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CHICAGO, SOUTH SHORE AND SOUTH BEND RAILROAD



OPERATION MANUAL

OF

Interlocker Signals and Track Layout
on the Illinois Central Railroad, Chicago
Terminal Division, between Kensington
and Randolph Street.

Chicago, South Shore and South Bend Railroad

The following is an outline, with sketches of the physical characteristics of interlocker signals and track layout encountered on the Illinois Central Railroad, Chicago Terminal, between Kensington and Randolph Street, in the operation of our trains on tracks 1 and 2, from the C. S. S. & S. B. rails at Kensington to just north of the Kensington platform (approximately 113th Street) tracks 1, 2, 3 and 4, from Kensington to 51st Street, and tracks 1, 2, 3, 4, 5 and 6, between 51st and 12th Street and tracks 1 and 3 between 12th Street and Randolph Street.

Revised and Corrected, Jan. 1, 1946 by
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Part One

Approaching the Interlocking Plant at Kensington, from the C. S. S. & S. B. rails, we will encounter a two-arm semaphore signal to the right of the track. The top arm, indicating *proceed*, is authority to move to the next color light interlocking signal, which is located directly south of the Kensington platform on track 2. The lower arm, known as the call-on signal, governs movements to all possible routes. Motormen must know that the proper route is lined when accepting the lower arm for movement through this plant.

This signal at the south end of the platform on track 2 is a two-unit color light home signal. The top unit, indicating *proceed*, authorizes the train to move to the next home signal at the north end of the Kensington platform; the lower unit of the same signal (south of the Kensington platform) is a call-on signal, and a yellow light authorizes the train to move to the platform or the next home signal under extreme caution, because track may be occupied.

As train is leaving the platform it is governed by the next home signal, which is a three-unit color light signal located at the north end of the Kensington platform. The top unit, indicating *proceed*, governs the straight track move from track 2 at Kensington platform to track 3 north of 113th Street; the middle unit, indicating *proceed*, governs a diverging route to track 4, which must be entered with caution. (The route to

track 4 is our usual route.) The lower unit, which is a call-on signal, governs all possible routes including those to tracks 1 and 2, which may be used in case of emergency. No. 1, as far as 67th Street, providing the entrance block is clear, may be used without orders. Track 2 can only be used to the north limits of Kensington Interlocking Plant until orders are received from the Illinois Central train dispatcher. The entrance block governing movements north on track 1 is located on the signal bridge near 113th Street. There is an automatic telephone located on the catenary structure at the extreme north signal bridge at the Kensington Interlocking Plant, about 113th Street.

Taking the usual route from track 2 to track 4, the next home interlocking signal encountered is located just north of the 72nd Street platform. This is a three-unit color light home signal; the top unit, indicating *proceed*, governs straight movement on track 4; the middle unit, indicating *proceed*, governs a diverging route to track 5 or an unelectrified area and *must not* be accepted by electric trains. The lower unit is a call-on signal, and when indicating *proceed* may be accepted with caution for electric trains on *straight route only*.

These signals when properly displayed, authorize the train to move to the next home signal on track 4, which is located near the north mouth of the South Chicago Tunnel. This is a two-unit color light home signal and the top unit, indicating *proceed*, governs a straight route to track

4; the lower unit is a call-on signal and governs the same routing and must be accepted with extreme caution because the track ahead may be occupied. This signal is a protection for trains moving from South Chicago Tunnel to track 4, and when properly displayed permits the train to operate to the next interlocking signal, which is a three-unit color light home signal, located just north of the 67th Street platform. The top unit, indicating *proceed*, governs straight route on track 4; the middle unit, indicating *proceed*, governs diverging route to track 3 and must be accepted under control; the lower unit, indicating *proceed*, is a call-on signal and governs all possible routes including those to tracks 1 and 2.

The movement to track 3 puts the train on the northbound local and express track to 51st Street. The movements to tracks 1 and 2, which are southbound tracks, can only be made to the limits of the interlocking plant, located just south of the 63rd Street platform, whereupon the dispatcher must be called for authority to move against the current of traffic. (Telephone located just north of home signal bridge).

Continuing north on track 4, the next home signal encountered is located at the north end of the 53rd Street platform. This is a three-unit color light home signal and the top unit indicating *proceed* governs movement straight ahead from track 4 which becomes track 6; the middle unit, indicating *proceed*, governs a diverging route movement from track 4 to track 5, which

is the express track from 51st Street to 12th Street; the lower unit is a call-on signal and may be accepted for any route including track 4, which is the northbound local track.

