

Massachusetts Department of Transportation Highway Division Standard Operating Procedures		S.O.P. No. HMD-02-02-2-000 Page: 1 of 9	
Subject: Connection or Discharge to any MassDOT Drainage System			Distribution:
Effective: 03/19/2012	Issued: 03/19/2012	Supersedes: Section 5 of S.O.P. No. HMD-75-03-1-000 Effective: Nov. 30, 1971	Authorized: Frank DePaola (signature on original)

PURPOSE:

To establish Standard Operating Procedures (SOP) for submission requirements, review process and approval of applications for Non-vehicular Access Permits for the purpose of connection or discharge to any MassDOT drainage system, in cases where it can be shown that no practicable alternative exists, and to ensure that the process will be predictable, timely, and applied in a uniform manner throughout MassDOT.

MassDOT is required to comply with state and federal statutes and regulations relating to storm water discharges including the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit. Consequently, MassDOT is precluded from accepting or continuing to accept drainage contributions to the MassDOT MS4, which cause or could cause violation of the permit conditions. Therefore, MassDOT must prohibit illicit and unauthorized connections and discharges to the MassDOT MS4 and require the removal of all such existing illicit and unauthorized connections, regardless of the duration that the connection has been in place.

AUTHORITY:

MassDOT is granted authority to issue state highway access permits by M.G.L. Chapter 81, Section 21, and its implementing regulations found at 720 CMR 13.00. These regulations provide the basis for the Standard Operating Procedures for Review of State Highway Access Permits (S.O.P. No. HMD-60-02-3-000). These regulations also provide the basis for this SOP, which provides guidance for the connection or discharge to any MassDOT drainage system through the Non-vehicular Access Permit process.

RESPONSIBILITY:

The District Highway Director (DHD) or designee, within whose District boundaries access is sought, in most cases, is directly responsible for issuance and/or denial of State Highway Permit Applications and, if requested by a prospective applicant, a determination of need for a Non-vehicular Access Permit.

NEED FOR A NON-VEHICULAR ACCESS PERMIT:

As defined in 720 CMR 13.00 and MassDOT's S.O.P. No. HMD-60-02-3-000, any connection to or discharge to any MassDOT drainage system (in cases where it can be shown that no practicable alternative exists), requires the issuance of a Non-vehicular Access Permit.

DEFINITIONS:

DRAINAGE CONNECTION: The permanent or temporary (including construction) connection of surface water flow via sheet flow, drainage swale, or pipe to the MassDOT drainage system.

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LAND USES WITH HIGHER POTENTIAL POLLUTANT LOADS: As defined by Massachusetts Stormwater Policy, land uses that generate higher concentrations of pollutants than found in typical runoff, based on existing data (e.g. auto salvage yards, auto fueling facilities, high intensity commercial parking lots, etc.).

ILLCIT DISCHARGE: Direct or indirect discharges to the MassDOT drainage system that are not composed entirely of storm water, except as exempted by this SOP. Illicit discharges include, without limitation, sewage, process wastewater, or wash water and any connections from indoor drains, sinks, or toilets, regardless of whether said connection was previously allowed, permitted, or approved before the effective date of this SOP.

ILLCIT DISCHARGE COMPLIANCE STATEMENT: Signed and completed statement as provided in Appendix "A" of this SOP.

MASSDEP: The Massachusetts Department of Environmental Protection.

MASSDOT DRAINAGE SYSTEM: The system of conveyances designed or used for collecting or conveying storm water, including any road with a drainage system, street gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural, man-made or altered drainage channel, reservoir, and other drainage structures. This includes all drainage systems or conveyances that are within MassDOT's State Highway Layout, any MassDOT easements, or any systems that are operated and maintained by the MassDOT Highway Division.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER DISCHARGE PERMIT: A permit jointly issued by the United States Environmental Protection Agency and MassDEP that authorizes the discharge of pollutants to waters of the United States.

