STORMWATER POLLUTION CONTROL PLAN

Tac Air Phase 1 and 2 Hangar
Bradley International Airport
Windsor Locks, CT

Connecticut Airport Authority

November 18, 2015

This Stormwater Pollution Control Plan (SPCP) is prepared to comply with the requirements for the General Permit for Stormwater Discharges (GPSD) from Construction Activities. Also to be considered part of the SPCP are the proposed construction plans, special provisions, and the Connecticut Department of Transportation's "Standard Specifications for Roads, Bridges and Incidental Construction" (Form 816) including supplements thereto and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control

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1. Site Description

Site Description

This project consists of the construction of 2 Hangars for Tac Air, a Fixed Based Operator (FBO) located at the Bradley International Airport. The project will be constructed in 2 Phases, with both discussed within this application. The Site consists of existing paved and grassed areas inside of the airport fence line. Stormwater runoff from this area currently discharges to an already established detention basin located east of the proposed Site and immediately west of State Route 75 (Ella Grasso Turnpike). The stormwater runoff from the proposed buildings will not discharge to any current impaired or coastal waters.

The purpose of this project is to provide additional storage for 6-8 additional private aircrafts.

Site work includes excavation and backfill for both hanger foundations, re-configuration of existing drainage so as to not conflict with building layout, added catch basin structures, and installation of 2 sets of drainage infiltrators to accept new roof water. The infiltration systems will handle the 25 year storm. Any flows beyond a 25 year storm will overflow to the existing detention basin, and therefore, no appreciable change in flows is anticipated. There are no wetlands on Site, however, special timing of the initial disturbance to the Site is required to avoid any adverse impact to grassland bird species known to utilize Bradley International Airport.

Estimated Disturbed Area

The total area for this project site is 5.14 acres. Of this area, 4.53 acres will be disturbed by construction activities.

Estimated Runoff Coefficient

The runoff coefficient assumed for pavement is 0.9 and 0.9 for the building's roof. For the pervious areas, a coefficient of 0.10 was assumed.

Pre-Construction

$$\frac{(1.32 \text{ ac. x } 0.9)+(3.82 \text{ ac. x } 1.0)}{1.32\text{ac.} + 3.82 \text{ ac.}} = 0.31$$

Post-Construction

$$\frac{(3.8 \text{ ac. x } 0.9)+(1.34 \text{ ac. x } 1.0)}{3.8 \text{ ac.} + 1.34 \text{ ac.}} = 0.69$$

Receiving Waters

Stormwater from the majority of the site (roof drains) will be directed to an infiltration system on site. The system will handle the 25 year storm. Any overflow, and drainage for the remainder of the site (Airplane apron areas) will be directed to an existing detention basin which is located between Bradley Airport's lot 5A and Route 75, which is jointly owned by the Connecticut Airport Authority (CAA) and the State of Connecticut. Overflows from the detention basin are directed into the storm drain system within Route 75 and ultimately discharges to Kettle Brook

Extent of Wetlands on Site

There are no wetlands or mapped FEMA floodplain areas within the Site.

2. Construction Sequencing

The contractor will be given approximately 15 months for the construction of all phases of the project.

The suggested sequence of construction is as follows:

<u>CONSTRUCTION SEQUENCE</u>

1. CONTACT CONNECTICUT AIRPORT AUTHORITY AND CONDUCT A PRECONSTRUCTION MEETING
2. INSTALL SEDIMENTAION CONTROLS AT EXISTING CATCH BASIN INLETS IN THE AREA OF THE EXISTING AND PROPOSED CONCRETE APRONS
3. INSTALL SILT FENCE ALONG THE PERIMETER OF THE PHASE I BUILDING AREA
4. PERFORM CLEARING AND GRUBBING ACTIVITIES WITH THE PHASE I BUILDING & APRON AREAS. STRIPPING OF TOPSOIL MUST OCCUR BEFORE MAY 15TH OR AFTER AUGUST 15TH IN ORDER TO MINIMIZE POTENTIAL IMPACTS TO GRASSLAND BIRDS AT THE AIRPORT.
5. COMPLETE PARTIAL INSTALLATION OF CONCRETE APRON AND INSTALL TEMPORARY SECURITY FENCING.
6. MODIFY EXISTING AND INSTALL NEW STORM DRAINAGE AROUND PROPOSED BUILDING TO ALLOW FOR NEW BUILDING FOUNDATION.
7. EXCAVATE FOR PHASE I & PHASE II BUILDING FOUNDATIONS, POUR AND BACKFILL.
8. THE CONSTRUCTION SHALL BE PHASED TO INSURE LESS THAN 5 ACRES IS DISTURBED AT ONE TIME.
9. GRADE GRASS SLOPES AND STABILIZE. PREPARE AND PAVE AREAS SHOWN ON PLAN.
10. TOPSOIL DISTURBED GRASS AREAS AND SEED.

11. REMOVE EROSION CONTROL MEASURES WHEN IT IS DETERMINED THAT THE DISTURBED AREAS HAVE BEEN STABILIZED BY THE CIVIL ENGINEER.
12. ALL POST-CONSTRUCTION STORMWATER STUCTURES SHALL BE CLEANED OF CONSTRUCTION SEDIMENT AND ANY REMAINING SILT FENCE SHALL BE REMOVED PRIOR TO FILING OF THE "Notice of Completion Form".
13. PERFORM PROJECT FINAL CLEANUP.

If the construction sequencing activities create an area of disturbance between two (2) acres and five (5) acres per discharge point, the Contractor must submit to the Engineer a revised SWPCP for review and approval. The SWPCP must include locations of the temporary sedimentation trap per discharge point with a capacity to contain 134 cubic yards per acre of material in accordance with the 2002 Guidelines. The Contractor shall provide an inspection and maintenance plan for the temporary sedimentation trap as part of the amended SWPCP.

3. Control Measures

Erosion and Sedimentation Controls

Tac Air will have construction inspection personnel assigned to the project in order to oversee the operations and to ensure compliance with the General Permit and the SWPCP. Further oversight is provided by the CAA for general overall Site compliance.

The following timelines will be followed for the proposed construction activities:

- If construction activities are complete or have been temporarily halted for more than seven (7) days, stabilization activities will be implemented within three (3) days.

- Areas that remain disturbed but inactive for at least 30 days shall receive temporary seeding or soil protection within seven (7) days.

- Disturbed areas that do not establish a vegetative cover within 30 days of seeding shall have erosion control blankets installed. Prior to the erosion control blanket installation, the soil would be prepared with the application of lime, fertilizer, and seed.

- Areas that will be disturbed past the planting season will be covered with a long-term, non-vegetative stabilization method that will provide protection through the winter.

- Stabilization practices will be implemented as quickly as possible in accordance with the Guidelines.

- The Contractor shall stabilize disturbed areas with temporary or permanent measures as quickly as possible after the land is disturbed. Requirements for soil stabilization are detailed in the Connecticut Department of Transportation's Form 816 Section 1.10.03, Best Management Practices.

Soil Stabilization and Protection

Temporary Stabilization Practices

- Silt Fence: Silt fence shall be placed at the limits of disturbance and around stockpiles as required.

- Anti-Tracking Pads: Construction entrances (gravel anti-tracking pads) shall be constructed at truck access points.

- Dust Control: Routine sweeping and application of dust suppression agents, including water and calcium chloride, over exposed sub base shall be completed for dust control.

- Hay Bales: Hay bales shall be utilized around existing catch basins during construction in order to minimize sediment entering the existing drainage system.

- Silt Sacks: Silt Sacks shall be utilized at existing catch basins during construction in order to minimize sediment entering the existing drainage system.

Stabilization practices shall be implemented no more than three days after completion, as final grades are reached, or if work has been suspended for more than seven days.

Temporary seeding shall be spread over any disturbed areas which will remain inactive for at least 30 days. Areas to remain disturbed through winter shall be protected with non-vegetative stabilization measures. The Contractor must provide an Erosion and Sedimentation Control plan for each winter season during construction operations.

The Contractor may use other controls in the project as necessary if they conform to the 2002 Connecticut Erosion and Sedimentation Guidelines and are approved by the Engineer. The contractor will be required to provide the necessary details for any erosion controls not specifically called for on the project plans.

During construction, all areas disturbed by the construction activity that have not been stabilized, structural control measures, and locations where vehicles enter or exit the site shall be inspected at least once every seven calendar days. These areas shall also be inspected within 24 hours following any storm in which 0.5 inches or greater of rain occurs.

Permanent Stabilization Practices

All new unpaved areas that are graded or disturbed by construction will receive topsoil and/or turf establishment. The Contractor may use other permanent stabilization practices approved by the Engineer and conforming to Connecticut's Erosion and Sedimentation Control Guidelines (2002).

Structural Measures

New structural measures are not required on Site as the drainage areas of disturbance will not exceed 2 acres. Due to the flat topography of the site and surrounding areas, diversion of flows around the Site are also not anticipated.

Maintenance

All construction activities and related activities shall conform to the requirements of Section 1.10 "Environmental Compliance" of Connecticut DOT's Standard Specifications, Form 816. In general, all construction activities shall proceed in such a manner so as not to pollute any wetlands, watercourses, water body, and conduit carrying stormwater. The Contractor shall limit, in so far as possible, the surface area of earthen materials exposed by construction activity and immediately provide temporary and permanent pollution control to prevent soil erosion and contamination on the site. Water pollution control provisions and best management practices per Section 1.10.03 of the Standard Specifications shall be administered during construction. Control measures shall be inspected and maintained in accordance with the 2002 Guidelines and as directed by the Engineer.

4 Dewatering Wastewaters

Dewatering Guidelines

Dewatering at the Site is not anticipated as soil borings indicate groundwater is well below anticipated excavation depths. However, if encountered, dewatering wastewaters will be infiltrated into the ground unless otherwise directed by the Engineer. When dewatering is necessary, pumps used shall not be allowed to discharge directly into a wetland or watercourse. Prior to any dewatering, the Contractor must submit to the Engineer a written proposal for specific methods and devices to be used, and must obtain the Engineer's written approval of such methods and devices, including, but not limited to, the pumping of water into a temporary sedimentation basin, providing surge protection at the inlet or outlet of pumps, floating the intake of a pump, or any other method for minimizing and retaining the suspended solids. If the Engineer determines that a pumping operation is causing turbidity problems, the Contractor shall

halt said operation until a means of controlling the turbidity is submitted by the Contractor in writing to the Engineer, approved in writing by the Engineer and implemented by the Contractor. No discharge of dewatering wastewater shall contain or cause a visible oil sheen, floating solids or foaming in the receiving water. If required, all activities are to be performed in compliance with ConnDOT's Form 816.

5. Post-Construction Stormwater Management

Post-construction Guidelines

After the project is complete, the Contractor will perform the following maintenance and restorative measures:

- Litter/debris will be removed from the site regularly.
- Mowing and maintenance of the turf areas and vegetated areas will occur as needed.
- Outlet protection will be inspected and repaired annually or as needed by CAA/ The State of Connecticut.
- The stormwater basin will be inspected and repaired annually or as needed by CAA/The State of Connecticut. Sediment will be removed when it interferes with the detention capacity of the basin. Outlets will be checked for excessive scour and repaired as needed.

Post Construction Performance Standards

Other Development

The Site as designed, retains the full water quality volume for the site. 21,685 square feet of proposed parking area will sheet flow to grassed areas. Two infiltration galleys will accommodate the stormwater from the proposed building roof areas. In the permanent condition, flows from the roof drains which exceed the 25 year storm will also be directed to an existing detention basin east of Lot 5A and west of Route 75. The runway apron area will be expanded from 55,500 square feet to 141,165 square feet and this flow will continue to be directed into the closed drainage system, which outlets to the detention basin located between Parking Lot 5A and Route 75, owned jointly by CAA and The State of Connecticut. This increase in apron area amounts to a 1.87 cfs increase in discharge to the detention basin for the 25 storm. These calculations have been provided to CAA. All flows from impervious areas on the proposed site therefore are either in the form of sheet flow, infiltrated, or directed to an existing primary treatment system.

Compliance with U.S. DOT FAA Advisory Circulars would prohibit any additional primary treatment within the Site that would result in surface water which could attract wildlife.

Post Construction Performance Standards

Runoff Reduction and LID Practices

The use of sheet flow for the parking area runoff reduces the overall volume of water to be treated. The two infiltration galleries proposed are a form of primary treatment and are an accepted LID practice and will promote groundwater recharge. Flows beyond the 25 year storm will be accommodated by an existing detention basin which also is a form of primary treatment. Long term maintenance of the infiltration galleries will follow the manufacturer's recommendations, and will be a part of the O & M plan for the Site.

