 12/5/2016
Projection: NAD83 UTM Zone 18N

NEW YORK STATE DEPARTMENT | Department of Environmental Conservation

EA

*This page intentionally left blank*

# Diagram

*This page intentionally left blank*

G:\Projects\State&Local\NYSDEC - D007624\D007624 - Work Assignments\14907.33 - Dzus Fastner Company, Inc\GIS\MXD\RM\Diagram1.mxd

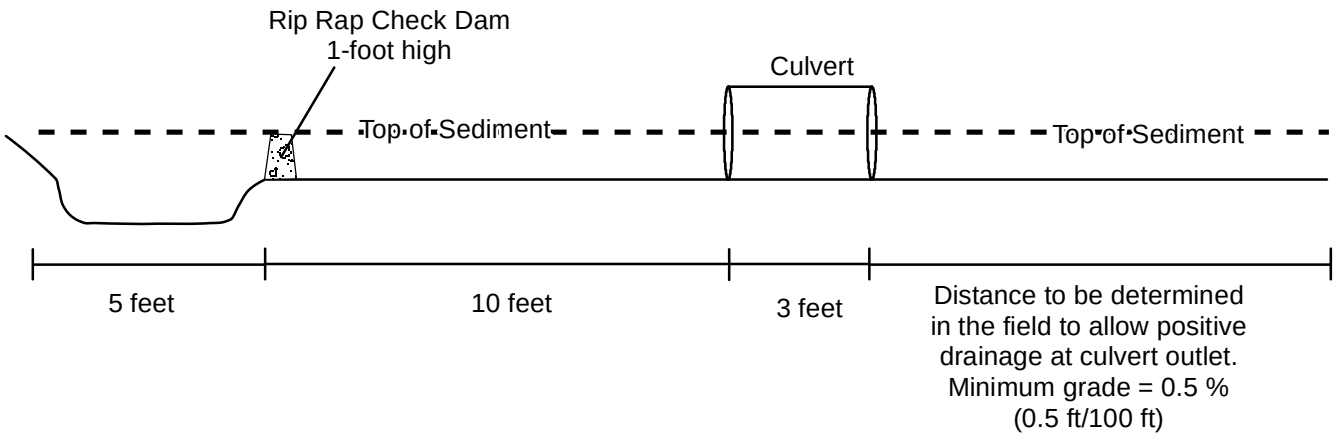



**Diagram 1**
**Conceptual Dredging Profile**
**Dzus Fastener Company, Inc. West**
**Islip, NY**

Map Date: 8/25/2016
Projection: NAD83 UTM Zone 18N