NON-STORM WATER DISCHARGE: Discharge to the MassDOT drainage system not composed entirely of storm water.

OWNER/APPLICANT: The person, as defined in 720 CMR 13.02, owning the land from which access is being sought to a State Highway Layout, as that term is defined in 720 CMR 31.02.

PRACTICABLE ALTERNATIVE: Generally, an alternative is practicable if it can be implemented taking into consideration land area requirements, soils, applicable regulations and other site constraints. The Owner/Applicant shall have made all reasonable efforts to legally dispose of the discharge to a location, receiving water, or drainage system not included in the State Highway Layout. Evaluation of practicable alternatives for project designs, site layouts,

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existing technology and BMPs are examples of reasonable efforts. However, off-site alternatives also may be practicable. For example, pursuing an easement for locating storm water controls on an adjacent lot where adequate capacity exists, or can be provided, may be a practicable alternative. The scope and effort to be undertaken to meet the Non-vehicular Access Permit requirements should reflect the scale and impacts of the proposed drainage connection and the classification and sensitivity of the receiving waterbody. Whether an alternative is or is not practicable is a decision made by MassDOT.

UNAUTHORIZED CONNECTION OR DISCHARGE: Connection or discharge to the MassDOT MS4 drainage system that does not have a valid Access Permit for a drainage connection or discharge.

APPLICATION OF PROCEDURES:

All permit applications for a stormwater drainage connection or the permitting of an existing drainage connection, to the MassDOT drainage system, shall be submitted in writing to the District Highway Director and shall comply with the requirements of 720 CMR 13.00, and MassDOT's Standard Operating Procedures for Review of State Highway Access Permits (S.O.P. No. HMD-60-02-3-000). As provided in 720 CMR 13.01(2)(b), in cases where a particular Project or activity may seek both vehicular and non-vehicular access, separate and distinct permit applications should be filed.

In order to show that no practicable alternative exists, an Owner/Applicant must show that all reasonable solutions have been evaluated including but not limited to: (1) all possible infiltration methods; (2) the use of low impact development (LID) techniques; (3) the minimization of impervious surface areas; (4) the use of applicable stormwater best management practices (BMPs); (5) the connection to municipal or privately owned off-site drainage systems; and (6) the acquisition of additional property or land easements.

It is strongly recommended that an Owner/Applicant, considering submitting an application for a Non-Vehicular Access Permit for the purpose of connection to or discharge to any MassDOT drainage system, contact the MassDOT District Permits Engineer to discuss the project and the process. It is also recommended that an Owner/Applicant not file any plans or permit applications for approval with any local boards or commissions for the approval of projects that require a connection or discharge to MassDOT's drainage system until the Owner/Applicant has received written notification from MassDOT that, based on the information presented, there does not seem to be a practicable alternative to provide for on-site stormwater treatment and that MassDOT will continue to review the required information. Site plan approval by a local board or commission does not mean that an Owner/Applicant has met MassDOT's requirement that no practicable alternative exists.

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If MassDOT determines that no practicable alternative exists other than a connection or discharge to the MassDOT drainage system, the Owner/Applicant shall be required to infiltrate or contain as much runoff as the site conditions will allow. MassDOT will only accept the volume of runoff that cannot be infiltrated on-site.

MassDOT will not under any circumstances allow the connection or discharge of drainage from a non-MassDOT facility or property for the following types of connections:

