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**ATTACHMENT E:
STORMWATER POLLUTION CONTROL PLAN
September 8, 2015**

**Prepared For:
VA Medical Center
950 Campbell Avenue
West Haven, Connecticut 06516**

**Registrant:
Lawrence Brunoli Inc.**

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Table of Contents

- 1. Introduction**
- 2. Site Plan and Site Description**
 - 2.1. Site Plan
 - 2.2. Site Description
- 3. Construction Sequencing**
 - 3.1. Phasing/Logistics Plan
- 4. Control Measures**
 - 4.1. Erosion And Sediment Control Plan
 - 4.2. Maintenance
 - 4.3. Dewatering
- 5. Runoff Reduction and Low Impact Development Information**
- 6. Inspections**
 - 6.1. Plan Implementation
 - 6.2. Routine Inspections
 - 6.3. Corrective Actions
- 7. Turbidity Monitoring**
 - 7.1. Monitoring Requirements
 - 7.2. Monitoring Frequency
 - 7.3. Sampling
 - 7.4. Monitoring Reports
- 8. Other Controls**
 - 8.1. Waste Disposal
 - 8.2. Washout Areas
 - 8.3. Sediment Tracking and Dust Control
 - 8.4. Chemical and Petroleum Storage
- 9. Records Keeping**
- 10. Termination Requirements**
- 11. Permittee and Contractor Certification Statements**



APPENDICES

Appendix A	General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities
Appendix B	Registration Form Part IV Site Information Maps
Appendix C	Site Drainage Maps and Grading and Drainage Plans
Appendix D	Soil Erosion and Sediment Control Plans and Details
Appendix E	Water Quality Flow calculations
Appendix F	Site Logistics Plan Specifications 312000 - Earth Moving 312100 - Earthwork
Appendix G	Geotechnical Report



1. Introduction

This Stormwater Pollution Control Plan (SWPCP) is being provided as required by Section 5(b) of the 2013 General Permit for the Discharge of Stormwater and Dewatering from Construction Activities.

The project involves the construction of an addition to the psychiatric emergency room to the VA Medical Center. The addition will be constructed within the limits of an existing parking lot. The project site is located at 950 Campbell Avenue, West Haven, Connecticut on the West Haven VA Medical Center campus. The project site is generally located on the southwest side of the VA Medical Center campus. The total site disturbance for this project is approximately 1.2 acres. For the purposes of this permit the term "project site" will refer to the 1.2 acres of disturbed area, not the whole VA Medical Center campus.

The project is expected to begin in November 2015 and be completed in March 2017. It is anticipated that construction activities will take place between 7:00am and 3:00pm Monday through Friday.

The project area is not located within the 100 year flood plain; refer to FEMA FIRM included in Appendix B.

There will not be any Mining Operations on this project.

This project is not located on federally recognized Indian lands.

This project site is not located within the Coastal Boundary.

Based on our review of the latest available maps (NDDDB December 2014) the project site is not located within inside areas designated as State and Federal Listed Species & Significant Natural Communities. Refer to Attachment C.

Stormwater from this project does not discharge to a Wild and Scenic River.

Based on review of the CT DEEP Aquifer Protection Area Maps website, the project site is not located within a mapped Aquifer Protection Area in the City of West Haven.

Stormwater is not discharged to a Publicly Owned Treatment Works.

Stormwater discharges from this project will not discharge entirely to Groundwater.

There are Certification Requirements for Registrants and Other Individuals.

Plan Review and Certification by a District is not required for this Locally Exempt Project.

Based on our review of the latest available data there will not be any discharges to Impaired Waters.

A historical pre-screening was conducted per the instructions in the general permit. The screening answered "no" to question 1 regarding proximity to surface water. Because of this answer, the permit



directed to skip question 2. The answers to questions 3 and 4 are "no." Based on the results of the pre-screening, contact with Daniel Forrest was not needed per the permit instructions to review the site, therefore, the proposed site does not have the potential for historic/archaeological resources.

The Connecticut Register of Historic Places does not list any historic places on or adjacent to the property.

Maps documenting answers to questions in Part IV of the general permit are included in Appendix B.

Relevant Information:

Owner:	XXXXXXXX
Developer:	N/A
Architect:	HDR Inc.
Engineer:	BVH Integrated Services, P.C.
Contractor(s):	XXXXXXXX
Applicant:	XXXXXXXXXX
Permittee:	XXXXXX

2. Site Description and Drainage Patterns

Introduction

The proposed project involves the construction of an addition to the psychiatric emergency room of the VA Medical center. The addition is being constructed within the limits of the exiting parking lot outside of the emergency room. There will be some modifications to the existing roadways and walkways to accommodate the new construction and provide access to and from the addition.

Pre-Development Conditions

The existing site consists of an existing parking lot and a portion of the campus loop road. There are some grass areas, but the majority of the lawn areas are 5:1 slope or greater.

The site impervious is composed mainly of asphalt from the parking lot and campus loop road with a portion of the existing emergency room roof area emptying into the site storm system. Much of this area sheet flows to the west over the asphalt in the parking lot or loop road and is collected in various catch basins on the site. The roof drains are piped to the aforementioned catch basin.

Pre Development flows from the project site eventually leave to the north through piped systems that connect into the main campus drainage system.

Post-Development Conditions

The project will include the construction of the new addition along with the modifications to the nearby campus loop road and walkways to accommodate the new addition. New drainage structures will be installed to collect stormwater and to pick up some existing storm drainage that needs to be rerouted due to the location of the proposed addition.

Post Development flows from the project site eventually leave to the north through piped systems that connect into the main campus drainage system.

The proposed development will result in no increase in impervious area on the site.



3. Construction Sequencing

3.1. Phasing/Logistics

A Site Logistics Plan has been created by the general contractor identify critical work on the site. A copy of that plan is included in Appendix F. The selected contractor will further develop and implement a phasing plan prior to construction. The phasing plan will be added to the Stormwater Pollution Control Plan. The contractor will also need to coordinate the sedimentation and erosion control measures with the plan and specifications.

