PDN Stage 2 - Roadway QA Checklist

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

2RD1 Alignment Defined

| **Item #** | **Review Item** | **Acceptable** | | **Unacceptable** | **N/A** |
| --- | --- | --- | --- | --- | --- |
|  | **Design Public Meeting/Hearing or Corridor Public Hearing Maps** | |  |  |  |
|  | General |  | |  |  |
|  | Have the design public meeting/hearing or the corridor public hearing maps been reviewed to ensure they are consistent with the Public Involvement Guide? |  | |  |  |
|  | Have the design public meeting/hearing or the corridor public hearing maps been reviewed to ensure they reflect the most current design? |  | |  |  |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
| ***This checklist may not be comprehensive to every project. It is the responsibility of the reviewer to ensure that an adequate review is performed.*** | | | |
| **QA Reviewer Name:** | | Click to edit. | **Date:** | Click to edit. | |
| **QA Reviewer (Signature):** | |  |  |  | |

2RD1 Alignment Defined

| **Item #** | **Review Item** | **Acceptable** | **Unacceptable** | **N/A** |
| --- | --- | --- | --- | --- |
|  | **Recommendation Plan Set** |  |  |  |
|  | Have the plans been reviewed for the following constructability/maintenance of traffic concerns:  \_\_\_ Are there any issues with the maintenance of traffic approach provided in the construction narrative?  \_\_\_ Have the number of crossovers been minimized for widening projects?  \_\_\_ Are there locations where the existing pavement is being undercut? If so, is there documentation as to how traffic will be maintained during construction?  \_\_\_ Are there locations where there is excessive wedging that can be minimized?  \_\_\_ Are there any major issues with the onsite detours as designed?  \_\_\_ Can proposed structures be constructed as shown in the plans (i.e. one stage vs. multiple stages? |  |  |  |
|  | Are the proposed driveway connections designed so that the appropriate vehicles can traverse them without issues? |  |  |  |
|  | Have accommodations for future projects as identified in Project Initiation been incorporated into the plans? |  |  |  |
|  | Have multimodal accommodations as identified in Project Initiation and/or as coordinated with municipalities been incorporated into the plan? |  |  |  |
|  | Has the “Verification of the Design with Adjacent Projects” been reviewed to ensure it is correct, if applicable? |  |  |  |
|  | Are there locations where it is feasible for retaining walls to be used to reduce impacts? |  |  |  |
|  | Are there locations where options other than retaining walls can be used to reduce costs? |  |  |  |
|  | Have the plans been reviewed to determine if there are opportunities to eliminate segments of guardrail? |  |  |  |
|  | Have the appropriate end treatments for guardrail been used based on Roadway Design Manual and Roadway Standard Drawings? |  |  |  |
|  | Title Sheet |  |  |  |
|  | Does the type of work accurately reflect the major work as shown in the plans? |  |  |  |
|  | Is the design data shown correct? |  |  |  |
|  | Is the mileage shown on the title sheet correct? |  |  |  |
|  | Are bridges and culverts 20’ and over shown and match the locations in the plans? |  |  |  |
|  | Are the tentative right of way and let dates shown and match the current schedule? |  |  |  |
|  | Does control of access note accurately reflects the type(s) of proposed control of access shown in the plans? |  |  |  |
|  | Typical Sections |  |  |  |
|  | Have the application rates for pavement layers been computed correctly for the mainline and major -Y- lines? |  |  |  |
|  | Are the elements of the typical sections for the mainline and major -Y- lines consistent with the approved design criteria? |  |  |  |
|  | Are the grade point and crown point, if applicable, consistent with how the profile was set for the mainline and major -Y- lines? |  |  |  |
|  | Have details for retaining walls been shown, where applicable? |  |  |  |
|  | Do the typical sections for staged bridge construction match the design shown in the plans? |  |  |  |
|  | Horizontal Design and Detour/Interchange/Plan Sheets |  |  |  |