- Any requests that do not fully comply with MassDOT's NPDES MS4 Permit and other environmental permits or state and federal regulations;
- Any requests that do not fully comply with MassDEP's Stormwater Management Standards;
- Any request for the connection of sump pump discharges;
- Any request for the connection of building floor drains;
- Any request for the connection of corrective or after-the-fact drainage connections to ameliorate problems (e.g., flooding) created by a lack of land use planning and/or site design. (An exception could be considered if the requested connection does not include any Illicit Discharge and mitigates or corrects an existing (i.e., prior to development) flooding or drainage issue within the State Highway Layout.);
- Any maintenance or continued use of an illicit connection or discharge to the MassDOT drainage system, regardless of whether the connection was permissible under applicable law, regulation or custom at the time of connection. When MassDOT staff is made aware of an illicit connection or discharge they will notify and work with MassDOT's Legal Department and MassDOT's Environmental Section to take the necessary steps to disconnect the illicit connection;
- Any maintenance or continued use of an unauthorized connection or discharge to the MassDOT drainage system, regardless of whether the connection was permissible under applicable law, regulation or custom at the time of connection. When MassDOT staff is made aware of an unauthorized connection or discharge they will immediately notify the property owner and make him/her aware of the necessary steps to correct the situation;
- Any discharges from dewatering activities or non-stormwater discharges including, discharges from private construction sites, and MassDOT construction and maintenance projects, unless the discharge is allowed under MassDOT's MS4 permit, or the applicant is in compliance with the conditions of a NPDES permit and the discharge is monitored, recorded, and reported to MassDOT by a Licensed Site Professional (LSP) for every 1,000 gallons of discharge or at least on a weekly basis; and
- Any request that in the opinion of MassDOT may have an adverse impact on the MassDOT drainage system in terms of pipe or conveyance capacity, the ability of existing MassDOT Best Management Practices (BMPs) to effectively treat the discharge/conveyance, or will require additional maintenance of MassDOT's drainage

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system. (An exception may be drainage system upgrades that will mitigate the impacts to the pipe system, and or the existing BMPs, or reduce MassDOT's required maintenance responsibilities.)

MassDOT may either require alteration or removal of an existing connection if it is deemed non-compliant with the MassDOT's NPDES MS4 permit or any of the prohibited connection types listed above.

The owner of land that connects to or discharges flow into MassDOT's drainage system may be liable to downstream abutter(s) that receive additional discharge water from the MassDOT drainage system as a result of any Non-vehicular Access Permit that may be issued.

SUBMISSION REQUIREMENTS:

Residential Access Permits for 5 Units or Less

The Owner/Applicant shall submit a sketch or site plan showing the drainage area of the site and all existing or proposed structures and driveways to MassDOT. The sketch/plan should show the proposed location of the requested connection or discharge to the MassDOT drainage system. The Owner/Applicant shall also submit a written description justifying the need for the connection, including why the storm water cannot be treated and or contained on-site and the steps or analysis the Owner/Applicant has performed to avoid requesting a connection. Additional information may need to be submitted based on the type of connection and the size of the drainage area.

Residential Access Permits, Greater than 5 Units, and Non-Residential Access Permits

The Owner/Applicant shall make the first submission (ordinarily the 25% Design) to MassDOT for review with a full set of plans and the following additional information:

Any design elements that are proposed in the State Highway Layout need to meet the requirements of MassDOT's *Project Development and Design Guide*, and the following:

- A report detailing the justification that no practicable alternative exists for on-site treatment, infiltration, or discharge to an adjacent parcel of land, private or municipal drainage system, or receiving water.
- A draft Stormwater Report that documents compliance with MassDEP's Stormwater Management Standards. The report shall be prepared and bear the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts.
- A MassDEP Stormwater Report Checklist. The checklist shall be prepared and bear the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts.
- A draft copy of each of the required local, state and federal environmental permit

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applications, including but not necessarily limited to, a NPDES Stormwater Permit, a Notice of Intent (NOI) or Request for Determination of Applicability (RDA) under the Wetlands Protection Act, a Chapter 91 Permit, a 404 Army Corps Permit, and a 401 Water Quality Certification.

