LETTING DATE
DEC 21, 2027

PCC Pavement- Grade and Pave
NHSX-058-1(097)--3H-07

BLACK HAWK COUNTY

## INDEX OF SHEETS



IOWA DOT

REVISIONS

| TOTAL 200 |
|---|
| PROJECT IDENTIFICATION NUMBER |
| 12-07-058-010-01 |
| PROJECT NUMBER |
| NHSX-058-1(097)--3H-07 |
| R.O.W. PROJECT NUMBER |
| NHSX-058-1(098)--2R-07 |

PLANS OF PROPOSED IMPROVEMENT ON THE

# PRIMARY ROAD SYSTEM
# BLACK HAWK COUNTY
## PCC Pavement- Grade and Pave

IA 58 at Greenhill Rd in Cedar Falls
Sta 186+33.21 to 267+38.32

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

### MILEAGE SUMMARY

105-1
09-27-94

| Div. | Location | Lin. Ft. | Miles |
|---|---|---|---|
| I | IA HWY 58 | | |
| | STA. 186+33.21 TO STA. 267+38.32 | 8105.11 | 1.535 |
| I | GREENHILL ROAD | | |
| | STA. 11+50.00 TO STA. 35+21.11 | 2371.11 | 0.449 |
| I | GREENHILL ROAD BRIDGE | | |
| | STA. 21+29.73 TO STA. 22+52.73 | -123.00 | -0.023 |
| | TOTAL LENGTH OF PROJECT | 10353.22 | 1.961 |

For Project Location Map Refer to Sheet A.2

Preliminary Earthwork:
38397.0 CY Cut (Total)
387330.3 CY Fill (Total)

| IA 58 DESIGN DATA URBAN | | | |
|---|---|---|---|
| 2022 | AADT | 21,200 | V.P.D. |
| 2050 | AADT | 31,800 | V.P.D. |
| 2050 | DHV | 4,970 | V.P.H. |
| TRUCKS | | 5 | % |
| Total Design ESALs | | - | |

| GREENHILL RD DESIGN DATA URBAN | | | |
|---|---|---|---|
| 2022 | AADT | 10,400 | V.P.D. |
| 2050 | AADT | 20,100 | V.P.D. |
| 2050 | DHV | 2,400 | V.P.H. |
| TRUCKS | | 3 | % |
| Total Design ESALs | | - | |

| INDEX OF SEALS | | |
|---|---|---|
| SHEET NO. | NAME | TYPE |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN - Date: X

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **A.1** |
|---|---|---|---|---|---|

5:06:03 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\A01_07058097Z05.dgn

R–14W

R–13W

T–89N

STA 11+50.00
BEGIN PROJECT

STA 267+38.32
END PROJECT

STA 35+21.11
END PROJECT

PROJECT
LOCATION

STA 186+33.21
BEGIN PROJECT



LOCATION MAP SCALE
0 0.2 0.4 0.6
Miles

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **A.2** |
|---|---|---|---|---|---|

4:39:14 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\A01_07058097Z05.dgn

| Roadway | IA-58 | | | |
|---|---|---|---|---|
| PIN Number | 12-07-058-010-01 | | Submittal Date | 07/12/24 |
| Project Number | NHSX-058-1(097)--3H-07 | | | Approval Date |
| District | District 2 | Assistant District Engineer | Nick Humpal | |
| County | BLACK HAWK | or | | |
| Route | IA-58 | Office Director | | |
| Location | IA-58 and Greenhill Rd | | | |
| Work Type | Unkown Pavement - Grade and New | | | |
| Segment Manager | | | | |
| Designer | AECOM | | | |

Design Manual Section 1C-1
Last Updated: 04-29-19

## Urban Interstates (Urban Freeways)

| Design Element | | Preferred | Acceptable | Project Values |
|---|---|---|---|---|
| Design speed (mph) | | 5 miles above the anticipated posted speed limit | 50 | 65 |
| Maximum superelevation rate (%) (Refer to Section 2A-2) | | 6 | 8 | 6% |
| Design lane width (ft) | | 12 | 12 | 12 |
| Full depth paved width (ft) | Outside lane | 12 | 12 | 12 |
| | Inside lane(s) | 12 | 12 | 12 |
| Auxiliary-lane width (ft) | | 12 | 12 | 12 |
| Pavement cross-slope | Through lanes | 2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3% | 1.5% minimum, 3 % maximum | 2% |
| | Auxiliary lanes | 3% | 3% maximum | 3% |
| | Crown break at centerline | 4% | 4% maximum | 4% |
| Shoulder cross-slope | Interstates | 4% | 6% max, but not less than the cross slope of the adjacent lane | N/A |
| | Freeways | 4% | 6% max, but not less than the cross slope of the adjacent lane | 3% |
| Curb type (Refer to Section 3C-2) | Interstates | 4-inch sloped | 4-inch sloped | |
| | Freeways | 4-inch sloped | 4-inch sloped | 4-inch sloped |
| Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance) | Adjacent to shoulder | 10:1 for 4' then 6:1 | 4:1 for Interstates, 3:1 for Freeways* | 10:1 for 4' then 4:1 |
| | Beyond standard ditch depth and design clear zone | 3.5:1 | 3:1 | 3:1 |
| | Curbed roadways | 2% | 4:1 for Interstates, 3:1 for Freeways* | 2% for 10' then 4:1 |
| Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.) | | 3:1 | 2.5:1 | 3:1 |
| Transverse Slopes | w/ drainage structures | 8:1 | 6:1 | 8:1 |
| | w/o drainage structures | 10:1 | 6:1 | 10:1 |
| Ditches (Refer to Section 3G-1) | Outside ditch (depth x width) (ft) | 5 x 10 | -- | Varies x 10 |
| | Median ditch depth (ft) | 4 | -- | Storm Sewer |
| Median width (ft) (Refer to Section 3E-1) | Interstates | 34 | 10 | |
| | Freeways | 34 | 10 | 22 |
| Bridge width—new*** | Bridge length ≤ 200 ft | design lane widths + effective shoulder widths | design lane widths + effective shoulder widths | N/A |
| | Bridge length > 200 ft | design lane widths + effective shoulder widths | design lane width + 4' right and left of the design lane widths | N/A |
| Bridge width—existing*** | Bridge length ≤ 200 ft | design lane widths + no less than 10' right and 3.5' left | design lane widths + 10' right shoulder and 3.5' left shoulder | N/A |
| | Bridge length > 200 ft | design lane widths + no less than 3.5' left and right | design lane widths + 3.5' right and left of the design lane widths | N/A |
| Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)) | Over primary | 16.5 | 16 | N/A |
| | Over non-primary | 16.5 at interchange locations, 15 ft at all other locations | 14 | N/A |
| | Over railroad | 23.3 | 23.3 | N/A |
| | Sign trusses and pedestrian crossings | 17.5 | 17 | N/A |
| Structural Capacity | | Contact Office of Bridges and Structures | Contact Office of Bridges and Structures | N/A |
| Level of Service | Freeway segments | C | C** | C |
| | Auxiliary Facilities | C | C** | C |

*Design Exception not required for Freeways
**LOS D may be acceptable in spot locations with FHWA approval
***FHWA notification via email is required if acceptable criteria is not met on the Interstate or NHS systems (No formal design exception required)

**Directional Design Hourly Volume (DDHV) for Trucks = 249**

Design Manual Section 1C-1
Last Updated: 04-29-19

## Effective Shoulder Width and Type for Interstates (Freeways)

| Auxiliary Lanes | Preferred (values shown in feet) | | Acceptable (values shown in feet) | | Project Values |
|---|---|---|---|---|---|
| | Effective Shoulder Width | Paved Width | Effective Shoulder Width | Paved Width | |
| | 6 | 6 | 6 | 6 | 10 |

### 4-Lane Sections

| Design Year Traffic | Outside | | Median Side | | Outside | | Median Side | | Project Values |
|---|---|---|---|---|---|---|---|---|---|
| | Effective Shoulder Width | Paved Width | Effective Shoulder Width | Paved Width | Effective Shoulder Width | Paved Width | Effective Shoulder Width | Paved Width | |
| Less than or equal to 250 DDHV | 10 | 10 | 6 | 6 | 10 | 10 | 4 | 4 | 10 |
| Greater than 250 DDHV | 12 | 12 | 6 | 6 | 12 | 12 | 4 | 4 | |

### Sections with 6 or more lanes

| Design Year Traffic | Outside | | Median Side | | Outside | | Median Side | | Project Values |
|---|---|---|---|---|---|---|---|---|---|
| | Effective Shoulder Width | Paved Width | Effective Shoulder Width | Paved Width | Effective Shoulder Width | Paved Width | Effective Shoulder Width | Paved Width | |
| Less than or equal to 250 DDHV | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| Greater than 250 DDHV | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |

Curbs should be located beyond the outer edge of the paved shoulder

**Roadway Design Speed (mph) = 65**

Design Manual Section 1C-1
Last Updated: 04-29-19

## Design Criteria for High Speed Roadways

| Design Element | | | Preferred Criteria, Design Speed, mph | | | | | | Acceptable Criteria, Design Speed, mph | | | | | | Project Values |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 50 | 55 | 60 | 65 | 70 | 75 | 50 | 55 | 60 | 65 | 70 | 75 | |
| Stopping sight distance (ft) (Refer to Section 6D-1) | | | 425 | 495 | 570 | 645 | 730 | 820 | 425 | 495 | 570 | 645 | 730 | 820 | 645 |
| Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3) | Method 5 superelevation and side friction distribution | $e_{max}$ = 6% | 833 | 1060 | 1330 | 1660 | 2040 | 2500 | 833 | 1060 | 1330 | 1660 | 2040 | 2500 | 1660 |
| | | $e_{max}$ = 8% | -- | -- | -- | -- | -- | -- | 758 | 960 | 1200 | 1480 | 1810 | 2210 | |
| Minimum vertical curve length (ft) (Refer to Section 2B-1) | | | 150 | 165 | 180 | 195 | 210 | 225 | 150 | 165 | 180 | 195 | 210 | 225 | 200 |
| Minimum rate of vertical curvature (K) (Refer to Section 2B-1) | crest vertical curves | | 84 | 114 | 151 | 193 | 247 | 312 | 84 | 114 | 151 | 193 | 247 | 312 | 166/197 |
| | sag vertical curves | roadways without fixed-source lighting | 96 | 115 | 136 | 157 | 181 | 206 | 96 | 115 | 136 | 157 | 181 | 206 | |
| | | roadways with fixed-source lighting | 96 | 115 | 136 | 157 | 181 | 206 | 54 | 66 | 78 | 91 | 106 | 121 | |
| Minimum gradient (%) | (Refer to Section 2B-1) | | 0.5 | | | | | | 0.3% with a curb, 0.0% without a curb | | | | | | |
| Maximum gradient (%) | (Refer to Section 2B-1) | Urban roadways | 4 | | | 3 | | | 7 | 6 | 6 | -- | -- | -- | 1.71% |
| | | Rural roadways | | | | | | | 5 | 5 | 4 | 4 | 4 | 4 | |
| | | Interstates | | | | | | | 5 | 5 | 4 | 4 | 4 | 4 | |
| Clear zone | | | See "Preferred Clear Zone" table in Section 8A-2 | | | | | | See "Acceptable Clear Zone" table in Section 8A-2 | | | | | | 30 |

| Roadway | Greenhill Rd | | | |
|---|---|---|---|---|
| PIN Number | 12-07-058-010-01 | | Submittal Date | 07/12/24 |
| Project Number | NHSX-058-1(097)--3H-07 | | | Approval Date |
| District | District 2 | Assistant District Engineer | Nick Humpal | |
| County | BLACK HAWK | or | | |
| Route | IA-58 | Office Director | | |
| Location | IA-58 and Greenhill Rd | | | |
| Work Type | Unkown Pavement - Grade and New | | | |
| Segment Manager | | | | |
| Designer | AECOM | | | |

Design Manual Section 1C-1
Last Updated: 04-29-19

## Urban Multilane Roadways (Urban Arterials)

| Design Element | | Preferred | Acceptable Criteria | Project Values |
|---|---|---|---|---|
| Design speed (mph) | | The anticipated posted speed limit | 30 | 45 |
| Maximum superelevation rate (Refer to Section 2A-2) | | 4% | 8% | 2% |
| Design lane width (ft) | | 12 | 11 | 12 |
| Full depth paved width (ft) | Outside lane | Design lane width + curb and gutter unit or 12 feet for roadways with shoulders | Match design lane width | 12 |
| | Inside lane(s) | Design lane width + curb and gutter unit. 12' for roadways without a curb and gutter unit | Match design lane width | 12 |
| Right turn lane or an auxiliary lane (ft) | | 12 | 10 | N/A |
| Left turn lane (ft) | With raised or painted median | 12 ft + median | 10 ft + median | N/A |
| | With depressed median | 12 | 10 | N/A |
| Two-way left turn lane (ft) | | 14 | 11 | N/A |
| Parking lane width (ft) | | 10 | 7 | N/A |
| Pavement cross-slope (on tangent sections) | Through lanes | 2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3% | 1.5% minimum, 3% maximum | 2% |
| | Auxiliary and turn lanes | 3% | 3% maximum | 3% |
| | Crown break at centerline | 4% | 4% maximum | 4% |
| Shoulder cross-slope (on tangent sections) | Shoulders | 4% | Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders | 3% |
| | Curb and gutter units | Match pavement cross-slope | 6% maximum | Match pavement cross-slope |
| | Parking lanes | 1% greater than pavement cross-slope | 6% maximum | N/A |
| Curb type (Refer to Section 3C-2) | Design speed ≤ 45 mph | 6-inch standard | any shape | 6-inch sloped |
| Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance) | Adjacent to shoulder | 10:1 for 4' then 6:1 | 3:1 | N/A |
| | Beyond standard ditch depth and design clear zone | 3.5:1 | 3:1 | 3:1 |
| | Curbed roadways | 2% | not steeper than 3:1 | 2% |
| Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.) | | 3:1 | 2.5:1 | 3:1 |
| Transverse Slopes | w/ drainage structures | 8:1 | 6:1 | N/A |
| | w/o drainage structures | 10:1 | 6:1 | N/A |
| Ditches (Refer to Section 3G-1) | Outside ditch (depth x width) (ft) | 5 x 10 | – | Varies x 5 |
| Median width (ft) (Refer to Section 3E-1) | | See Section 3E-1 | 0 | 22 |
| Bridge width—new* | Bridge length ≤ 200 ft | design lane widths + effective shoulder widths or design lane width + 3 ft each side in curb and gutter section | design lane widths + effective shoulder widths or curb-to-curb width in curb and gutter section** | 167.5' |
| | Bridge length > 200 ft | design lane widths + effective shoulder widths or design lane width + 3 ft each side in curb and gutter section | design lane widths + 4 ft offset each side for roadways with shoulders or curb-to-curb width in curb and gutter section** | N/A |
| Bridge width—existing* | | design lane widths + no less than 2 ft left and right | design lane widths + 2 ft left and right of the design widths | N/A |
| Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks) | Over primary | 16.5 | 16 | N/A |
| | Over non-primary | 16.5 at interchange locations, 15 at all other locations | 14 | 16.5 |
| | Over railroad | 23.3 | 23.3 | N/A |
| | Sign truss and pedestrian crossings | 17.5 | 17 | N/A |
| Structural Capacity | | Contact Office of Bridges and Structures | Contact Office of Bridges and Structures | N/A |
| Level of Service | | C | D | C |

*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception required)
** If travel lanes are less than 12 ft wide contact the Methods Section for assistance.

**Design year ADT = 20100**

Design Manual Section 1C-1
Last Updated: 04-29-19

## Effective Shoulder Width and Type for Multilane Arterials

| Preferred (Values shown in feet) | | | | | Acceptable (Values shown in feet) | | | | | Project Values |
|---|---|---|---|---|---|---|---|---|---|---|
| | Rural Roadways | | Urban Roadways | | | Rural Roadways | | Urban Roadways | | |
| Auxiliary lanes or turn lanes with shoulders | 6 | | 6 | | Auxiliary lanes or turn lanes with shoulders | 6 | | 0 | | N/A |
| Turn lanes with curbs | 6 | | See Section 3C-2 | | Turn lanes with curbs | 6 | | 0 | | N/A |
| Expressways | Outside | | Median Side | | Expressways | Outside | | Median Side | | |
| | Effective Shoulder Width | Paved Width | Effective Shoulder Width | Paved Width | | Effective Shoulder Width | Pavec Width | Effective Shoulder Width | Paved Width | |
| Routes where bicycles are to be accommodated | 10 | 10 | 6 | 6 | Routes where bicycles are to be accommodated | 8 | 4 | 4 | 4 | N/A |
| On roadways approaching urban areas (due to increased bike traffic) | 10 | 10 | 6 | 6 | | | | | | |
| On all curves with a superelevation rate of 7.0% or greater | 10 | 10 | 6 | 6 | On all other Expressways (Multilane Arterials) | 8 | 0* | 4 | 4 | |
| On roadways with design year ADT > 6500 vpd | 10 | 6 | 6 | 6 | | | | | | |
| On all other Expressways (Multilane Arterials) | 10 | 6 | 6 | 6 | | | | | | |

*Requires safety edge-See Section 3C-6
Curbs should be located beyond the outer edge of the effective shoulder width in rural areas
Refer to Section 3C-2 for curb offsets in urban areas

**Roadway Design Speed (mph) = 45**

Design Manual Section 1C-1
Last Updated: 05-26-17

## Design Criteria for LowSpeed Roadways

| Design Element | | | Preferred Criteria, Design Speed, mph | | | | | Acceptable Criteria, Design Speed, mph | | | | | Project Values |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 25 | 30 | 35 | 40 | 45 | 25 | 30 | 35 | 40 | 45 | |
| Stopping sight distance (ft) (Refer to Section 6D-1) | | | 155 | 200 | 250 | 305 | 360 | 155 | 200 | 250 | 305 | 360 | 360 |
| Minimum horizontal curve radius (ft) and superelevation rate (Refer to Sections 2A-2 and 2A-3) | Method 2 superelevation and side friction distribution | $e$ = 4% max | See Table 10 in Section 2A-3 | | | | | -- | | | | | N/A |
| | Method 5 superelevation and side friction distribution | $e_{max}$ = 6% | 144 | 231 | 340 | 485 | 643 | 144 | 231 | 340 | 485 | 643 | N/A |
| | | $e_{max}$ = 8% | -- | -- | -- | -- | -- | 134 | 214 | 314 | 444 | 587 | N/A |
| Minimum vertical curve length (ft) (Refer to Section 2B-1) | | | 75 | 90 | 105 | 120 | 135 | 75 | 90 | 105 | 120 | 135 | 550 |
| Minimum rate of vertical curvature (K) (Refer to Section 2B-1) | crest vertical curves | | 12 | 19 | 29 | 44 | 61 | 12 | 19 | 29 | 44 | 61 | 129 |
| | sag vertical curves | roadways without fixed-source lighting | 26 | 37 | 49 | 64 | 79 | 26 | 37 | 49 | 64 | 79 | 100 |
| | | roadways with fixed-source lighting | 26 | 37 | 49 | 64 | 79 | 14 | 20 | 27 | 35 | 44 | |
| Minimum gradient (%) | (Refer to Section 2B-1) | | 0.5 | | | | | 0.3% with a curb, 0.0% without a curb | | | | | 2.71% |
| Maximum gradient (%) | (Refer to Section 2B-1) | Urban roadways | 5 | | | | | -- | 9 | 8 | 8 | 7 | 3.82% |
| | | Rural roadways | | | | | | -- | -- | -- | 6 | 6 | |
| Clear zone | | | See "Preferred Clear Zone" table in Section 8A-2 | | | | | See "Acceptable Clear Zone" table in Section 8A-2 | | | | | |

| | | | |
|---|---|---|---|
| **Roadway** | IA-58 NB Ramp A | | |
| **PIN Number** | 12-07-058-010-01 | **Submittal Date** | 07/12/24 |
| **Project Number** | NHSX-058-1(097)--3H-07 | **Approval Date** | |
| **District** | District 2 | **Assistant District Engineer** | Nick Humpal |
| **County** | BLACK HAWK | **or** | |
| **Route** | IA-58 | **Office Director** | |
| **Location** | IA-58 and Greenhill Rd | | |
| **Work Type** | Unkown Pavement - Grade and New | | |
| **Segment Manager** | | | |
| **Designer** | AECOM | | |

Design Manual Section 1C-1
Last Updated: 04-29-19

## Ramps

| Design Element | | Preferred Values | Acceptable Values | Project Values | |
|---|---|---|---|---|---|
| Design speed (mph) | | See Design Speed for Ramps Table Below | See Design Speed for Ramps Table Below | 60/45/30 | -- |
| Design lane width (ft) | | | | | |
| Turn-lane width (ft) | Interstate ramps | 12 | 12 | N/A | IDG page 4, RDG 3.3.2 |
| | Non-interstate ramps | 12 | 10 | 12 | GB section 9.7.1 |
| Pavement cross-slope (on tangent sections) | | 2% | 1.5% minimum, 2% maximum | 2% | GB page 10-111 |
| Shoulder cross-slope (on tangent sections) | | 4 | Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders | 3% | GB section 4.4.3 |
| Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance) | Adjacent to shoulder | 10:1 for 4' then 6:1 | 4:1 for interstates*, 3:1 for other roadways | 10:1 for 4' then 4:1 | IDG page 5, RDG 3.3.2 |
| | Beyond standard ditch depth and design clear zone | 3.5:1 | 3:1 | 3:1 | RDG section 3.3.2 |
| | Curbed roadways | 2% | not steeper than 3:1 | 2% for 10' then 4:1 | |
| Bridge width—new** | | design lane widths + effective shoulder widths | design lane widths + effective shoulder widths | N/A | GB page 10-122 |
| Bridge width—existing** | | design lane widths + effective shoulder widths | design lane widths + effective shoulder widths | N/A | GB page 10-122 |
| Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks) | Over primary | 16.5 | 16 | N/A | IDG page 7 and GB section 8.2.9 |
| | over non-primary | 16.5 at interchange locations, 15 at all other locations | 14 | N/A | GB pages 5-9 and 6-8 |
| | over railroad | 23.3 | 23.3 | N/A | -- |
| | sign truss and pedestrian bridges | 17.5 | 17 | N/A | IDG page 7 and GB section 8.2.9 |
| Structural Capacity | | Contact Office of Bridges and Structures | Contact Office of Bridges and Structures | N/A | -- |

*Design Exception required for ramps on the Interstate system only
**FHWA notification via email is required if acceptable criteria is not met on the Interstate or NHS systems (No formal design exception required)

Design Manual Section 1C-1
Last Updated: 04-29-19

## Effective Shoulder Width and Type for Ramps

| Design Element | | Ramp Type: Preferred | | | | | | | Ramp Type: Acceptable | | | | | | | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Diagonal | | Loop | Semi-Directional | | Directional | | Diagonal | | Loop | Semi-Directional | | Directional | | | |
| | | one lane | two lane | | one lane | two lane | one lane | two lane | Radius*> 500 feet* one lane | Radius*> 500 feet* two lane | | Radius > 500 feet one lane | Radius > 500 feet two lane | Radius > 500 feet one lane | Radius > 500 feet two lane | | |
| Full depth paved width (ft) | | 16 | 24 | 18 | 16 | 24 | 16 | 24 | 14 | 22 | 17 | 14 | 22 | 14 | 22 | 16 | GB Table 3-29 |
| Design lane width (ft) | | 16 | 12 | 18 | 16 | 12 | 16 | 12 | 14 | 11 | 17 | 14 | 11 | 14 | 11 | 16 | GB Table 3-29 |
| Paved shoulder width (ft) (in the direction of travel)** | Left | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | GB page 10-121 |
| | Right | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | GB page 10-121 |
| ***Granular shoulder width (ft) (in the direction of travel) | Left | 4 | - | - | - | - | - | - | 4 | - | - | - | - | - | - | N/A | GB page 10-121 |
| | Right | 6 | - | - | - | - | - | - | 6 | - | - | - | - | - | - | N/A | GB page 10-121 |
| Curb type | Interstate | 4-inch sloped | | | | | | | 4-inch sloped | | | | | | | | IDG page 6 |
| | Non-Interstate | 4-inch sloped | | | | | | | 6-inch sloped | | | | | | | 6-inch sloped | |

*For radii less than 500 feet, refer to design widths of pavement for turning roadways in A Policy on Geometric Design of Highways and Streets — GB Table 3-29
**Left and right shoulders widths may be reversed if needed to provide additional sight distance
***Non-Interstate interchanges only — GB page 10-121

**Notes:**

| | | | |
|---|---|---|---|
| **Ramp Design Speed (mph) =** | **60/45/30** | | |

Design Manual Section 1C-1
Last Updated: 04-29-19

## Design Criteria for Ramps Based Upon Design Speed

| Design Element | | | Preferred Criteria Design Speed, mph 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | Acceptable Criteria Design Speed, mph 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stopping sight distance (ft) (Refer to Section 6D-1) | | | 155 | 200 | 250 | 305 | 360 | 425 | 495 | 570 | 155 | 200 | 250 | 305 | 360 | 425 | 495 | 570 | 570/360/250 | GB Table 3-1 |
| Minimum horizontal curve radius (ft) and superelevation rate (Refer to Sections 2A-2 and 2A-3) | Method 2 superelevation and side friction distribution | $e_{max}$ = 4% max | See Table 10 in Section 2A-3 | | | | | -- | -- | -- | -- | | | | | | | | | GB Section 3.3.6, Table 3-13 |
| | Method 5 superelevation and side friction distribution | $e_{max}$ = 6% | 144 | 231 | 340 | 485 | 643 | 833 | 1060 | 1330 | 144 | 231 | 340 | 485 | 643 | 833 | 1060 | 1330 | 2000/1055/129 | GB Table 3-7 |
| | | $e_{max}$ = 8% | -- | -- | -- | -- | -- | -- | -- | -- | 134 | 214 | 314 | 444 | 587 | 758 | 960 | 1200 | | GB Table 3-7 |
| Minimum vertical curve length (ft) (Refer to Section 2B-1) | | | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 150/350/90 | GB page 3-168 |
| Minimum Rate of Vertical Curvature (Refer to Section 2B-1) | crest vertical curves | | 12 | 19 | 29 | 44 | 61 | 84 | 114 | 151 | 12 | 19 | 29 | 44 | 61 | 84 | 114 | 151 | 0/0/28 | GB Table 3-35 |
| | sag vertical curves | roadways without fixed-source lighting | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 142/0/0 | GB Table 3-37 |
| | | roadways with fixed-source lighting | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 14 | 20 | 27 | 35 | 44 | 54 | 66 | 78 | | GB page 3-175 |
| Minimum gradient (%) | (Refer to Section 2B-1) | | 0.5 | | | | | | | | 0.3% with a curb, 0.0% without a curb | | | | | | | | 0.3% | GB page 3-130 |
| Maximum gradient (%) on ramps | (Refer to Sections 2B-1) | Upgrades | 4 | | | | | | | | .8 | .7 | .6 | .6 | .5 | .5 | .5 | .5 | 2.95% | GB page 10-109,110 |
| | | Downgrades | | | | | | | | | Equal to the maximum upgrade gradient. In special cases, may be 2% greater but in no case greater than 8% | | | | | | | | 0.8% | |
| Clear zone | | | See "Preferred Clear Zone" table in Section 9A-2 | | | | | | | | See "Acceptable Clear Zone" table in Section 9A-2 | | | | | | | | 30 | |

| | | | |
|---|---|---|---|
| **Ramp Design Speed (mph) =** | **60/45/30** | | |

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## Design Speed for Ramps

| Design Element | Ramp Type: Preferred All curves near free flow terminals | Preferred Diagonal Curves near at-grade terminals | Preferred Loop | Preferred Semi-Directional | Preferred Directional | Ramp Type: Acceptable All curves near free flow terminals | Acceptable Diagonal Curves near at-grade terminals | Acceptable Loop | Acceptable Semi-Directional | Acceptable Directional | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Design speed (mph) | 60 | 40 | 30 | 50 | 60 | 50 | 35 | 25 | 40 | 40 | | GB pages 10-105 |
| Maximum superelevation rate (Refer to Section 2A-2 for details) | 6% | 4% | 6% | | | 8% | | | | | 6%/-2%/-2% | GB pages 3-31 |

| | | | |
|---|---|---|---|
| **Roadway** | IA-58 NB Ramp B | | |
| **PIN Number** | 12-07-058-010-01 | **Submittal Date** | 07/12/24 |
| **Project Number** | NHSX-058-1(097)--3H-07 | **Approval Date** | |
| **District** | District 2 | **Assistant District Engineer** | Nick Humpal |
| **County** | BLACK HAWK | **or** | |
| **Route** | IA-58 | **Office Director** | |
| **Location** | IA-58 and Greenhill Rd | | |
| **Work Type** | Unkown Pavement - Grade and New | | |
| **Segment Manager** | | | |
| **Designer** | AECOM | | |

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## Ramps

| Design Element | | Preferred Values | Acceptable Values | Project Values | |
|---|---|---|---|---|---|
| Design speed (mph) | | See Design Speed for Ramps Table Below | See Design Speed for Ramps Table Below | 60/45/35 | -- |
| Design lane width (ft) | | | | | |
| Turn-lane width (ft) | Interstate ramps | 12 | 12 | N/A | IDG page 4, RDG 3.3.2 |
| | Non-Interstate ramps | 12 | 10 | 12 | GB section 9.7.1 |
| Pavement cross-slope (on tangent sections) | | 2% | 1.5% minimum, 2% maximum | 2% | GB page 10-111 |
| Shoulder cross-slope (on tangent sections) | | 4 | Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders | 3% | GB section 4.4.3 |
| Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance) | Adjacent to shoulder | 10:1 for 4' then 6:1 | 4:1 for interstates*, 3:1 for other roadways | 10:1 for 4' then 4:1 | IDG page 5, RDG 3.3.2 |
| | Beyond standard ditch depth and design clear zone | 3.5:1 | 3:1 | 3:1 | RDG section 3.3.2 |
| | Curbed roadways | 2% | not steeper than 3:1 | 2% for 10' then 4:1 | |
| Bridge width—new** | | design lane widths + effective shoulder widths | design lane widths + effective shoulder widths | N/A | GB page 10-122 |
| Bridge width—existing** | | design lane widths + effective shoulder widths | design lane widths + effective shoulder widths | N/A | GB page 10-122 |
| Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks) | Over primary | 16.5 | 16 | N/A | IDG page 7 and GB section 8.2.9 |
| | over non-primary | 16.5 at interchange locations, 15 at all other locations | 14 | N/A | GB pages 5-9 and 6-8 |
| | over railroad | 23.3 | 23.3 | N/A | -- |
| | sign truss and pedestrian bridges | 17.5 | 17 | N/A | IDG page 7 and GB section 8.2.9 |
| Structural Capacity | | Contact Office of Bridges and Structures | Contact Office of Bridges and Structures | N/A | -- |

*Design Exception required for ramps on the Interstate system only
**FHWA notification via email is required if acceptable criteria is not met on the Interstate or NHS systems (No formal design exception required)

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## Effective Shoulder Width and Type for Ramps

| Design Element | | Ramp Type: Preferred | | | | | | | Ramp Type: Acceptable | | | | | | | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Diagonal | | Loop | Semi-Directional | | Directional | | Diagonal | | Loop | Semi-Directional | | Directional | | | |
| | | one lane | two lane | | one lane | two lane | one lane | two lane | Radius*> 500 feet* one lane | Radius*> 500 feet* two lane | | Radius > 500 feet one lane | Radius > 500 feet two lane | Radius > 500 feet one lane | Radius > 500 feet two lane | | |
| Full depth paved width (ft) | | 16 | 24 | 18 | 16 | 24 | 16 | 24 | 14 | 22 | 17 | 14 | 22 | 14 | 22 | 16 | GB Table 3-29 |
| Design lane width (ft) | | 16 | 12 | 18 | 16 | 12 | 16 | 12 | 14 | 11 | 17 | 14 | 11 | 14 | 11 | 16 | GB Table 3-29 |
| Paved shoulder width (ft) (in the direction of travel)** | Left | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | GB page 10-121 |
| | Right | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | GB page 10-121 |
| ***Granular shoulder width (ft) (in the direction of travel) | Left | 4 | - | - | - | - | - | - | 4 | - | - | - | - | - | - | N/A | GB page 10-121 |
| | Right | 6 | - | - | - | - | - | - | 6 | - | - | - | - | - | - | N/A | GB page 10-121 |
| Curb type | Interstate | 4-inch sloped | | | | | | | 4-inch sloped | | | | | | | | IDG page 6 |
| | Non-Interstate | 4-inch sloped | | | | | | | 6-inch sloped | | | | | | | 6-inch sloped | |

*For radii less than 500 feet, refer to design widths of pavement for turning roadways in A Policy on Geometric Design of Highways and Streets — GB Table 3-29
**Left and right shoulders widths may be reversed if needed to provide additional sight distance
***Non-Interstate interchanges only — GB page 10-121

**Notes:**

| | | | |
|---|---|---|---|
| **Ramp Design Speed (mph) =** | **60/45/35** | | |

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## Design Criteria for Ramps Based Upon Design Speed

| Design Element | | | Preferred Criteria Design Speed, mph 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | Acceptable Criteria Design Speed, mph 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stopping sight distance (ft) (Refer to Section 6D-1) | | | 155 | 200 | 250 | 305 | 360 | 425 | 495 | 570 | 155 | 200 | 250 | 305 | 360 | 425 | 495 | 570 | 570/360/250 | GB Table 3-1 |
| Minimum horizontal curve radius (ft) and superelevation rate (Refer to Sections 2A-2 and 2A-3) | Method 2 superelevation and side friction distribution | $e_{max}$ = 4% max | See Table 10 in Section 2A-3 | | | | | -- | -- | -- | -- | | | | | | | | | GB Section 3.3.6, Table 3-13 |
| | Method 5 superelevation and side friction distribution | $e_{max}$ = 6% | 144 | 231 | 340 | 485 | 643 | 833 | 1060 | 1330 | 144 | 231 | 340 | 485 | 643 | 833 | 1060 | 1330 | 2000/1055/132 | GB Table 3-7 |
| | | $e_{max}$ = 8% | -- | -- | -- | -- | -- | -- | -- | -- | 134 | 214 | 314 | 444 | 587 | 758 | 960 | 1200 | | GB Table 3-7 |
| Minimum vertical curve length (ft) (Refer to Section 2B-1) | | | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 150/350/100 | GB page 3-168 |
| Minimum Rate of Vertical Curvature (Refer to Section 2B-1) | crest vertical curves | | 12 | 19 | 29 | 44 | 61 | 84 | 114 | 151 | 12 | 19 | 29 | 44 | 61 | 84 | 114 | 151 | 0/0/34 | GB Table 3-35 |
| | sag vertical curves | roadways without fixed-source lighting | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 137/140/0 | GB Table 3-37 |
| | | roadways with fixed-source lighting | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 14 | 20 | 27 | 35 | 44 | 54 | 66 | 78 | | GB page 3-175 |
| Minimum gradient (%) | (Refer to Section 2B-1) | | 0.5 | | | | | | | | 0.3% with a curb, 0.0% without a curb | | | | | | | | 0.3% | GB page 3-130 |
| Maximum gradient (%) on ramps | (Refer to Sections 2B-1) | Upgrades | 4 | | | | | | | | .8 | .7 | .6 | .6 | .5 | .5 | .5 | .5 | 2.79% | GB page 10-109,110 |
| | | Downgrades | | | | | | | | | Equal to the maximum upgrade gradient. In special cases, may be 2% greater but in no case greater than 8% | | | | | | | | 0.8% | |
| Clear zone | | | See "Preferred Clear Zone" table in Section 9A-2 | | | | | | | | See "Acceptable Clear Zone" table in Section 9A-2 | | | | | | | | 30 | |

| | | | |
|---|---|---|---|
| **Ramp Design Speed (mph) =** | **60/45/35** | | |

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## Design Speed for Ramps

| Design Element | Ramp Type: Preferred All curves near free flow terminals | Preferred Diagonal Curves near at-grade terminals | Preferred Loop | Preferred Semi-Directional | Preferred Directional | Ramp Type: Acceptable All curves near free flow terminals | Acceptable Diagonal Curves near at-grade terminals | Acceptable Loop | Acceptable Semi-Directional | Acceptable Directional | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Design speed (mph) | 60 | 40 | 30 | 50 | 60 | 50 | 35 | 25 | 40 | 40 | | GB pages 10-105 |
| Maximum superelevation rate (Refer to Section 2A-2 for details) | 6% | 4% | 6% | | | 8% | | | | | 6%/-2%/-2% | GB pages 3-31 |

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **A.4** |
|---|---|---|---|---|---|

4:39:18 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\A01_07058097Z05.dgn

| | |
|---|---|
| **Roadway** | IA-58 NB Ramp C |
| **PIN Number** | 12-07-058-010-01 |
| **Submittal Date** | 07/12/24 |
| **Project Number** | NHSX-058-1(097)--3H-07 |
| **Approval Date** | |
| **District** | District 2 |
| **Assistant District Engineer** | Nick Humpal |
| **County** | BLACK HAWK |
| **or** | |
| **Route** | IA-58 |
| **Office Director** | |
| **Location** | IA-58 and Greenhill Rd |
| **Work Type** | Unkown Pavement - Grade and New |
| **Segment Manager** | |
| **Designer** | AECOM |

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## Ramps

| Design Element | | Preferred Values | Acceptable Values | Project Values | |
|---|---|---|---|---|---|
| Design speed (mph) | | See Design Speed for Ramps Table Below | See Design Speed for Ramps Table Below | 60/35 | -- |
| Design lane width (ft) | | | | | |
| Turn-lane width (ft) | Interstate ramps | 12 | 12 | N/A | IDG page 4, RDG 3.3.2 |
| | Non-Interstate ramps | 12 | 10 | N/A | GB section 9.7.1 |
| Pavement cross-slope (on tangent sections) | | 2% | 1.5% minimum, 2% maximum | 2% | GB page 10-111 |
| Shoulder cross-slope (on tangent sections) | | 4 | Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders | 3% | GB section 4.4.3 |
| Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance) | Adjacent to shoulder | 10:1 for 4' then 6:1 | 4:1 for interstates*, 3:1 for other roadways | 10:1 for 4' then 4:1 | IDG page 5, RDG 3.3.2 |
| | Beyond standard ditch depth and design clear zone | 3.5:1 | 3:1 | 3:1 | RDG section 3.3.2 |
| | Curbed roadways | 2% | not steeper than 3:1 | 2% for 10' then 4:1 | |
| Bridge width—new** | | design lane widths + effective shoulder widths | design lane widths + effective shoulder widths | N/A | GB page 10-122 |
| Bridge width—existing** | | design lane widths + effective shoulder widths | design lane widths + effective shoulder widths | N/A | GB page 10-122 |
| Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks) | Over primary | 16.5 | 16 | N/A | IDG page 7 and GB section 8.2.9 |
| | over non-primary | 16.5 at interchange locations, 15 at all other locations | 14 | N/A | GB pages 5-9 and 6-8 |
| | over railroad | 23.3 | 23.3 | N/A | -- |
| | sign truss and pedestrian bridges | 17.5 | 17 | N/A | IDG page 7 and GB section 8.2.9 |
| Structural Capacity | | Contact Office of Bridges and Structures | Contact Office of Bridges and Structures | N/A | -- |

*Design Exception required for ramps on the Interstate system only
**FHWA notification via email is required if acceptable cirteria is not met on the Interstate or NHS systems (No formal design exception required)

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## Effective Shoulder Width and Type for Ramps

| Design Element | | Ramp Type: Preferred: Diagonal: one lane | Diagonal: two lane | Loop | Semi-Directional: one lane | Semi-Directional: two lane | Directional: one lane | Directional: two lane | Acceptable: Diagonal Radius*> 500 feet*: one lane | Diagonal Radius*> 500 feet*: two lane | Loop | Semi-Directional Radius > 500 feet*: one lane | Semi-Directional Radius > 500 feet*: two lane | Directional Radius > 500 feet: one lane | Directional Radius > 500 feet: two lane | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Full depth paved width (ft) | | 16 | 24 | 18 | 16 | 24 | 16 | 24 | 14 | 22 | 17 | 14 | 22 | 14 | 22 | 16 | GB Table 3-29 |
| Design lane width (ft) | | 16 | 12 | 18 | 16 | 12 | 16 | 12 | 14 | 11 | 17 | 14 | 11 | 14 | 11 | 16 | GB Table 3-29 |
| Paved shoulder width (ft) (in the direction of travel)** | Left | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | GB page 10-121 |
| | Right | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | GB page 10-121 |
| ***Granular shoulder width (ft) (in the direction of travel) | Left | 4 | - | - | - | - | - | - | 4 | - | - | - | - | - | - | N/A | GB page 10-121 |
| | Right | 6 | - | - | - | - | - | - | 6 | - | - | - | - | - | - | N/A | GB page 10-121 |
| Curb type | Interstate | 4-inch sloped | | | | | | | 4-inch sloped | | | | | | | | IDG page 6 |
| | Non-Interstate | 4-inch sloped | | | | | | | 6-inch sloped | | | | | | | 6-inch sloped | |

*For radii less than 500 feet, refer to design widths of pavement for turning roadways in A Policy on Geometric Design of Highways and Streets — GB Table 3-29
**Left and right shoulders widths may be reversed if needed to provide additional sight distance
***Non-Interstate interchanges only — GB page 10-121

**Notes:**

| Ramp Design Speed (mph) = | 60/35 |
|---|---|

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## Design Criteria for Ramps Based Upon Design Speed

| Design Element | | | Preferred Criteria Design Speed, mph: 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | Acceptable Criteria Design Speed, mph: 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stopping sight distance (ft) (Refer to Section 6D-1) | | | 155 | 200 | 250 | 305 | 360 | 425 | 495 | 570 | 155 | 200 | 250 | 305 | 360 | 425 | 495 | 570 | 570/250 | GB Table 3-1 |
| Minimum horizontal curve radius (ft) and superelevation rate (Refer to Sections 2A-2 and 2A-3) | Method 2 superelevation and side friction distribution | e = 4% max | See Table 10 in Section 2A-3 | | | | | -- | -- | -- | -- | | | | | | | | | GB Section 3.3.6, Table 3-13 |
| | Method 5 superelevation and side friction distribution | $e_{max}$ = 6% | 144 | 231 | 340 | 485 | 643 | 833 | 1060 | 1330 | 144 | 231 | 340 | 485 | 643 | 833 | 1060 | 1330 | 2184.18/420 | GB Table 3-7 |
| | | $e_{max}$ = 8% | -- | -- | -- | -- | -- | -- | -- | -- | 134 | 214 | 314 | 444 | 587 | 758 | 960 | 1200 | | GB Table 3-7 |
| Minimum vertical curve length (ft) (Refer to Section 2B-1) | | | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 200/150 | GB page 3-168 |
| Minimum Rate of Vertical Curvature (Refer to Section 2B-1) | crest vertical curves | | 12 | 19 | 29 | 44 | 61 | 84 | 114 | 151 | 12 | 19 | 29 | 44 | 61 | 84 | 114 | 151 | 241/35 | GB Table 3-35 |
| | sag vertical curves | roadways without fixed-source lighting | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 141/0 | GB Table 3-37 |
| | | roadways with fixed-source lighting | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 14 | 20 | 27 | 35 | 44 | 54 | 66 | 78 | | GB page 3-175 |
| Minimum gradient (%) | (Refer to Section 2B-1) | | 0.5 | | | | | | | | 0.3% with a curb, 0.0% without a curb | | | | | | | | 0.25% | GB page 3-130 |
| Maximum gradient (%) on ramps | (Refer to Sections 2B-1) | Upgrades | 4 | | | | | | | | 8 | 7 | 6 | 6 | 5 | 5 | 5 | 5 | 1.68% | GB page 10-109,110 |
| | | Downgrades | | | | | | | | | Equal to the maximum upgrade gradient. In special cases, may be 2% greater but in no case greater than 8% | | | | | | | | 4.0% | |
| Clear zone | | | See "Preferred Clear Zone" table in Section 8A-2 | | | | | | | | See "Acceptable Clear Zone" table in Section 8A-2 | | | | | | | | 30 | |

| Ramp Design Speed (mph) = | 60/35 |
|---|---|

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## Design Speed for Ramps

| Design Element | Ramp Type: Preferred: All curves near free flow terminals | Diagonal Curves near at-grade terminals | Loop | Semi-Directional | Directional | Acceptable: All curves near free flow terminals | Diagonal Curves near at-grade terminals | Loop | Semi-Directional | Directional | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Design speed (mph) | 60 | 40 | 30 | 50 | 60 | 50 | 35 | 25 | 40 | 40 | | GB pages 10-105 |
| Maximum superelevation rate (Refer to Section 2A-2 for details) | 6% | 4% | 6% | | | 8% | | | | | 6%/-2% | GB pages 3-31 |

| | |
|---|---|
| **Roadway** | IA-58 NB Ramp D |
| **PIN Number** | 12-07-058-010-01 |
| **Submittal Date** | 07/12/24 |
| **Project Number** | NHSX-058-1(097)--3H-07 |
| **Approval Date** | |
| **District** | District 2 |
| **Assistant District Engineer** | Nick Humpal |
| **County** | BLACK HAWK |
| **or** | |
| **Route** | IA-58 |
| **Office Director** | |
| **Location** | IA-58 and Greenhill Rd |
| **Work Type** | Unkown Pavement - Grade and New |
| **Segment Manager** | |
| **Designer** | AECOM |

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## Ramps

| Design Element | | Preferred Values | Acceptable Values | Project Values | |
|---|---|---|---|---|---|
| Design speed (mph) | | See Design Speed for Ramps Table Below | See Design Speed for Ramps Table Below | 60/35 | -- |
| Design lane width (ft) | | | | | |
| Turn-lane width (ft) | Interstate ramps | 12 | 12 | N/A | IDG page 4, RDG 3.3.2 |
| | Non-Interstate ramps | 12 | 10 | N/A | GB section 9.7.1 |
| Pavement cross-slope (on tangent sections) | | 2% | 1.5% minimum, 2% maximum | 2% | GB page 10-111 |
| Shoulder cross-slope (on tangent sections) | | 4 | Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders | 3% | GB section 4.4.3 |
| Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance) | Adjacent to shoulder | 10:1 for 4' then 6:1 | 4:1 for interstates*, 3:1 for other roadways | 10:1 for 4' then 4:1 | IDG page 5, RDG 3.3.2 |
| | Beyond standard ditch depth and design clear zone | 3.5:1 | 3:1 | 3:1 | RDG section 3.3.2 |
| | Curbed roadways | 2% | not steeper than 3:1 | 2% for 10' then 4:1 | |
| Bridge width—new** | | design lane widths + effective shoulder widths | design lane widths + effective shoulder widths | N/A | GB page 10-122 |
| Bridge width—existing** | | design lane widths + effective shoulder widths | design lane widths + effective shoulder widths | N/A | GB page 10-122 |
| Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks) | Over primary | 16.5 | 16 | N/A | IDG page 7 and GB section 8.2.9 |
| | over non-primary | 16.5 at interchange locations, 15 at all other locations | 14 | N/A | GB pages 5-9 and 6-8 |
| | over railroad | 23.3 | 23.3 | N/A | -- |
| | sign truss and pedestrian bridges | 17.5 | 17 | N/A | IDG page 7 and GB section 8.2.9 |
| Structural Capacity | | Contact Office of Bridges and Structures | Contact Office of Bridges and Structures | N/A | -- |

*Design Exception required for ramps on the Interstate system only
**FHWA notification via email is required if acceptable cirteria is not met on the Interstate or NHS systems (No formal design exception required)

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## Effective Shoulder Width and Type for Ramps

| Design Element | | Ramp Type: Preferred: Diagonal: one lane | Diagonal: two lane | Loop | Semi-Directional: one lane | Semi-Directional: two lane | Directional: one lane | Directional: two lane | Acceptable: Diagonal Radius*> 500 feet*: one lane | Diagonal Radius*> 500 feet*: two lane | Loop | Semi-Directional Radius > 500 feet*: one lane | Semi-Directional Radius > 500 feet*: two lane | Directional Radius > 500 feet: one lane | Directional Radius > 500 feet: two lane | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Full depth paved width (ft) | | 16 | 24 | 18 | 16 | 24 | 16 | 24 | 14 | 22 | 17 | 14 | 22 | 14 | 22 | 16 | GB Table 3-29 |
| Design lane width (ft) | | 16 | 12 | 18 | 16 | 12 | 16 | 12 | 14 | 11 | 17 | 14 | 11 | 14 | 11 | 16 | GB Table 3-29 |
| Paved shoulder width (ft) (in the direction of travel)** | Left | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | GB page 10-121 |
| | Right | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | GB page 10-121 |
| ***Granular shoulder width (ft) (in the direction of travel) | Left | 4 | - | - | - | - | - | - | 4 | - | - | - | - | - | - | N/A | GB page 10-121 |
| | Right | 6 | - | - | - | - | - | - | 6 | - | - | - | - | - | - | N/A | GB page 10-121 |
| Curb type | Interstate | 4-inch sloped | | | | | | | 4-inch sloped | | | | | | | | IDG page 6 |
| | Non-Interstate | 4-inch sloped | | | | | | | 6-inch sloped | | | | | | | 6-inch sloped | |

*For radii less than 500 feet, refer to design widths of pavement for turning roadways in A Policy on Geometric Design of Highways and Streets — GB Table 3-29
**Left and right shoulders widths may be reversed if needed to provide additional sight distance
***Non-Interstate interchanges only — GB page 10-121

**Notes:**

| Ramp Design Speed (mph) = | 60/35 |
|---|---|

Design Manual Section 1C-1
Last Updated: 04-29-19

## Design Criteria for Ramps Based Upon Design Speed

| Design Element | | | Preferred Criteria Design Speed, mph: 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | Acceptable Criteria Design Speed, mph: 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stopping sight distance (ft) (Refer to Section 6D-1) | | | 155 | 200 | 250 | 305 | 360 | 425 | 495 | 570 | 155 | 200 | 250 | 305 | 360 | 425 | 495 | 570 | 570/250 | GB Table 3-1 |
| Minimum horizontal curve radius (ft) and superelevation rate (Refer to Sections 2A-2 and 2A-3) | Method 2 superelevation and side friction distribution | e = 4% max | See Table 10 in Section 2A-3 | | | | | -- | -- | -- | -- | | | | | | | | | GB Section 3.3.6, Table 3-13 |
| | Method 5 superelevation and side friction distribution | $e_{max}$ = 6% | 144 | 231 | 340 | 485 | 643 | 833 | 1060 | 1330 | 144 | 231 | 340 | 485 | 643 | 833 | 1060 | 1330 | 5000/419.5 | GB Table 3-7 |
| | | $e_{max}$ = 8% | -- | -- | -- | -- | -- | -- | -- | -- | 134 | 214 | 314 | 444 | 587 | 758 | 960 | 1200 | | GB Table 3-7 |
| Minimum vertical curve length (ft) (Refer to Section 2B-1) | | | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 500/150 | GB page 3-168 |
| Minimum Rate of Vertical Curvature (Refer to Section 2B-1) | crest vertical curves | | 12 | 19 | 29 | 44 | 61 | 84 | 114 | 151 | 12 | 19 | 29 | 44 | 61 | 84 | 114 | 151 | 0/36 | GB Table 3-35 |
| | sag vertical curves | roadways without fixed-source lighting | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 138/0 | GB Table 3-37 |
| | | roadways with fixed-source lighting | 26 | 37 | 49 | 64 | 79 | 96 | 115 | 136 | 14 | 20 | 27 | 35 | 44 | 54 | 66 | 78 | | GB page 3-175 |
| Minimum gradient (%) | (Refer to Section 2B-1) | | 0.5 | | | | | | | | 0.3% with a curb, 0.0% without a curb | | | | | | | | 0.21% | GB page 3-130 |
| Maximum gradient (%) on ramps | (Refer to Sections 2B-1) | Upgrades | 4 | | | | | | | | 8 | 7 | 6 | 6 | 5 | 5 | 5 | 5 | 3.98% | GB page 10-109,110 |
| | | Downgrades | | | | | | | | | Equal to the maximum upgrade gradient. In special cases, may be 2% greater but in no case greater than 8% | | | | | | | | | |
| Clear zone | | | See "Preferred Clear Zone" table in Section 8A-2 | | | | | | | | See "Acceptable Clear Zone" table in Section 8A-2 | | | | | | | | 30 | |

| Ramp Design Speed (mph) = | 60/35 |
|---|---|

Design Manual Section 1C-1
Last Updated: 04-29-19

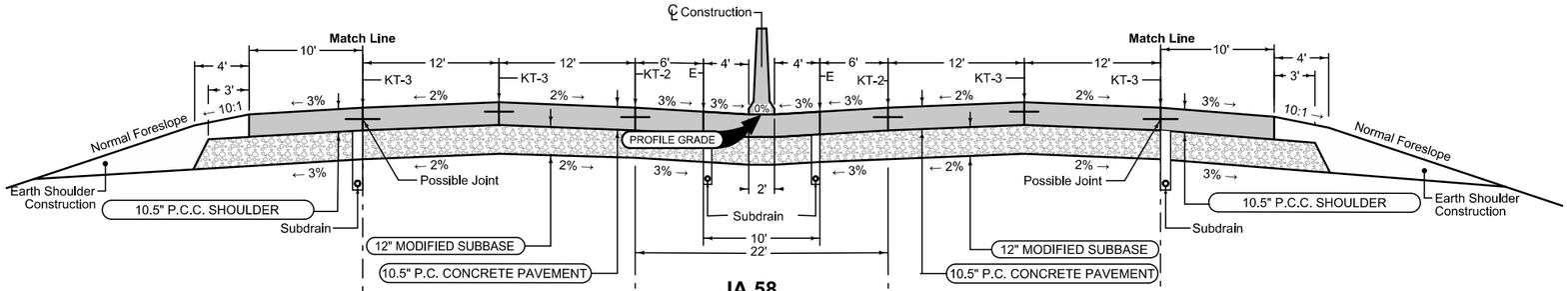
## Design Speed for Ramps

| Design Element | Ramp Type: Preferred: All curves near free flow terminals | Diagonal Curves near at-grade terminals | Loop | Semi-Directional | Directional | Acceptable: All curves near free flow terminals | Diagonal Curves near at-grade terminals | Loop | Semi-Directional | Directional | Project Values | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Design speed (mph) | 60 | 40 | 30 | 50 | 60 | 50 | 35 | 25 | 40 | 40 | | GB pages 10-105 |
| Maximum superelevation rate (Refer to Section 2A-2 for details) | 6% | 4% | 6% | | | 8% | | | | | 6%/-2% | GB pages 3-31 |

# Field Exam Notes

| | | | | | |
|---|---|---|---|---|---|
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **A.6** |

4:39:25 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\A01_07058097Z05.dgn




# IA 58

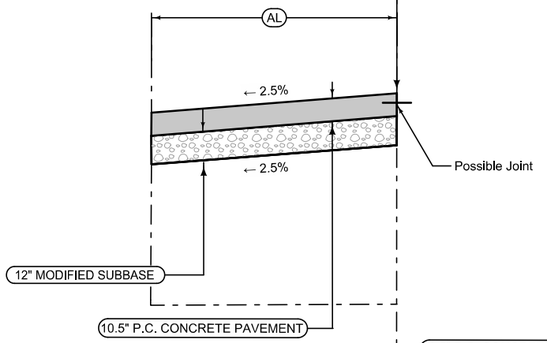
## 4 LANE PAVING with MEDIAN BARRIER

### AUXILIARY LANE

Longitudinal joint: L or KT
Transverse joint: Match Mainline

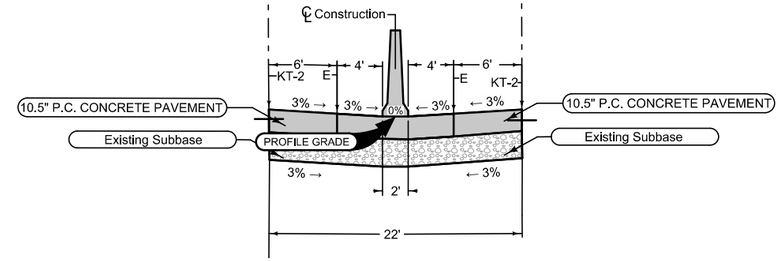
| 4_AuxLane_PCC_R Modified | | |
|---|---|---|
| STATION TO STATION | | (AL) Feet |
| 195+30.36 | 210+31.24 | Taper |
| 235+58.88 | 241+58.88 | Taper |

