

LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL / RETAINING WALL

SYSTRA

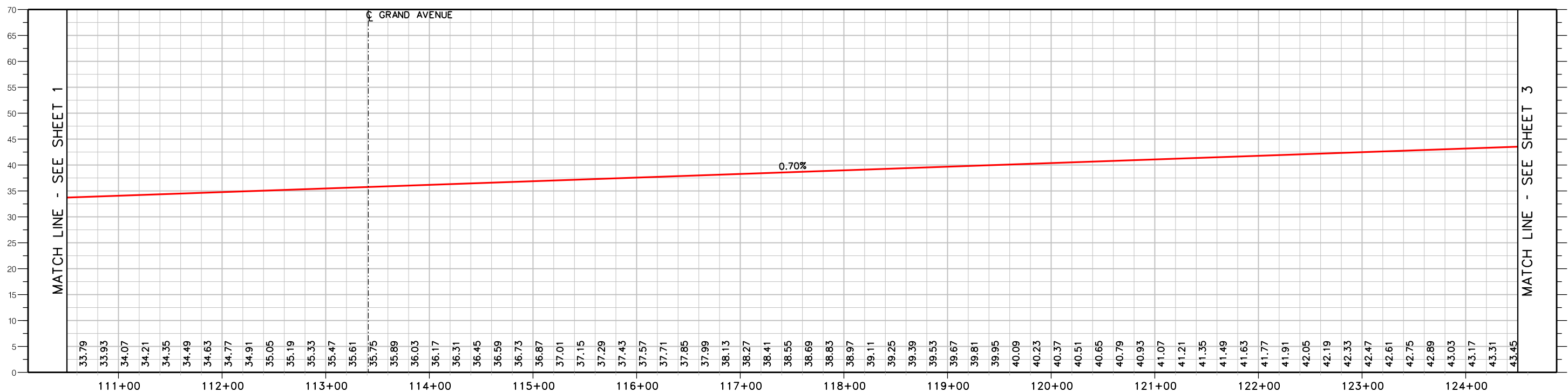
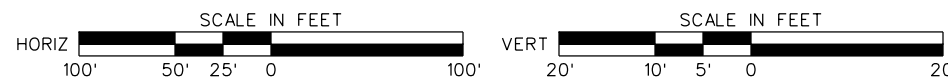
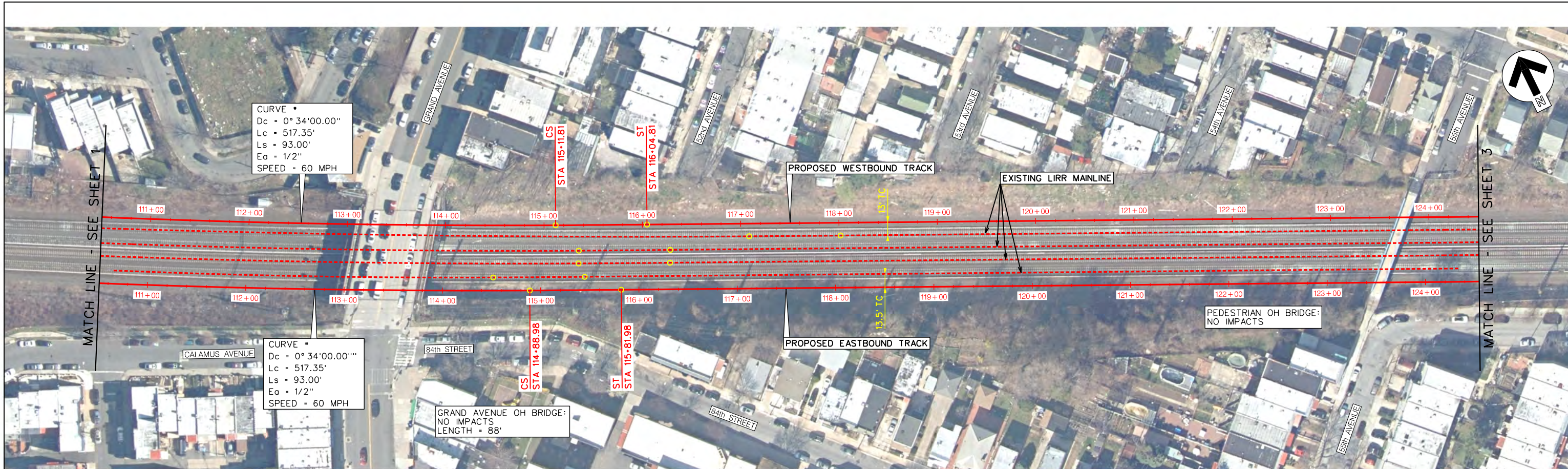
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New York, NY 10018

CONCEPTUAL
NOT FOR
CONSTRUCTION

LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 1 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL

SYSTRA

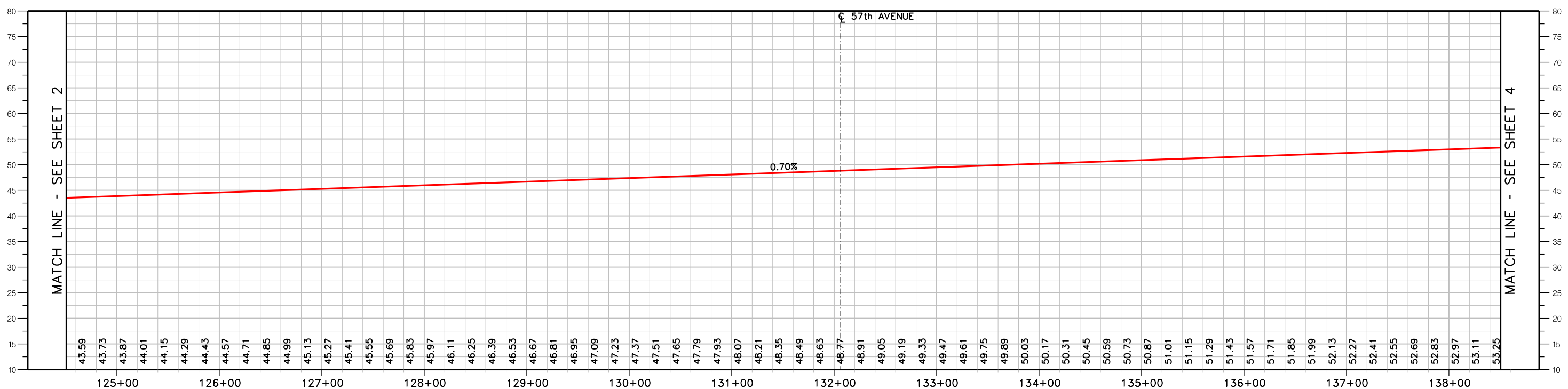
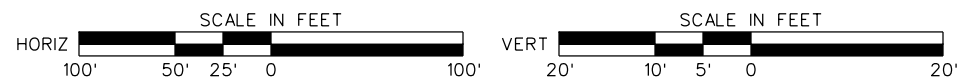
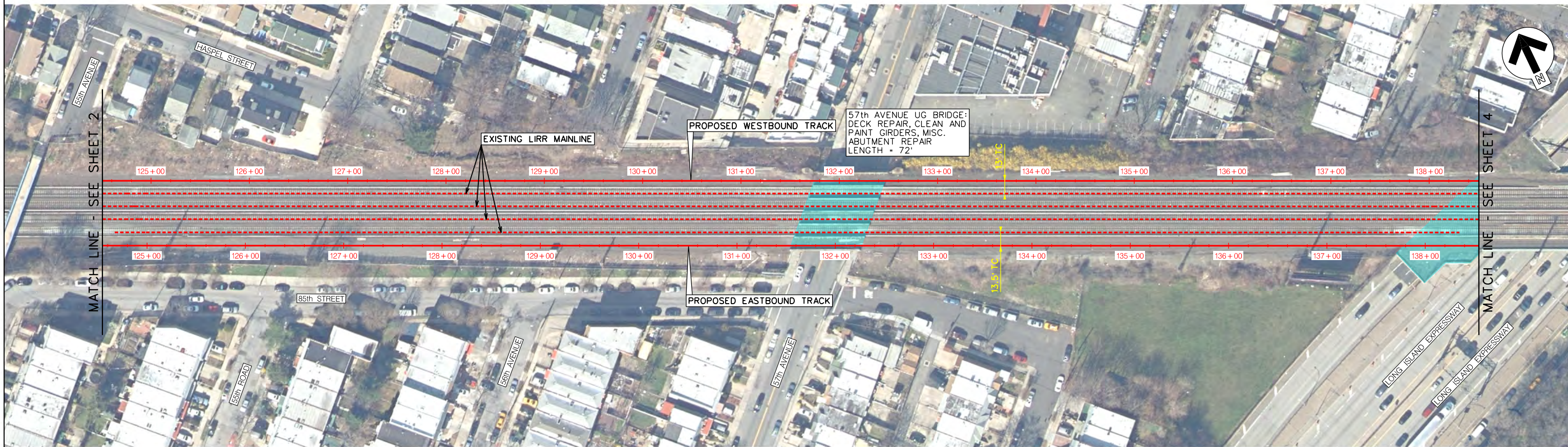
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 2 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL / RETAINING WALL

SYSTRA

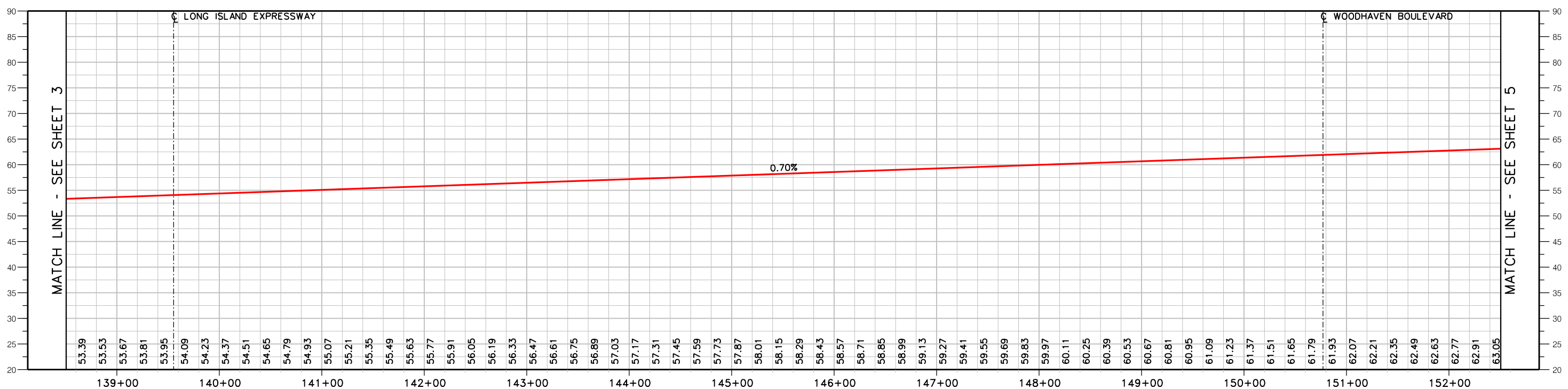
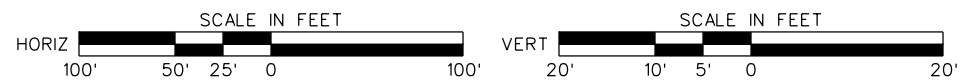
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 3 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL

SYSTRA

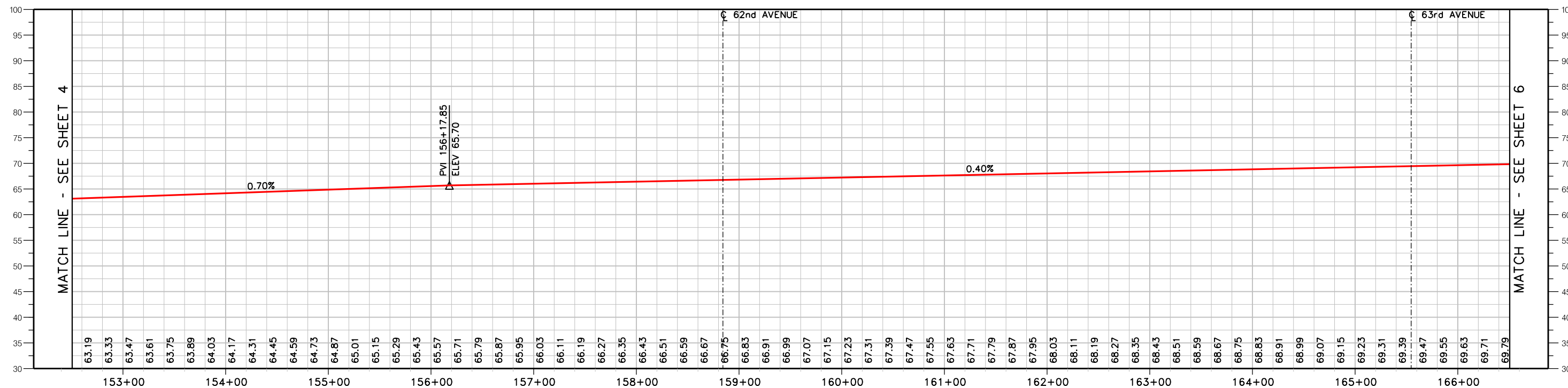
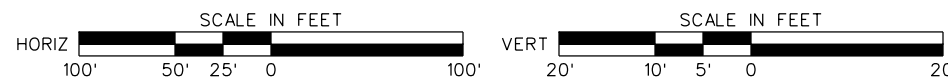
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 4 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL



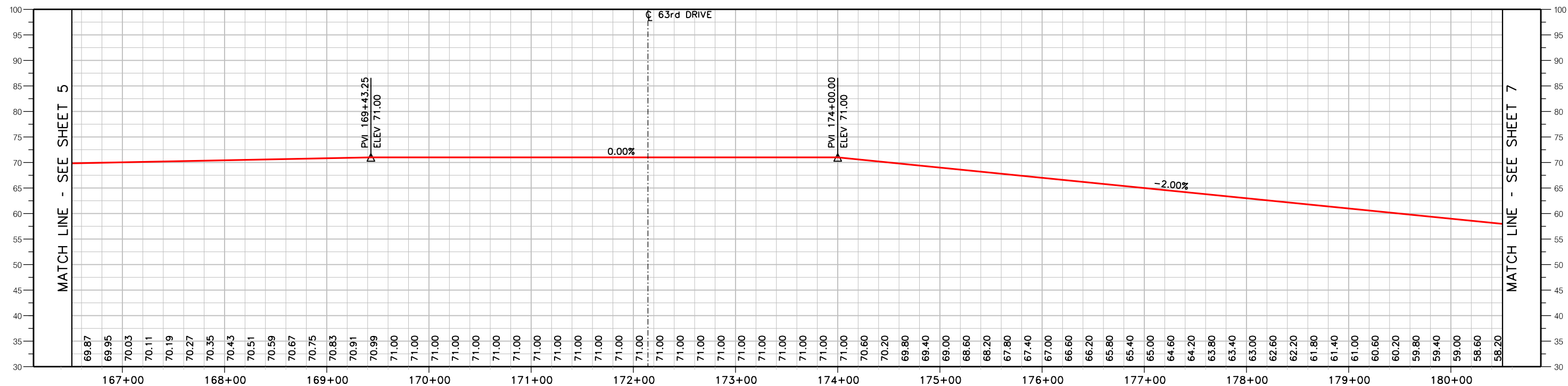
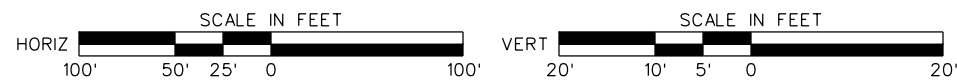
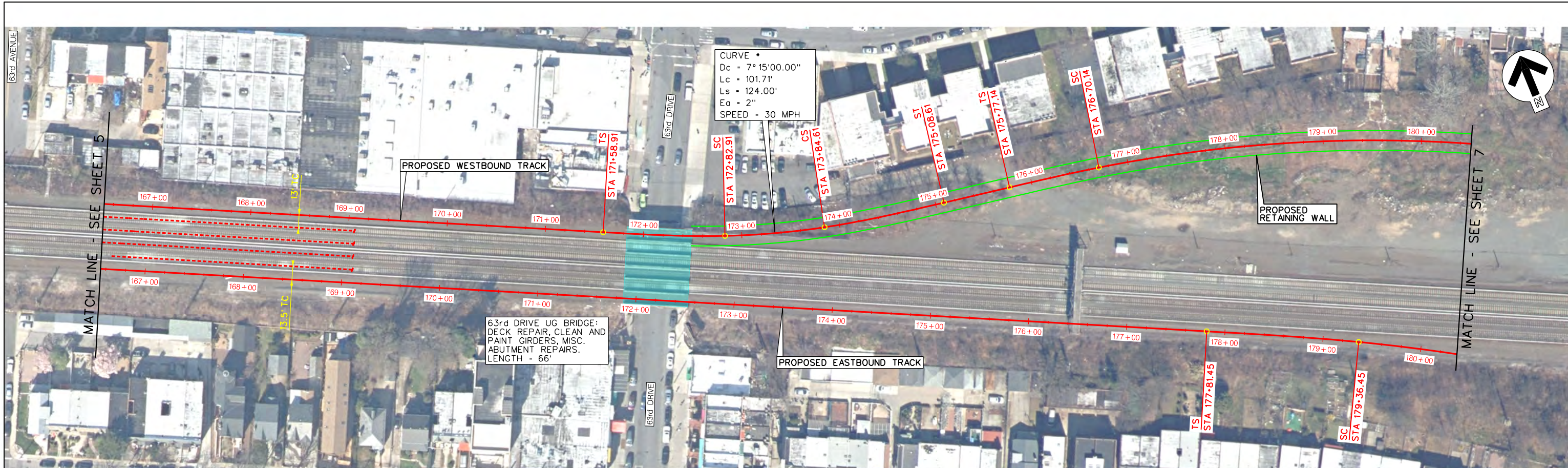
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 5 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL / RETAINING WALL



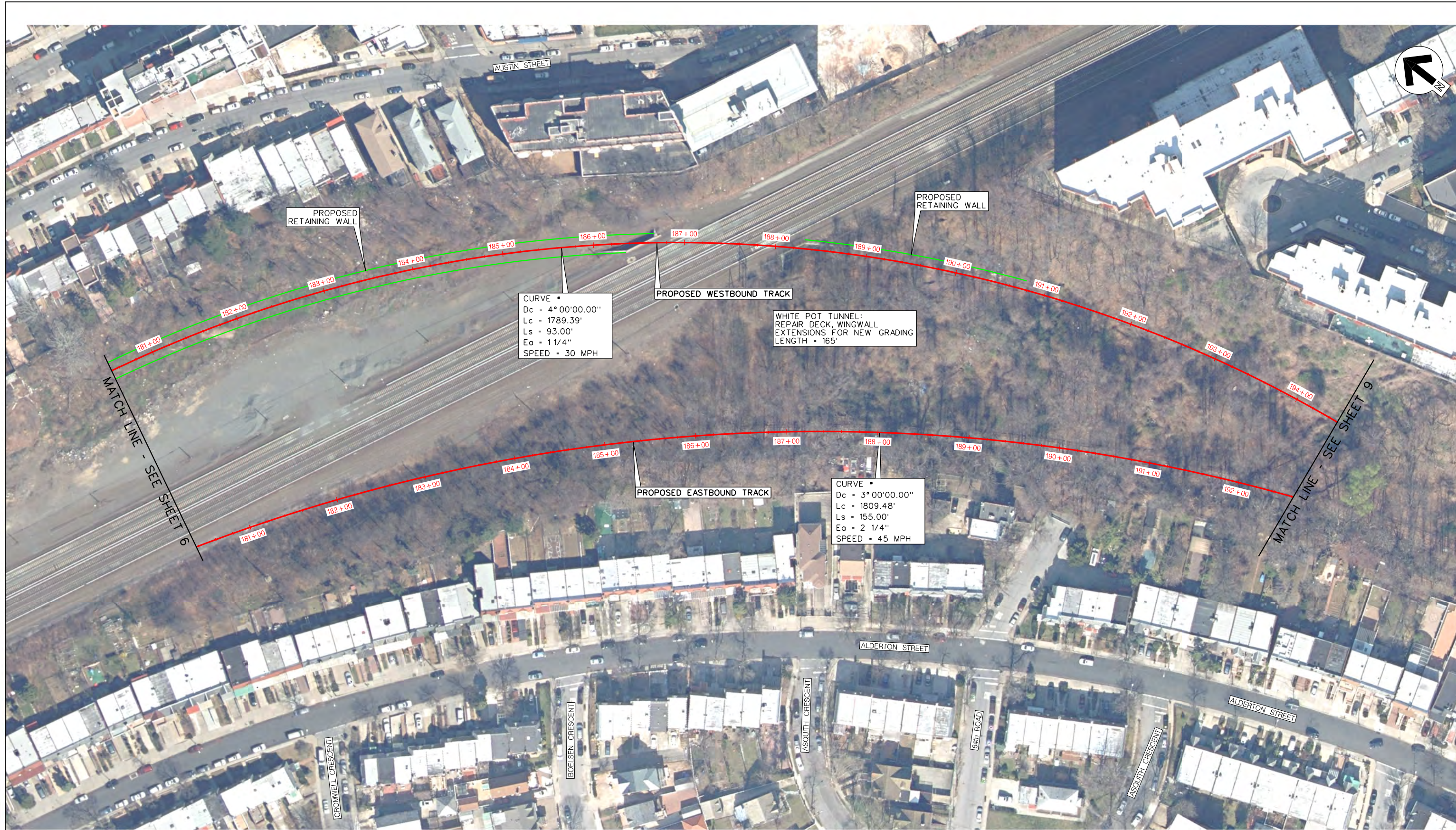
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LONG ISLAND RAIL ROAD
 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 6 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



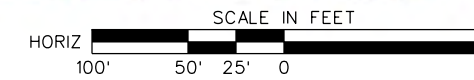
CURVE •
 Dc = 4° 00' 00.00"
 Lc = 1789.39'
 Ls = 93.00'
 Ea = 1 1/4"
 SPEED = 30 MPH

WHITE POT TUNNEL:
 REPAIR DECK, WINGWALL
 EXTENSIONS FOR NEW GRADING
 LENGTH = 165'

CURVE •
 Dc = 3° 00' 00.00"
 Lc = 1809.48'
 Ls = 155.00'
 Ea = 2 1/4"
 SPEED = 45 MPH

LEGEND:

- - - - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL



SYSTRA

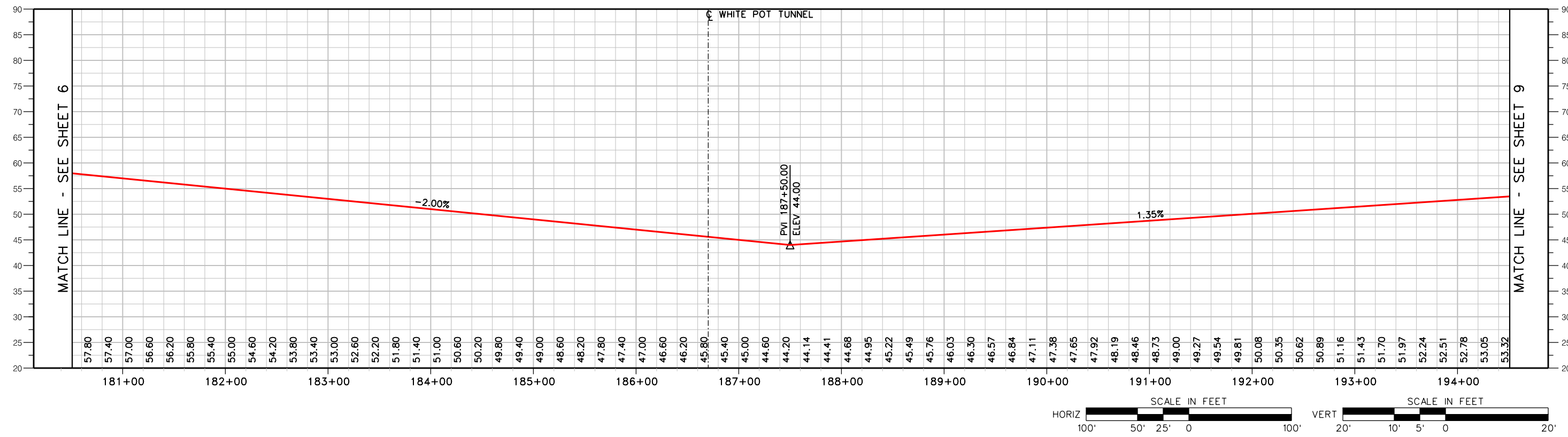
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LONG ISLAND RAIL ROAD
 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 7 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL

SYSTRA

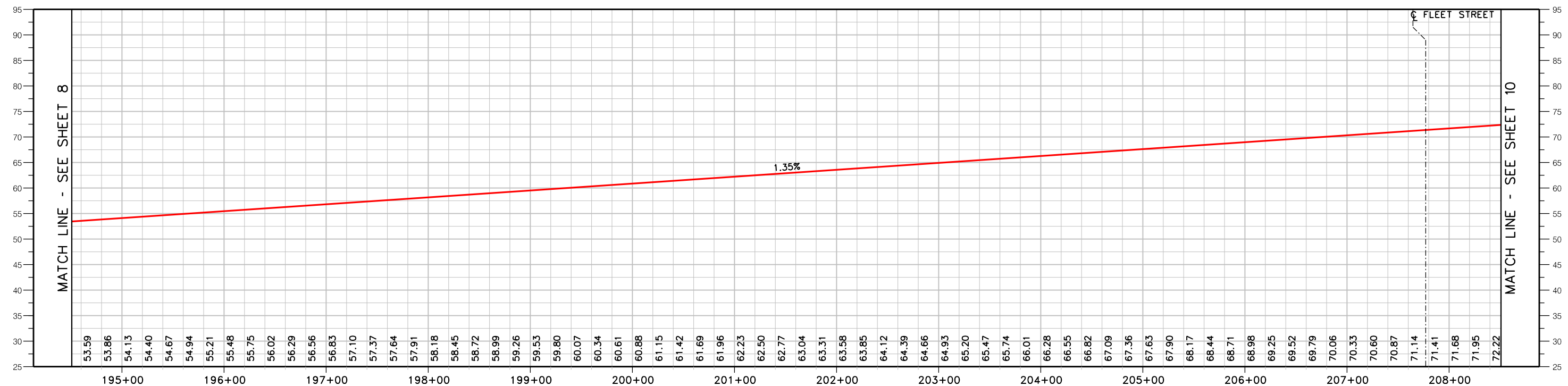
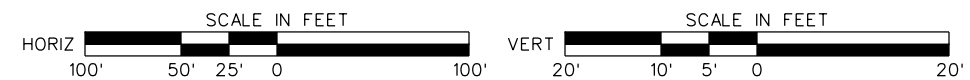
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 8 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

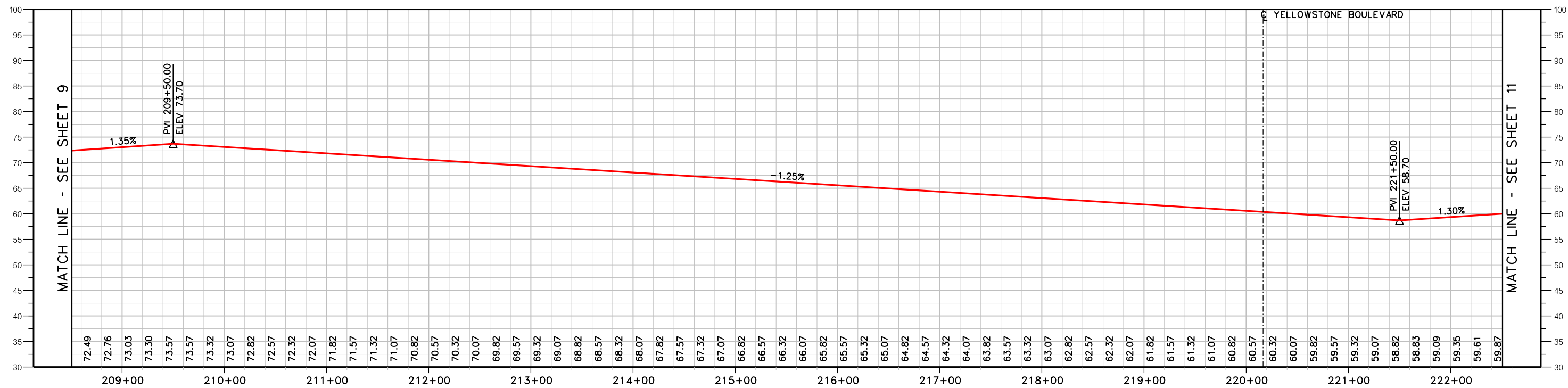
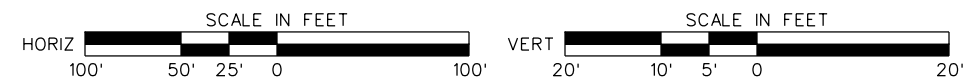
- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/RETAINING WALL

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LONG ISLAND RAIL ROAD
 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 9 OF 29

SCALE: AS NOTED
 DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL / RETAINING WALL

SYSTRA

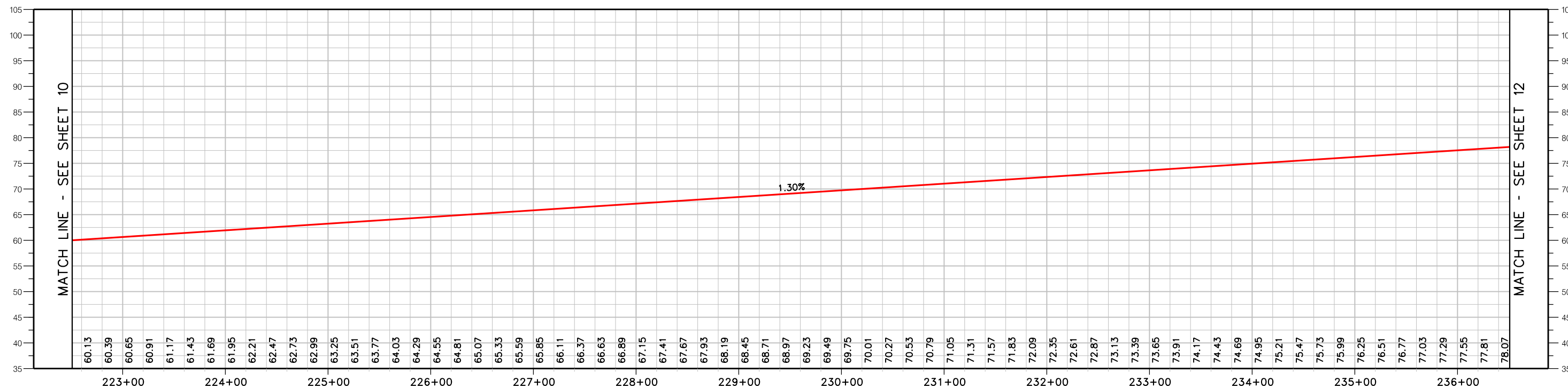
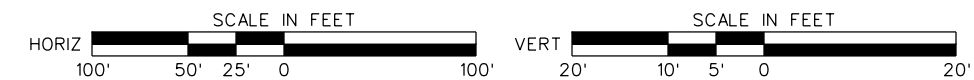
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 10 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/RETAINING WALL

SYSTRA

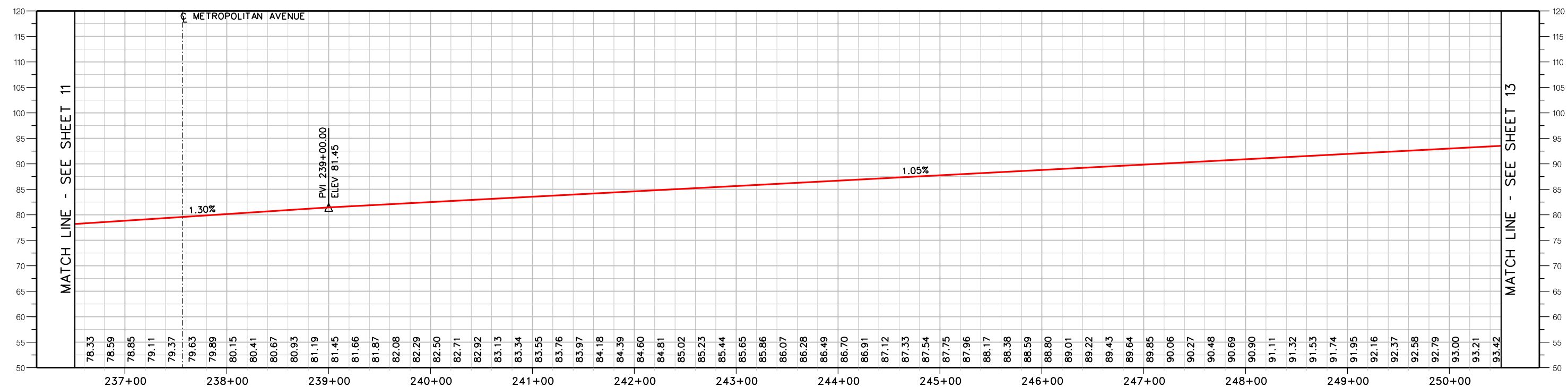
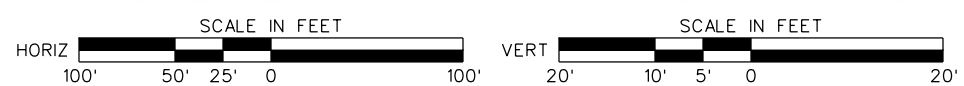
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 11 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/RETAINING WALL

SYSTRA

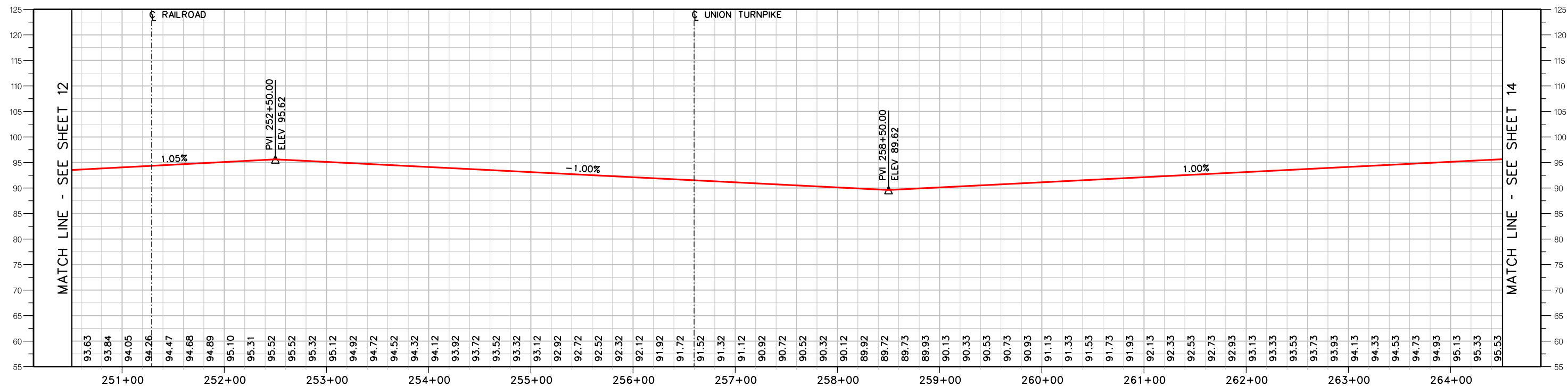
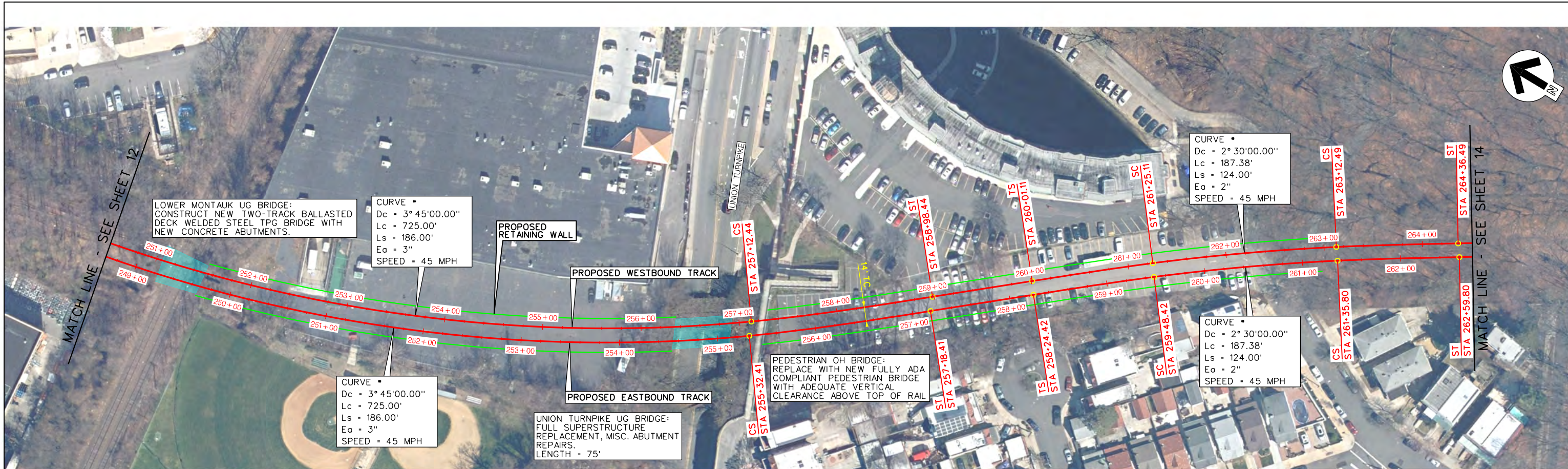
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 12 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/RETAINING WALL

