 **ACHIEVEMENT PROGRAM**

 **MODEL RAILROAD ENGINEER ELECTRICAL**

 **STATEMENT OF QUALIFICATIONS FORM**

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Member's Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NMRA #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Exp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Street: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ City: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ State/Prov.: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ZIP/PC: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Country: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NMRA Region: \_\_\_\_\_\_\_\_\_\_\_Division:\_\_\_\_\_\_\_\_

Date Submitted: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ E-Mail: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**To qualify for this certificate you must:**

1. Construct and demonstrate on your own, someone else’s layout, or a club layout, the satisfactory operation of an electrical control system on a model railroad capable of simultaneous and independent control of two mainline trains in either direction, and containing at least:

[ ] If DC Power – 5 blocks that can be controlled independently

[ ]  If DCC/TMCC/Other Power – gaps/switches/phase for troubleshooting

[ ] One Reverse Loop or Wye or Turntable or Transfer Table

[ ] One passing siding

[ ] Facilities for storing of at least two unused motive power units.

[ ] One yard with a minimum of three tracks and a switching lead independent of the mainline.

[ ] One power supply with protective devices (short indicator and/or circuit breaker) to ensure safe operation.

[ ] Other \_\_\_\_\_\_\_\_\_\_

[ ]  Single slip switch

[ ]  Gauge separation turnout

[ ]  Double junction turnout

[ ]  Three way turnout

[ ]  Turnout

[ ]  Crossing

[ ]  Crossover

[ ]  Double crossover

[ ]  Gauntlet turnout

[ ]  Spring switch

[ ]  Operating switch in overhead

[ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Wire and demonstrate the electrical operation of at least three of the following track items:

[ ]  Electrical turnout position

[ ]  Track occupancy

[ ]  Cab control

[ ]  Engine terminal

[ ]  Two turnout junctions

[ ]  High-frequency lighting

[ ]  Electronic throttle

[ ]  Grade crossing

[ ]  Two-way block signaling

[ ]  Operating overhead wire

[ ]  Computer control

[ ]  Animated displays

[ ]  Layout lighting displays

[ ]  Command Control Receiver

[ ]  Command Control Throttle Buss

[ ]  Sound in Locomotive

[ ]  Sound system

[ ]  Signaling system

[ ]  CTC system

[ ]  Onboard video system

[ ]  Computerized block detection

[ ]  Computerized operation

[ ]  Computer to railroad interface

[ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Wire and demonstrate the satisfactory electrical operation of at least three of the following features:

1. Prepare a schematic drawing of the propulsion circuitry of the model railroad in Section 1 showing the gaps, blocks, feeders, speed and direction control, electrical switches and power supplies.

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1. Prepare schematic drawings identifying the wiring and components of the six items in Requirements 2 & 3.
2. Submit a completed Statement of Qualifications (SOQ) which shall include the following:

[ ]  Attachment showing the track plan required in Requirement 1.

[ ]  Description of the track work features, method of construction and identification of commercial components used in 2 & 3.

[ ]  The signed witness certification form showing that each of the above items are operational and meet all applicable NMRA Standards.

|  |  |  |
| --- | --- | --- |
| EVALUATOR'S NAME | SIGNATURE | NMRA # |
|  |  |  |
|  |  |  |
|  |  |  |

**Member Statement and Agreement:**

I certify that I have completed all of the requirements for this Certificate of Achievement as listed above and that I will agree to assist other members in this subject whenever possible, whether or not they are participants in the Achievement Program. 🞎 Check here if this is the member’s first award.

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_SIGNATURE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Division Achievement Program Chair Review (optional):** Reviewed for compliance and completeness.

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_SIGNATURE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Certification of Region Achievement Program Chair**

As the NMRA Region Achievement Program Chair of the \_\_\_\_\_\_\_\_\_\_\_, I certify that I have examined this SOQ and, having compared it to the stated requirements for this certificate, I am satisfied that the stated requirements have been met.

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_SIGNATURE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Region Certificate #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Approval by AP National Executive Assistant Manager**

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SIGNATURE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_