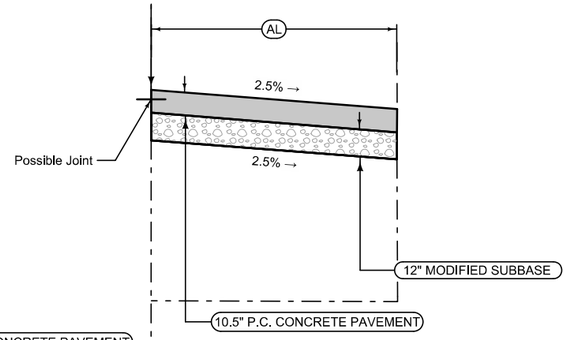
Ramp Taper - Width Varies




Mainline Jointing:
Longitudinal joint: L-2
Transverse joints: CD at 17' spacing

| 4DP_Closed_ Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 194+43.21 | 197+79.45 |
| 209+58.39 | 241+97.27 |




### AUXILIARY LANE

Longitudinal joint: L or KT
Transverse joint: Match Mainline

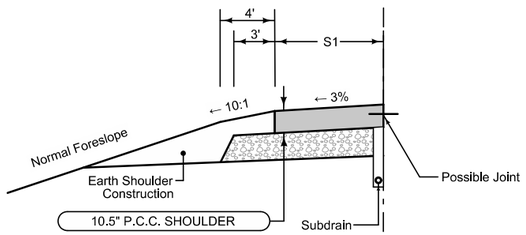
| 4_AuxLane_PCC_R Modified | | |
|---|---|---|
| STATION TO STATION | | (AL) Feet |
| 194+43.21 | 205+43.51 | 12 |
| 205+43.51 | 209+72.55 | TAPER |
| 234+28.91 | 249+61.61 | TAPER |

Ramp Taper - Width Varies

### Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-3, L-2 or KT-2
Transverse joints: C at 17' spacing

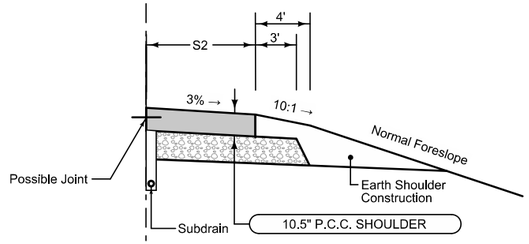
| 4D_Closed_P_FullPCC_L Modified | | |
|---|---|---|
| BEGIN STATION | END STATION | (S1) Feet |
| 194+43.21 | 195+29.80 | 10 |
| 195+29.80 | 196+29.28 | 10-8 |
| 196+29.28 | 210+31.24 | 8 |




### Median Barrier

Mainline Jointing:
Longitudinal joint: KT-2
Transverse joints: CD at 17' spacing

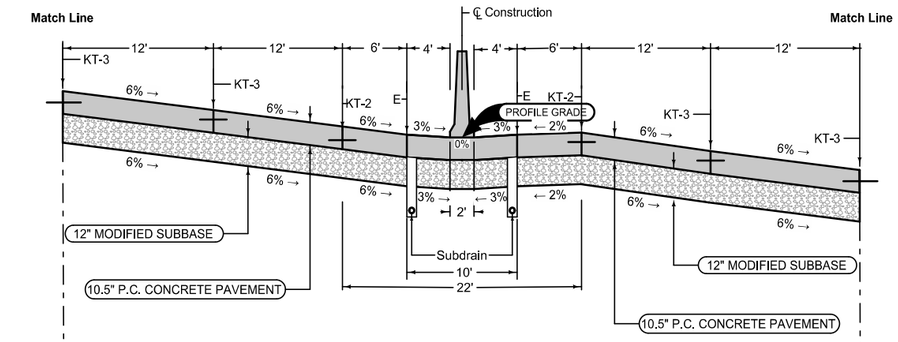
| 4DP_Closed_ Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 186+33.21 | 194+43.21 |




### Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-3, L-2 or KT-2
Transverse joints: C at 17' spacing

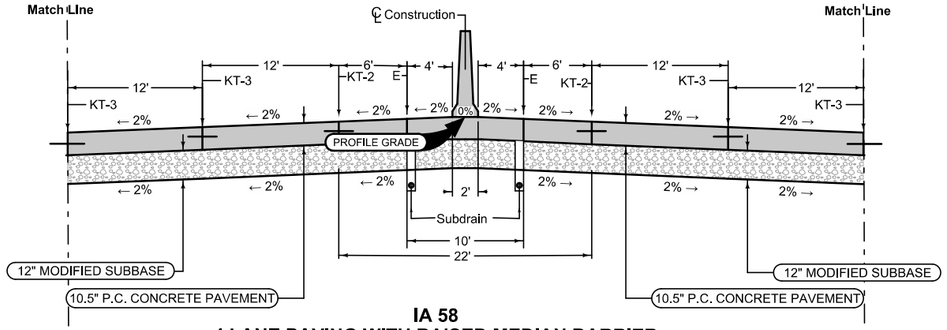
| 4D_Closed_P_FullPCC_L Modified | | |
|---|---|---|
| BEGIN STATION | END STATION | (S1) Feet |
| 194+43.21 | 205+43.51 | 10 |
| 205+43.51 | 205+73.86 | 10-8 |
| 205+73.86 | 209+72.55 | 8 |




**IA 58**
**4 LANE PAVING SUPERELEVATION**
**SEE G-SHEETS AND U-SHEETS FOR DETAILS AND LOCATIONS**

Mainline Jointing:
Longitudinal joints: KT-3
Transverse joints: CD at 17' spacing

| 4DP_Closed_Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 197+79.21 | 209+58.39 |
| 241+97.27 | 251+89.19 |




**IA 58**
**4 LANE PAVING WITH RAISED MEDIAN BARRIER**

Mainline Jointing:
Longitudinal joints: KT-3
Transverse joints: CD at 17' spacing

| 4DP_Raised_Out_Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 251+89.19 | 267+38.72 |

KT-2
ing

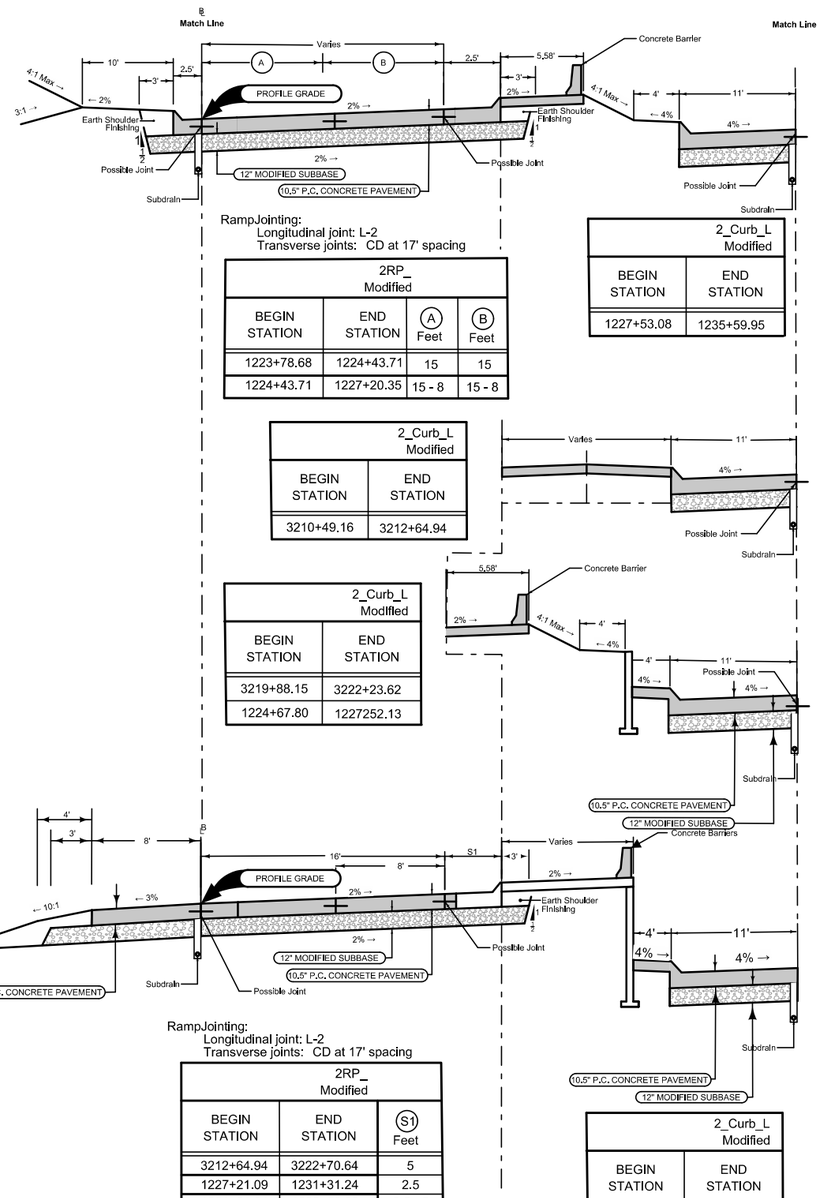
# IA 58 4Lane Paving with Medium Barrier

## See TYP. B.1

## CURBED SHOULDER

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':
Single pour: L-2
Staged : KT-2
Transverse: C at 17' spacing

| 2_Curb_L Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 1223+78.68 | 1231+31.35 |
| 3222+52.60 | 3222+91.43 |




| 2RP_ Modified | | | |
|---|---|---|---|
| BEGIN STATION | END STATION | (A) Feet | (B) Feet |
| 1223+78.68 | 1224+43.71 | 15 | 15 |
| 1224+43.71 | 1227+20.35 | 15 - 8 | 15 - 8 |

| 2_Curb_L Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 1227+53.08 | 1235+59.95 |

| 2_Curb_L Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 3210+49.16 | 3212+64.94 |

| 2_Curb_L Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 3219+88.15 | 3222+23.62 |
| 1224+67.80 | 1227252.13 |

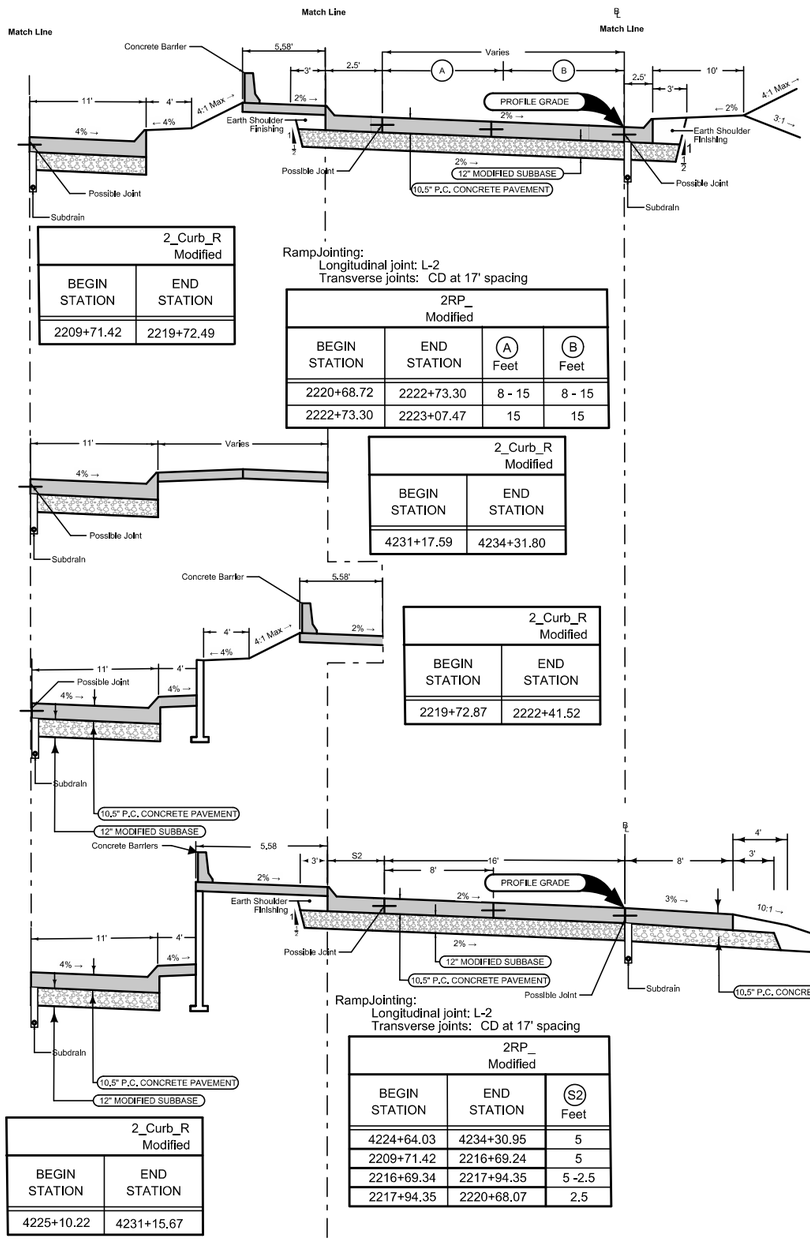
| 2RP_ Modified | | |
|---|---|---|
| BEGIN STATION | END STATION | (S1) Feet |
| 3212+64.94 | 3222+70.64 | 5 |
| 1227+21.09 | 1231+31.24 | 2.5 |
| 1231+31.24 | 1232+50.98 | 2.5 - 5 |
| 1232+50.98 | 1235+59.95 | 5 |

| 2_Curb_L Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 3212+64.94 | 3219+88.15 |

## Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-3, L-2 or KT-2
Transverse joints: C at 17' spacing

| 4D_Closed_P_FullPCC_L Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 3210+49.16 | 3222+52.60 |
| 1231+31.35 | 1235+54.95 |




| 2_Curb_R Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 2209+71.42 | 2219+72.49 |

| 2RP_ Modified | | | |
|---|---|---|---|
| BEGIN STATION | END STATION | (A) Feet | (B) Feet |
| 2220+68.72 | 2222+73.30 | 8 - 15 | 8 - 15 |
| 2222+73.30 | 2223+07.47 | 15 | 15 |

| 2_Curb_R Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 4231+17.59 | 4234+31.80 |

| 2_Curb_R Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 2219+72.87 | 2222+41.52 |

| 2_Curb_R Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 4225+10.22 | 4231+15.67 |

| 2RP_ Modified | | |
|---|---|---|
| BEGIN STATION | END STATION | (S2) Feet |
| 4224+64.03 | 4234+30.95 | 5 |
| 2209+71.42 | 2216+69.24 | 5 |
| 2216+69.34 | 2217+94.35 | 5 -2.5 |
| 2217+94.35 | 2220+68.07 | 2.5 |

## CURBED SHOULDER

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':
Single pour: L-2
Staged : KT-2
Transverse: C at 17' spacing

| 2_Curb_R Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 2217+94.35 | 2223+07.47 |

## Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-3, L-2 or KT-2
Transverse joints: C at 17' spacing

| 4D_Closed_P_FullPCC_R Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 2209+71.42 | 2217+94.35 |
| 4225+23.23 | 4234+30.95 |

**SEE G-SHEETS AND U-SHEETS FOR DETAILS AND LOCATIONS**

## Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2 or L-2
Transverse:C at 17' spacing

| 2_Curb_L Modified | | | |
|---|---|---|---|
| STATION TO STATION | | (P) Feet | Curb Type See PV-102 |
| 11+50.00 | 12+00.00 | | 6" SLOPED |
| 19+90.58 | 20+05.44 | | 6" SLOPED |
| 20+66.92 | 21+23.03 | | 6" SLOPED |
| 22+55.17 | 23+39.14 | | 6" SLOPED |
| 30+73.80 | 35+20.10 | | 6" SLOPED |

## Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

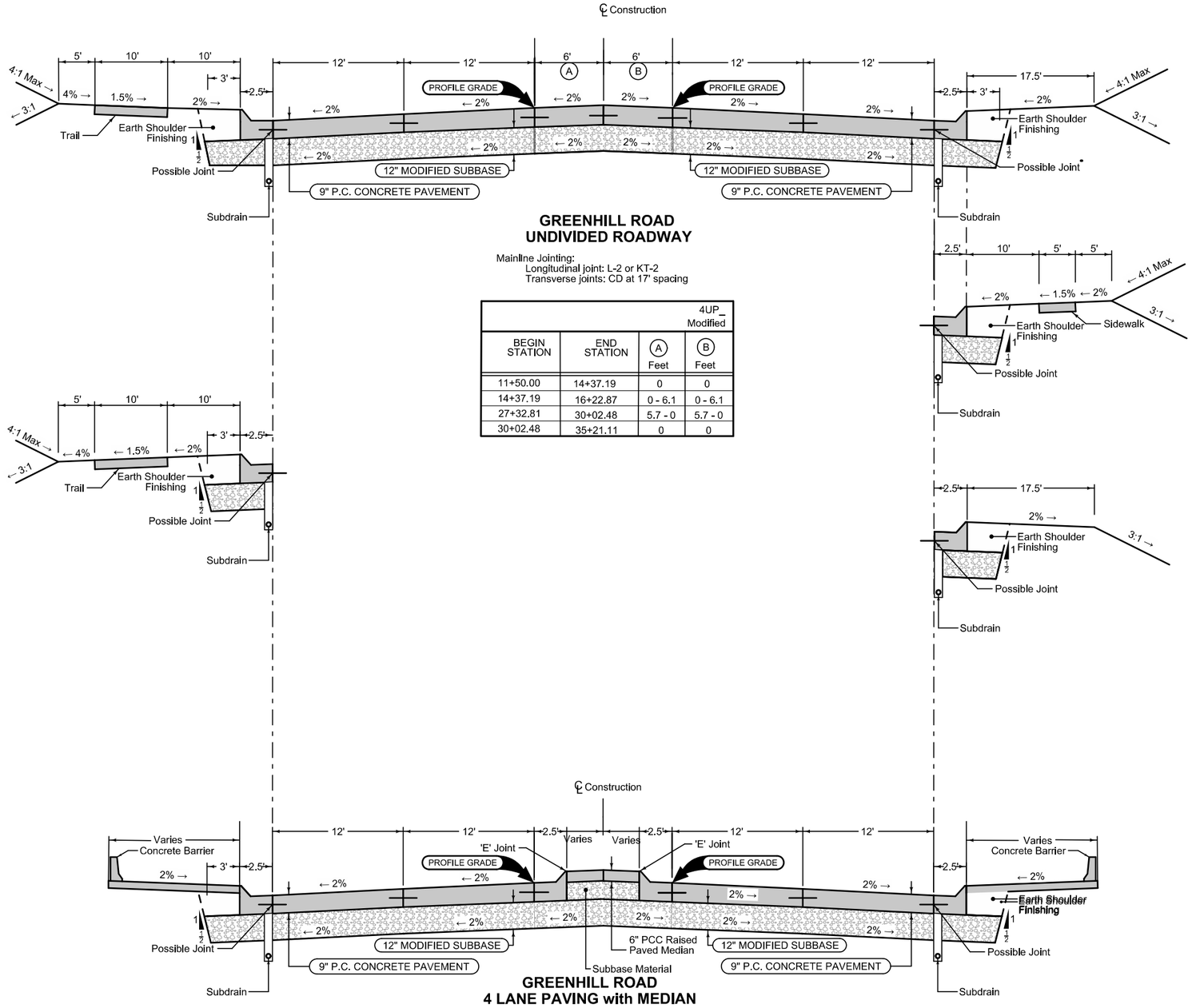
Single pour: L-2
Staged : KT-2 or L-2
Transverse:C at 17' spacing

| 2_Curb_L Modified | | | |
|---|---|---|---|
| STATION TO STATION | | (P) Feet | Curb Type See PV-102 |
| 11+50.00 | 12+00.00 | | 6" SLOPED |
| 12+00.00 | 19+04.00 | | 6" SLOPED |
| 21+23.03 | 24+92.68 | | 6" SLOPED |
| | | | |

## Shoulder with Barrier

C at 17' spacing.
See L-sheets

| 2_Curb_L Modified | | |
|---|---|---|
| STATION TO STATION | | Curb Type See PV-102 |
| 21+23.03 | 21+51.64 | 6" SLOPED |




### GREENHILL ROAD
### UNDIVIDED ROADWAY

Mainline Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: CD at 17' spacing

| 4UP_ Modified | | | |
|---|---|---|---|
| BEGIN STATION | END STATION | (A) Feet | (B) Feet |
| 11+50.00 | 14+37.19 | 0 | 0 |
| 14+37.19 | 16+22.87 | 0 - 6.1 | 0 - 6.1 |
| 27+32.81 | 30+02.48 | 5.7 - 0 | 5.7 - 0 |
| 30+02.48 | 35+21.11 | 0 | 0 |

### GREENHILL ROAD
### 4 LANE PAVING with MEDIAN

Mainline Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: CD at 17' spacing

| 4DP_Raised_Out_ Modified | |
|---|---|
| BEGIN STATION | END STATION |
| 16+22.87 | 19+61.26 |
| 20+10.21 | 23+76.96 |
| 24+14.15 | 27+32.81 |
| | |

## Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2 or L-2
Transverse:C at 17' spacing

| 2_Curb_R Modified | | | |
|---|---|---|---|
| STATION TO STATION | | (P) Feet | Curb Type See PV-102 |
| 11+50.00 | 14+37.19 | | 6" STD. |
| 27+50.00 | 29+15.92 | | |

## Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2 or L-2
Transverse:C at 17' spacing

| 2_Curb_R Modified | | | |
|---|---|---|---|
| STATION TO STATION | | (P) Feet | Curb Type See PV-102 |
| 29+21.33 | 35+21.11 | | 6" SLOPED |

## Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2 or L-2
Transverse:C at 17' spacing

| 2_Curb_R Modified | | | |
|---|---|---|---|
| STATION TO STATION | | (P) Feet | Curb Type See PV-102 |
| 14+37.19 | 19+75.08 | | 6" SLOPED |
| 24+76.01 | 29+21.33 | | 6" SLOPED |
| | | | |
| | | | |

## Shoulder with Barrier

C at 17' spacing.
See L-sheets

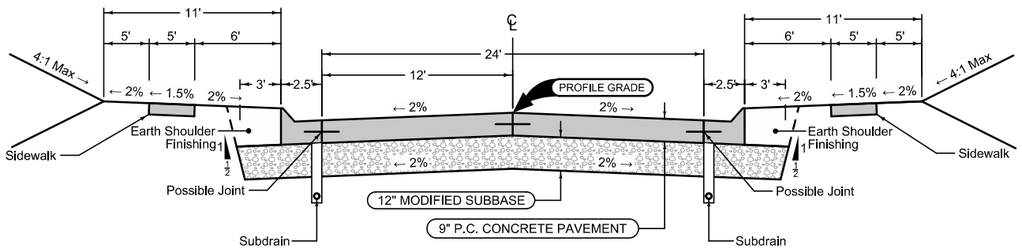
| 2_Curb_R Modified | | |
|---|---|---|
| STATION TO STATION | | Curb Type See PV-102 |
| 20+22.54 | 21+26.97 | 6" SLOPED |
| 22+30.50 | 23+10.67 | 6" SLOPED |

## Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2 or L-2
Transverse:C at 17' spacing

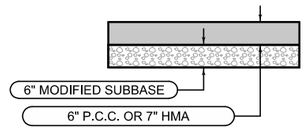
| | | | 2_Curb_L Modified |
|---|---|---|---|
| STATION TO STATION | | (P) Feet | Curb Type See PV-102 |
| 0+51.76 | 0+85.96 | | 6" STD. |




**JAMES DRIVE**

Mainline Jointing:
Longitudinal joint: KT-2 or L-2
Transverse joints: CD at 17' spacing

| | 2P_ Modified |
|---|---|
| BEGIN STATION | END STATION |
| 0+24.00 | 0+85.96 |




**TEMPORARY PAVING DETAIL FOR THE DOGBONE AND TEMPORARY MEDIAN CROSSOVER**

## Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2 or L-2
Transverse:C at 17' spacing

| | | | 2_Curb_R Modified |
|---|---|---|---|
| STATION TO STATION | | (P) Feet | Curb Type See PV-102 |
| 0+51.76 | 0+85.96 | | 6" STD. |

## SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- WH Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor
- Guardrail (Beam or Cable)
- GP Guard Post (one or two)
- Guard Post (over two)
- FP Filler Pipe
- GV Gas Valve
- WV Water Valve
- SL Speed Limit Sign
- MM Mile Marker Post
- SIGN Sign
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box
- EB Electric Box

## UTILITY LEGEND

- E1 — ***EL1D, Cedar Falls Utilities - Quality D***
- E2 — ***EL2D, City of Cedar Falls - Quality D***
- FO — ***FO1D, Cedar Falls Utilities - Quality D***
- FO2 — ***FO2D, Aureon Network Services - Quality D***
- FO3 — ***FO3D, Lumen - Quality D***
- G — ***GL1D, Cedar Falls Utilites - Quality D***
- SAN. — ***SA1D, Cedar Falls Utilities - Quality D***
- ST_S — ***ST1D, Cedar Falls Utilities - Quality D***
- T1 — ***TL1D, CenturyLink - Quality D***
- W — ***WL51D, Cedar Falls Utilities - Quality D***
- ***PPA, Cedar Falls Utilities***

## PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

| LINEWORK | Design Color No. | |
|---|---|---|
| Green | (2) | Existing Topographic Features and Labels |
| Blue | (1) | Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation |
| Magenta | (5) | Existing Utilities |
| **SHADING** | **Design Color No.** | |
| Lavender | (9) | Temporary Pavement Shading |
| Yellow | (4) | Proposed Pavement Shading |
| Orange | (6) | Proposed Granular Shading |
| Orange | (70) | Proposed Shoulder Granular Shading |
| Yellow | (68) | Proposed Shoulder Paved Full Depth Shading |
| Yellow | (132) | Proposed Shoulder Paved Partial Depth Shading |
| Gray, Dark | (112) | Proposed Grade and Pave Shading "In conjunction with a paving project" |
| Brown, Light | (236) | Grading Shading |
| Orange, Light | (134) | Proposed Granular Entrance Shading |
| Yellow | (220) | Proposed Paved Entrance Shading |
| Tan | (8) | Proposed Sidewalk Shading |
| Blue, Light | (230) | Proposed Sidewalk Landing Shading |
| Pink | (11) | Proposed Sidewalk Ramp Shading |
| Green, Light | (225) | Existing Pavement Shading |
| Red | (3) | Proposed Structure Shading |
| Red | (3) | Delineates Restricted Areas |

## PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

| LINEWORK | Design Color No. | |
|---|---|---|
| Green | (10) | Existing Ground Line Profile |
| Blue | (1) | Proposed Profile and Annotation |
| Magenta | (5) | Existing Utilities |
| Blue, Light | (230) | Proposed Ditch Grades, Left |
| Black | (0) | Proposed Ditch Grades, Median |
| Rust | (14) | Proposed Ditch Grades, Right |

- Reference Point — Station — Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

## RIGHT-OF-WAY LEGEND

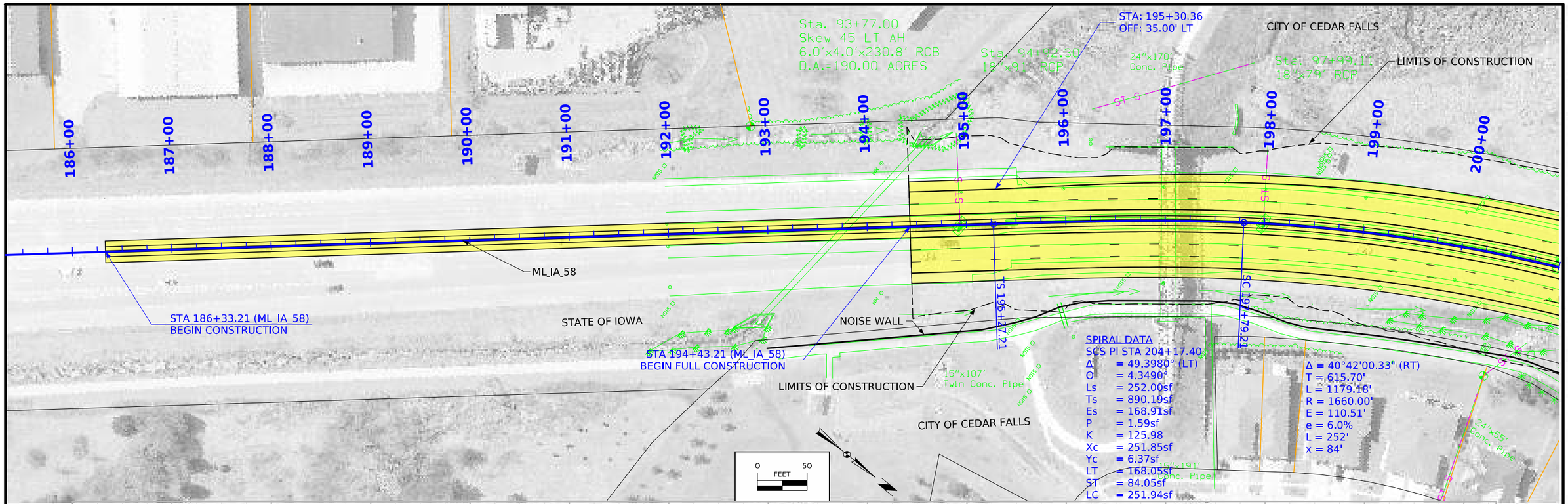
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- C/A Access Control
- Property Line

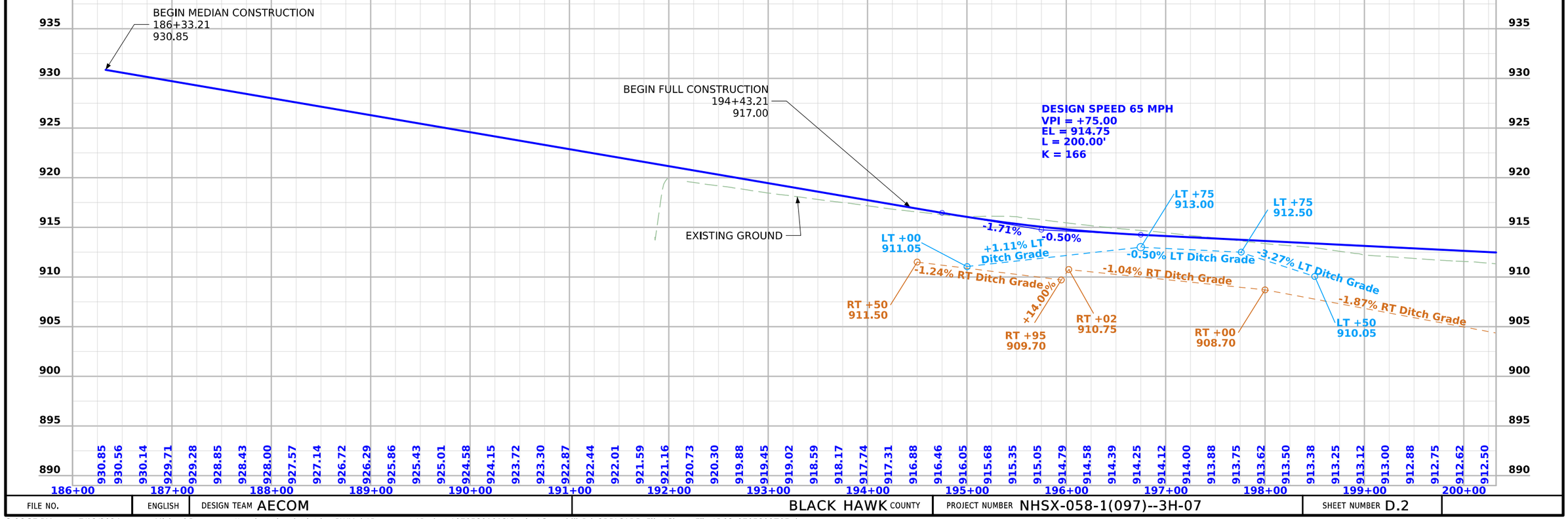
# PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, F, & K)

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **D.1** |
|---|---|---|---|---|---|

3:06:01 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Legend_Sheet.dgn




| | | | | | |
|---|---|---|---|---|---|
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER D.2 |

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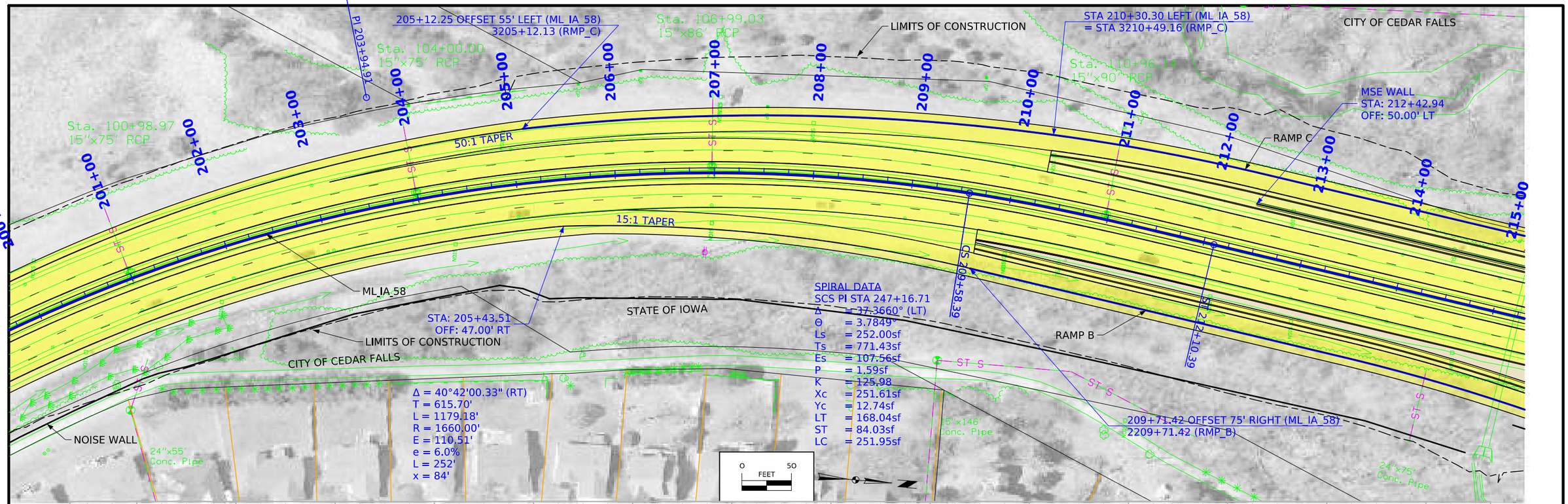


| | | | | | |
|---|---|---|---|---|---|
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER D.3 |

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CITY OF CEDAR FALLS
Sta. 113+23.00
6.0'x4.0'x201.00' RCB
D.A.=100.00 ACRES

LIMITS OF CONSTRUCTION

223+55.55 (ML_IA_58)
21+91.23 (SR_GREENHILL)

Sta. 9081+85.34
15"x148' RCP

STATE OF IOWA
UNIVERSITY OF NORTHERN IOWA

RAMP A

RAMP C

STATE OF IOWA

STATE OF IOWA

MSE WALL
STA: 227+60.66
OFF: 50.00' LT

ML_IA_58

MSE WALL
STA: 219+94.24
OFF: 54.00' RT

24"x75'
Conc. Pipe
NOISE WALL

STATE OF IOWA

NOISE WALL

RAMP B

RAMP D

176'-0 x 100'-0 BRIDGE

Sta. 9085+66.28
30"x261' RCP

LIMITS OF CONSTRUCTION

STATE OF IOWA
UNIVERSITY OF
NORTHERN IOWA

GREENHILL RD

0 50
FEET

EXISTING GROUND

-0.50%

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER D.4 |
|---|---|---|---|---|---|

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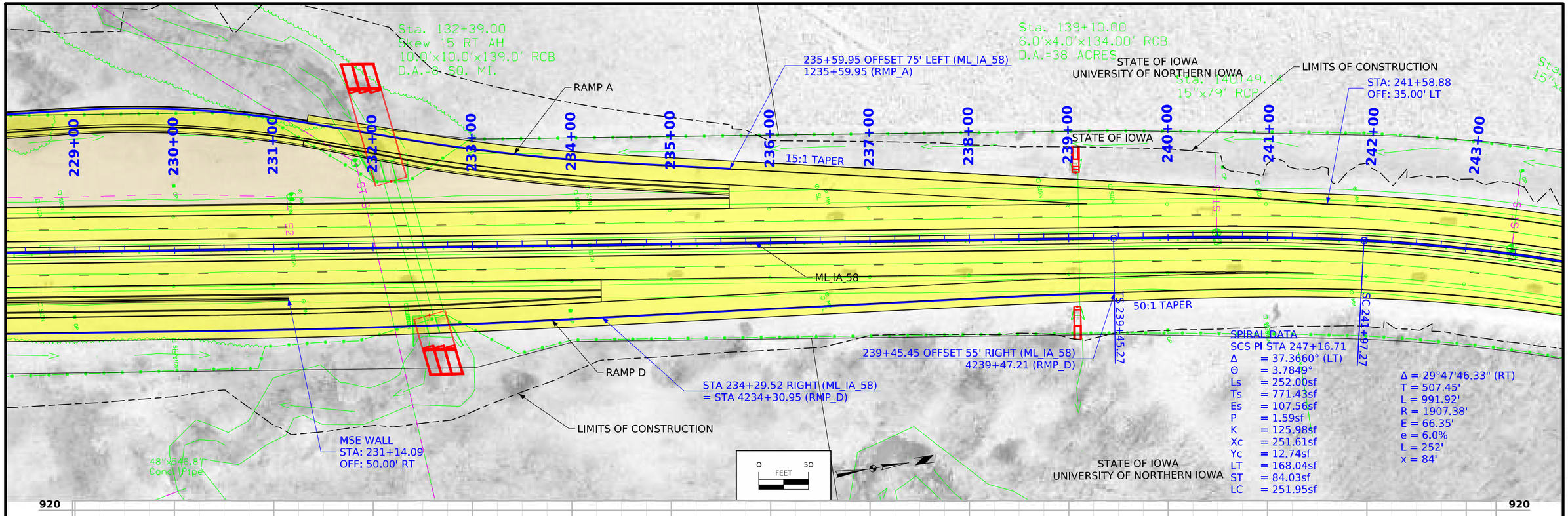
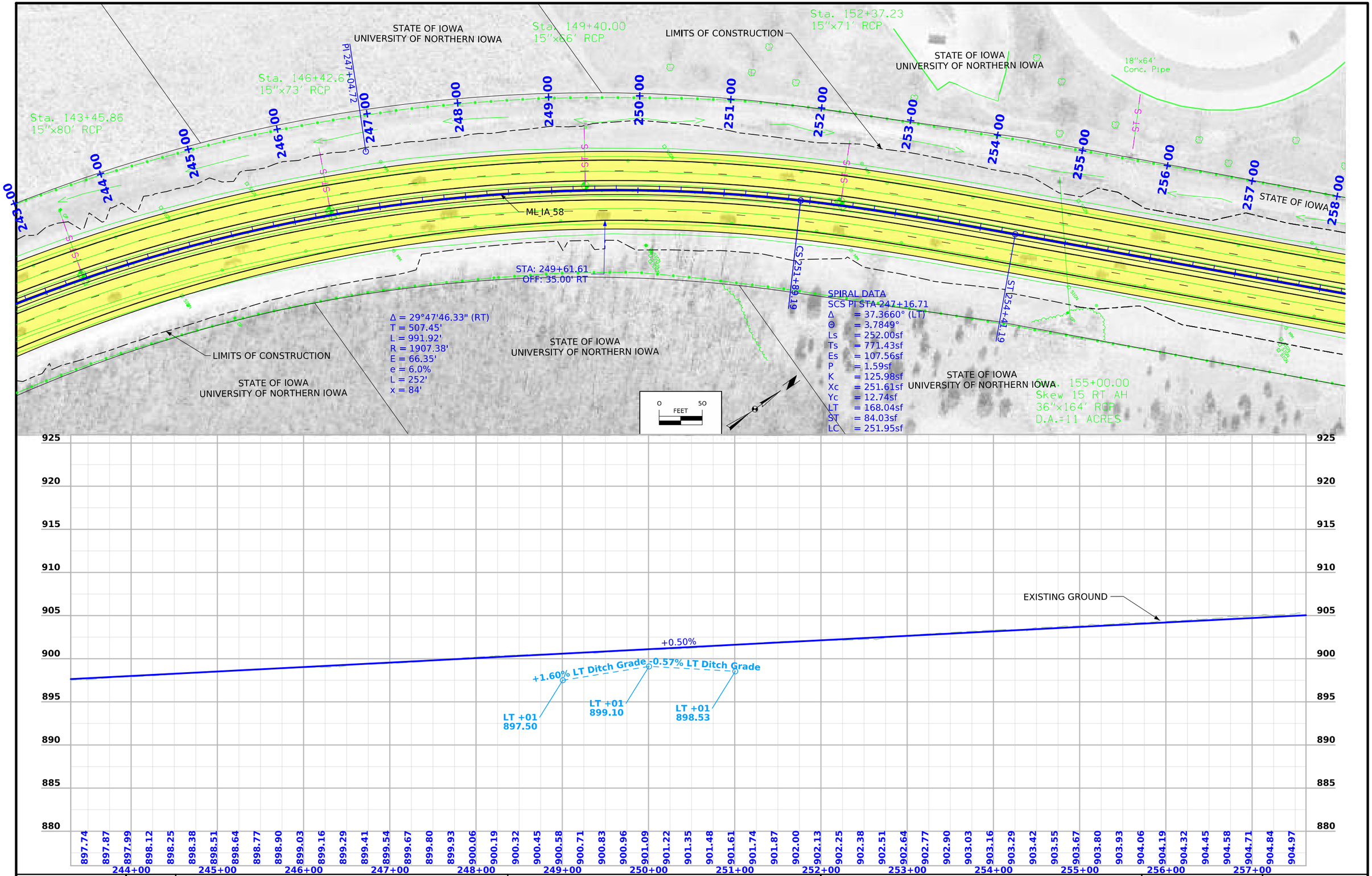



| | | | | | |
|---|---|---|---|---|---|
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER D.5 |

3:06:57 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\D02_0705809Z05.dgn




| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER D.6 |
|---|---|---|---|---|---|

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Sta. 164+97.75
Skew 30 RT AH
27"x205' RCP
D.A.=2 ACRES

STATE OF IOWA
UNIVERSITY OF NORTHERN IOWA

STA: 258+93.20
OFF: 35.00' LT

LIMITS OF CONSTRUCTION

STA 267+38.32 (ML_IA_58)
END CONSTRUCTION

257+00 258+00 259+00 260+00 261+00 262+00 263+00 264+00 265+00 266+00 267+00 268+00

STATE OF IOWA

70:1 TAPER

POE 268+10.08

STA 266+83.38 (ML_IA_58)

STA 266+39.84 (ML_IA_58)

LIMITS OF CONSTRUCTION

STATE OF IOWA
UNIVERSITY OF NORTHERN IOWA

0 50
FEET

START OF BRIDGE
266+83.38
909.79

END OF CONSTRUCTION
267+38.32
910.07

EXISTING GROUND

-0.50%

930 925 920 915 910 905 900 895 890 885

905.10 905.22 905.35 905.48 905.61 905.74 905.87 906.00 906.13 906.26 906.39 906.52 906.64 906.77 906.90 907.03 907.16 907.29 907.42 907.55 907.68 907.81 907.94 908.06 908.19 908.32 908.45 908.58 908.71 908.84 908.97 909.10 909.23 909.36 909.48 909.61 909.74 909.87 910.00 910.07

258+00 259+00 260+00 261+00 262+00 263+00 264+00 265+00 266+00 267+00 268+00

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER D.7 |
|---|---|---|---|---|---|

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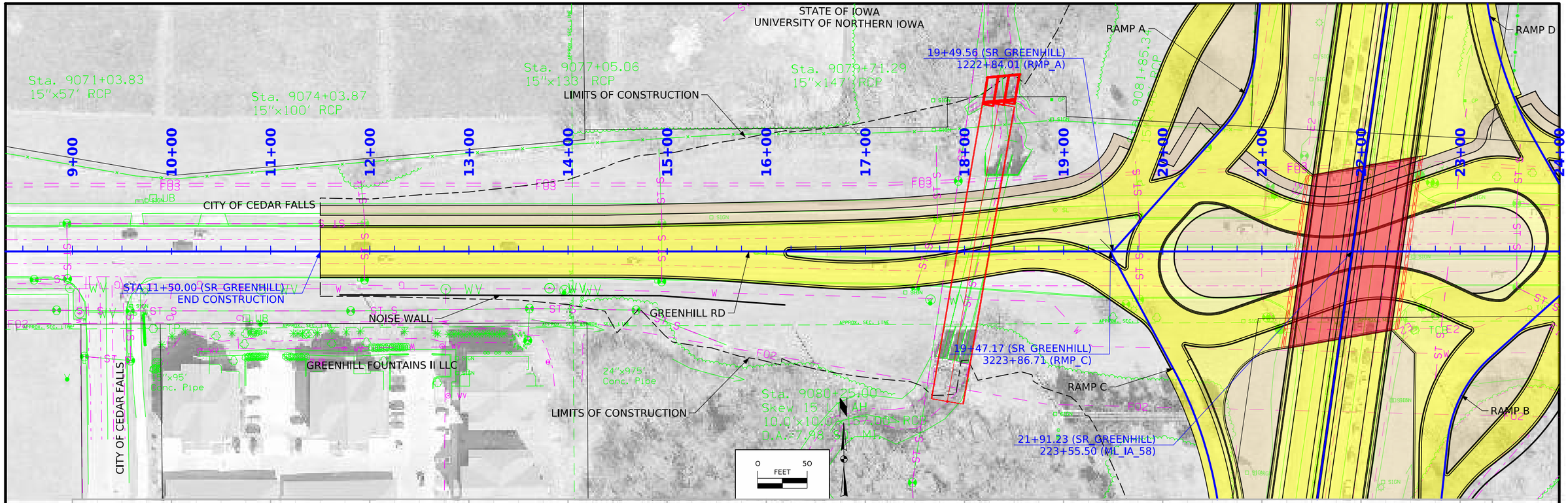


| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **E.1** |
|---|---|---|---|---|---|

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STATE OF IOWA
UNIVERSITY OF
NORTHERN IOWA

RAMP B

Sta. 9087+50.29
POT STA 24+38.75 (SR_GREENHILL)
= POT STA 4223+46.18 (RMP_D)

CITY OF CEDAR FALLS

Sta. 9085+66.2
30"x21" RCP

36"x142" RCP

CEDAR FALLS

CITY OF CEDAR

JAMES HARTEL

Sta. 9089+97.87
15"x105' RCP

JAMES DR

LIMITS OF CONSTRUCTION

24"x70'
Conc. Pipe

GREENHILL RD

24"x90'
Conc. Pipe

GERALD SORENSEN

Sta. 9092+98.11
24"x94' RCP

Sta. 9096+49.72
15"x100' RCP

Sta. 9100+04.68
15"x105' RCP

23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00

CITY OF CEDAR FALLS

STA 35+21.11 (SR_GREENHILL)
END CONSTRUCTION

POT STA 24+50.18 (SR_GREENHILL)
= POT STA 2224+34.57 (RMP_B)

RAMP B

CITY OF CEDAR FALLS

NOISE WALL

30"x123'
Conc. Pipe

LIMITS OF CONSTRUCTION

STA: 29+34.20
ENT_CFU DRIVEWAY

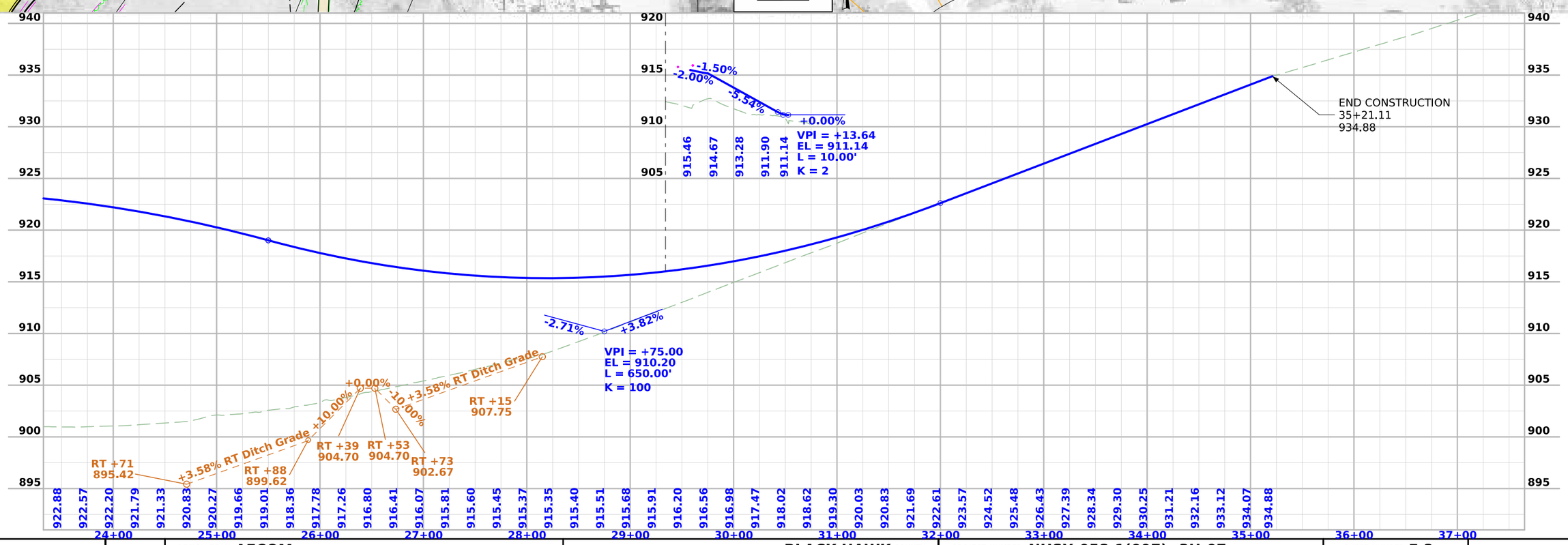
15"x60'
Twin Conc. Pipe

CEDAR FALLS UTILITIES

CITY OF CEDAR FALLS

24"x198'
Conc. Pipe

0 50
FEET




ENT_CFU_P - Profile 1

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER E.2 |
|---|---|---|---|---|---|

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LIMITS OF CONSTRUCTION

STA 0+85.97 (SR_JAMES)
END CONSTRUCTION

JAMES DR

PI 1+12.51

LIMITS OF CONSTRUCTION

GREENHILL RD

30+33.68 (SR_GREENHILL)
0+00.00 (SR_JAMES)

POB 0+00.00

PC 0+89.10

PT 1+35.24

POE 2+12.18

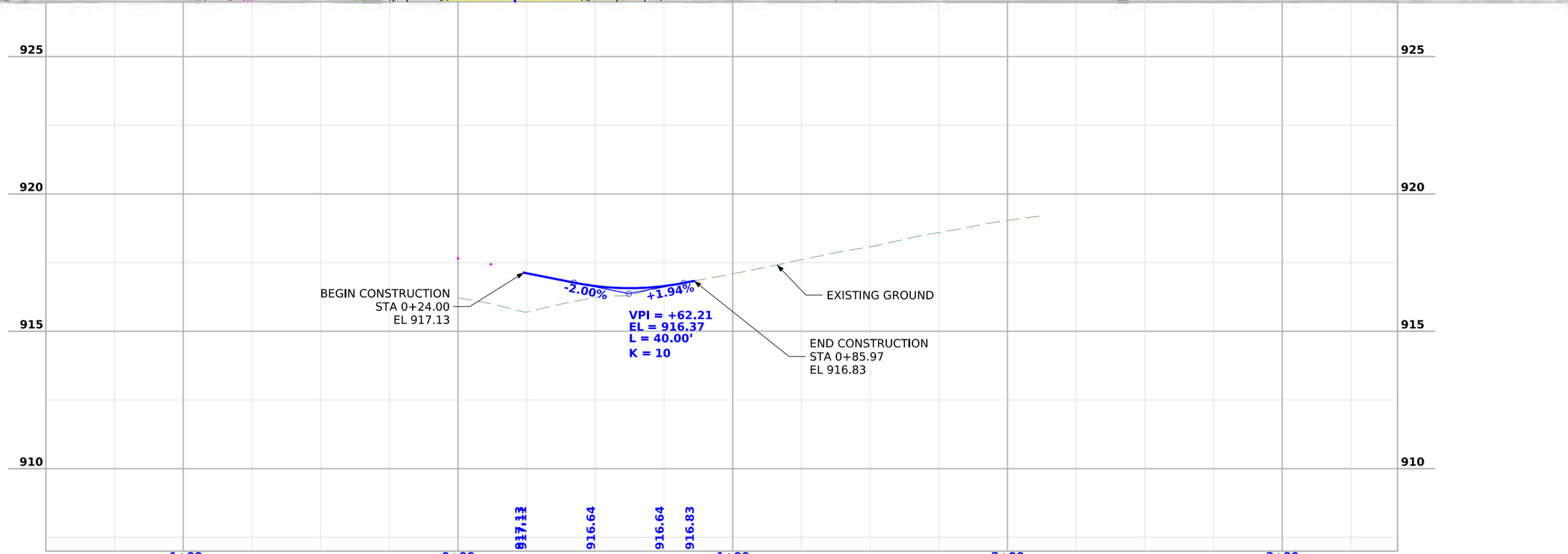
CITY OF CEDAR FALLS

Δ = 24°01'48.71" (RT)
T = 23.41'
L = 46.13'
R = 110.00'
E = 2.46'

15'x60' Twin Conc. Pipe

24"x198' Conc. Pipe

24"x90' Conc. Pipe




| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **E.3** |
|---|---|---|---|---|---|

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## SURVEY INDEX

**County: Black Hawk**
**PIN: 12-07-058-010**
**Project Number: NHSX-058-1(97)—3H-07**
**Location: Hwy 58 and Greenhill Rd**
**Type of Work: Project Control**
**Project Directory: 0705801012**

## Survey Personnel

Michael Fagle – Survey Party Chief
Aaron Mueller – Assistant Survey Party Chief
Ethan Nicholas – Assistant Survey Party Chief

## Date(s) of Survey

| | |
|---|---|
| Begin Date | 01/09/2023 |
| End Date | 03/17/2023 |

## General Information

This survey is for Hwy 58/27 and Greenhill Rd reconstruction. This survey request was for the Hwy 58/27 and Greenhill Rd corridors. This project is a Full Field DTM survey.

## Utility Information

For logging data and other utility details see Utility Survey and Ownership Report in the Utility folder of the PrelimSurvey project directory.

## Project Control

Coordinates were determined for primary project control points by conducting one concurrent six-hour static observation. Post processing is constrained to nearby Iowa Real Time Network reference stations. For additional details of the control survey, contact the Preliminary Survey department.