SYSTRA

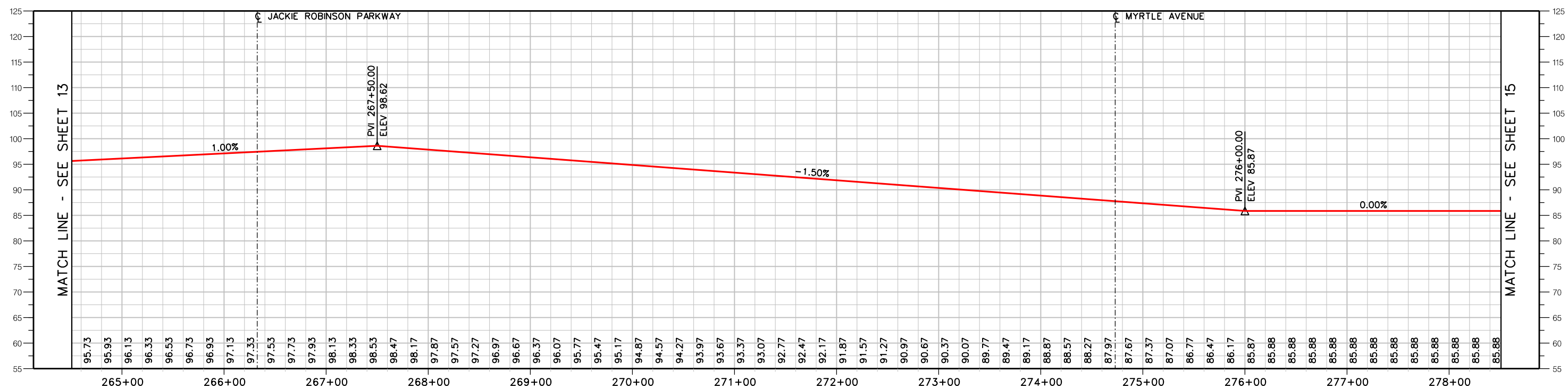
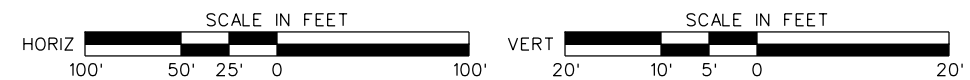
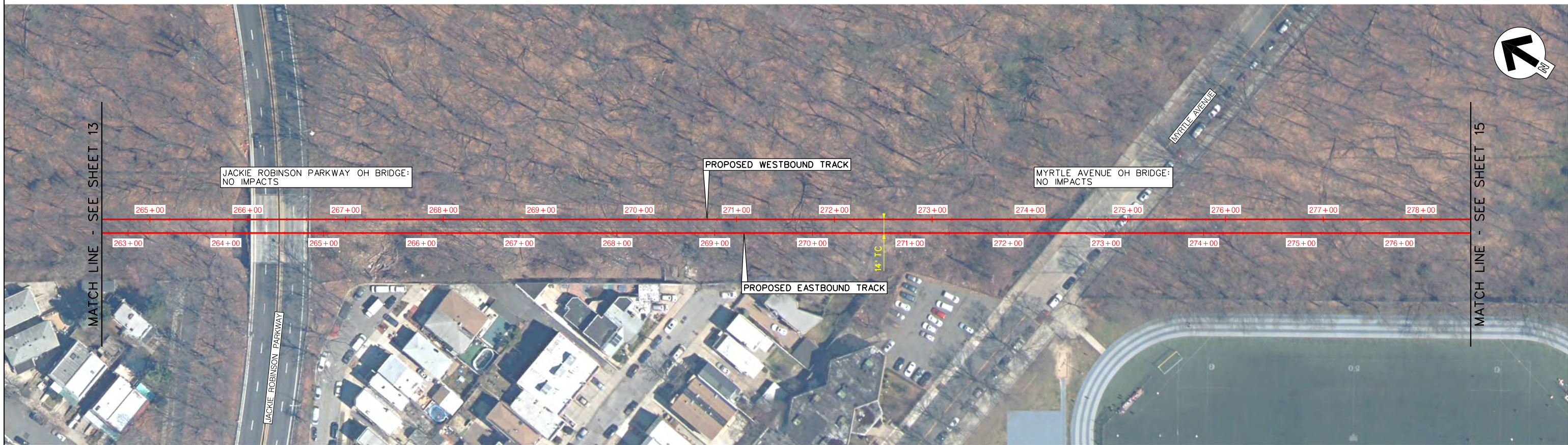
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 13 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

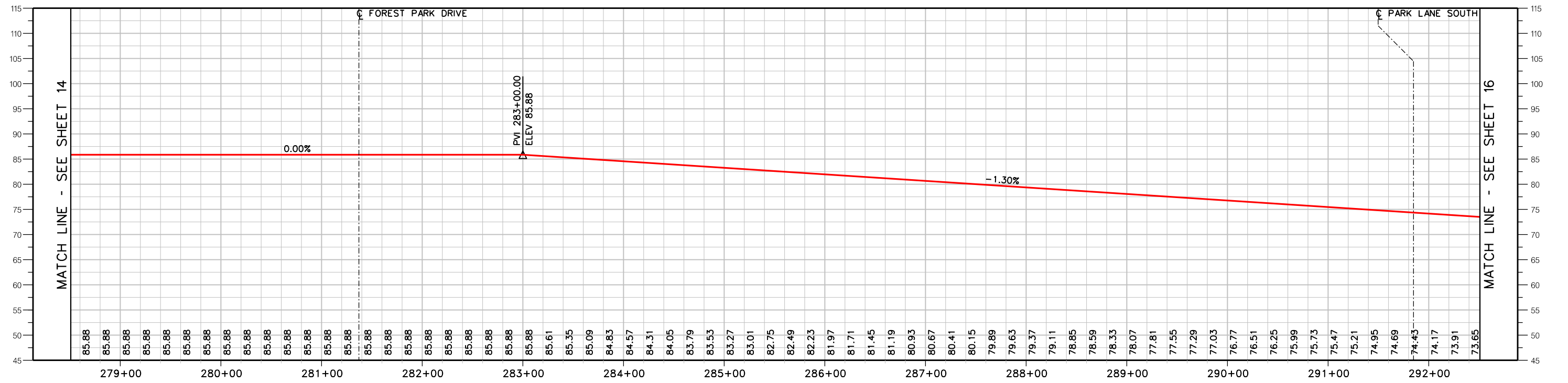
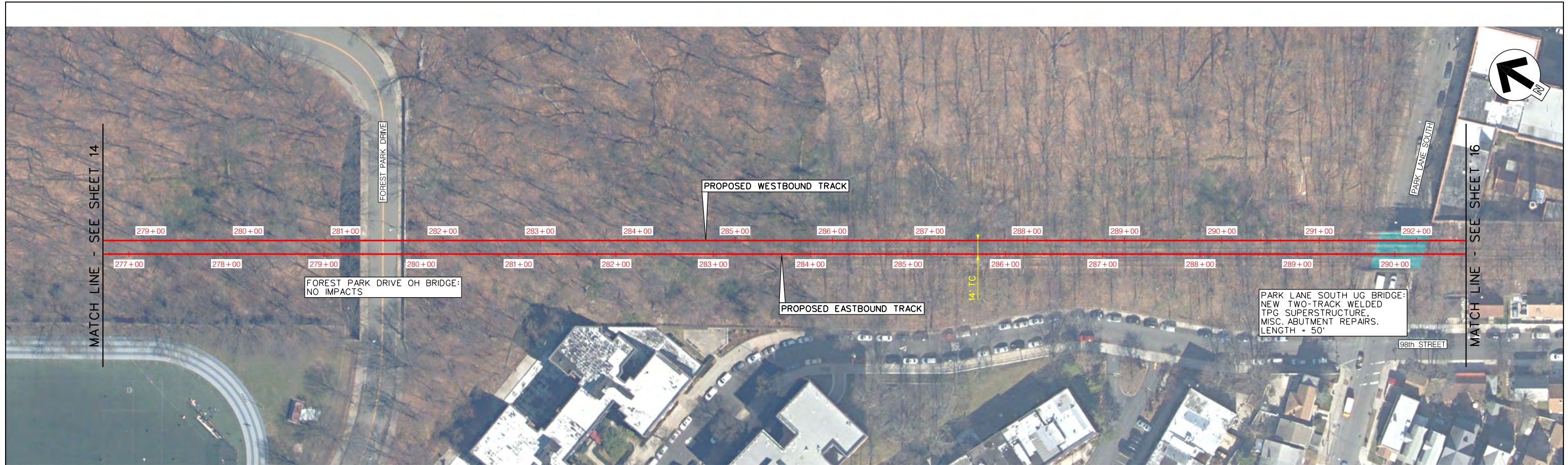
- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/RETAINING WALL

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LONG ISLAND RAIL ROAD
 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 14 OF 29

SCALE: AS NOTED
 DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL

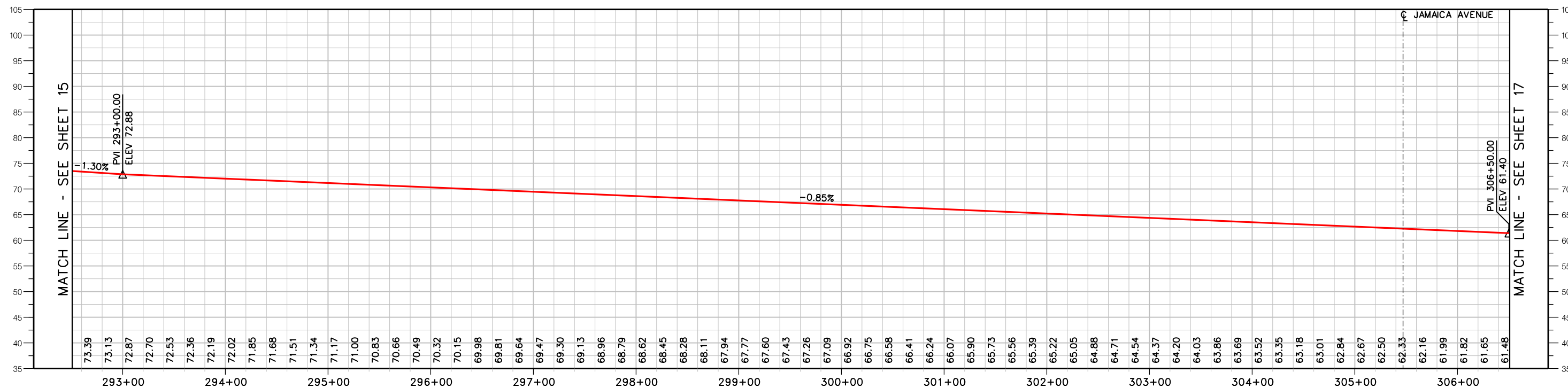
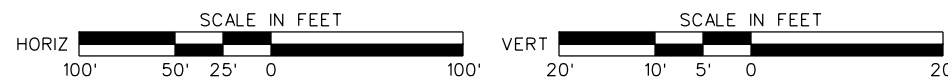
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 15 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