Prior to any excavation on the site, temporary erosion and sedimentation controls will be installed. The contractor will be responsible for installing and maintaining all erosion control measures as well as modifications needed during all phases of the project.

4. Control Measures

4.1. Erosion and Sediment Control Plan

The sediment and erosion control for this project will address all disturbed areas. A variety of measures will be used throughout construction for soil erosion and sediment control. Multiple details are included with the plan for measures such as silt fence, stock pile stabilization and inlet protection. All measures taken and implemented shall comply with specifications and standards of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

The installation of erosion control and stabilization shall be installed and coordinated by the contractor throughout the project.

For additional information refer to the soil erosion and sediment control plans and details included in Appendix D.

4.2. Maintenance

All erosion and sediment controls will be maintained throughout the project. All components of the sediment and erosion controls will be inspected, repaired, and enhanced routinely throughout the course of this project. All damaged slopes or protective measures shall be repaired and restored as soon as possible.

All protective measures shall be inspected and maintained prior to each forecast storm event in addition to the routine inspections.

The contractor shall have additional materials on site throughout the project to repair or replace all components of the sedimentation and erosion control system at any time.

Maintenance shall include the replacement of sediment collection areas, removal of collected sediment, and restoration of all measures protecting adjacent areas from runoff during the project.

A copy of a sample erosion and sediment controls checklist is included on the drawings in Appendix D.

4.3. Dewatering

Prior to initiating any dewatering, a plan must be proposed by the contractor for review and approval by the owner's representative. All dewatering activities shall be in accordance with the approved "General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities", and specification sections 312000-Earth Moving and 312005-Sedimentation and Erosion Control. The contractor shall reroute surface water runoff away from excavated areas and not allow water to accumulate in excavations. The Contractor shall grade and ditch the site as necessary to direct surface runoff away from open excavations and will not use excavated trenches as temporary drainage ditches. The contractor will also install dewatering



as required to keep subgrades dry and convey groundwater away from excavations until dewatering is no longer required. Selected specification sections are included in Appendix G.

5. Runoff Reduction and Low Impact Development Information

Runoff Reduction

The Geotechnical report by O'Reily, Talbot & Okun Associated dated April 2012, indicates there is groundwater on site between elevations 94 and 100.5. Much of the lawn area on the proposed site is at slopes of 5:1 or steeper due to the existing grade differential of this portion of the campus. The only portion of the lawn area onsite with relatively mild slopes is between elevations 101 and 102. Based on the information outlined in the geotechnical report the existing soil conditions are not favorable for any accountable infiltration. Therefore this project is not proposing any runoff reduction practices related to infiltration. Refer to Appendix G.

This project is not increasing the amount of impervious area on site.

Stormwater Treatment

Stormwater runoff will be treated using multiple measures in a "treatment train" approach. First, catch basins with sumps will be utilized which will allow sediments to settle out of runoff. Second, on the downstream end of the piping system a hydrodynamic separator water quality structure will be installed to treat a portion of the site's stormwater runoff prior to connecting the existing campus storm drainage system. The separator is sized in accordance with the 2004 Connecticut Stormwater Quality Manual by The Connecticut Department of Environmental Protection. Water quality calculations are included in Appendix E.

Routine maintenance as detailed below should be performed on catch basins and water quality structures.

Catch Basins/Inlet Structures

- Trash and debris shall be removed from catch basin grates as often as necessary to ensure system can collect/intercept runoff.
- Structures shall be cleaned twice per year, removing all sediment from sumps and disposing of material in accordance with local regulations.
- Visual inspection of basin integrity and associated components shall be performed during cleaning and replaced or repaired as necessary.
- During dry flow periods, wash out drain pipes and clean catch basins to minimize future re-suspension.
- A maintenance log should be kept with amount of sediment removed, the date it was removed and a brief description of the condition of the structure.

Hydrodynamic Separator Water Quality Structure

- Structures shall be inspected for accumulated sediment on a quarterly basis and cleaned when the depth of sediment is in excess of one foot. Collected sediment shall be disposed of in accordance with local regulations.



- A maintenance log should be kept with amount of sediment removed, the date it was removed and a brief description of the condition of the structure.

Inspections

5.1. Plan Implementation

The erosion and sediment control components will require inspection throughout the project by a Qualified Inspector as defined by the General Permit. The requirements of the Qualified Inspector are also defined in the General Permit.

The implementation portion of the General Permit requires up to 3 inspections within the first 90 days of the project. The Qualified Inspector will be required to report on the conditions, whether they are compliant or deficient. If the project conditions are acceptable after the first, second, or third inspection the project can move forward. If the conditions are still deficient after the third inspection the Qualified Inspector is required to report the findings to the CT DEEP who will then intervene.

5.2. Routine Inspections

The permittee is required to perform routine inspections for compliance as required in the General Permit. The routine inspections shall continue until a Notice of Termination has been submitted.

The permittee shall maintain a rain gauge on-site to monitor and document rainfall amounts.

A qualified inspector (provided by the permittee) shall routinely inspect all disturbed areas that have not been stabilized, all sedimentation and erosion control measures, stockpile areas, washout areas, site entrances/exits, etc. Inspections shall occur at least once a week and within 24 hours of an event that generates a discharge.

For storm events that occur on a weekend or holiday inspections are required within 24 hours only for storms that equal or exceed 0.5 inches. If storms are less than 0.5 inches the inspection can occur immediately at the start of the next business day.

5.3. Corrective Actions

Non-engineered corrective actions shall be implemented on site within 24 hours and incorporated into a revised plan within 3 calendar days of the date of inspection. Engineered corrective actions shall be implemented on site within 7 days and incorporated into a revised plan within 10 days of the date of inspection. During the period in which any corrective actions are being developed and have not yet been fully implemented, interim measures shall be implemented to minimize the potential for the discharge of pollutants from the site.

For more specific requirements refer to Section 5 (b) (4) of the general permit.

6. Turbidity Monitoring

6.1. Monitoring Requirements

This project requires Registration and therefore the General Permit requires sampling, monitoring, and reporting. Sampling and analysis are prescribed in 40 CFR Part 136.