**PROJECT DATUM: NAD83(2011) EPOCH 2010.00**
**VERTICAL DATUM: NAVD88**
**COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 05**
**GEOID MODEL: 2018**

## Alignment Information

The horizontal alignment for Hwy 58/27 this survey is a retrace of As-built Plans No. IX-58-1(15)—3P-07. Survey stationing was equated to the plan POT at Sta. 123+56.68 and run back and ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

TS Sta. 95+43.30 As-built Plans Project No. IX-58-1(15)—3P-07
Survey TS Sta. 95+42.83

SC Sta. 97+83.30 As-built Plans Project No. IX-58-1(15)—3P-07
Survey SC Sta. 97+82.83

PI Sta. 103+95.37 As-built Plans Project No. IX-58-1(15)—3P-07
Survey PI Sta. 103+94.90

CS Sta. 109+54.76 As-built Plans Project No. IX-58-1(15)—3P-07
Survey CS Sta. 109+54.28

ST Sta. 111+94.76 As-built Plans Project No. IX-58-1(15)—3P-07
Survey CS Sta. 111+94.28

POT Sta. 123+56.68 As-built Plans Project No. IX-58-1(15)—3P-07
Survey POT Sta. 123+56.68

TS Sta. 139+53.52 As-built Plans Project No. IX-58-1(15)—3P-07
Survey TS Sta. 139+53.05

SC Sta. 141+93.52 As-built Plans Project No. IX-58-1(15)—3P-07
Survey SC Sta. 141+93.05

PI Sta. 147+08.53 As-built Plans Project No. IX-58-1(15)—3P-07
Survey PI Sta. 147+08.06

CS Sta. 151+99.61 As-built Plans Project No. IX-58-1(15)—3P-07
Survey CS Sta. 151+99.14

ST Sta. 154+39.61 As-built Plans Project No. IX-58-1(15)—3P-07
Survey TS Sta. 154+39.14

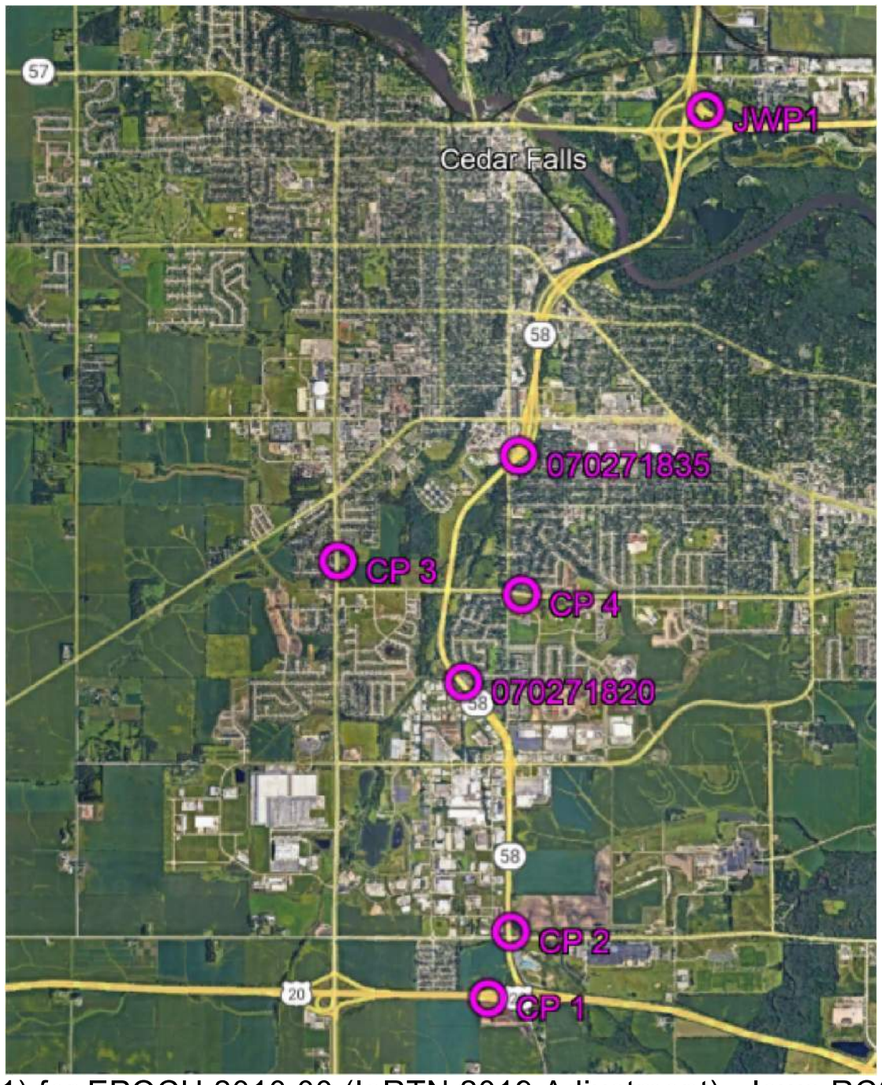
The horizontal alignment for Greenhill Rd this survey is a retrace of As-built Plans No. X-6560(4)—79-07 and follows section line. Survey stationing was equated to the As-built Plans No. X-6560(4)—79-07 PI at Sta. 84+00.77 and run back and ahead with equation from As-Built Plans No. IX-58-1(15)—3P-07 of 84+00.77 = 9084+00.77 throughout the survey.

Survey stationing relates to as-built plan stationing as follows:

POT Sta. 84+00.77 As-built Plans Project No. X-6560(4)—79-07 = POT Sta. 9084+00.77 As-built Plans Project IX-58-1(15)—3P-07

## CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points. Primary control is for use with RTK base stations and for RTN validation. Future surveys will use primary project control to establish temporary control as needed for construction or other surveying applications.




HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 05 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u3

Coordinate listing from next sheet will be used with IaRTN for monument recovery. No other reference ties are given.

# HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

## HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
## Ia. Regional Coordinate System Zone 05 (U.S. Survey Foot)

## VERT. DATUM: NAVD88
## Geoid Model: 2018u3

| Point Name | Northing | Easting | Elevation | Code Description |
|---|---|---|---|---|
| | | | | |
| CP1 | 8832416.71 | 15446592.17 | 945.94 | CP FND FENO MONUMENT IN EAST BOUND INFIELD BETWEEN US 20 AND US 20 OFF RAMP TO IA 27/58 MONUMENT IS 75FT E OF LUMINAIRE 13FT S OF SOUTH EDGE PCC PAVED SHOULDER EAST BOUND US 20 AND 12FT N OF NORTH EDGE PAVED SHOULDER OF OFF RAMP |
| | | | | |
| CP2 | 8834541.82 | 15447254.48 | 918.01 | CP FND FENO MONUMENT 260FT N AND 95FT E OF THE INTERSECTION OF HWY 58/27 AND RIDGWAY AVE MONUMENT IS 59FT E OF EAST EDGE PAVED SHOULDER NORTH BOUND HWY 58/27 AND 7FT W OF 6IN X 6IN WOOD TRAIL MARKER POST |
| | | | | |
| CP3 | 8845723.49 | 15441962.22 | 919.53 | CP SET FENO MONUMENT 3IN DEEP AND 750FT N OF THE INTERSECTION OF GREENHILL RD AND HUDSEN RD MONUMENT IS 22FT E OF EAST BACK OF CURB ALONG HUDSEN RD 6FT E OF EAST EDGE PCC SIDEWALK AND 73FT NE OF CENTER MH TOP INTK LID |
| | | | | |
| CP4 | 8844769.08 | 15447612.06 | 947.38 | CP SET FENO MONUMENT 3IN DEEP AND 430FT E OF THE INTERSECTION OF GREENHILL RD AND S MAIN ST MONUMENT IS 9FT S OF SOUTH BACK OF CURB ALONG GREENHILL RD 2FT N OF NORTH EDGE PCC SIDEWALK AND 78FT E OF FIRE HYDRANT |
| | | | | |
| JWP1 | 8859694.06 | 15453130.52 | 887.96 | CP FND FENO MONUMENT 0.22 MI NW OF WEST BOUND HWY 57/218 IN INFIELD BETWEEN NORTH BOUND 218 RAMP AND SOUTH BOUND 58/27 RAMP 41.5FT NE OF STA STAMP 3264 AND 23FT NNE OF EDGE PCC SHOULDER AND 20FT SW OF EDGE PCC RAMP SHOULDER |
| | | | | |
| 70271820 | 8842114.96 | 15445805.97 | 917.59 | CP SET FENO MONUMENT 3IN DEEP AND 0.6MILES NORTH ALONG HWY 58 FROM THE INTERSECTION OF HWY 58 AND VIKING RD MONUMENT IS 11FT SE OF SOUTHEAST EDGE PCC PAVED SHOULDER HWY 58 14FT S OF THE NEAR COR RCB HDWL AND 136FT SE OF MM 182 POST |
| | | | | |
| 70271835 | 8849013.25 | 15447506.23 | 909.79 | CP SET FENO MONUMENT 3IN DEEP AND 0.9MILES NE ALONG HWY 58 FROM THE INTERSECTION OF HWY 58 AND GREENHILL RD MONUMENT IS 20FT W OF NEAR EDGE PCC RAMP 21FT E OF NEAR EDGE HMA PAVED SHOULDER HWY 58 AND 84FT N OF NEAR COR LUMINAIRE BASE |
| | | | | |

## CROSS SECTION VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

| SHADING | Design Color No. | |
|---|---|---|
| Green, Light | (225) | Existing Pavement Shading |
| Gray, Light | (48) | Previously Constructed Pavement Shading |
| Gray, Med | (80) | Previously Constructed Granular Surface Shading |
| Blue, Light | (230) | Proposed Pavement Shading |
| Lavender | (9) | Temporary Pavement Shading |
| Brown, Med | (237) | Future Proposed Pavement Shading |

## CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

| | | | |
|---|---|---|---|
| | Pavement Removal | | Proposed Granular Shoulder |
| | Proposed Granular Subbase | | Temporary Shoulder |
| | Proposed Special Backfill | | Existing Shoulder Strengthening |
| | Temporary Barrier Rail | | Permanent Barrier Rail |
| | | | Channelizing Device |

## PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

| LINEWORK | Design Color No. | |
|---|---|---|
| Green | (2) | Existing Topographic Features and Labels |
| Magenta | (5) | Pavement Marking Call Outs |
| Blue | (1) | Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation |
| Yellow | (4) | Pavement Markings, Yellow |
| Off White | (254) | Pavement Markings, White |
| Violet | (15) | Temporary barrier rail, Unpinned |
| Flush Orange | (228) | Temporary barrier rail, Pinned |

| SHADING | Design Color No. | |
|---|---|---|
| Green, Light | (225) | Existing Pavement Shading |
| Gray, Light | (48) | Previously Constructed Pavement Shading |
| Gray, Med | (80) | Proposed Granular Surface Shading |
| Gray, Med | (80) | Previously Constructed Granular Surface Shading |
| Blue, Light | (230) | Proposed Pavement Shading |
| Lavender | (9) | Temporary Pavement Shading |
| Brown, Light | (236) | Proposed Grading Limits Shading |
| Pink, Dark | (13) | Proposed MSE or CIP Wall Shading |
| Red | (3) | Proposed Bridge Shading and Sign Trusses |
| Black w/Gray, Light Fill | (0,48) | Previously Constructed Structure |

## PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

| | | | |
|---|---|---|---|
| | Channelizing Device | | Crash Cushion (Temp or Perm) |
| | Drum | | Traffic Signal |
| | Temporary Lane Separator | | Flagger |
| | Tubular Marker | | Temporary Floodlighting |
| | Channelizer Marker | | Traffic Sign |
| | Concrete Barrier Marker | | Type III Barricade |
| | Delineator | | Type A Warning Light |
| | Temporary Barrier Rail | | Direction of Traffic |
| | Pavement Removal | | Safety Closure |
| | Sand Barrel Layout | 1 | Lane Identification |

**NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.**

# TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES J)

## STAGING NOTES

The staging shown is one method for construction for the project. Any request for changes to the staging should follow Article 1105.15 of the Standard Specifications. Maintenance of traffic shall be according to Tab. 108.23. No Value Engineering proposal will be accepted that deviates from the intent of the traffic control plan shown in the plans.
Stage 1 has interim stages A and B to maintain traffic to James Drive.
Stages 2 and 3 shall be constructed concurrently.

Pre-Stage 1 Traffic
- Close the northbound and southbound inside lanes of IA 58 to accommodate the construction of the crossovers near stations 190+00 and 265+00.

Pre-Stage 1 Construction
- Remove the inside should pavement, cable rail, and concrete barrier on IA 58 to accommodate the construction of the crossovers near stations 190+00 and 265+00.
- Construct the crossovers with temporary pavement. Refer to the F -sheets.

Stage 1 Traffic
- Shift the IA 58 traffic head-to-head on the west side of the roadway.
- Install temporary traffic signal at IA 58 and Greenhill Road. - Close Greenhill Road from IA 58 northbound to James Drive.
- Close shared use path system.

Stage 1 Construction
- Construct the IA 58 northbound outside wall as grading progresses.
- Grade and construct the IA 58 northbound on and off ramps.
- Construct east abutment for the Greenhill Road Bridge over IA 58.
- Construct replacement pedestrian underpass near station 26+50.
- Construct box culvert extension under northbound on ramp near station 232+50.
- Grade and construct Greenhill Road east of the IA 58 intersection.
- Construct the permanent and temporary paving for the eastside Greenhill Road from bridge approach to James Drive west edge.

Stage 1A Traffic
- Install temporary traffic signals on Greenhill at east construction limits and at James Drive to maintain access to James Road utilizing the outside westbound lane. Refer to TC-216.

Stage 1A Construction
- Construct Greenhill Road eastbound lanes to east limits and James Drive west half.

Stage 1B Traffic
- Maintain access to James utilizing the outside eastbound lanes.

Stage 1B Construction
- Construct Greenhill Road westbound lanes from James Drive to east limits and James Drive east half.

Stage 2 Traffic
- Shift the IA 58 head-to-head traffic to the IA 58 northbound on and off ramps to Greenhill Road.
- Install temporary traffic signal at IA 58 and Greenhill Road intersection.
- Greenhill Road from IA 58 to east limits shall be one lane in both directions.

Stage 2 Construction
- Grade Greenhill Road from west project limits to IA 58 retaining wall. .
- Construct the IA 58 southbound outside wall as grading progresses.
- Construct west abutment for the Greenhill Road Bridge over IA 58.
- Construct detention basin outlet and box culvert under Greenhill Road near station 18+20.
- Construct the Greenhill Road Bridge over IA 58 and bridge approaches.
- Construct the permanent paving for Greenhill Road from Phase 1 limits to west limits.

Stage 3 Traffic
- Maintain the IA 58 head-to-head traffic on the east side of the roadway utilizing the newly constructed Stage 1 sections of IA 58 northbound and the on and off ramps to Greenhill Road.

Stage 3 Construction
- Grade and construct the IA 58 southbound on and off ramps.
- Construct the IA 58 northbound and southbound mainline.

Winter Shutdown
- IA 58 head-to-head traffic shall continue to utilize the constructed northbound on and off ramps with temporary traffic signals until completion of Stage 3.
- Greenhill Road shall be open to 4 lanes after the construction of Stage 1. Stage 2 shall be closed until completion of Stage 3.

Stage 4A Traffic
- IA 58 traffic will be signle lane in both directions with on and off ramps for Greenhill Road open.
- Greenhill Road will be open with one lane in both directions.

Stage 4A Construction
- Grade and Construct outside lanes and IA 58 bridge approach over S. Main Street Bridge.
- Construct remaining IA 58 retaining wall enhancements.
- Construct the remaining Greenhill Road improvements on new bridge and enhancements.
- Construct median and permanent barrier rail near station 190+00 and 265+00.

Stage 4B Traffic
- Shift northbound and southbound IA 58 traffic to outside lanes.

Stage 4B Construction
- Construct IA 58 inside lanes near station 265+00 at the north median crossover.

## TRAFFIC CONTROL PLAN

Refer to Tab. 108-26A for traffic control specifics.
Traffic control on this project shall be in accordance with Standard Road Plans listed on Tab 105-4 and as detailed elsewhere in the J Sheets. For additional complementary information, refer to part 6 of the Manual on Uniform Traffic Control Devices and to the current Standard Specifications.
Sign washing shall be considered incidental to traffic control and required as directed by the Engineer.

The Contractor shall take measures to prevent tracking or spilling of dirt, mud or other foreign materials onto IA 58 and Greenhill Road.

Work that directly affects traffic movement and flow, such as staging changes, temporary striping/signing, startup of temporary traffic signals, etc. shall
not be allowed between 6:00 AM Friday and 9:00 PM Sunday and 6:00 AM to 9:00 PM Monday through Thursday. The DOT reserves the right to modify
the hours specified above to accommodate unexpected traffic flows. Coordinate with the Engineer a minimum of two (2) weeks prior to changes in the
proposed traffic patterns.

Contractor shall use a Portable Dynamic Message Sign (PDMS) to inform the public a minimum of five (5) days prior to a major change in traffic patterns
on Greenhill Road and IA 58. Locations of PDMS will be determined by the Engineer in the field.

The Contractor shall place painted pavement markings as indicated by the staging and traffic control plan. The Contractor shall also remove existing and
temporary markings as necessary for the proposed traffic control plan. The removal method shall be approved by the Engineer and shall not permanently
damage or scar the pavement.

Maintain access to James Drive and Cedar Falls Utilities (CFU) substation at all times. All construction activities restricting full access to the Cedar Falls Utility
(CFU) substation must be scheduled during closed business hours and coordinated with CFU in advance of closure with emergency access to be maintained.
Maintaining vehicle access to James Drive and CFU substation shall be considered incidental to the Traffic Control bid item.

If contractor plans to store equipment or materials on private property they need to provide a copy of the agreement to the Engineer.

Contractor is approved to work 7 days a week. Night work will be permitted. Night work within 300 feet of a residential property will not be allowed between
10:00 PM and 6:00 AM unless approved by the Engineer.

Contractor will be responsible for maintaining traffic control throughout winter shutdown.

Contractor to maintain storm water flow throughout the duration of the project.

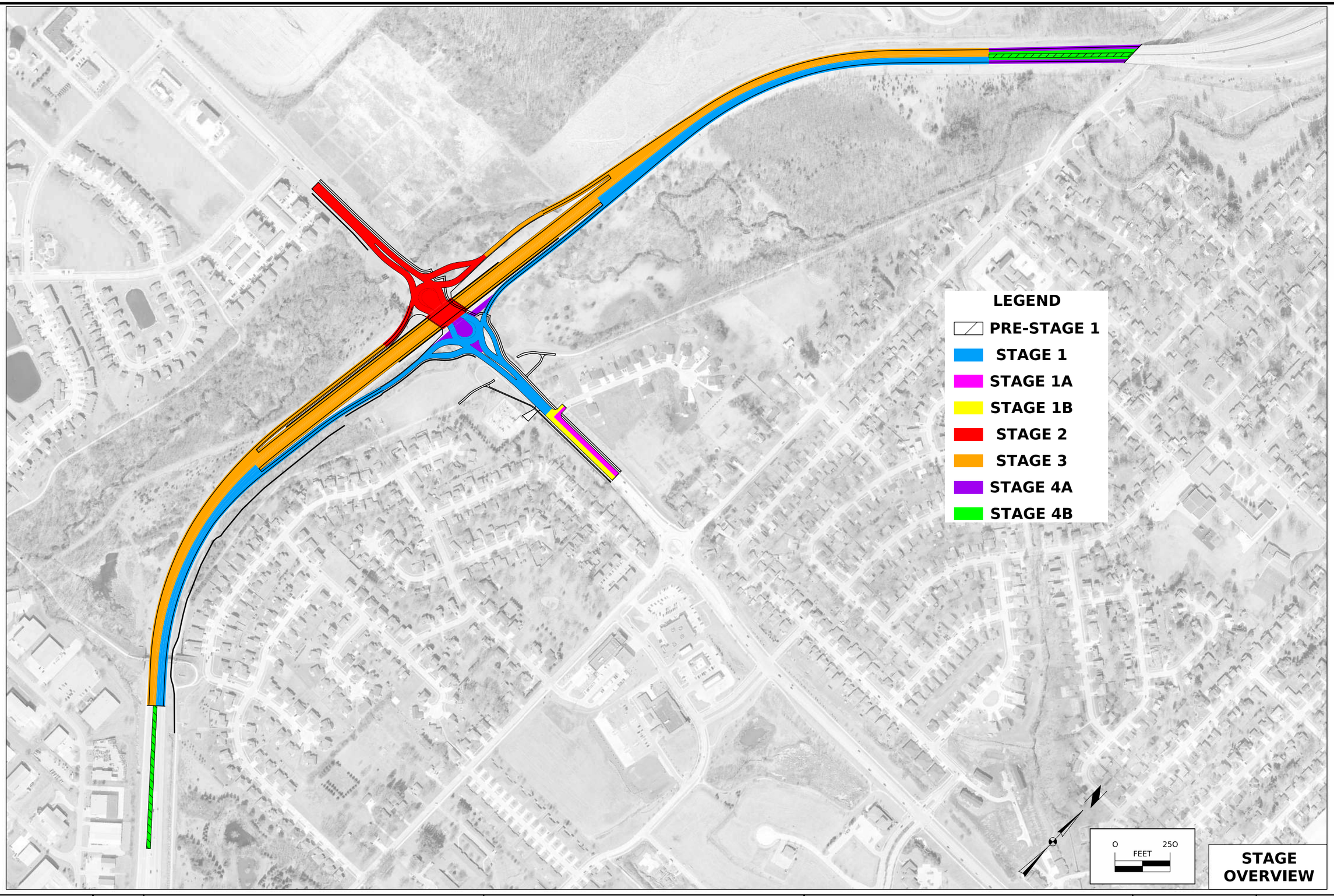
IA 58
- Maintain traffic, both northbound and southbound, at all times during all stages of construction.
- The intersection with Greenhill Road shall remain open except as noted elsewhere in the traffic control plan.

Greenhill Road
- During construction of Greenhill Road, road closures shall be allowed on Greenhill Road, except as noted elsewhere in the traffic control plan to maintain access for CFU and James Drive.
- Once reconstruction of Greenhill is complete, traffic shall be maintained, both eastbound and westbound, as noted elsewhere in the traffic control plan.

James Drive
- Maintain traffic, both northbound and southbound, during all stages except as noted elsewhere in the traffic control plan.
- During reconstruction of James Drive and Greenhill Rd, maintain traffic with alternate one-way movement through the constricted section via a temporary traffic signal.
- Maintain access to Ashworth Drive and S. Main Street during all stages of construction.

Sign W21-3A "Trucks Turning Ahead" shall be posted in advance of locations where trucks are entering or exiting work areas. Details of the W21-3A sign can be found on Standard Road Plan SI-881.

Active contractor vehicles and self-propelled equipment (except hand operated equipment) operating or parked within 15 feet of an open traffic lane (unless shielded by temporary or permanent barrier) and contractor, delivery, and service vehicles entering or exiting work area shall display cab roof mounted amber or yellow high intensity rotating, flashing or oscillating warning lights. Repair or replace vehicle warning lights not functional or missing within 24 hours.




**STAGE OVERVIEW**

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **J.3** |
|---|---|---|---|---|---|

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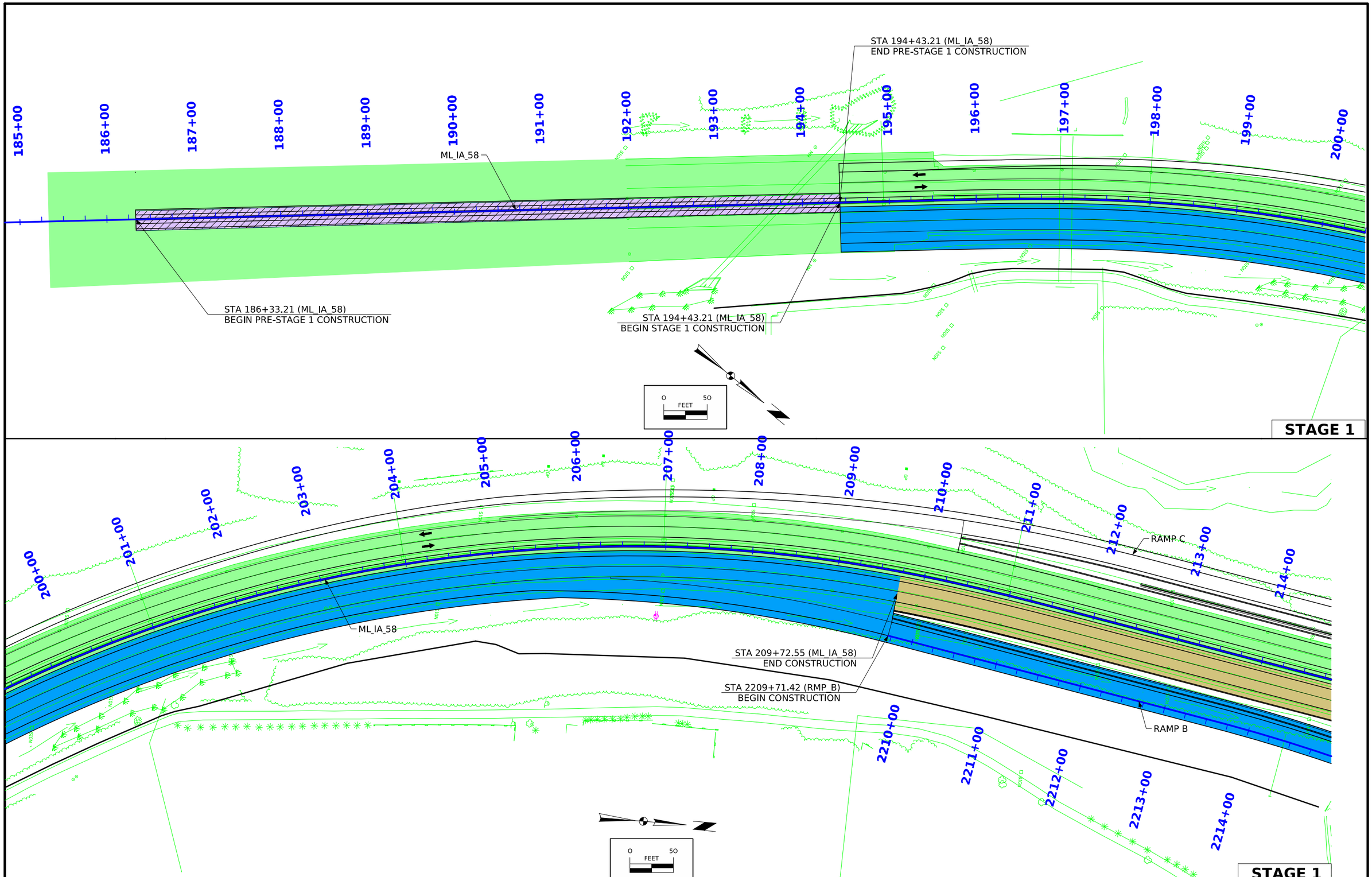


| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.4 |
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GREENHILL RD

RAMP A

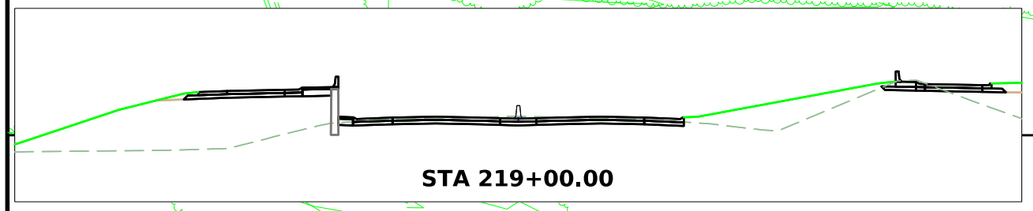
RAMP C

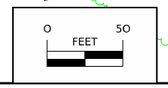
ML_IA_58

RAMP B

RAMP D

214+00 215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00



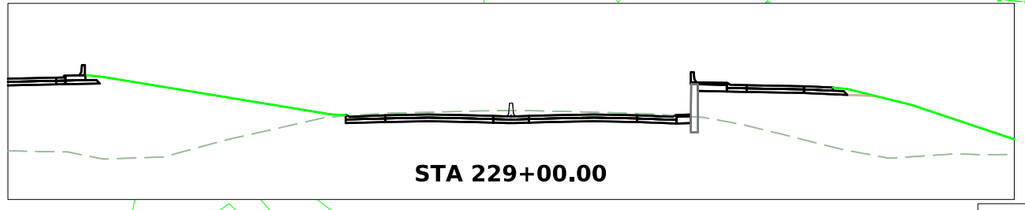

STAGE 1

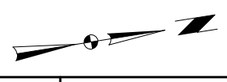
228+00 229+00 230+00 231+00 232+00 233+00 234+00 235+00 236+00 237+00 238+00 239+00 240+00 241+00 242+00 243+00

RAMP A

ML_IA_58

RAMP D




STAGE 1

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.5 |
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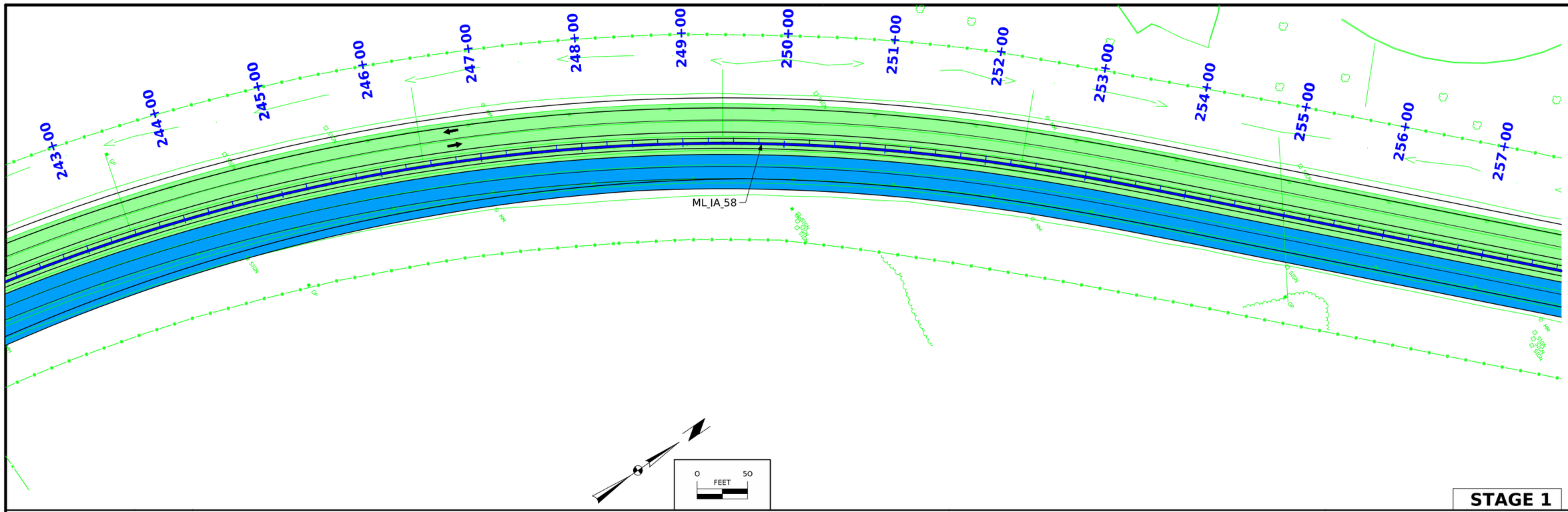
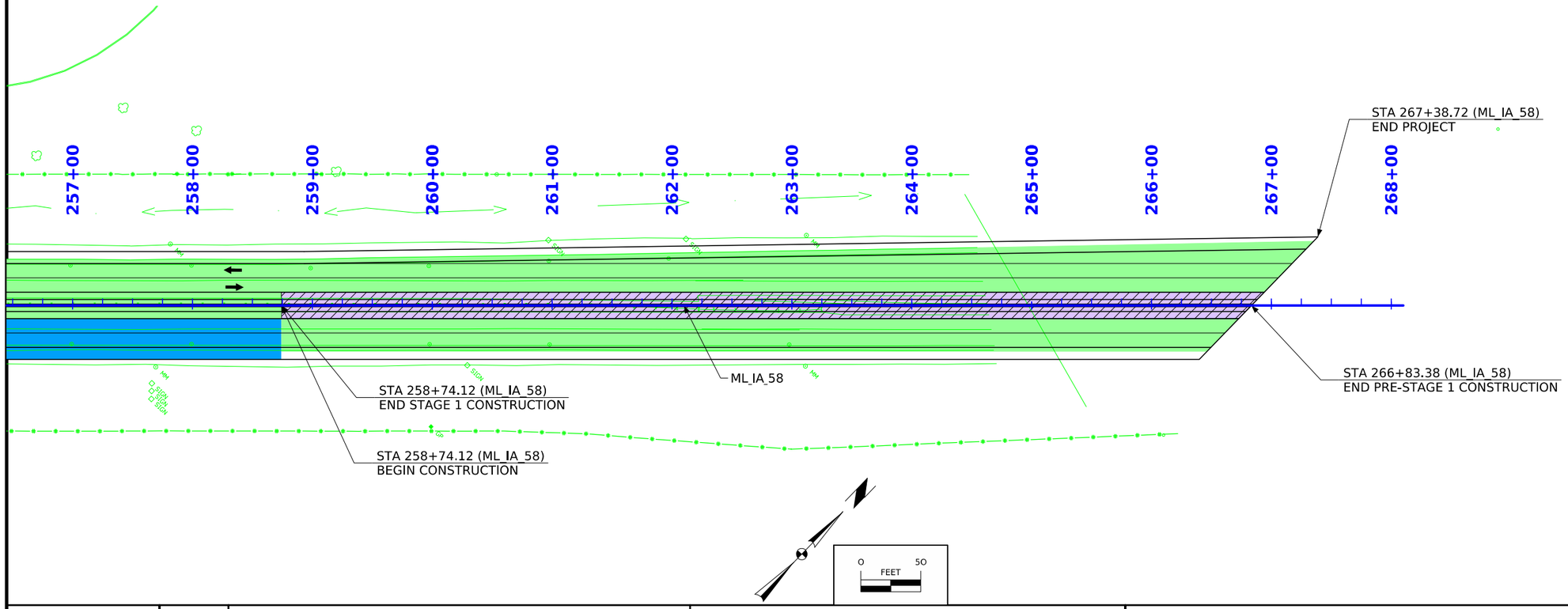



**STAGE 1**




**STAGE 1**

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9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

GREENHILL RD

RAMP A

RAMP C

RAMP D

RAMP B

ML_IA 58

0 50 FEET

**STAGE 1**

RAMP D

RAMP B

22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00

JAMES DRIVE

GREENHILL RD

STA 29+92.68 (SR_GREENHILL)
END STAGE 1 CONSTRUCTION

**STA 25+00.00**

0 50 FEET

**STAGE 1**

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.7 |
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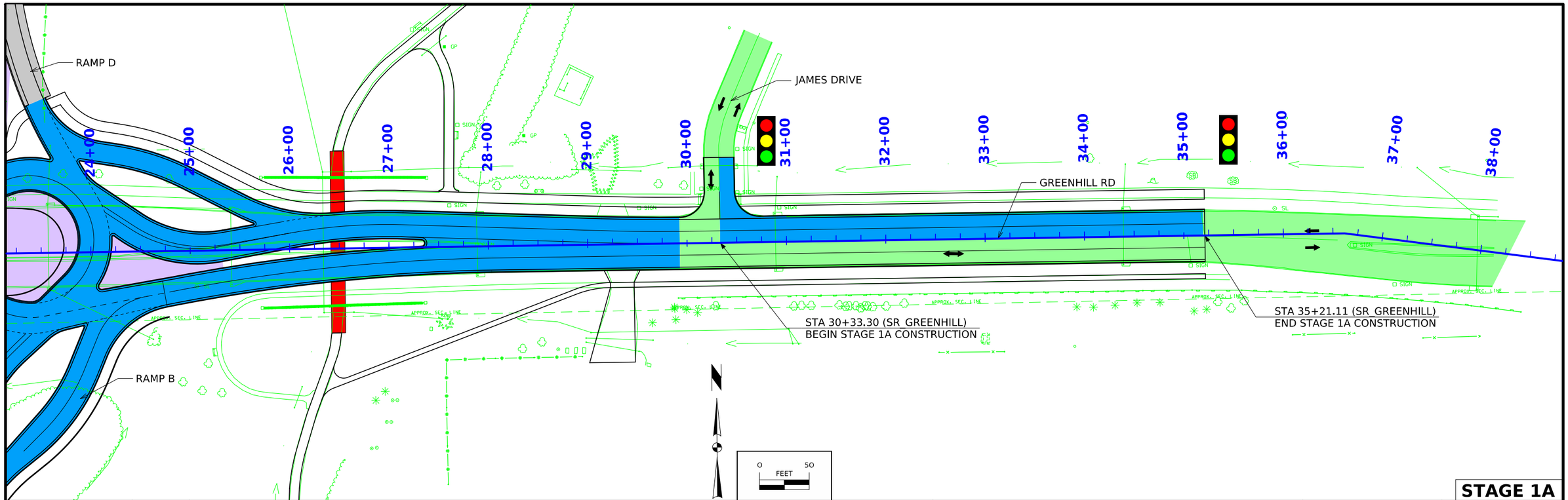
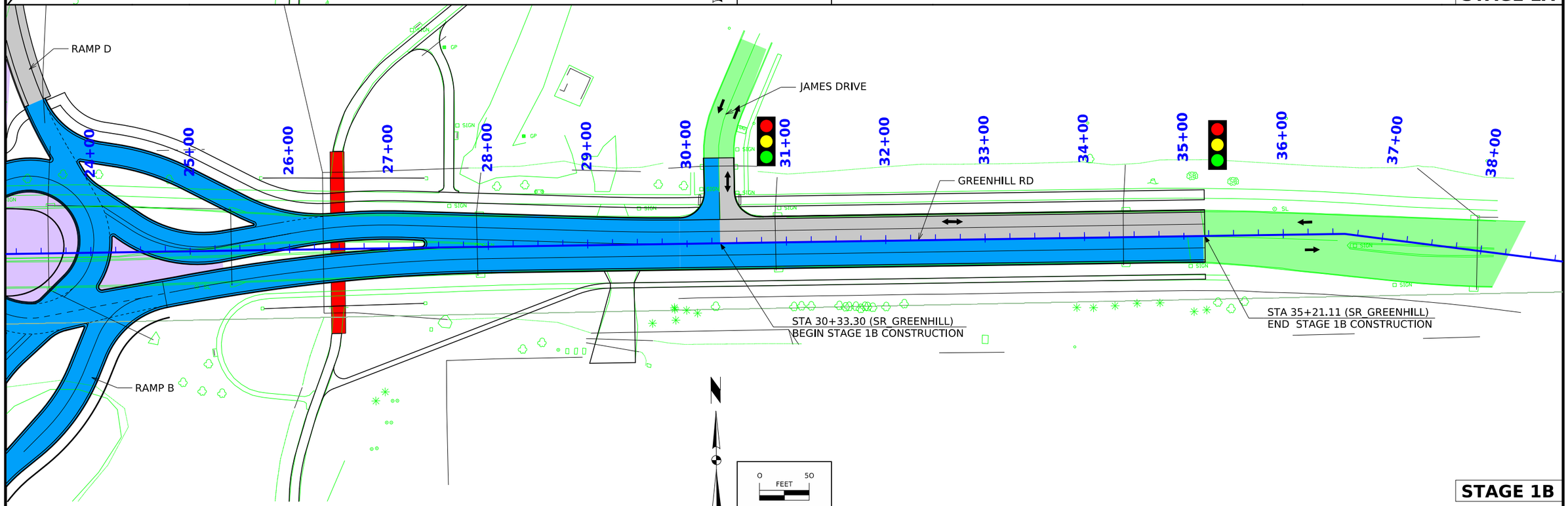



**STAGE 1A**




**STAGE 1B**

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.8 |
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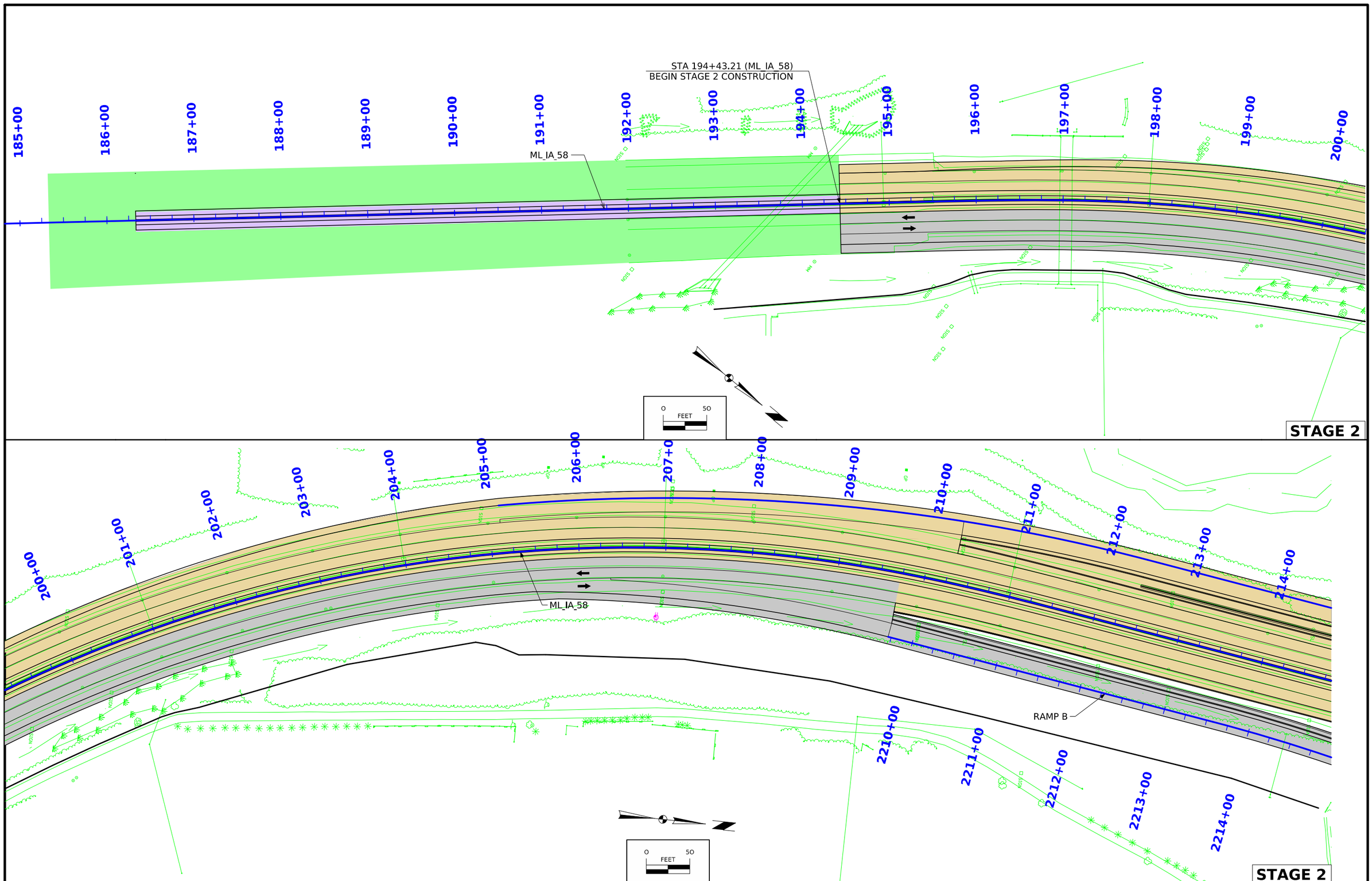


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GREENHILL RD

STA 3219+86.80 (RMP_C)
BEGIN CONSTRUCTION

RAMP C

ML IA 58

RAMP A
STA 1227+21.80 (RMP_A)
END CONSTRUCTION

RAMP D

RAMP B

214+00 215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00

2214+00 2215+00 2216+00 2217+00 2218+00 2219+00 2220+00 2222+00 4225+00 4226+00 4227+00 4228+00 4229+00

0 FEET 50

STAGE 2

RAMP A

228+00 229+00 230+00 231+00 232+00 233+00 234+00 235+00 236+00 237+00 238+00 239+00 240+00 241+00 242+00 243+00

PI 4238+87.22

ML_IA_58

RAMP D

4228+00 4229+00 4230+00 4231+00 4232+00 4233+00 4234+00 4235+00 4236+00 4237+00 4238+00 4239+00

0 FEET 50

STAGE 2

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.10 |
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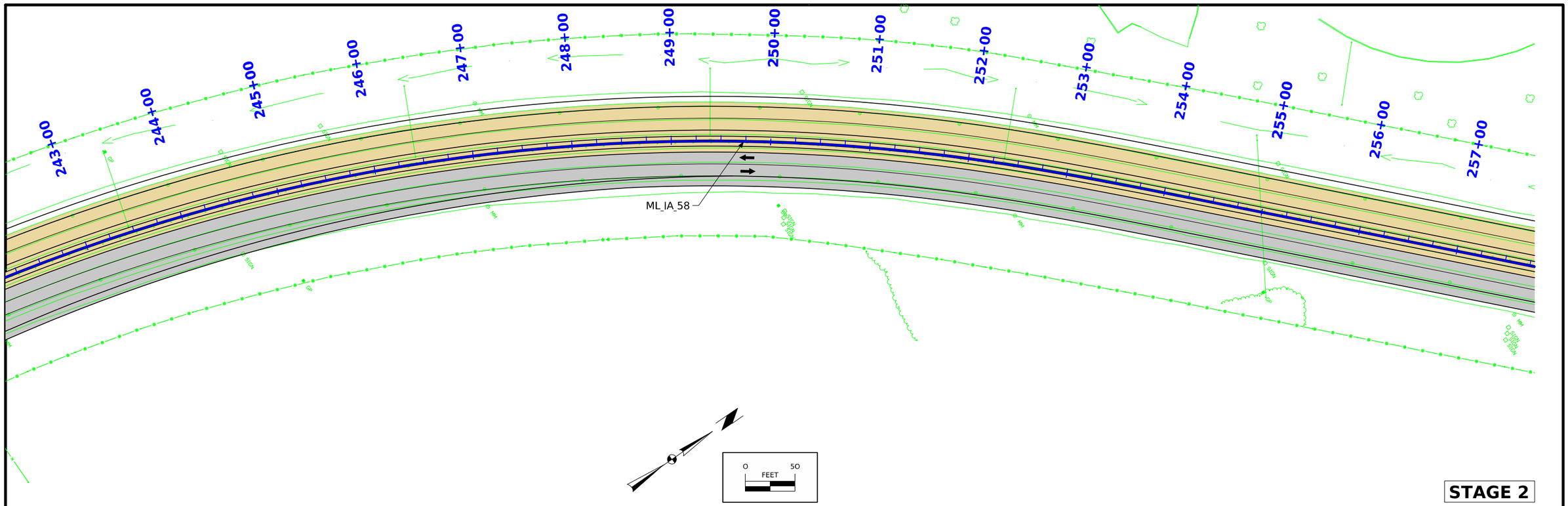
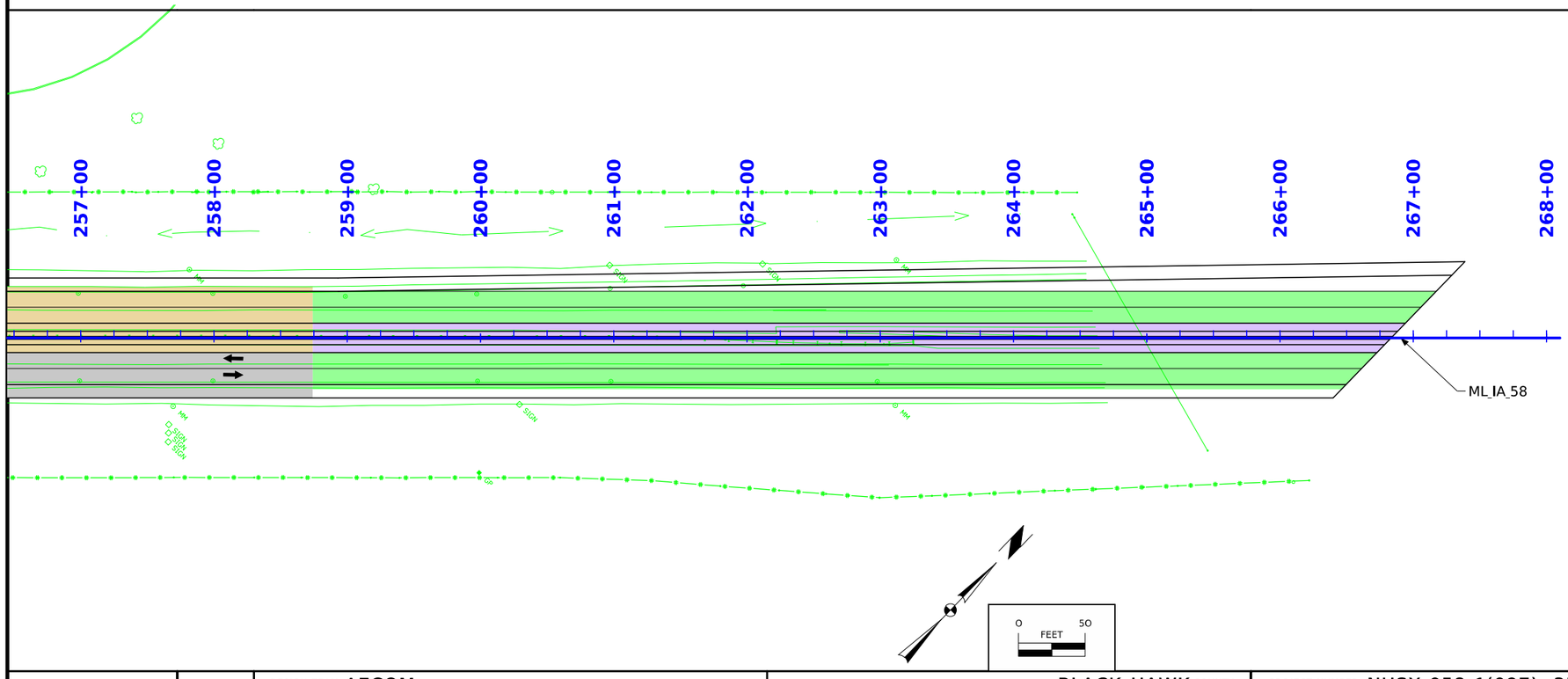



STAGE 2




STAGE 2

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.11 |
|---|---|---|---|---|---|

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STA 11+50.00 (SR_GREENHILL)
BEGIN STAGE 2 CONSTRUCTION

9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

GREENHILL RD

ASHWORTH DR

RAMP A

RAMP D

ML_IA_58

RAMP C

RAMP B

STA 19+00.00

0 50 FEET

STAGE 2

RAMP D

24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00

JAMES DRIVE

GREENHILL RD

RAMP B

0 50 FEET

STAGE 2

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.12 |
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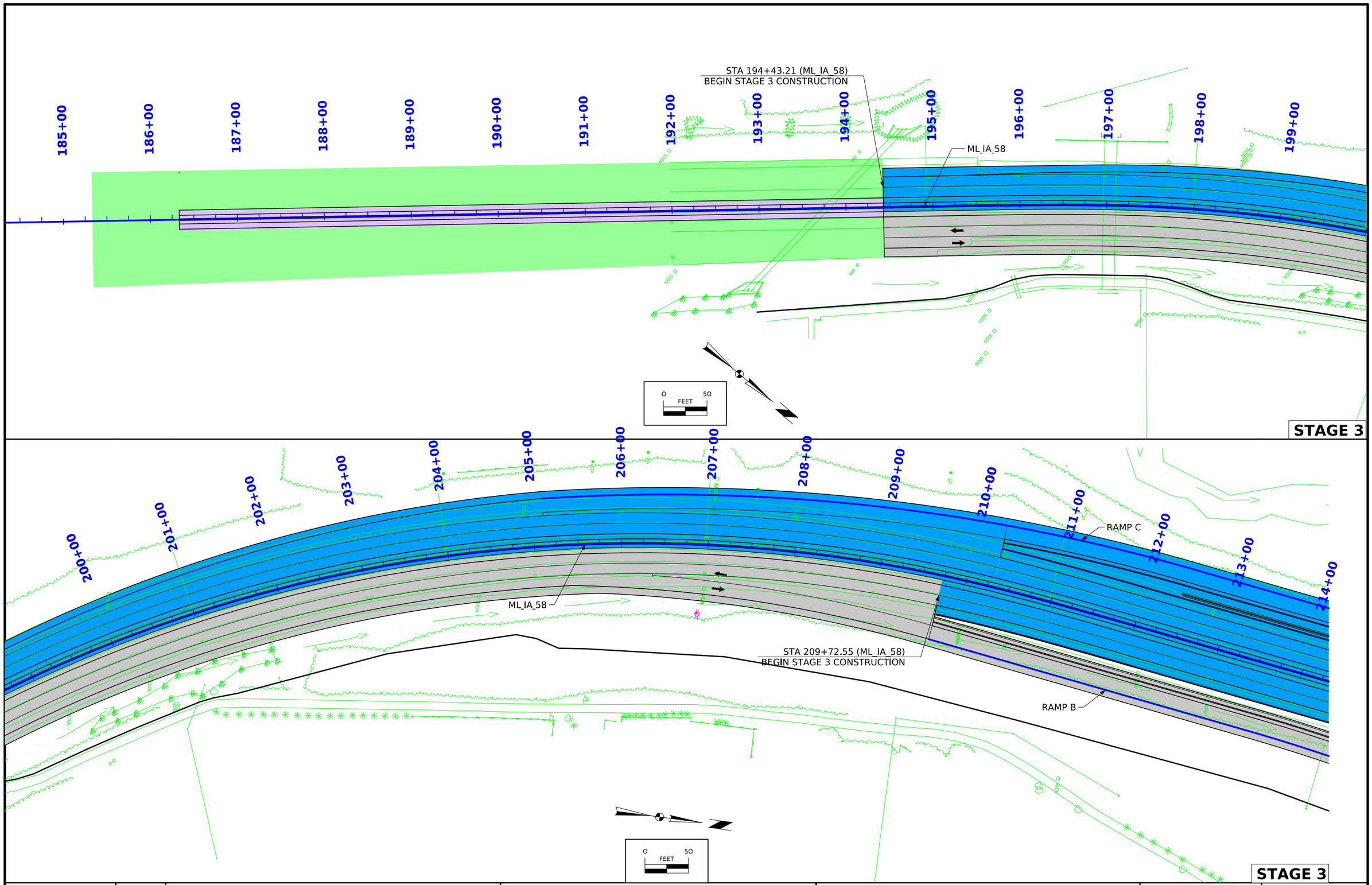


| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.13 | |
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GREENHILL RD

RAMP A

RAMP C

ML_IA_58

RAMP B

RAMP D

2213+00 2214+00 2215+00 2216+00 2217+00 2218+00 2219+00 2220+00 2222+00 2223+00 4225+00 4226+00 4227+00 4228+00

0 50 FEET

STAGE 3

RAMP A

ML_IA_58

RAMP D

STA 234+28.90 (ML_IA_58)
END STAGE 3 CONSTRUCTION

228+00 229+00 230+00 231+00 232+00 233+00 234+00 235+00 236+00 237+00 238+00 239+00 240+00 241+00 242+00

4228+00 4229+00 4230+00 4231+00 4232+00 4233+00 4234+00 4235+00 4236+00 4237+00 4238+00 4239+00

0 50 FEET

STAGE 3

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.14 |
|---|---|---|---|---|---|