Proceeding north on track 6, which is the usual route, the next signal encountered is a stop board located at the north end of the 12th Street platform at which point all trains must make a complete stop, being governed from there on to the Seventh Street viaduct by a switch-tender, located just north of 12th Street platform, who controls in addition to a hand signal, a manual-operated signal on the catenary structure above tracks 4, 5, and 6.

After receiving the proper signals from the switch-tender you will encounter a permissive automatic block signal, which is located just south of the Seventh Street viaduct. When a red light is displayed trains may proceed cautiously without coming to a complete stop. The signal displayed in this manner indicates that a train is in the block ahead which extends to the automatic block signal located to the right of the track approximately opposite the middle of the Van Buren Street platform. This signal at Van Buren Street platform is an automatic block signal two-color light type and when red is displayed shows that a train is standing at the north platform. When displayed yellow which is the normal position, it shows that the track is clear to the end of the block sign located just north of the Van Buren Street Platform.

Leaving the Van Buren Street Platform on

track 3, the next signal encountered is a dwarf signal just south of the Monroe Street viaduct which is a single-unit three-color light signal (protecting movements through the cross-over from track 3 to track 2). This signal, indicating *proceed*, permits the train to operate to the next dwarf signal located under the Monroe Street viaduct. This is a single-unit three-color light signal and governs movements to the South Shore yard, which is a diverging route to the right, and also straight ahead to the Illinois Central Suburban yard at Randolph. All dwarf signals of the Randolph Street Interlocker are the four-indication color light type and their indications are as follows:

- Red — Stop
- Green — Proceed
- Yellow — Proceed with caution
- Red over yellow — Call on signal governing all routes

Movements within this plant must be made under extreme caution. This ends the movement northward on track 2, Kensington to 113th Street; track 4, 113th Street to 51st Street; track 6, 51st Street to 12th Street; and track 3, 12th Street to Randolph Street.

Part Two

The southward move from Randolph Street Terminal is governed leaving the South Shore yard by a dwarf signal located to the right of

the lead, just north of the Monroe Street viaduct. This is a single-unit three-color indication signal and governs movement from the South Shore yard to track 3, to the next dwarf signal located under the Monroe Street viaduct to the right of the track. This is a single-unit three-color light signal and when indicating *proceed* allows the train to move across the crossovers to southbound main track 1 or into No. 2, the Randolph Street lead. Movement from this point must be made with extreme caution, as outside of a block signal located at the south end of the Van Buren Street platform, no positive signal is encountered until a dwarf signal is reached just south of the Seventh Street viaduct protecting a set of crossovers. This is a single-unit two-color light type. Red indicates stop, yellow indicates *proceed* at restricted speed to a point approximately 200 feet beyond, where all trains must make a complete stop. The movement from the stop board is governed by a switchtender who operates in addition to a hand signal, a manual signal located approximately 200 feet south of the dwarf signal, which governs movements across the set of crossovers and two freight tracks to the 12th Street platform.

Our operation on track 1 (which is the usual route) encounters nothing but automatic block signals until we reach the first home signal of the 51st Street Interlocking Plant located approximately at 49th Street. This is a two-unit color light signal protecting movements

from track Nos. 2 and 3 to track 1. The upper unit, indicating *proceed*, authorizes the movement straight ahead on track 1; the lower unit is a call-on signal and authorizes the same movement under caution. The next home signal encountered is the first home signal of the 67th Street Interlocking Plant located at the south end of the 63rd Street platform. This is a three-unit color light signal and the top unit, indicating *proceed*, governs a straight route on track 1; the middle unit, indicating *proceed*, governs a diverging route with traffic to track 2, and must be accepted under caution; the lower unit, indicating *proceed*, is a call-on signal and governs all possible routes. In case of a diverging move, it must be accepted with caution and it must be known that the switches are properly lined as movement must not be made beyond track 4 because all tracks east thereof are not electrified.

If the lower unit is accepted for tracks 3 or 4, movement must not be made beyond the dwarf signal located to the right of each track at the south end of the 67th Street platform, unless the dwarf signal indicates *proceed*. If the dwarf signal indicates *proceed*, movement may be made with caution diverging to tracks 1 or 2 through a set of crossovers directly south and over the South Chicago tunnel. If the movement is south on tracks 3 or 4, orders must be received from Illinois Central train dispatcher. If the top unit at the south end of the 63rd Street platform on track 1 is accepted, the next

home signal of the 67th Street Interlocking Plant is encountered at the south end of the 67th Street platform, which is a three-unit color light home signal; the top unit, indicating *proceed*, governs a straight route on track 1; the middle unit, indicating *proceed*, governs a diverging route to the South Chicago district only; the lower unit, indicating *proceed*, is a call-on signal and governs all possible routes including a crossover located just south of the tunnel which may be used for crossing to track 2 or into the stub track located just north of the 72nd Street platform, in which case movement must be made with extreme caution.