Suspended Solids and Floatables Removal

The WQV required for the site is .03 ac/ft. The STORMTECH units provide .08ac/ft.

Velocity Dissipation

Velocity dissipation measures are not required due to the sheetflow and infiltration of stormwater runoff and also the relatively flat nature of the Site and Site surroundings. The outfall at the existing detention basin has been inspected and appears stable.

6. Other Controls

Waste Disposal

Construction site waste shall be properly managed and disposed of during the entire construction period. Additionally,

- A waste collection area will be designated. The selected area will minimize truck travel through the site and will not drain to wetlands.
- Waste collection shall be scheduled regularly to prevent the containers from overfilling.
- Spills shall be cleaned up immediately.
- Defective containers that may cause leaks or spills will be identified through regular inspection. Any found to be defective will be repaired or replaced immediately.
- Any stockpiling of materials will be confined to the designated area as defined by the engineer and all equipment storage, machinery operations and access routes will be maintained on impervious surfaces in order to minimize and impact to grassland birds at the airport.

Washout Areas

Washout of applicators, containers, vehicles and equipment for concrete shall be conducted in a designated washout area as depicted on Plan Sheet ES-1. No surface discharge of washout wastewaters from the area will be allowed. All concrete washwater will be directed into a container or pit such that no overflows can occur. Washout shall be conducted in an entirely self-contained system and will be clearly designed and flagged or signed where necessary. The washout area shall be located outside of any buffers and at least 50 feet from any stream, wetland or other sensitive water or natural resources.

The designated area shall be designed and maintained such that no overflows can occur during rainfall or after snowmelt. Containers or pits shall be inspected at least once a week to ensure structural integrity, adequate holding capacity and will be repaired prior to future use if leaks are present. The contractor shall remove hardened concrete waste when it accumulates to a height of ½ of the container or pit or as necessary to avoid overflows. All concrete waste shall be disposed of in a manner consistent with all applicable laws, regulations and guidelines.

Anti-tracking Pads and Dust Control

Off –site vehicle tracking of sediments and the generation of dust shall be minimized. Temporary anti-tracking pads from the active work site to the existing pavement will be installed and maintained at the location shown on plan sheet ES-1. The contractor shall:

- Maintain the entrance in a condition which will prevent tracking and washing of sediment onto paved surfaces.
- Provide periodic top dressing with additional stone or additional length as conditions demand.
- Repair any measures used to trap sediment as needed.
- Immediately remove all sediment spilled, dropped, washed or tracked onto paved surfaces.
- Ensure roads adjacent to a construction site are left clean at the end of each day.

If the construction entrance is being properly maintained and the action of a vehicle traveling over the stone pad is not sufficient to remove the majority of the sediment, then the contractor shall either:

- Increase the length of the construction entrance,
- Modify the construction access road surface, or
- Install washing racks and associated settling area or similar devices before the vehicle enters a paved surface.

For construction activities which cause airborne particulates, wet dust suppression shall be utilized. Construction site dust will be controlled by sprinkling the ground surface with water until it is moist on an as-needed basis. The volume of water sprayed shall be such that it suppresses dust yet also prevents the runoff of water.

Post-Construction

Upon completion of construction activities and stabilization of the site, all post-construction stormwater structures, including finished asphalt and concrete aprons, shall be cleaned of construction sediment and any remaining silt fence shall be removed prior to acceptance of the project by CAA. Sediment shall be properly disposed of in accordance with all applicable laws, regulations and guidelines.

Maintaining and Storing Vehicles and Equipment

The contractor shall take measures to prevent any contamination to wetlands and watercourses while maintaining construction equipment on the site. Storage of chemical and petroleum containers is not anticipated on site. However, if necessary to store such materials on site, the containers shall be provided with impermeable containment which will hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is larger, without overflow from the containment area. All chemicals and their containers shall be stored under a roofed area except for those stored in containers of 100 gallon capacity or more, in which case double-walled tanks will suffice.

7. Inspections

Inspection Guidelines

All construction activities shall be inspected initially for Plan implementation and then weekly for Routine Inspections.

During construction, all areas disturbed by the construction activity that have not been stabilized, all erosion and sedimentation control measures, all structural control measures, soil stockpile areas, washout areas and locations where vehicles enter or exit the site shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and impacts to receiving waters at least once every seven calendar days and within 24 hours of the end of a storm that generates a discharge.

For storms that end on a weekend, holiday or other time in which working hours will not commence within 24 hours, an inspection is required within 24 hours only for storms that equal or exceed 0.5 inches. For lesser storms, inspection shall occur immediately upon the start of subsequent normal working hours.

Where sites have been temporarily or finally stabilized, such inspection shall be conducted at least once every month for three months.

Qualified personnel provided by the contractor shall conduct Inspections.

Items to be inspected: the following items shall be inspected as described below:

Item	Procedure
Silt Fence	Silt fence shall be inspected to ensure that the fence line is intact with no breaks or tears. The fence shall be firmly anchored to the ground. Areas where the fence is excessively sagging or where support posts are broken or uprooted shall be noted. Depth of sediment behind the fence shall be noted.
Catch Basin Protection	Protective measures shall be inspected to ensure that sediment is not entering the catch basins. Catch basin sumps shall be monitored for sediment deposition. Hay bales shall be inspected to ensure they have not clogged.
Vehicle Entrances / Exits	Locations where vehicles enter or exit the site shall be inspected for evidence of off-site tracking.
General	Construction areas and the perimeter of the site shall be inspected for any evidence of debris that may blow or wash off site or that has blown or washed off site. Construction areas shall be inspected for any spills or unsafe storage of materials that could pollute off site waters.

8. Keeping Plans Current

Revisions to Stormwater Pollution Control Plans:

The contractor shall amend the Plan if the actions required by the Plan fail to prevent pollution or otherwise comply with provisions of the General Permit. The Plan shall also be amended whenever there is a change in contractors or sub-contractors at the site. If the results of the inspections require modifications to the Stormwater Pollution Control Plan, the plans shall be revised as soon as practicable after the inspection. Such modifications shall provide for a timely implementation of any changes to non-engineered controls on the site within 24 hours and implementation of any changes to the plan within 3 (three) calendar days following the inspection. For Engineered measures, corrective actions shall be implemented on site within 7

(seven) days and incorporated into a revised Plan within 10 (ten) days of the date of inspection

In no event shall the requirements to keep the Plan current or update a Plan, relieve the permittee and their contactor(s) of the responsibility to properly implement any actions required to protect the waters of the State and to comply with all conditions of the permit.

9. Monitoring Requirements

A written report summarizing the scope of the inspection, the name(s) and qualifications of inspection personnel, the date and time of the inspection, major observations relative to the implementation of the Pollution Control Plan, and actions taken shall be completed within 24 hours of the inspection. This report shall be retained as part of the Stormwater Pollution Control Plan for at least five years after the date of the inspection.

Turbidity monitoring shall be conducted at the one location depicted on the Plan utilizing a procedure consistent with 40 CFR Part 136 (http://www.epa.gov/region9/qa/pdfs/40cfr136_03.pdf) and may be taken manually or by an in-situ turbidity probe or other automatic sampling device equipped to take individual turbidity readings. The first sample shall be taken within the first hour of stormwater discharge from the site and at least three grab samples shall be taken during a storm event and shall be representative of the flow and characteristics of the discharge. Sampling shall be conducted at least monthly when there is a discharge of stormwater from the site while construction activity is ongoing, until final stabilization of the drainage area associated with each outfall is achieved.

Samples shall be taken during normal working hours, which for this project shall be defined as Monday through Friday, 7 am to 3:30 pm. If a storm continues past working hours, sampling shall resume the following morning or the morning of the next working day following a weekend or Holiday, as long as the discharge continues. Sampling may be temporarily suspended when conditions exist that may reasonably pose a threat to the safety of the person taking the sample.

Within 30 days following the end of each month, the stormwater sampling results shall be submitted on the Stormwater Monitoring Report (SMR) and submit in accordance with Net DMR. If there is no stormwater discharge during a month, sampling is not required, however, SMR's indicating "no discharge" shall still be submitted as required.

10. Contractors

General

This section shall identify all Contractors and Subcontractors who will perform on site actions which

may reasonably be expected to cause or have the potential to cause pollution of the waters of the State.

Certification Statement

All contractors and subcontractors must sign the attached statement. All certification will be included in the Stormwater Pollution Control Plan.

Tac Air Phase 1 and 2 Hangers
Windsor Locks, CT

"I certify under penalty of law that I have read and understand the terms and conditions of the general permit for the discharge of stormwater associated with construction activity. I understand that as Contractor on the project, I am covered by this general permit, and must comply with the terms and conditions of this permit, including, but not limited to, the requirements of the Stormwater Pollution Control Plan prepared for this project."

GENERAL CONTRACTOR

Signed:_____ Date: 10/30/15

Title: Project Manager

Firm: PDS Engineering & Construction

Telephone: 860-202-3461

Address: 107 Old Windsor Rd
Bloomfield, Ct 06002

SUBCONTRACTOR

Signed:_____ Date: 10/30/15

Title: Owner

Firm: Pierce Builders

Telephone: 860-653-9254

Address: 500 Salmon Brook Rd
East Granby, Ct 06035

General:

This Stormwater Pollution Control Plan (SPCP) is prepared to comply with the requirements for the General Permit for Stormwater Discharges (GPSD) from Construction Activities. Also to be considered part of the SPCP are the proposed construction plans, special provisions, and the Connecticut DOT's "Standard Specifications for Roads, Bridges and Incidental Construction" (Form 816) including supplements thereto and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control and 2004 Stormwater Quality Manual.

List of applicable Figures / Plans:

Appendix A - Figures

Topographic Map	Figure 1
NRCS Soils Mapping	Figure 2
Drainage Area Maps	*C-101 & C-103 with areas delineated*

Appendix B – Drainage Calculations

Drainage Calculations, Water Quality Computations & Chamber Sizing	*Tac Air Calculations dated 9/11/15*

Appendix C – Plan Sheets

Cover Sheet	
Lease Area Plan Site Demolition Plan	C-101
Site Grading & Utility Plan	C-102
Site Grading Utility Plan	C-103
Site Details	C-104
Site Details	C-105
Erosion and Sedimentation Control Plan	ES-1
E & S Control Standard Details	ES-2

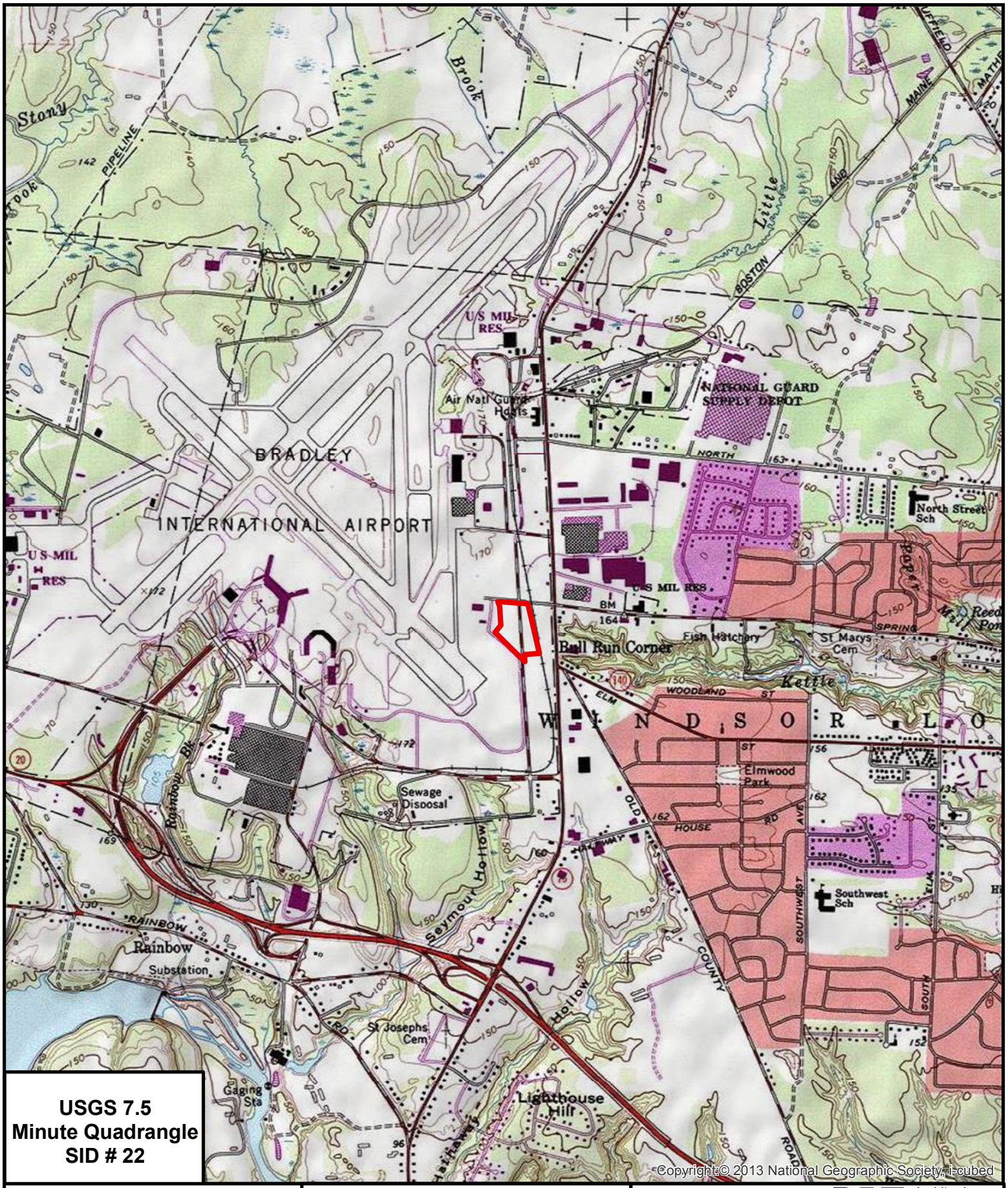
Appendix D – Stormwater Monitoring Report Form

A copy of the Stormwater Monitoring Report Form is included as Appendix D.

