PDN Stage 2HY1 – Hydraulics QA Checklist

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| --- | --- |
| **SPOT ID/Project TIP #:** |  Click or tap to edit. |
| **County:** |  Click or tap to edit. |

2HY1: Develop Preliminary Hydraulic Recommendations

Deliverables: Hydraulic Planning Report

 Preliminary Stormwater Management Plan

| **Item #** | **Review Item** | **Acceptable** | **Unacceptable** | **N/A** |
| --- | --- | --- | --- | --- |
|  | **Hydraulic Planning Report** |  |  |  |
|  | Hydraulic Planning Report QC process is complete |[ ] [ ] [ ]
|  | Data has been gathered from appropriate sources |[ ] [ ] [ ]
|  | Drainage-related project-specific items that may affect project scope or schedule are identified and a preliminary recommendation is made where appropriate. (Prior commitments for maintenance; existing stormwater treatment devices; FEMA floodplain involvement not associated with a major drainage structure; current flooding issues; current drainage issues; potential drainage issues/concerns; information from NRTR included as necessary; etc.)  |[ ] [ ] [ ]
|  | Hydraulic commitments were identified for the project Green Sheet |[ ] [ ] [ ]
|  | Hydraulic risks and potential conflicts with other resources have been discussed and approved for adding to the Risk Assessment Worksheet (RAW) |[ ] [ ] [ ]
|  | Avoidance and Minimization measures have been discussed and approved for adding to the Avoidance and Minimization Tracker. |[ ] [ ] [ ]
|  | Preliminary Hydroplaning Assessment of typical sections completed (as needed) |[ ] [ ] [ ]
|  | Field review completed and is adequately documented including field notes and sketches | [ ]  | [ ]  | [ ]  |
|  | Roadway design recommendations to mitigate for potential risks or concerns are included (typical, horizontal, vertical alignment recommendations) | [ ]  | [ ]  | [ ]  |
|  | Appropriate design frequency and hydrological methods with a reasonable allowance for future development are used for peak discharge calculations. | [ ]  | [ ]  | [ ]  |
|  | A higher Level of Service was appropriately evaluated for important transportation corridors such as the Strategic Transportation Corridor, evacuation routes, interstates, and other major roadways in accordance with Chapter 3 of the [Guidelines](https://connect.ncdot.gov/resources/hydro/Pages/Guidelines-Drainage-Studies.aspx). | [ ]  | [ ]  | [ ]  |
|  | A preliminary hydraulic recommendation is made for each stream crossing expected to require a hydraulic conveyance greater than a 30 square foot waterway opening and include a preliminary size, span arrangement for bridge crossings, and horizontal/vertical recommendations. | [ ]  | [ ]  | [ ]  |
|  | Hydraulic recommendations are reasonable and based on sound engineering judgment considering all known constraints, guidelines, FEMA compliance, environmental requirements, aquatic organism passage, avoidance and minimization measures, costs, and constructability | [ ]  | [ ]  | [ ]  |
|  | Hydraulic Planning Report is saved on the Preconstruction Site and marked as “final” key document | [ ]  | [ ]  | [ ]  |
|  | **Preliminary Stormwater Management Plan (pSMP)** |  |  |  |
|  | Stormwater quality treatment goals documented from SELDM catalog run(s) |[ ] [ ] [ ]
|  | Preliminary SMP is saved on the Preconstruction Site and marked as final key document | [ ]  | [ ]  | [ ]  |
|  | The current version of the SMP template (Excel file) was used | [ ]  | [ ]  | [ ]  |

*For items marked* ***Unacceptable****, provide comments or action items in the table below.*

| **Item #** | **Comments and Action Items** |
| --- | --- |
|  Click to edit. |  Click to edit. |

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| **This checklist may not be comprehensive to every project. All items may not be applicable for smaller projects. It is the responsibility of the reviewer to ensure that all necessary information has been provided and an adequate review performed.** |
| **QA Reviewer Name:** |  Click to edit. | **Date:** |  Click to edit. |
| **QA Reviewer (Signature):** |  |  |  |