6.2. Monitoring Frequency

Sampling is required at least once every month. When final stabilization of an outfall is achieved turbidity monitoring is no longer required.

6.3. Sampling

All samples shall be collected from discharges resulting from a storm event that occurs at least 24 hours after any previous storm event generating a stormwater discharge. Any sample containing snow or ice melt must be identified as such and, in the absence of a storm event, is not a valid sample. Samples shall be grab samples taken at least three separate times during a storm event and shall be representative of the flow and characteristics of the discharge. Samples 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, or at the start of normal working hours if samples are manually collected and the discharge began outside of normal working hours.

6.4. Monitoring Reports

Within 30 days following the end of each month, permittees shall enter the stormwater sampling results on the Stormwater Monitoring Report (SMR) form, which is available on the CT DEEP website. If there was no discharge during the monitoring period, the permittee shall submit the form with the words "no discharge" entered in place of the monitoring results. If the permittee monitors a discharge more frequently than required by the general permit, the results shall be included in additional SMRs for that month.

Prior to one-hundred and eighty (180) days after the issuance of this permit, the Permittee may either submit monitoring data and other reports to the Department in hard copy form or electronically using NetDMR, after one-hundred and eighty (180) days after the issuance of this permit the Permittee shall begin reporting electronically using NetDMR.

For more specific requirements refer to Section 5 (c) of the general permit.

7. Other Controls

7.1. Waste Disposal

The Contractor will be responsible for the proper handling and disposal of construction waste and debris. All waste material shall be disposed of offsite according to all applicable federal, state and local laws and regulations.

7.2. Washout Areas

If on site washout of containers, vehicles, equipment, applicators etc. will take place, the Contractor shall set up designated washout areas outside any buffers and at least 50 feet from any stream or other sensitive resource. Washout areas shall be flagged and all water used for washing shall be directed into a designated container or pit. Dumping of waste wash water into storm sewers is not permitted. Waste water for washing shall be disposed of per all applicable federal, state and local laws and regulations.

7.3. Sediment Tracking and Dust Control

Stone construction entrances and haul roads shall be installed and maintained where vehicles enter or leave the site. Inlet protection shall be installed as shown on the Soil Erosion and Sediment Control plans in Appendix D.

Dust suppression shall be provided in accordance with the erosion control specifications, and 22a-174-18b of the Connecticut General Statutes for any construction activity that causes airborne particulates.

7.4. Chemical and Petroleum Storage

All chemical and petroleum product containers stored on the site (excluding those contained within vehicles and equipment) 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 chemicals stored in containers of 100 gallon capacity or more, in which case a roof is not required. Double-walled tanks satisfy this requirement.



8. Records Keeping

The permittee shall retain copies of the plan and all reports required by the general permit, and all records used to complete the registration for this general permit, for a period of 5 years from the date that construction is complete. Inspection records must be retained for 5 years after the date of inspection. A copy of this plan shall be retained at the site until construction is complete.



9. Termination Requirements

At completion of construction a Notice of Termination must be filed with the commissioner. A project shall be considered complete after all post-construction measures and drainage structures are installed, cleaned, and functioning and the site has been stabilized for at least 3 months. A site is considered stabilized when there is no active erosion or sedimentation present and no disturbed areas remain exposed for all phases and silt fence and other temporary measures are removed. Once the site has been stabilized for at least 3 months, the registrant shall have the site inspected by a qualified inspector to confirm final stabilization. The registrant shall indicate compliance with this requirement on the Notice of Termination form.

A final copy of the stormwater pollution control plan and all inspection records shall be submitted to the design engineer and registrant.



Appendix C:

Site Drainage Maps and Grading and Drainage Plans



Appendix D:

Soil Erosion and Sediment Control Plans, Narrative and Details

GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES REQUIREMENTS

INSPECTIONS

-PLAN IMPLEMENTATION:

THE EROSION AND SEDIMENT CONTROL COMPONENTS WILL REQUIRE INSPECTION THROUGHOUT THE PROJECT BY A QUALIFIED INSPECTOR

QUALIFIED INSPECTOR MEANS AN INDIVIDUAL POSSESSING EITHER:

- (1) A PROFESSIONAL LICENSE OR CERTIFICATION BY A PROFESSIONAL ORGANIZATION RECOGNIZED BY THE COMMISSIONER RELATED TO AGRONOMY, CIVIL ENGINEERING, LANDSCAPE ARCHITECTURE, SOIL SCIENCE, AND TWO YEARS OF DEMONSTRABLE AND FOCUSED EXPERIENCE IN EROSION AND SEDIMENT CONTROL PLAN READING, INSTALLATION, INSPECTION AND/OR REPORT WRITING FOR RESIDENTIAL AND COMMERCIAL CONSTRUCTION PROJECTS IN ACCORDANCE WITH THE GUIDELINES;
- (2) FIVE YEARS OF DEMONSTRABLE AND FOCUSED EXPERIENCE IN EROSION AND SEDIMENT CONTROL PLAN READING, INSTALLATION, INSPECTION AND/OR REPORT WRITING FOR RESIDENTIAL AND COMMERCIAL CONSTRUCTION PROJECTS IN ACCORDANCE WITH THE GUIDELINES
- (3) CERTIFICATION BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION (DOT).

THE IMPLEMENTATION PORTION OF THE GENERAL PERMIT REQUIRES UP TO 3 INSPECTIONS WITHIN THE FIRST 90 DAYS OF THE PROJECT. THE QUALIFIED INSPECTOR WILL BE REQUIRED TO REPORT ON THE CONDITIONS, WHETHER THEY ARE COMPLIANT OR DEFICIENT. IF THE PROJECT CONDITIONS ARE ACCEPTABLE AFTER THE FIRST, SECOND, OR THIRD INSPECTION THE PROJECT CAN MOVE FORWARD. IF THE CONDITIONS ARE STILL DEFICIENT AFTER THE THIRD INSPECTION THE QUALIFIED INSPECTOR IS REQUIRED TO REPORT THE FINDINGS TO THE CT DEEP WHO WILL THEN INTERVIEW.