The next positive signal encountered on track 1 is located just north of the 72nd Street platform and is a single-unit three-color light entrance block without number governing single track operation on track 1 between the 67th Street Interlocking Plant and Burnside. This is a positive signal and must not be passed (without orders from the train dispatcher) unless proper indication is displayed. When this signal displays the clear indication, it permits the train to operate to the next positive signal which is located on the 94th Street viaduct. This is a positive signal, governing single-track movements between 94th Street and the Kensington Interlocking Plant and must not be passed (without orders from the train dispatcher) unless the proper indication is displayed. This signal, displaying *proceed*, permits the train to operate to the first home signal of the Ken-

sington Interlocking Plant, located approximately at 113th Street. This is a three-unit color light home signal; the top unit, indicating *proceed*, governs movements on track 1 to the Kensington Platform; the middle unit, indicating *proceed*, governs a diverging route with caution, across to track 2; the lower unit, indicating *proceed*, governs all possible moves and must be accepted with caution.

The next positive home signal in the Kensington Interlocking Plant is located at the south end of the Kensington Platform, over track 1, which is a three-unit color light home signal. The top unit, indicating *proceed*, governs a straight route on track 1 and must not be accepted by South Shore trains; the middle unit, indicating *proceed*, governs a diverging movement ahead to the right near Blue Island Junction and should not be accepted by South Shore trains; the lower unit is a call-on signal and when indicating *proceed*, governs movement to all possible routes including tracks 3 and 5 or to the next home signal between track 6 and the C. S. S. & S. B. eastbound lead, just south of 116th Street. This movement must be made with extreme caution, for if the towerman should give an incorrect line-up for tracks 3 or 5, it would move the train into an un-electrified area. The home signal located between the Illinois Central track 6 and the Michigan Central southward main is a three-unit color light signal; the top unit indicating *proceed* governs movement to the Michigan Central eastward

main track; the middle unit indicating *proceed* governs a diverging movement to the C. S. S. & S. B. eastward main track; the lower unit is a call-on signal and governs all possible routes and must be accepted with extreme caution.

This ends our southward operation on track 1 from Randolph Street to Kensington.

Part Three

Operation northward from Kensington to 51st Street on Track 3 and from 51st to 12th Street on Track 5.

The third home signal of the Kensington Interlocking Plant, located just north of the Kensington platform and described in our northward movement on track 2, will govern movements north thereof. The top unit as heretofore described, and indicating *proceed*, will permit the train to operate straight north on track 2, which becomes track 3 north of 113th Street.

The next home interlocking signal located on track 3 is the first home-signal of the 67th Street Interlocking Plant located just north of 72nd Street platform and is a three-unit color light signal. The top unit, indicating *proceed*, governs straight route on track 3; the middle unit, indicating *proceed*, governs diverging movement to track 4; the lower unit is a call-on signal and governs all possible moves under complete control. The *proceed* indication of either the top or lower unit will permit the train

to advance to the second home signal which is located at the mouth of the South Chicago tunnel to the right and above track 3.

This home-signal is a three-unit color light signal. The upper unit which is supposed to govern a straight movement is of fixed indication, as track 3 diverges to the left at this point, and there is no straight route; the middle unit, indicating *proceed*, governs the movement on track 3, which diverges across the lead from the South Chicago tunnel; the lower unit is a call-on signal and is used for advancing the train under caution when the track ahead is occupied. This signal also protects movements from the South Chicago tunnel to track 3 and 4 and must not be confused with the same type of signal located at the left of track 3 over the right wall of the tunnel which governs movements of trains from the South Chicago tunnel. A *proceed* indication on the middle or lower unit will advance the train on track 3, which crosses the South Chicago lead to track 4, to the third home-signal of the Interlocking Plant located just north of the 67th Street platform. This is a three-unit color light home signal; the upper unit, indicating *proceed*, governs a straight route on track 3; the middle unit, indicating *proceed*, governs a diverging route to track 4; the lower unit is a call-on signal and when indicating *proceed* governs all possible routes and both middle and lower unit must be accepted, with caution.

The route to tracks 1 or 2 (which are south-

ward tracks) must not be accepted beyond the limit of the Interlocking Plant without orders from the dispatcher.

The next positive signal on track 3 is the first interlocking home-signal of the 51st Street Interlocking Plant located just south of the 53rd Street platform. This signal is a two-unit color light home signal; the top unit, indicating *proceed*, governs straight route ahead; the lower unit, indicating *proceed*, is used for advancing a train when the block ahead is occupied. This signal is also used for protection of trains leaving the stub track, known as the two-and-one-half track, located between tracks 2 and 3 south of the 53rd Street platform.