- A draft copy of the site specific Stormwater Management Plan (SWMP).
- MassDOT's Early Environmental Coordination Checklist (EECC).
- MassDOT's Water Quality Data Form for the receiving water at the discharge/outlet location of the MassDOT drainage system(s) that the Owner/Applicant proposes to connect or discharge to.
- A Locus Map indicating:
 - The location of the site and the contributing watershed.
 - The location of the MassDOT drainage system, from the site location to the discharge/outlet location.
 - The MassDOT discharge/outlet location and the receiving water and watershed if different than the site location.
 - Habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species within five hundred (500) feet of any construction activity and the MassDOT discharge/outlet location.
 - Properties listed or eligible to be listed on the National Register of Historic Places that are within five hundred (500) feet of any construction activity and the MassDOT discharge/outlet location. It may be necessary to submit a list of properties with address to better define their locations.
- A hydraulic analysis of the existing and proposed capacity of the MassDOT drainage system into which the Owner/Applicant proposes to connect. The analysis shall include identification of all current connections to the system from MassDOT and non-MassDOT uses. The evaluation shall be for the entire stormwater drainage system that the Owner/Applicant proposes connection to and not just the area downstream of the proposed connection.
- If necessary, proposed improvements to the existing MassDOT drainage system to support, at a minimum, the existing and proposed additional drainage flow and conveyance, including but not limited to cleaning and or repairs to the existing system, from the point of connection to the system outlet. Video inspection, by the Owner/Applicant, may also be required to evaluate the condition of the existing system.
- Engineering Plans bearing the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts, including plans and details describing the proposed changes to the site and the MassDOT drainage system. The plans shall meet the requirements of MassDOT's *Project Development and Design Guide* and the following:
 - Complete plan and profile of the MassDOT drainage system that the

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Owner/Applicant proposes to connect into from the point of connection to the system outlet, including:

- ✓ Pipe sizes and materials;
 - ✓ Invert elevations;
 - ✓ Hydraulic coefficients;
 - ✓ Flow capacities;
 - ✓ Flows and hydraulic grade lines based on the appropriate storm frequency as stated in the most current version of MassDOT's *Project Development and Design Guide*; and
 - ✓ Existing drainage easements.
- Complete plan and profile of the Owner/Applicant's existing and proposed drainage systems including:
 - ✓ Pipe sizes and materials;
 - ✓ Invert elevations;
 - ✓ Hydraulic coefficients;
 - ✓ Flow capacities; and
 - ✓ Existing flows and discharge velocities based on the appropriate storm frequency as stated in the most current version of MassDOT's *Project Development and Design Guide*.
- Complete set of the Owner/Applicant's site plans including:
 - ✓ Existing grades at contour intervals of 2-feet (maximum) contours, supplemented by spot grades sufficient to characterize drainage patterns of the entire site.
 - ✓ Location of wastewater and groundwater conveyance systems and all other underground and overhead utilities.
 - ✓ The location of all existing and proposed buildings and structures, as well as their use.
 - ✓ The location and dimensions of all existing property easements and their designated use.
 - ✓ Watercourses and water bodies, wetland resource areas, floodplain information, and all relevant buffer zones.
- Additional submittal requirements for Land Uses with Higher Potential Pollutant Loads (LUHPPL):
 - A copy draft source control and pollution prevention plan.
 - Indicate the location and sizing method for all proposed BMPs that are required for LUHPPL.

If the Owner/Applicant receives written notification from MassDOT that, based on the information provided by the Owner/Applicant, there does not seem to be a practicable alternative to provide for on-site stormwater treatment and that MassDOT will continue to review the

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required information, the second submission (ordinarily the 75%/100% Design) may be submitted to the District Highway Director for review. The second submission shall include the following project design documents:

- 75%/100% Design Plans, the previous requirements for the 25% Design Plans as listed above, and revisions or additional information that address the 25% comments. Any design elements that are proposed in the State Highway Layout need to meet the requirements of MassDOT's *Project Development and Design Guide*.
- Written responses to the 25% design comments.
- Specifications and Cost Estimate for all work that may occur within the State Highway Layout.
- The revised Stormwater Report that documents compliance with MassDEP's Stormwater Management Standards. The report shall be prepared and bear the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts.
- A MassDEP Stormwater Report Checklist. The checklist shall be prepared and bear the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts.
- A copy of the submitted or approved documents for each of the required local, state and federal environmental permits or applications.
- A revised copy of the site specific Stormwater Management Plan (SWMP).

