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Stormwater Management As-Built Review Checklist

This checklist is completed by MCDPS.

To the Designer:

The submission has been reviewed. The review was performed using minimum requirements per this checklist. Please address all items on this checklist and all additional comments on the submitted materials. Provide responses in the Applicant's Response Box in Workflow or on cover letter when paper submission.

Project Name: _____ **Designer/Contact:** _____

Sediment Control Permit No.: _____ **Email/Phone No.:** _____

SWM File No.: _____ **Assigned to:** _____

Plan Type: _____ **Contact Info:** _____

Checklist Legend:

OK Complete/Acceptable
 INC Incomplete/Incorrect
 N/A Not Applicable
 TBD To Be Determined
 SC Sediment Control
 SWM Stormwater Management

<i>Submittal Date</i>	<i>Review Date</i>
_____	_____
_____	_____
_____	_____

Section A - General As-Built Submission Requirements

- _____ 1. As-built submissions are to be applied for and processed as a formal revision.
- _____ 2. Plans and computations must be presented as a clear **marked up comparison** of approved versus constructed SWM design elements and volumes. Utilize the plans as approved as the base and include any approved revisions. Sheets that contain only SC should not be included in the plan set. Cross of SC that is on SWM sheets.
- _____ 3. All information added to or updated on an as-built plan must be in **red**. Show any approved revisions as black.
- _____ 4. All pdf's must be of good quality and all information must be legible.
- _____ 5. When preparing as-built plans use a **red check** or **red box** to indicate a design element that was constructed as approved.
- _____ 6. When showing information that is different than as approved, indicate so by crossing off the original information, in a legible manner, and adding the as-built information. If the difference is a graphical element such as a contour, wall location, surface area delineation or pipe location, add the new information in red in a legible manner so original design is still discernable.
- _____ 7. Provide a blank 2"x3" space in the upper middle portion of each sheet for DPS's approval.
- _____ 8. Include and upload into the Documents Folder a Transmittal listing submitted materials and upload folder locations. Explain any other project elements that the reviewer should know before beginning the review.
- _____ 9. Completed Landscape Certification Letter on plan.

Section B - Cover Sheet

- ____ ____ ____ 1. As-Built” added to Project Title. Vicinity Map.
- ____ ____ ____ 2. Sheet index modified for as-built sheet numbers and eplan file names. Update sheet numbers (As-built X of XX) on each sheet.
- ____ ____ ____ 3. As-built Certification Statement and seal of Qualified Professional (PE, PLS, RLA) indicating, “This record drawing and computations are accurate and complete and the stormwater management facilities are constructed per the approved plan or subsequent approved revisions, and stormwater management is provided per the approved design computations.”
- ____ ____ ____ 4. As-built Certification FOR PONDS. Must be sealed by a PE: “This record drawing and computations are accurate and complete and the pond is constructed per the approved plans or subsequent approved revisions, and substantially meets and/or exceeds the requirements of the USDA Natural Resources Conservation Service - Maryland MD-378 for Ponds.”
- ____ ____ ____ 5. SWM Summary Table. ESD: Provide Design storage and As-built storage for each facility and total ESD volume for the project. Structural: Provide Design storage and As-built storage for each facility and total structural volume for the project. Project: Provide ESDv required and total volume (ESD plus structural) provided. Ponds: Design and as-built stage storage table for design and safety storms.

Section C - Other As-Built Plan Sheets

- ____ ____ ____ 1. Include the Overall SWM Plan showing locations of facilities with labels.
- ____ ____ ____ 2. Include the SWM Drainage Area Map in the plan set. Modify delineated areas and square footages if constructed is different than as approved. Use modified areas in as-built computations.
- ____ ____ ____ 3. Verify all downspouts and roof drains including location, material, size and inverts.
- ____ ____ ____ 4. Provide completed SWM Construction Inspection Check-Off List for each facility, if available. If not available, please indicate and explain on the transmittal.
- ____ ____ ____ 5. For SWM plans that include landscaping, provide as-built information, Maryland RLA seal or a certification sealed by a Maryland RLA placed on the applicable plan sheet.
- ____ ____ ____ 6. For SWM plans that include poured in place structures, provide as-built information of all structural comments and dimensions, including rebar. Verify the concrete specification when applicable.
- ____ ____ ____ 7. Verify the removal of any existing SWM facilities and removal of temporary blocking, temporary pipe outfalls, or plugs.
- ____ ____ ____ 8. Verify that all facilities are constructed within the recorded SWM easement areas. Note recording information on Overall SWM Plan. Provide copies of recorded SWM Easements, Covenants and Access Easements and terminations, if not already in eplans.
- ____ ____ ____ 9. Verify project specific elements of proprietary measures e.g. number of cartridges.