Trains having equipment trouble that would delay operation and which could be repaired temporarily could call the towerman from the telephone located on the catenary structure near this signal, asking the towerman to permit them to enter this stub track until repairs are made. Upon receiving instructions from the towerman and a clear signal from this unit, the train could advance to the south end of the 53rd Street platform or just clear of the switch points entering this track, where a dwarf signal is located on the west side of track 3.

A clear indication of this dwarf signal would permit the train to back into the stub track to make temporary repairs. On leaving the stub track for movement to track 3, movement will be governed by a dwarf signal located to the right of the stub and by calling the towerman

advising him to clear you for track 3. Upon receiving a clear indication from the dwarf, train will proceed on normal route. The dwarf signal located on the left side of the stub between the stub and track 2 is a protection for trains moving northward against the current of traffic on track 2 and must not be confused with the dwarf signal on the right side.

Going back to main track 3 after receiving a clear signal from the dwarf, it permits the train to advance to the second home signal of the Interlocking Plant located just north of the 53rd Street platform. This is a three-unit color light home signal; the top unit, indicating *proceed*, governs movements straight ahead on track 3 which becomes track 5 north of 51st Street; the middle unit, indicating *proceed*, governs a diverging route to the left to track 4 north of 51st Street; the lower unit, indicating *proceed*, governs all possible routes and must be accepted with extreme caution.

The next positive signal encountered on track 5, which is the northward express track, is a stop board located near the north end of the 12th Street platform. From here on to Randolph Street the operation is the same as described in Part 1.

Part Four

Going back to track 3 northward at 51st Street Interlocking Plant: If the second home signal located at the north end of the 53rd Street

platform displayed a yellow indication on the middle unit, the movement would be with the current of traffic diverging to the left to track 4, north of 51st Street. This is the northward local track and the next positive indication encountered on track 4 will be the stop board located near the north end of the 12th Street platform and your route from track 4 to Randolph Street is the same as described in Part 1.

Part Five

The southward movement from 12th Street to Kensington on track 2 is as follows:

If the switch-tender at 11th Street on your southward move gives a line-up for track 2, which is the southward express track, the train will operate according to automatic block signal indication until it approaches the first home signal of the 51st Street Interlocking Plant, which is located about 49th Street and is a three-unit color light type signal; the upper unit, indicating *proceed*, governs movements of the straight route ahead on track 2; the middle unit, indicating *proceed*, governs a diverging route to track 1; the lower unit which is a call-on signal governs all possible routes and must be accepted with caution.

The next home signal on track 2 is located near the south end of the 53rd Street platform. It is a two-unit color light signal; the top governing straight movement ahead on track 2; the lower unit is a call-on signal and governs a

move straight ahead with caution or into the stub track known as the two-and-one-half track south of the 53rd Street platform.

The next positive home signal on track 2 is located at the south end of the 63rd Street platform which is the first home signal of the 67th Interlocking Plant. It is a three-unit color light signal; the top unit indicating *proceed* governs straight route ahead on track 2; the middle unit indicating *proceed* governs a diverging move to the right, to track 1; the lower unit is a call-on signal which governs movements to all possible routes including tracks 3 and 4 which are northward tracks and can only be used as described in Part 2; the upper unit of this first home signal of the 67th Street Interlocking Plant permits the train to operate to the second home signal located at the south end of the 67th Street platform. This signal is a three-unit color light type, and the top unit, indicating *proceed*, governs movement straight ahead on track 2 to the southward track in the South Chicago tunnel; the middle unit, indicating *proceed*, governs a diverging route to the right which crosses a lead from track 1 to the South Chicago tunnel and continues along the right side of the tunnel as track 2 to Kensington. (This signal also protects movements from track 1 to the South Chicago tunnel.) The lower unit is a call-on signal and when indicating *proceed* may be used for all possible routes.

Both the middle and the lower units are used for movements for South Shore trains and will

display a yellow caution indication. These movements must be made under caution as it is possible for the towerman to put the train in the stub track located south of the tunnel on a call-on signal indication.

The next positive signal on track 2 is the first home signal of the Kensington Interlocking Plant located just north of 113th Street. This signal is a three-unit color light type and the top unit is of fixed indication; the middle unit's *proceed* indication is yellow and controls the movements from track 2 to track 1 at Kensington platform; the lower unit is a call-on signal governing all possible routes and is used to advance a train to the platform when the block ahead is occupied.

Our operation for the route by track 1 at Kensington platform is governed by the second unit of the plant located at the south end of the platform and described in our operation of track 1 from Randolph Street to Kensington, Part 2.