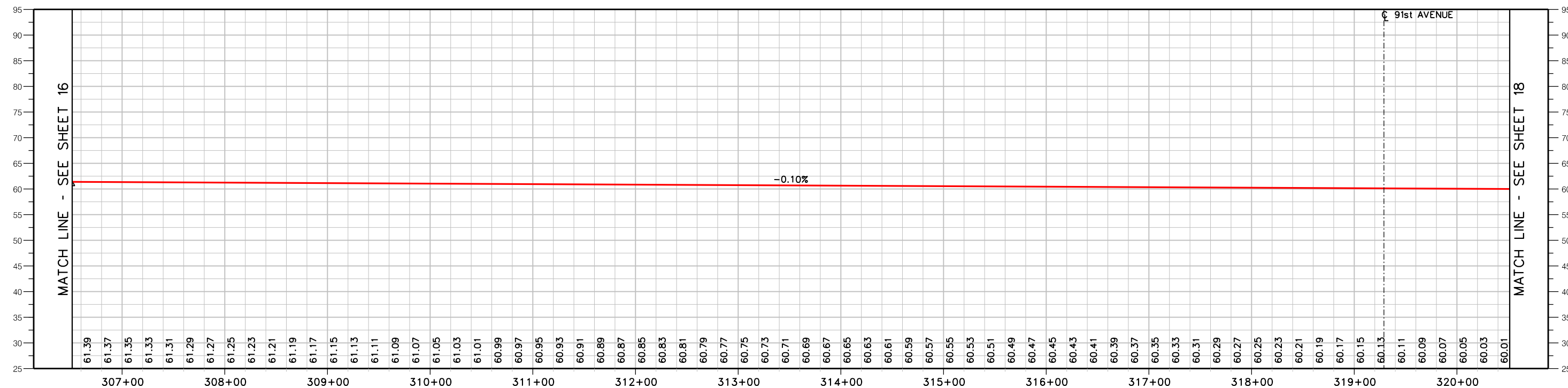
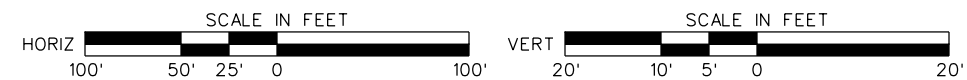
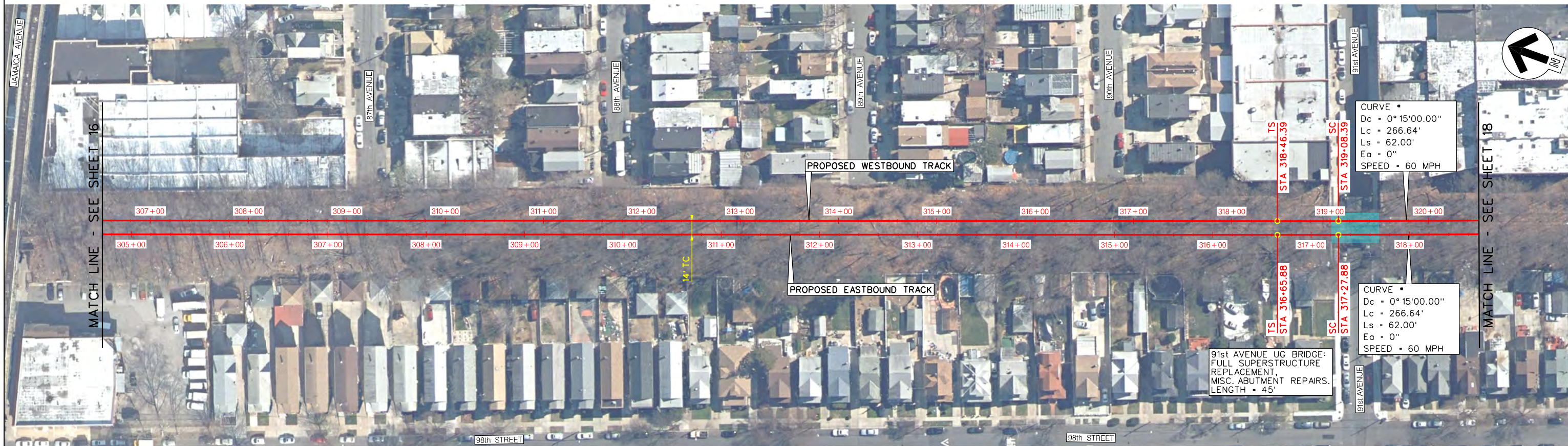
- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/RETAINING WALL

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LONG ISLAND RAIL ROAD
 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 16 OF 29

SCALE: AS NOTED
 DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL

SYSTRA

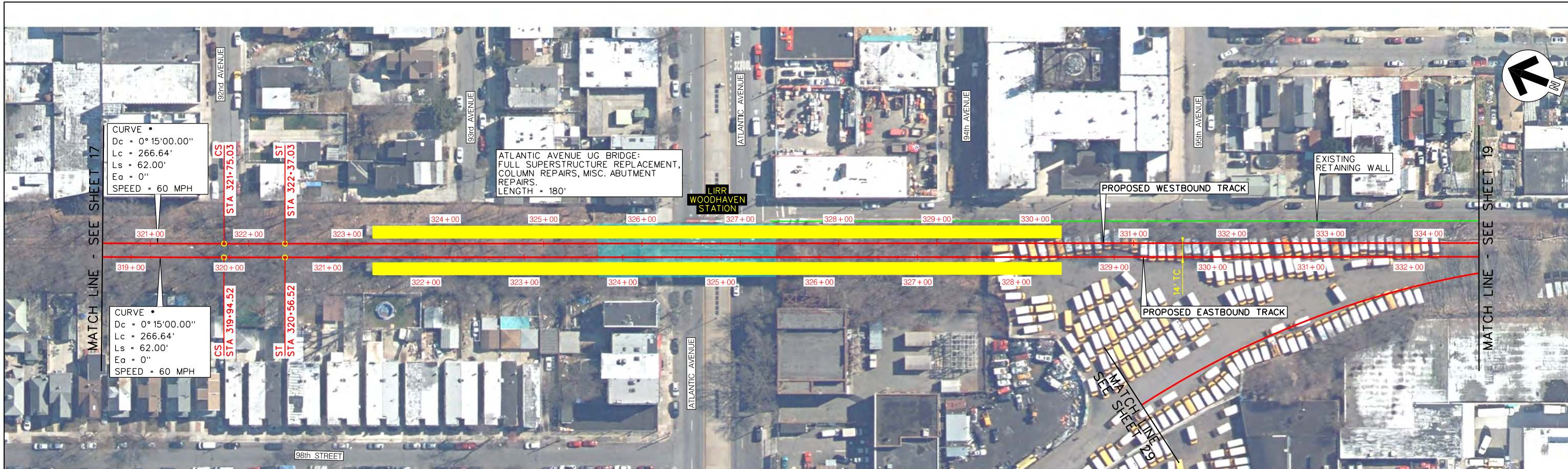
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 17 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



CURVE •
 Dc = 0° 15' 00.00"
 Lc = 266.64'
 Ls = 62.00'
 Ea = 0"
 SPEED = 60 MPH

CURVE •
 Dc = 0° 15' 00.00"
 Lc = 266.64'
 Ls = 62.00'
 Ea = 0"
 SPEED = 60 MPH

ATLANTIC AVENUE UG BRIDGE:
 FULL SUPERSTRUCTURE REPLACEMENT,
 COLUMN REPAIRS, MISC. ABUTMENT
 REPAIRS.
 LENGTH = 180'

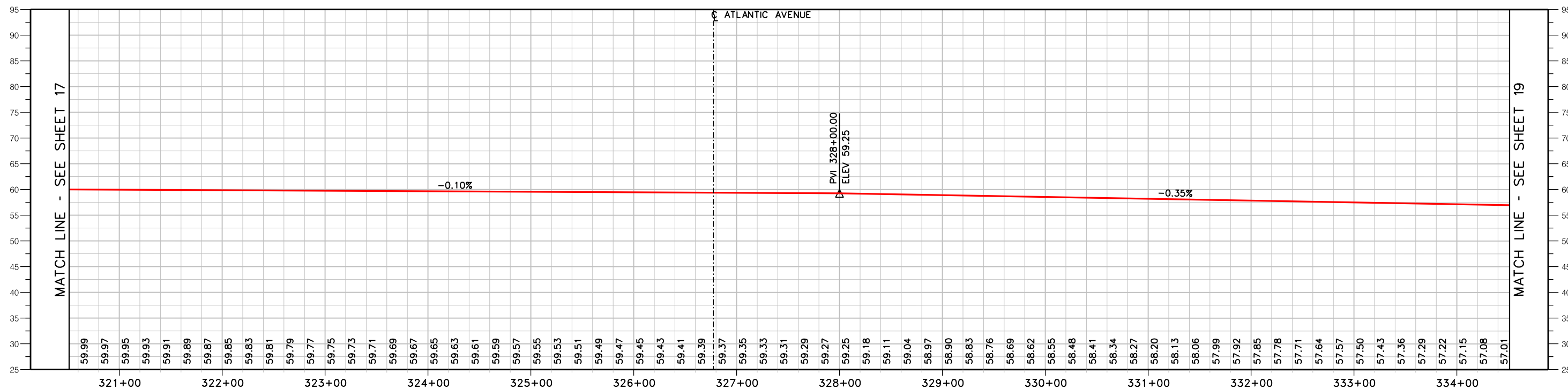
LIRR
 WOODHAVEN
 STATION

PROPOSED WESTBOUND TRACK

EXISTING
 RETAINING WALL

PROPOSED EASTBOUND TRACK

SEE
 MATCH LINE
 29



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL

SYSTRA

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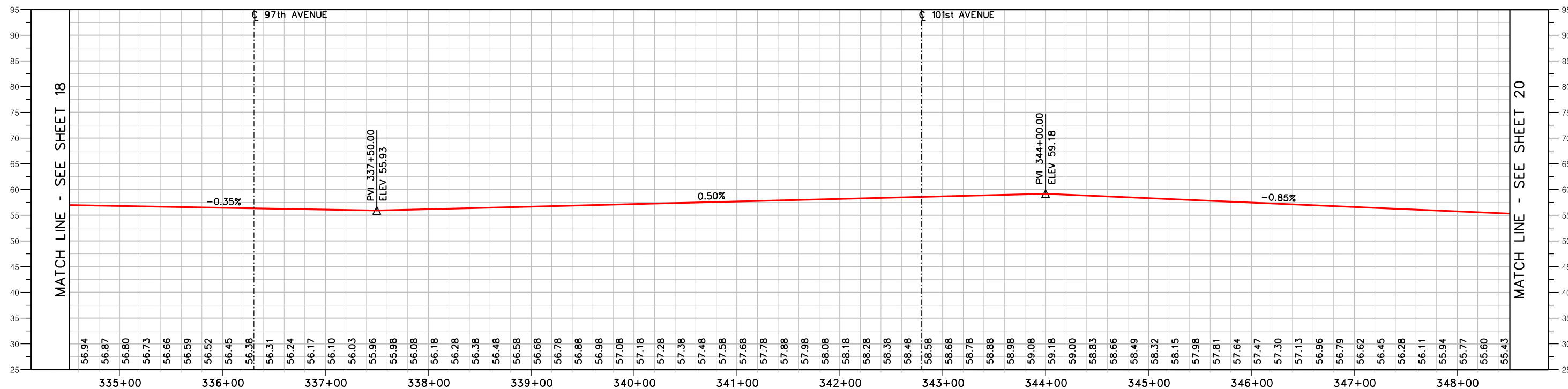
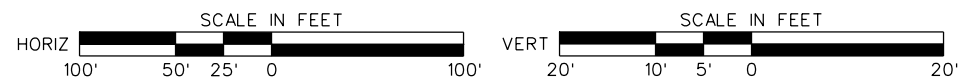
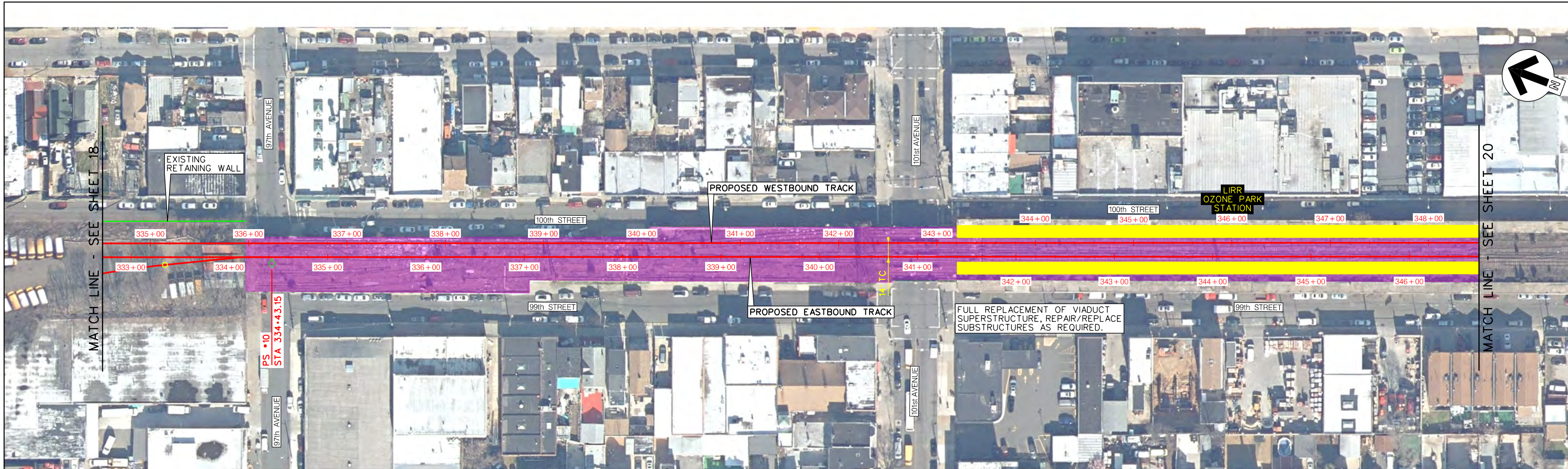
CONCEPTUAL
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LONG ISLAND RAIL ROAD
 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 18 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017





LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/RETAINING WALL

SYSTRA

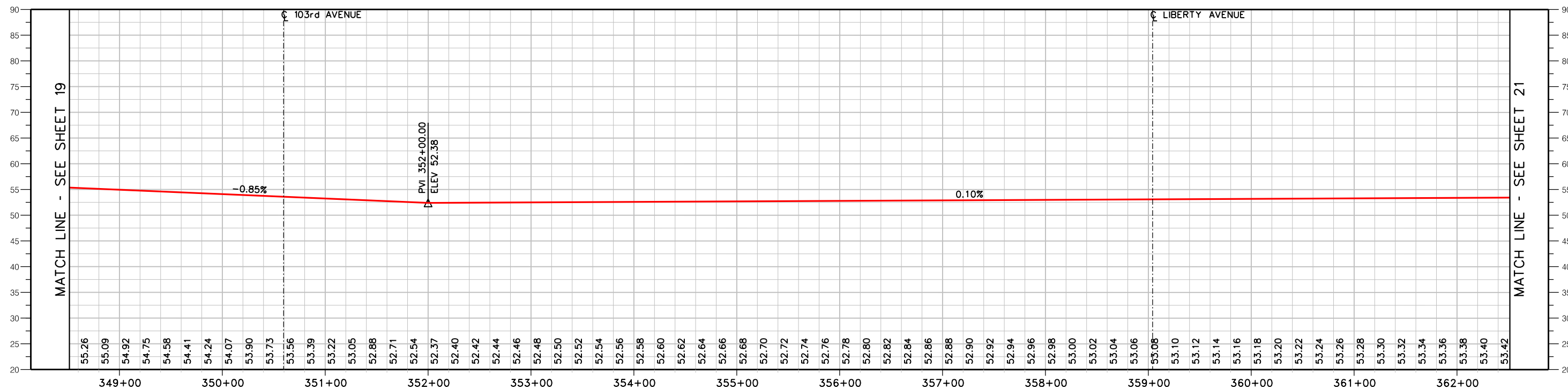
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 19 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL



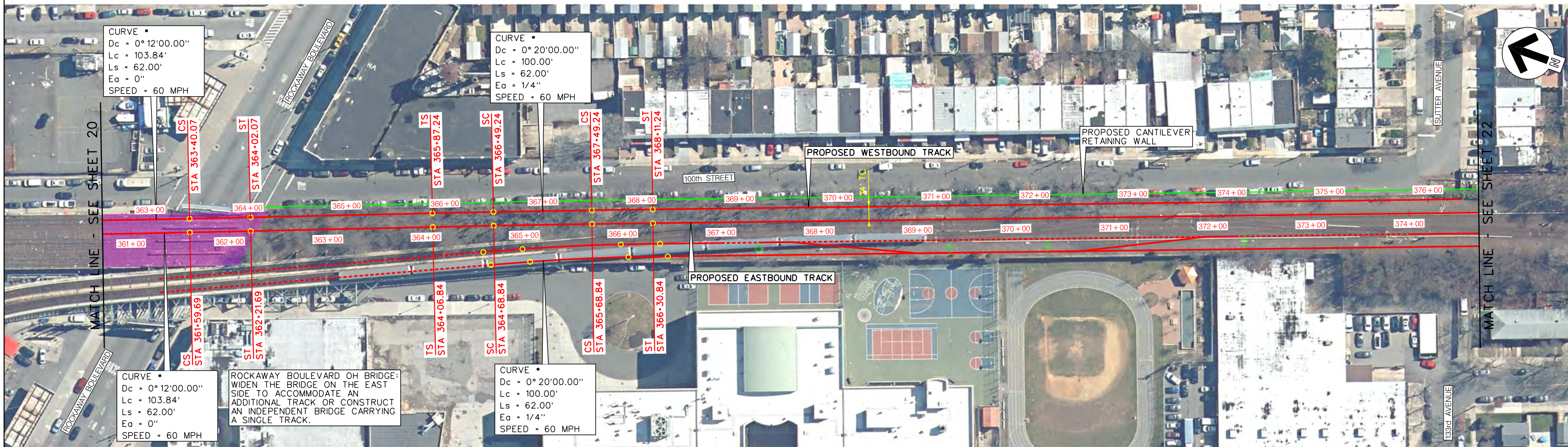
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 20 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



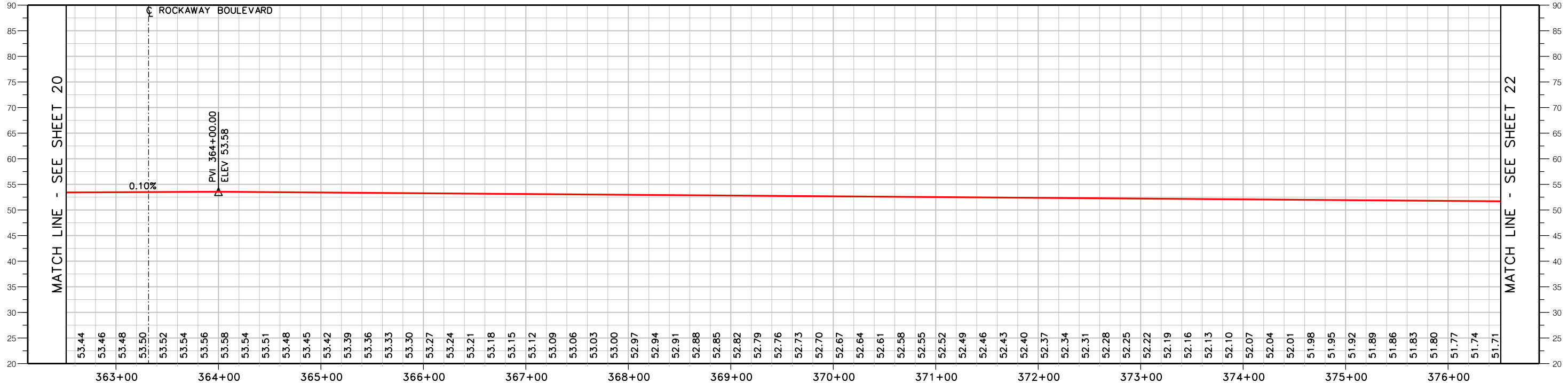
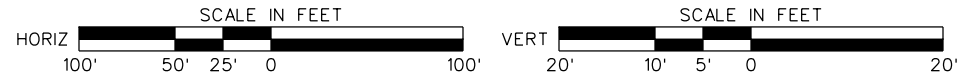
CURVE •
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 Lc = 103.84'
 Ls = 62.00'
 Ea = 0"
 SPEED = 60 MPH

CURVE •
 Dc = 0° 20'00.00"
 Lc = 100.00'
 Ls = 62.00'
 Ea = 1/4"
 SPEED = 60 MPH

CURVE •
 Dc = 0° 12'00.00"
 Lc = 103.84'
 Ls = 62.00'
 Ea = 0"
 SPEED = 60 MPH

ROCKAWAY BOULEVARD OH BRIDGE:
 WIDEN THE BRIDGE ON THE EAST
 SIDE TO ACCOMMODATE AN
 ADDITIONAL TRACK OR CONSTRUCT
 AN INDEPENDENT BRIDGE CARRYING
 A SINGLE TRACK.

CURVE •
 Dc = 0° 20'00.00"
 Lc = 100.00'
 Ls = 62.00'
 Ea = 1/4"
 SPEED = 60 MPH



LEGEND:

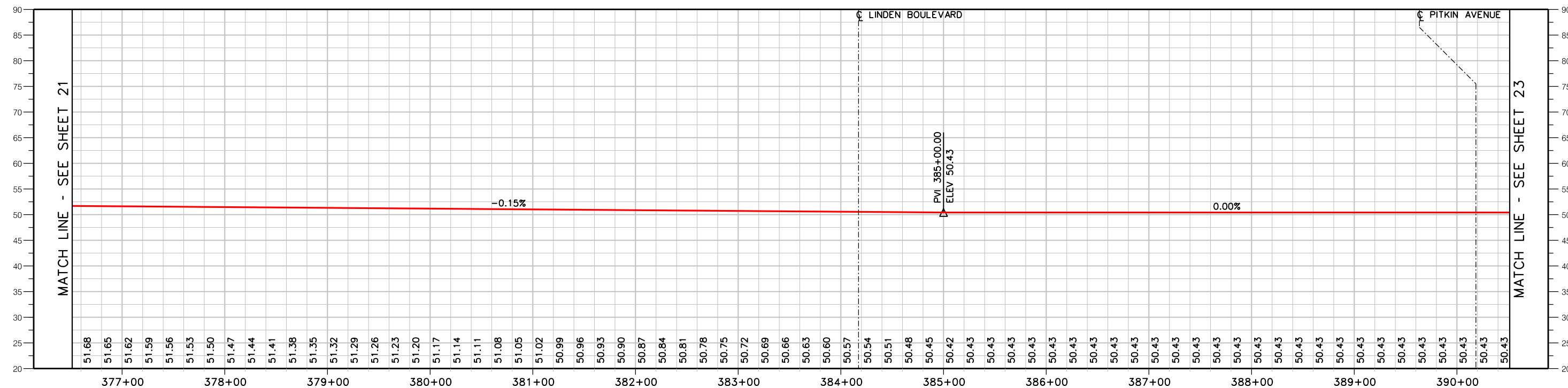
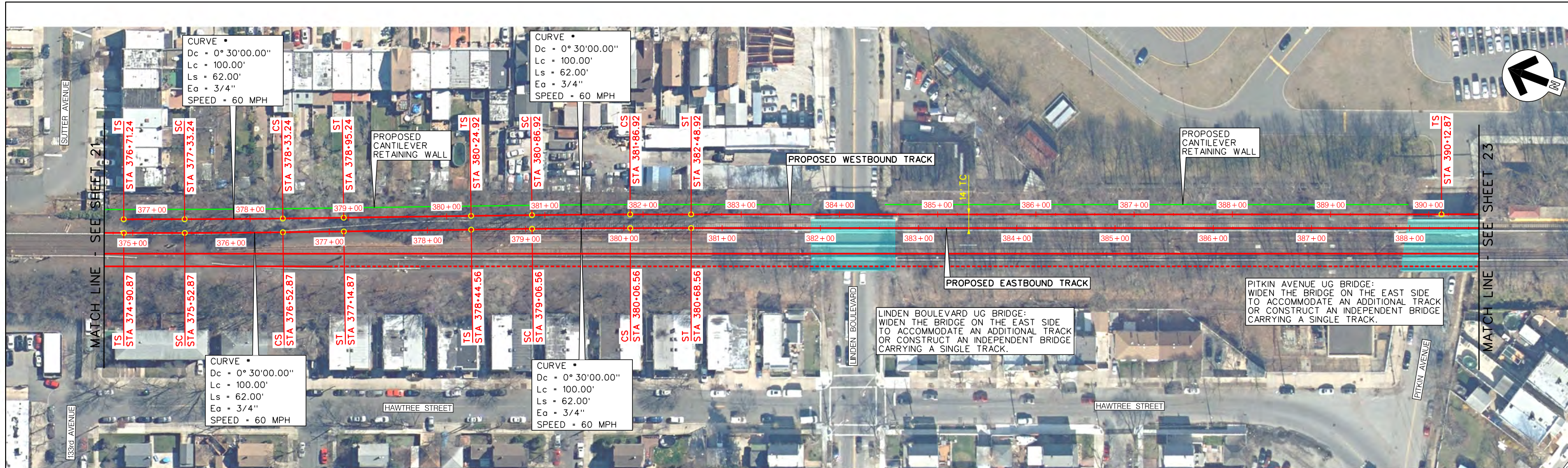
- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL

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 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 21 OF 29