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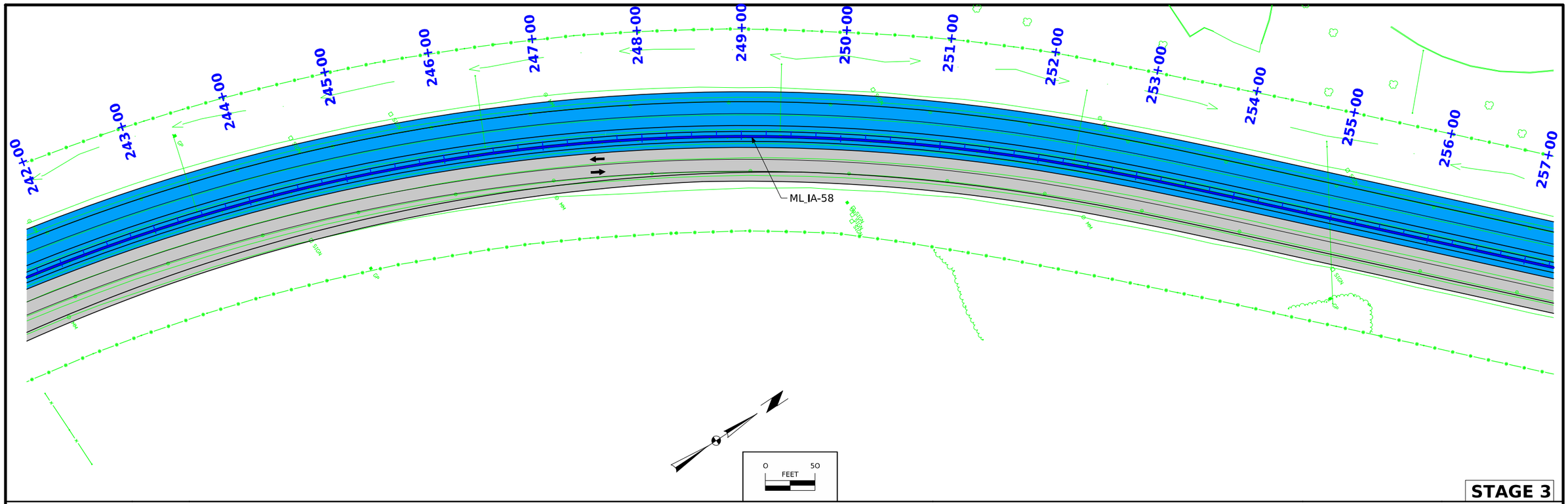
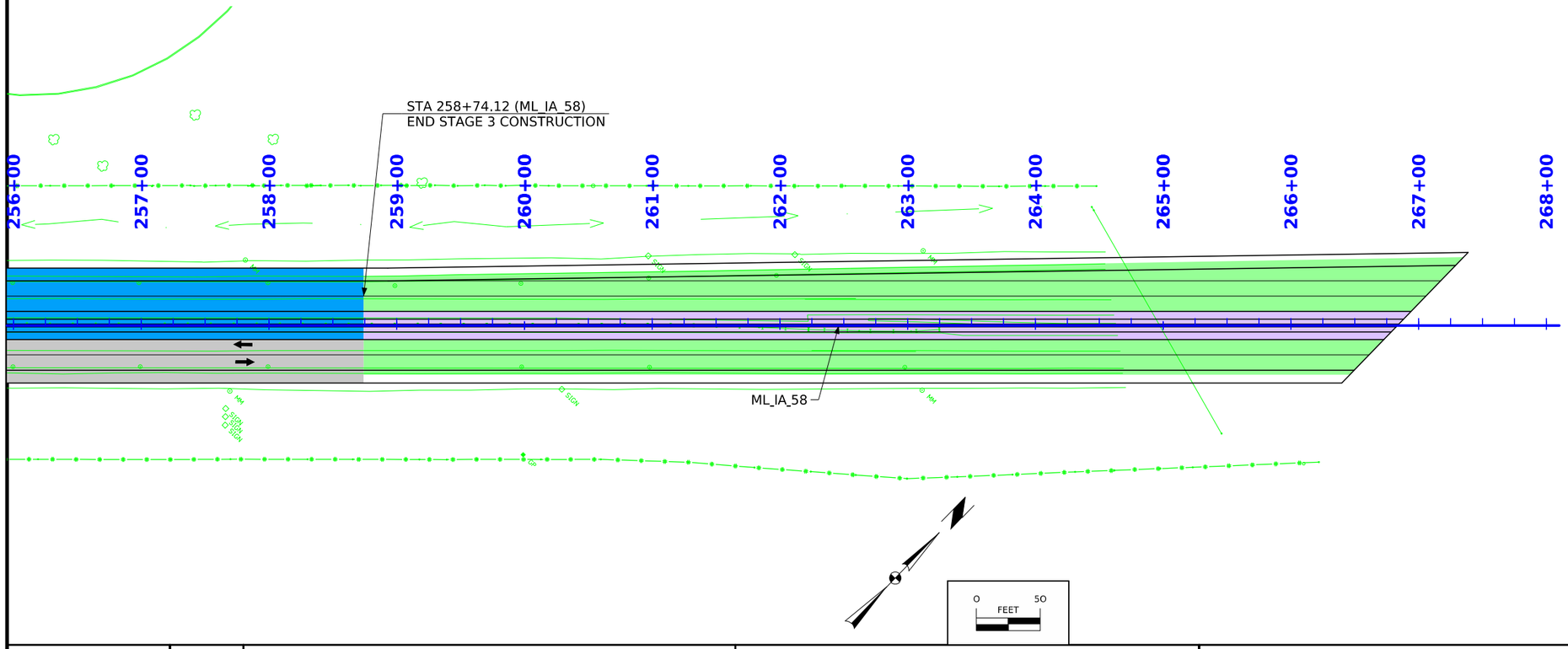



STAGE 3




STAGE 3

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.15 |
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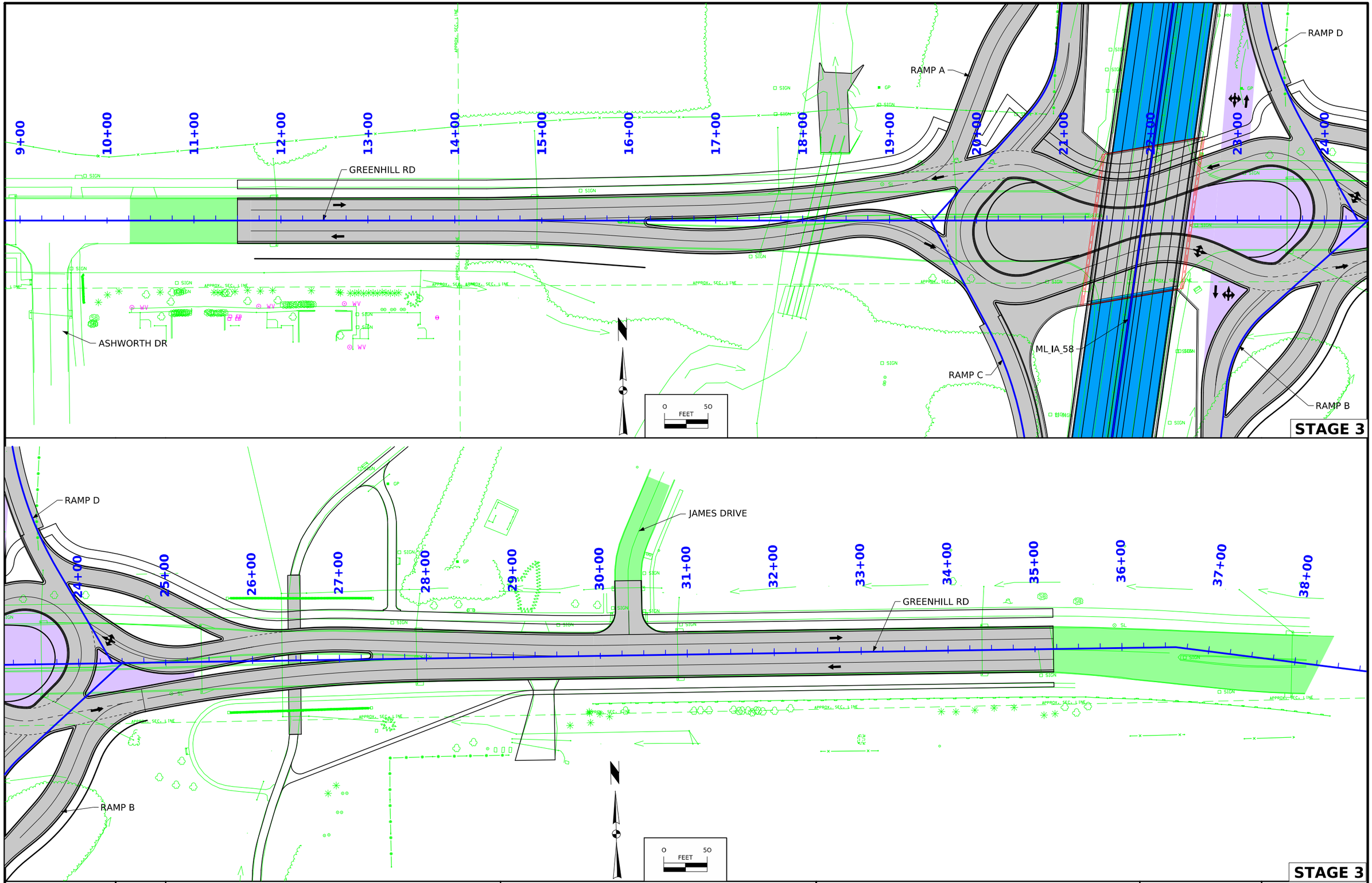


| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.16 |
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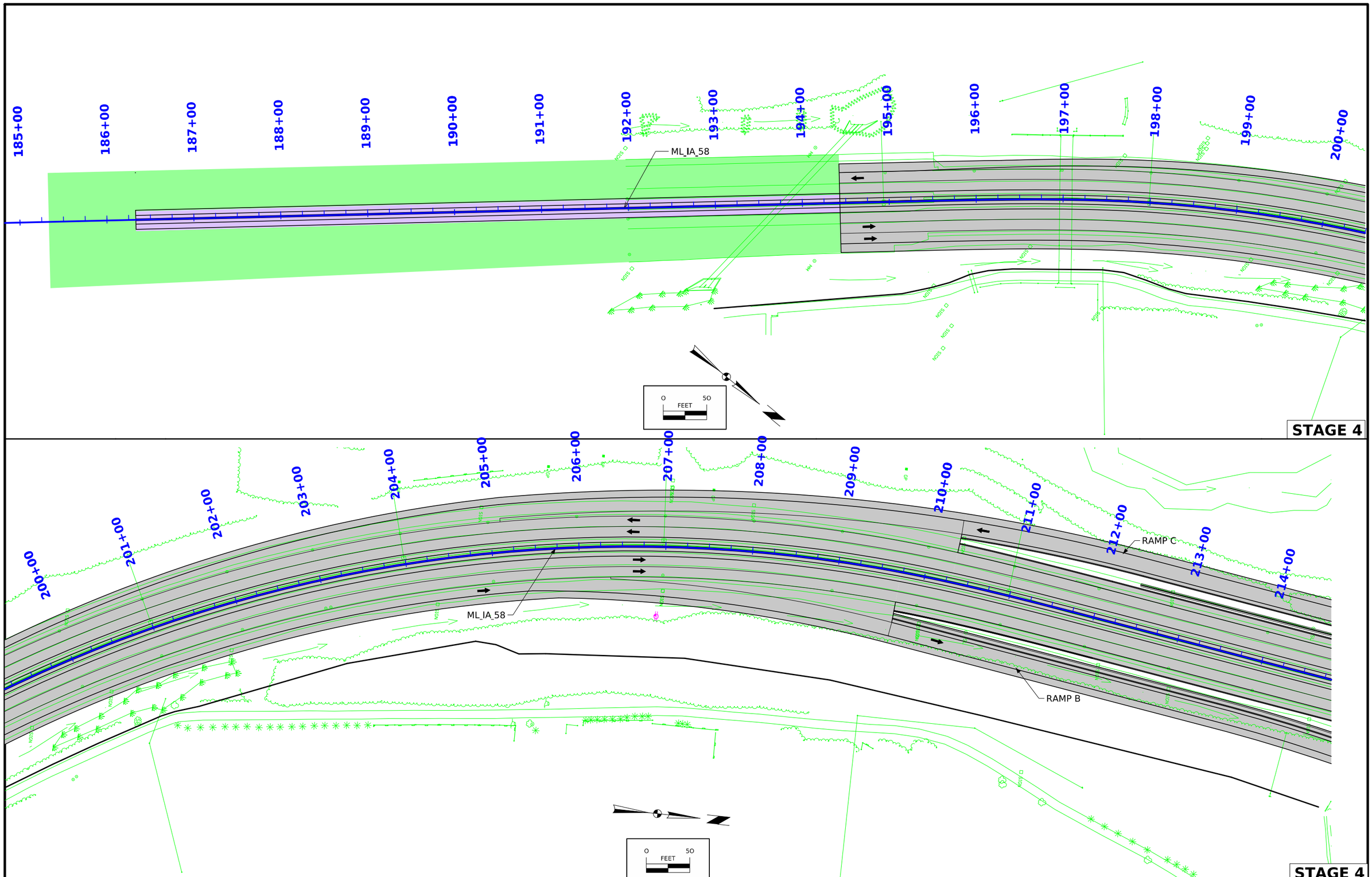


| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.17 | |
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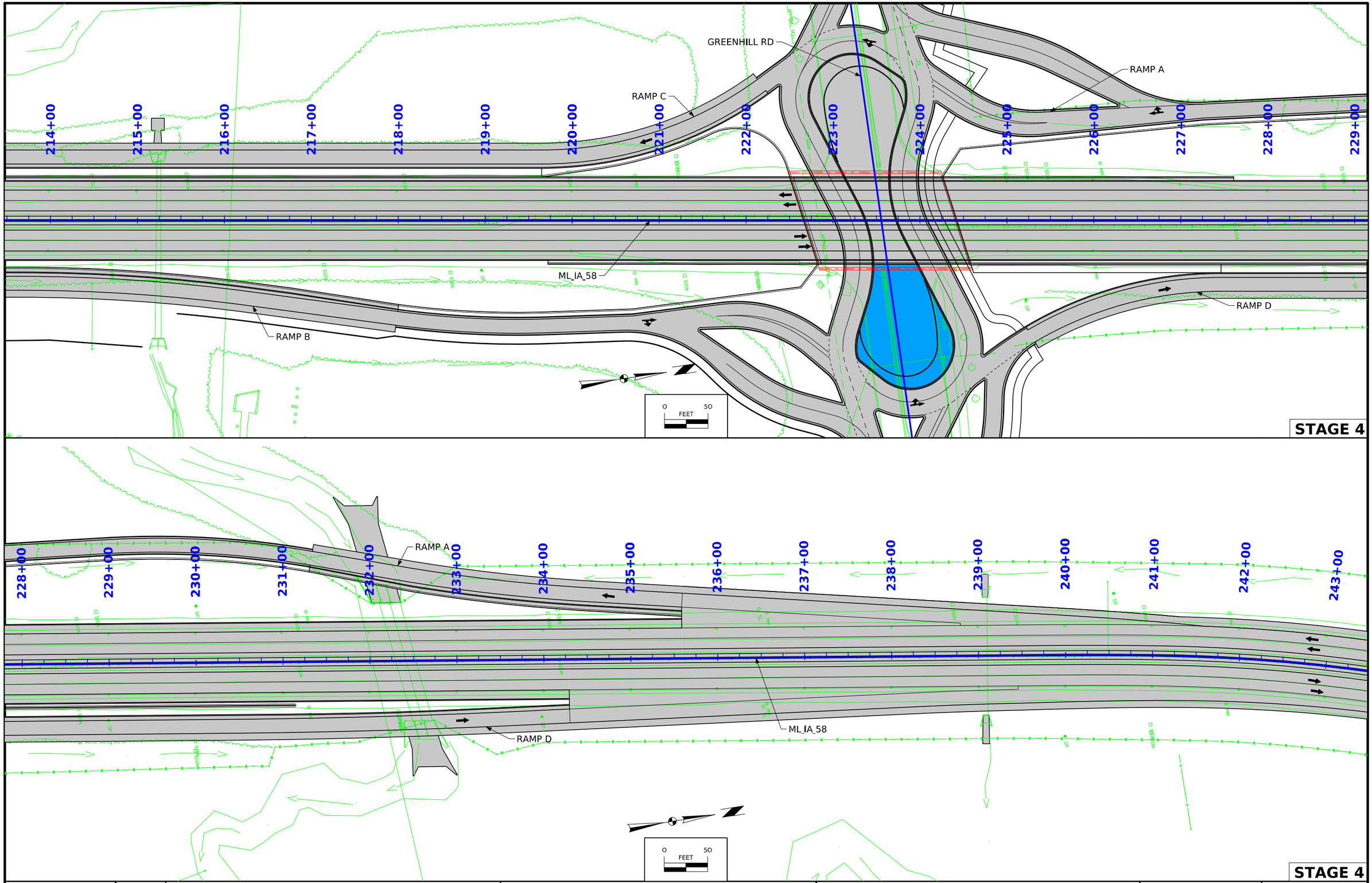


| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.18 |
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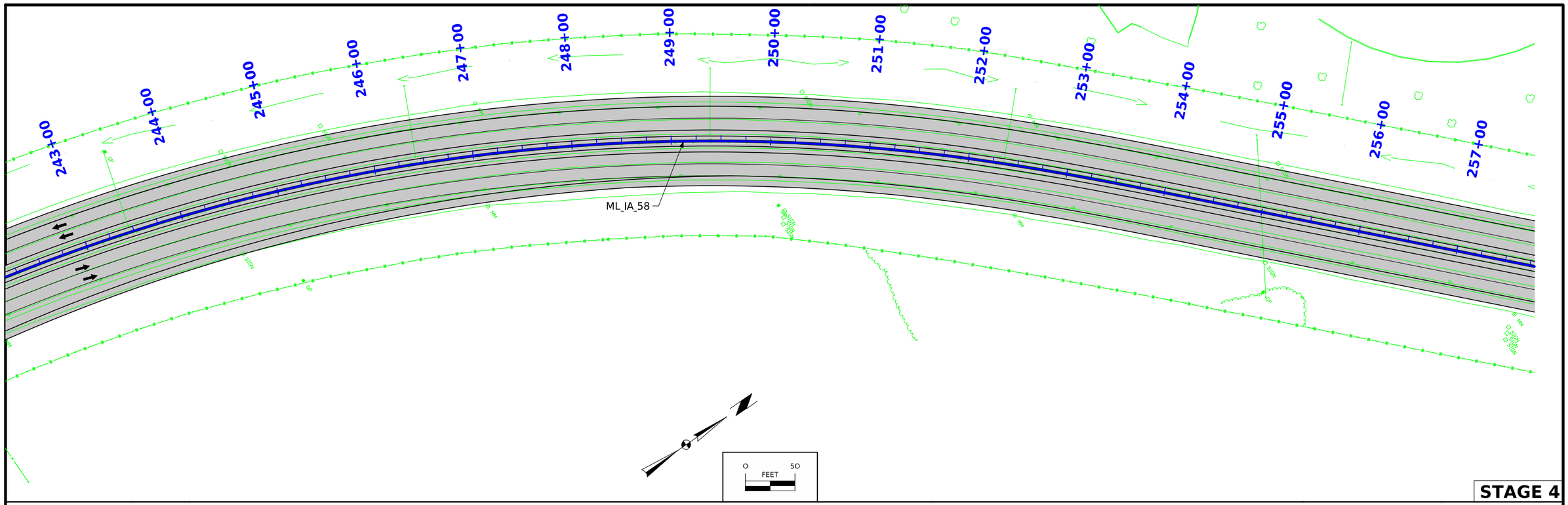
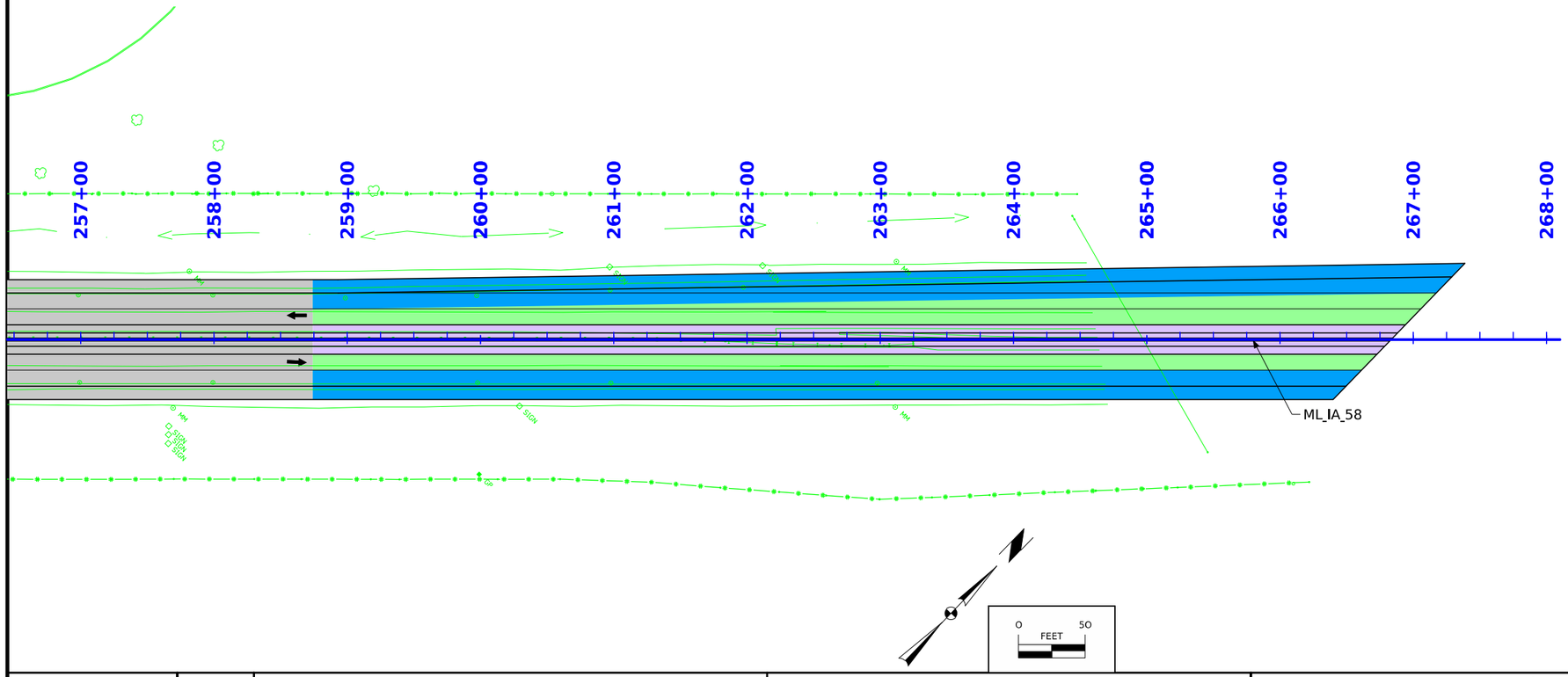



STAGE 4




STAGE 4

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.19 |
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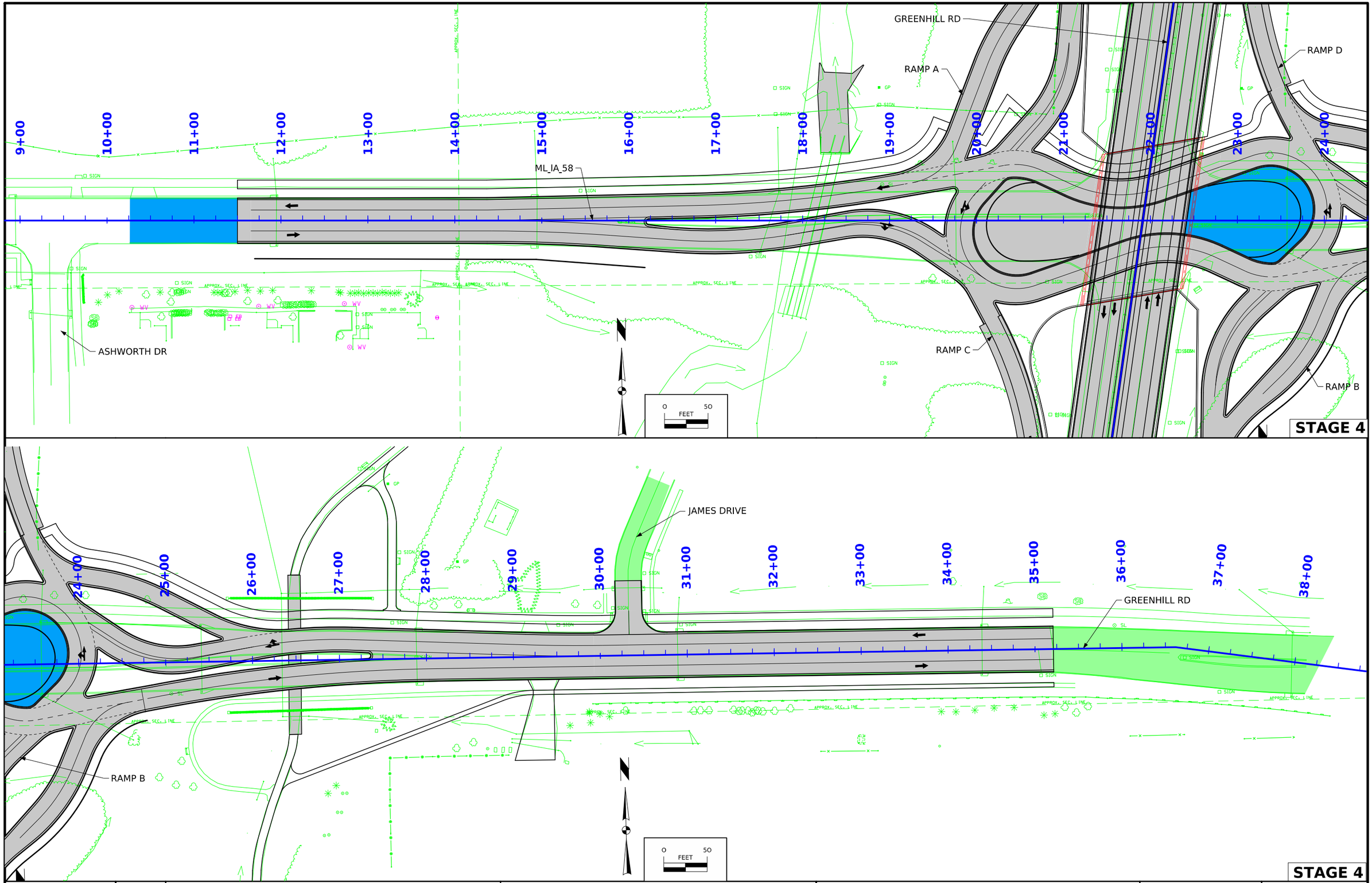


| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.20 |
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185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00 193+00 194+00 195+00 196+00 197+00 198+00 199+00 200+00

0 FEET 50

STAGE 4

200+00 201+00 202+00 203+00 204+00 205+00 206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00

ML_IA_58

0 FEET 50

STAGE 4

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.21 | |
|---|---|---|---|---|---|---|

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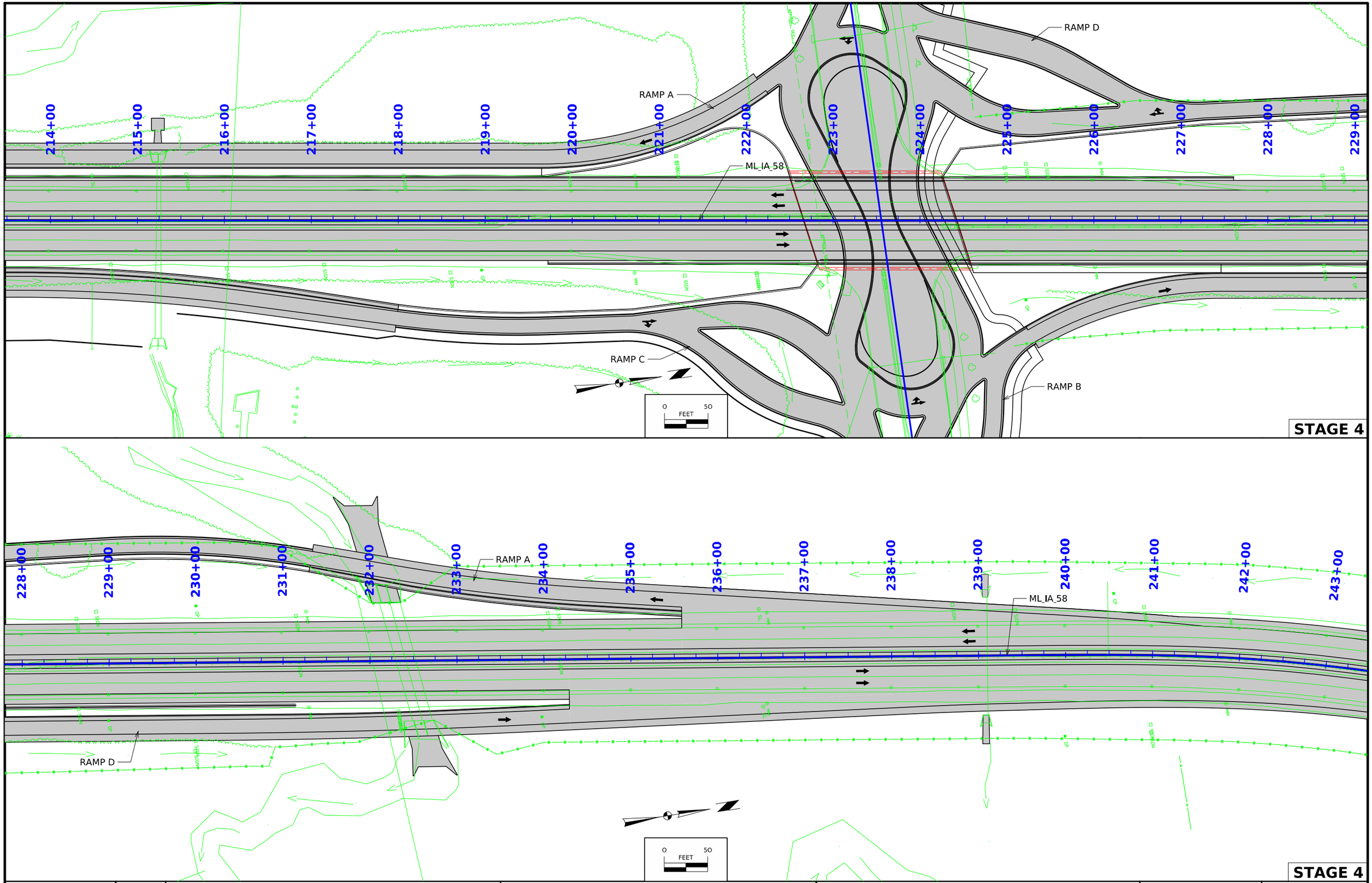


| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.22 |
|---|---|---|---|---|---|

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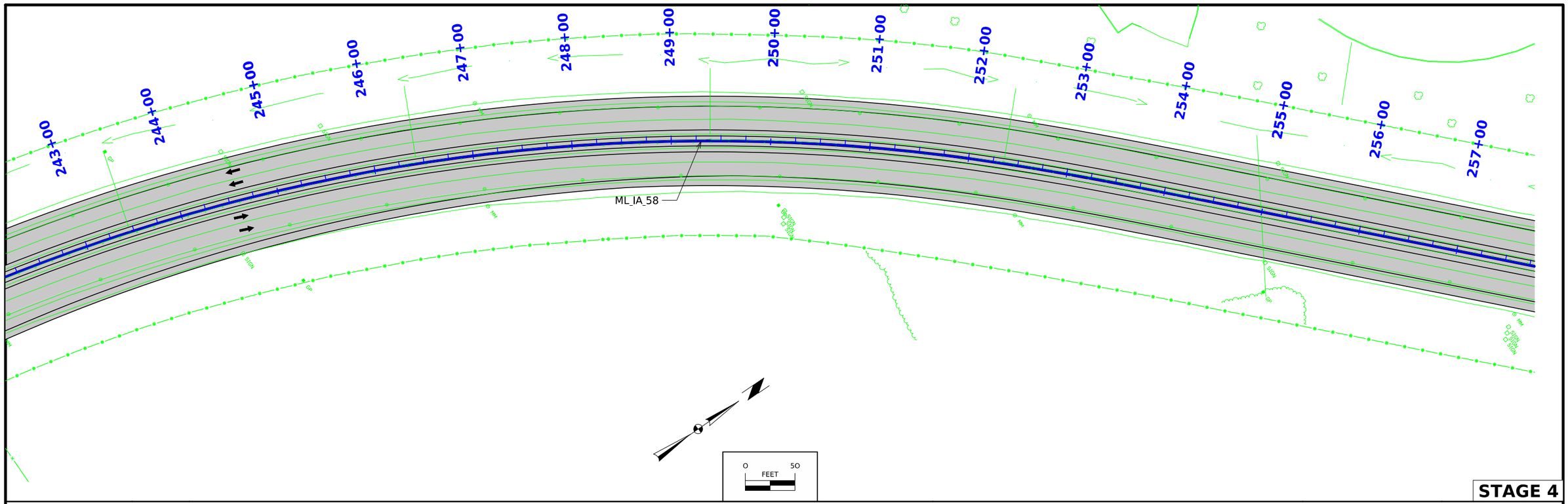
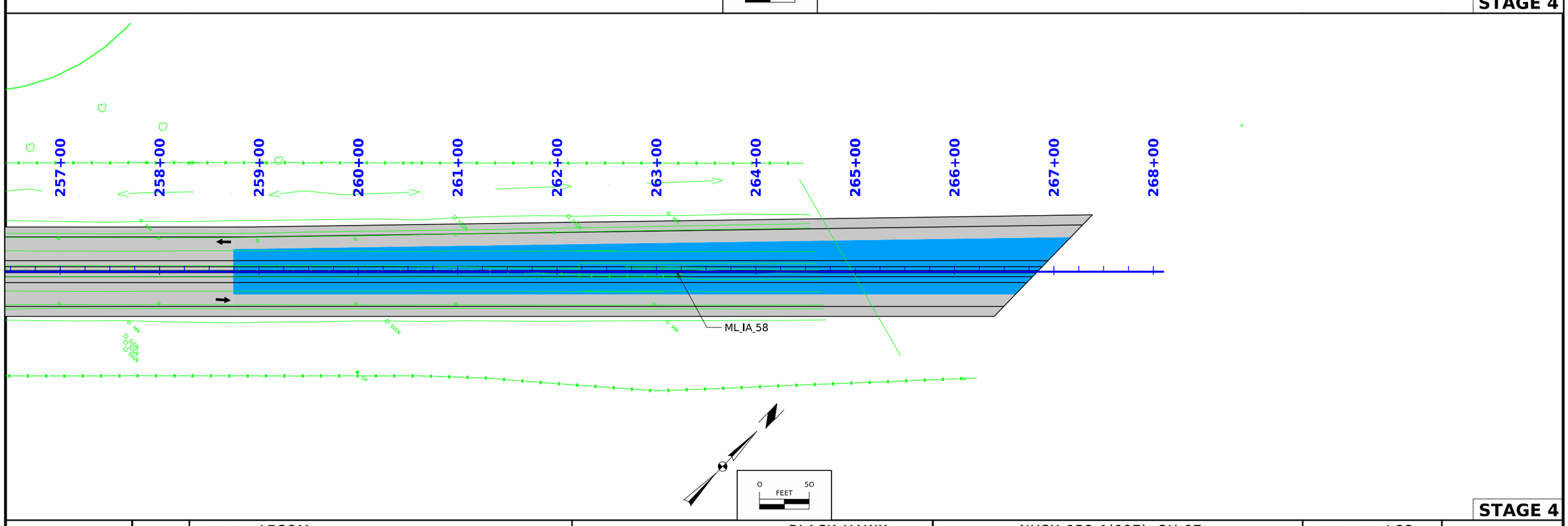



STAGE 4




STAGE 4

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER J.23 |
|---|---|---|---|---|---|

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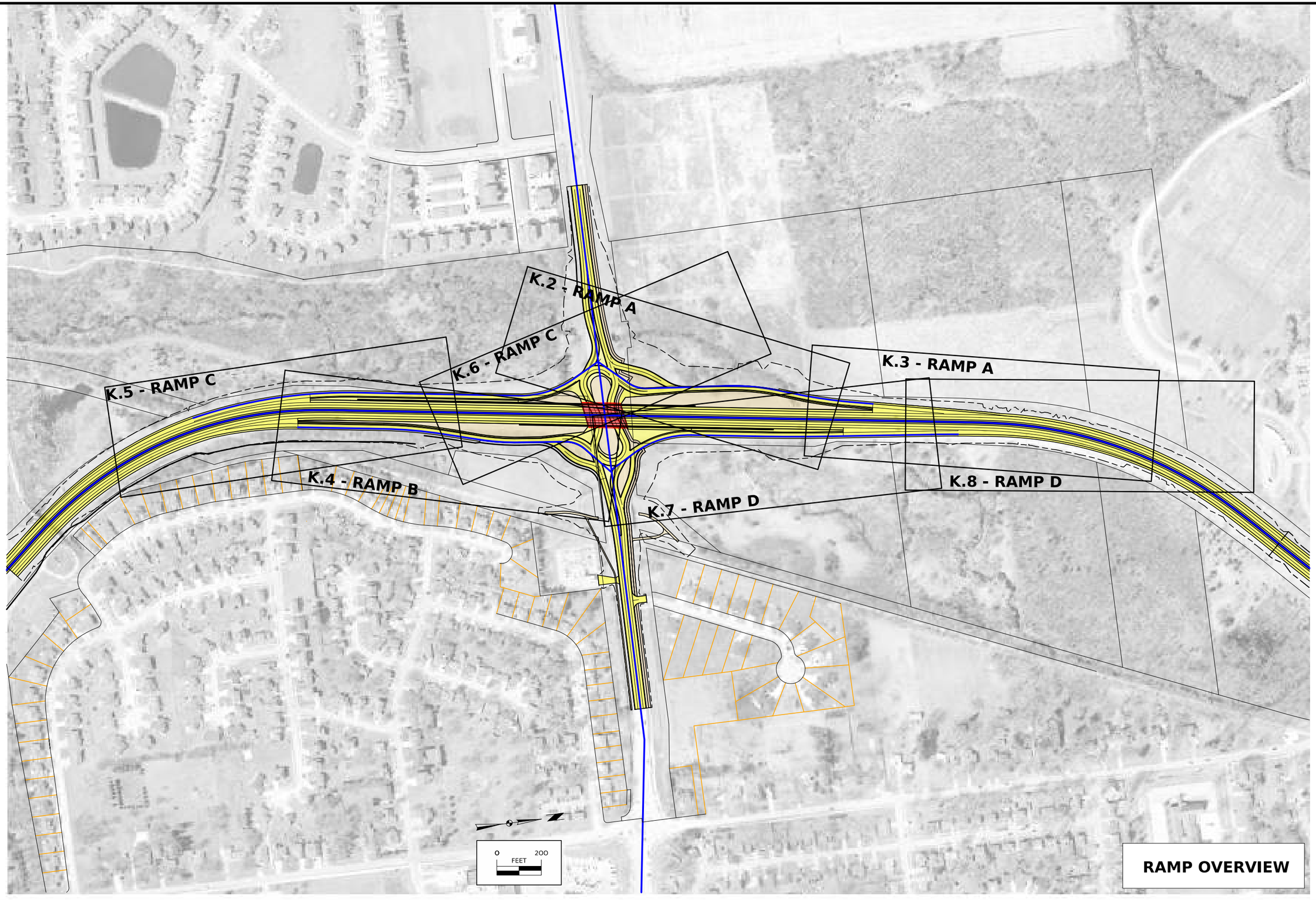


| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **K.1** |
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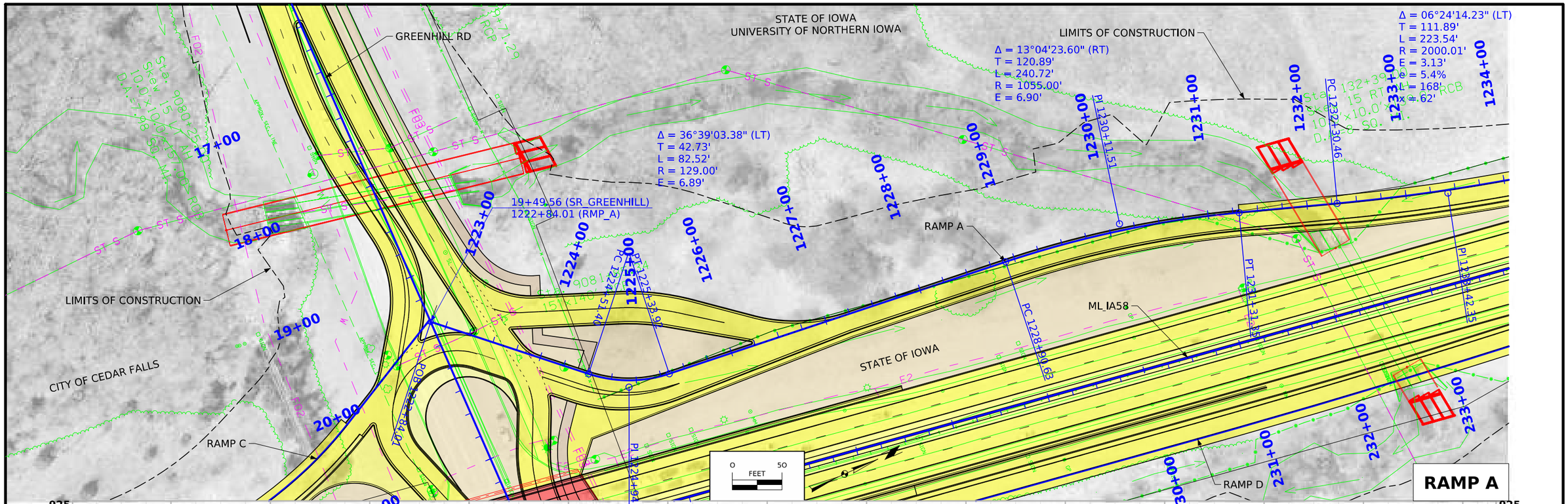


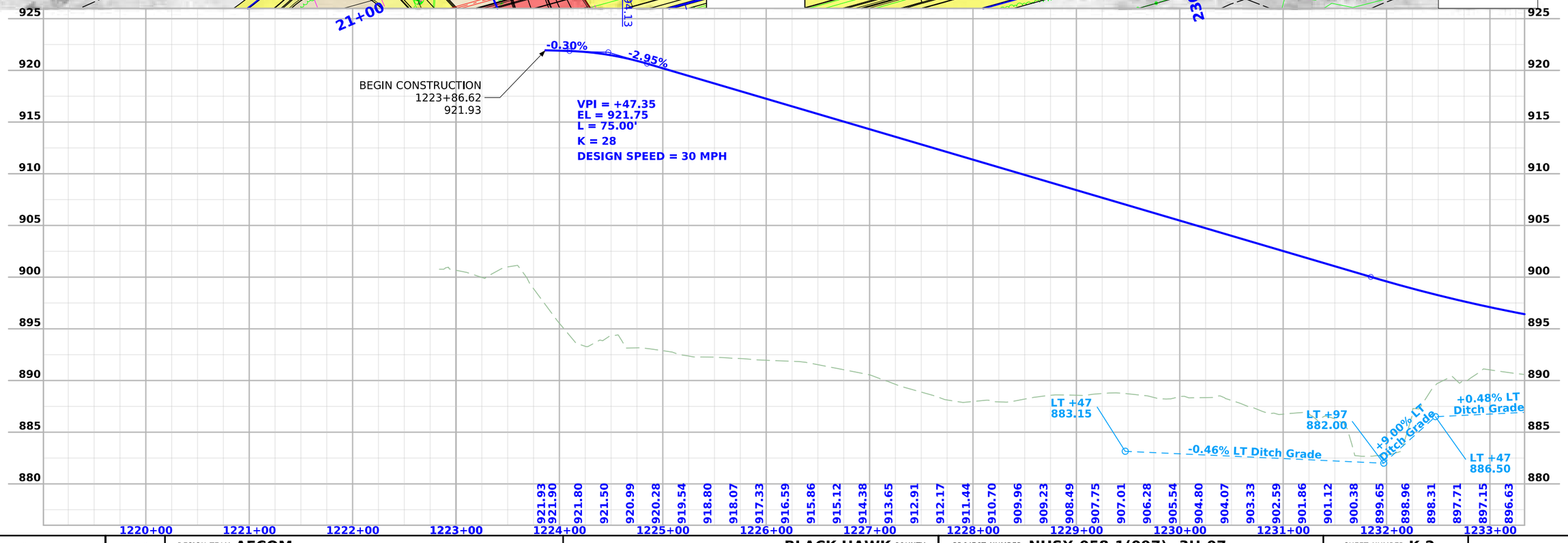


| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **K.2** |
|---|---|---|---|---|---|

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Δ = 06°24'14.23" (LT)
T = 111.89'
L = 223.54'
R = 2000.01'
E = 3.13'
e = 5.4%
L = 168'
x = 62'

Sta. 139+10.00
6.0'x4.0'x134.00' RCB
D.A.=38 ACRES

STATE OF IOWA
UNIVERSITY OF NORTHERN IOWA

Sta. 140+49.14
15"x79' RCP

Sta. 143+45.86
15"x80' RCP

SPIRAL DATA
SCS PI STA 247+16.71
Δ = 37.3660° (LT)
Θ = 3.7849°
Ls = 252.00sf
Ts = 771.43sf
Es = 107.56sf
P = 1.59sf
K = 125.98
Xc = 251.61sf
Yc = 12.74sf
LT = 168.04sf
ST = 84.03sf
LC = 251.95sf

Δ = 29°47'46.33" (RT)
T = 507.45'
L = 991.92'
R = 1907.38'
E = 66.35'
e = 6.0%
L = 252'
x = 84'

235+59.95 OFFSET 75' LEFT (ML_IA_58)
1235+59.95 (RMP_A)

STATE OF IOWA

15:1 TAPER

PT 1234+54.00

PI 1238+42.35

PCE 1235+76.95

PI 247+04.77

STATE OF IOWA
UNIVERSITY OF NO

SCS 241+79.27

TS 239+45.27

233+00 234+00 235+00 236+00 237+00 238+00 239+00 240+00 241+00 242+00 243+00 244+00 245+00 246+00 247+00

0 50 FEET

**RAMP A**

920 915 910 905 900 895 890 885 880 875

**VPI = +72.35**
**EL = 894.49**
**L = 375.00'**
**K = 142**
**DESIGN SPEED 60 MPH**

-2.95%
-0.30%

END CONSTRUCTION
1235+59.85
893.93

EXISTING GROUND

+0.48% LT Ditch Grade

LT +60
888.00

896.16 895.73 895.35 895.01 894.71 894.46 894.25 894.09 893.97

1234+00 1235+00

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **K.3** |
|---|---|---|---|---|---|

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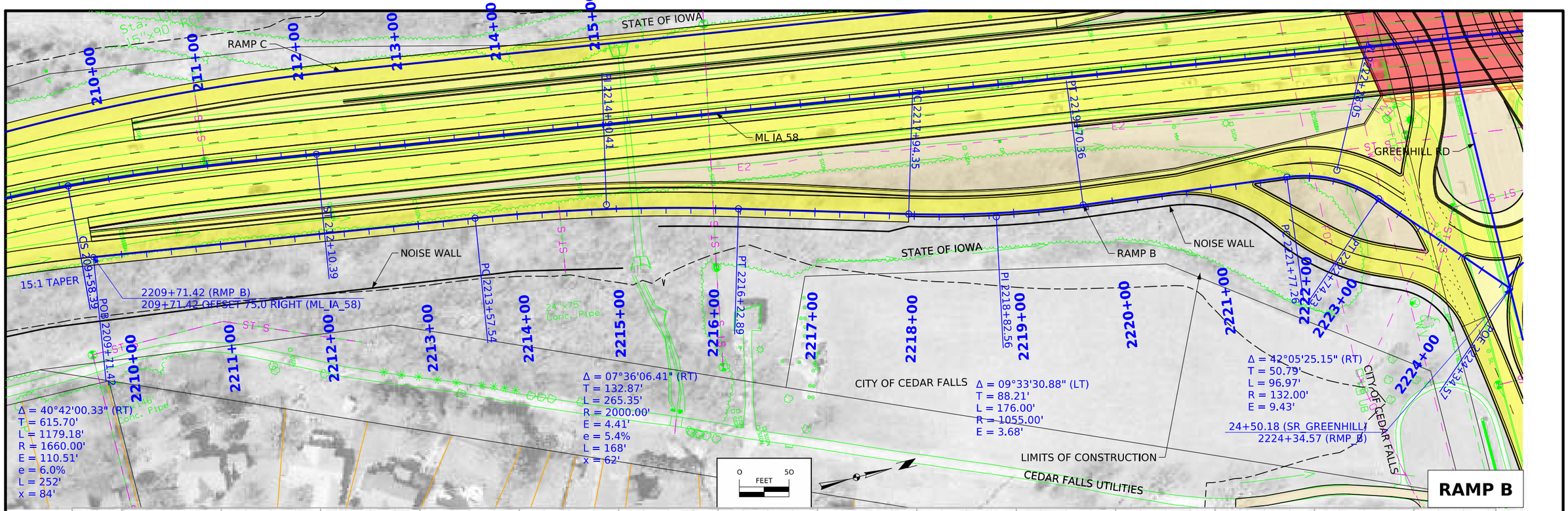


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|---|---|---|---|---|---|
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **K.4** |

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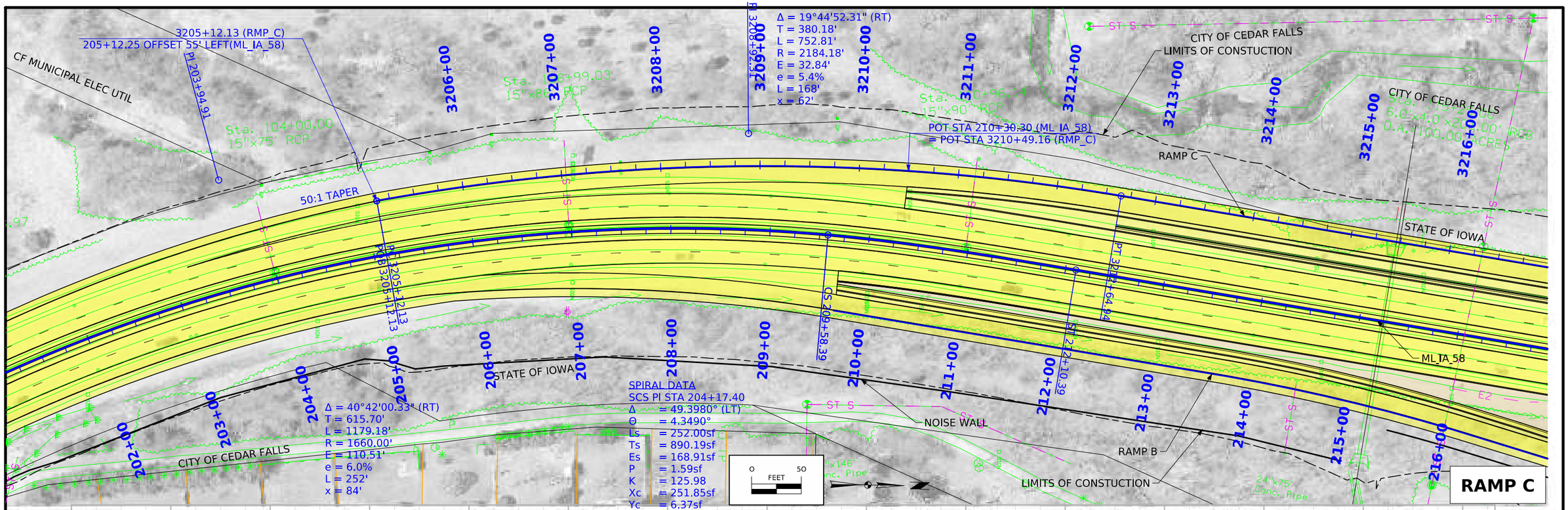


| | | | | | |
|---|---|---|---|---|---|
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **K.5** |

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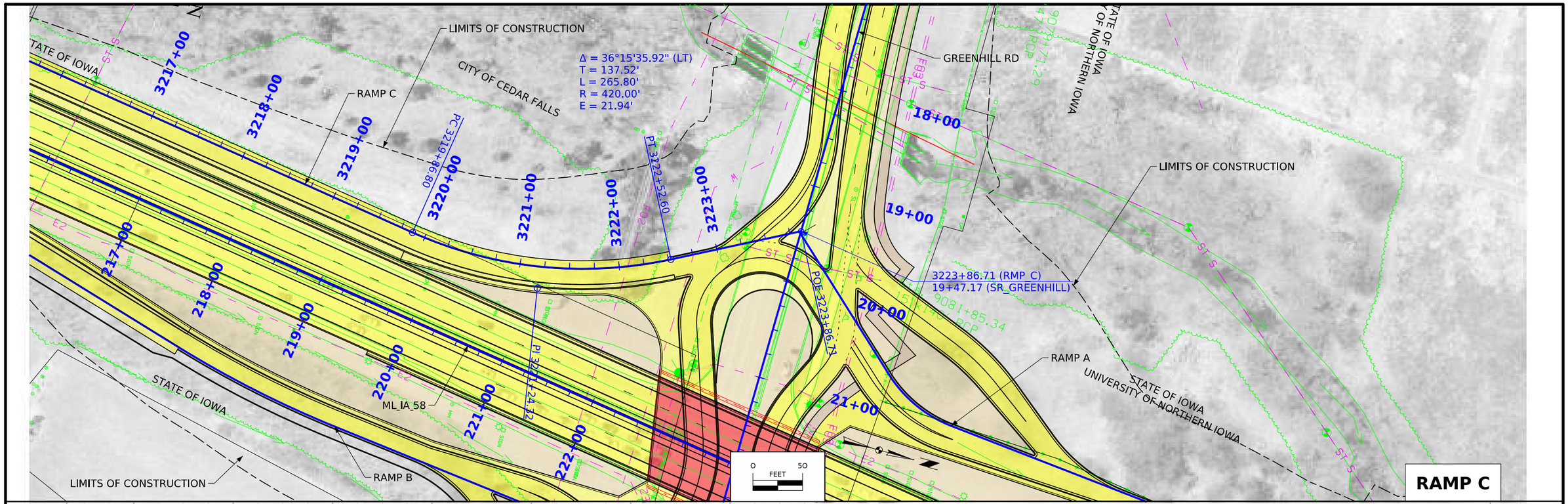


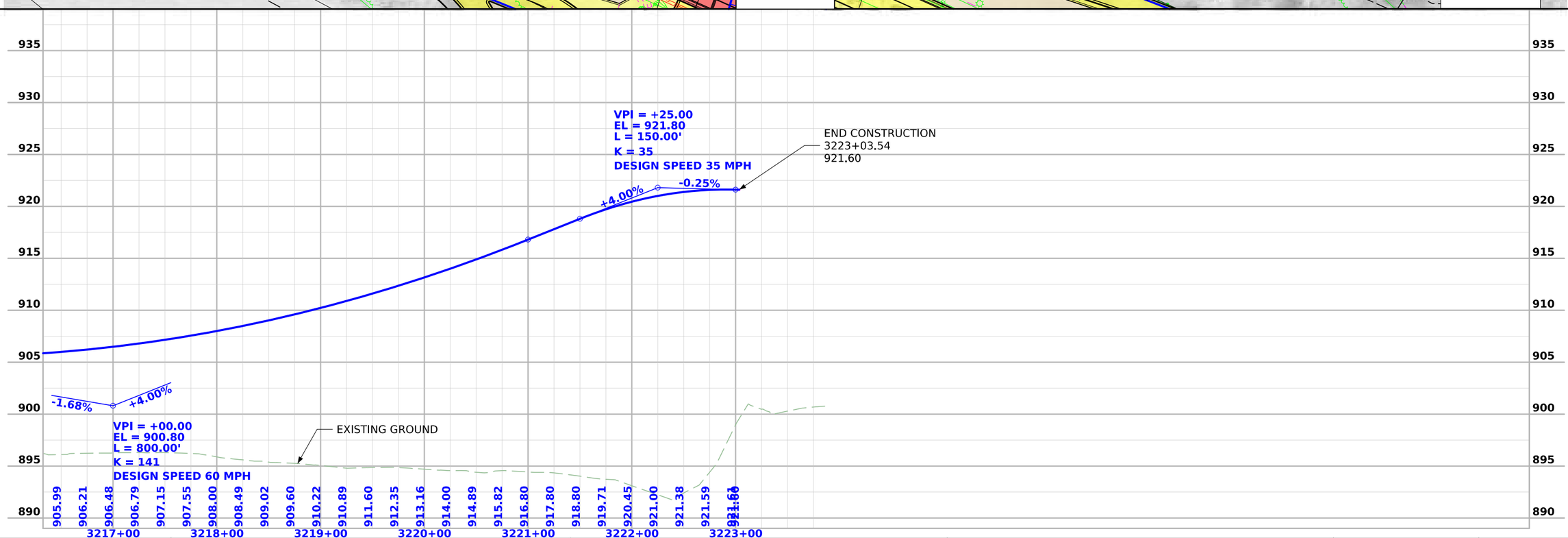


| | | | | | |
|---|---|---|---|---|---|
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **K.6** |

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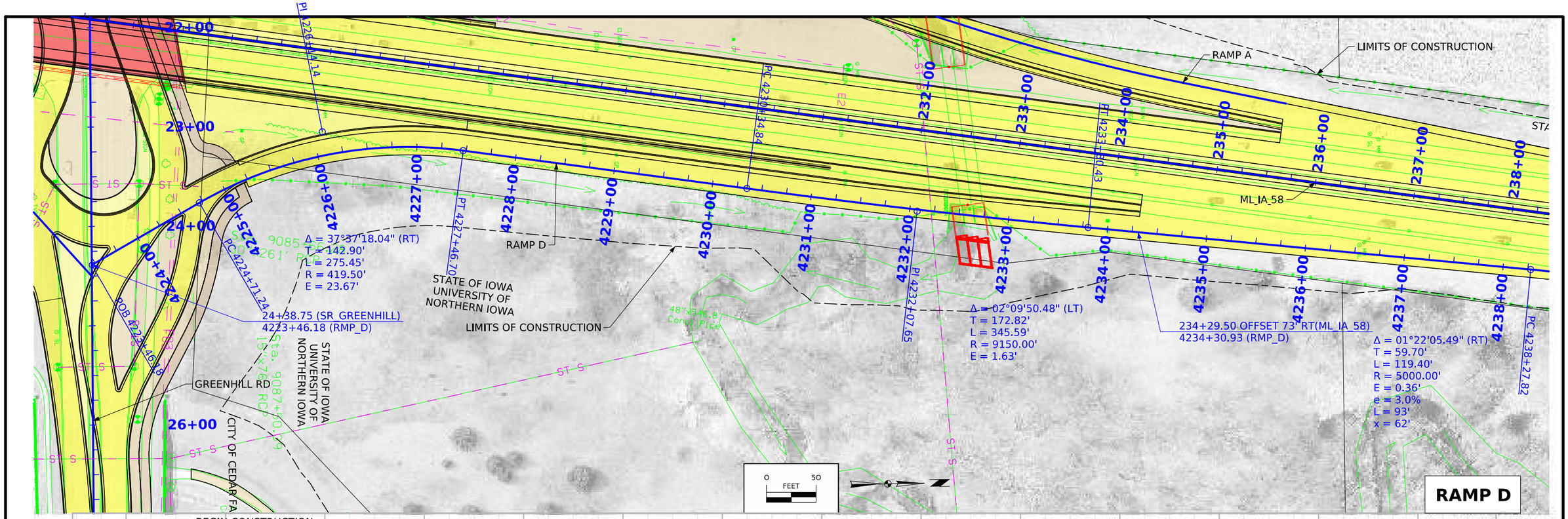