Our operation from track 2 north of 113th Street to track 2 at Kensington platform would be to the next, or second, home signal of the Interlocking Plant located at the south end of the Kensington platform on track 2. This signal is a three-unit color light type; the upper unit is of fixed indication; the middle unit governs movement straight ahead on track 2 to a diverging route move to track 1 near Blue Island Junction, and the lower unit is a call-on signal governing all possible routes including a crossover move to the left to track 6 or straight across

to the westward C. S. S. & S. B. main track which, of course, would be against the current of traffic.

If the movement is lined for the crossover move from our westward lead to our eastward lead, across Illinois Central track 6, it can be made without dropping pantagraph as overhead trolley has been installed at this point.

Part Six

The southward operation on track 3 from 12th Street to 51st Street is controlled by automatic block signals until the first home signal of the 51st Street Interlocker is reached near 49th Street. This signal is a three-unit color light type and the top unit is of fixed indication because the track diverges at this point to track 2 and there is no straight move ahead. This move is governed by the middle unit, accepted at caution, the lower unit is a call-on signal and governs all possible routes.

Part Seven

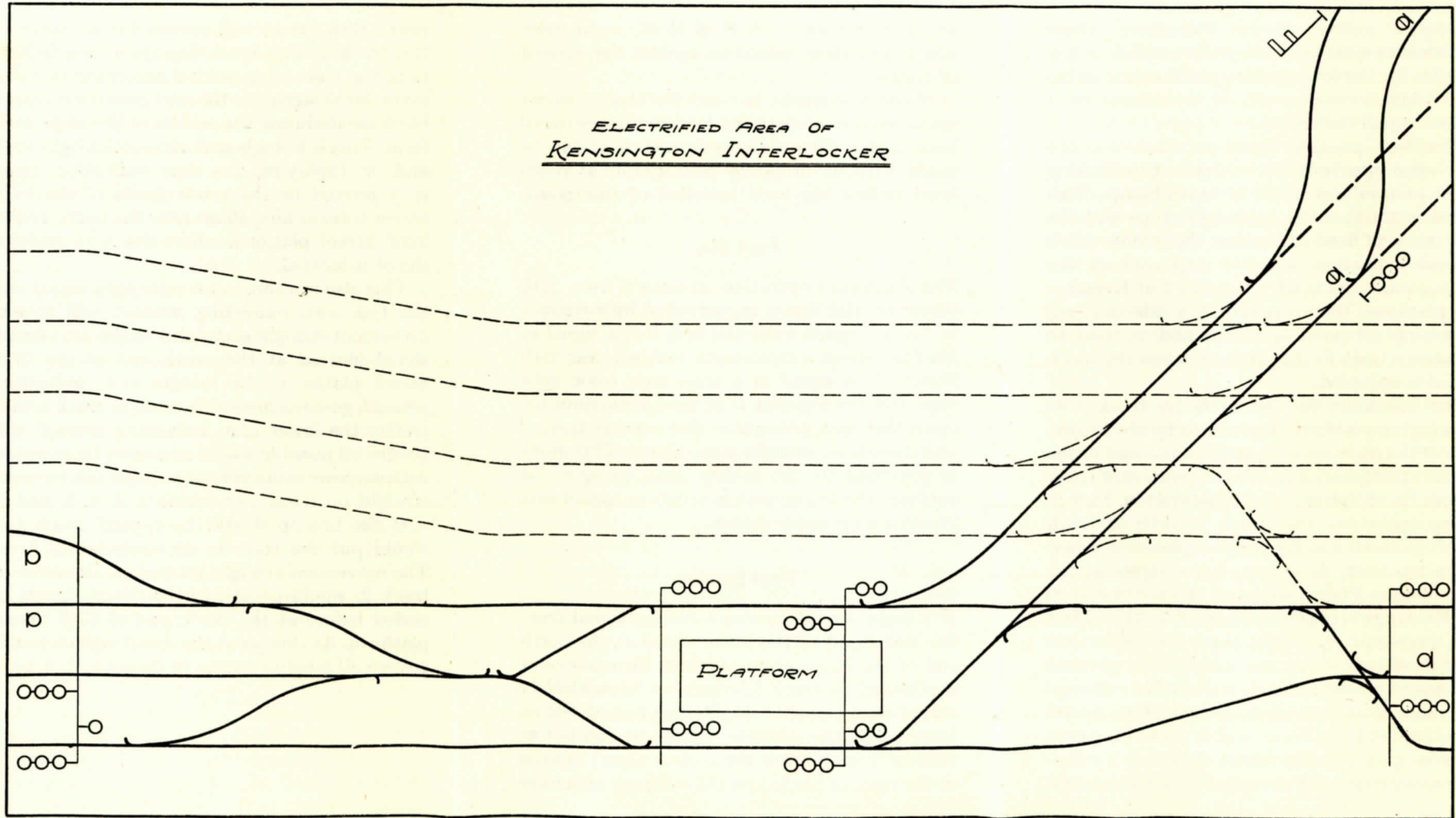
If a train should receive a call-on signal from the lower unit of the home signal at the north end of the Kensington platform for movement northward on track 1, which we have already stated can be used as single track to 67th Street Interlocker, the positive signals are located as follows: A single unit three-color signal located at the right of track 1 on the catenary structure