Section D - As-Built for ESD Measures

- ____ ____ ____ 1. All plan information per the approved design shown and verified as constructed per plan or provide as-built information. Including but not limited to surface area square footages, design dimensions and critical distances, contours, ponding depth, ESD and 10 year WSEL, critical slopes and spot elevations, materials, flowsplitter structures and appurtenances such as overflow structures, cleanouts, overdrains, underdrains, and erosion protection.

_____ 2. All profile and section information per the approved design shown and verified as constructed per plan or provide as-built information. Including but not limited to inverts, dimensions, depths, slopes, elevations, ponding depth, ESD and 10 year WSEL, materials, flowsplitter structures, appurtenances such as overflow structures, cleanouts, overdrains, underdrains and erosions protection.

Section E - As-Built for Structural (non ESD) Facilities

_____ 1. All plan information per the approved design shown and verified as constructed per plan or provide as-built information.

_____ 2. All profile and section information per the approved design shown and verified as constructed per plan or provide as-built information.

Section F - As-Built for Ponds

_____ 1. All plan information per the approved design shown and verified as constructed per plan or provide as-built information. Including but not limited to contours, design WSEL's, critical slopes, dimensions, and elevations, control structures, flowsplitters, benchmark (location, description and elevation), and all appurtenances such as pipes, trash racks, engineered channels, and erosion protection measures. Confirm or certify materials. Maryland RLA to confirm planting materials – number, location and species. **For DPS Reviewed As-Built Plans ONLY.**

_____ 2. All profile, detail and cross section information per the approved design shown and verified as constructed per plan or provide as-built information. Including but not limited to inverts, dimensions, depths, slopes, elevations. Confirm or certify materials. **For DPS Reviewed As-Built Plans ONLY.**

_____ 3. As-built memo to MSCD for ponds as applicable. (For DPS Use) **For DPS Reviewed As-Built Plans ONLY.**

_____ 4. For As-builts reviewed by MDE or MSCD, verification from that agency that they have completed their reviews must be received by DPS prior to DPS plan approval. Copy of agency approved as-built plan and computations must be in our files.

Section G - Computations

_____ 1. Full report as approved, supplemented and modified with as-built information as a comparison of approved versus as-built. Include an updated summary (same as on Cover sheet). Include design and as-built TR-20 when applicable. Highlight comparison of approved design versus as-built for all design storms including Safety Storm. All sheets within the report containing as-built information clearly labelled "as-built" in red.

_____ 2. Projects with Flowsplitters: update computations as necessary to reflect as-built condition inverts and demonstrate flowsplitter functions as designed.

Section H - Supporting Information - if not already in the folders and each as a single pdf with identifying name

Note: Materials to be presented in a summarized and organized manner. Only materials related to SWM are to be provided.

_____ 1. Copies of approved Shop Drawings.

_____ 2. Material tickets for all SWM components ONLY (e.g. sand, stone, pipes, filter fabric, etc.) organized and identified.

_____ 3. Geotechnical inspection and testing reports (compaction, concrete breaks, permeable paving tests, etc.) verifying materials used (e.g. concrete, reinforcing steel, planting media, sand, etc.) are per the approved plan. SWM Observations reports from geotechnical or others as applicable.

_____ 4. SWM facility construction progress/completion photographs when available. Provide photographs of the flowsplitter structures when applicable. Separate pdf and with identifiable file name.

_____ 5. Other documents as may be required for review of the as-built condition and to demonstrate the project's SWM requirement has been met.

_____ 6. Copy of recorded SWM Easement and Covenant documents including terminations