|  | Do the proposed horizontal elements for the mainline and major -Y- lines meet the approved design criteria? |  |  |  |
|  | Have all design exceptions associated with the horizontal design been correctly identified? |  |  |  |
|  | Do the proposed horizontal elements for onsite detours meet the recommended design speed? |  |  |  |
|  | Are the lane configurations and storage lengths for right and left turn lanes are consistent with Congestion Management recommendations? |  |  |  |
|  | Are the curve data, superelevation rate and superelevation runoff shown in the plans correct based on the horizontal radii on the mainline and major -Y- lines per the current AASHTO guidance? |  |  |  |
|  | Has the superelevation runoff been distributed appropriately per the Roadway Standard Drawings? |  |  |  |
|  | Are there structures where the superelevation rate exceeds the 6% maximum per the Roadway Design Manual?” |  |  |  |
|  | Are there curb and gutter sections where the superelevation rate exceeds the maximum 4% per the Roadway Design Manual? |  |  |  |
|  | Are there issues with lane continuity on the project? |  |  |  |
|  | Are appropriate acceleration and deceleration lengths provided for ramps and/or loops per the current AASHTO guidance? |  |  |  |
|  | Have the gore areas for interchanges been laid out per NCDOT standard drawings? |  |  |  |
|  | Was a cursory review of the gore calculations completed to determine if the rollover guidance in the Roadway Design Manual has been followed? |  |  |  |
|  | Are there potential site distance issues at intersections, ramp termini, and/or from walls/bridge rails/barriers along the horizontal alignment? |  |  |  |
|  | Have appropriate horizontal clearances been provided to bridge piers, vertical abutments, retaining walls, and/or median barrier? |  |  |  |
|  | Have guardrail/guiderail/barrier been provided where warranted per the Roadway Design Manual and NCDOT Standard Drawings? (i.e. fixed objects in the clear zone, fill height warrants, water deeper than 2’, top and bottom of a retaining wall) |  |  |  |
|  | Are there potential obstructions in the deflection zone? |  |  |  |
|  | Do u-turn movements accommodate the appropriate design vehicle? |  |  |  |
|  | Are there elements from the NCHRP 672 guidance that would be recommended for inclusion in the roundabout designs, if applicable? |  |  |  |
|  | Are the types of proposed control of access and access breaks, if required, shown correctly on the plans based on the control of access definitions? |  |  |  |
|  | Vertical Design and Profile Sheets |  |  |  |
|  | Do the proposed vertical elements for the mainline and major -Y- lines meet the approved design criteria? |  |  |  |
|  | Have all design exceptions associated with vertical design been correctly identified? |  |  |  |
|  | Do the proposed vertical elements for onsite detours meet the recommended design speed? |  |  |  |
|  | Have the proposed grades been set so that no sag vertical curves are present in a cut section? |  |  |  |
|  | Have the proposed grades been set so that there are no low points on structures? |  |  |  |
|  | Has a cursory review of the vertical clearances for bridges over roadways, railroads, and greenways been completed to ensure they have been calculated correctly? |  |  |  |
|  | Are there any potential issues for hydroplaning (i.e. 0% superelevation at an intersection, long vertical curves, etc.)? |  |  |  |
|  | 3D Model/XSC and Cross Section Sheets (Cursory Review) |  |  |  |
|  | Are the 3D model/cross sections consistent with what is shown in the horizontal and vertical designs (i.e. guardrail locations, new location vs. resurfacing, curb and gutter vs. shoulder, retaining wall locations, etc.)? |  |  |  |
|  | Do the cross sections show potential ponding issues with at the proposed edge of travel in the gore areas for ramps and loops? |  |  |  |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
| ***This checklist may not be comprehensive to every project. It is the responsibility of the reviewer to ensure that an adequate review is performed.*** | | | |
| **QA Reviewer Name:** | | Click to edit. | **Date:** | Click to edit. | |
| **QA Reviewer (Signature):** | |  |  |  | |