Appendix E – Notice of Termination Form

A copy of the Stormwater Notice of Termination Form is included as Appendix E.

Appendix A - Figures



USGS 7.5 Minute Quadrangle SID # 22

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Legend

Approximate Project Location

N

0 900 1,800 3,600 Feet

15C5760
Proposed TAC
Airplane Hangar

Architecture
Engineering
Environmental
Land Surveying
Companies

Attachment A - USGS Topo Map

Soil Map—State of Connecticut
(15C5670 Soils)

Map Scale: 1:2,390 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 13, Oct 28, 2014

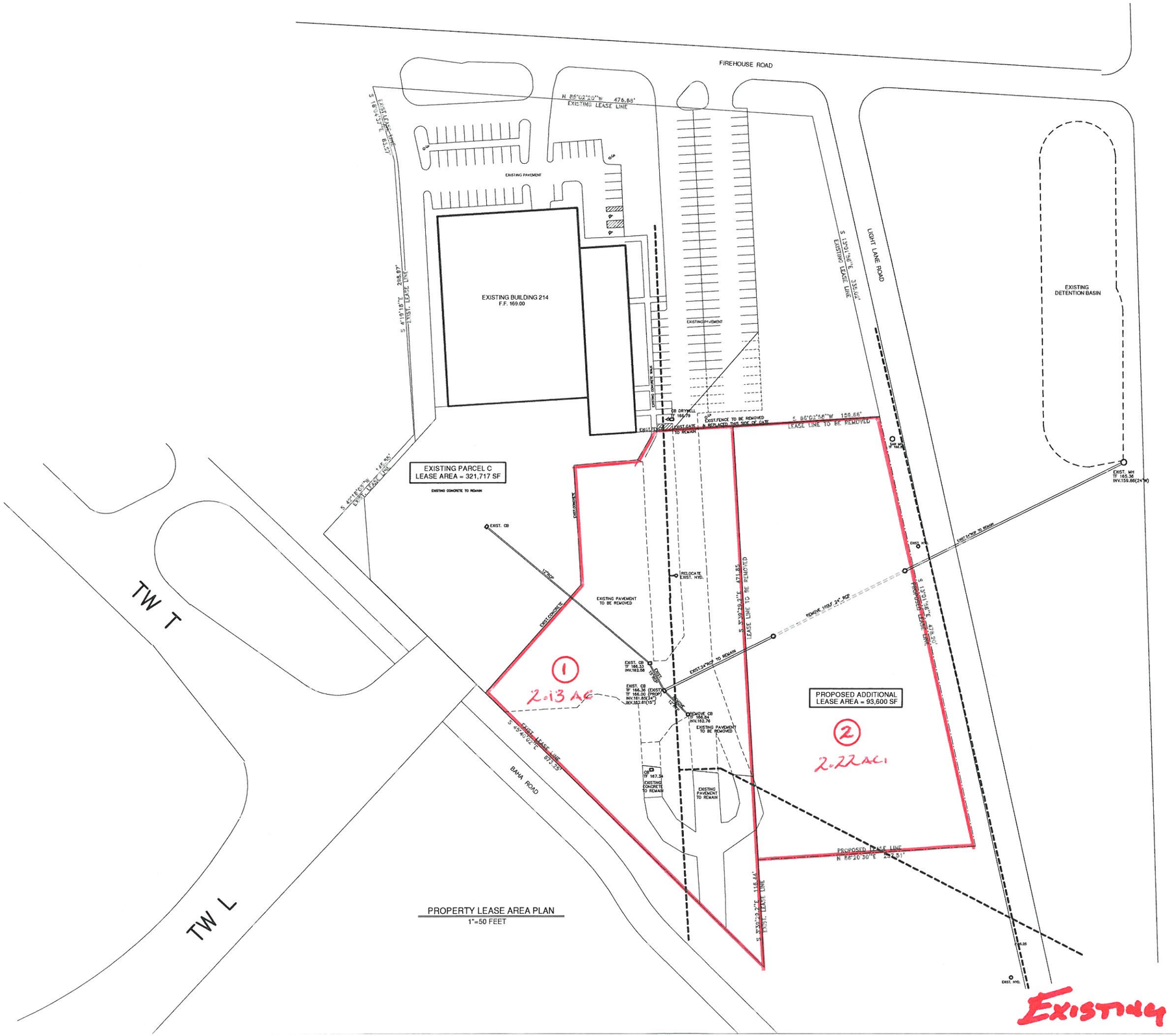
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 25, 2013—Sep 9, 2013

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
306	Udorthents-Urban land complex	10.5	37.2%
307	Urban land	0.7	2.5%
308	Udorthents, smoothed	17.1	60.4%
Totals for Area of Interest		**28.3**	**100.0%**



DATE	ISSUE
7-29-15	CONTRACT DRAWING
8-11-15	REV. LEASE AREA
9-11-15	CAA REVIEW COMMENTS

PDS ENGINEERING & CONSTRUCTION, INC.

107 Old Windsor Road
Bloomfield, Connecticut.06002

Telephone: (860) 242-8586
FAX (860) 242-8587

CONSULTANTS:

PROJECT NAME:
Tac Air - Proposed Hangar

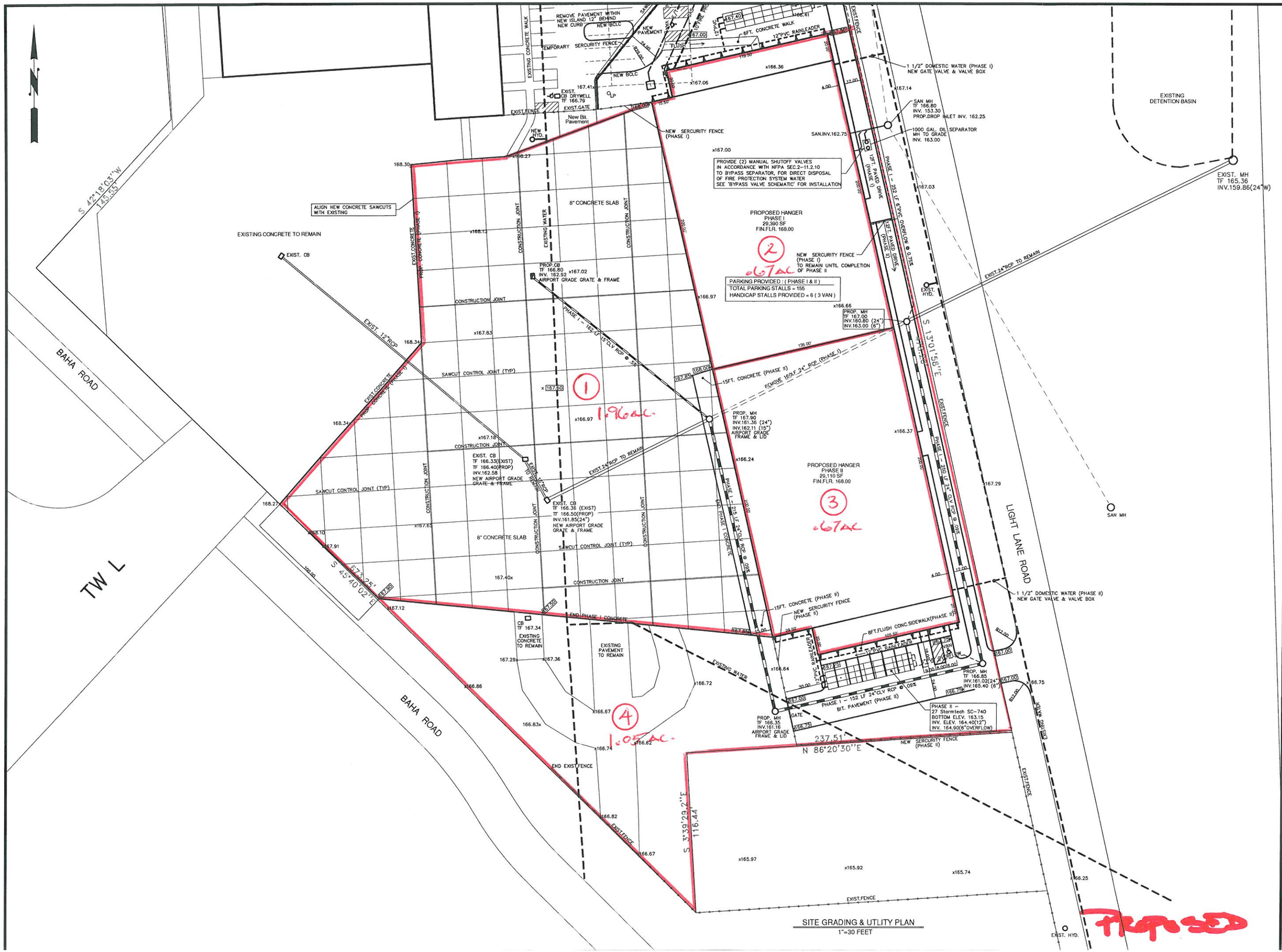
FIRE HOUSE ROAD & LIGHT LANE ROAD
WINDSOR LOCKS , CONNECTICUT

DRAWING TITLE:
LEASE AREA PLAN
SITE DEMOLITION PLAN

SEAL

ENGINEER: FB
ARCHITECT:
PROJECT MGR:
DRAFTED BY: BF

C-101



SITE GRADING & UTILITY PLAN
1"=30 FEET

DATE	ISSUE
7-29-15	CONTRACT DRAWING
9-11-15	CAA REVIEW COMMENTS

PDS ENGINEERING & CONSTRUCTION, INC.
107 Old Windsor Road
Bloomfield, Connecticut.06002
Telephone: (860) 242-8586
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CONSULTANTS:

PROJECT NAME:
Tac Air - Proposed Hangar
FIRE HOUSE ROAD & LIGHT LANE ROAD
WINDSOR LOCKS , CONNECTICUT

DRAWING TITLE:
SITE GRADING UTLITY PLAN

SEAL

ENGINEER: FB
ARCHITECT:
PROJECT MGR:
DRAFTED BY: BF

C-103

Appendix B - Drainage Calculations

Tac Air Proposed Hangar

Fire House Road & Light Lane Road

Windsor Locks, Connecticut

PROPOSED SITE IMPROVEMENTS

DRAINAGE CALCULATIONS

9-11-15

PDS Engineering & Construction

107 Old Windsor Road

Bloomfield, CT. O6002

(860)242-8586

u

The following is a Storm Water Management analysis for the proposed site improvements and hangar construction for Tac Air in Windsor Locks, Connecticut. The analysis will show the proposed site improvements with underground storm water storage chambers will result in a slight increased runoff to the existing detention basin along Route 75.

The existing paved areas and the majority of the existing grass areas presently sheet flow to a number of existing catch basins and is piped into the existing detention basin along Route 75. The proposed site development will increase the impervious areas by adding concrete ramp areas, buildings and associated parking.

