Appendix 200.2

Electrical Design Quality Review Checklist

(Refer to Template Section for
Word Format Document)

Electrical Design Quality Review Checklist

DRAWINGS - GENERAL

☐	Are Ministry drafting standards followed?	☐	Is there a Key Plan? Is Legend shown on sheet 1?
☐	Is the print quality clear? Is unessential information lightly shaded in the background?	☐	Are the Notes and Disclaimers ("DO NOT USE …", "THIS DRAWING SUPERSEDES …") shown?
☐	Are Revision numbers and descriptions correct and consistent across all sheets?	☐	Are correct Roadway names shown on site plans and elevations?
☐	Are Elevations dimensioned and labeled correctly?	☐	Are join lines matching and consistent, if applicable?
☐	Are Schematics/Wiring Diagrams shown and labeled correctly?	☐	Are station numbers shown and correct, if applicable?
☐	Are Standard Specifications Supplementary Drawings (SP635) referenced?	☐	Are the Laning and Geometrics consistent with the approved civil design?
☐	Are Title block(s) correct and consistent across all sheets?	☐	Are Pavement Markings generally consistent with the approved civil design?
☐	Are Scales and North Arrows (True & Signal) shown on Site Plans and Elevations?	☐	Is the posted speed for each roadway shown?

LIGHTING and UNDERGROUND

☐	Is the existing equipment clearly identified?	☐	Are photoelectric cells identified and labeled correctly on site plan, elevations and schematic?
☐	Is the equipment to be removed clearly identified?	☐	Are Service drops and Service panels identified?
☐	Are existing and new conductors clearly identified?	☐	Is J.B. type numbering per MoT standard (matches legend? C.J.B. identified?)
☐	Are existing and new conduits clearly identified?	☐	Is there a Flasher panel in the Wiring Schematic?
☐	Is conduit sizing correct and has a conduit fill check been placed in the design folder?	☐	Are there post mounted flashers as per Design Manual or as requested by RTE?
☐	Are Conductor and Conduit sizes and symbols shown on schematic wiring diagrams?	☐	Are pole bases correctly shown on elevations (height) and site plan (type, frangible, breakaway)?
☐	Have questions re future requirements been addressed (pre-ducting, extra conductors, etc.)?	☐	Are minimum backfill requirements around pole bases as per Standard Specifications?
☐	Are existing utilities shown and all conflicts identified and noted in design folder?	☐	Have pole placements been checked (1 m setback from curb; no conflicts with pedestrians, etc)?
☐	Have clearances to overhead conflicts been verified in the field and with Hydro?	☐	Are Clear Zone requirements met?
☐	Are Service Panels numbered correctly?	☐	Has a Pole loading review been done for all poles being modified? Placed in design folder?
☐	Are Breaker Sizes correct?	☐	Do lighting warrants conform to TAC Illumination of Isolated Rural Intersections and RTE requirements?
☐	Is luminaire circuit numbering correct on Site Plan and Elevations?	☐	Do lighting levels and uniformity ratios conform to MoT standards?
☐	Are luminaire wattages (flat glass designation) correct?		

[C.]J.B. – [concrete] junction box
MoT – Ministry of Transportation
RTE –Regional Traffic Engineer
TAC – Transportation Association of Canada
TEC – Traffic Engineering Checklist
SS – Standard Specifications for Highway Construction

Electrical Design Quality Review Checklist

TRAFFIC SIGNALS

☐	Is the Traffic Engineering Checklist signed-off by the RTE? Have the drawings and TEC been compared for conformity?	☐	Does the Signal Sequence Display match the TEC? Are roadways named and north arrow shown? Is T-intersection / 4-way intersection shown?
☐	Is pole numbering as per MoT standards and consistent on the site plan and elevations?	☐	Is there a geometric conflict with opposing double left turns? Is this noted on the Signal Sequence Display?
☐	Does the controller type match the TEC?	☐	Is Bus priority shown in the Signal Sequence Display?
☐	Has the cone of vision been checked for all approaches? Are signal heads aligned correctly?	☐	Is Emergency vehicle pre-emption equipment correctly shown on the drawings? Is it correctly shown on the Signal Sequence Display per the TEC?
☐	Has the stop bar to signal head distance (> 15 m & < 45 m) been checked and addressed?	☐	Does the Signal Display have Railway pre-emption clearance and pre-emption phasing per the TEC?
☐	Has the number of conductors for signal heads incl. service pole been checked?	☐	Are fibre optic No Left Turn Signs required and shown?
☐	Has phasing of signal heads on site plan and signal display been checked to comply with the TEC?	☐	Has the Conductor Colour Coding been checked for correct wiring (controller, flashers, lighting, pre-emption)?
☐	Has the Phasing Designation of heads on elevations been checked for conformity?	☐	Are Street Name Signs correctly shown on elevations?
☐	Are tunnels, arrows, etc. shown on elevations and site plan where required?	☐	Are Lane Use Signs and correctly shown on the approaches per the TEC?
☐	Are pedestrian pushbuttons within 5 m of crossings and conveniently located?	☐	Are Turn Control Signs correctly shown on the drawings per the TEC?
☐	Are pedestrian pushbutton signs appropriately located and designated (R vs. L)?	☐	Has accommodation been made for cyclists (pushbuttons, loops, stencils) per the TEC and RTE requirements?
☐	Have the position, phase designation, dimension and numbering of detector loops been checked to comply with MoT standards?	☐	Have Advance Warning Flashers warrants been reviewed and signs installed as required? Are sign locations based on speed and grade and dimensions shown on drawings?
☐	Has the detector loop table been verified to conform with the site plan and phasing?	☐	Does the telephone / cellular / time clock synchronization requirements match the TEC?
☐	Have all right turn lane loops been classified as counting unless directed otherwise by the RTE?	☐	Do drawings conform with all other requirements in TEC?

DESIGN FOLDER

☐	Is the Design Folder complete in accordance with Sec. 202.8?

I _____, P. Eng. (Professional Engineer) declare that the drawings being submitted have been thoroughly quality managed and that each of the items noted in this review checklist have been checked for compliance. I also understand that this review checklist is not complete and that it is my responsibility to ensure that I have a quality control and assurance plan in place and that ALL requirements and standards for the project are met. I understand that any errors or omissions of the design that impact the project and cause delays or additional costs to the project may be subject to claims under my Professional Errors and Omissions Insurance.

_____ _____

Professional Engineer Signature Date

Poor consultant work performance will impact consultant selection and assignments on future projects.