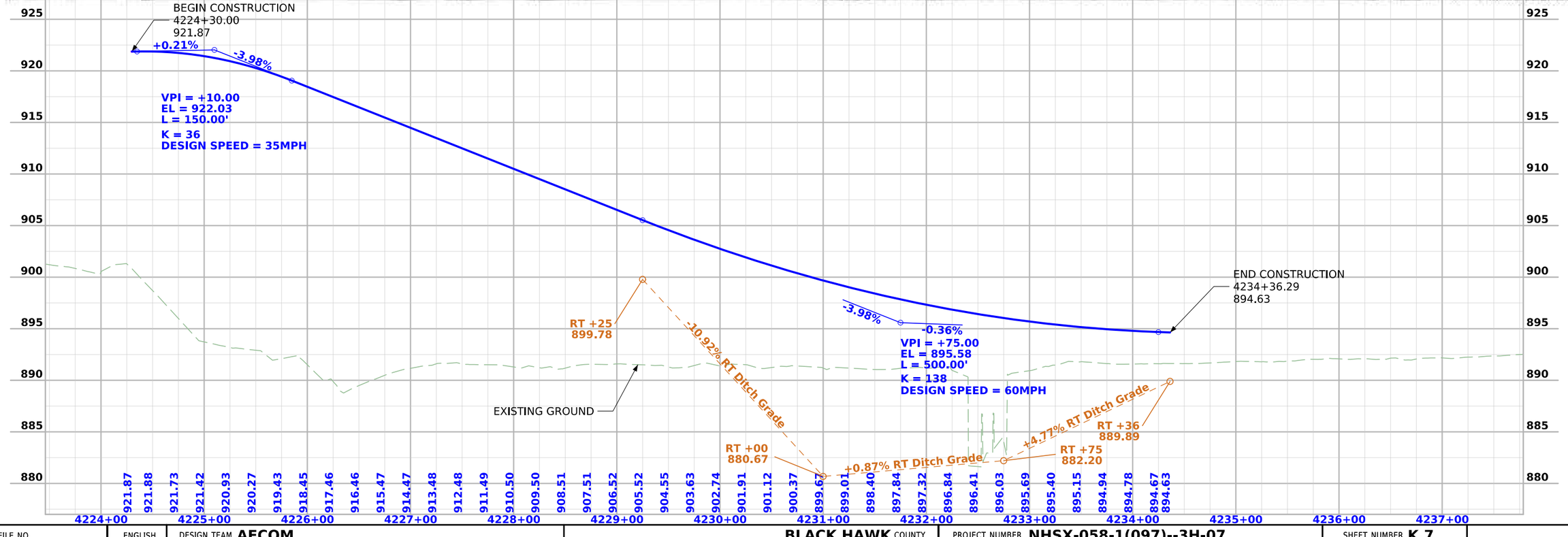


| | | | | | |
|---|---|---|---|---|---|
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **K.7** |

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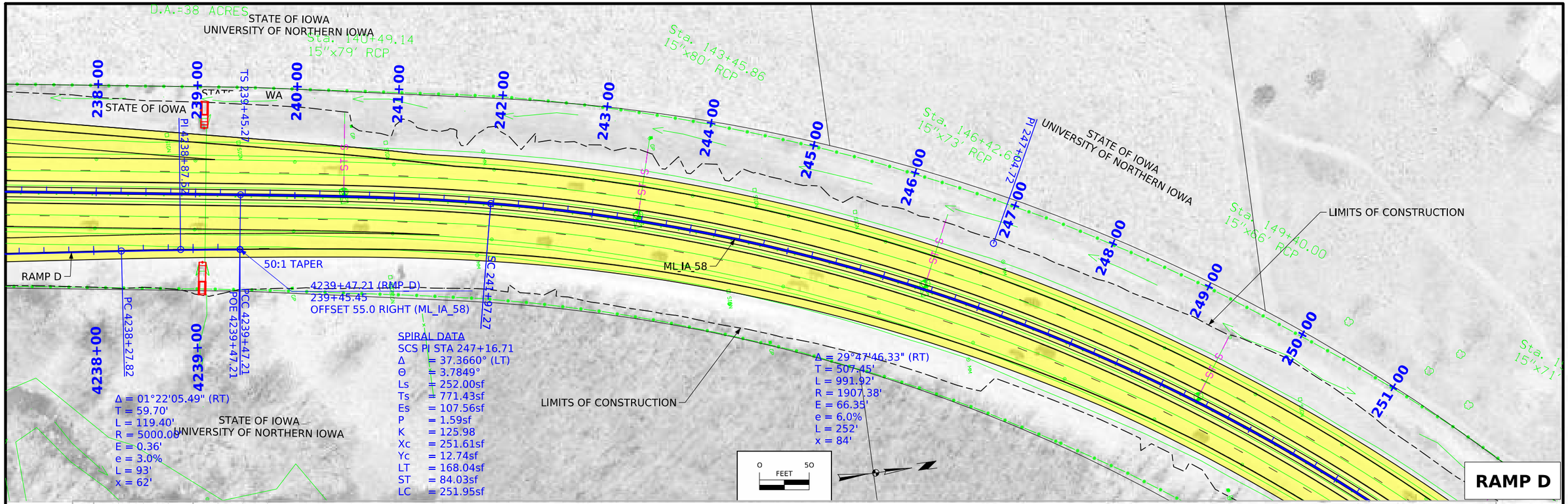


| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **K.8** |
|---|---|---|---|---|---|

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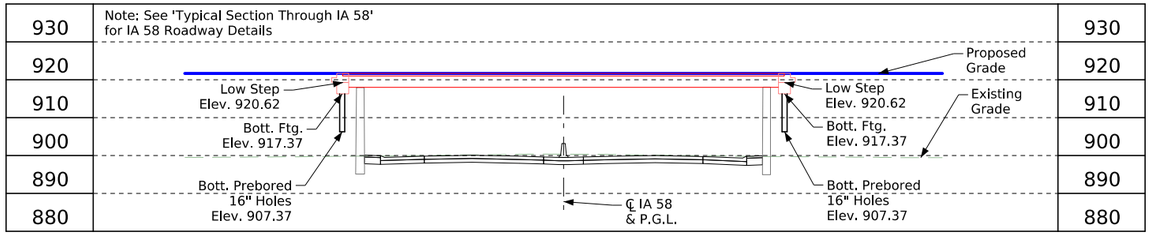
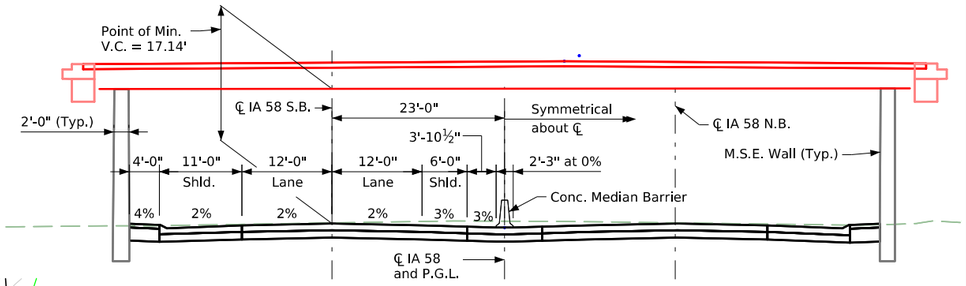
Control Point: 070271825
Northing: 8849013.25
Easting: 15447506.23
Elevation: 909.79
Description: CP Set Monuments 3" Deep and 0.9 Miles NE Along IA 58 from the Intersection of IA 58 and Greenhill Rd




## Longitudinal Section Along ℄ Greenhill Road




## Typical Section Through IA 58

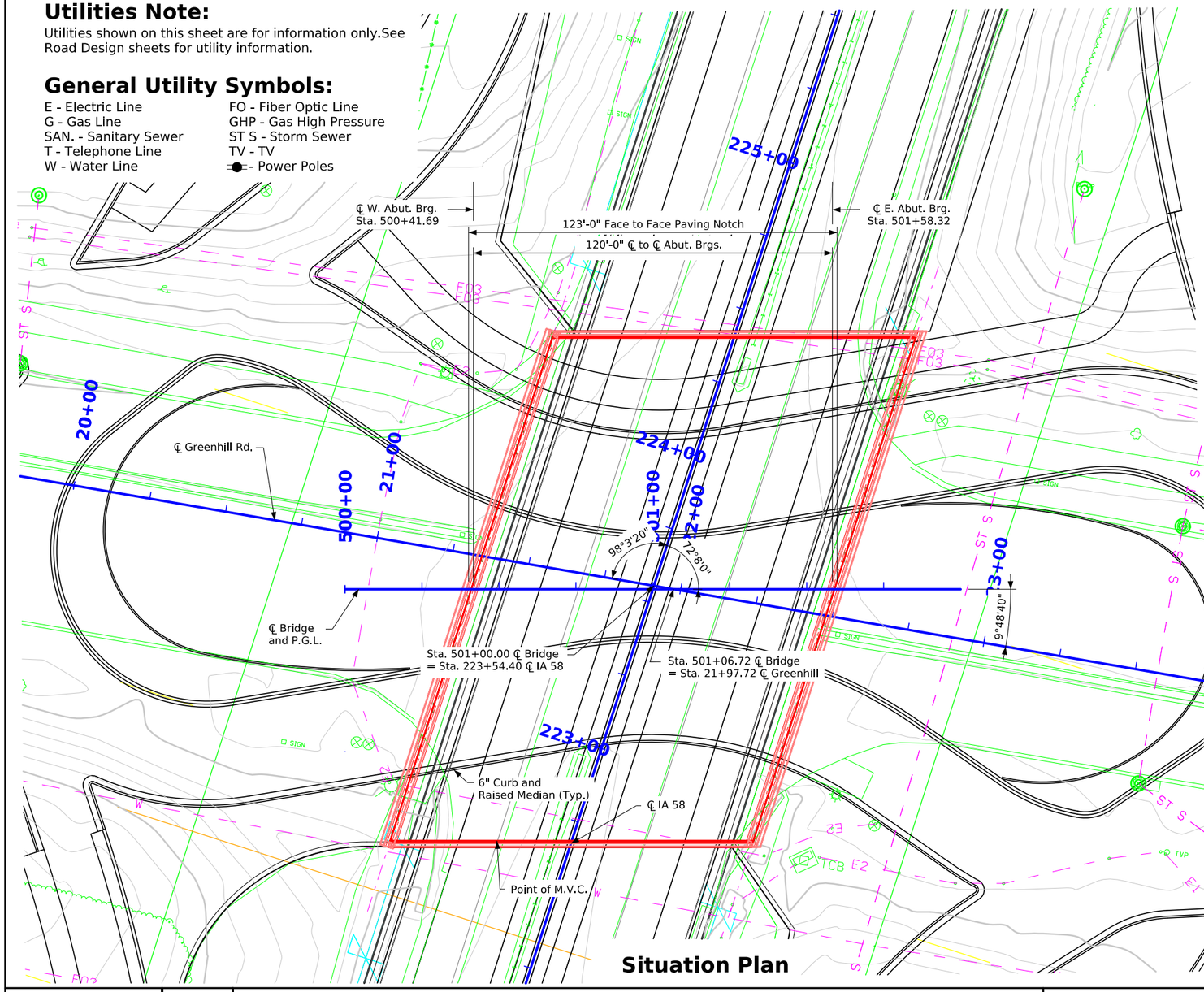
(Looking Upstation Under Structure)

## Utilities Note:

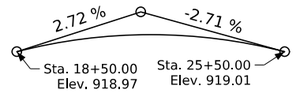
Utilities shown on this sheet are for information only.See Road Design sheets for utility information.

## General Utility Symbols:

E - Electric Line
G - Gas Line
SAN. - Sanitary Sewer
T - Telephone Line
W - Water Line
FO - Fiber Optic Line
GHP - Gas High Pressure
ST S - Storm Sewer
TV - TV
- Power Poles

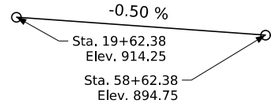



## Situation Plan




VPI Sta. = 22+00.00
VPI Elev. = 928.50
VC = 700.09'

## Proposed Profile Grade Greenhill Rd Over IA 58




## Proposed Profile Grade IA 58 Under Greenhill Road

## Minimum Vertical Clearance

Overhead Station = 500+50.04, Offset 80.67
Overhead Elevation = 922.92
Depth of Superstructure = 3'-11' (3.92)
Deck Thickness = 8 ½ in.
Estimated Haunch = 2½ in.
Beam Depth = 36 in.
Underpass Station = 222+61.09, Offset -23.00
Underpass Elevation = 901.86
Minimum Vertical Clearance = 17.14

## Traffic Estimate

Greenhill Road

| | | |
|---|---|---|
| 2022 AADT | 10,400 | V.P.D. |
| 2050 AADT | 20,100 | V.P.D. |
| 2050 DHV | 2,400 | V.P.H. |
| TRUCKS | 3 | % |
| Total Design ESALs | -- | |

## Traffic Estimate

IA 58

| | | |
|---|---|---|
| 2022 AADT | 21,200 | V.P.D. |
| 2050 AADT | 31,800 | V.P.D. |
| 2050 DHV | 4,970 | V.P.H. |
| TRUCKS | 5 | % |
| Total Design ESALs | -- | |

N

0 20 FEET

Design For 9° Left Ahead

# 120'-0" x 167'-6" Pretensioned Prestressed Concrete Beam Bridge

120'-0" End Spans — Interior Span

## Situation Plan

STA. 501+00.00 (CL Bridge)

Turn-in Date: Dec. 21, 2027

## Black Hawk County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 2222 — Design Sheet No. 1 of 2 — FHWA No. 223344

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | Black Hawk COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER V.1 |
|---|---|---|---|---|---|

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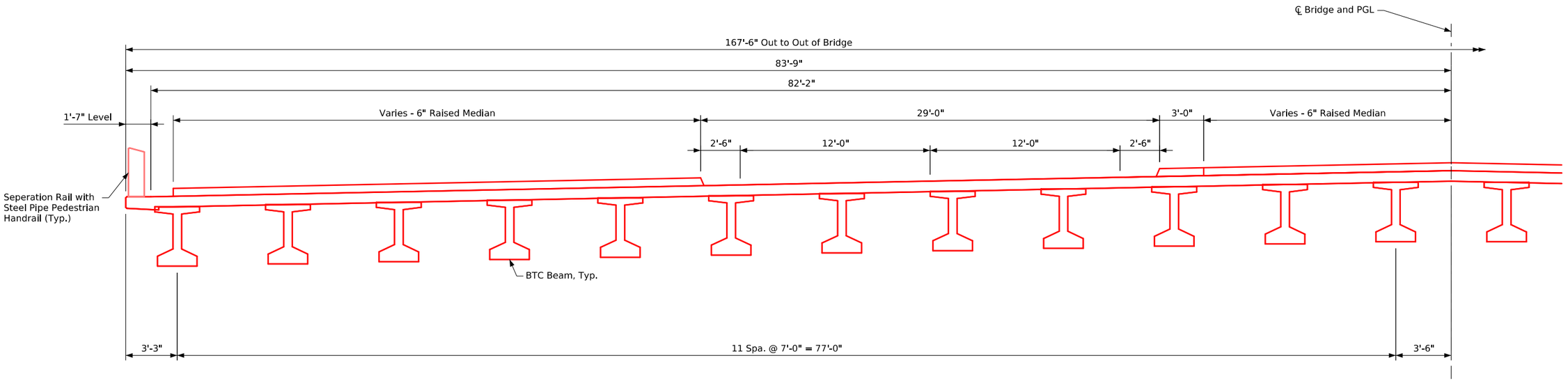


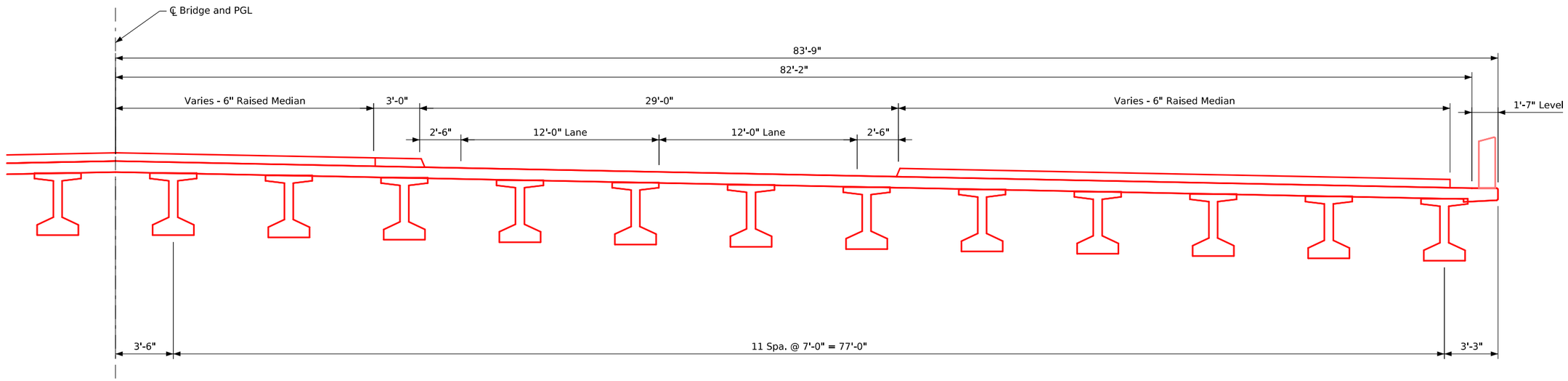


Design For 9° Left Ahead

# 120'-0" x 167'-6" Pretensioned Prestressed Concrete Beam Bridge

120'-0" End Spans | Interior Span

## Bridge Deck Cross Section

STA. 501+00.00 (CL Bridge)

Turn-in Date: Dec. 21, 2027

## Black Hawk County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 2222 | Design Sheet No. 2 of 2 | FHWA No. 223344

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **Black Hawk** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **V.2** |
|---|---|---|---|---|---|

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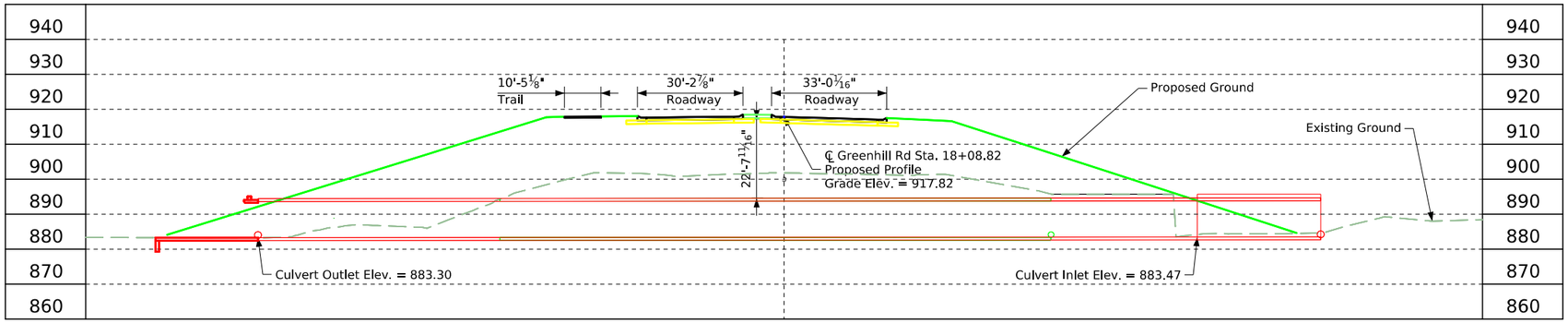



CONTROL POINT: C4
NORTHING: 8844769.08
EASTING: 1544769.06
ELEVATION: 947.38
DESCRIPTION: CP SET FENO MONUMENT 3IN DEEP AND 430FT E OF THE INTERSECTION OF GREENHILL RD AND S MAIN ST MONUMENT IS 9FT S OF SOUTH BACK OF CURB ALONG GREENHILL RD 2FT N OF NORTH EDGE PCC SIDEWALK AND 78FT E OF FIRE HYDRANT

## Longitudinal Section Along ℄ Culvert

## Hydraulic Data

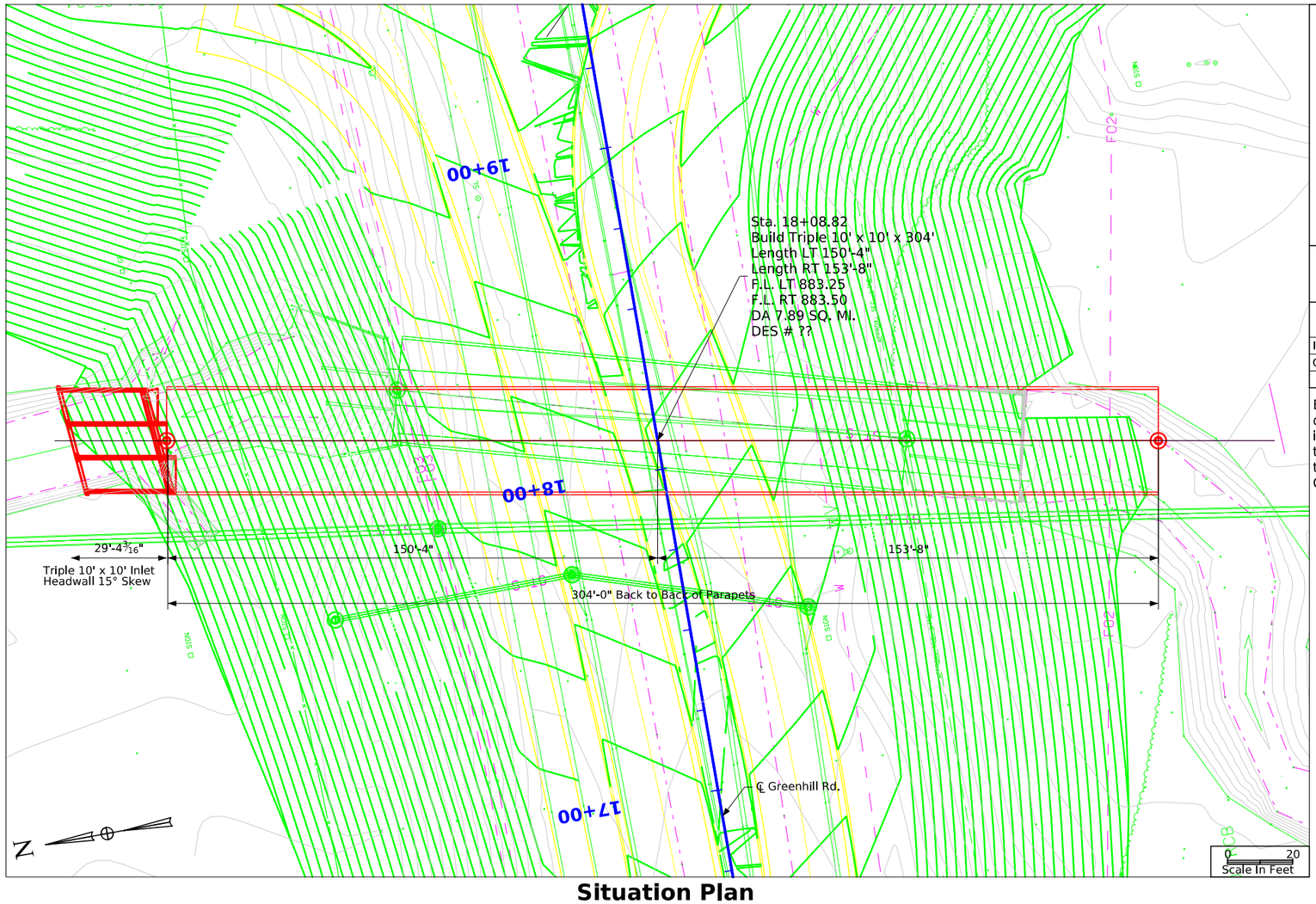
RIDB: Dry Run
Drainage Area = 7.89 SQ. MI.
Stream Slope = 3.47 Ft./Mi.
$Q_{100}$= Q-IN 2500 cfs
Q-OUT 2000 cfs
HW Elev. = 898.8
Exit Velocity = ?.? fps

## Location

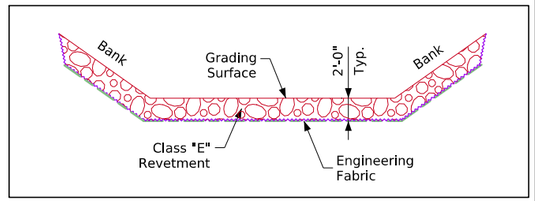
Greenhill Rd over Dry Run Creek
In City of Cedar Falls
T-89N R-14W
Section 24
Cedar Falls Township
Black Hawk County
Latitude 42.498779°
Longitude -92.454170°

## Traffic Estimate

| | |
|---|---|
| 20?? AADT | ??? V.P.D. |
| 20?? AADT | ??? V.P.D. |
| 20?? DHV | ??? V.P.H. |
| TRUCKS | ?? % |
| Total Design ESALs | ??? |




## Situation Plan




## Typical Channel Protection

## Estimated Revetment Quantities Included With Road Plans

| Location | Revetment Class "E" (Ton) | Engineering Fabric (SY) | CL. 10 Channel Excavation (CY) |
|---|---|---|---|
| Inlet | XX | XX | XX |
| Outlet | | | |
| Totals | | | |

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans.
Quantities shown for information only. See Road Sheets.

## Utilities Note:

Utilities shown on this sheet are for information only.See Road Design sheets for utility information.

## General Utility Symbols:

E - Electric Line
G - Gas Line
SAN. - Sanitary Sewer
T - Telephone Line
W - Water Line
FO - Fiber Optic Line
GHP - Gas High Pressure
ST S - Storm Sewer
TV - TV
- Power Poles

Design For 15 Degree LA

# TRIPLE 10' x 10' x 304' RCB with Special Inlet

## Situation Plan

STA. 18+08.82 (GREENHILL RD)
Turn-in Date: June

## Black Hawk County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. Design # Design Sheet No. 1 of 1 FHWA/Asset XXXXXX

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER V.3 |
|---|---|---|---|---|---|

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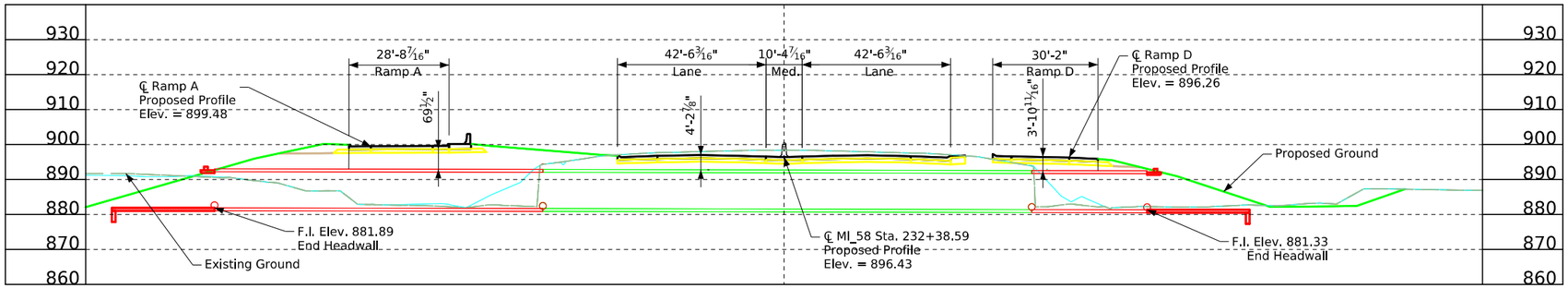



CONTROL POINT: C4
NORTHING: 8844769.08
EASTING: 15447612.06
ELEVATION: 947.38
DESCRIPTION: CP SET FENO MONUMENT 3IN DEEP AND 430FT E OF THE INTERSECTION OF GREENHILL RD AND S MAIN ST MONUMENT IS 9FT S OF SOUTH BACK OF CURB ALONG GREENHILL RD 2FT N OF NORTH EDGE PCC SIDEWALK AND 78FT E OF FIRE HYDRANT

## Longitudinal Section Along ℄ Culvert

## Hydraulic Data

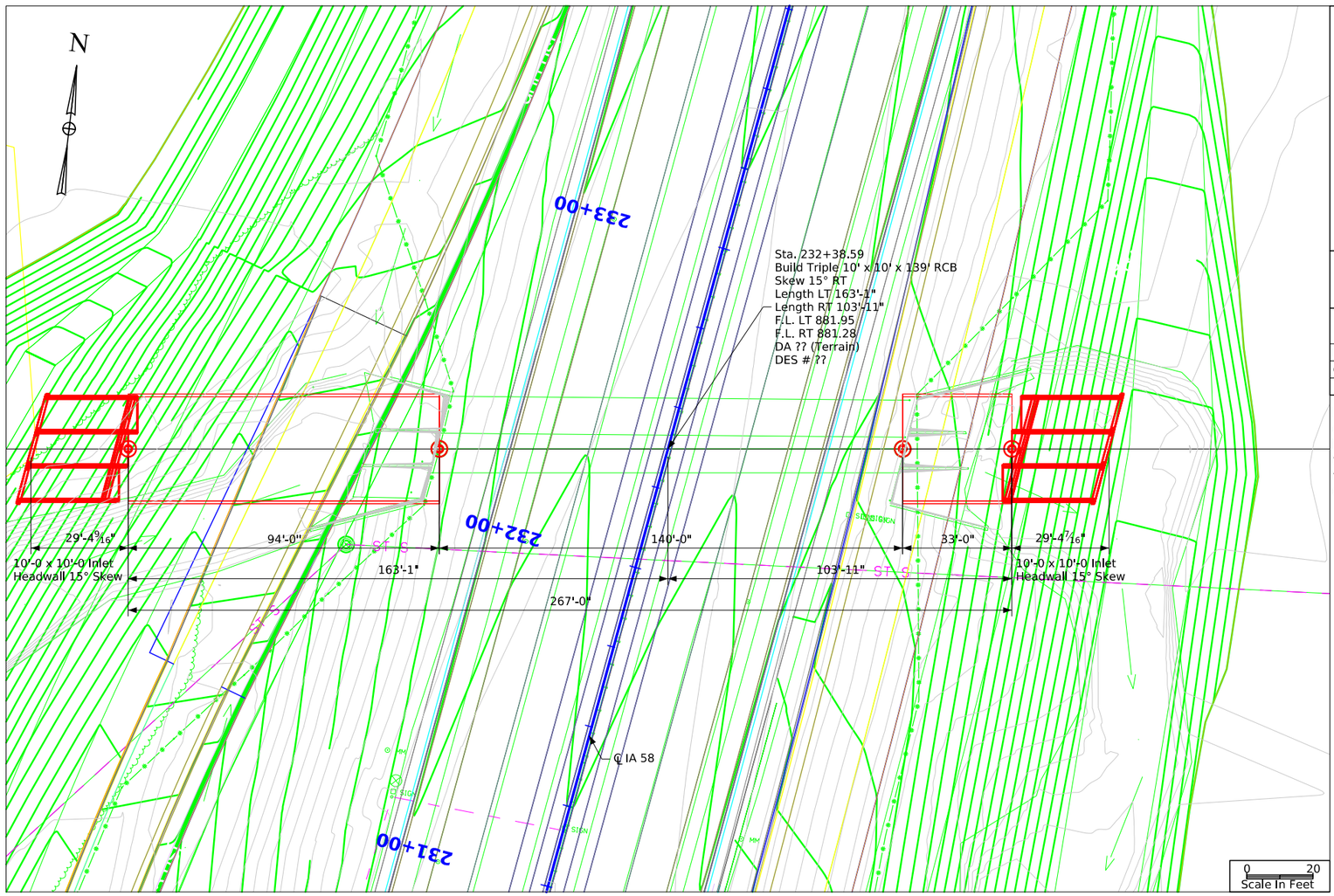
RIDB: Dry Run
Drainage Area = 8 SQ. MI.
$Q_{50}$ = ?,??? cfs
HW Elev. = ????
Exit Velocity = ?.? fps
Stream Slope = 12.4 Ft./Mi.

## Location

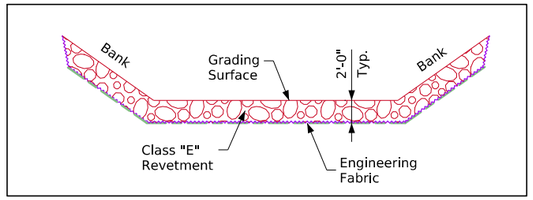
Iowa 58 over Dry Run Creek
In City of Cedar Falls
T-89N R-14W
Section 24
Cedar Falls Township
Black Hawk County
Latitude 42.501144°
Longitude -92.452321°

## Traffic Estimate

| | |
|---|---|
| 20?? AADT | ??? V.P.D. |
| 20?? AADT | ??? V.P.D. |
| 20?? DHV | ??? V.P.H. |
| TRUCKS | ?? % |
| Total Design ESALs | ??? |




## Situation Plan




## Typical Channel Protection

## Estimated Revetment Quantities Included With Road Plans

| Location | Revetment Class "E" (Ton) | Engineering Fabric (SY) | CL. 10 Channel Excavation (CY) |
|---|---|---|---|
| Inlet | XX | XX | XX |
| Outlet | | | |
| Totals | | | |

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans.
Quantities shown for information only. See Road Sheets.

## Utilities Note:

Utilities shown on this sheet are for information only.See Road Design sheets for utility information.

## General Utility Symbols:

E - Electric Line
G - Gas Line
SAN. - Sanitary Sewer
T - Telephone Line
W - Water Line
FO - Fiber Optic Line
GHP - Gas High Pressure
ST S - Storm Sewer
TV - TV
- Power Poles

Design For 15 Degree RA
TRIPLE 10' x 10' x 139'
RCB Extension

Situation Plan

STA. 232+38.59 (IOWA 58)
Turn-in Date: JUNE

Black Hawk County
IOWA DEPARTMENT OF TRANSPORTATION

Design No. Design # Design Sheet No. 1 of 1
FHWA/Asset XXXXXX

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER V.4 |
|---|---|---|---|---|---|

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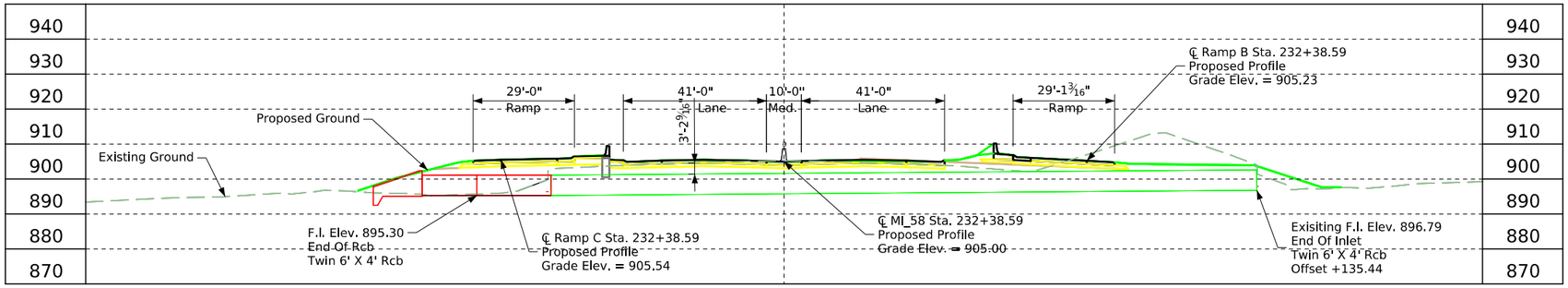



CONTROL POINT: 70271820
NORTHING: 8842114.96
EASTING: 15445805.97
ELEVATION: 917.59
DESCRIPTION: CP SET FENO MONUMENT 3IN DEEP AND 0.6MILES NORTH ALONG HWY 58 FROM THE INTERSECTION OF HWY 58 AND VIKING RD MONUMENT IS 11FT OF SOUTHEAST EDGE PCC PAVED SHOULDER HWY 58 14FT S OF THE NEAR COR RCB HDWL AND 136 FT SE OF MM 182 POST

## Longitudinal Section Along ℄ Culvert

## Hydraulic Data

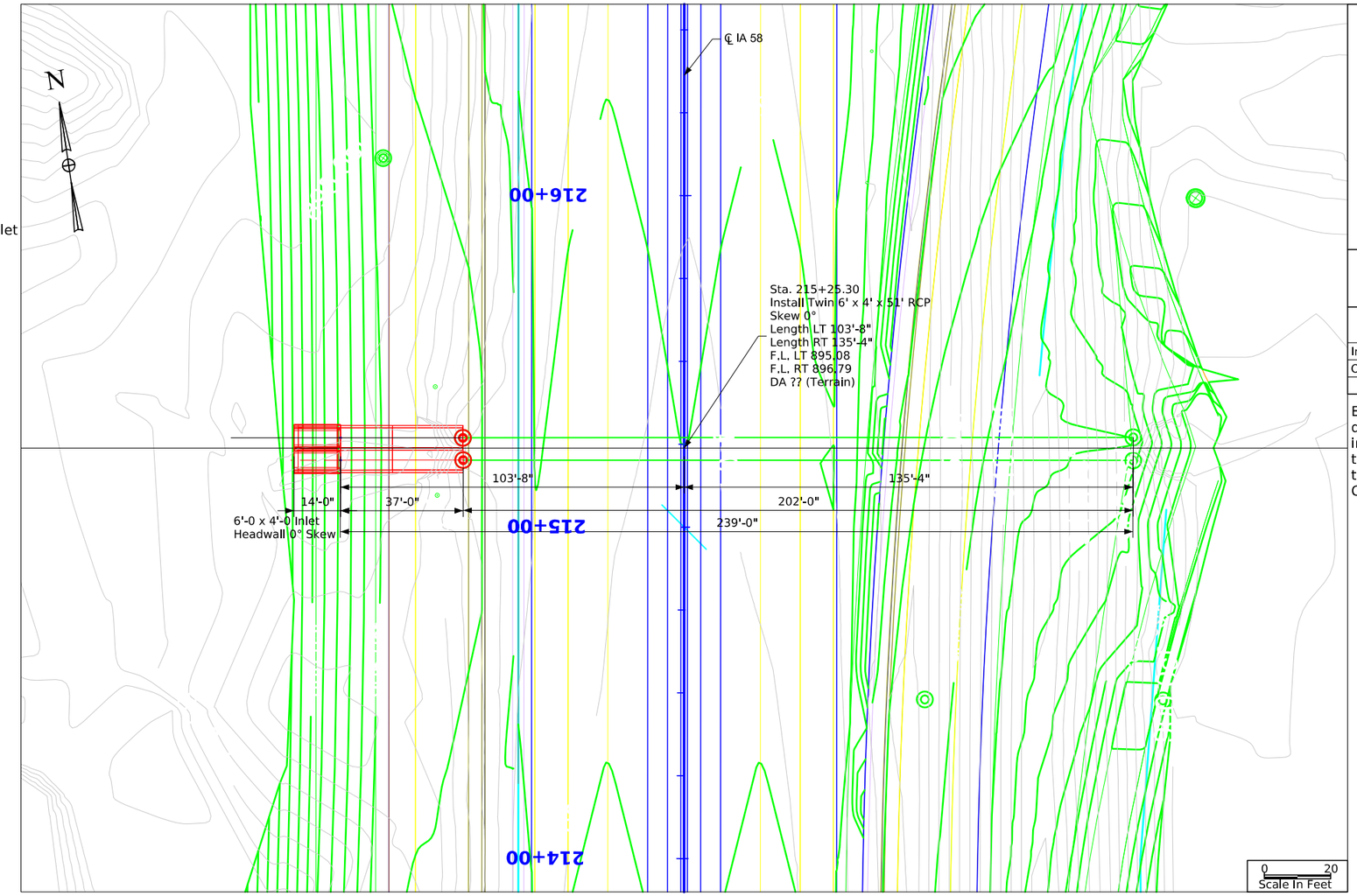
RIDB: "Not Applicable"
Drainage Area = 100.0 Acres
$Q_{50}$ = ?,??? cfs
HW Elev. = ????
Exit Velocity = ?.? fps
Stream Slope = ??.? Ft./Mi.

## Location

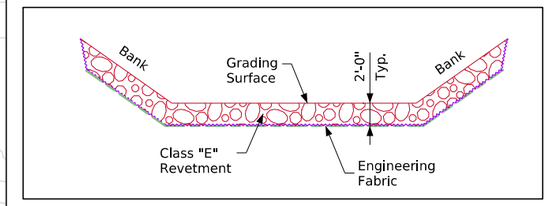
Iowa 58 over Park Drainage Outlet
In City of Cedar Falls
T-89N R-14W
Section 25
Cedar Falls Township
Black Hawk County
FHWA No. 1990
Latitude 42.496520°
Longitude -92.453248°

## Traffic Estimate

| | |
|---|---|
| 20?? AADT | ??? V.P.D. |
| 20?? AADT | ??? V.P.D. |
| 20?? DHV | ??? V.P.H. |
| TRUCKS | ?? % |
| Total Design ESALs | ??? |




## Situation Plan




## Typical Channel Protection

## Estimated Revetment Quantities Included With Road Plans

| Location | Revetment Class "E" (Ton) | Engineering Fabric (SY) | CL. 10 Channel Excavation (CY) |
|---|---|---|---|
| Inlet | XX | XX | XX |
| Outlet | | | |
| Totals | | | |

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans.
Quantities shown for information only. See Road Sheets.

## Utilities Note:

Utilities shown on this sheet are for information only.See Road Design sheets for utility information.

## General Utility Symbols:

E - Electric Line
G - Gas Line
SAN. - Sanitary Sewer
T - Telephone Line
W - Water Line
FO - Fiber Optic Line
GHP - Gas High Pressure
ST S - Storm Sewer
TV - TV
- Power Poles

Design For 0
TWIN 6' x 4' x 51'
RCB Extension

Situation Plan

STA. 215+25.30 (IOWA 58)
Turn-in Date: JUNE

Black Hawk County
IOWA DEPARTMENT OF TRANSPORTATION

Design No. Design # Design Sheet No. 1 of 1 FHWA/Asset XXXXXX

| FILE NO. 98765 | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER V.5 |
|---|---|---|---|---|---|

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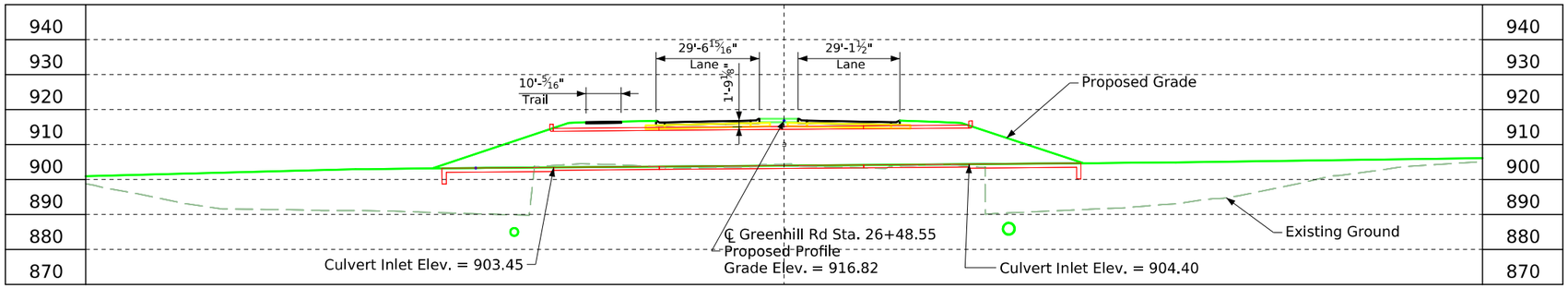
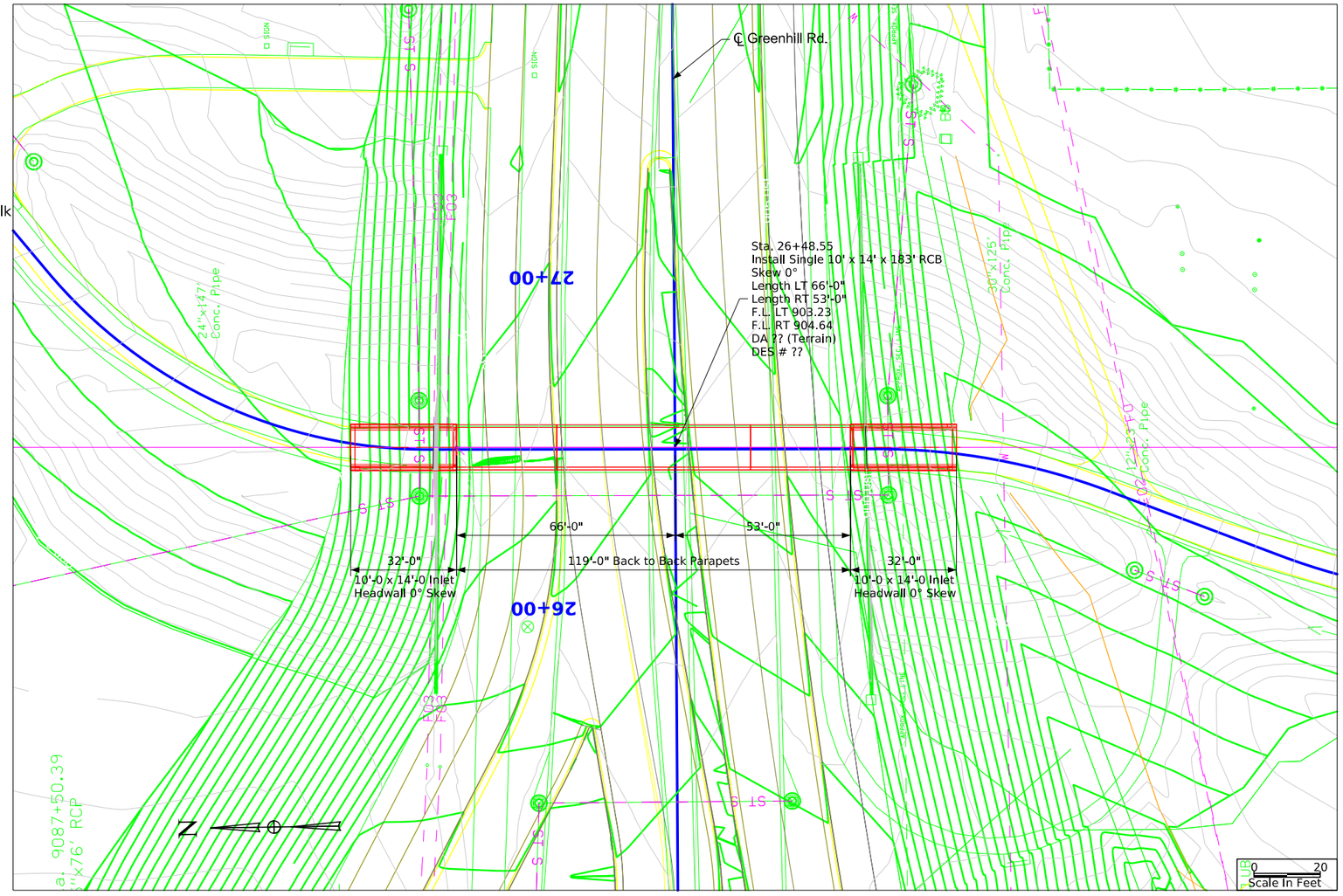



CONTROL POINT: C4
NORTHING: 8844769.08
EASTING: 15447612.06
ELEVATION: 947.38
DESCRIPTION: CP SET FENO MONUMENT 3IN DEEP AND 430 FT E OF THE INTERSECTION OF GREENHILL RD AND S MAIN ST MONUMENT IS 9FT S OF SOUTH BACK OF CURB ALONG GREENHILL RD 2 FT OF NORTH EDGE OF PCC SIDEWALK AND 78FT E OF FIRE HYDRANT

## Longitudinal Section Along ℄ Culvert

## Location

Greenhill Rd over Pedestrian Sidewalk
In City of Cedar Falls
T-89N R-14W
Section 25
Cedar Falls Township
Black Hawk County
Latitude 42.498778°
Longitude -92.454191°




## Situation Plan

## Traffic Estimate

| | |
|---|---|
| 20?? AADT | ??? V.P.D. |
| 20?? AADT | ??? V.P.D. |
| 20?? DHV | ??? V.P.H. |
| TRUCKS | ?? % |
| Total Design ESALs | ??? |

## Utilities Note:

Utilities shown on this sheet are for information only.See Road Design sheets for utility information.

## General Utility Symbols:

| | |
|---|---|
| E - Electric Line | FO - Fiber Optic Line |
| G - Gas Line | GHP - Gas High Pressure |
| SAN. - Sanitary Sewer | ST S - Storm Sewer |
| T - Telephone Line | TV - TV |
| W - Water Line | - Power Poles |

Design For 0
10' x 14' x 183'
RCB Pedestrian Culvert

Situation Plan

STA. 26+48.55 (GREENHILL RD)
Turn-in Date: June

Black Hawk County
IOWA DEPARTMENT OF TRANSPORTATION

Design No. Design # Design Sheet No. 1 of 1 FHWA/Asset XXXXXX

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER V.6 |
|---|---|---|---|---|---|

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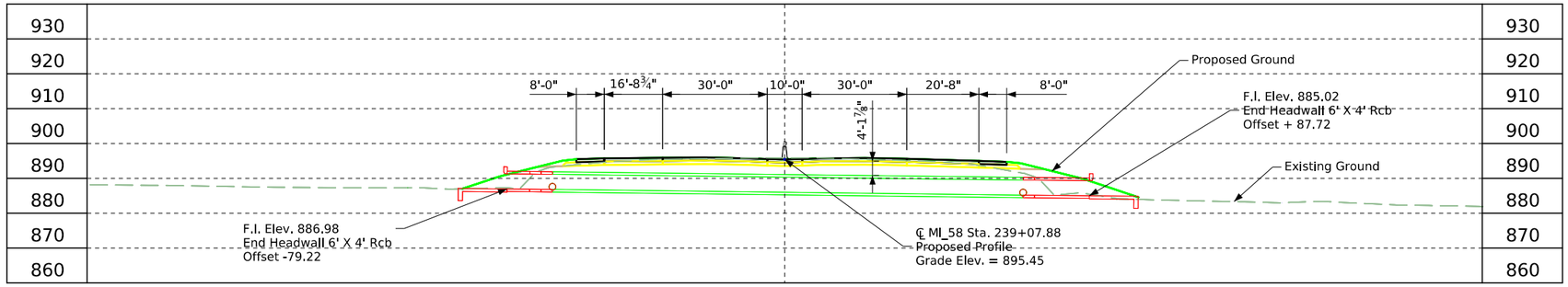



CONTROL POINT: 070271825
NORTHING: 8849013.25
EASTING: 15447506.23
ELEVATION: 909.79
DESCRIPTION: CP SET FENO MONUMENTS 3IN DEEP AND 0.9 MILES NE ALONG HWY 58 FROM THE INTERSECTION OF HWY 58 AND GREENHILL RD MONUMENT IS 20FT W OF NEAR EDGE PCC RAMP 21 FT E OF NEAR COR LUMINAIRE BASE

## Longitudinal Section Along ℄ Culvert

## Hydraulic Data

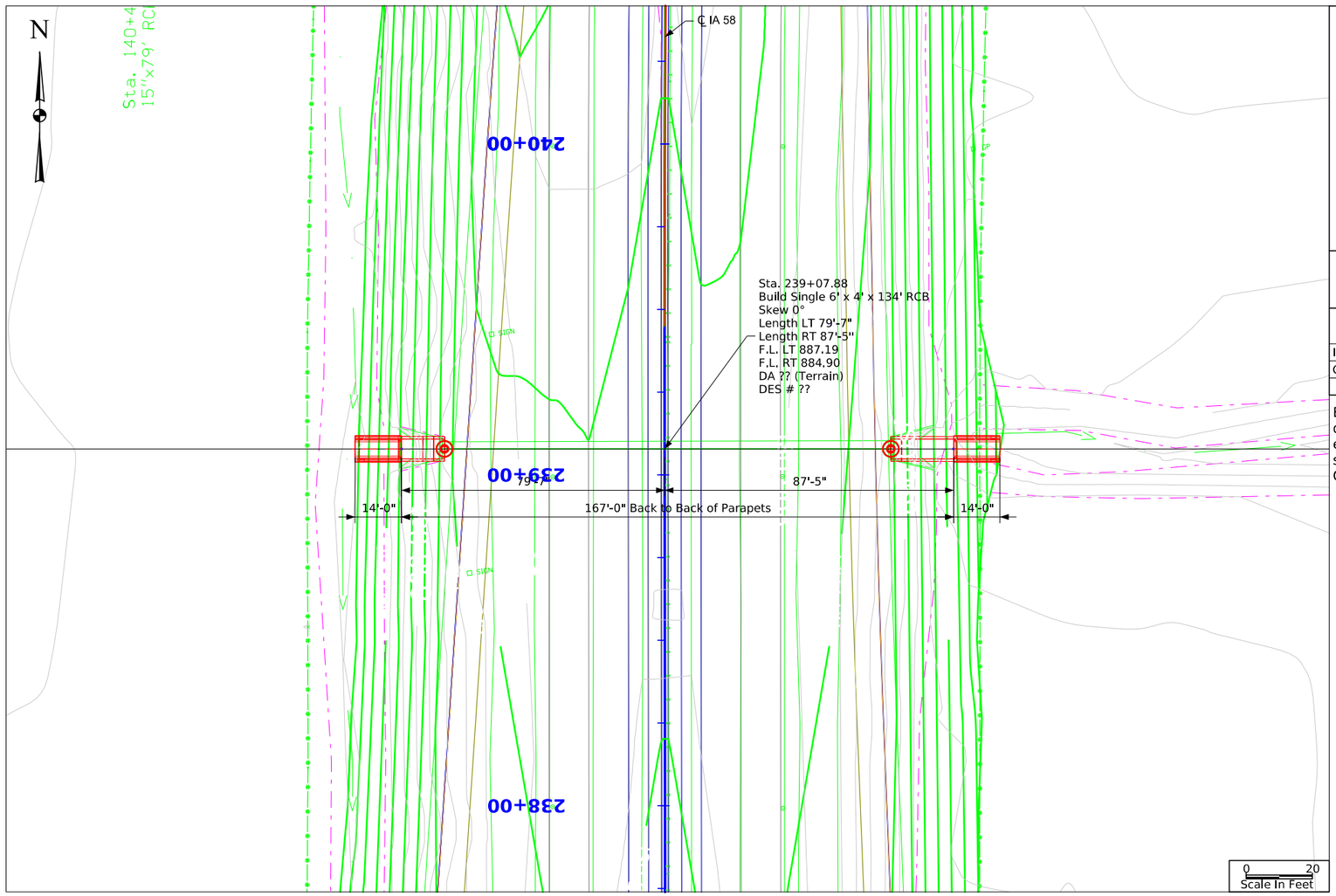
RIDB: "Not Applicable"
Drainage Area = 38.0 Acres
Stream Slope = ??.? Ft./Mi.
$Q_{50}$ = ?,??? cfs
HW Elev. = ????
Exit Velocity = ?.? fps

## Location

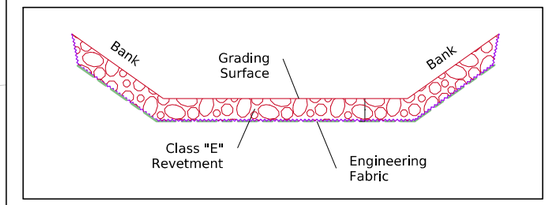
Iowa 58 over drainage ditch
In City of Cedar Falls
T-89N R-14W
Section 24
Cedar Falls Township
Black Hawk County
FHWA No. ?? (if applicable)
Latitude 42.502986°
Longitude -92.451957°

## Traffic Estimate

| | |
|---|---|
| 20?? AADT | ??? V.P.D. |
| 20?? AADT | ??? V.P.D. |
| 20?? DHV | ??? V.P.H. |
| TRUCKS | ?? % |
| Total Design ESALs | ??? |




## Situation Plan




## Typical Channel Protection

## Estimated Revetment Quantities Included With Road Plans

| Location | Revetment Class "E" (Ton) | Engineering Fabric (SY) | CL. 10 Channel Excavation (CY) |
|---|---|---|---|
| Inlet | XX | XX | XX |
| Outlet | | | |
| Totals | | | |

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans. Quantities shown for information only. See Road Sheets.