With the proposed site improvements, the concrete ramp runoff will drain to catch basins and outlet in the existing detention basin. The proposed building roof water will be collected in underground storage chambers. The proposed parking area to the south will sheet flow across the existing grass areas.

The drainage design is based on a 25 year storm event.

The calculation will show the following:

Total existing site runoff to the detention basin = **10.65 cfs**

Total proposed site runoff to the detention basin = **12.52 cfs**

Total increased runoff to detention pond = **1.87 cfs**

Proposed Roof Drainage (Areas #2 & #3) to proposed StormTech Chambers = **8.56 cfs**

Total remaining sheet flow runoff = **2.68 cfs**

I. EXISTING DRAINAGE AREA RUNOFF

A. EXISTING RUNOFF AREA #1

1. AREA = 2.13 ACRE
2. COEFFICIENT OF RUNOFF

PAVEMENT = (1.32/2.13)(.9) = .56
GRASS = (.81/2.13)(.10) = .04
C= .60

3. TIME OF CONCENTRATION

DESCRIPTION OF FLOW	SLOPE	LENGTH	VELOCITY	TRAVEL TIME
PAVEMENT	1%	230 FT.	2	115 SEC.

Tc = 115 / 60 = 1.92 MIN. Tc = 7.1 (5 MIN. MINIMUM)

4. PEAK RATE OF RUNOFF Q=CiA

(7.1)(.60)(2.13) = 9.07

B. EXISTING RUNOFF AREA #2

1. AREA = 2.22 ACRE
2. COEFFICIENT OF RUNOFF

GRASS C = .01

3. TIME OF CONCENTRATION

DESCRIPTION OF FLOW	SLOPE	LENGTH	VELOCITY	TRAVEL TIME
GRASS	1%	210 FT.	.75	280 SEC

Tc = 280 / 60 = 4.66 MIN. Tc = 7.1 (5 MIN. MINIMUM)

4. PEAK RATE OF RUNOFF Q=CiA

(7.1)(.01)(.2.22) = 1.58 CFS

II. PROPOSED DRAINAGE AREA RUNOFF

A. PROPOSED RUNOFF AREA #1

1. AREA = 1.96 ACRE
2. COEFFICIENT OF RUNOFF

C = .90

3. TIME OF CONCENTRATION

DESCRIPTION OF FLOW	SLOPE	LENGTH	VELOCITY	TRAVEL TIME
CONCRETE	1%	140 FT.	2	70 SEC.

Tc = 70 / 60 = 1.17 MIN. Tc = 7.1

4. PEAK RATE OF RUNOFF Q=CiA

(7.1)(.90)(1.96) = 12.52 CFS

B. PROPOSED RUNOFF AREA #2

1. AREA = .67 ACRE
2. COEFFICIENT OF RUNOFF

C = .90

3. TIME OF CONCENTRATION

DESCRIPTION OF FLOW	SLOPE	LENGTH	VELOCITY	TRAVEL TIME
ROOF	1%	200 FT.	2	100 SEC.

Tc = 100 / 60 = 1.66 MIN. Tc = 7.1

4. PEAK RATE OF RUNOFF Q=CiA

(7.1)(.90)(.67) = 4.28 CFS

C. PROPOSED RUNOFF AREA #3

1. AREA = .67 ACRE
2. COEFFICIENT OF RUNOFF

C = .90

3. TIME OF CONCENTRATION

DESCRIPTION OF FLOW	SLOPE	LENGTH	VELOCITY	TRAVEL TIME
ROOF	1%	200 FT.	2	100 SEC.

Tc = 100 / 60 = 1.66 MIN. Tc = 7.1

4. PEAK RATE OF RUNOFF Q=CiA

(7.1)(.90)(.67) = 4.28 CFS

D. PROPOSED RUNOFF AREA #4

1. AREA = 1.05 ACRE
2. COEFFICIENT OF RUNOFF

PAVEMENT = (.34/1.05)(.9) = .29

GRASS = (.71/1.05)(.10) = .07

C= .36

3. TIME OF CONCENTRATION

DESCRIPTION OF FLOW	SLOPE	LENGTH	VELOCITY	TRAVEL TIME
GRASS	1%	30 FT.	.75	40 SEC.

Tc = 40 / 60 = .66 MIN. Tc = 7.1

4. PEAK RATE OF RUNOFF Q=CiA

(7.1)(.36)(1.05) = 2.68 CFS

StormTech Storage Chamber Sizing Calculation

Drainage Areas #2 (Area #3 Similar)

TOTAL RUNOFF TO STORAGE CHAMBERS = 4.28 CFS

REQUIRED STORAGE VOLUME = 1/2 (3tc) (Qp)

V = 1/2 (3) (60 sec) (5 min) (4.28) = 1926 cu/ft

1 StormTech SC-740 w/ 6" STONE BASE = 74.9 CU/FT CAPACITY

1926 / 74.9 = 25.71 (26 UNITS REQUIRED)

27 UNITS PROVIDED

Water Quality Volume

A = 5.14 ACRES
I = 3.8 acres / 5.24 acres = .74
R = 0.05 + 0.009 (.74) = .06

WQV = (1) (.06) (5.14) / 12 = .03 AC/FT

Total Capcity of Stormtech Storage Chambers = (2) 1926 CF / 43560 = .08 AC/FT

Appendix C Plan Sheets

BUILDING CODE DATA TABLE

2005 CONNECTICUT STATE BUILDING CODE
2009 CONNECTICUT AMMENDMENT
2011 CONNECTICUT AMMENDMENT
2013 CONNECTICUT AMMENDMENT
2005 CONNECTICUT FIRE SAFETY CODE
2003 INTERNATIONAL MECHANICAL CODE
2003 INTERNATIONAL PLUMBING CODE
2011 NATIONAL ELECTRICAL CODE (NFPA-70)
ICC/ANSI A117.1-2003
2009 INTERNATIONAL ENERGY CONSERVATION CODE

BUILDING CLASSIFICATION:

USE GROUP : B / S-1 MIXED USE NONSEPARATED
CONSTRUCTION TYPE : IIB

ENTIRE BUILDING EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH IBC SECTION 412.2.6 AND NFPA 409 FOR GROUP I AIRCRAFT HANGARS

GENERAL BUILDING LIMITATIONS:

ALLOWABLE BUILDING AREA = 17,500 SF (TABLE 503)
300% AUTOMATIC SPRINKLER INCREASE = 52,500 SF (SEC.506.3)
TOTAL ALLOWABLE AREA = 70,000 SF
ACTUAL BUILDING AREA = 29,590 SF

ALLOWABLE BUILDING HEIGHT = 3 STORY / 65 FT. (TABLE 503)
ACTUAL BUILDING HEIGHT = 1 STORY / 43'-10"

MEANS OF EGRESS: (PHASE I)

DESIGN OCCUPANT LOAD (TABLE 1004.1.2)
BUSINESS AREA = 2,390 / 100 = 24 OCC.
STORAGE AREA = 27,000 / 500 = 54 OCC.
TOTAL DESIGN OCCUPANT LOAD = 78

MINIMUM NUMBER OF EXITS (TABLE 1018.1)
1 REQUIRED 4 PROVIDED

MAXIMUM LENGTH OF EXIT ACCESS TRAVEL (TABLE 1015.1)
MAXIMUM LENGTH OF EXIT TRAVEL = 250 FT.
ACTUAL MAXIMUM LENGTH OF TRAVEL = 158 FT.

BUILDING DESIGN LOADS :

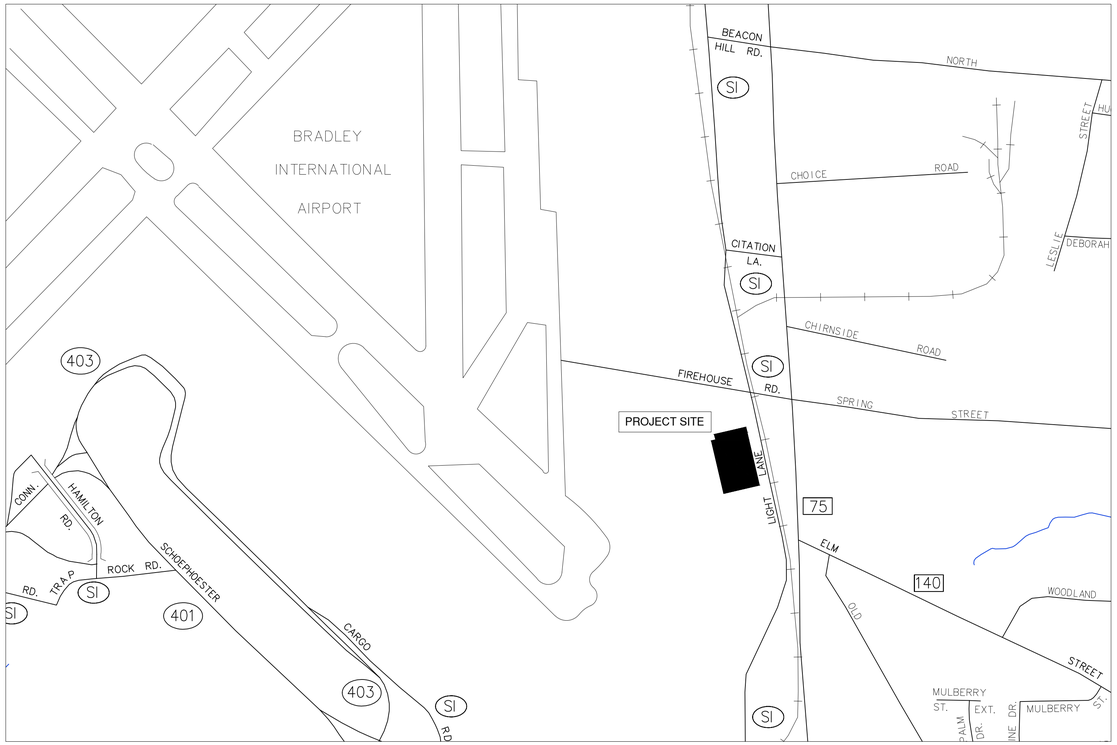
GROUND SNOW LOAD = 35 PSF
GROUND SNOW EXPOSURE FACTOR = 1.0
GROUND SNOW IMPORTANCE FACTOR = 1.0

UNIFORM COLLATERAL LOAD = 8 PSF

BASIC WIND SPEED = 95 MPH
WIND EXPOSURE CATEGORY = C
WIND IMPORTANCE FACTOR = 1.00

SEISMIC : S_s = 23.5%
S_1 = 6.5%

PROPOSED HANGAR
BRADLEY INTERNATIONAL AIRPORT
WINDSOR LOCKS, CT



PROJECT SITE LOCATION MAP
N.T.S.

LIST OF DRAWINGS :

COVER	BUILDING CODE DATA
C-101	LEASE AREA / SITE DEMOLITION PLAN
C-102	SITE GRADING & UTLITY PLAN
C-103	SITE GRADING & UTLITY PLAN
C-104	SITE DETAILS
C-105	SITE DETAILS
A-100	BUILDING FLOOR PLAN
A-101	ENLARGED FLOOR PLAN / DOOR SCHEDULE
A-102	OFFICE REFLECED CEILING PLAN / FINISH SCHEDULE
A-200	EXTERIOR ELEVATIONS
A-300	OFFICE WALL SECTIONS
A-301	INTERIOR WALL SECTIONS
S-100	FOUNDATION PLAN
S-101	COLUMN PIER DETAILS
S-102	FOUNDATION PIER DETAILS
S-103	FOUNDATION SECTIONS
H-1	HVAC FLOOR PLAN
H-2	HVAC SPECIFICATIONS