-ROUTINE INSPECTIONS:

THE PERMITTEE IS REQUIRED TO PERFORM ROUTINE INSPECTIONS FOR COMPLIANCE AS REQUIRED IN THE GENERAL PERMIT. THE ROUTINE INSPECTIONS SHALL CONTINUE UNTIL A NOTICE OF TERMINATION HAS BEEN SUBMITTED.

THE PERMITTEE SHALL MAINTAIN A RAIN GAUGE ON-SITE TO MONITOR AND DOCUMENT RAINFALL AMOUNTS.

A QUALIFIED INSPECTOR (PROVIDED BY THE PERMITTEE) SHALL ROUTINELY INSPECT ALL DISTURBED AREAS THAT HAVE NOT BEEN STABILIZED, ALL SEDIMENTATION AND EROSION CONTROL MEASURES, STOCKPILE AREAS, WASHOUT AREAS, SITE ENTRANCES/EXITS, ETC. INSPECTIONS SHALL OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF AN EVENT THAT GENERATES A DISCHARGE.

FOR STORM EVENTS THAT OCCUR ON A WEEKEND OR HOLIDAY INSPECTIONS ARE REQUIRED WITHIN 24 HOURS ONLY FOR STORMS THAT EQUAL OR EXCEED 0.5 INCHES. IF STORMS ARE LESS THAN 0.5 INCHES THE INSPECTION CAN OCCUR IMMEDIATELY AT THE START OF THE NEXT BUSINESS DAY.

-CORRECTIVE ACTIONS:

NON-ENGINEERED CORRECTIVE ACTIONS SHALL BE IMPLEMENTED ON SITE WITHIN 24 HOURS AND INCORPORATED INTO A REVISED PLAN WITHIN 3 CALENDAR DAYS OF THE DATE OF INSPECTION. ENGINEERED CORRECTIVE ACTIONS SHALL BE IMPLEMENTED ON SITE WITHIN 7 DAYS AND INCORPORATED INTO A REVISED PLAN WITHIN 10 DAYS OF INSPECTION. DURING THE PERIOD IN WHICH ANY CORRECTIVE ACTIONS ARE BEING DEVELOPED AND HAVE NOT YET BEEN FULLY IMPLEMENTED, INTERIM MEASURES SHALL BE IMPLEMENTED TO MINIMIZE THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS FROM THE SITE.

FOR MORE SPECIFIC REQUIREMENTS REFER TO SECTION 5 (B) (4) OF THE GENERAL PERMIT.

MAINTENANCE

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED THROUGHOUT THE PROJECT. ALL COMPONENTS OF THE SEDIMENT AND EROSION CONTROLS WILL BE INSPECTED, REPAIRED, AND ENHANCED IF NECESSARY ROUTINELY THROUGHOUT THE COURSE OF THIS PROJECT. ALL DAMAGED SLOPES OR PROTECTIVE MEASURES SHALL BE REPAIRED AND RESTORED AS SOON AS POSSIBLE.

ALL PROTECTIVE MEASURES SHALL BE INSPECTED AND MAINTAINED PRIOR TO EACH FORECAST STORM EVENT IN ADDITION TO THE ROUTINE INSPECTIONS.

THE CONTRACTOR SHALL HAVE ADDITIONAL MATERIALS ON SITE THROUGHOUT THE PROJECT TO REPAIR OR REPLACE ALL COMPONENTS OF THE SEDIMENTATION AND EROSION CONTROL SYSTEM AT ANY TIME.

MAINTENANCE SHALL INCLUDE THE REPLACEMENT OF SEDIMENT COLLECTION AREAS, REMOVAL OF COLLECTED SEDIMENT, AND RESTORATION OF ALL MEASURES PROTECTING ADJACENT AREAS FROM RUNOFF DURING THE PROJECT.

OTHER CONTROLS

-WASTE DISPOSAL:

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER HANDLING AND DISPOSAL OF CONSTRUCTION WASTE AND DEBRIS. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFFSITE ACCORDING TO ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

-WASHOUT AREAS:

IF ON SITE WASHOUT OF CONTAINERS, VEHICLES, EQUIPMENT, APPLICATORS ETC WILL TAKE PLACE, THE CONTRACTOR SHALL SET UP DESIGNATED WASHOUT AREAS OUTSIDE ANY BUFFERS AND AT LEAST 50 FEET FROM ANY STREAM OR OTHER SENSITIVE RESOURCE. WASHOUT AREAS SHALL BE FLAGGED AND ALL WATER USED FOR WASHING SHALL BE DIRECTED INTO A DESIGNATED CONTAINER OR PIT. DUMPING OF WASTE WASH WATER INTO STORM SEWERS IS NOT PERMITTED. WASTE WATER FOR WASHING SHALL BE DISPOSED OF PER ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

-SEDIMENT TRACKING AND DUST CONTROL:

STONE CONSTRUCTION ENTRANCES AND STONE HAUL ROADS SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE PROJECT AND ON ACCESS ROADS THROUGH THE SITE. INLET PROTECTION SHALL BE INSTALLED AS SHOWN ON SEDIMENT AND EROSION CONTROL PLANS.

DUST SUPPRESSION SHALL BE PROVIDED IN ACCORDANCE WITH THE EROSION CONTROL SPECIFICATIONS, AND 22A-174-18B OF THE CONNECTICUT GENERAL STATUTES FOR ANY CONSTRUCTION ACTIVITY THAT CAUSES AIRBORNE PARTICULATES.

-CHEMICAL AND PETROLEUM STORAGE:

ALL CHEMICAL AND PETROLEUM PRODUCT CONTAINERS STORED ON THE SITE (EXCLUDING THOSE CONTAINERS WITHIN VEHICLES AND EQUIPMENT) 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 CHEMICALS STORED IN CONTAINERS OF 100 GALLON CAPACITY OR MORE, IN WHICH CASE A ROOF IS NOT REQUIRED. DOUBLE-WALLED TANKS SATISFY THIS REQUIREMENT.