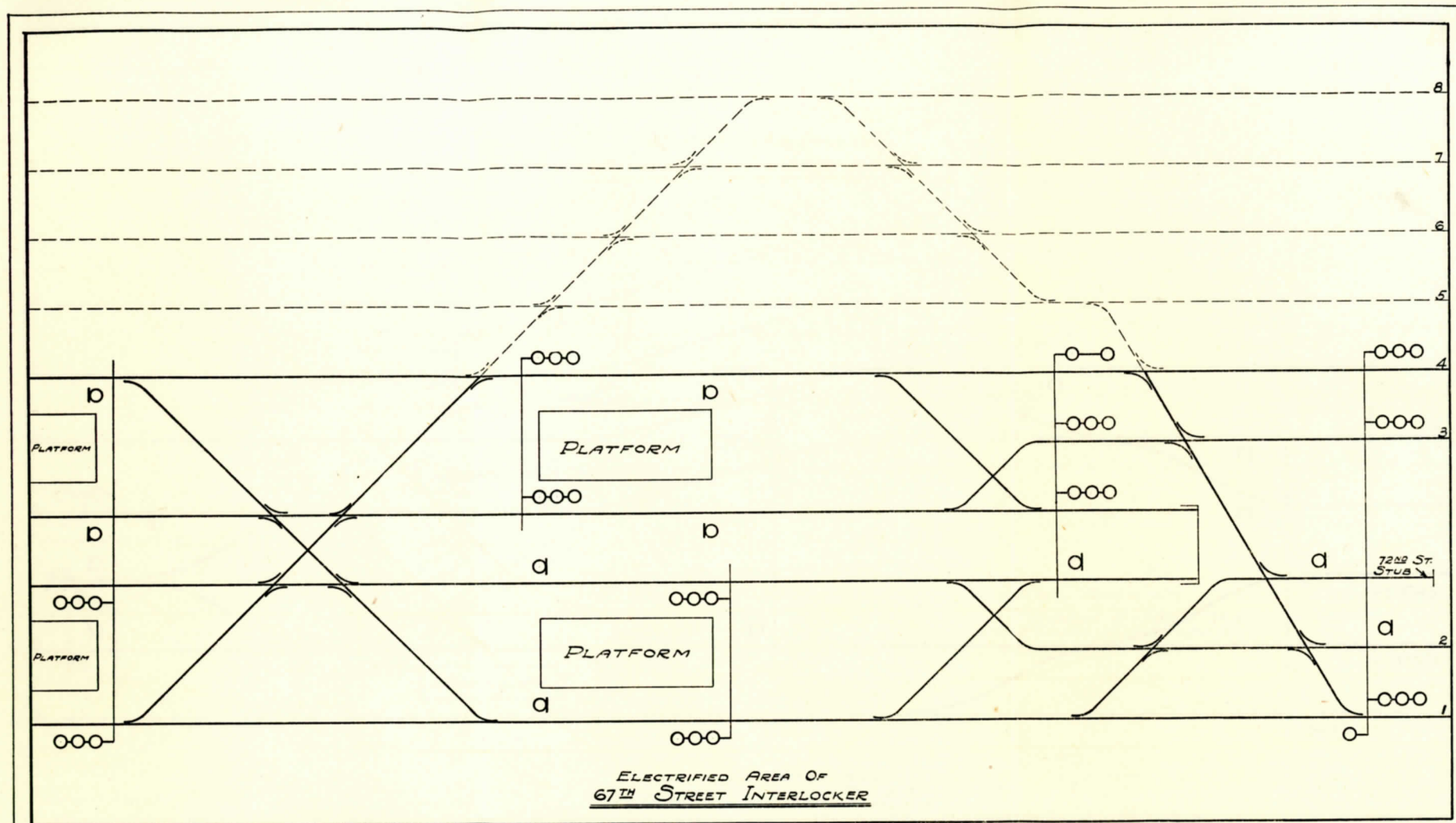
near 113th Street will govern the entrance to this track. If the signal displays a clear indication, the train may *proceed* according to automatic block signals to the next positive entrance block located near the middle of Burnside platform. This is a single unit three-color light type and, if displaying the clear indication, train may *proceed* to the south limits of the 67th Street Interlocking Plant near the north end of 72nd Street platform where the next positive signal is located.