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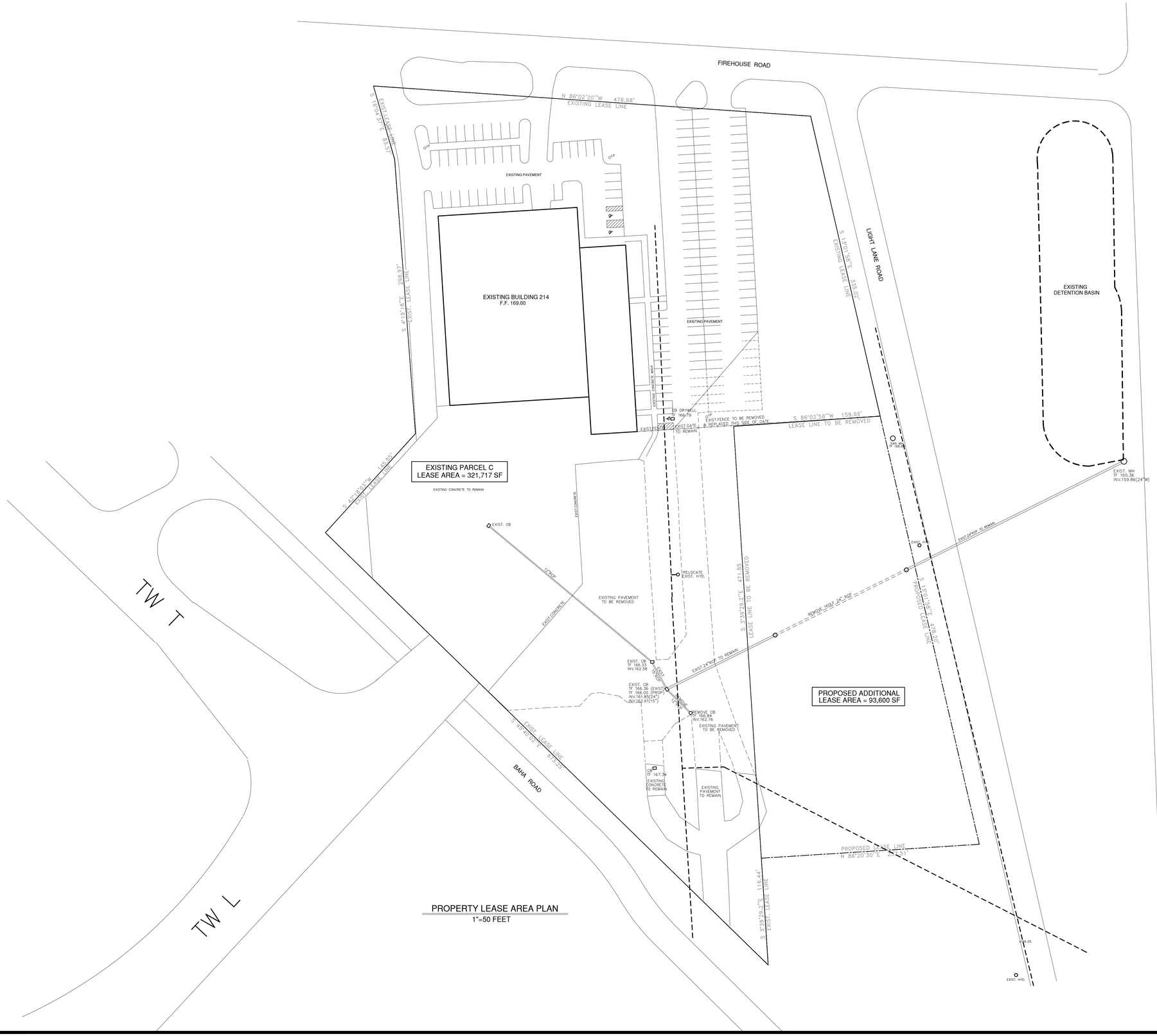

PROPERTY LEASE AREA PLAN
1"=50 FEET

DATE	ISSUE
7-29-15	CONTRACT DRAWING
8-11-15	REV. LEASE AREA
9-11-15	CAA REVIEW COMMENTS

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CONSULTANTS:

PROJECT NAME:

Tac Air - Proposed Hangar

FIRE HOUSE ROAD & LIGHT LANE ROAD
WINDSOR LOCKS , CONNECTICUT

DRAWING TITLE:

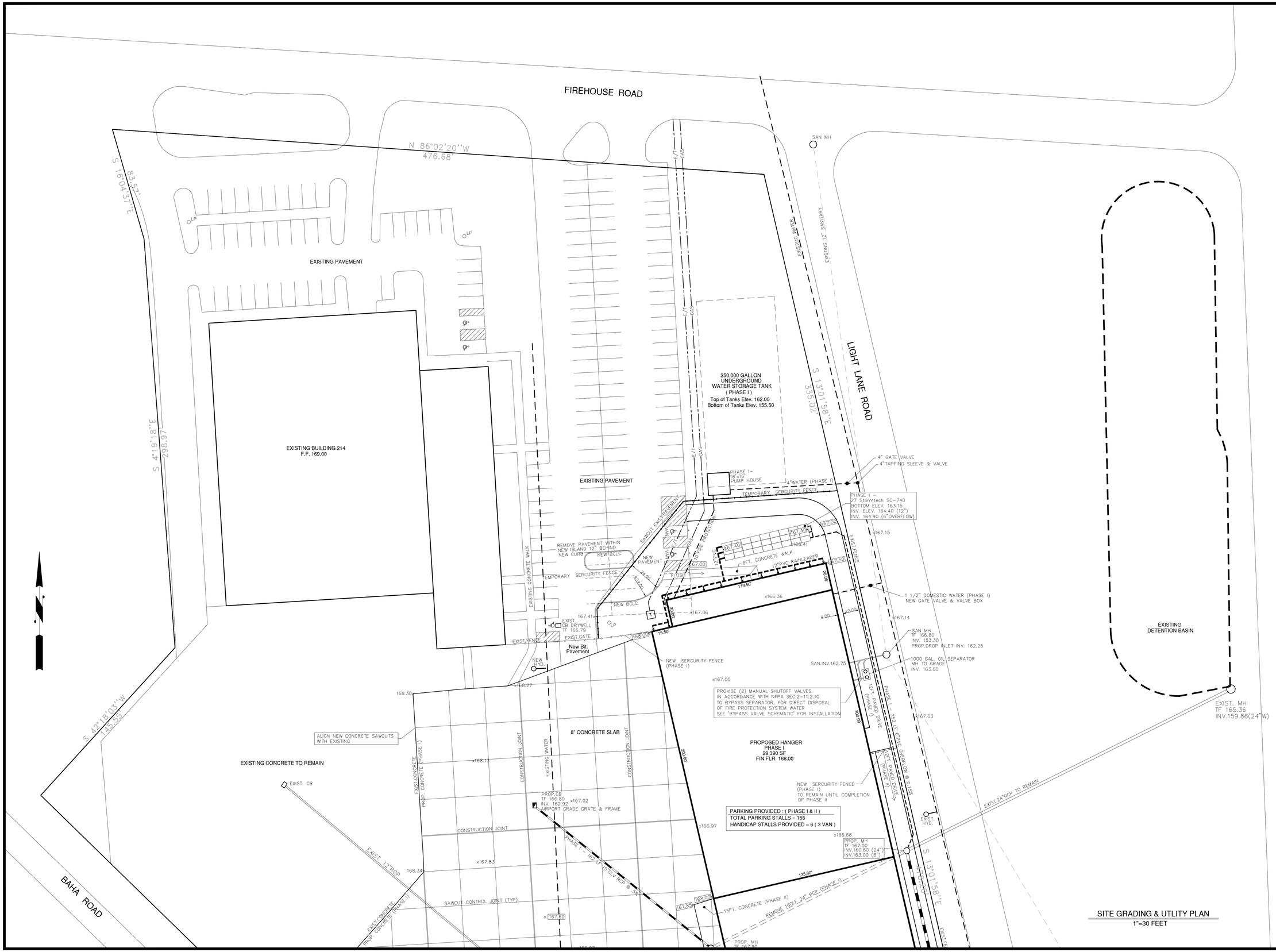
LEASE AREA PLAN
SITE DEMOLITION PLAN

SEAL

ENGINEER: FB
ARCHITECT:
PROJECT MGR:
DRAFTED BY: BF

C-101

DATE	ISSUE
7-29-15	CONTRACT DRAWING
9-11-15	CAA REVIEW COMMENTS



SITE GRADING & UTLITY PLAN
1"=30 FEET

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CONSULTANTS:

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Tac Air - Proposed Hangar
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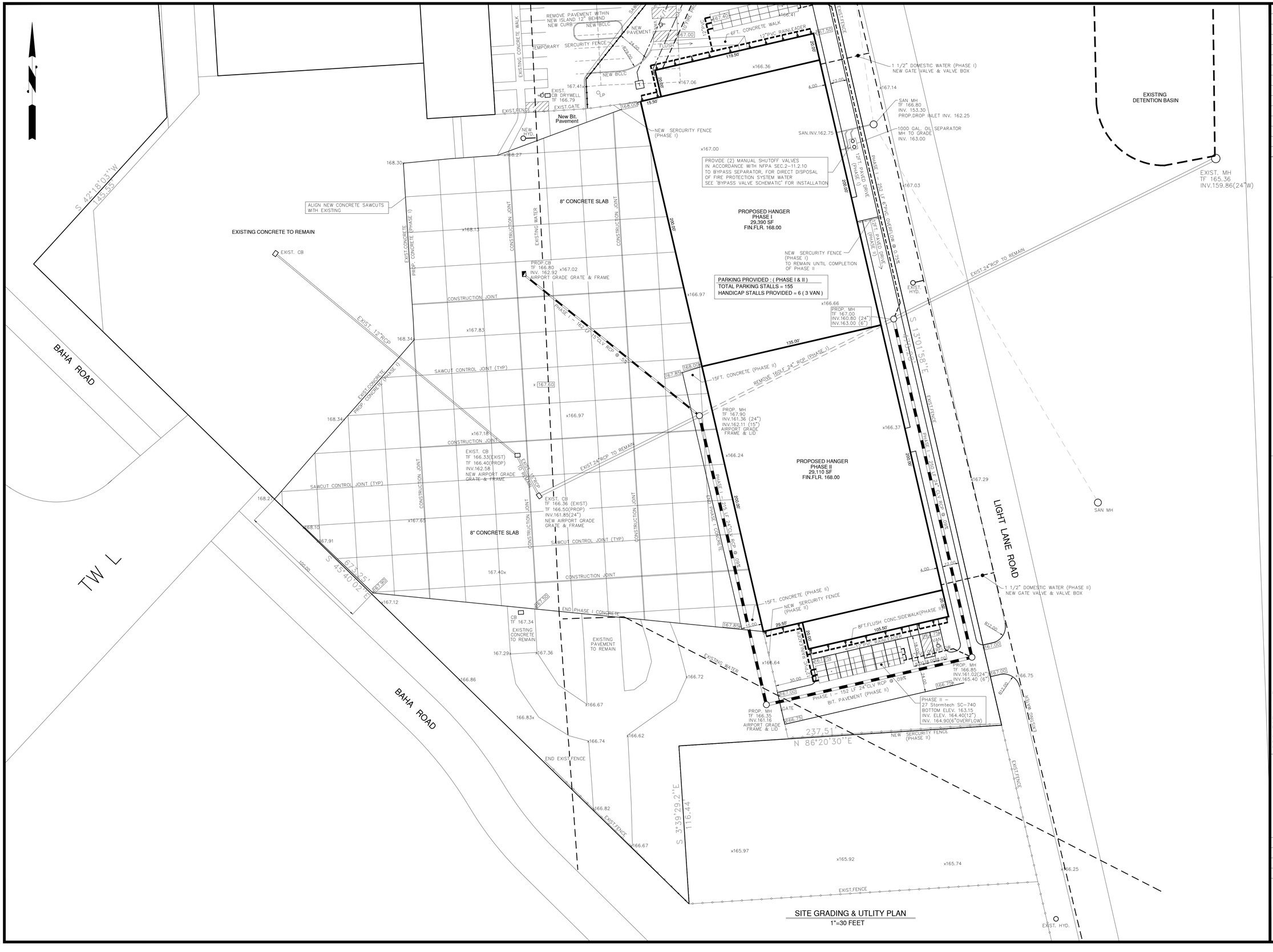
WINDSOR LOCKS , CONNECTICUT

DRAWING TITLE:
SITE GRADING & UTLITY PLAN

SEAL

ENGINEER: FB
ARCHITECT:
PROJECT MGR:
DRAFTED BY: BF

C-102



SITE GRADING & UTLITY PLAN
1"=30 FEET

DATE	ISSUE
7-29-15	CONTRACT DRAWING
9-11-15	CAA REVIEW COMMENTS

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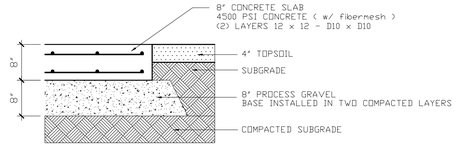
DRAWING TITLE:
SITE GRADING UTLITY PLAN

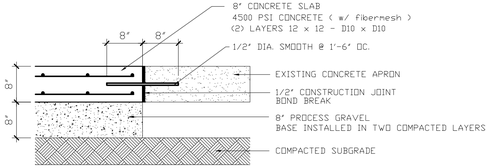
SEAL

ENGINEER: FB
ARCHITECT:
PROJECT MGR:
DRAFTED BY: BF

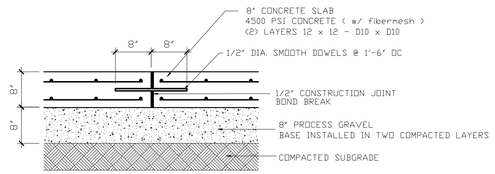
C-103



SECTION @ CONCRETE APRON
3/4" = 1'-0"