Upon approval of the 75%/100% Design Plans by the District Highway Director or designee, the third submission (ordinarily the PS&E submission) may be submitted to the District Highway Director for review. The third submission shall include the following project design documents:

- PS&E Design Plans, the previous requirements for the 25% Design Plans as listed above, and revisions or additional information that address the 75%/100% comments. Any design elements that are proposed in the State Highway Layout need to meet the requirements of MassDOT's *Project Development and Design Guide*.
- Written responses to the 75%/100% design comments.
- Final Specifications and Cost Estimate for all work that may occur within the State Highway Layout.
- The final Stormwater Report that documents compliance with MassDEP's Stormwater Management Standards. The report shall be prepared by and bear the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts.
- A MassDEP Stormwater Report Checklist. The checklist shall be prepared by and bear the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts.
- A copy of the approved documents for each of the required local, state and federal environmental permits or applications.
- A final copy of the site specific Stormwater Management Plan (SWMP).

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- Signed and completed Illicit Discharge Compliance Statement Form Appendix “A”.
- Maintenance and Cleaning Record Schedule.

Upon approval of the PS&E submission and all required documents, the Non-vehicular Access Permit for the connection or discharge to a MassDOT drainage system may be issued. Upon issuance of the Permit, and prior to the start of work, the Applicant/Owner is required to record the Non-vehicular Access Permit and plans, the Illicit Discharge Compliance Statement Form, and a Maintenance and Cleaning Record Schedule at the appropriate Registry of Deeds. The Permit will not be effective until the required documents are recorded and a notice of recording is submitted to the District Highway Director. Prior to the start of work, a Storm Water Pollution Prevention Plan (SWPPP), if required based on the thresholds set by the Environmental Protection Agency (EPA), must be submitted to the District Highway Director for review.

Additional Information

The Owner/Applicant shall submit any additional information requested by MassDOT as part of reviewing the permit application.

SOP Appendix:

Illicit Discharge Compliance Statement Appendix “A”
Drainage Connection Policy, [P-06-002](#)

Appendix A
MassDOT Highway Division
Illicit Discharge Compliance Statement

(MassDOT Permit Number)

I, as Owner/Applicant, certify, that; (1) the property located at:

(Street name, route number and station location of proposed stormwater drainage connection)

in, _____, Massachusetts;
(City/Town)

(2) the property does not have any illicit* or unauthorized drainage connections or discharges including, but not limited to, non-stormwater discharges occurring due to spills, dumping and improper connections to the MassDOT drainage system from residential, industrial, commercial or institutional establishments.

(3) that the attached plan/map clearly identifies the following:

- The location of all on-site systems for conveying wastewater, stormwater and/or groundwater.
- The location of any measures taken to prevent the entry of illicit discharges into the MassDOT storm drain system.
- That there are no connections between the wastewater management system and the MassDOT storm drain system; and

(4) that the following actions have been taken to identify and remove illicit discharges for existing and redevelopment projects:

- Visual screening/inspection
- Dye or smoke testing
- Water quality sampling
- Removal of illicit discharges (List type and location): _____
- Other method of illicit detection (List method): _____

Property Owner:

Name: _____

Address: _____

City/Town: _____

Signature: _____

Registered Professional Engineer:



*An illicit discharge includes direct or indirect discharges to the MassDOT storm drain system that are not composed entirely of storm water, except as exempted in MassDOT's Drainage and Connection Policy, P-06-002, dated, 6/26/2006. Illicit discharges include, without limitation, sewage, process wastewater, or wash water and any connections from indoor drains, sinks, or toilets, regardless of whether said connection was previously allowed, permitted, or approved.