

## 90 % ENGINEERING QA/QC Review

Project No.: \_\_\_\_\_

Project Name: \_\_\_\_\_

Project Manager: \_\_\_\_\_

Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

**Notes:**

Provide reference materials in comments while developing this checklist.

	YES	NO	N/A	COMMENTS
Plan has uniform size of text and line weights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are all of the technician's initials correct for "Design By", "QA/QC", and "PM"?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check boring & coring log listed property and located on the plans.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check Excel table sheet numbers are correct.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Review and confirm notes and details are modified with municipal requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Confirm municipality is listed properly on notes and details and plan set	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Verify locations and sizes of existing utilities and that invert are correct	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are all elements being removed clearly identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are all elements remaining clearly identified?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Provide notes to protect any resources to remain.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Review and coordinate the removal and demolition plan with the design layout.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are all keynotes cross reference on the drawings correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are the keynotes easily understood?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is all product information that is referenced thorough?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Are site furnishings identified in pay items/keynotes and included in the specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the site materials from appropriate climatic region?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check lighting spacing (if applicable).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is irrigation required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has draft of maintenance of traffic been created and discussed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check Rim elevations are correct and listed # of structures reviewed in comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Typical existing cross-section(s) reviewed and labeled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Typical proposed cross-sections(s) reviewed and labeled properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Verify that the pavement sections are correct in existing and proposed cross-sections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the HMA Application Table been provided and updated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Verify that the proposed sewer and water is > 10 feet from each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provided 18" vertical separation between sewer and water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review Vertical Alignment (K Values & % Grade)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review Horizontal Alignment (Radius & Super Elevation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are proposed ADA ramps shown with proper removals limits identified for ADA work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Verify manholes can accommodate pipe sizes and alignment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Verify Storm and Sanitary Sewer includes inverts, structure elevations, pipes slopes, STA.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is potholing required to identify existing utility information and depths?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Confirm existing and proposed utilities do not have conflicts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Verify proper proposed covers are labeled on structure notes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide minimum cover callouts on proposed water main.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide traffic signal data on plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide SESC Design plan with proposed quantities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide Stormwater Pollution Prevention Plan (SWPPP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do details coordinate with local design ordinances?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Confirm all spelling on plan notes, keynotes, and utility callouts (spell check)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Confirm bands in profile have been updated to show correct elevation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the sheet index correspond with all the sheets in the set?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is all sheet numbering correct?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide final Maintenance of Traffic plan. Has phasing been approved by owner?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review grading plan. Review ADA routes, slopes, trip hazards, drainage, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review and compare proposed grading with adjacent properties and streets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review intersection details for drainage, minimum slope, and ADA grades.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review all building door openings are accounted for in design.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is running slope < 5%, and ramps identified with proper slopes/handrails (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Are handrails proper diameter, height, and proper slope?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Handrails extend 12" minimum beyond level landing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are the proposed and existing contours easy to identify?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are all proposed non-motorized paths follow AASHTO guidelines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Have all requirements been met for site amenities and playground items?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Has the final layer state been applied before printing and layers reviewed on paper?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – Review geotechnical report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations - If site lighting has been proposed, review photometric requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – Have the storm sewer calculations been completed and reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – Have the retention/detention calculations been reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – Has the sanitary sewer basis of design calculations been reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – Has the water main basis of design calculations been reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – Has the pavement design been reviewed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – After reviewing the geotechnical report, are there any concerns?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – Review site distances and calculations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – Review guardrail calculations if applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – Review all taper lengths and include them on plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Calculations – Have retaining walls been calculated and reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cost Estimates – Have calculations on quantities been reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cost Estimates – Pay item descriptions match the plans, specs, and special provision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cost Estimates – Review units vs. plans and specifications are industry standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cost Estimates – Review unit pricing compares to industry standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cost Estimates – Is the proper contingency been applied to the cost estimate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Permits – Sanitary Sewer: has the permit application been developed and reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Permits – Water Main: has the permit application been developed and reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Permits – Rule 5/SESC: has the permit application been developed and reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Permits – MDOT: is an MDOT permit required and been developed and reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Permits – Drainage Board/Commissioner: Drain permits developed and reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Permits – Joint Permit Application: is a permit needed, or not required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Permit – SHPO: has the SHPO application been applied for?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00200.3.01 Add Requirements from Bidders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00200.5.01 Revise Pre-Bid Conference Notes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00200.8.01 Change City/Client Name for Bid Security, etc. (Std = Owner)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00200.8.01 Review requirements for Bid Bond % (Std = 5%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00200.13.01 review or change if copies can be obtained elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



Specifications: 00200.15.01 Provide/Revise Requirements from Bidders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00200.15.02 Revise/Review recipient is deleted or is correct	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00410.1.01 Insert Recipient of Bid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00410.5.01 Non-Collusion, Debarment (Federal), Familial (School)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00410.5.01 Add list of subcontractors and suppliers if required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00410.6.01 Revise Completion Dates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00410.7.01 Adjust Requirements from Bidders (Only if different)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00520.1.01 Add Description of Work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00520.2.01 Add Project Title	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00520.3.01 Adjust Project Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00520.4.02 Add Dates for Substantial Completion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00520.4.03 Adjust Liquidated Damages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00520.5.01 Add the words "See Attached Bid" or revise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00520.6.02 Adjust Contract Pay Schedule (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00520.6.02 Adjust Retainage % (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00520.7.01 Adjust Interest Rate (if applicable, Std = 0%)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: 00520.8.01 Review and revise Supplementary Conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: have technical specifications and special provisions been reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: Review the Table of Contents will all specifications sections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: Has the advertisement for bids been reviewed and provided?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Specifications: Have copies of water, sanitary, SESC permit been included?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## Review Comments

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