This also is a three-unit color light signal and the top unit, indicating *proceed*, will govern movement straight on track 1 to the next dwarf signal located at the north end of the 67th Street platform; the middle unit, indicating *proceed*, governs diverging route to track 3 with traffic; the lower unit, indicating *proceed*, will govern all possible routes and must be accepted with extreme caution as movement can be made straight on track 1 or across 2, 3, 4, 5, and 6.

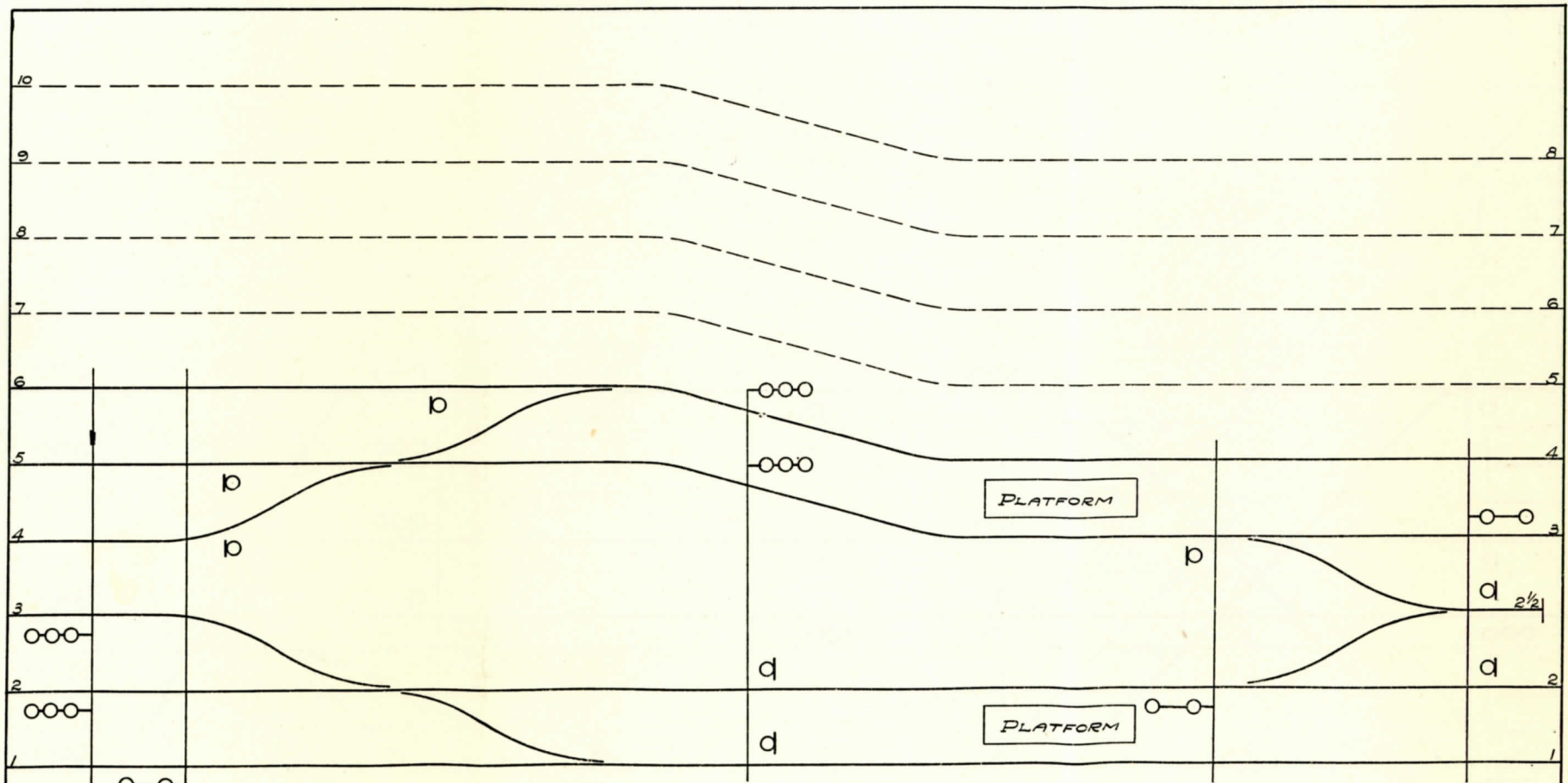
If the line-up should be beyond track 4 it would put the train in an unelectrified area. The movement straight on track 1, or across to track 2, would govern to the dwarf signals as stated before at the north end of 67th Street platform. At this point the dwarf signals would govern all possible routes to tracks 1, 2, 3, or 4.