TURBIDITY MONITORING

-MONITORING REQUIREMENTS:

THIS PROJECT REQUIRES REGISTRATION AND THEREFORE THE GENERAL PERMIT REQUIRES SAMPLING, MONITORING, AND REPORTING. SAMPLING AND ANALYSIS ARE PRESCRIBED IN 40 CFR PART 136.

-MONITORING FREQUENCY:

SAMPLING IS REQUIRED AT LEAST ONCE EVERY MONTH. WHEN FINAL STABILIZATION OF AN OUTFALL IS ACHIEVED TURBIDITY MONITORING IS NO LONGER REQUIRED.

-SAMPLING:

ALL SAMPLES SHALL BE COLLECTED FROM DISCHARGES RESULTING FROM A STORM EVENT THAT OCCURS AT LEAST 24 HOURS AFTER ANY PREVIOUS STORM EVENT GENERATING A STORMWATER DISCHARGE. ANY SAMPLE CONTAINING SNOW OR ICE MELT MUST BE IDENTIFIED AS SUCH AND, IN THE ABSENCE OF A STORM EVENT, IS NOT A VALID SAMPLE. SAMPLES SHALL BE GRAB SAMPLES TAKEN AT LEAST THREE SEPARATE TIMES DURING A STORM EVENT AND SHALL BE REPRESENTATIVE OF THE FLOW AND CHARACTERISTICS OF THE DISCHARGE. SAMPLES 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, OR AT THE START OF NORMAL WORKING HOURS IF SAMPLES ARE MANUALLY COLLECTED AND DISCHARGE BEGAN OUTSIDE OF NORMAL WORKING HOURS.

-MONITORING REPORTS:

WITHIN 30 DAYS FOLLOWING THE END OF EACH MONTH, PERMITTEES SHALL ENTER THE STORMWATER SAMPLING RESULTS ON THE STORMWATER MONITORING REPORT (SMR) FORM, WHICH IS AVAILABLE ON THE CT DEEP WEBSITE. IF THERE WAS NO DISCHARGE DURING THE MONITORING PERIOD, THE PERMITTEE SHALL SUBMIT THE FORM WITH THE WORDS "NO DISCHARGE" ENTERED IN PLACE OF THE MONITORING RESULTS. IF THE PERMITTEE MONITORS A DISCHARGE MORE FREQUENTLY THAN REQUIRED BY THE GENERAL PERMIT, THE RESULTS SHALL BE INCLUDED IN ADDITIONAL SMRS FOR THAT MONTH.

PRIOR TO ONE-HUNDRED AND EIGHTY (180) DAYS AFTER THE ISSUANCE OF THIS PERMIT, THE PERMITTEE MAY EITHER SUBMIT MONITORING DATA AND OTHER REPORTS TO THE DEPARTMENT IN HARD COPY FORM OR ELECTRONICALLY USING NETDMR, AFTER ONE-HUNDRED AND EIGHTY (180) DAYS AFTER THE ISSUANCE OF THIS PERMIT THE PERMITTEE SHALL BEGIN REPORTING ELECTRONICALLY USING NETDMR.

FOR MORE SPECIFIC REQUIREMENTS REFER TO SECTION 5 (C) OF THE GENERAL PERMIT.

KEEPING THE PLAN CURRENT

THE PERMITTEE IS RESPONSIBLE FOR KEEPING THEIR PLAN IN COMPLIANCE WITH THIS GENERAL PERMIT AT ALL TIMES. THIS MAY INVOLVE ANY OR ALL OF THE FOLLOWING:

THE PERMITTEE SHALL AMEND THE PLAN IF THE ACTIONS REQUIRED BY THE PLAN FAIL TO PREVENT POLLUTION OR FAIL TO OTHERWISE COMPLY WITH ANY OTHER PROVISION OF THIS GENERAL PERMIT. THE PLAN SHALL ALSO BE AMENDED WHENEVER THERE IS A CHANGE IN CONTRACTORS OR SUBCONTRACTORS AT THE SITE, OR A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE AT THE SITE WHICH HAS THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE PLAN.

THE COMMISSIONER MAY NOTIFY THE PERMITTEE AT ANY TIME THAT THE PLAN AND/OR THE SITE DO NOT MEET ONE OR MORE OF THE MINIMUM REQUIREMENTS OF THE GENERAL PERMIT. WITHIN 7 DAYS OF SUCH NOTICE, OR SUCH OTHER TIME AS THE COMMISSIONER MAY ALLOW, THE PERMITTEE SHALL MAKE THE REQUIRED CHANGES TO THE PLAN AND PERFORM ALL ACTIONS REQUIRED BY SUCH REVISED PLAN, WITHIN 15 DAYS OF SUCH NOTICE, OR SUCH OTHER TIME AS THE COMMISSIONER MAY ALLOW. THE PERMITTEE SHALL SUBMIT TO THE COMMISSIONER A WRITTEN CERTIFICATION THAT THE REQUESTED CHANGES HAVE BEEN MADE AND IMPLEMENTED AND SUCH OTHER INFORMATION AS THE COMMISSIONER REQUIRES, IN ACCORDANCE WITH THE "DUTY TO PROVIDE INFORMATION" AND "CERTIFICATION OF DOCUMENTS" SECTIONS OF THE GENERAL PERMIT.

RECORDS KEEPING AND TERMINATION

THE PERMITTEE SHALL RETAIN COPIES OF THE PLAN AND ALL REPORTS REQUIRED BY THE GENERAL PERMIT, AND ALL RECORDS USED TO COMPLETE THE REGISTRATION FOR THIS GENERAL PERMIT, FOR A PERIOD OF 5 YEARS FROM THE DATE THAT CONSTRUCTION IS COMPLETE. INSPECTION RECORDS MUST BE RETAINED FOR 5 YEARS AFTER THE DATE OF INSPECTION. A SAMPLE INSPECTION REPORT IS INCLUDED ON THE NEXT DRAWING. A COPY OF THIS PLAN SHALL BE RETAINED AT THE SITE UNTIL CONSTRUCTION IS COMPLETE.