## Utilities Note:

Utilities shown on this sheet are for information only.See Road Design sheets for utility information.

## General Utility Symbols:

E - Electric Line
G - Gas Line
SAN. - Sanitary Sewer
T - Telephone Line
W - Water Line
FO - Fiber Optic Line
GHP - Gas High Pressure
ST S - Storm Sewer
TV - TV
-●- Power Poles

Design For 0

# SINGLE 6' x 4' x 167' RCB Extension

## Situation Plan

STA. 239+07.88 (IOWA 58)
Turn-in Date: June

## Black Hawk County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. Design # Design Sheet No. 1 of 1 FHWA/Asset XXXXXX

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER V.7 |
|---|---|---|---|---|---|

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# CROSS SECTION VIEW COLOR LEGEND

| Design Color No. | Feature |
|---|---|
| **Aggregate** | |
| (64) | Choke Stone |
| (42) | Engineering Fabric |
| (8) | Flooded Backfill |
| (92) | Macadam Stone |
| (20) | Modified |
| (12) | Plowing Shaping |
| (14) | Porous Backfill |
| (8) | Revetment Class A |
| (6) | Revetment Class B |
| (62) | Revetment Class C |
| (188) | Revetment Class D |
| (28) | Revetment Class E |
| (12) | Shoulder Special Backfill |
| (12) | Special Backfill |
| (20) | Subbase |
| (20) | Subbase Lower |
| (20) | Subbase Upper |
| (118) | Subgrade Treatment |
| **Asphalt** | |
| (207) | HMA Base Course |
| (207) | HMA Interim Course |
| (207) | HMA Surface Course |
| **Concrete** | |
| (0) | Barrier Concrete |
| (0) | Barrier Concrete Footing |
| (0) | Curb Gutter |
| (48) | Flowable Mortar |
| (0) | Median Concrete |
| (0) | PCC Pavement |
| (0) | Sidewalk |
| **Shoulder** | |
| (209) | Shoulder HMA |
| (0) | Shoulder PCC |
| (6) | Shoulder Granular |
| **Existing** | |
| (0) | Existing Pavement |
| **Structural** | |
| (112) | Noise Wall |
| (112) | Noise Wall Footing |
| (112) | Retaining Wall Back |
| (112) | Retaining Wall Back Excavate |
| (112) | Retaining Wall Face |
| (112) | Retaining Wall Front Excavate |
| (112) | Retaining Wall Front Footing |
| (112) | Retaining Wall MSE Gutter |
| (112) | Retaining Wall Reinforced Earth |
| **Grading** | |
| (8) | Behind Curb Cut |
| (6) | Granular |
| (13) | Granular Back Fill |
| (48) | Rock Undercut |
| (8) | Shoulder Earth Fill |
| (2) | Side Slopes |
| (226) | Side Slopes Dressing |
| **Substrata** | |
| (128) | Boulder Substrata |
| (48) | Broken Weathered Substrata |
| (3) | Core Out Substrata |
| (203) | Existing Pavement Substrata |
| (6) | Loam Substrata |
| (80) | Rock Substrata |
| (4) | Select Sand Substrata |
| (3) | Shale Substrata |
| (10) | Topsoil Substrata |
| **Unsuitable / Waste** | |
| (3) | Unsuitable Type A |
| (13) | Unsuitable Type B |
| (11) | Unsuitable Type C |
| (3) | Waste |

**NOTES:**

Text

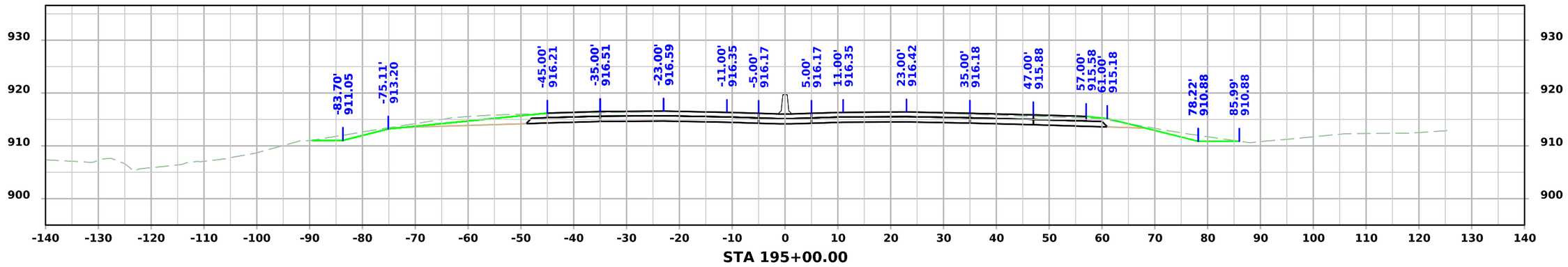
**NOTES:**

Text

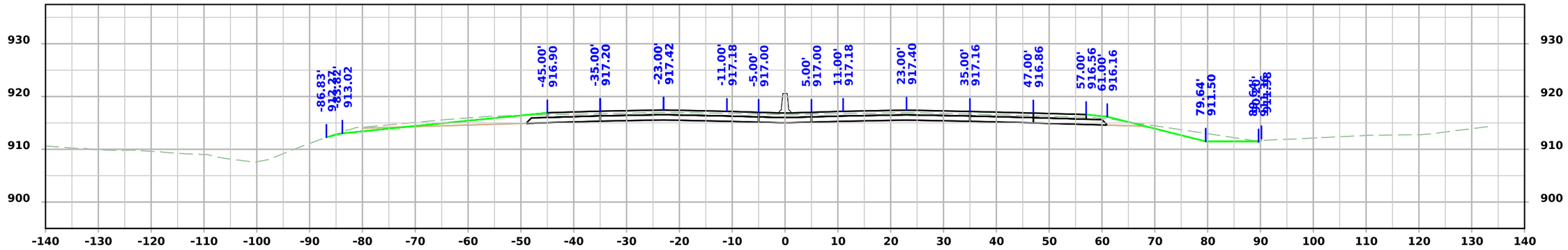
# CROSS SECTIONS
# LEGEND AND INFORMATION SHEET

(COVERS SHEET SERIES W, X, Y, & Z)

# ML - IA58




**STA 195+00.00**

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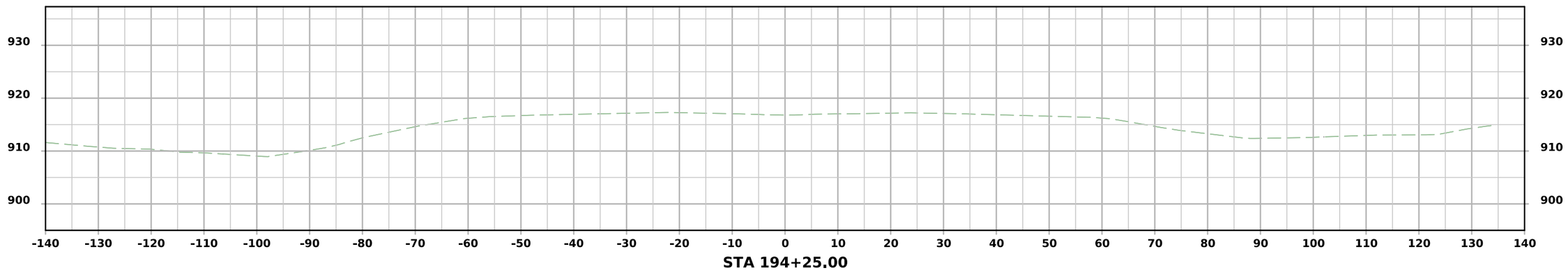


**STA 194+25.00**

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.2 | |
|---|---|---|---|---|---|---|

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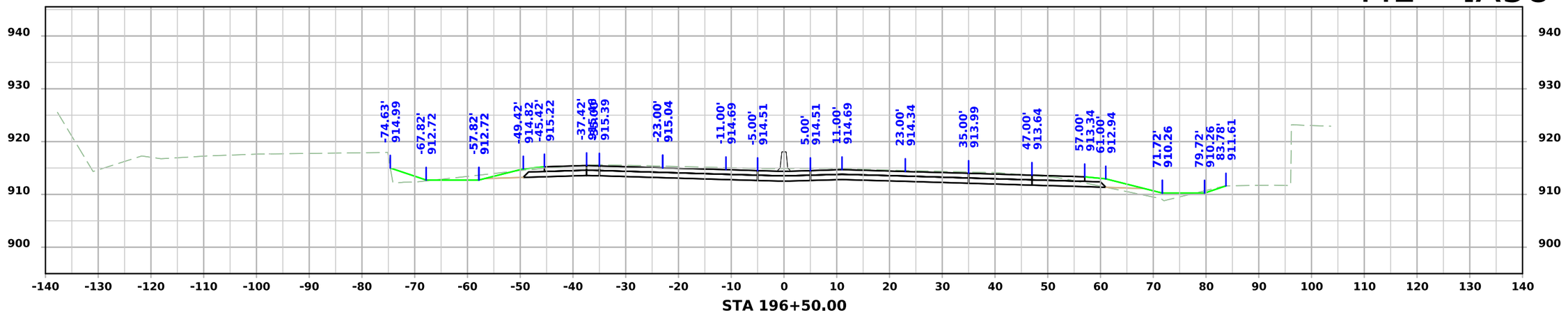


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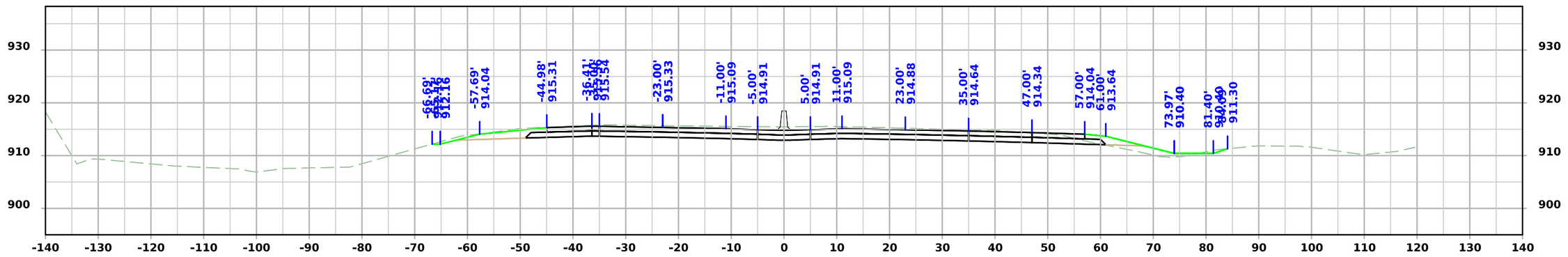


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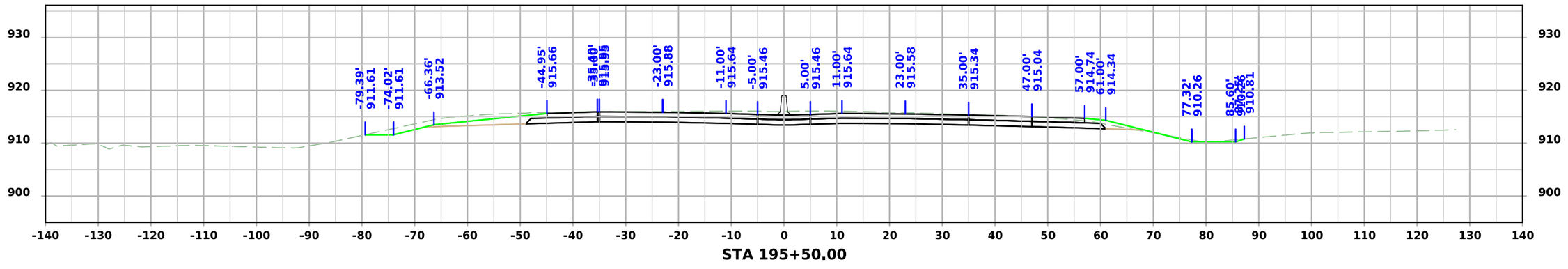


STA 195+50.00

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.3 |
|---|---|---|---|---|---|

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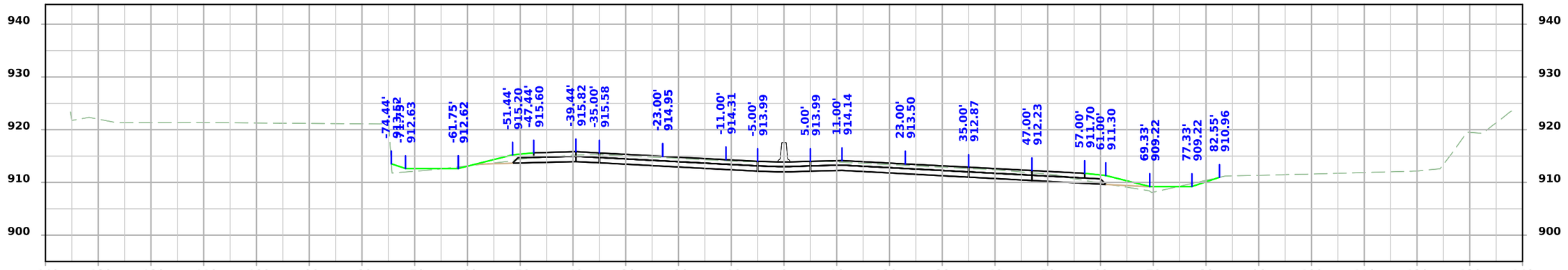
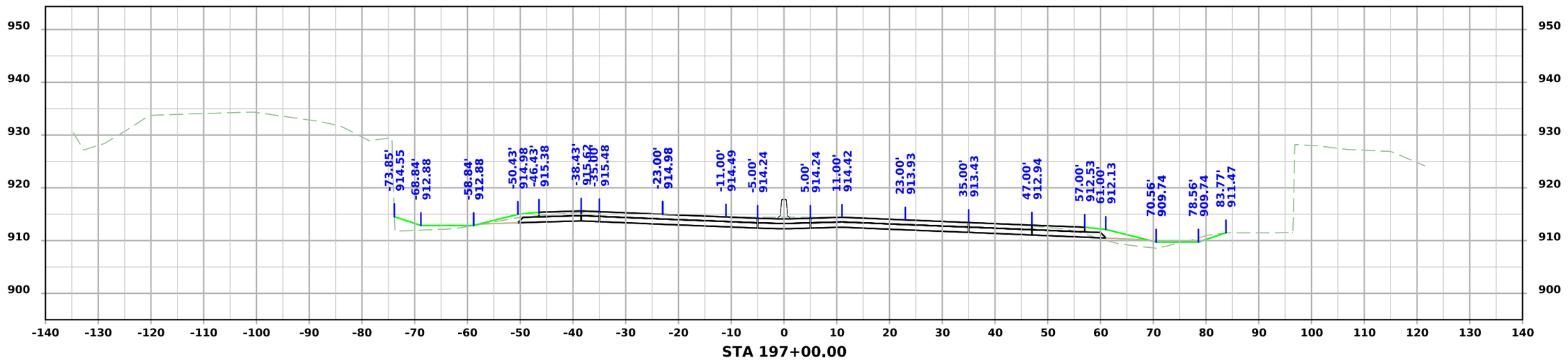
# ML - IA58




STA 197+50.00

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| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.4 |
|---|---|---|---|---|---|

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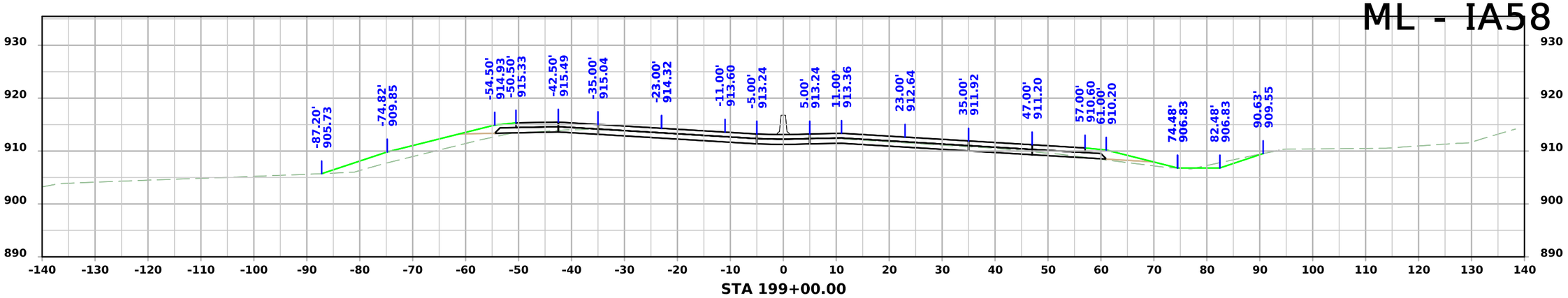


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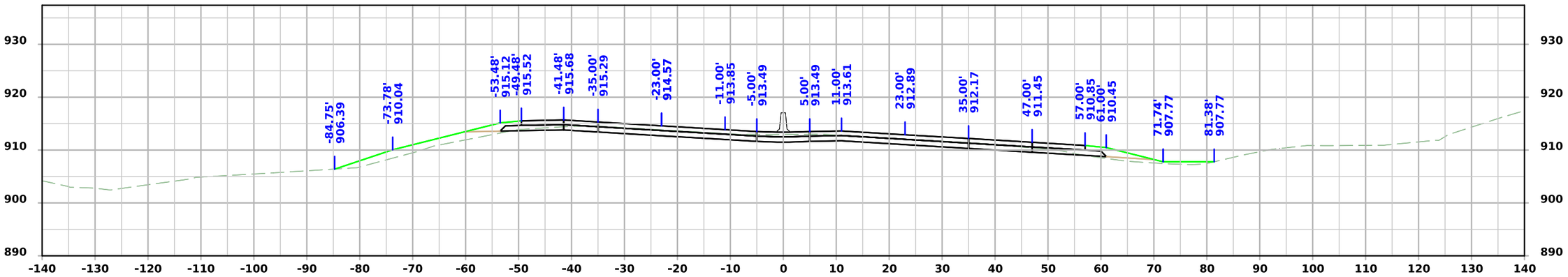


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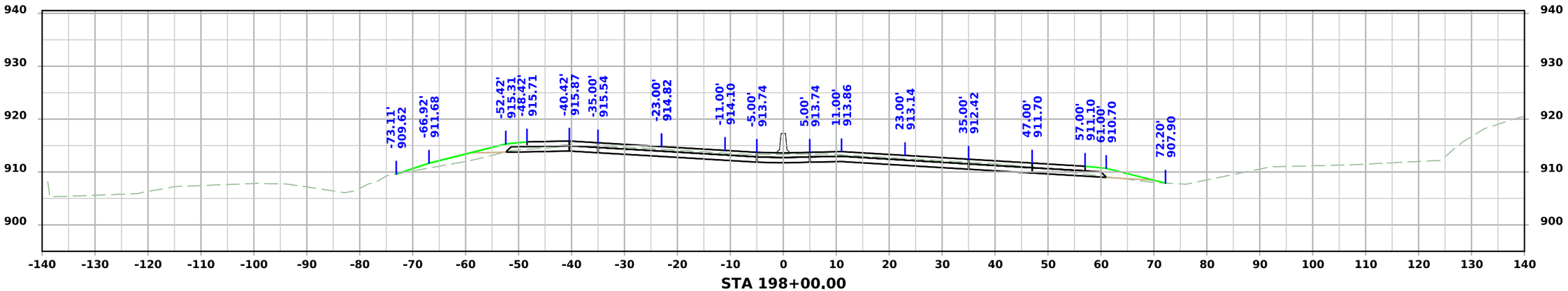


STA 198+00.00

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.5 |
|---|---|---|---|---|---|

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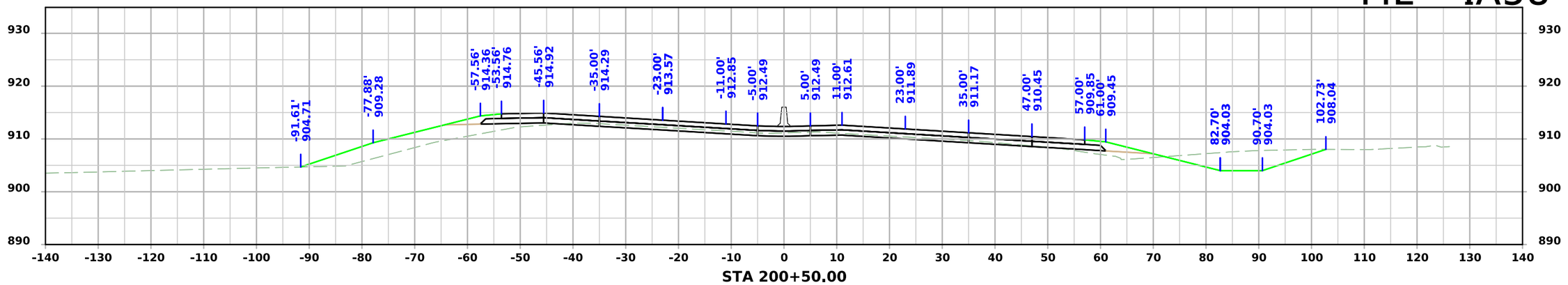
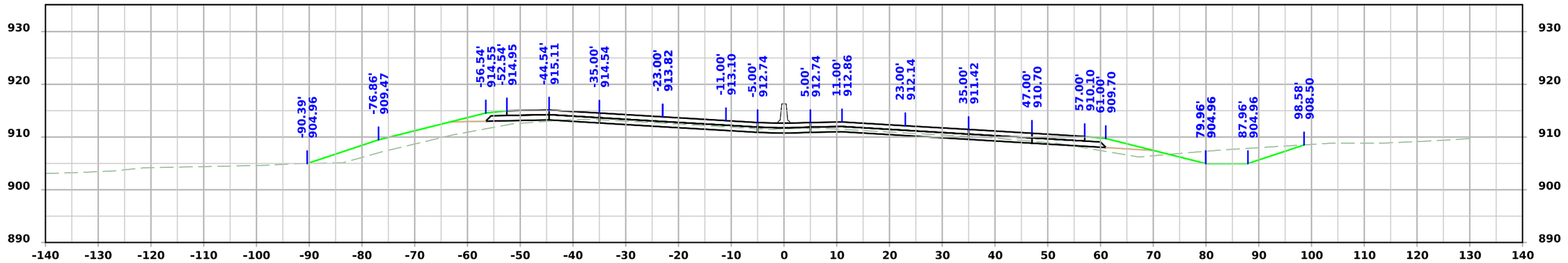
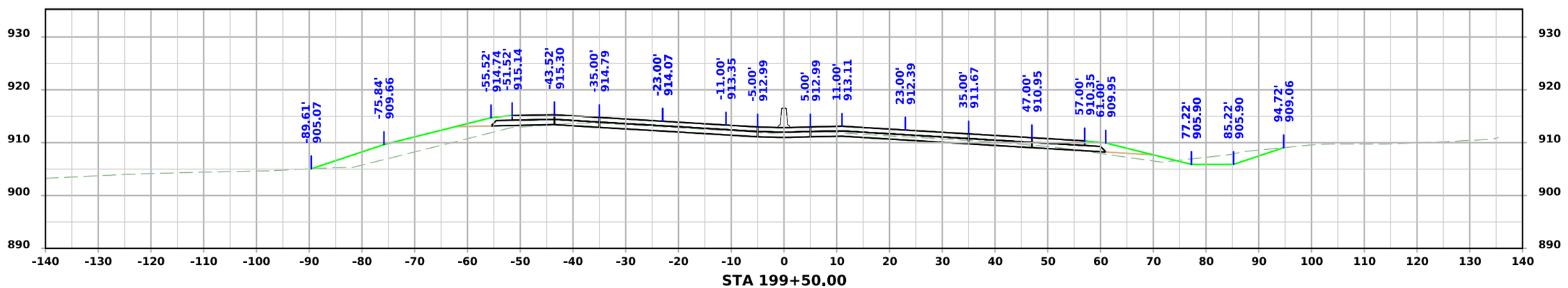
# ML - IA58




**STA 200+50.00**




**STA 200+00.00**




**STA 199+50.00**

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.6 |
|---|---|---|---|---|---|

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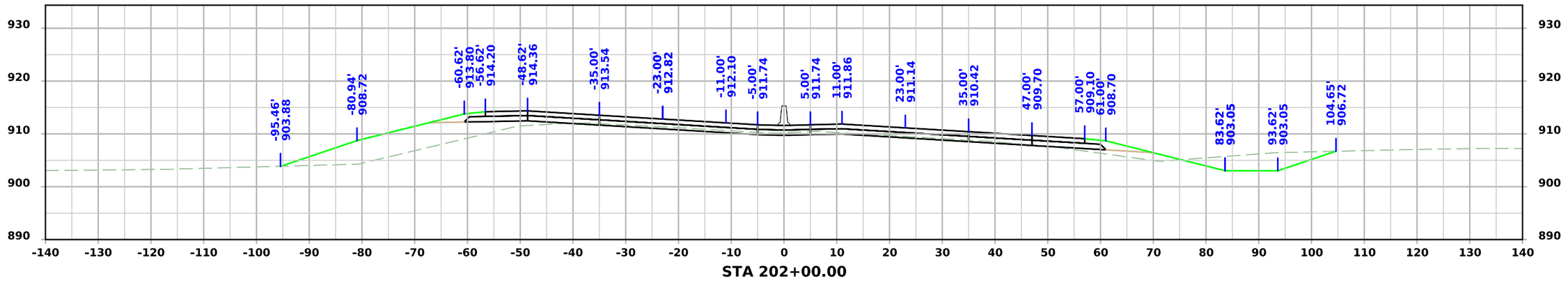
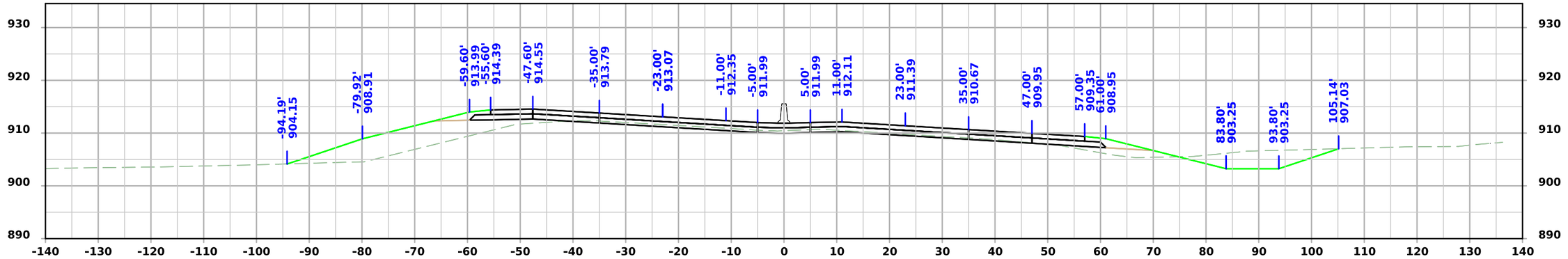
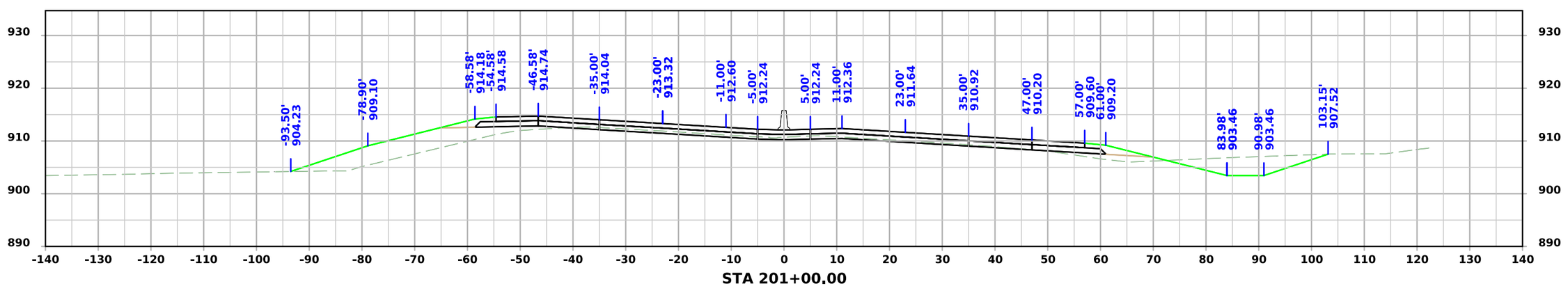



STA 202+00.00




STA 201+50.00

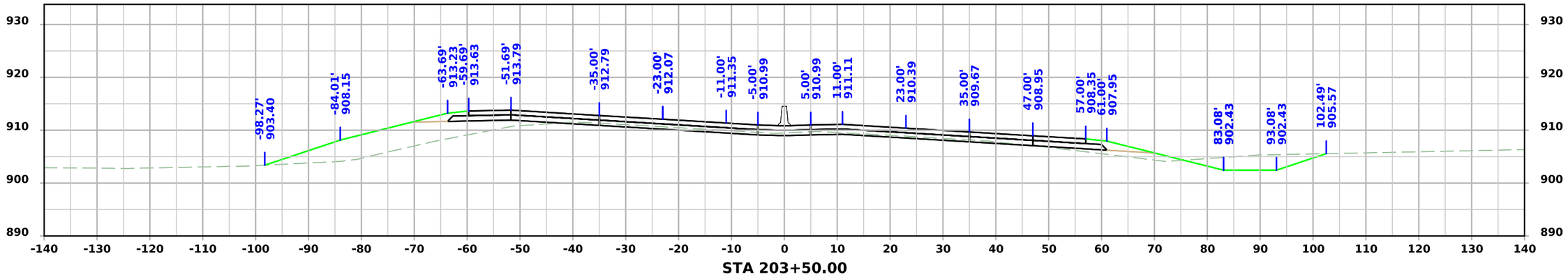



STA 201+00.00

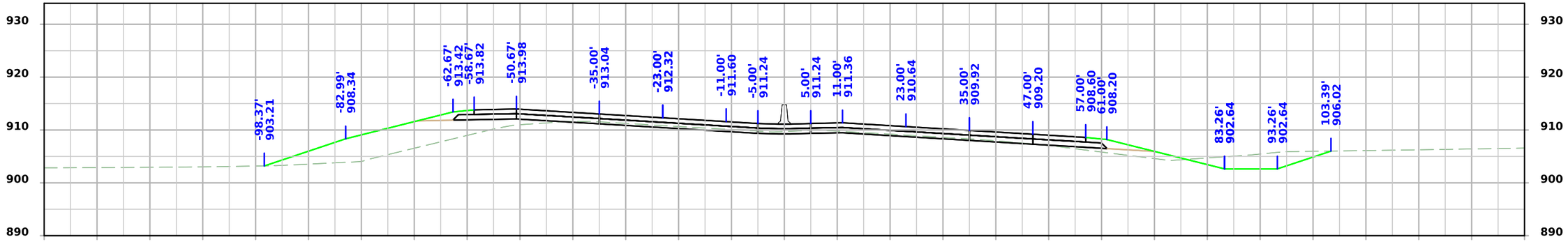
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.7 |
|---|---|---|---|---|---|

2:37:54 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

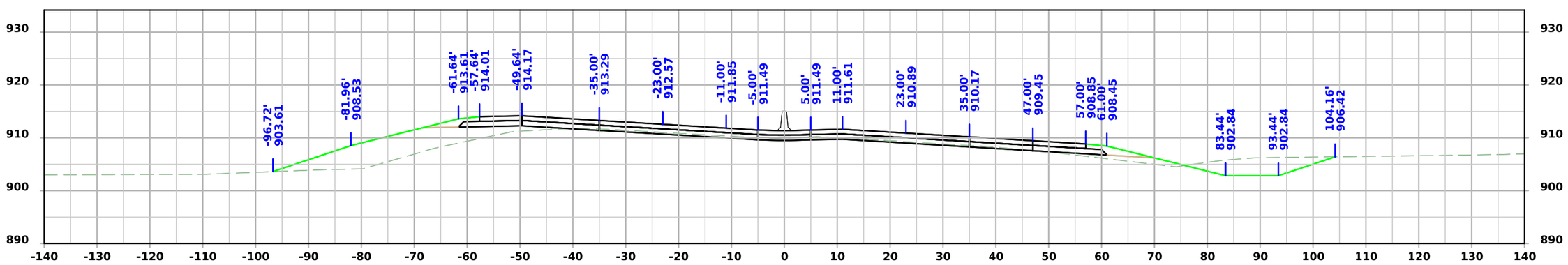
# ML - IA58




STA 203+50.00




STA 203+00.00

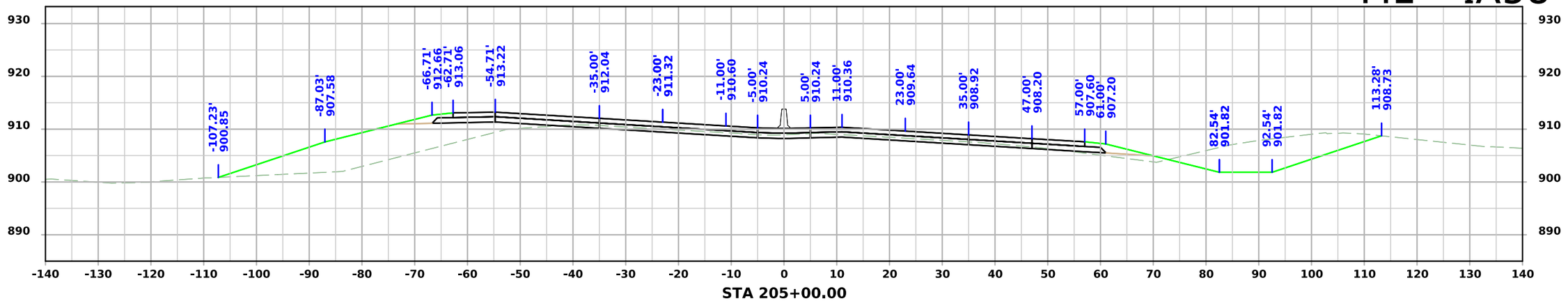



STA 202+50.00

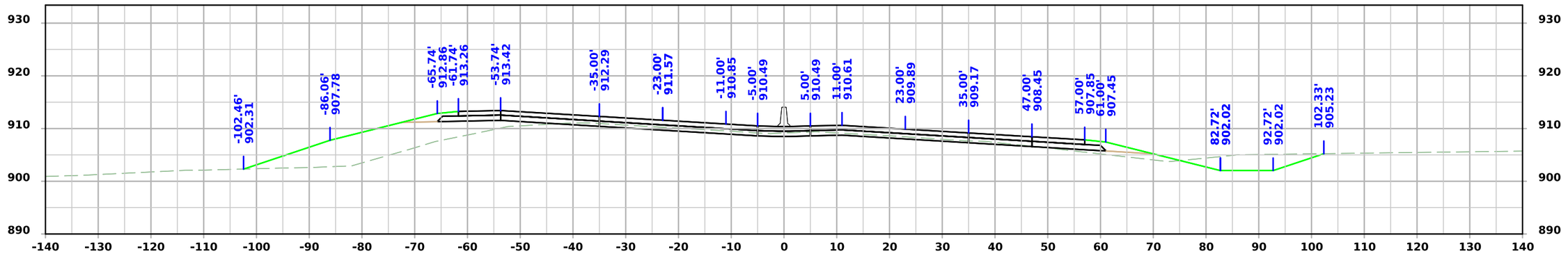
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.8 |
|---|---|---|---|---|---|

2:37:55 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

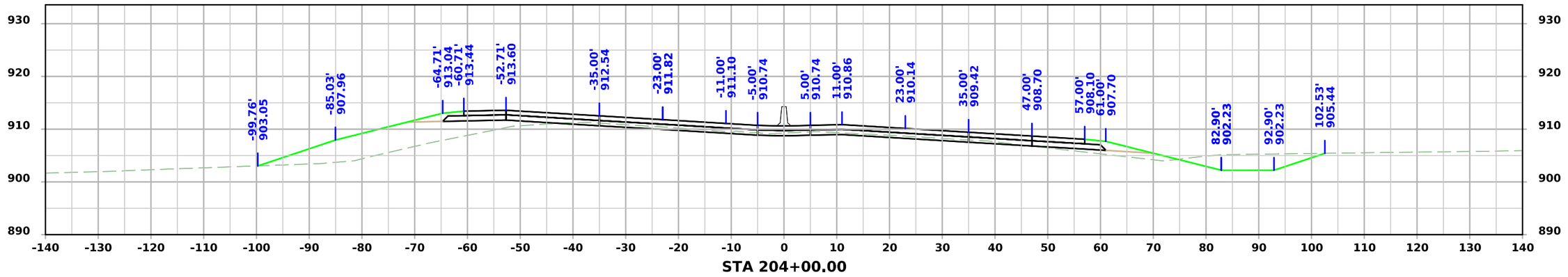
# ML - IA58




**STA 205+00.00**




**STA 204+50.00**

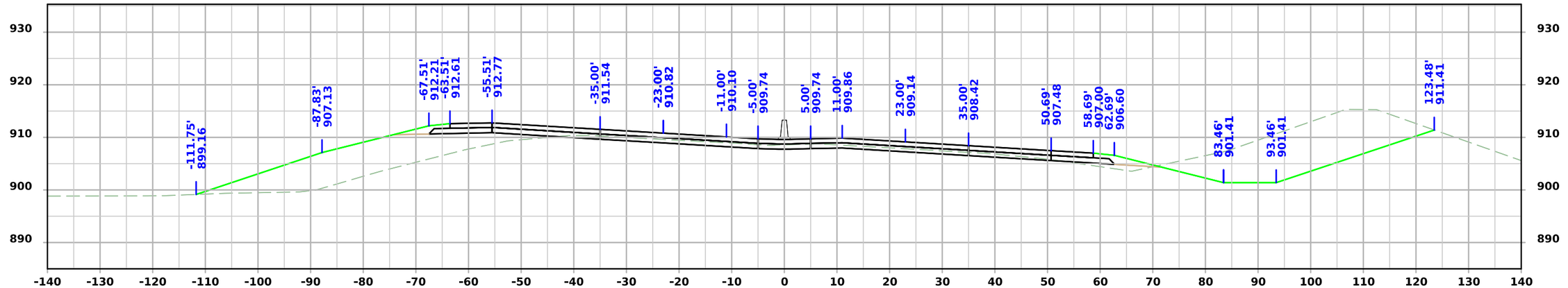



**STA 204+00.00**

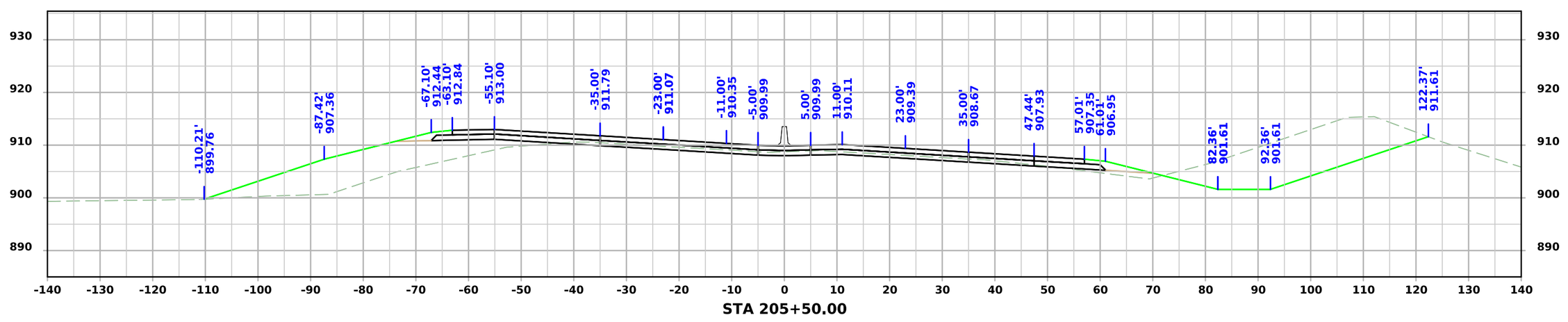
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.9 |
|---|---|---|---|---|---|

2:37:57 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhiII_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 206+00.00

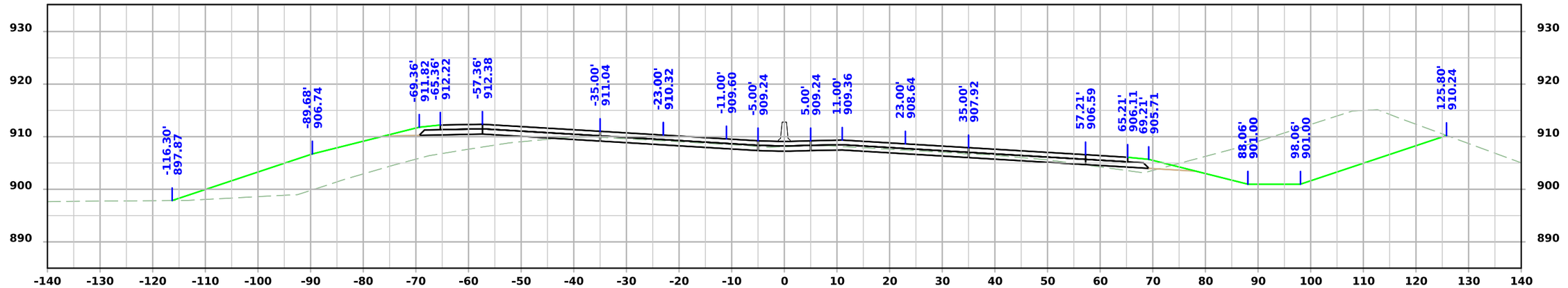



STA 205+50.00

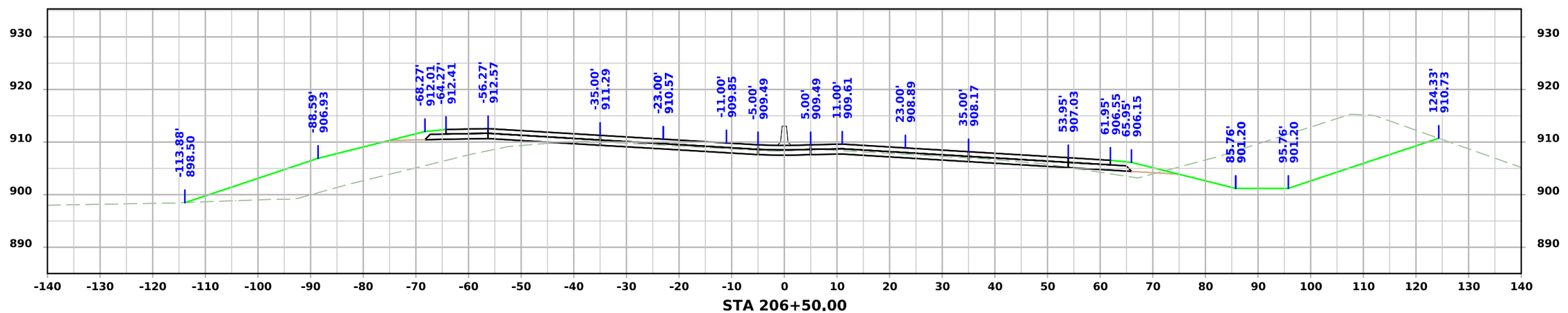
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.10 |
|---|---|---|---|---|---|

2:37:58 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 207+00.00

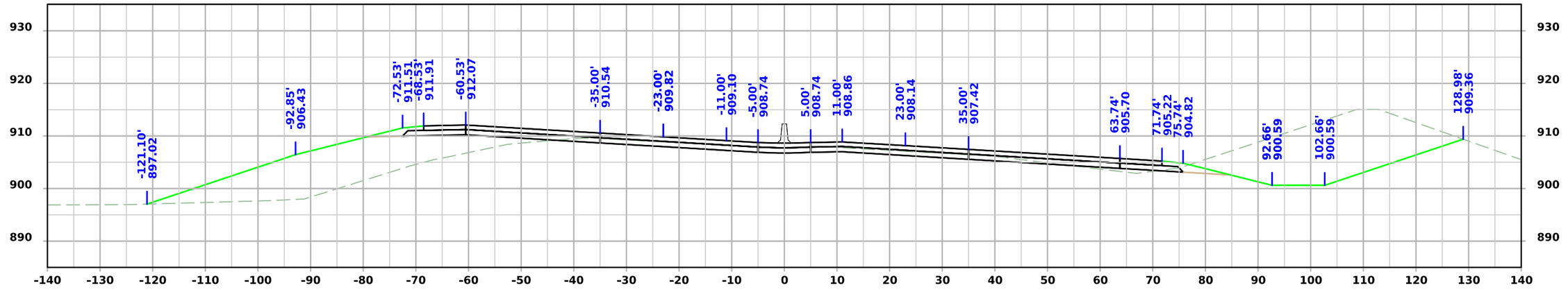



STA 206+50.00

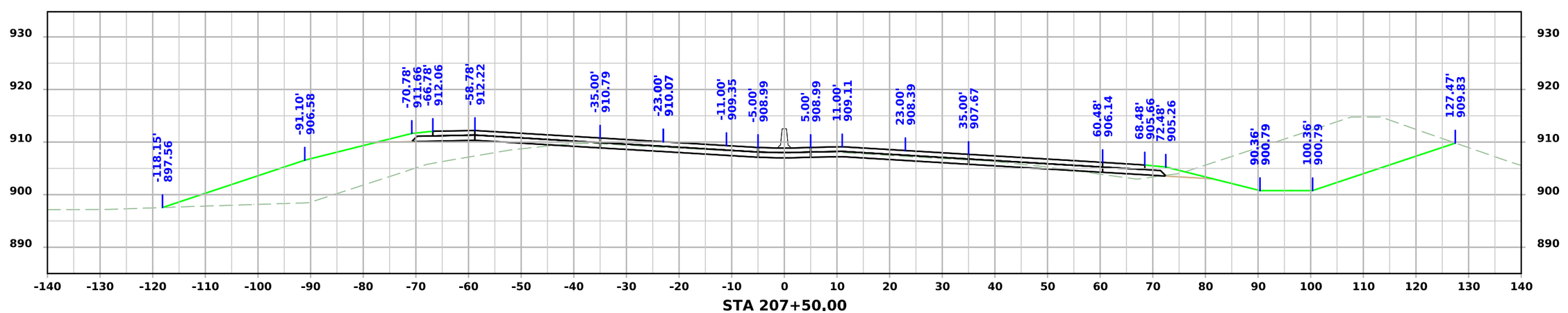
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.11 |
|---|---|---|---|---|---|

2:37:59 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 208+00.00

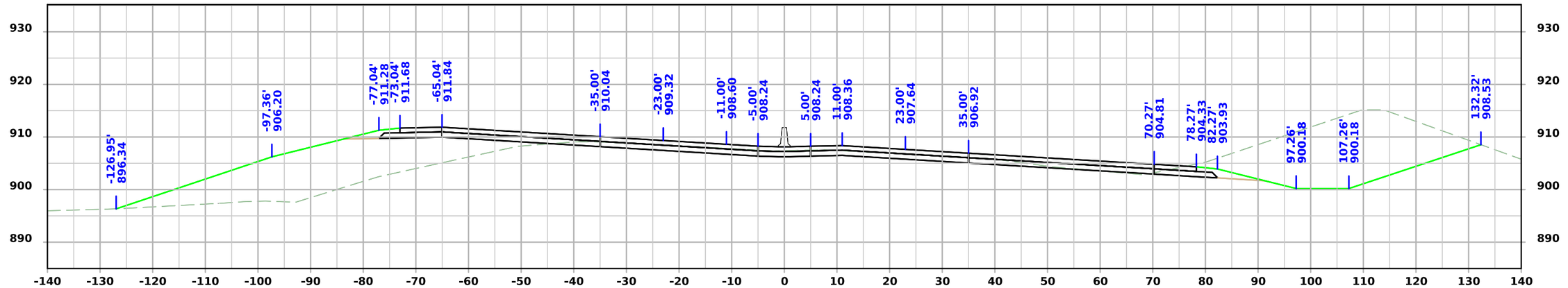



STA 207+50.00

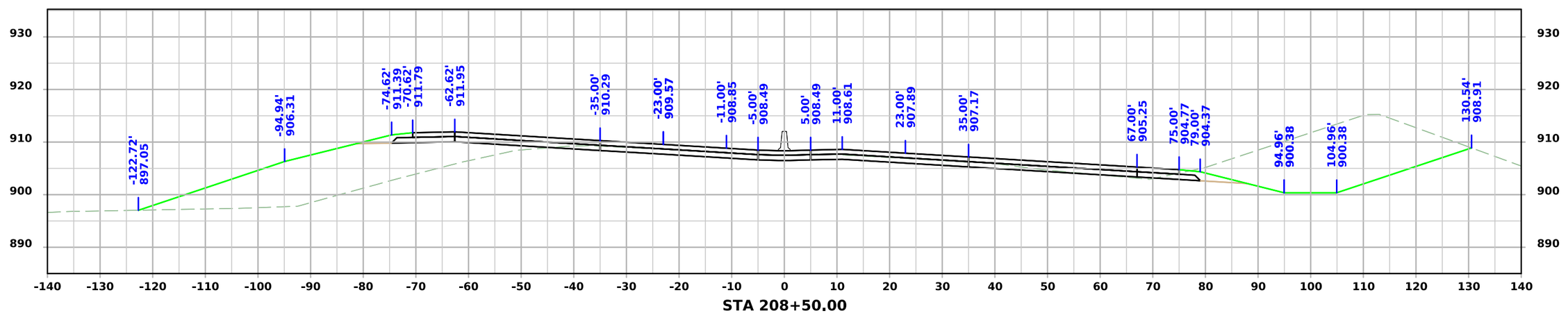
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.12 |
|---|---|---|---|---|---|

2:38:01 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 209+00.00

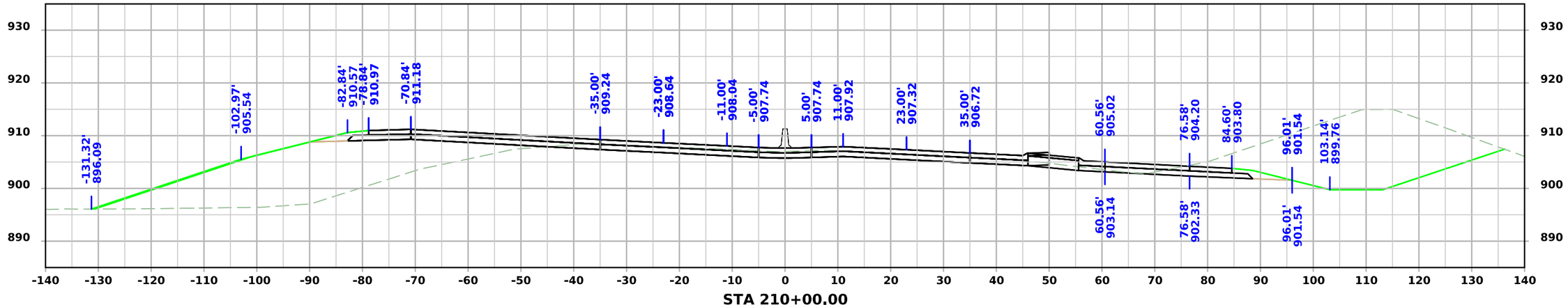



STA 208+50.00

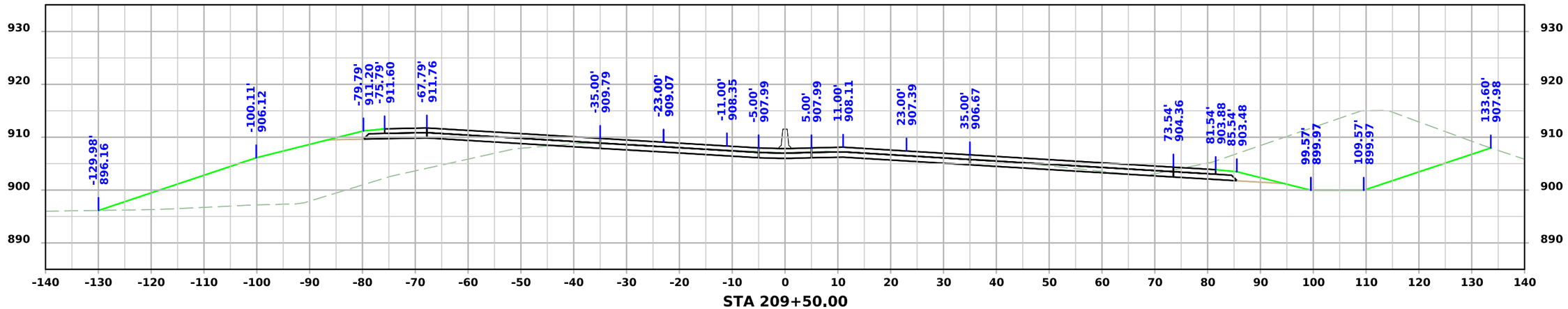
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.13 |
|---|---|---|---|---|---|

2:38:02 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 210+00.00

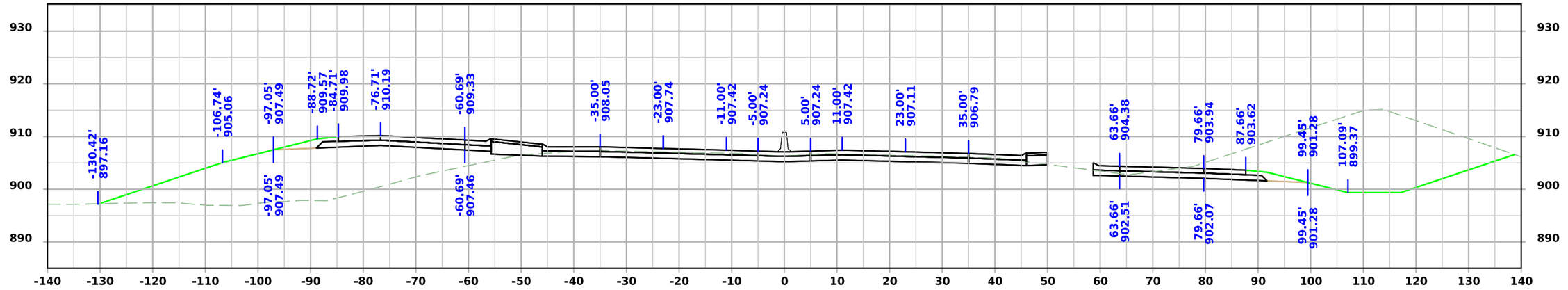



STA 209+50.00

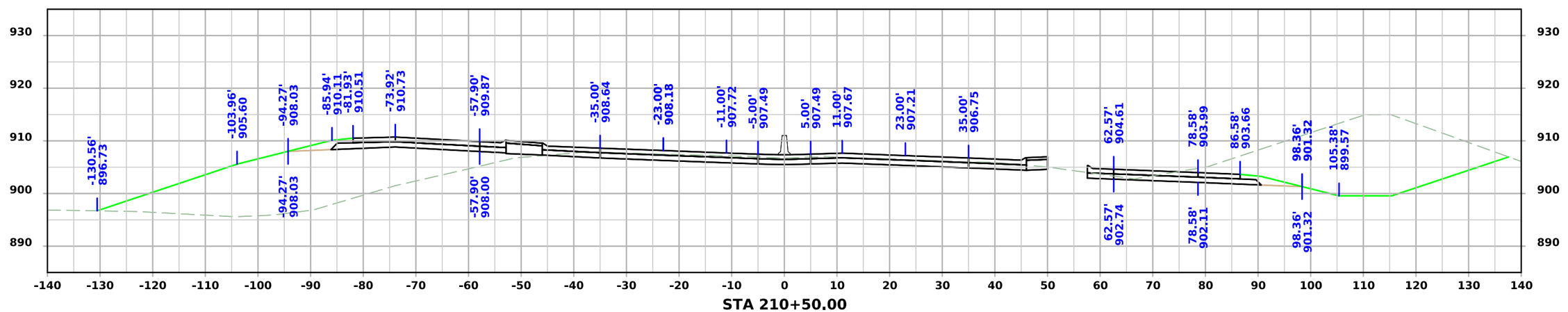
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.14 |
|---|---|---|---|---|---|