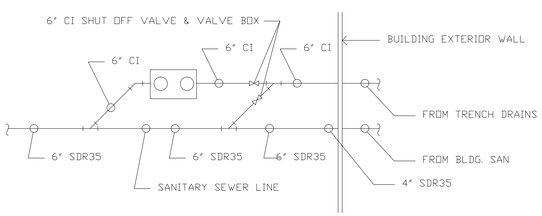
SECTION @ EXISTING RAMP
3/4" = 1'-0"



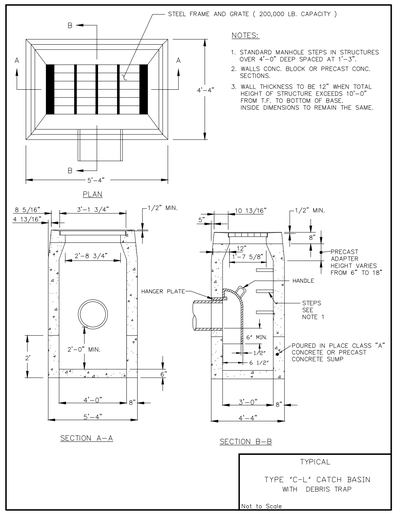
SECTION @ CONSTRUCTION JOINT
3/4" = 1'-0"

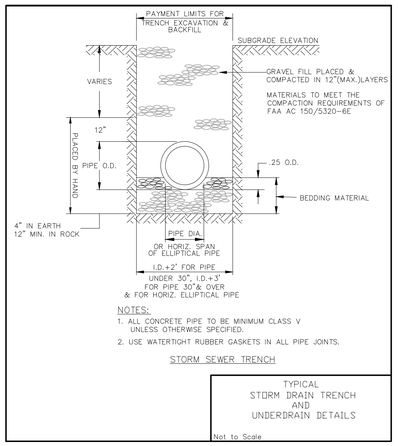
CONCRETE NOTES @ RAMP

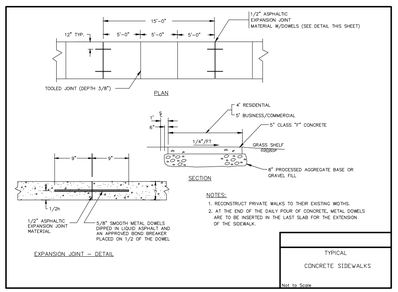
1. SOIL BEARING PRESSURE - 4000 PSF
2. DESIGN PER STATE AND LOCAL BUILDING CODE AND ALL FAA AC's AS APPLICABLE
3. CONCRETE TO BE 4500 PSI (28 day strength)
   MIN. 5% AIR ENTRAINED
   1-1/4 " MAX. AGGREGATE SIZE, 11/2" MIN. COVER FOR REINFORCING STEEL AND MAX. SLUMP OF 4"
4. STEEL REQUIREMENTS :
   STRUCTURAL - ASTM A-36
   BOLTS - ASTM A-325
   REBAR - ASTM A-615 GR-60
   MESH - ASTM A-185
   WELDING ELECTRODES - AWS E-70
5. CONCRETE MIX WITH FIBERMESH

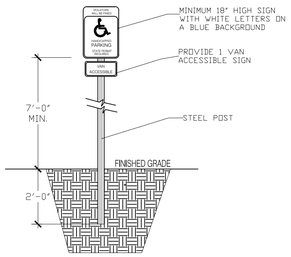


BYPASS VALVE SCHEMATIC

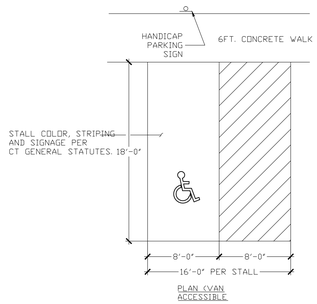




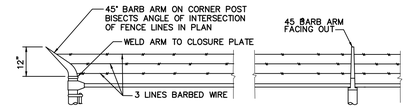




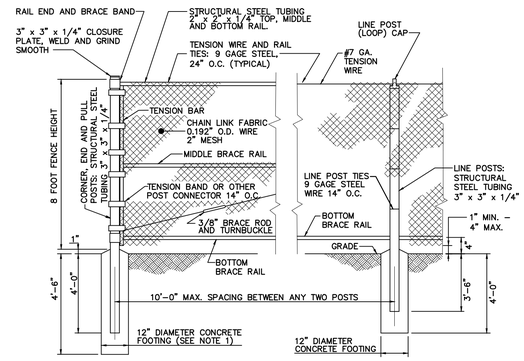
HC PARKING SIGN DETAIL
N.T.S.



HANDICAPPED PARKING STALL
SCALE: N.T.S.



DETAIL WITH BARB WIRE TOP



TERMINAL GATE AND POST DETAIL

LINE POST DETAIL

STRUCTURAL STEEL TUBING	SWING GATE OPENINGS	
	SINGLE GATE	DOUBLE GATE
3" x 3" x 1/4"	UP THRU 6'	UP THRU 12'
4" x 4" x 1/4"	7' THRU 13'	13' THRU 26'
6" x 6" x 5/16"	14' THRU 18'	27' THRU 36'
8" x 8" x 5/16"	19' THRU 32'	37' THRU 64'

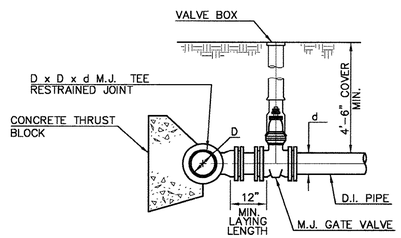
NOTES:
1. FOR GATE WIDTHS GREATER THAN 13'-0" SINGLE (26'-0" DOUBLE) MINIMUM DIAMETER OF POST FOUNDATION SHALL BE 18" AND 4'-6" DEEP.
2. ALL CONNECTION DETAILS SHALL BE SUBMITTED FOR APPROVAL.
3. WELDED GATE SQUARE TUBING SIZES SHALL BE AS FOLLOWS:

FABRIC HEIGHT	EXT. BRACING	INT. BRACING
6' OR LESS	1¾"x1¾"x 3/16"	1¼"x1¼"x 3/16"
OVER 6'	2" x 2" x 3/16"	1½"x1½"x 3/16"

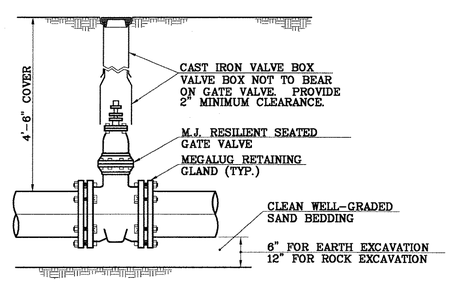
4. EQUIVALENT STEEL SECTIONS SHALL NOT BE PERMITTED.
5. BRACE RAILS AND TRUSS ROD ON ONE BAY EACH SIDE OF CORNER, END, PULL AND GATE POSTS ONLY.

METALLIC COATED CHAIN LINK FENCE-EWR

090.010 CLFEWR



TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE



M.J. GATE VALVE INSTALLATION
NOT TO SCALE

DATE	ISSUE
7-29-15	PROGRESS DRAWING
9-11-15	CAA REVIEW COMMENTS

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CONSULTANTS:

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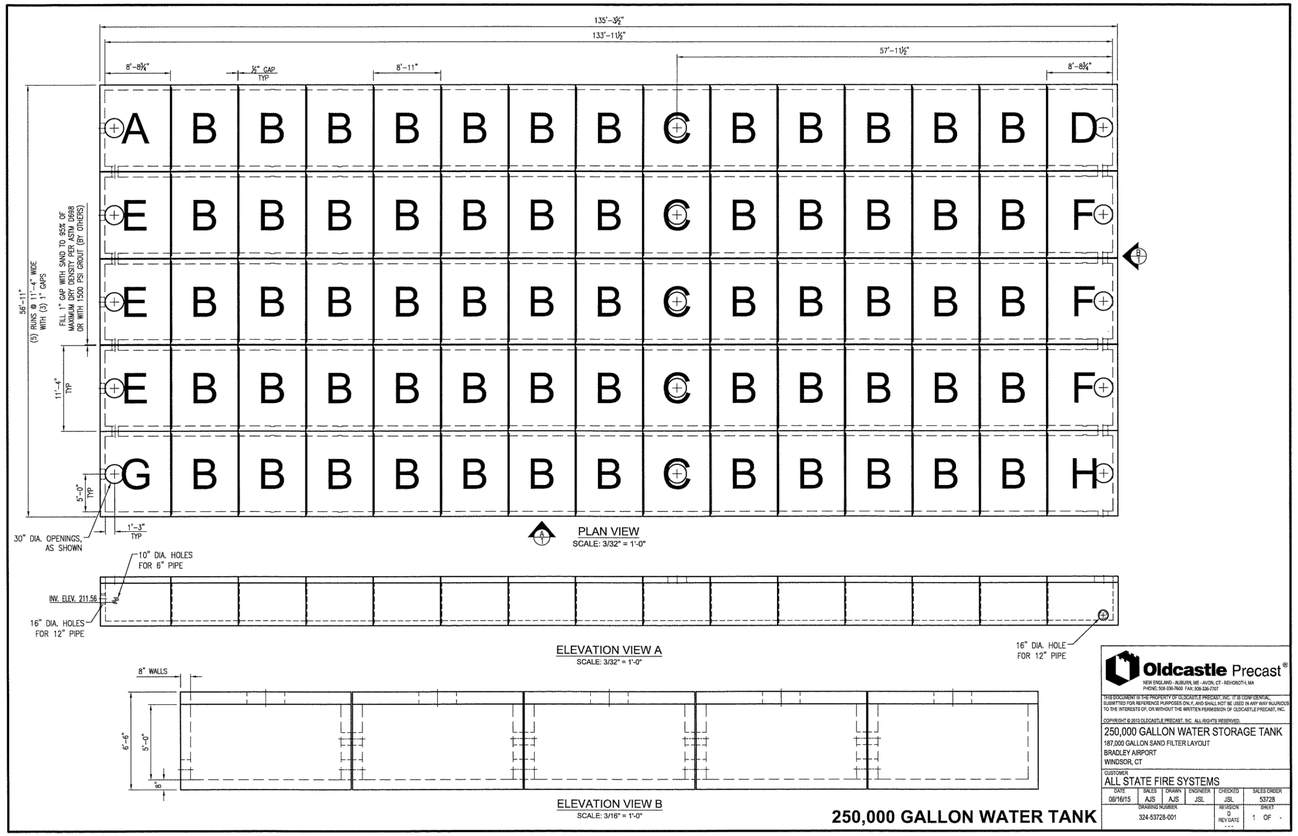
FIRE HOUSE ROAD & LIGHT LANE ROAD
WINDSOR LOCKS , CONNECTICUT

DRAWING TITLE:
SITE DETAILS

SEAL

ENGINEER: FB
ARCHITECT:
PROJECT MGR:
DRAFTED BY: BF

C-104



250,000 GALLON WATER TANK

Oldcastle Precast®
NEW ENGLAND - AUBURN, ME - AVON, CT - ABINGTON, MA
PHONE: 508-836-7605 FAX: 508-326-7707

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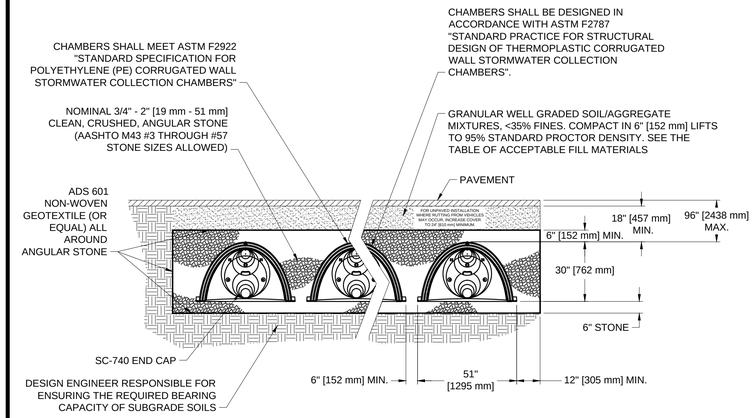
250,000 GALLON WATER STORAGE TANK
187,000 GALLON SAND FILTER LAYOUT
BRADLEY AIRPORT
WINDSOR, CT

CUSTOMER:
ALL STATE FIRE SYSTEMS

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
08/16/15	AJS	AJS	JSL	JSL	53728

DRAWING NUMBER	REVISION / REV DATE	SHEET
324-53728-001	0 / - - -	1 OF -



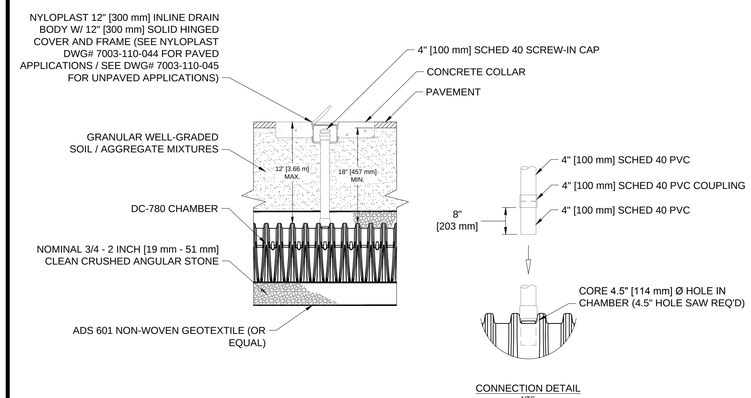
ADS ADVANCED DRAINAGE SYSTEMS, INC.