AT COMPLETION OF CONSTRUCTION A NOTICE OF TERMINATION MUST BE FILED WITH THE COMMISSIONER. A PROJECT SHALL BE CONSIDERED COMPLETE AFTER ALL POST-CONSTRUCTION MEASURES AND DRAINAGE STRUCTURES ARE INSTALLED, CLEANED, AND FUNCTIONING AND THE SITE HAS BEEN STABILIZED FOR AT LEAST 3 MONTHS. CLEANING SHALL INCLUDE REMOVAL OF TRASH, DEBRIS, SEDIMENT ETC FROM CATCH BASINS, DRAINS, MANHOLES, DETENTION SYSTEMS, HYDRODYNAMIC SEPARATORS, SWALES AND PIPING.

A SITE IS CONSIDERED STABILIZED WHEN THERE IS NO ACTIVE EROSION OR SEDIMENTATION PRESENT AND NO DISTURBED AREAS REMAIN EXPOSED FOR ALL PHASES AND SILT FENCE AND OTHER TEMPORARY MEASURES ARE REMOVED.

ONCE THE SITE HAS BEEN STABILIZED FOR AT LEAST 3 MONTHS, THE REGISTRANT SHALL HAVE THE SITE INSPECTED BY A QUALIFIED INSPECTOR TO CONFIRM FINAL STABILIZATION. THE REGISTRANT SHALL INDICATE COMPLIANCE WITH THIS REQUIREMENT ON THE NOTICE OF TERMINATION FORM.

A FINAL COPY OF THE STORMWATER POLLUTION CONTROL PLAN AND ALL INSPECTION RECORDS SHALL BE SUBMITTED TO THE DESIGN ENGINEER AND REGISTRANT.

SITE EROSION CONTROL CHECKLIST					
PROJECT:	BY:				
LOCATION:	DATE:				
AREA INSPECTED:					
	OVERALL CONDITION	NEED REPAIR	G=GOOD, F=FAIR, P=POOR, Y=YES, N=NO COMMENTS:		
DEWATERING INFILTRATION BASINS	G	F	P	Y	N
SILT FENCE	G	F	P	Y	N
CONTINUOUS BERM	G	F	P	Y	N
DRAIN/INLET PROTECTION	G	F	P	Y	N
TREE PROTECTION	G	F	P	Y	N
TOPSOILING	G	F	P	Y	N
LAND GRADING	G	F	P	Y	N
SURFACE ROUGHENING	G	F	P	Y	N
DUST CONTROL	G	F	P	Y	N
TEMPORARY SEEDING	G	F	P	Y	N
PERMANENT SEEDING	G	F	P	Y	N
SODDING	G	F	P	Y	N
LANDSCAPE PLANING	G	F	P	Y	N
TEMPORARY SOIL PROTECTION	G	F	P	Y	N
MULCH FOR SEED	G	F	P	Y	N
LANDSCAPE MULCH	G	F	P	Y	N
TEMPORARY EROSION CONTROL BLANKET	G	F	P	Y	N
PERMANENT TURF REINFORCEMENT MAT	G	F	P	Y	N
STONE SLOPE PROTECTION	G	F	P	Y	N
RETAINING WALLS	G	F	P	Y	N
RIP RAP	G	F	P	Y	N
PERMANENT SLOPE DRAIN	G	F	P	Y	N
CHANNEL GRADE STABILIZATION STRUCTURE	G	F	P	Y	N
TEMPORARY LINED CHUTE	G	F	P	Y	N
TEMPORARY PIPE SLOPE DRAIN	G	F	P	Y	N
VEGETATED WATERWAY	G	F	P	Y	N
TEMPORARY LINED CHANNEL	G	F	P	Y	N
PERMANENT LINED WATERWAY	G	F	P	Y	N
TEMPORARY FILL BERM	G	F	P	Y	N
WATER BAR	G	F	P	Y	N
TEMPORARY DIVERSION	G	F	P	Y	N