2:38:04 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 211+00.00

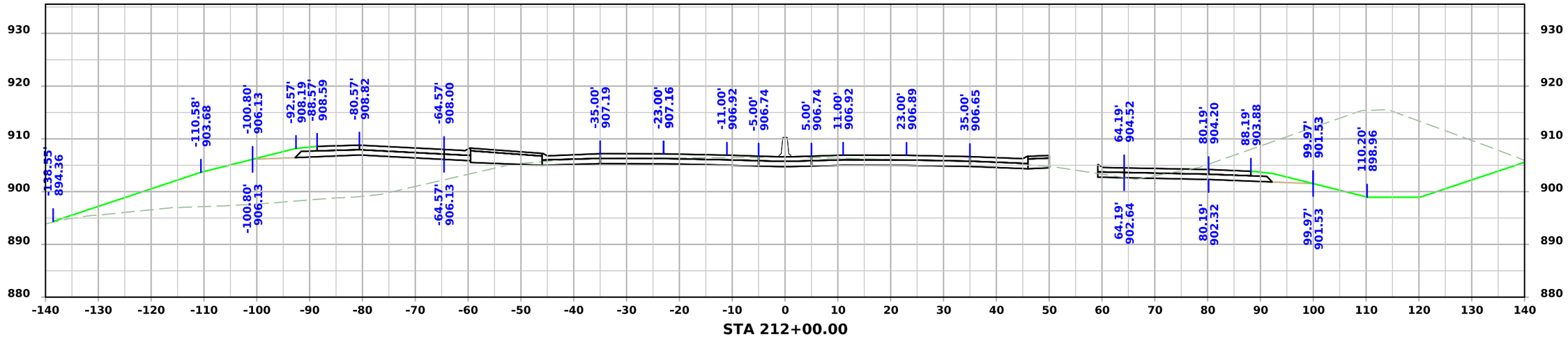



STA 210+50.00

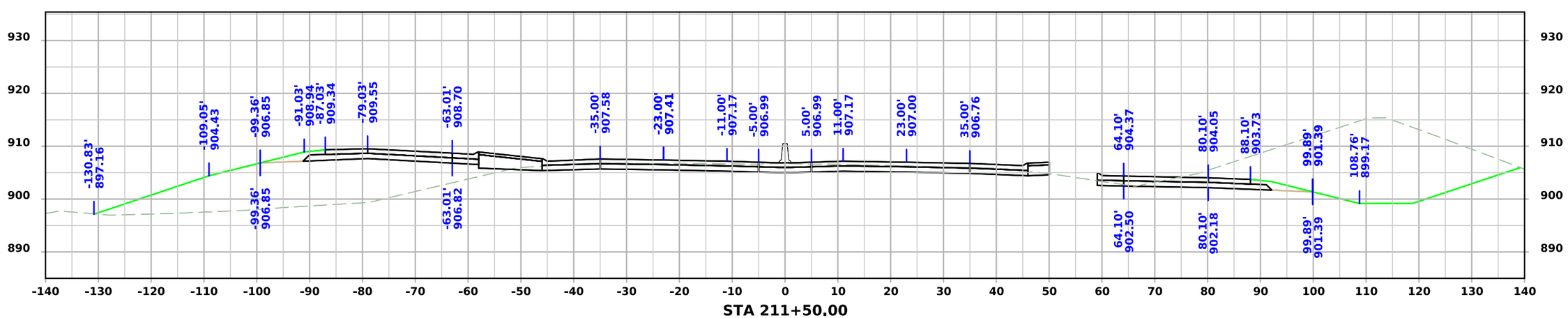
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.15 |
|---|---|---|---|---|---|

2:38:05 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 212+00.00

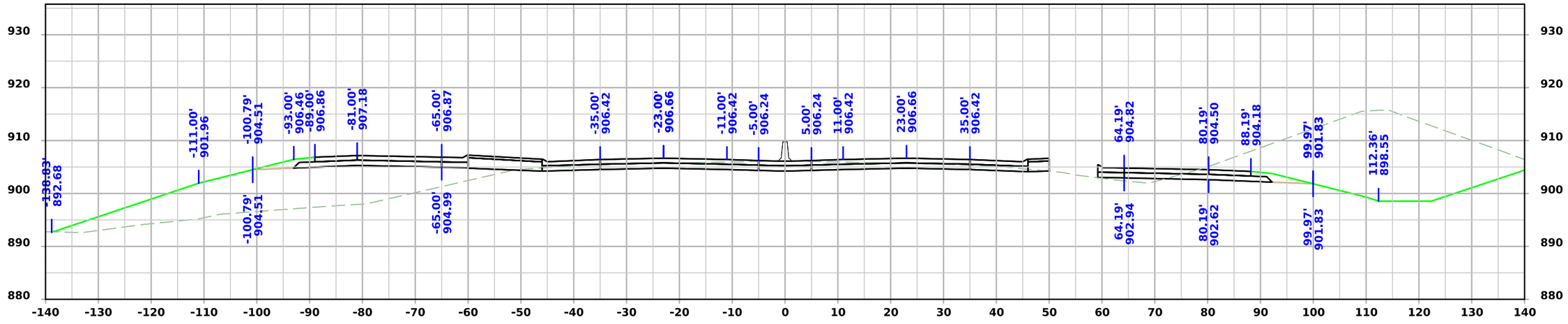



STA 211+50.00

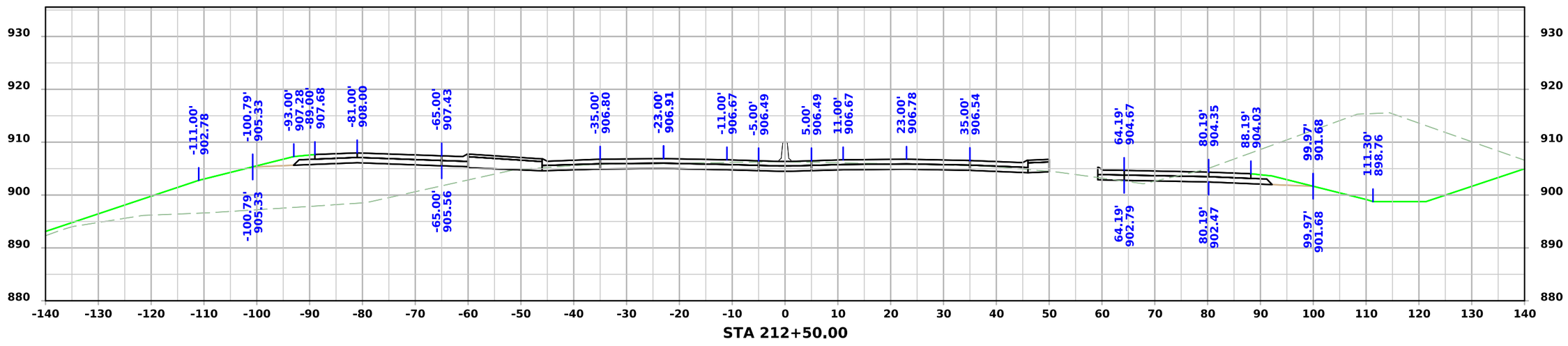
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.16 |
|---|---|---|---|---|---|

2:38:07 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 213+00.00**

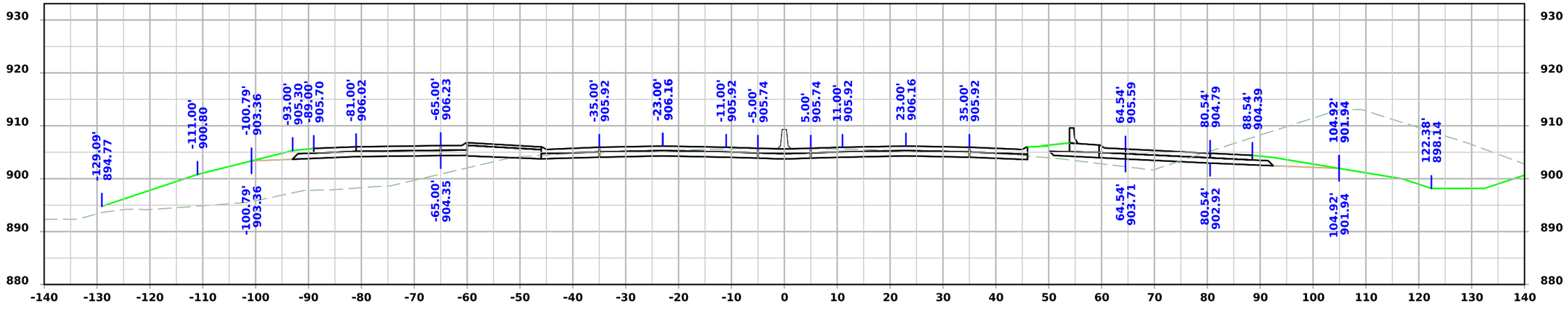



**STA 212+50.00**

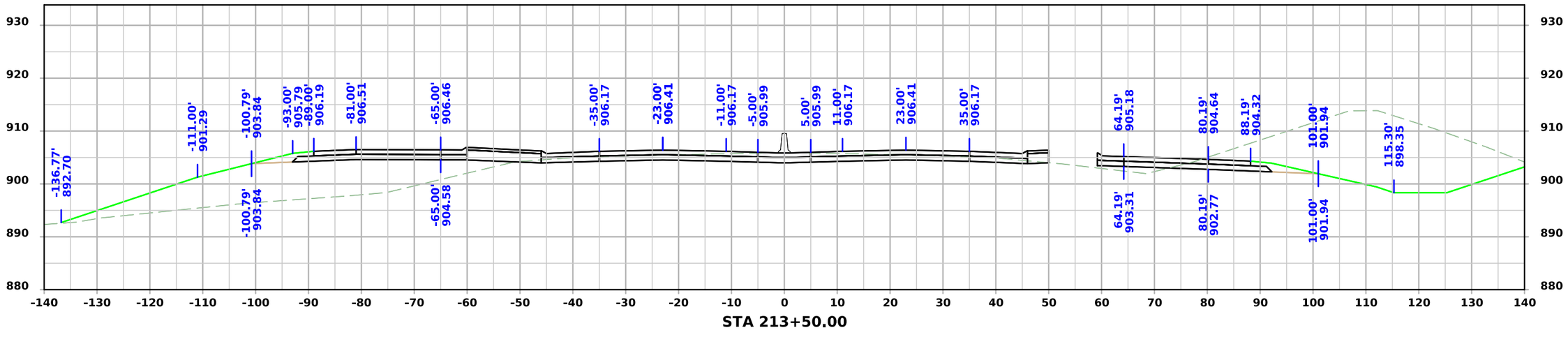
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.17 |
|---|---|---|---|---|---|

2:38:08 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 214+00.00**

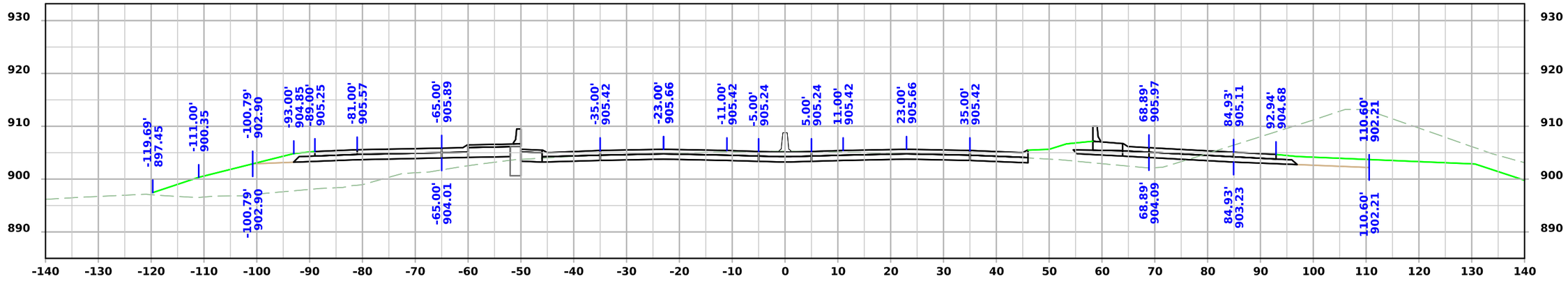



**STA 213+50.00**

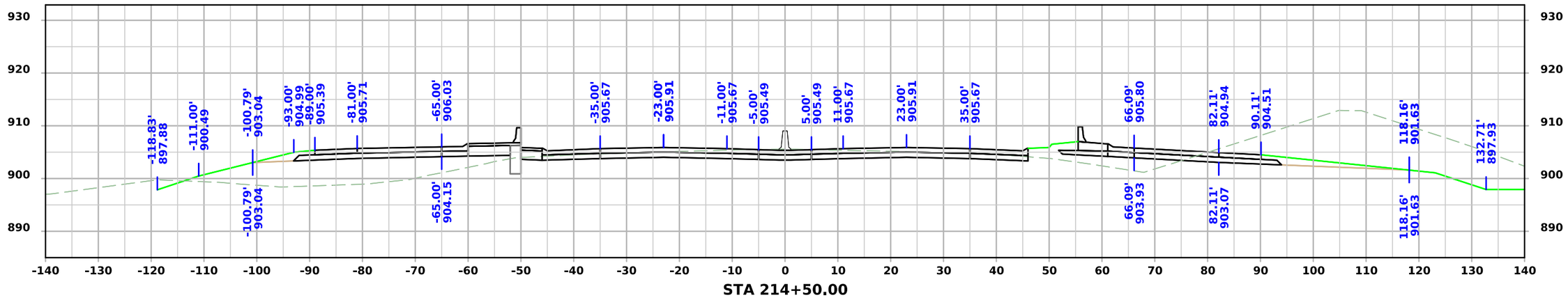
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.18 | |
|---|---|---|---|---|---|---|

2:38:10 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 215+00.00

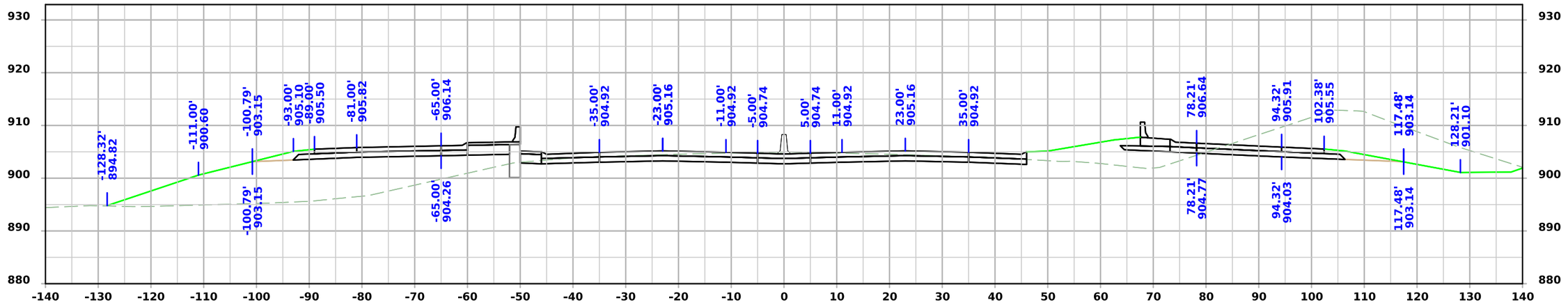



STA 214+50.00

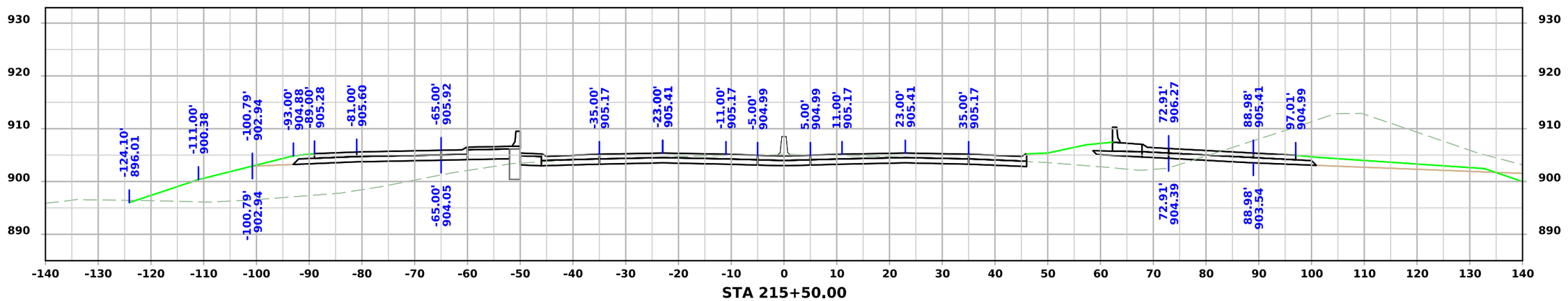
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.19 |
|---|---|---|---|---|---|

2:38:11 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 216+00.00

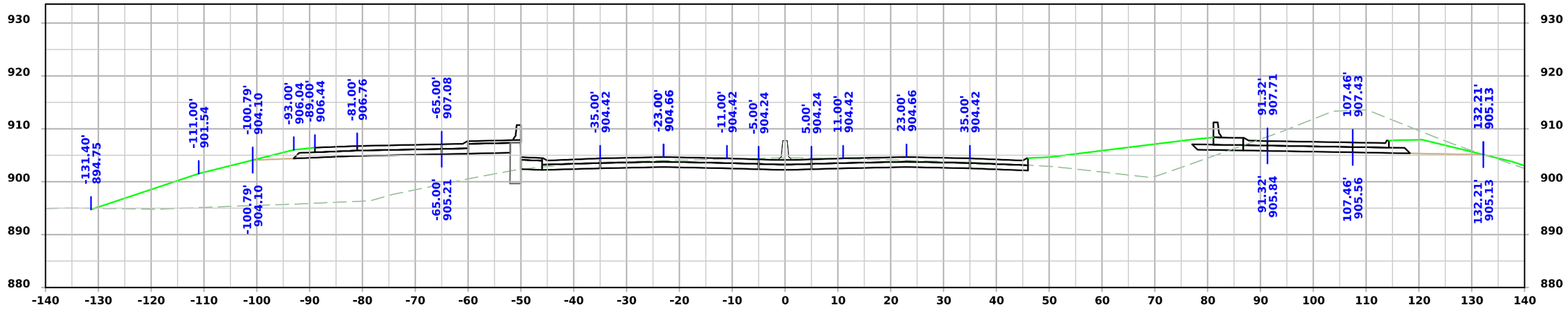



STA 215+50.00

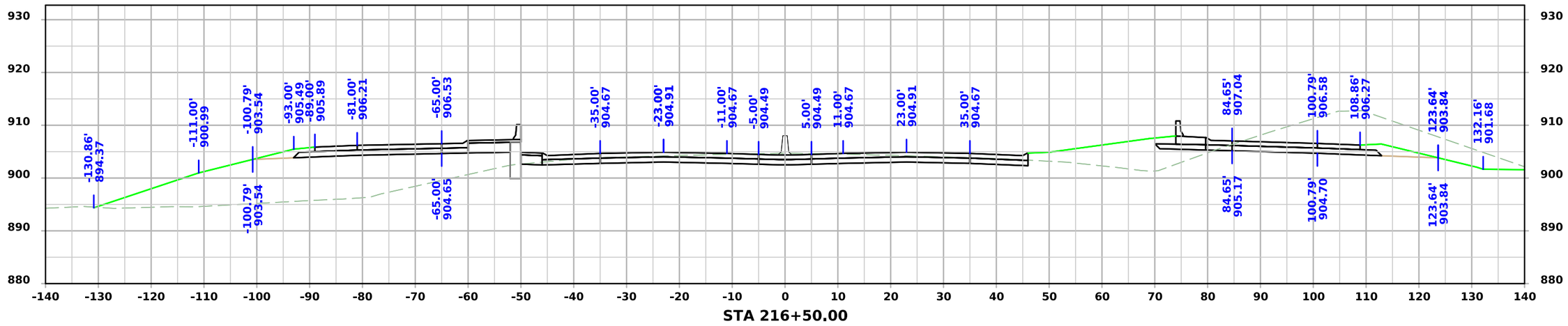
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.20 |
|---|---|---|---|---|---|

2:38:13 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 217+00.00**

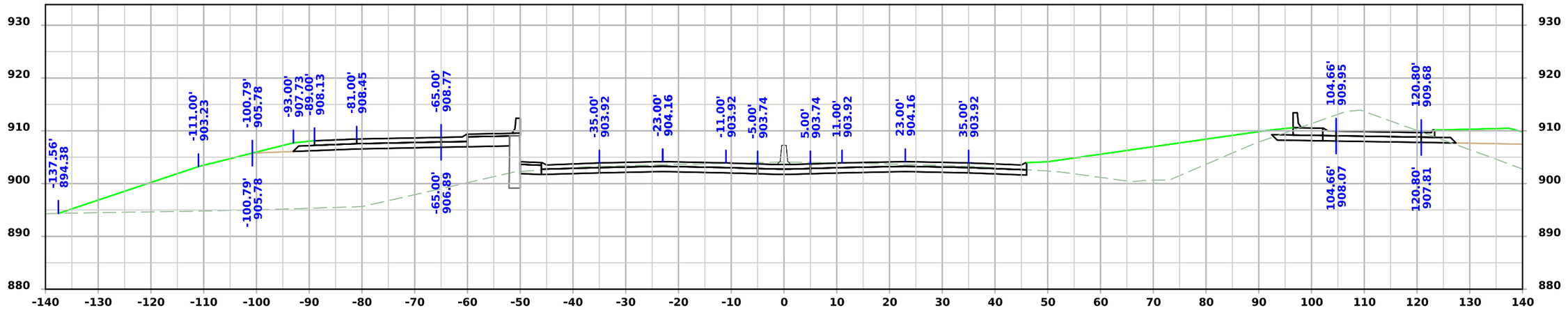



**STA 216+50.00**

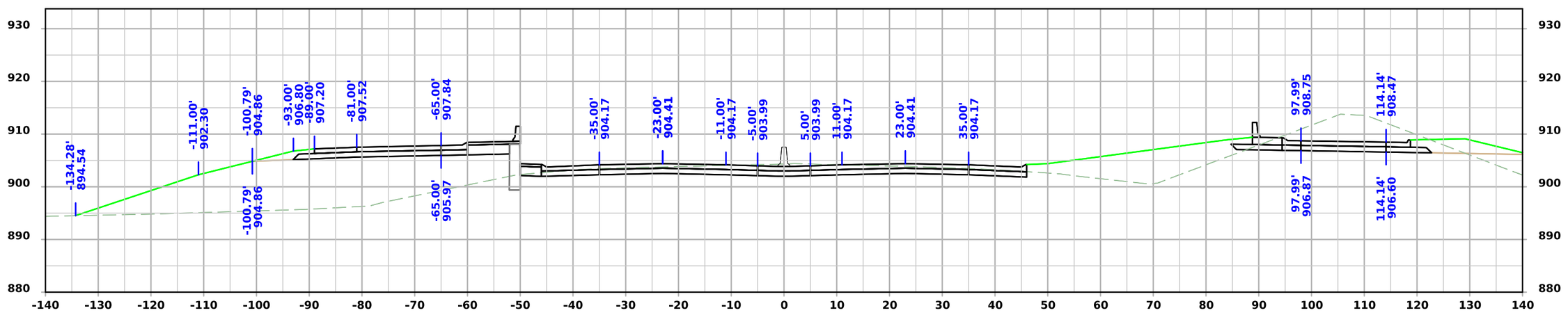
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.21 |
|---|---|---|---|---|---|

2:38:14 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 218+00.00

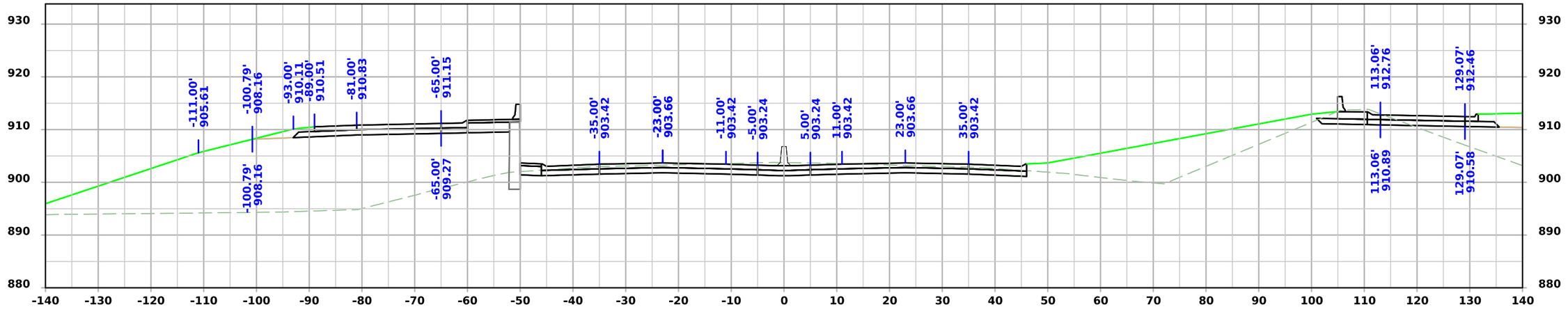



STA 217+50.00

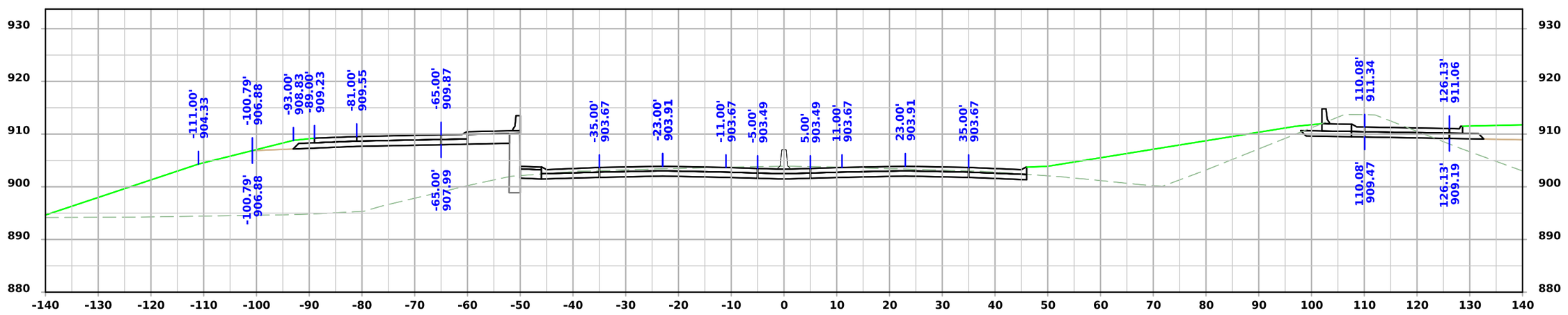
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.22 |
|---|---|---|---|---|---|

2:38:16 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 219+00.00**

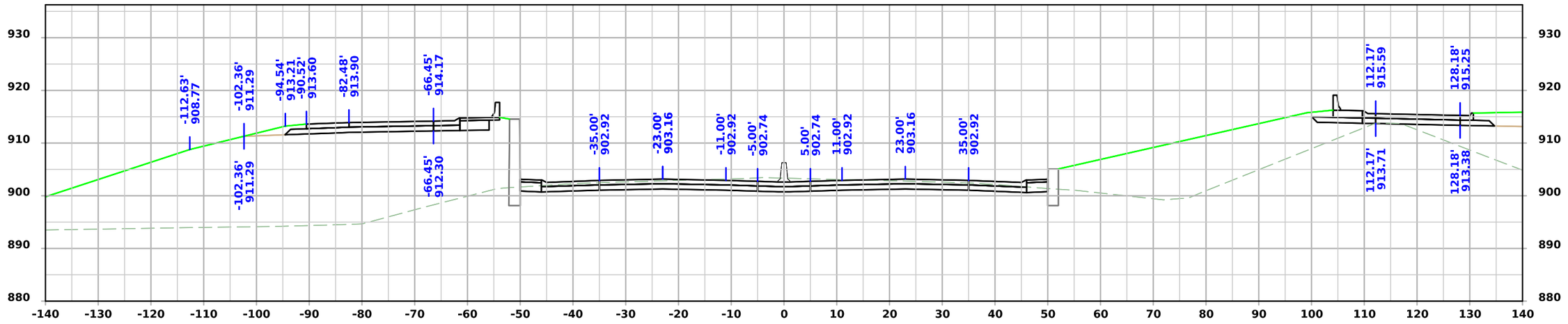



**STA 218+50.00**

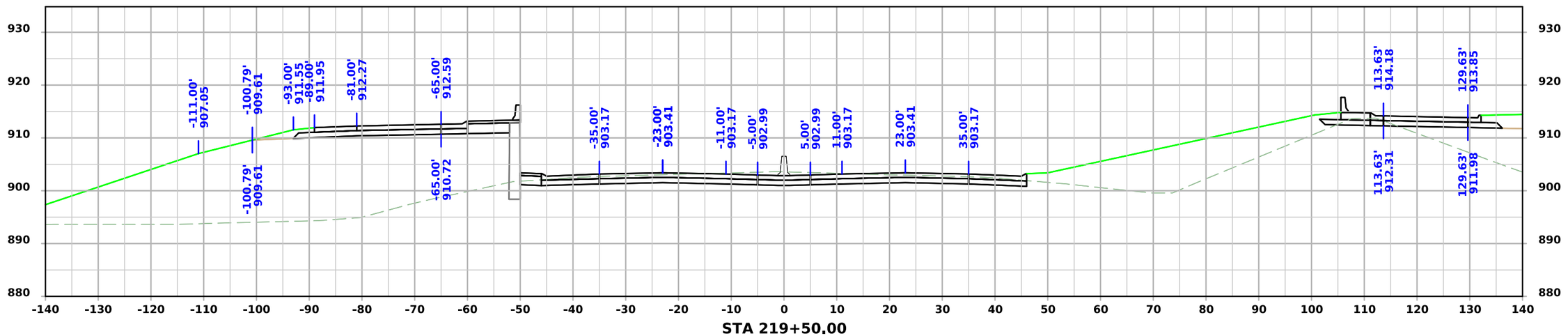
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.23 |
|---|---|---|---|---|---|

2:38:17 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 220+00.00

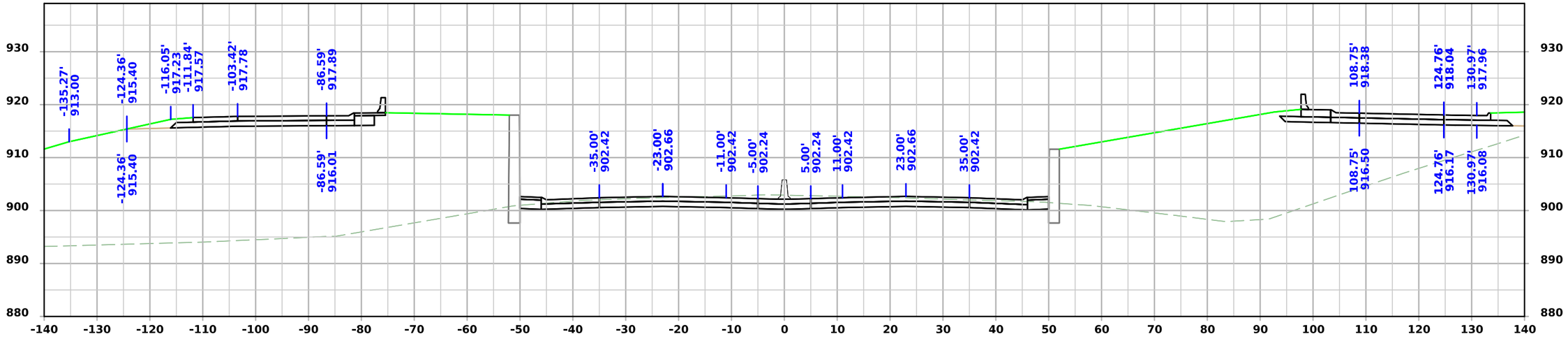



STA 219+50.00

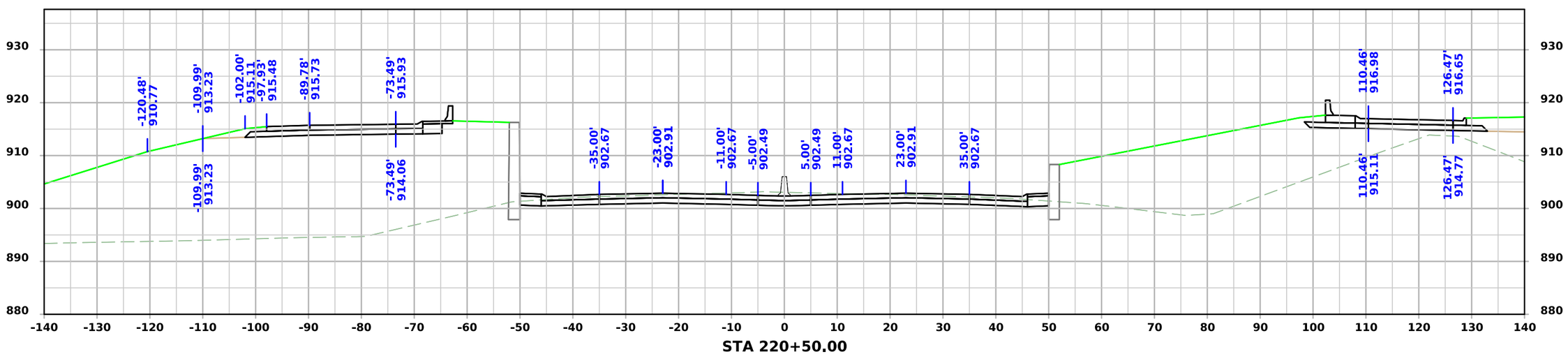
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.24 | |
|---|---|---|---|---|---|---|

2:38:19 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 221+00.00**

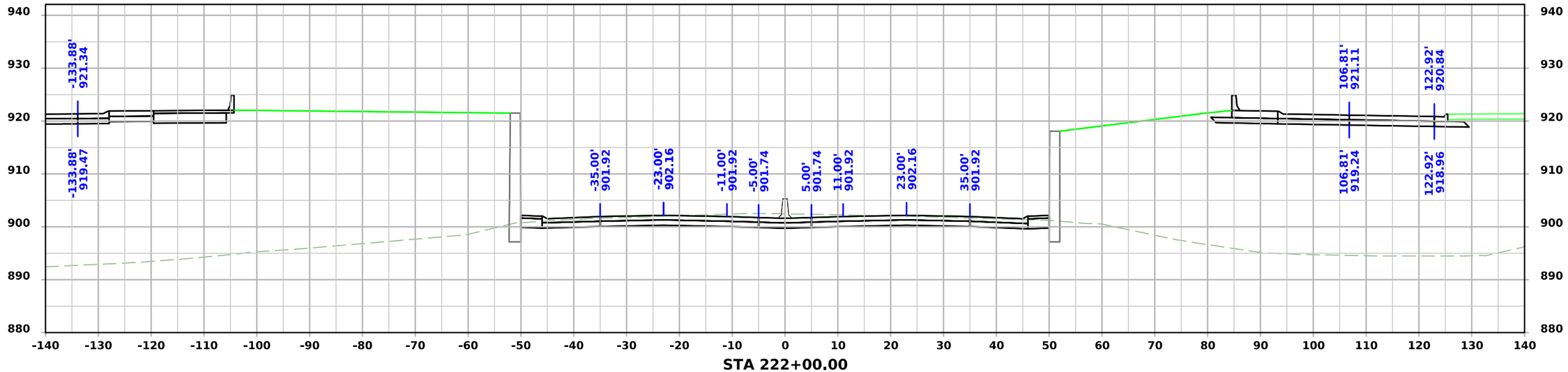



**STA 220+50.00**

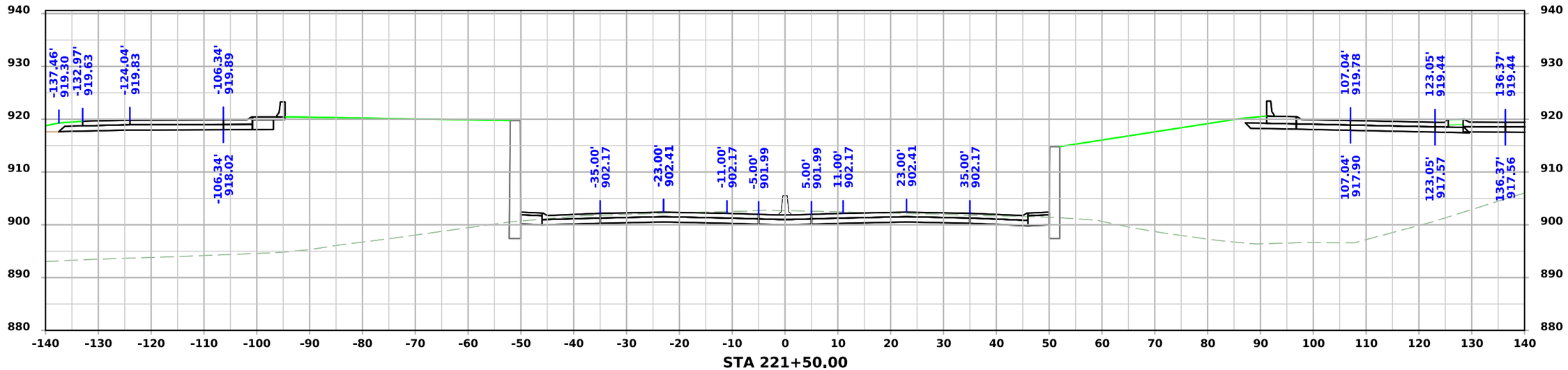
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.25 |
|---|---|---|---|---|---|

2:38:20 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 222+00.00

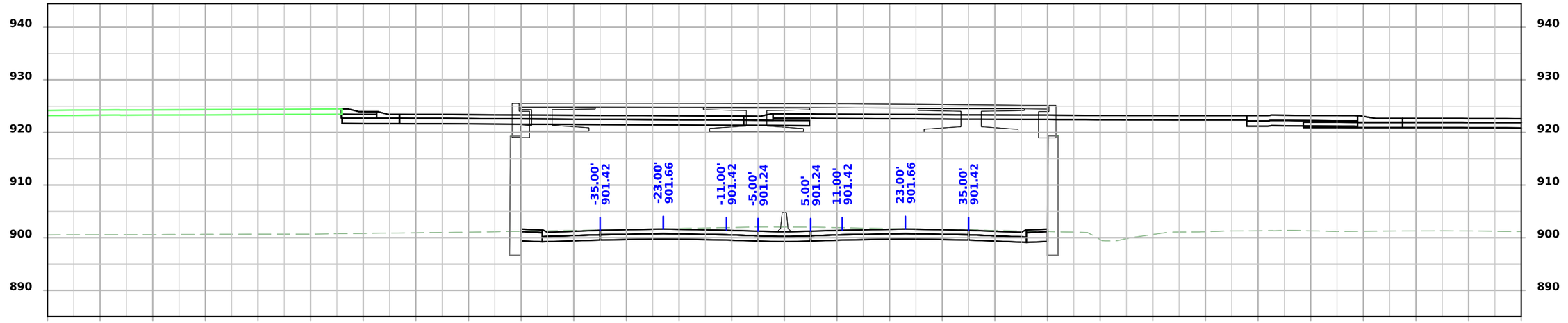



STA 221+50.00

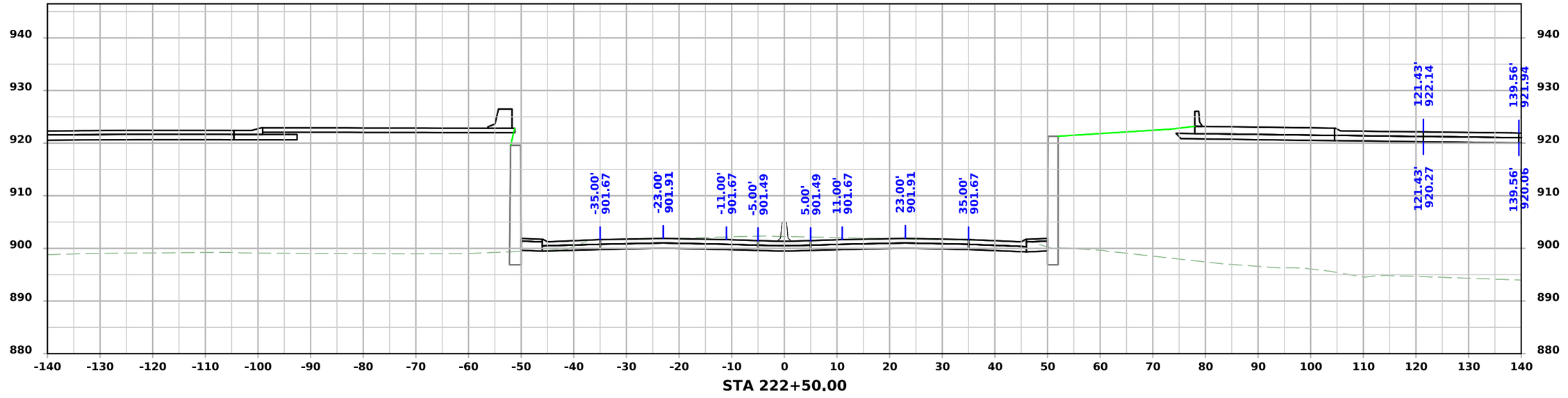
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.26 |
|---|---|---|---|---|---|

2:38:22 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 223+00.00

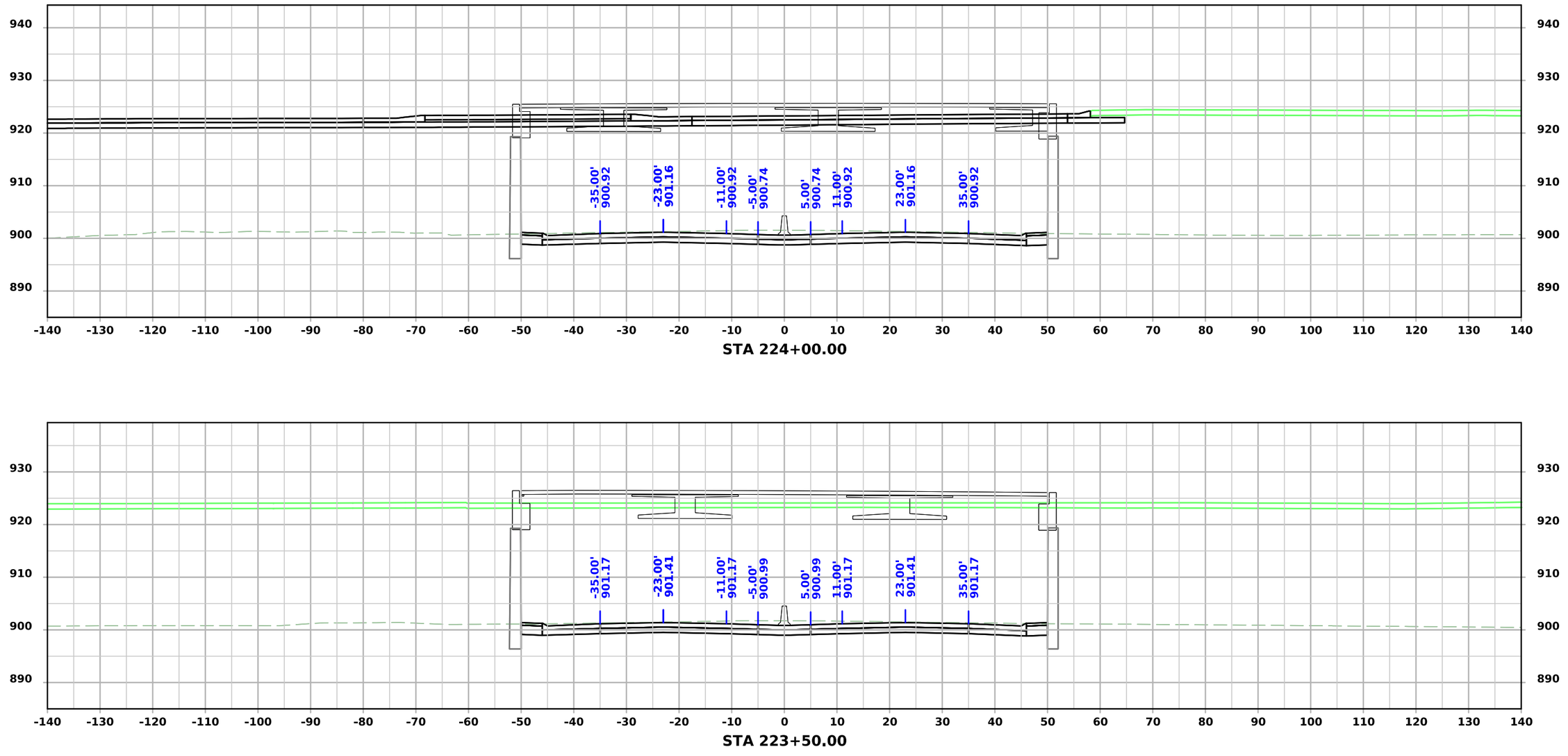



STA 222+50.00

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.27 |
|---|---|---|---|---|---|

2:38:24 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 224+00.00**

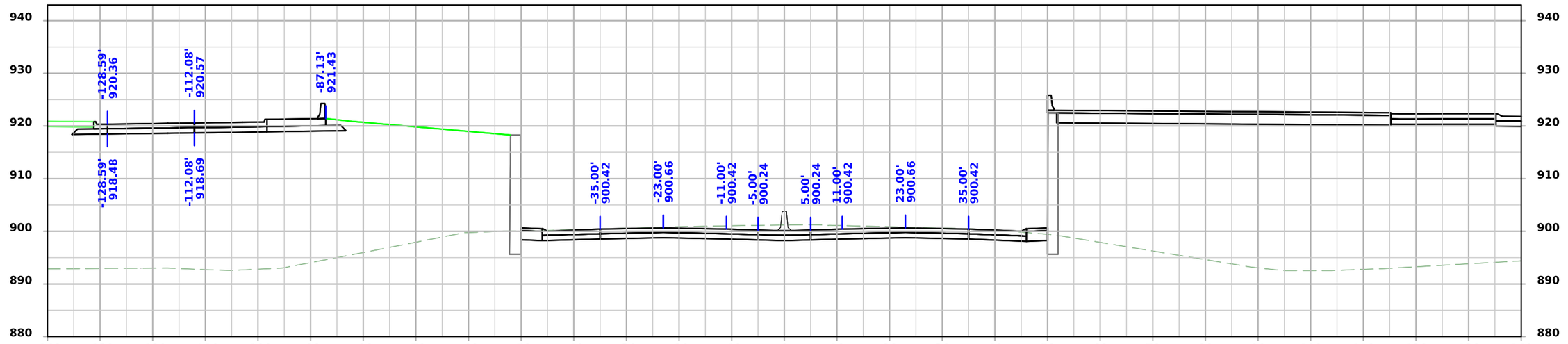



**STA 223+50.00**

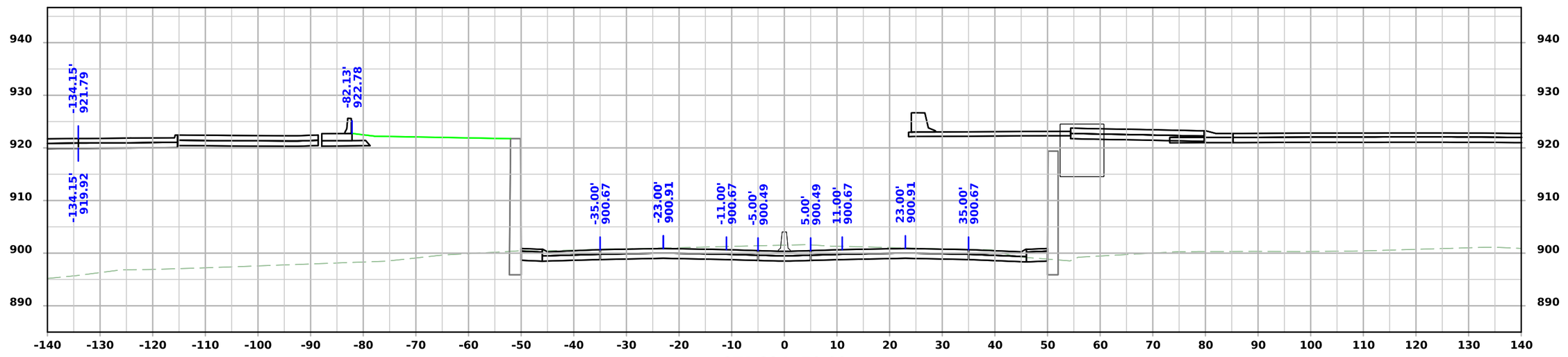
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.28 | |
|---|---|---|---|---|---|---|

2:38:26 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 225+00.00

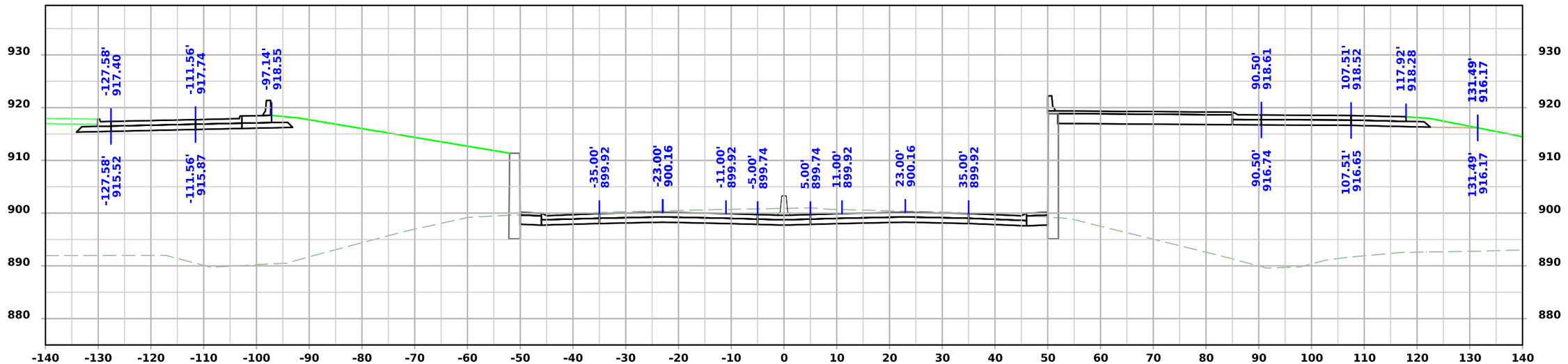



STA 224+50.00

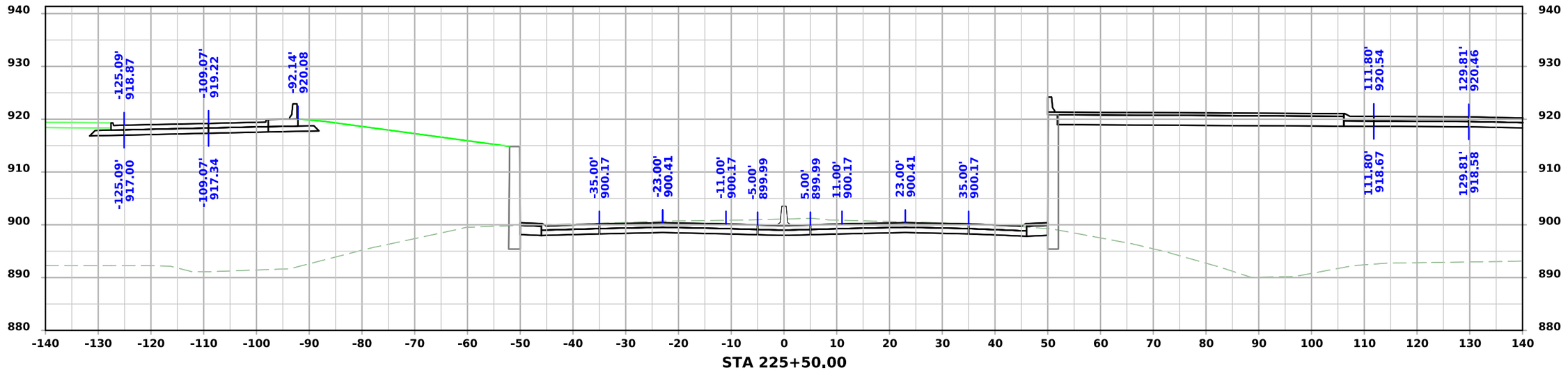
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.29 | |
|---|---|---|---|---|---|---|

2:38:28 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 226+00.00**

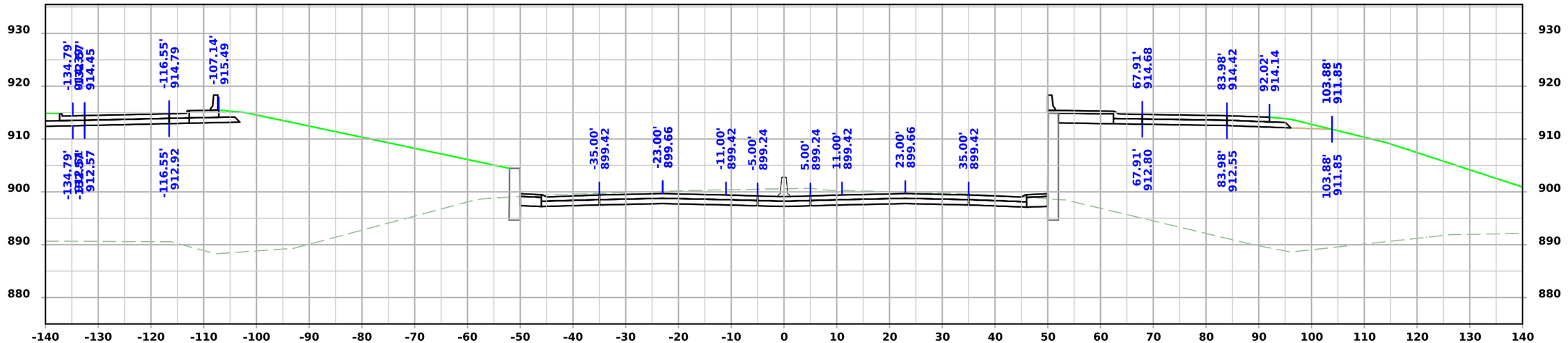



**STA 225+50.00**

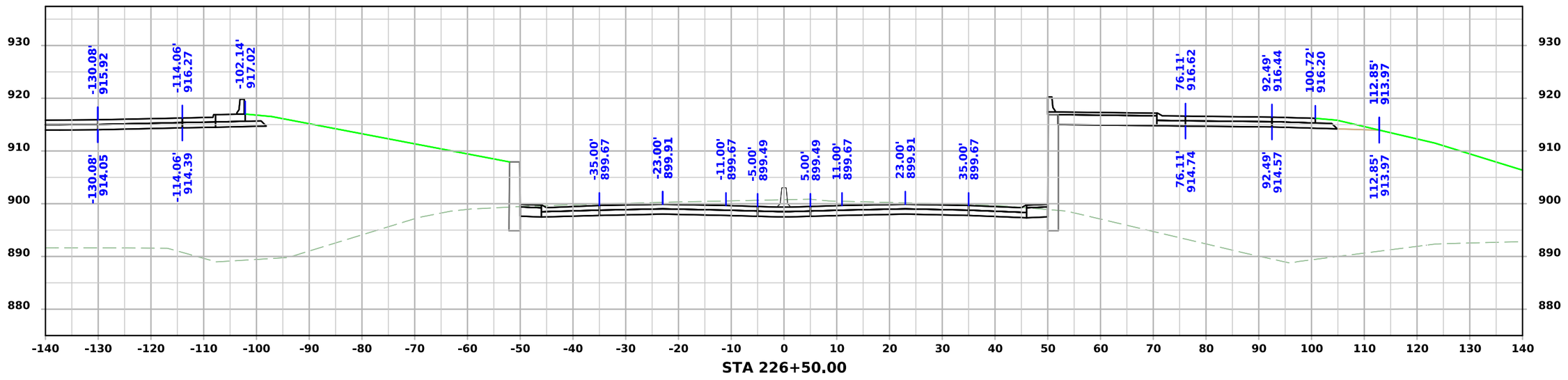
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.30 |
|---|---|---|---|---|---|