SCALE: AS NOTED
 DATE: OCTOBER 2017



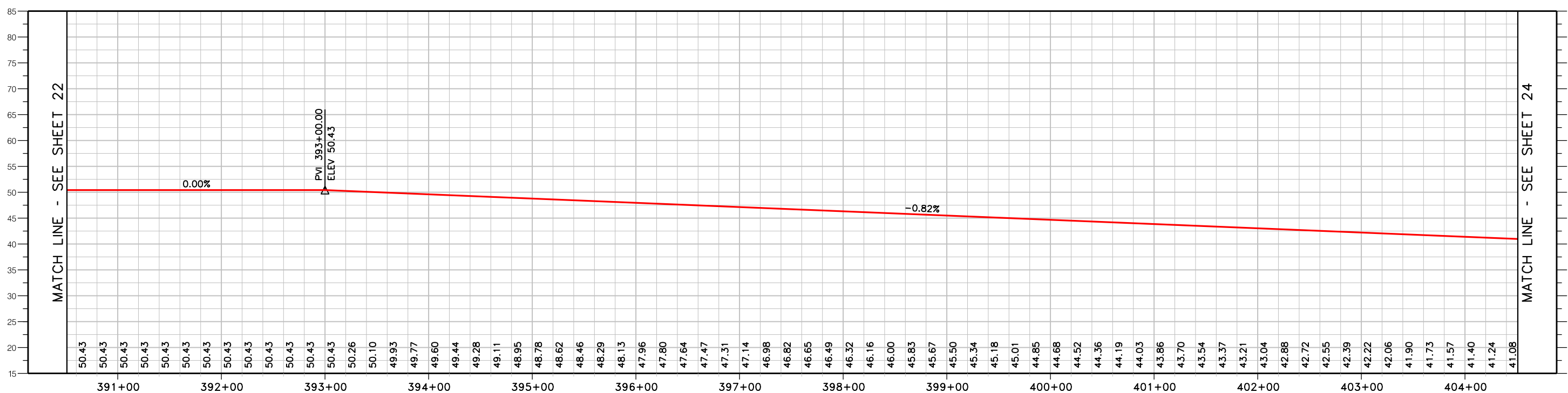
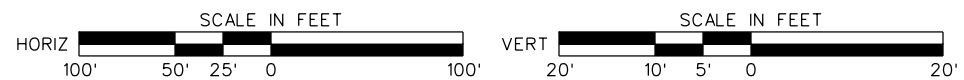
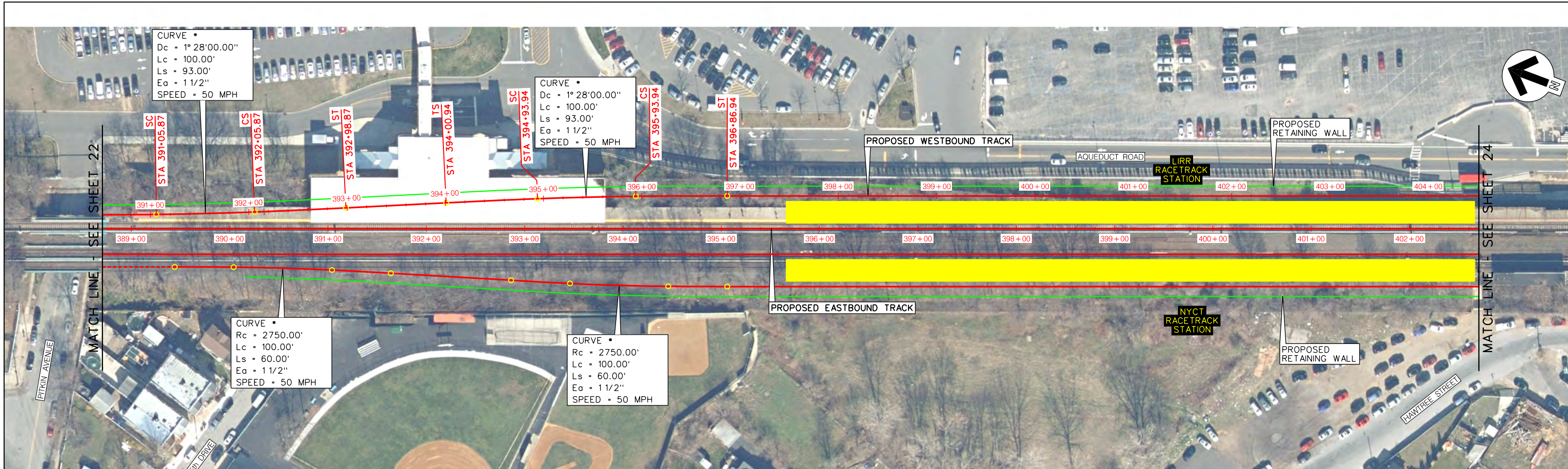
- LEGEND:**
- EXISTING TRACK
 - PROPOSED TRACK
 - EXISTING GROUND
 - UG BRIDGE
 - VIADUCT
 - TUNNEL WALL/RETAINING WALL

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 NOT FOR
 CONSTRUCTION

LONG ISLAND RAIL ROAD
 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 22 OF 29

SCALE: AS NOTED
 DATE: OCTOBER 2017



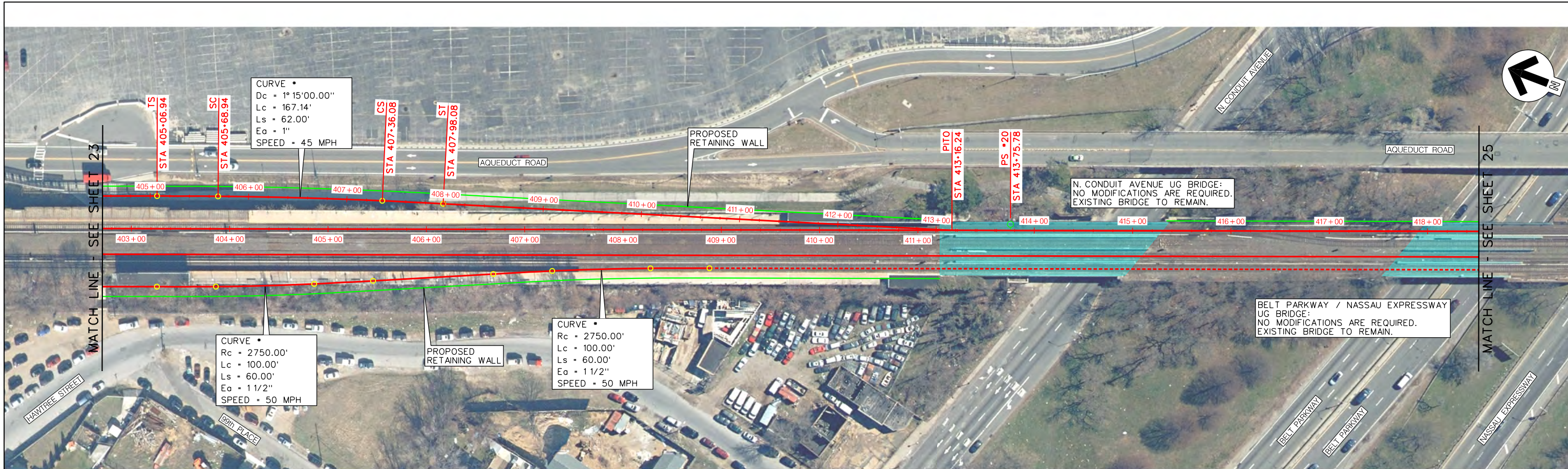
- LEGEND:**
- EXISTING TRACK
 - PROPOSED TRACK
 - EXISTING GROUND
 - UG BRIDGE
 - VIADUCT
 - TUNNEL WALL / RETAINING WALL



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LONG ISLAND RAIL ROAD
 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 23 OF 29

SCALE: AS NOTED
 DATE: OCTOBER 2017



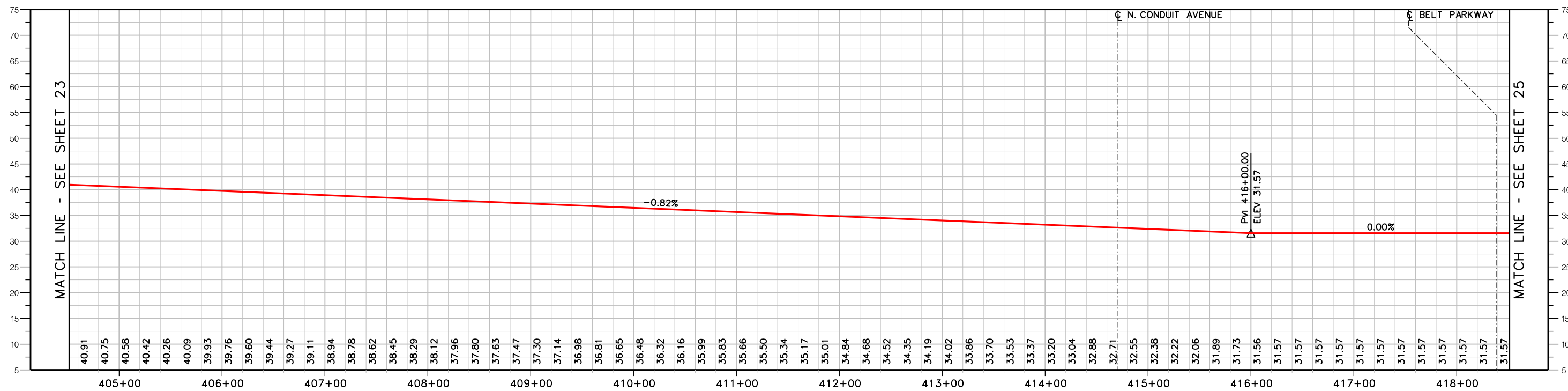
CURVE •
 Dc = 1° 15' 00.00"
 Lc = 167.14'
 Ls = 62.00'
 Ea = 1"
 SPEED = 45 MPH

CURVE •
 Rc = 2750.00'
 Lc = 100.00'
 Ls = 60.00'
 Ea = 1 1/2"
 SPEED = 50 MPH

CURVE •
 Rc = 2750.00'
 Lc = 100.00'
 Ls = 60.00'
 Ea = 1 1/2"
 SPEED = 50 MPH

N. CONDUIT AVENUE UG BRIDGE:
 NO MODIFICATIONS ARE REQUIRED.
 EXISTING BRIDGE TO REMAIN.

BELT PARKWAY / NASSAU EXPRESSWAY
 UG BRIDGE:
 NO MODIFICATIONS ARE REQUIRED.
 EXISTING BRIDGE TO REMAIN.



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL / RETAINING WALL

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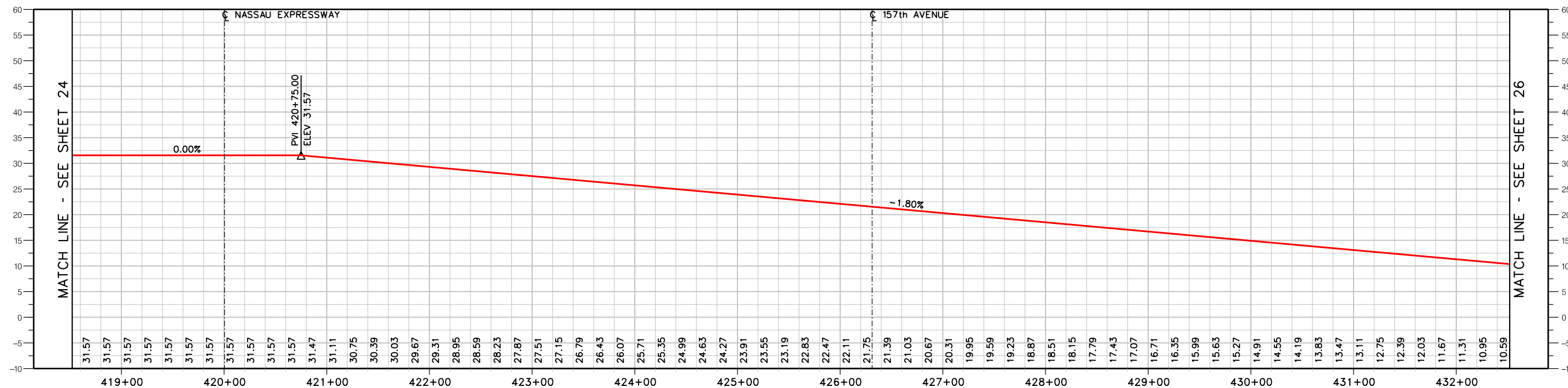
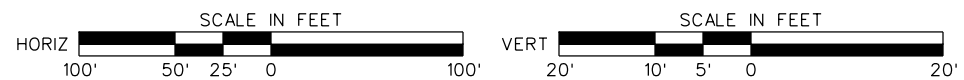
LONG ISLAND RAIL ROAD
 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 24 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



BELT PARKWAY / NASSAU EXPRESSWAY
UG BRIDGE:
NO MODIFICATIONS ARE REQUIRED.
EXISTING BRIDGE TO REMAIN.