THE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

StormTech® Subsurface Stormwater Management™
70 INWOOD ROAD, SUITE 3 | ROCKY HILL, CT 06067
PHONE: 888-892-2694 | FAX: 866-328-8401
WWW.STORMTECH.COM

SC-740 TYPICAL CROSS-SECTION
SCALE: NTS
DATE:
DRAWN BY: JLM
CHECKED:

NOTES:
1. INSPECTION PORT MUST BE CONNECTED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER.
2. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.



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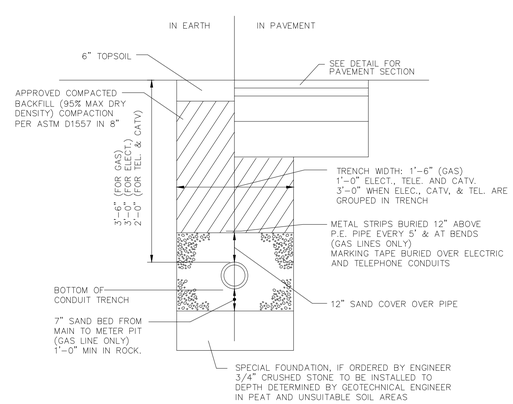
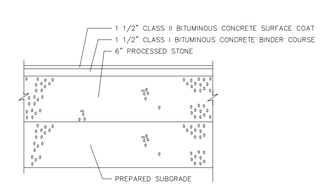
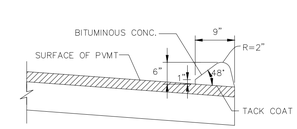
DC-780 INSPECTION PORT DETAIL
SCALE: NTS
DATE: 6/15/11
DRAWN BY: KLJ
CHECKED:



ELECTRICAL, TELEPHONE AND GAS TRENCH DETAIL
N.T.S.



STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT ON SITE
N.T.S. CTPC-006



BITUMINOUS CONCRETE LIP CURBING
N.T.S. CTPC-002

DATE	ISSUE
7-29-15	PROGRESS DRAWING
9-11-15	CAA REVIEW COMMENTS

PDS ENGINEERING & CONSTRUCTION, INC.
107 Old Windsor Road
Bloomfield, Connecticut.06002
Telephone: (860) 242-8586
FAX (860) 242-8587

CONSULTANTS:

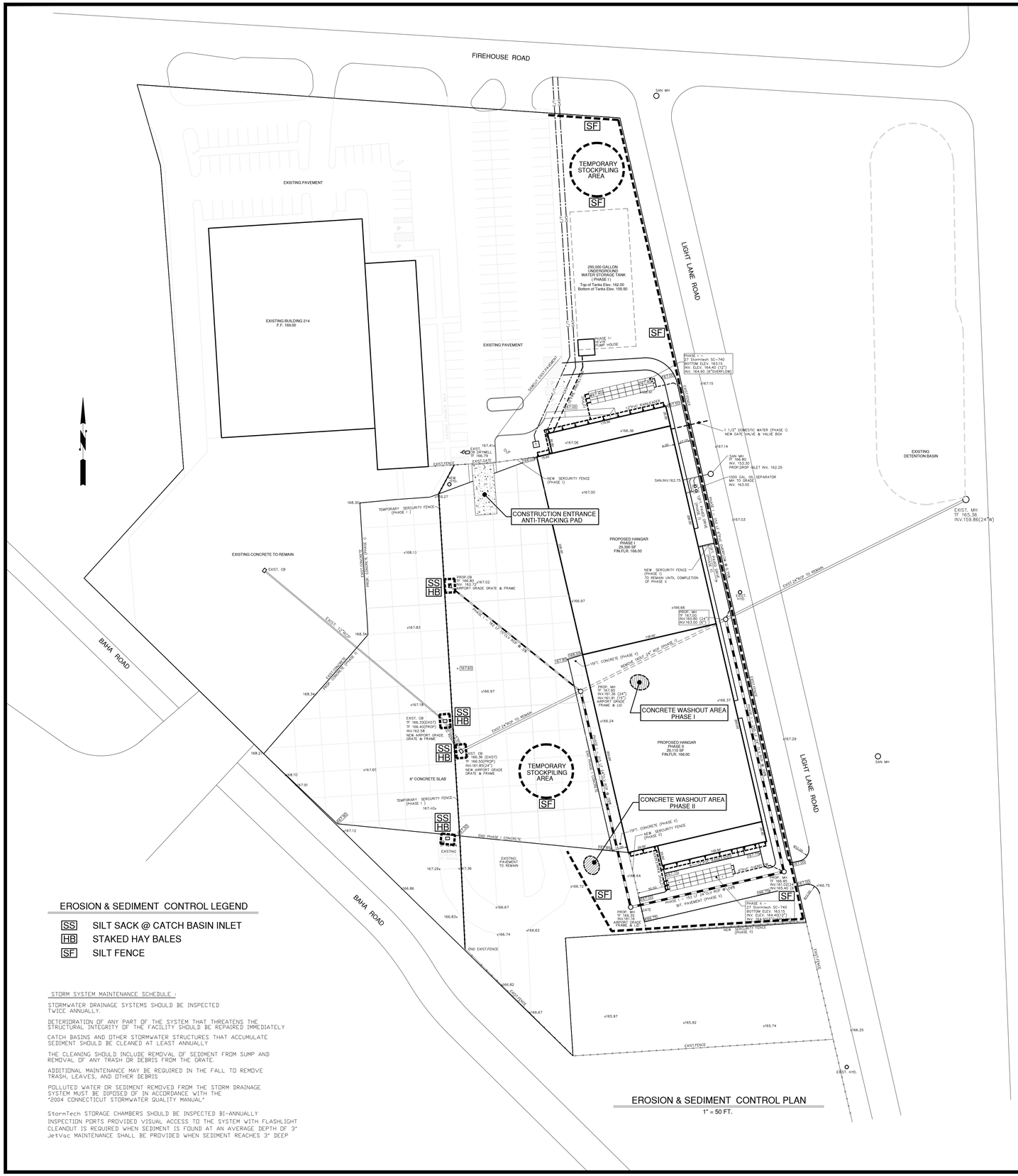
PROJECT NAME:
Tac Air - Proposed Hangar
FIRE HOUSE ROAD & LIGHT LANE ROAD
WINDSOR LOCKS , CONNECTICUT

DRAWING TITLE:
SITE DETAILS

SEAL

ENGINEER: FB
ARCHITECT:
PROJECT MGR:
DRAFTED BY: BF

C-105



EROSION & SEDIMENT CONTROL PLAN

1" = 50 FT.

EROSION & SEDIMENT CONTROL LEGEND

- SS — SILT SACK @ CATCH BASIN INLET
- HB — STAKED HAY BALES
- SF — SILT FENCE

STORM SYSTEM MAINTENANCE SCHEDULE :

STORMWATER DRAINAGE SYSTEMS SHOULD BE INSPECTED TWICE ANNUALLY.

DETERIORATION OF ANY PART OF THE SYSTEM THAT THREATENS THE STRUCTURAL INTEGRITY OF THE FACILITY SHOULD BE REPAIRED IMMEDIATELY

CATCH BASINS AND OTHER STORMWATER STRUCTURES THAT ACCUMULATE SEDIMENT SHOULD BE CLEANED AT LEAST ANNUALLY

THE CLEANING SHOULD INCLUDE REMOVAL OF SEDIMENT FROM SUMP AND REMOVAL OF ANY TRASH OR DEBRIS FROM THE GRATE.

ADDITIONAL MAINTENANCE MAY BE REQUIRED IN THE FALL TO REMOVE TRASH, LEAVES, AND OTHER DEBRIS

POLLUTED WATER OR SEDIMENT REMOVED FROM THE STORM DRAINAGE SYSTEM MUST BE DIPOSED OF IN ACCORDANCE WITH THE "2004 CONNECTICUT STORMWATER QUALITY MANUAL"

StormTech STORAGE CHAMBERS SHOULD BE INSPECTED BI-ANNUALLY
INSPECTION PORTS PROVIDED VISUAL ACCESS TO THE SYSTEM WITH FLASHLIGHT
CLEANOUT IS REQUIRED WHEN SEDIMENT IS FOUND AT AN AVERAGE DEPTH OF 3"
JetVac MAINTENANCE SHALL BE PROVIDED WHEN SEDIMENT REACHES 3" DEEP

CONSTRUCTION SEQUENCE

1. CONTACT CONNECTICUT AIRPORT AUTHORITY AND CONDUCT A PRECONSTRUCTION MEETING
2. INSTALL SEDIMENTAION CONTROLS AT EXISTING CATCH BASIN INLETS IN THE AREA OF THE EXISTING AND PROPOSED CONCRETE APRONS
3. INSTALL SILT FENCE ALONG THE PERIMETER OF THE PHASE I BUILDING AREA
4. PERFORM CLEARING AND GRUBBING ACTIVITIES WITH THE PHASE I BUILDING & APRON AREAS. STRIPPING OF TOPSOIL MUST OCCUR BEFORE MAY 15TH OR AFTER AUGUST 15TH IN ORDER TO MINIMIZE POTENTIAL INPACTS TO GRASSLAND BIRDS AT THE AIRPORT.
5. COMPLETE PARTIAL INSTALLATION OF CONCRETE APRON AND INSTALL TEMPORARY SECURITY FENCING.
6. MODIFY EXISTING AND INSTALL NEW STORM DRAINAGE AROUND PROPOSED BUILDING TO ALLOW FOR NEW BUILDING FOUNDATION.
7. EXCAVATE FOR PHASE I & PHASE II BUILDING FOUNDATIONS, POUR AND BACKFILL.
8. THE CONSTRUCTION SHALL BE PHASED TO INSURE LESS THAN 5 ACRES IS DISTURBED AT ONE TIME.
9. GRADE GRASS SLOPES AND STABILIZE. PREPARE AND PAVE AREAS SHOWN ON PLAN.
10. TOPSOIL DISTURBED GRASS AREAS AND SEED.
11. REMOVE EROSION CONTROL MEASURES WHEN IT IS DETERMINED THAT THE DISTURBED AREAS HAVE BEEN STABILIZED BY THE CIVIL ENGINEER.
12. ALL POST-CONSTRUCTION STORMWATER STUCTURES SHALL BE CLEANED OF CONSTRUCTION SEDIMENT AND ANY REMAINING SILT FENCE SHALL BE REMOVED PRIOR TO FILING OF THE "Notice of Completion Form".
13. PERFORM PROJECT FINAL CLEANUP.

