

Sun-N-Sand Proposed Layout Electrical Design

Definitions:

Power district – Area on one line powered by a DCC booster.

Control district – Area controlled by a single DC throttle hand controller. May have one or more electrical districts.

Electrical district – sub-division of power district powered by DC throttles. One or more may comprise a Control district.

Functions of Both Layouts.

1. Each line will be switchable between DC and DCC control.
2. The number of DC control districts will be expanded in number at a later date.
3. There will be a master RF kill switch for each line.
4. All new control circuits, turnout control circuits, power selection, circuits will be controlled by a latching relay control circuit.
5. All electrical control districts will be wired for control by a single RF master throttle per line. This capability will not be implemented at move-in.

Inner U Layout.

1. Modules conform to NTrak Recommend Practice wiring.
2. DCC - Three power districts.
 1. Four track lines per power district.
 2. Yard.
 3. From yard entrance to bottom of U.
 4. From bottom of U to yard exit.
 5. One booster per power district.
 6. Two PSX-2 circuit breaker per booster. Each serves two lines. This allows quickly adding additional boosters if needed.
 7. One command station.
 8. Booster to Command station ground wire will be retained.
3. Analog.
 1. Three electrical districts per line. (Aligned with the DCC power districts).
 2. Yard throttle selectable.
 3. Two control districts at move in. The two outside the yard control districts will be

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controlled by one throttle.

4. Eight Lindsay throttles used.

Outer C Layout

1. Sections will use NTrak Recommend Practice wiring.
2. DCC - Six Power Districts.
 1. Two lines per district.
 2. Power districts roughly equal to forty feet in length.
 3. Two PSX-2 circuit breakers per booster.
 4. One command station.
 5. One command station set up as booster only (spare command station).
3. Analog basics
 1. Each line will have six electrical districts.
 2. Outer line.
 1. Automated.
 2. Two electrical districts per DCC power district.
 3. Each DCC control district pair will be powered from one GML throttle.
 4. Each capable of stopping, holding, or starting an automated train.
 3. Inner line. paired into three control districts.
 1. Six electrical districts will be paired into three control districts.
 2. Two control districts per DCC power district.
 3. One GML throttle for each control districts.
 4. No Automation.