GENERAL GUIDELINES AND PRINCIPALS

1. THE CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES OF ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN.
2. THE OBJECTIVE IS TO MINIMIZE THE AMOUNT OF SEDIMENT-LADEN RUNOFF THROUGH IMPLEMENTATION OF A VARIETY OF CONVENTIONAL SOIL SEDIMENTATION AND EROSION CONTROL PRACTICES RECOMMENDED BY THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL. PROCEDURES AND APPLICATION TECHNIQUES SHALL CONFORM TO THE ABOVE MENTIONED GUIDELINES. THE DETAILS SHOWN ON THE CONTRACT DRAWINGS AND THE CT DEEP GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES (GENERAL PERMIT).
3. EXISTING TREES TO REMAIN MUST BE PROTECTED. DO NOT PARK OR STORE MATERIALS UNDER TREES. DO NOT DIRECT RUNOFF OR ALLOW SILT TO EXTEND UNDER TREES. AVOID DAMAGE TO TRUNKS AND BRANCHES. CONTRACTOR MUST CLEAN UP EDGE BEFORE LEAVING SITE.
4. STAGE CONSTRUCTION ACTIVITIES SUCH THAT ONLY THOSE AREAS OF THE SITE SCHEDULED FOR IMMEDIATE DEVELOPMENT ARE DISTURBED AND ACTIVITIES SCHEDULED FOR LATER DEVELOPMENT ARE NOT STARTED PREMATURELY. RE-STABILIZATION SHALL BE SCHEDULED IMMEDIATELY AFTER DISTURBANCE.
5. EARTH DISTURBANCE SHOULD BE TIMED TO MINIMIZE POTENTIAL IMPACTS CAUSED BY SEASONAL WEATHER CHANGES AND SCHEDULED FOR PERIODS WHEN SOIL SATURATION IS LOW AND SOIL LOSS HAZARD IS AT MINIMUM RISK.
6. SUSPEND EARTHWORK CONSTRUCTION ACTIVITIES FOR MAJOR STORM EVENTS AND IMPLEMENT ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES, AS NECESSARY.
7. THERE WILL BE NO LARGE CUTS OR FILLS LEFT AS "RAW" AREAS. SUB-GRADE WILL BE ACHIEVED AS SOON AS POSSIBLE AND AN ESTABLISHED PROCEDURE OF TEMPORARY SEEDING AND/OR COVER WITH EROSION PROTECTION (EROSION CONTROL BLANKETS FOR SLOPES AND MULCH OR EROSION CONTROL BLANKETS FOR FLAT AREAS); WILL BE FOLLOWED TO INSURE MINIMAL SOIL LOSS.
8. ALL SURFACES DESIGNATED FOR PAVING WILL HAVE THE SUB-BASE, BASE AND BINDER INSTALLED AS SOON AS POSSIBLE. WHERE FEASIBLE THE STORM DRAINAGE SYSTEM WILL BE INSTALLED TO PROVIDE CONTROL OF SURFACE RUNOFF.
9. PROVIDE SILT FENCE BARRIER AROUND STOCKPILES
10. EROSION CHECK DAMS CONSISTING OF STONE, SILT FENCE OR HAYBALES SHALL BE INSTALLED TO PREVENT SILTATION DOWNGRADE OF CONSTRUCTION.
11. SILT FENCE FABRIC BARRIERS SHALL BE INSTALLED AT ALL OUTLETS AND ALONG TOE OF CRITICAL SLOPES.
12. FLARED END DISCHARGE AREAS SHALL BE PROTECTED WITH RIP RAP PADS. ENERGY DISSIPATORS WILL BE PROVIDED AS NECESSARY.
13. INLET STRUCTURES (EXISTING AND PROPOSED) SHALL BE PROTECTED WITH FILTER FABRIC BARRIERS INSTALLED BETWEEN GRATE AND FRAME AS WELL AS SURROUNDING STRUCTURE IN SOFTSCAPE AREAS.
14. CREATE TEMPORARY SEDIMENT TRAPS AS NECESSARY WITHIN WORK AREA AND SIZED AT 3,600 CF/ACRE CONTRIBUTING.
15. INSTALL RIP RAP OR GRASS LINED SWALES TO DIRECT DRAINAGE TO TEMPORARY SEDIMENT TRAPS.
16. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD IS NECESSARY OR REQUIRED.
17. WHEN RIPRAP IS USED, PROVIDE FABRIC BETWEEN SOIL AND RIPRAP
18. IN AREAS OF GENERAL FILLS, PITCH SLOPE AWAY FROM EDGE OF FILL SLOPE DURING CONSTRUCTION EACH NIGHT. GRADE LAND TOWARD RIPRAP SWALES AT END OF EACH NIGHT.
19. PROTECT STREET SIDE OF CONSTRUCTION ENTRANCES AT END OF THE WORK DAY BY SILT FENCE FABRIC, HAYBALES OR STONE BERMS.
20. AS TOPOGRAPHY CHANGES, DIRECT STORM WATER RUNOFF TO TEMPORARY SEDIMENT TRAPS.
21. PITCH ALL WATER AT END OF EACH WORK DAY INTO TEMPORARY SEDIMENT TRAPS. VEHICLES SHALL BE WASHED OFF IN AREAS THAT DO NOT RESULT IN SEDIMENT OR OTHER MATERIALS LEAVING THE SITE. NO VEHICLES SHALL BE WASHED UNDER TREES, ON ROADS, OR IN SENSITIVE AREAS OF THE SITE.
22. MAINTAIN CONSTRUCTION ENTRANCES AND HAUL ROADS REGULARLY. REMOVE AND REPLACE STONE SURFACE AS NECESSARY.
23. SEDIMENT REMOVAL FROM CONTROL MEASURES SHALL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN.
24. PROVIDE STREET SWEEPING ON A REGULAR BASIS.
25. ON-SITE TRUCKS SHALL HAVE COVERS TO MINIMIZE DUST.

	OVERALL CONDITION	NEED REPAIR	G=GOOD, F=FAIR, P=POOR, Y=YES, N=NO COMMENTS:		
PERMANENT DIVERSION	G	F	P	Y	N
SUBSURFACE DRAIN	G	F	P	Y	N
DETENTION BASIN	G	F	P	Y	N
LEVEL SPREADER	G	F	P	Y	N
OUTLET PROTECTION	G	F	P	Y	N
STONE CHECK DAM	G	F	P	Y	N
TEMPORARY SEDIMENT BASIN	G	F	P	Y	N
TEMPORARY SEDIMENT TRAP	G	F	P	Y	N
HAY BALE BARRIER	G	F	P	Y	N
GEOTEXTILE SILT FENCE	G	F	P	Y	N
VEGETATIVE FILTER	G	F	P	Y	N
CONSTRUCTION ENTRANCE	G	F	P	Y	N
PUMP INTAKE AND OUTLET PROTECTION	G	F	P	Y	N
PUMPING SETTLING BASIN	G	F	P	Y	N
PORTABLE SEDIMENT TANK	G	F	P	Y	N
DEWATERING OF EARTH MATERIALS	G	F	P	Y	N
ARE CONTROLLED RELEASES OF MUD OR MUDDY WATER FROM THE SITE EVIDENT?				YES	NO
IF YES, WHAT CORRECTIVE ACTIONS ARE RECOMMENDED?					
ARE DEPOSITS OF SEDIMENT EVIDENT ON ADJACENT OFF-SITE STREETS OR PROPERTIES?				YES	NO
IF YES, WHAT CORRECTIVE ACTIONS ARE RECOMMENDED?					
	OVERALL CONDITION	NEED REPAIR	G=GOOD, F=FAIR, P=POOR, Y=YES, N=NO COMMENTS:		
STAGING REMOVAL OF VEGETATION	G	F	P	Y	N
NEW VEGETATION ESTABLISHMENT	G	F	P	Y	N
MULCH AND/OR BFM PROTECTION	G	F	P	Y	N
SOIL BINDER PROTECTION	G	F	P	Y	N
HILLSIDE RECP'S	G	F	P	Y	N
DRAINAGE CHANNEL ECB'S	G	F	P	Y	N
RIP RAP	G	F	P	Y	N
ADDITIONAL COMMENTS:					
INSPECTION COMPLETED ON:					
I CERTIFY THIS INSPECTION WAS COMPLETED BY MYSELF OR UNDER MY SUPERVISION:					
DATE:					

EROSION AND SEDIMENTATION CONTROL CONSTRUCTION STAGES:

STAGE I:

- A. IMMEDIATELY AFTER MOBILIZATION BUT PRIOR TO INITIATING ANY SOIL-DISTURBING ACTIVITIES THE CONTRACTOR SHALL MAKE A GENERAL SITE ASSESSMENT TO ESTABLISH CONSTRUCTION LIMITS, DESIGNATE CONSTRUCTION ENTRANCES AND MAIN HAUL ROADS WITHIN THE SITE AND INSTALL ALL SPECIFIED SOIL EROSION AND SEDIMENT CONTROL MEASURES.