EROSION CONTROL PLAN

1. HAY BALE FILTERS OR SILT FENCE WILL BE INSTALLED ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES.
2. CATCH BASINS WILL BE PROTECTED WITH HAY BALE FILTERS, SILT SACKS, SILT FENCE, OR OTHER INLET PROTECTION DEVICES PER DETAILS, THROUGHOUT THE CONSTRUCTION PROJECT AND UNTIL ALL DISTURBED AREAS ARE STABLE.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (LATEST EDITION).
4. EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO CONSTRUCTION WHENEVER POSSIBLE.
5. ALL CONTROL MEASURES WILL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
6. ADDITIONAL CONTROL MEASURES WILL BE INSTALLED IF NECESSARY OR REQUIRED OR AS DIRECTED BY THE CIVIL ENGINEER OR BY LOCAL GOVERNING OFFICIALS.
7. SEDIMENT REMOVED FROM EROSION CONTROL STRUTURES WILL BE DISPOSED OF IN A MANNER CONSISTENT WITH THE INTENT AND REQUIREMENTS OF THE EROSION CONTROL PLAN, NOTES, AND DETAILS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THIS EROSION CONTROL PLAN.
9. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS BEFORE AND AFTER EACH STORM, OR AT LEAST WEEKLY, TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS WHERE NECESSARY.
10. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIALS ON-SITE FOR MAINTENANCE AND EMERGENCY REPAIRS.
11. INSTALL PERIMETER SEDIMENT CONTROL PRIOR TO CONSTRUCTION. ALL CONSTRUCTION ACTIVITIES SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE.
12. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE IN FINAL LANDSCAPING. ALL STOCKPILES SHALL HAVE SILT FENCE AROUND THE LIMIT OF THE PILE.
13. MINIMIZE LAND DISTURBANCE. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE USING PERENIAL RYEGRASS AT 40 LBS. PER ACRE.
14. MAINTAIN EXISTING PAVED AREAS FOR CONSTRUCTION STAGING FOR AS LONG AS POSSIBLE.
15. WHERE INDICATED ON THE PLAN, USE NEW HAY BALES AND REPLACE THEM WHENEVER THEIR CONDITION DETERIORATES BEYOND USABILITY. STAKE HAY BALES SECURELY INTO GROUND AND BUTT TIGHTLY TOGETHER TO PREVENT BYPASSING.
16. SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY DURING CONSTRUCTION IF TRACKING IS A PROBLEM. OTHER DUST CONTROL MEASURES TO BE USED AS NECESSARY INCLUDE WATERING DOWN DISTURBED AREAS, USING CALCIUM CHLORIDE, AND COVERING LOADS ON DUMP TRUCKS.
17. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF UTILITY AND STORM PIPE TRENCHES SO AS TO ALLOW THE TRENCH TO INTERCEPT ALL SILT RUNOFF.
18. CONTRACTOR TO ONLY EXCAVATE AS MUCH UTILITY AND STORM PIPE TRENCH WORK AS CAN BE COMPLETED, BACKFILLED AND STABILIZED IN ONE DAY TO LIMIT THE AMOUNT OF DISTURBED TRENCHING.
19. SILT FENCES SHALL BE INSTALLED AT THE DOWNHILL SIDES OF BUILDING EXCAVATIONS AND STOCKPILES. HAY BALES MAY BE USED IF SHOWN ON THE EROSION CONTROL PLAN OR IF DIRECTED BY THE CIVIL ENGINEER
20. MAINTAIN ALL TEMPORAY AND PERMINATE SEDIMENT CONTROL DEVICES THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP PARKING LOT AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS WHEN AUTHORIZED BY LOCAL GOVERNING AUTHORITY.

INSTALLATION OF EROSION & SEDIMENTATION CONTROL MEASURES

SILT FENCE:

1. DIG A SIX INCH TRENCH ON THE UPHILL SIDE OF THE DESIGNATED FENCE LINE
2. POSISTION THE POST AT THE BACK OF THE TRENCH AND HAMMER THE POST 1.5 FEET MINIMUM INTO GROUND
3. LAY THE BOTTOM 6" OF THE FABRIC INTO THE TRENCH TO PREVENT UNDERMINING BY STORM RUN-OFF.
4. BACKFILL & COMPCT THE TRENCH

HAY BALES:

1. BALES SHALL BE PLACED IN A SINGLE ROW, ORIENTED PARALLEL TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING EACH OTHER
2. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A DEPTH OF 4". BALES TO BE STAKED AND BACKFILLED
3. ANCHOR EACH BALE WITH AT LEAST TWO STAKES
4. WEDGE STRAW IN GAPS BETWEEN BALES TO PREVENT WATER LEAKAGE
5. EXTEND BARRIER UNTIL ENDS ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE, TO ENSURE THAT RUNN-OFF WILL FLOW EITHER THROUGH OR OVER THE BARRIER, BUT NOT AROUND IT.

MAINTENANCE OF SEDIMENTATION AND EROSION CONTROL MEASURES

1. ALL SILT FENCE SHALL BE INSPECTED AS A MINIMUM WEEKLY OR AFTER EACH RAINFALL. ALL DETERIORATED FABRIC AND DAMAGED POST SHALL BE REPLACED AND PROPERLY REPOSITIONED IN ACCORDANCE WITH THIS PLAN.
2. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE FENCE WHEN THEY EXCEED A HEIGHT OF 1 FOOT.
3. ALL HAY BALE RINGS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE AS NEEDED.
4. DEPOSITS SHALL BE REMOVED AND CLEANED OUT IF ONE HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED WITH SEDIMENT.

DATE	ISSUE
11–18–15	FOR CONSTRUCTION

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CONSULTANTS:

PROJECT NAME:

Tac Air - Proposed Hangar

FIRE HOUSE ROAD & LIGHT LANE ROAD
WINDSOR LOCKS , CONNECTICUT

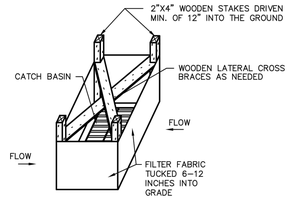
DRAWING TITLE:

EROSION & SEDIMENTATION CONTROL PLAN

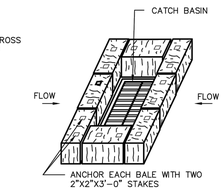
SEAL

ENGINEER: FB
ARCHITECT:
PROJECT MGR:
DRAFTED BY: BF

ES-1



SILT FENCE INSTALLATION AT CATCH BASINS AT LOW POINTS



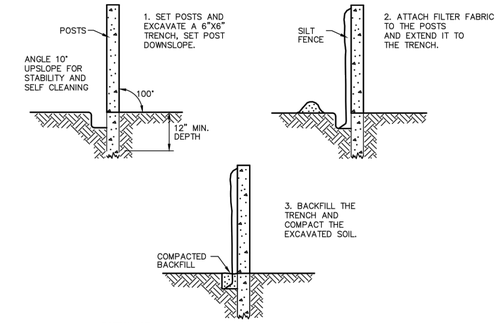
HAY BALE FILTER INSTALLATION AT CATCH BASIN AT LOW POINTS

STORMWATER INLETS WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS, MUST BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.

SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM EVENT.

CATCH BASIN EROSION CONTROL

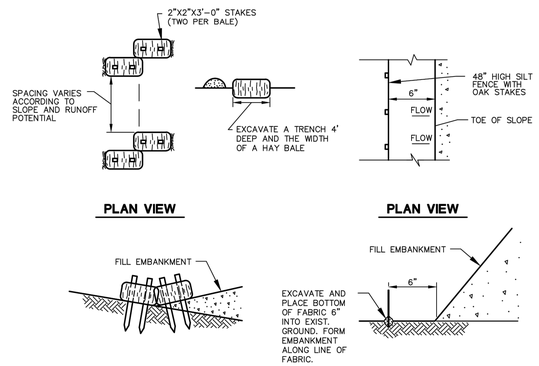
N.T.S. BLEC–012



PLAN VIEW

SILT FENCE BARRIER

N.T.S. CTEC–003



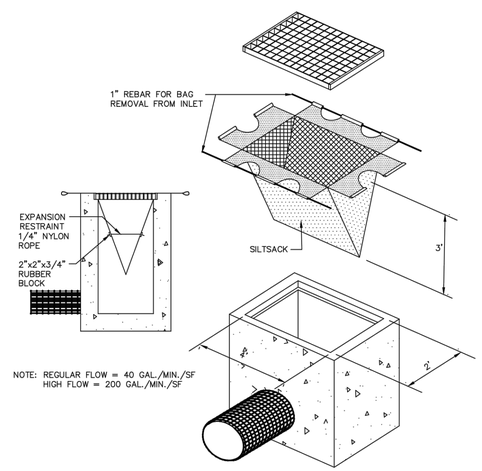
PLAN VIEW **PLAN VIEW**

SECTION VIEW **SECTION VIEW**

HAY BALE BERM DETAIL **SILT FENCE DETAIL**

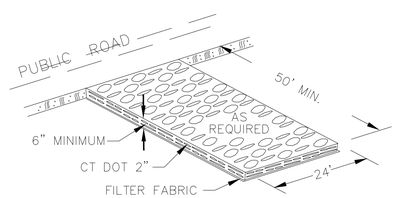
EROSION PROTECTION DEVICES

N.T.S. CTEC–002



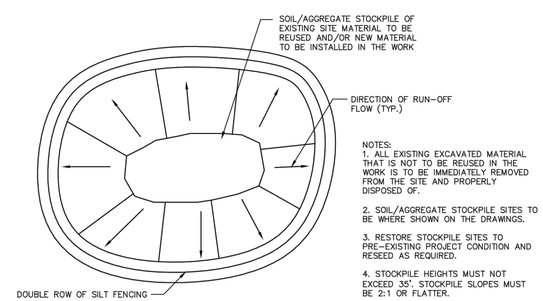
SILTSACK DETAIL

N.T.S. BLEC–005



ANTI–TRACKING PAD

N.T.S. XEC–008



NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.

2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.

3. RESTORE STOCKPILE SITES TO PRE–EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.

4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

MATERIALS STOCKPILE DETAIL

N.T.S. BLEC–006

DATE	ISSUE
11–18–15	FOR CONSTRUCTION

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CONSULTANTS:

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FIRE HOUSE ROAD & LIGHT LANE ROAD
WINDSOR LOCKS , CONNECTICUT

DRAWING TITLE:
EROSION & SEDIMENTATION CONTROL STANDARD DETAILS

SEAL

ENGINEER: FB
ARCHITECT:
PROJECT MGR:
DRAFTED BY: BF

ES-2

Appendix D - SMR Form

Connecticut Department of
Energy & Environmental Protection
Bureau of Materials Management & Compliance Assurance
Water Permitting & Enforcement Division

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, issued 8/21/13, effective 10/1/13
Stormwater Monitoring Report

SITE INFORMATION

Permittee: _____

Mailing Address: _____

Business Phone: _____ ext.: _____ Fax: _____

Contact Person: _____ Title: _____

Site Name: _____

Site Address: _____

Receiving Water (name, basin): _____

Stormwater Permit No. GSN _____

SAMPLING INFORMATION (Submit a separate form for each outfall)

Outfall Designation: _____ Date/Time Collected: _____

Outfall Location(s) (lat/lon or map link): _____

Person Collecting Sample: _____

Storm Magnitude (inches): _____ Storm Duration (hours): _____

Size of Disturbed Area at any time: _____

MONITORING RESULTS

Sample #	Parameter	Method	Results (units)	Laboratory (if applicable)
1	Turbidity			
2	Turbidity			
3	Turbidity			
4	Turbidity			

(provide an attachment if more than 4 samples were taken for this outfall) Avg =

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: _____

Signature: _____ Date: _____

Please send completed form to:

DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE
79 ELM STREET
HARTFORD, CT 06106-5127
ATTN: NEAL WILLIAMS

Appendix E - Notice of Termination Form

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

Notice of Termination Form

Please complete and submit this form in accordance with the general permit (DEP-PED-GP-015) in order to ensure the proper handling of your termination. Print or type unless otherwise noted.

Note: Ensure that for commercial and industrial facilities, registrations under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* (DEP-PED-GP-014) or the *General Permit for the Discharge of Stormwater from Commercial Activities* (DEP-PED-GP-004) have been filed where applicable. For questions about the applicability of these general permits, please call the Department at 860-424-3018.

Part I: Registrant Information

1. Permit number: ***GSN***
2. Fill in the name of the registrant(s) as indicated on the registration certificate:

   Registrant:
3. Site Address:

   City/Town: State: Zip Code:
4. Date all storm drainage structures were cleaned of construction sediment:

   Date of Completion of Construction:

   Date of Last Inspection (must be at least three months after final stabilization pursuant to Section 6(b)(6)(D) of the general permit):
5. Check the post-construction activities at the site (check all that apply):

   ☐ Industrial ☐ Residential ☐ Commercial ☐ Capped Landfill

   ☐ Other (describe):

Part II: Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Signature of Permittee	Date
Name of Permittee (print or type)	Title (if applicable)

Note: Please submit this Notice of Termination Form to:

STORMWATER PERMIT COORDINATOR
BUREAU OF WATER MANAGEMENT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127