LEGEND:

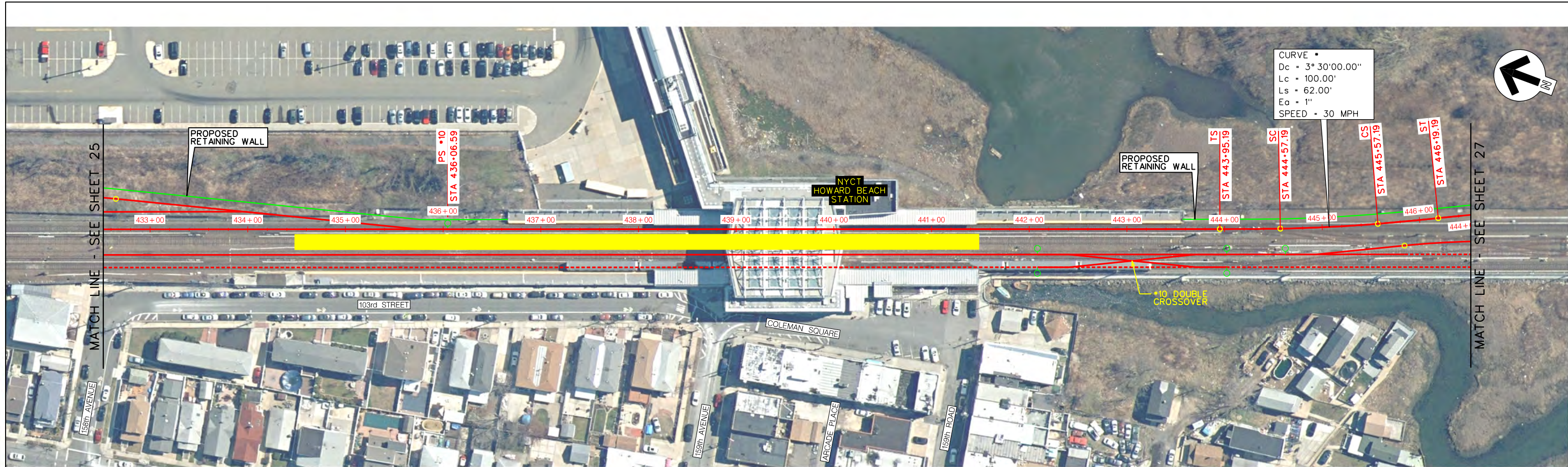
- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL / RETAINING WALL

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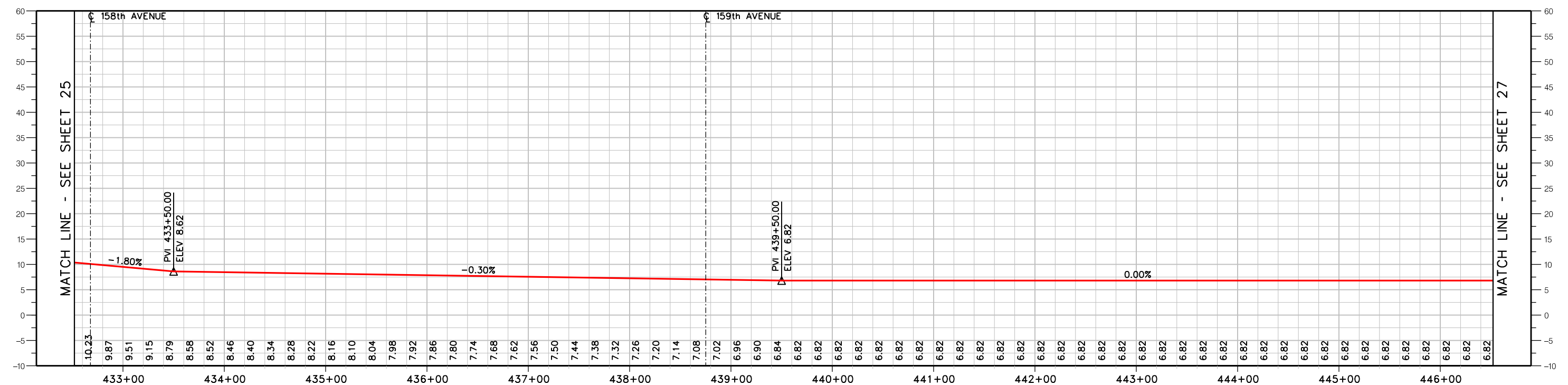
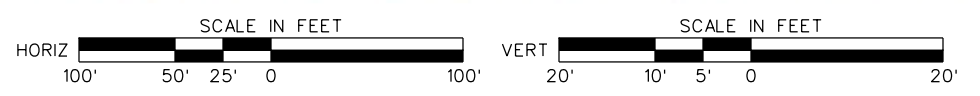
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 25 OF 29

SCALE: AS NOTED
 DATE: OCTOBER 2017



CURVE •
 Dc = 3° 30'00.00"
 Lc = 100.00'
 Ls = 62.00'
 Ea = 1"
 SPEED = 30 MPH



LEGEND:

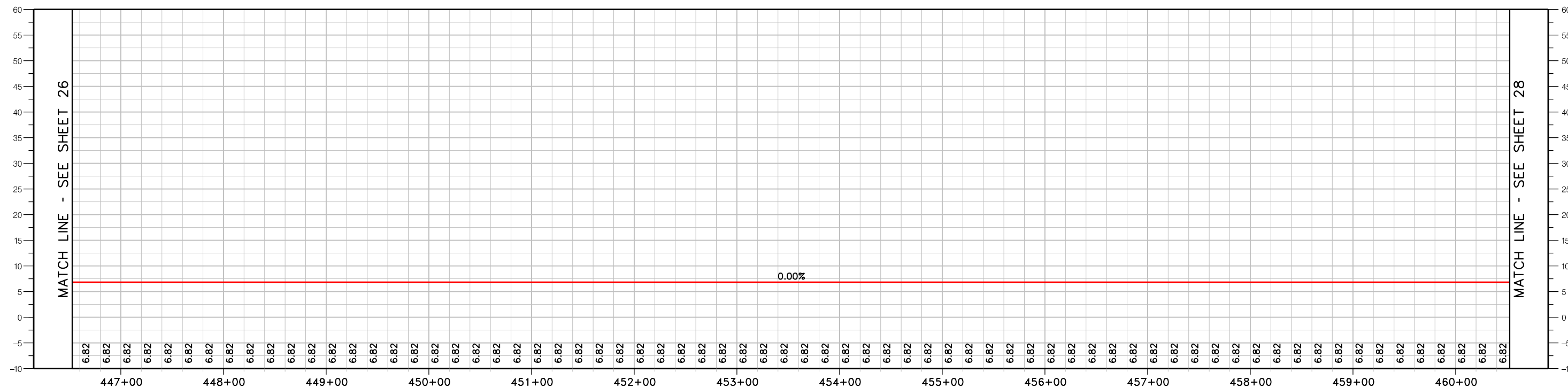
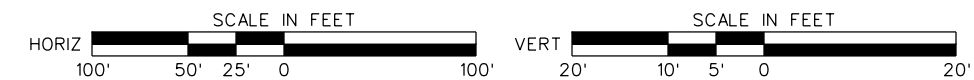
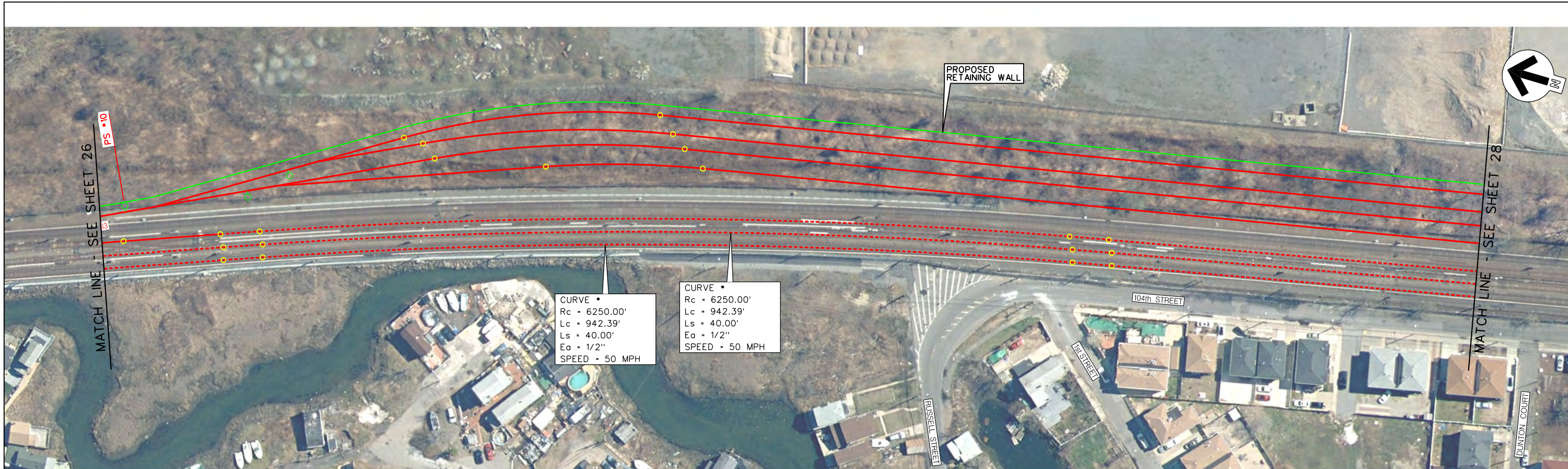
- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL

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LONG ISLAND RAIL ROAD
 RESTORATION OF THE ROCKAWAY BEACH BRANCH
 LIRR ALIGNMENT LAYOUT
 SHEET 26 OF 29

SCALE: AS NOTED
 DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL/
RETAINING WALL

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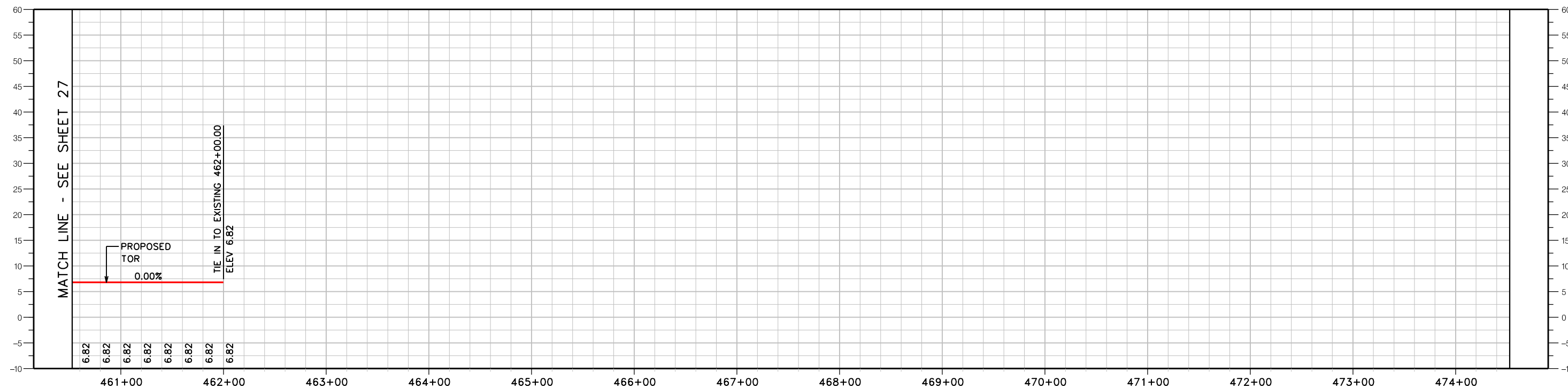
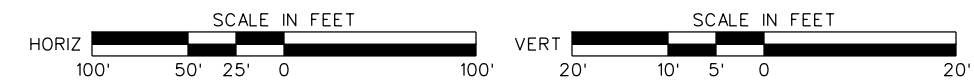
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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 27 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL / RETAINING WALL

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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 28 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017



LEGEND:

- - - - - EXISTING TRACK
- PROPOSED TRACK
- EXISTING GROUND
- UG BRIDGE
- VIADUCT
- TUNNEL WALL / RETAINING WALL

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LONG ISLAND RAIL ROAD
RESTORATION OF THE ROCKAWAY BEACH BRANCH
LIRR ALIGNMENT LAYOUT
SHEET 29 OF 29

SCALE: AS NOTED

DATE: OCTOBER 2017