ELECTRIFIED AREA OF
KENSINGTON INTERLOCKER

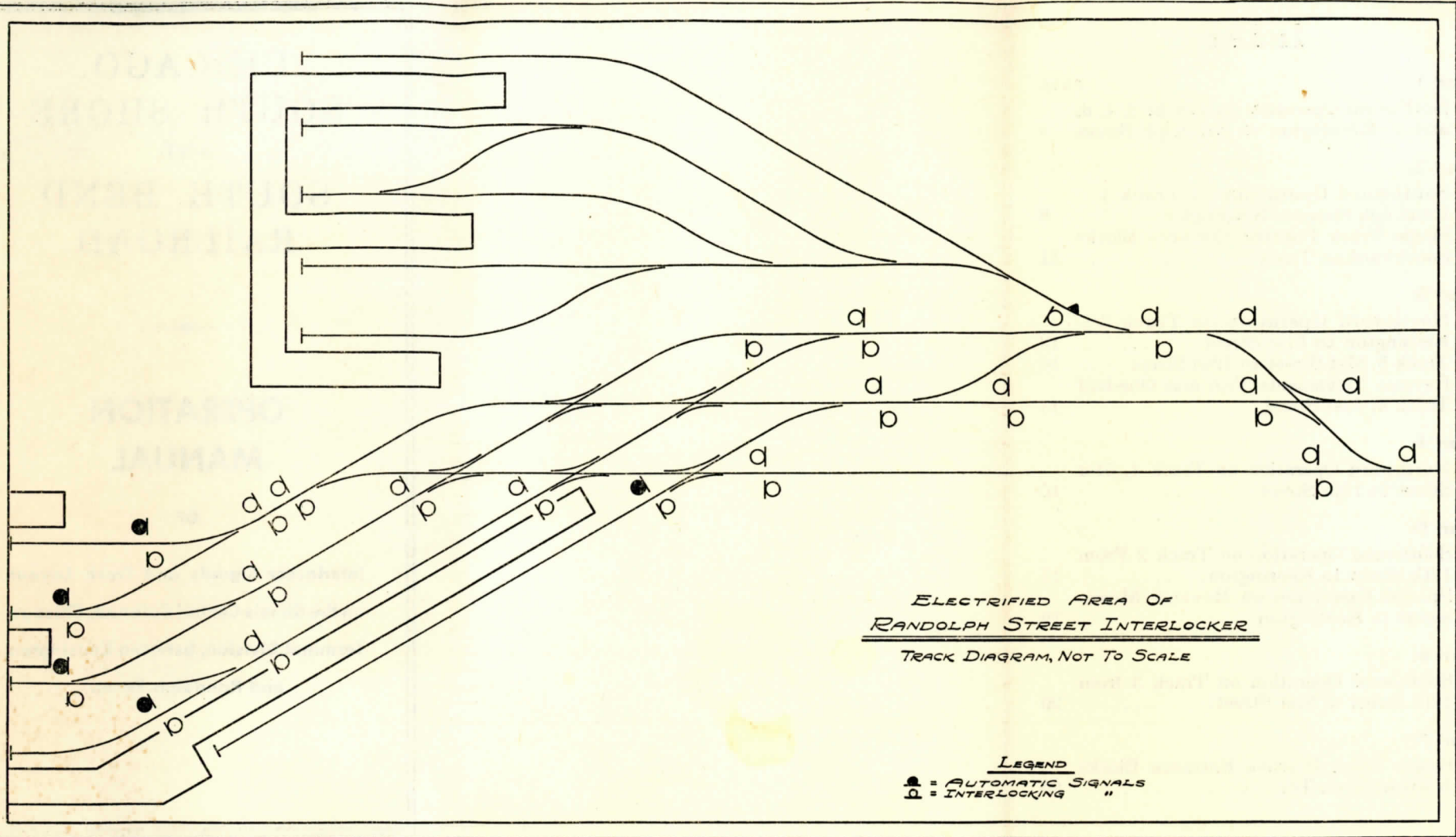




ELECTRIFIED AREA OF
67TH STREET INTERLOCKER



ELECTRIFIED AREA OF
51ST STREET INTERLOCKER



ELECTRIFIED AREA OF
RANDOLPH STREET INTERLOCKER

TRACK DIAGRAM, NOT TO SCALE

LEGEND

● = AUTOMATIC SIGNALS
○ = INTERLOCKING "