STAGE II:

- A. CLEAR SITE AS REQUIRED ACCOMMODATING THE CONSTRUCTION. LEGALLY CUT AND CHIP BRUSH AND REMOVE STUMPS FROM THE SITE TO BE DISPOSED OF IN A PROPER MANNER. THE OWNER'S PERMISSION IS REQUIRED BEFORE CLEARING BEYOND TREE LINE OR WOODED AREA DEFINED ON THE PLANS.
- B. ADDRESS ALL STOCKPILE MATERIAL AS INDICATED IN THE EROSION CONTROL SPECIFICATION.
- C. EXCAVATE SITE TO SUB GRADE AND INSTALL ALL REQUIRED MEASURES TO STABILIZE THE SITE AND PREVENT SOIL EROSION AND CONTROL SOIL SEDIMENTATION. NO RAW CUTS OR FILL SHALL BE LEFT EXPOSED TO THE ELEMENTS. IF NO WORK IS ANTICIPATED WITHIN A TWO (2) WEEK PERIOD, OR IF SIGNIFICANT RAINFALL IS ANTICIPATED, COVER EXPOSED AREAS AS INDICATED IN THE APPLICATION/GENERAL PROCEDURE.

STAGE III:

- A. SURVEY, STAKE, AND PLACE NEW IMPROVEMENTS IDENTIFIED WITHIN THE WORK AREA AND AS SHOWN ON THE CONTRACT DRAWINGS.
- B. MAINTAIN, CLEAN AND REPAIR EROSION CONTROL AND SEDIMENT PROTECTION MEASURES AS RECOMMENDED BY THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

STAGE IV:

- A. RESPREAD TOPSOIL TO DESIGNATED AREAS.
- B. INSTALL NEW PLANTING, BEGIN WITH THE SITE PERIMETER PLANTING IN BUFFER YARDS TO ACHIEVE EARLY STABILIZATION, AND THEN PLANT SITE INTERIOR AREAS AND FINALLY PLACE SEED.
- C. CLEAN UP SITE BUT LEAVE REMAINING EROSION CONTROL AND SEDIMENT PROTECTION MEASURES IN PLACE UNTIL SITE IS STABILIZED AS APPROVED BY THE ENGINEER.
- D. MAINTAIN, CLEAN AND REPAIR EROSION CONTROL AND SEDIMENT PROTECTION MEASURES AS RECOMMENDED BY THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

RECOMMENDED POST-CONSTRUCTION OWNER MAINTENANCE

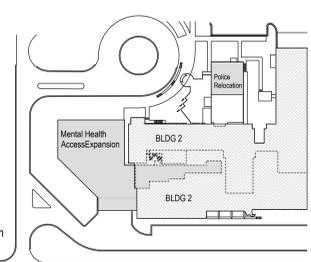
THE RECOMMENDATIONS BELOW ARE FOR THE OWNER'S REFERENCE AND USE IN CREATING A LONG TERM MAINTENANCE PLAN FOR THE STORMWATER SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE INITIAL CLEANING AS NOTED IN THE RECORDS KEEPING AND TERMINATION SECTION OF THE GENERAL PERMIT REQUIREMENTS ON THIS SHEET. LONG TERM CLEANING IS THE RESPONSIBILITY OF THE OWNER.

CATCH BASINS/INLET STRUCTURES:

- TRASH AND DEBRIS SHALL BE REMOVED FROM CATCH BASIN GRATES AS OFTEN AS NECESSARY TO ENSURE SYSTEM CAN COLLECT/INTERCEPT RUNOFF.
- STRUCTURES SHALL BE CLEANED TWICE PER YEAR, REMOVING ALL SEDIMENT FROM PUMPS AND DISPOSING OF MATERIAL IN ACCORDANCE WITH LOCAL REGULATIONS.
- VISUAL INSPECTION OF BASIN INTEGRITY AND ASSOCIATED COMPONENTS SHALL BE PERFORMED DURING CLEANING AND REPLACED OR REPAIRED AS NECESSARY.
- DURING DRY FLOW PERIODS, WASH OUT DRAIN PIPES AND CLEAN CATCH BASINS TO MINIMIZE FUTURE RE-SUSPENSION.
- A MAINTENANCE LOG SHOULD BE KEPT WITH AMOUNT OF SEDIMENT REMOVED, THE DATE IT WAS REMOVED AND A BRIEF DESCRIPTION OF THE CONDITION OF THE STRUCTURE.

HYDRODYNAMIC SEPARATOR WATER QUALITY STRUCTURE:

- STRUCTURES SHALL BE INSPECTED FOR ACCUMULATED SEDIMENT ON A QUARTERLY BASIS AND CLEANED WHEN THE DEPTH OF SEDIMENT IS IN EXCESS OF ONE FOOT. COLLECTED SEDIMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS.
- A MAINTENANCE LOG SHOULD BE KEPT WITH AMOUNT OF SEDIMENT REMOVED, THE DATE IT WAS REMOVED AND A BRIEF DESCRIPTION OF THE CONDITION OF THE STRUCTURE.



KEY PLAN FULLY SPRINKLERED

100% Bid (Final) Documents Submission

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Appendix E:
Water Quality Flow Calculation