2:38:30 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 227+00.00

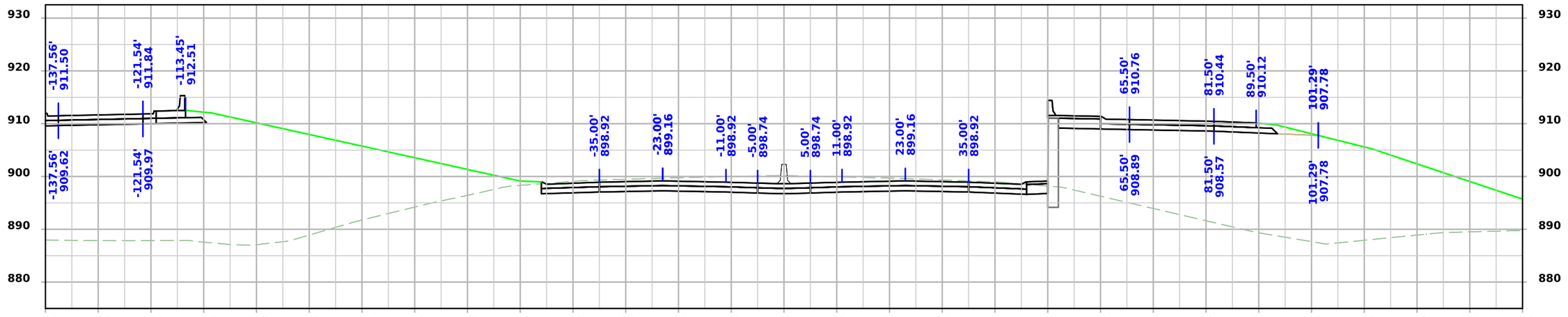



STA 226+50.00

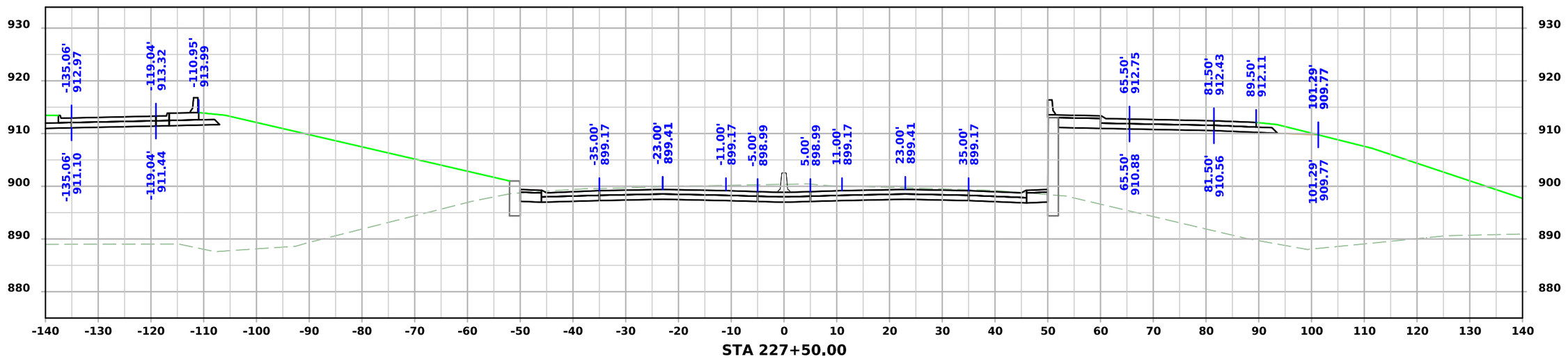
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.31 |
|---|---|---|---|---|---|

2:38:31 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 228+00.00**

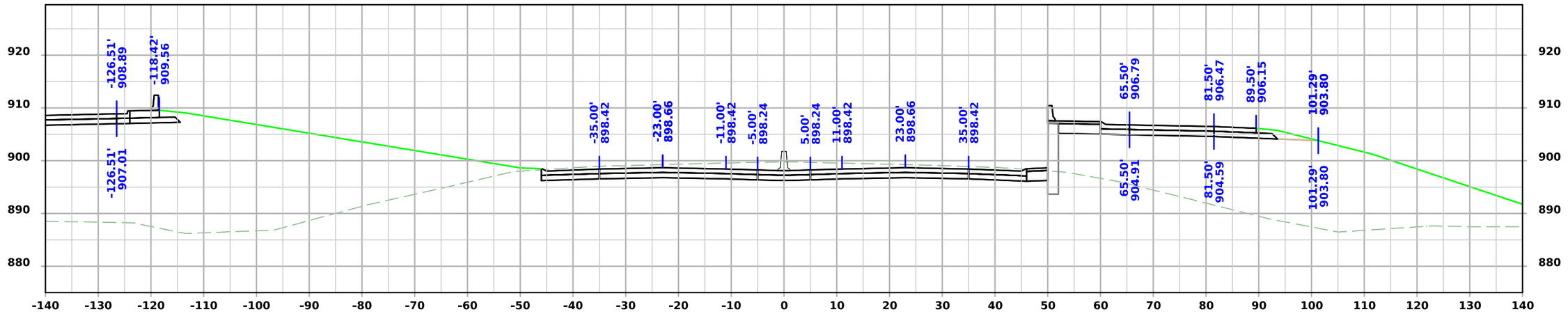



**STA 227+50.00**

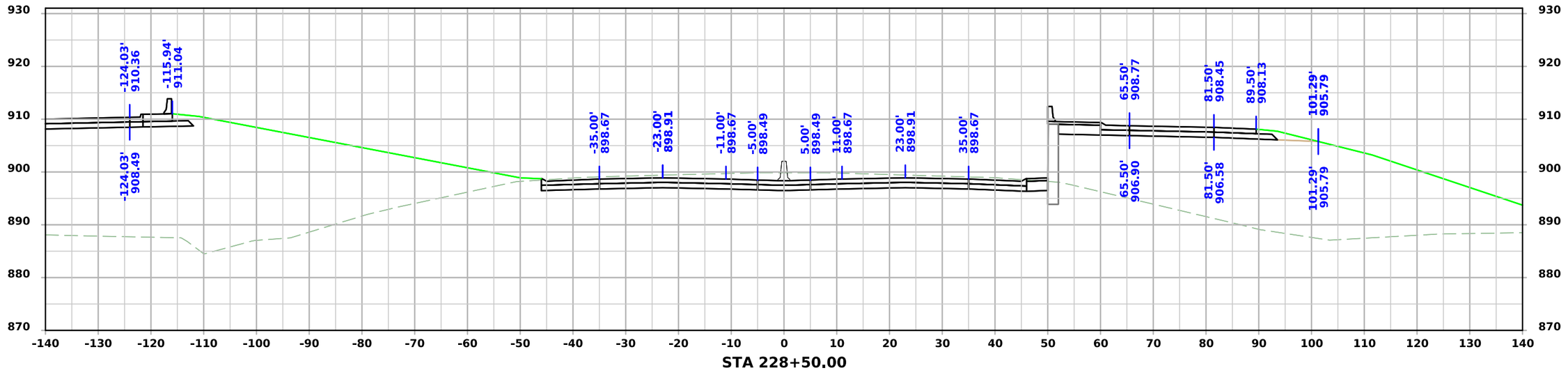
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.32 |
|---|---|---|---|---|---|

2:38:33 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 229+00.00

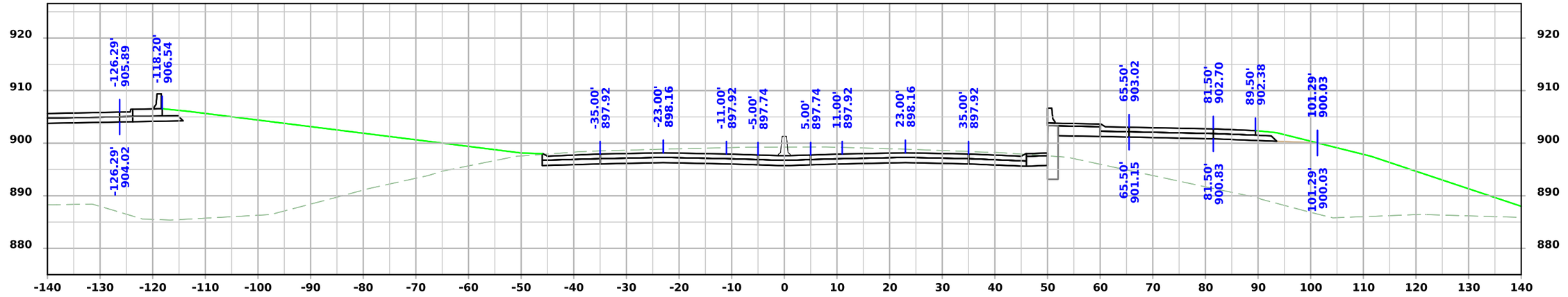



STA 228+50.00

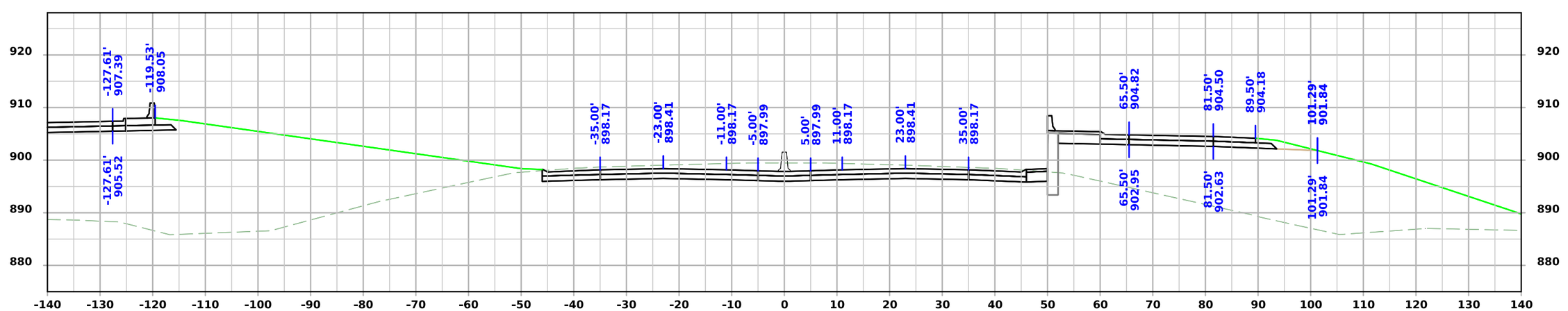
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.33 | |
|---|---|---|---|---|---|---|

2:38:34 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 230+00.00

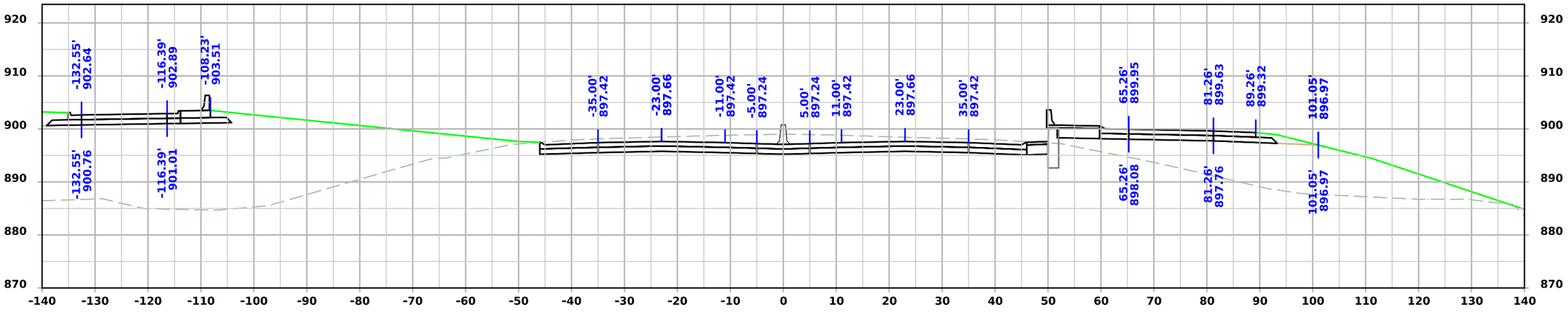



STA 229+50.00

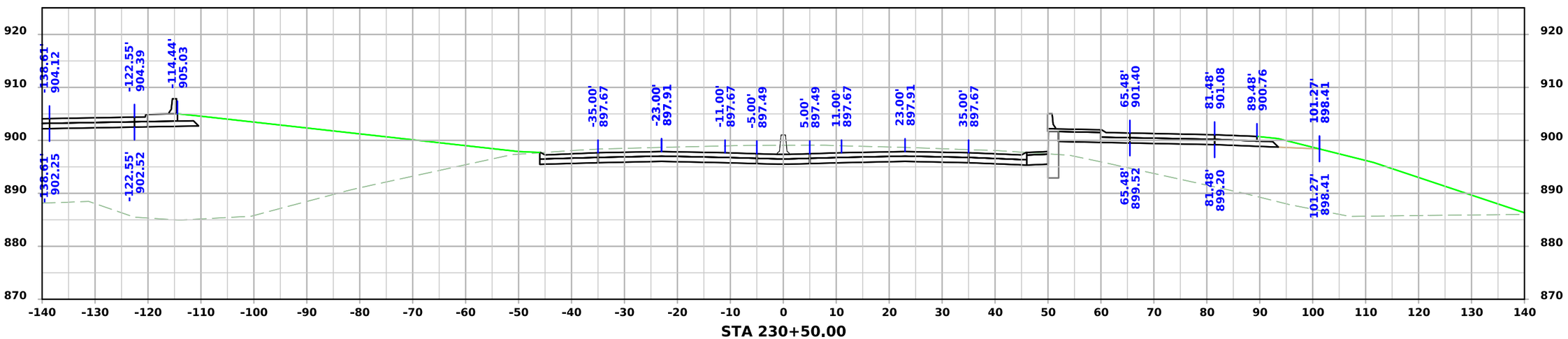
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.34 |
|---|---|---|---|---|---|

2:38:36 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 231+00.00**

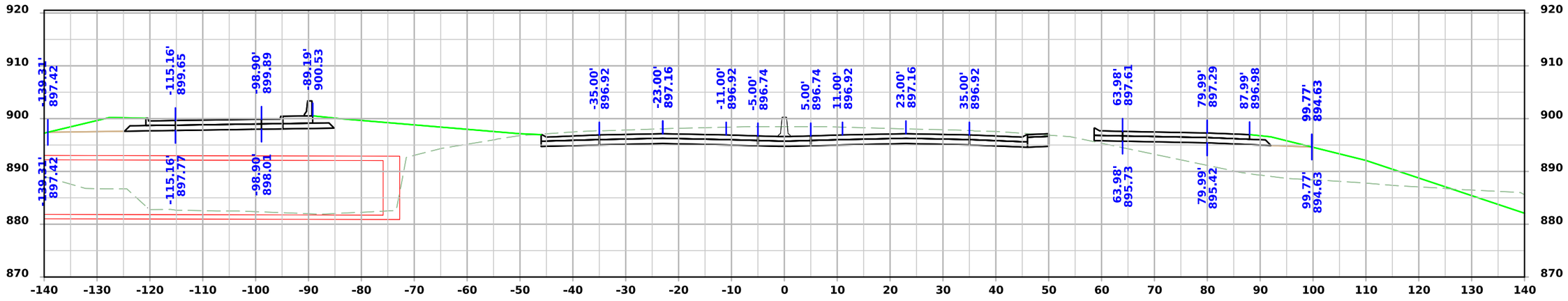



**STA 230+50.00**

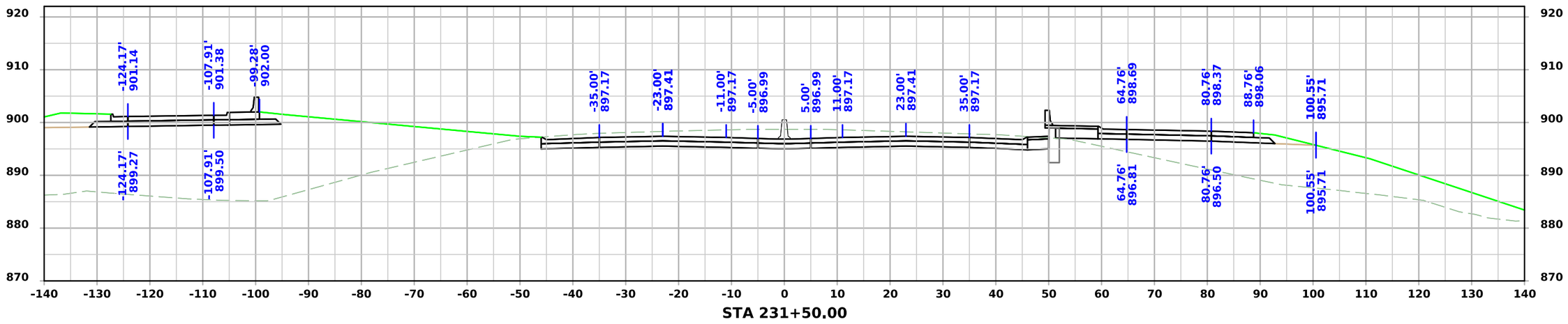
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.35 |
|---|---|---|---|---|---|

2:38:37 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 232+00.00

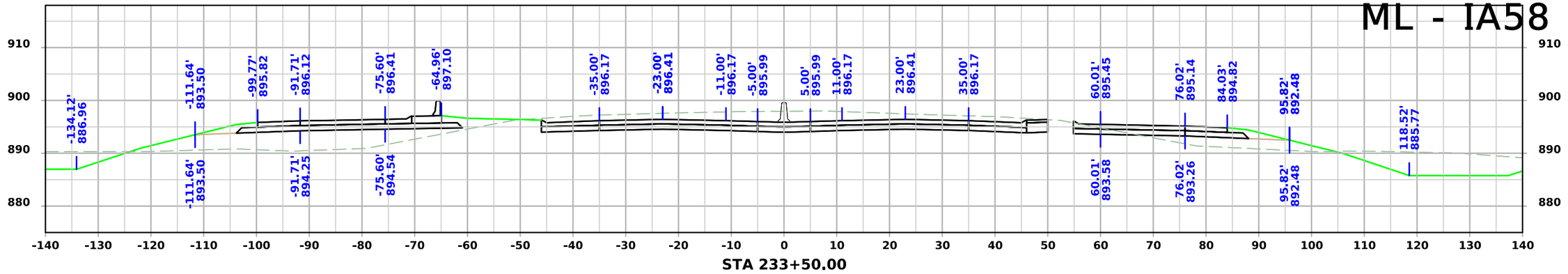



STA 231+50.00

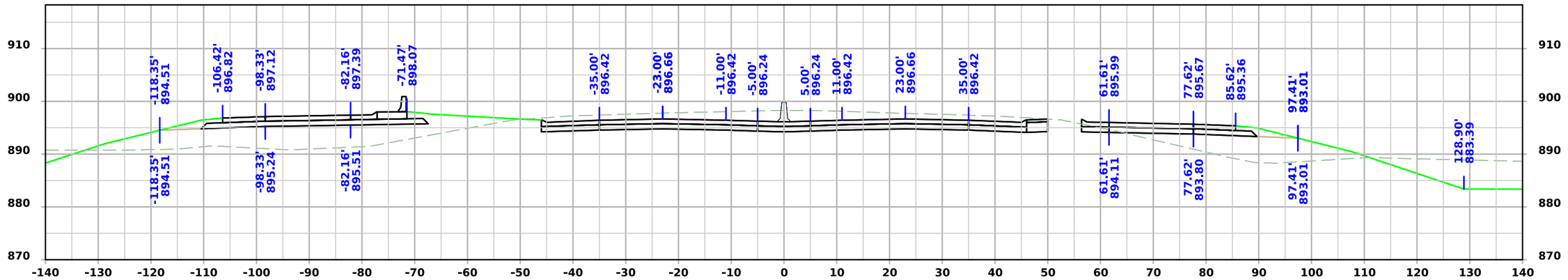
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.36 | |
|---|---|---|---|---|---|---|

2:38:39 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

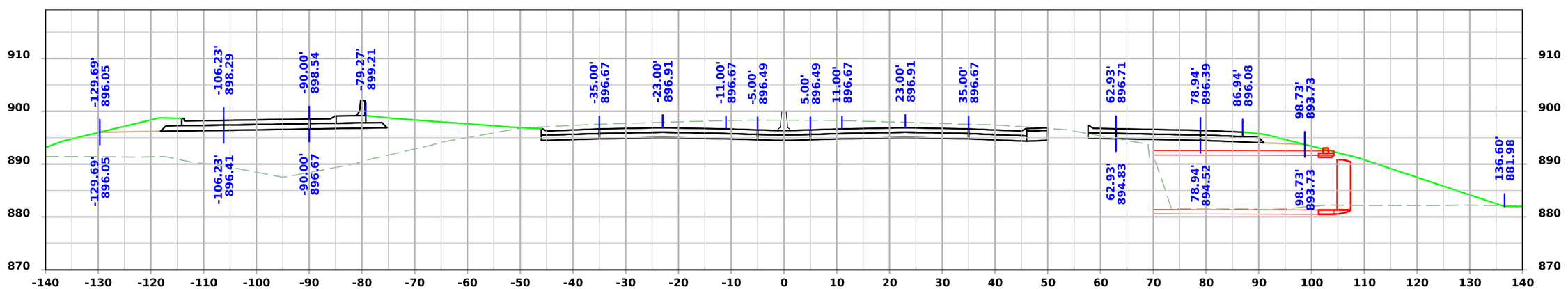
# ML - IA58




STA 233+50.00




STA 233+00.00




STA 232+50.00

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.37 | |
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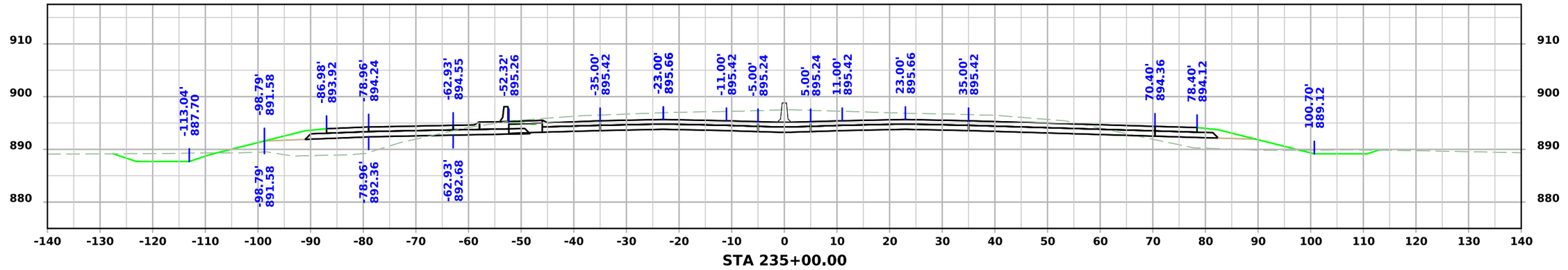
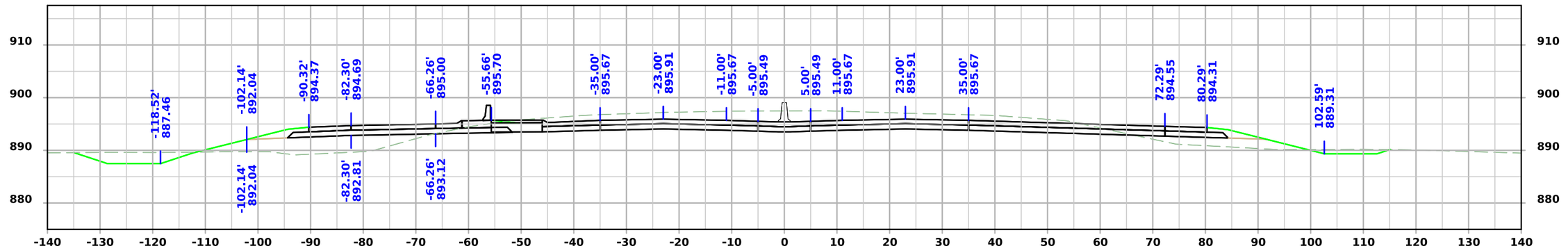
2:38:41 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

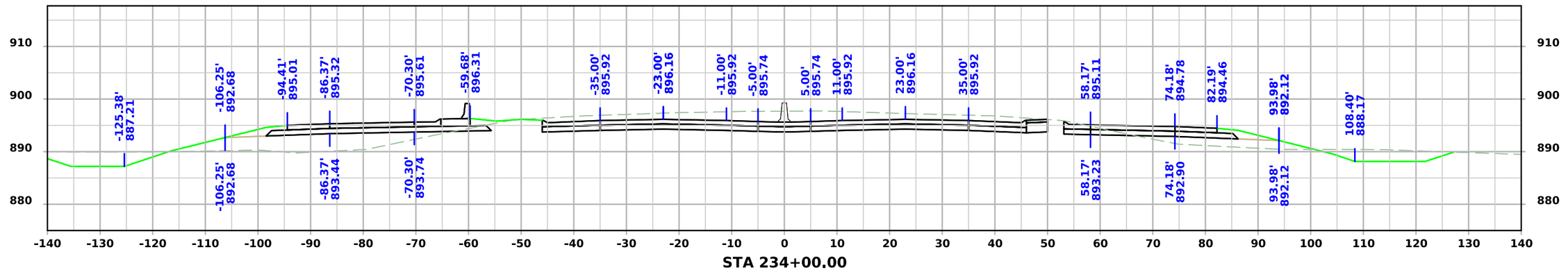
# ML - IA58




**STA 235+00.00**




**STA 234+50.00**




**STA 234+00.00**

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.38 |
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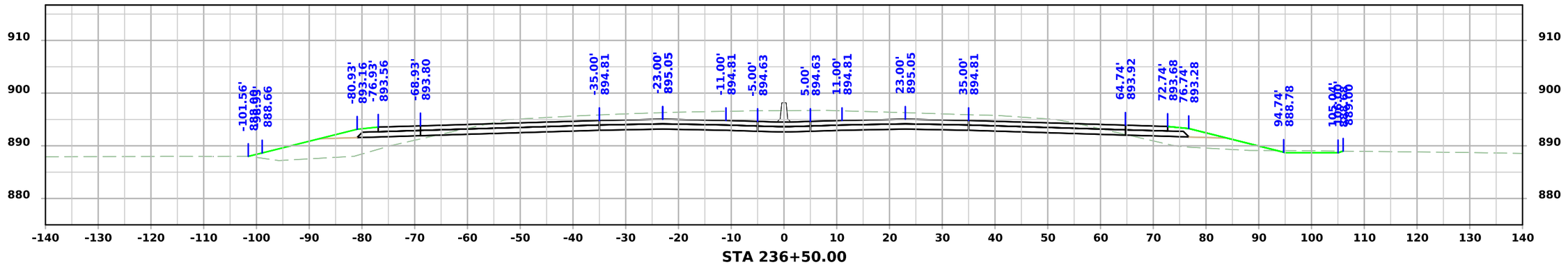
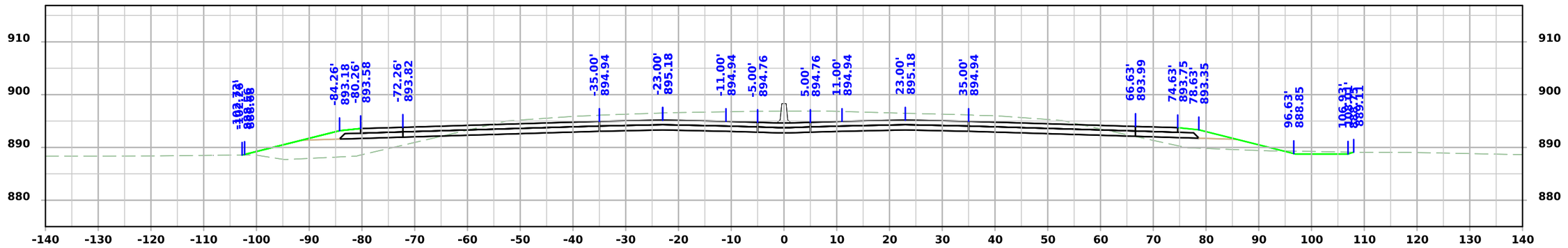
2:38:42 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

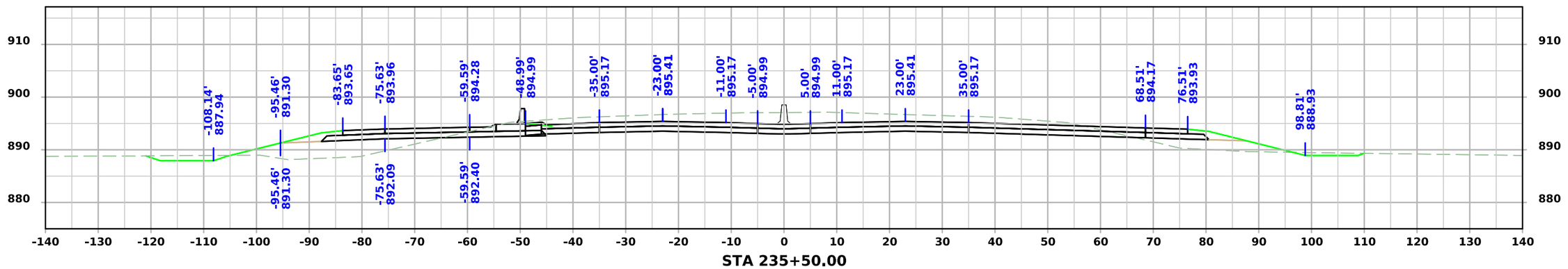
# ML - IA58




STA 236+50.00




STA 236+00.00




STA 235+50.00

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.39 | |
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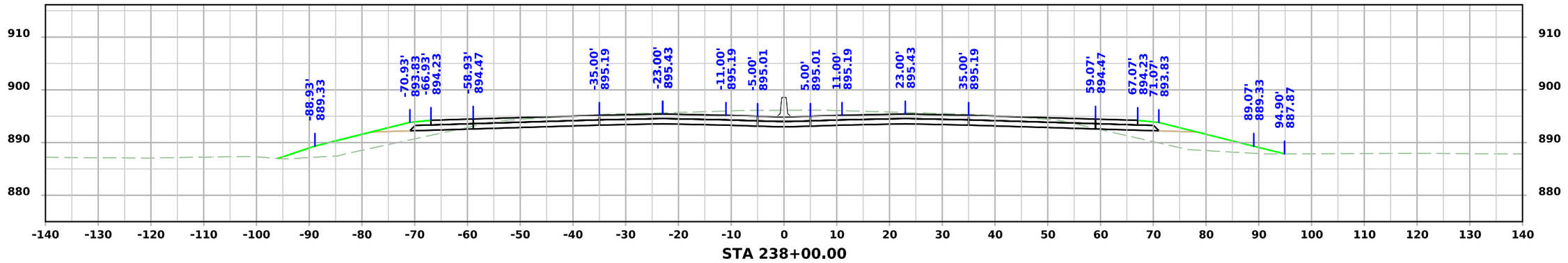
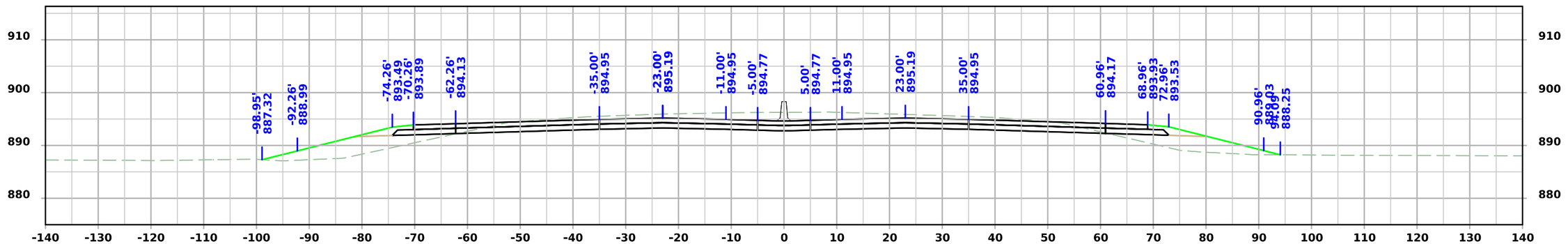
2:38:44 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

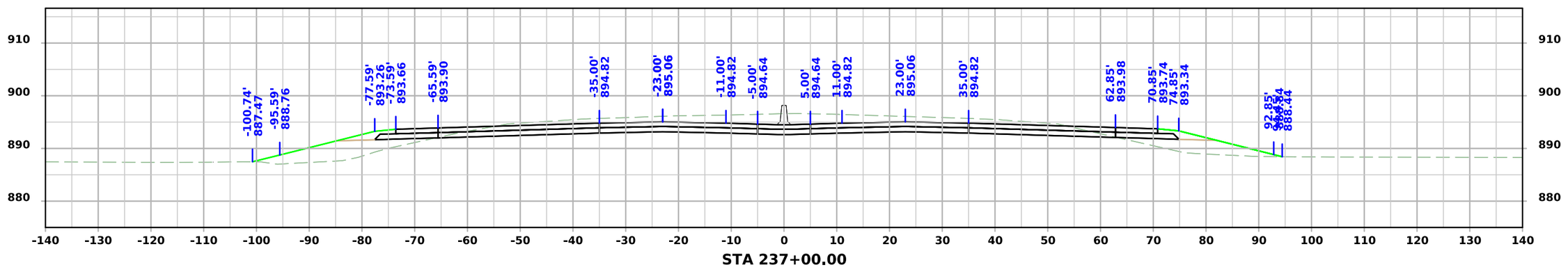
# ML - IA58




**STA 238+00.00**




**STA 237+50.00**

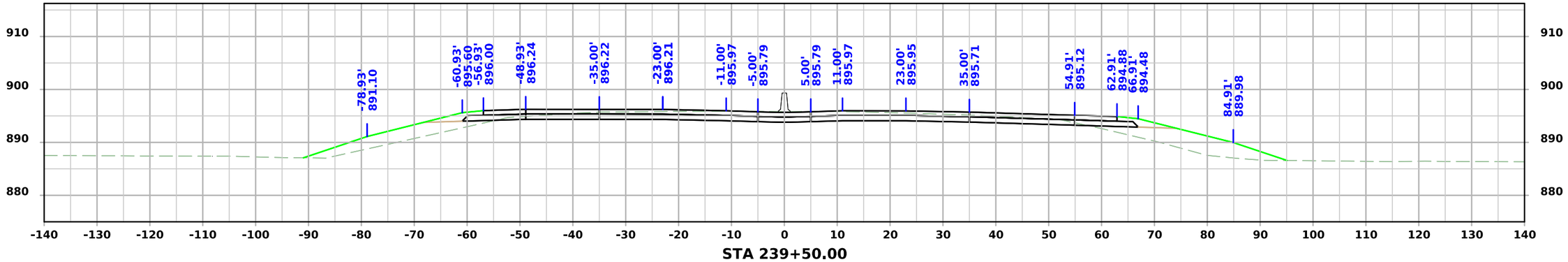



**STA 237+00.00**

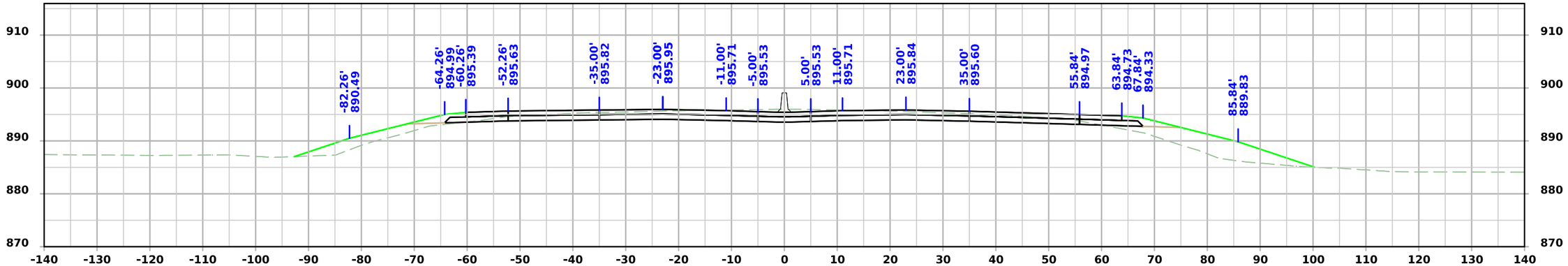
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.40 |
|---|---|---|---|---|---|

2:38:46 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

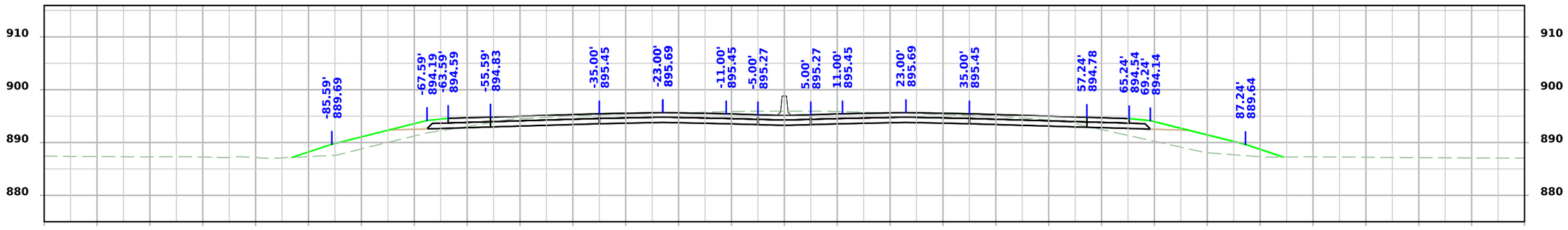
# ML - IA58




**STA 239+50.00**




**STA 239+00.00**

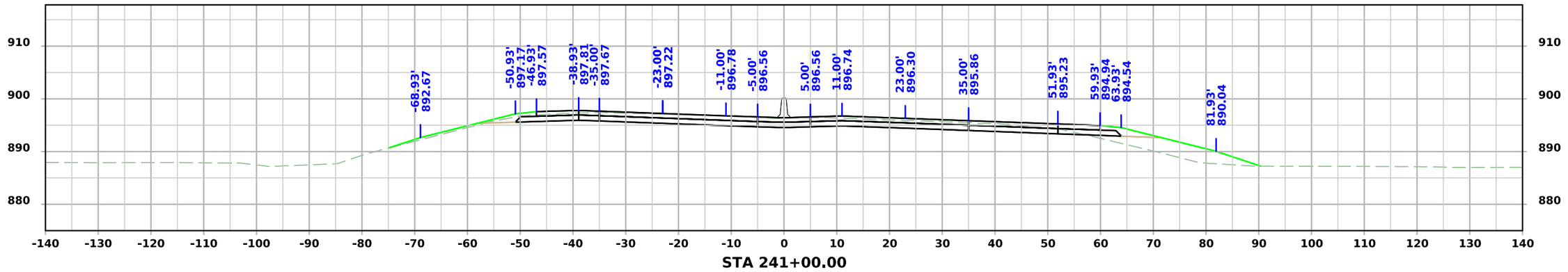



**STA 238+50.00**

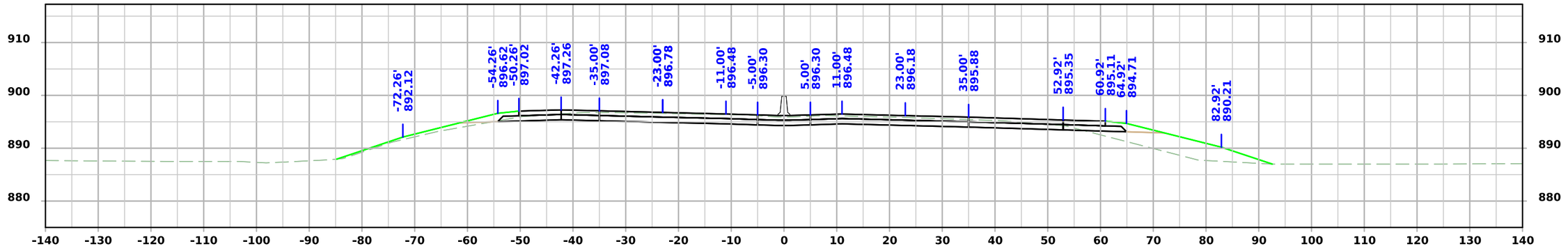
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.41 |
|---|---|---|---|---|---|

2:38:48 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

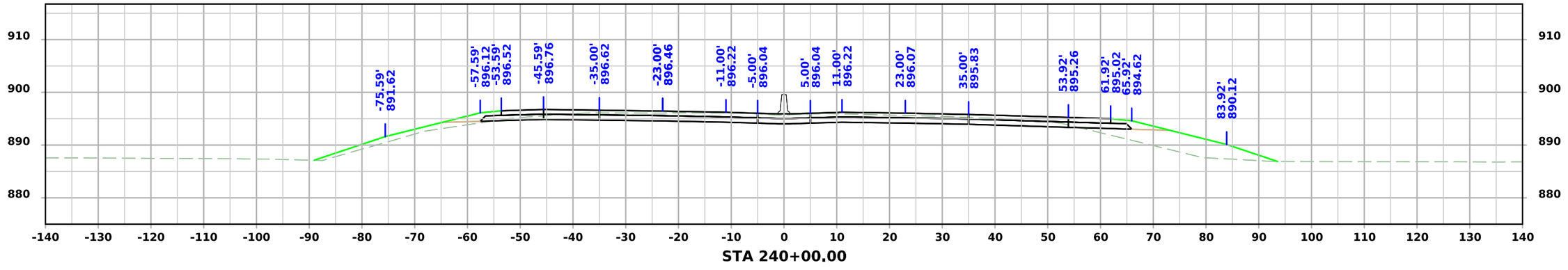
# ML - IA58




**STA 241+00.00**




**STA 240+50.00**

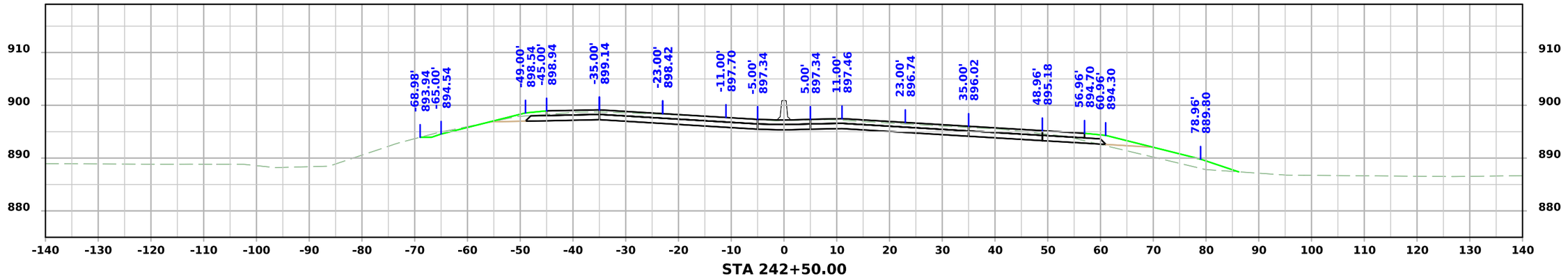



**STA 240+00.00**

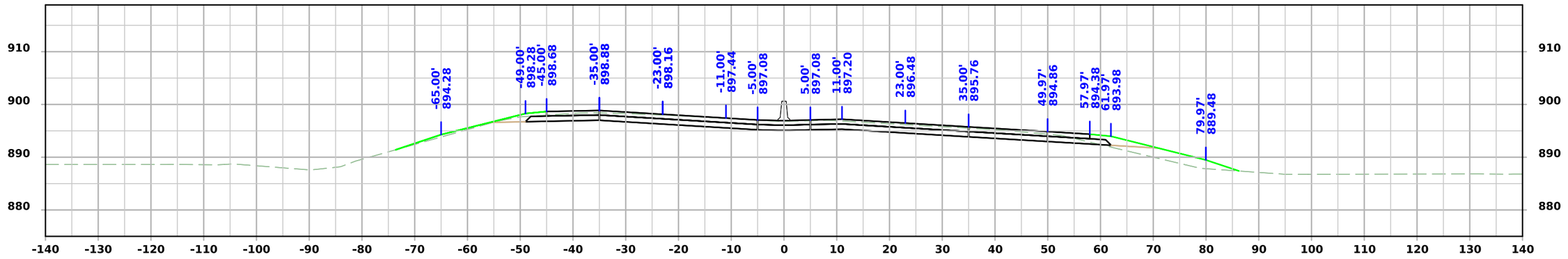
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.42 |
|---|---|---|---|---|---|

2:38:50 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

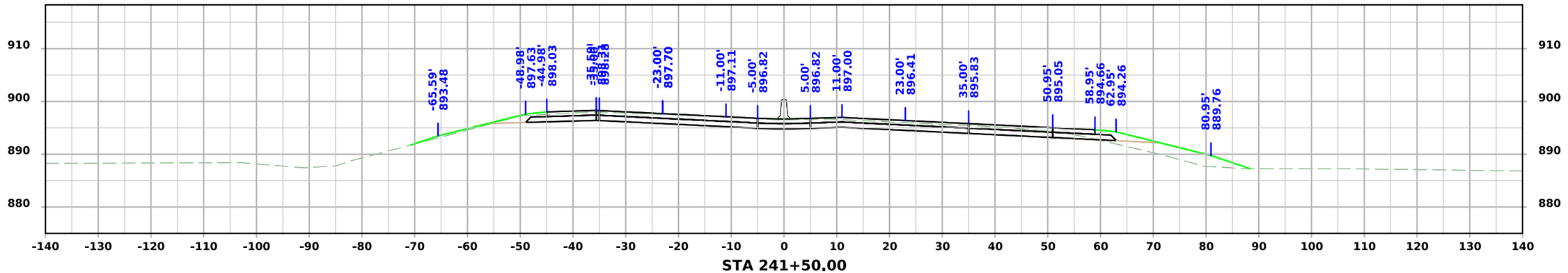
# ML - IA58




**STA 242+50.00**



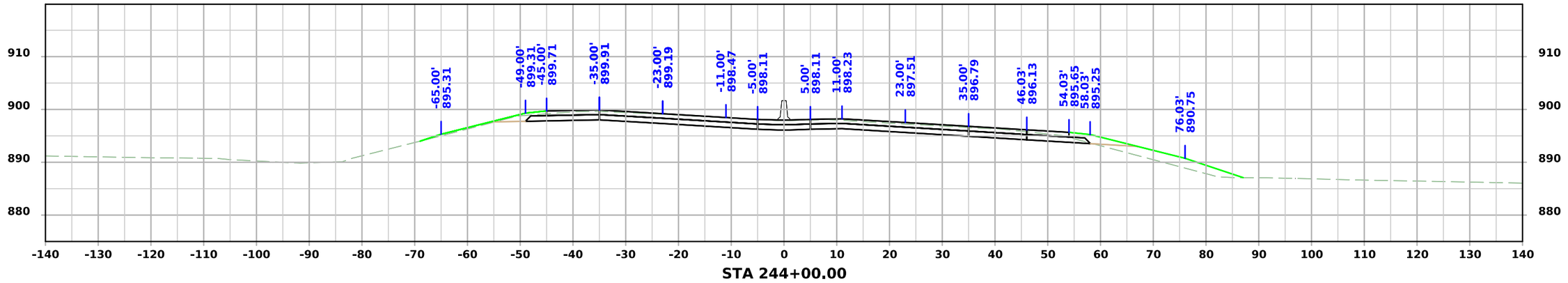

**STA 242+00.00**



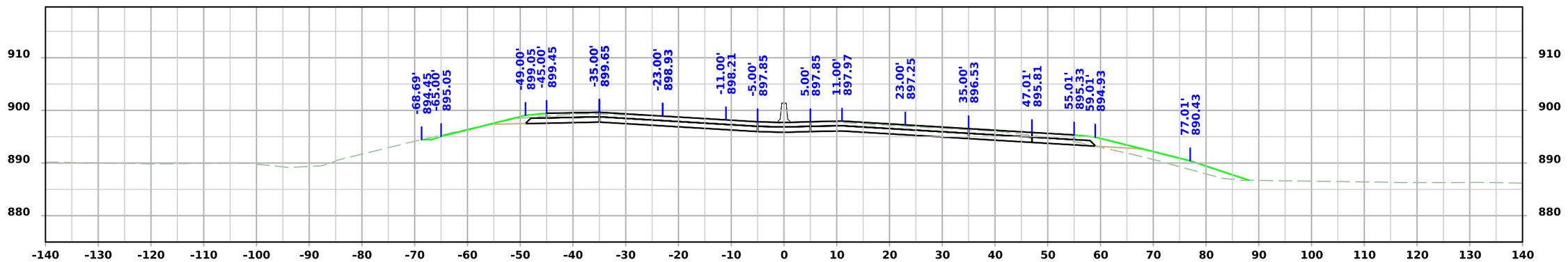

**STA 241+50.00**

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.43 | |
|---|---|---|---|---|---|---|

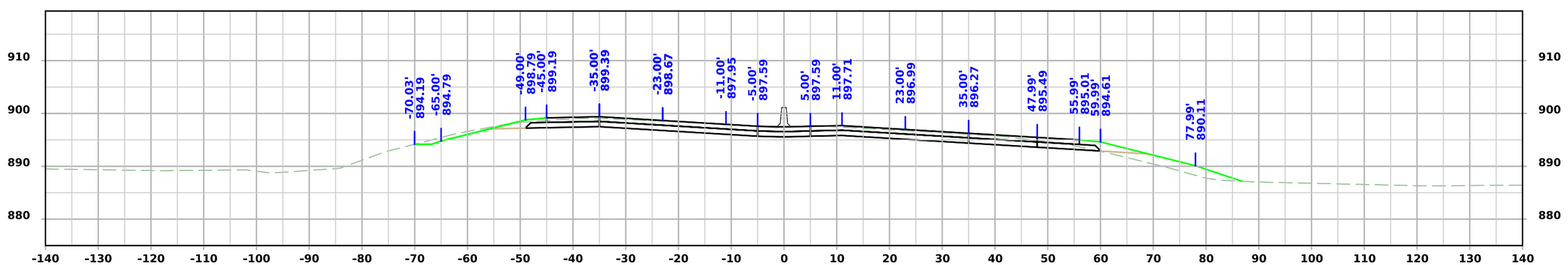
# ML - IA58




STA 244+00.00




STA 243+50.00

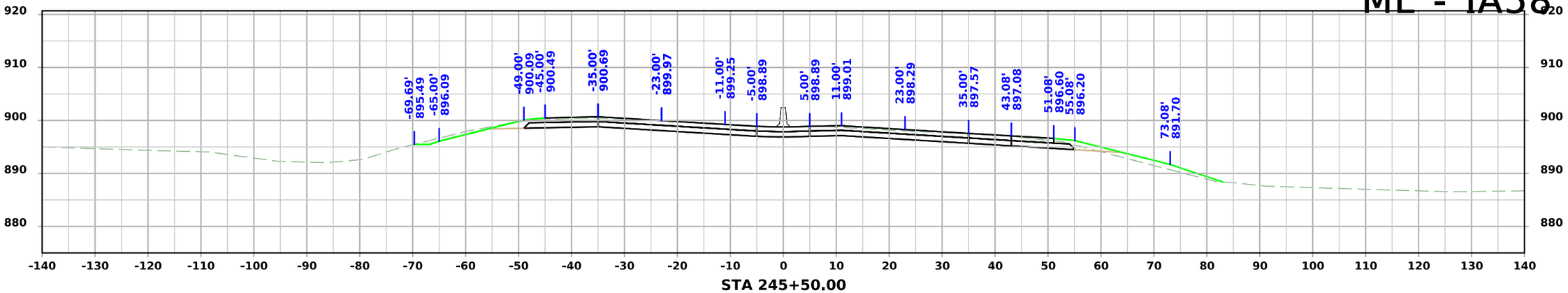



STA 243+00.00

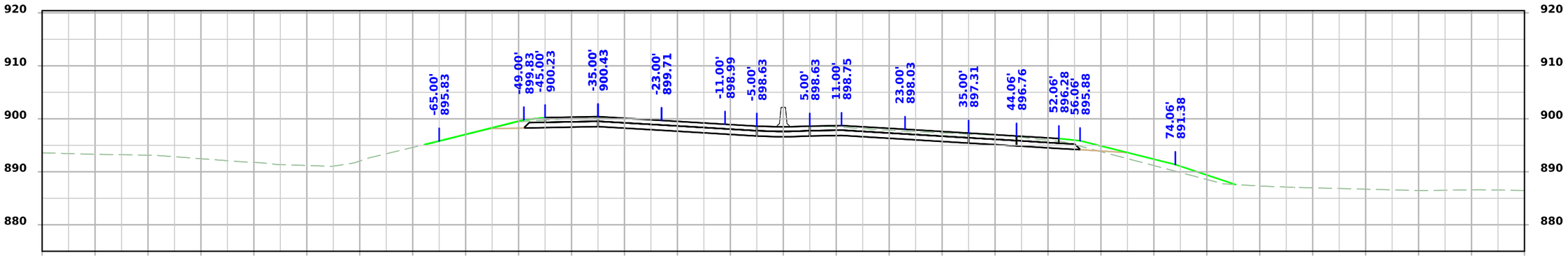
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.44 |
|---|---|---|---|---|---|

2:38:53 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

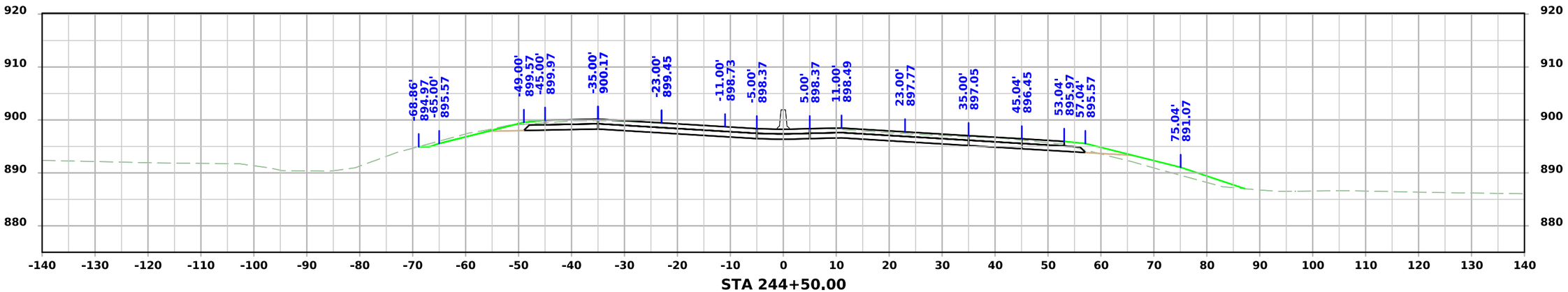
# ML - IA58




STA 245+50.00




STA 245+00.00

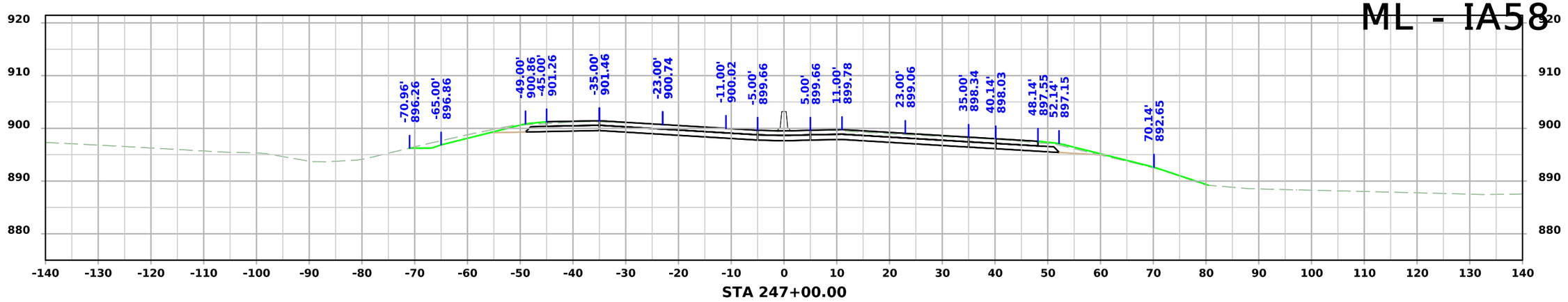



STA 244+50.00

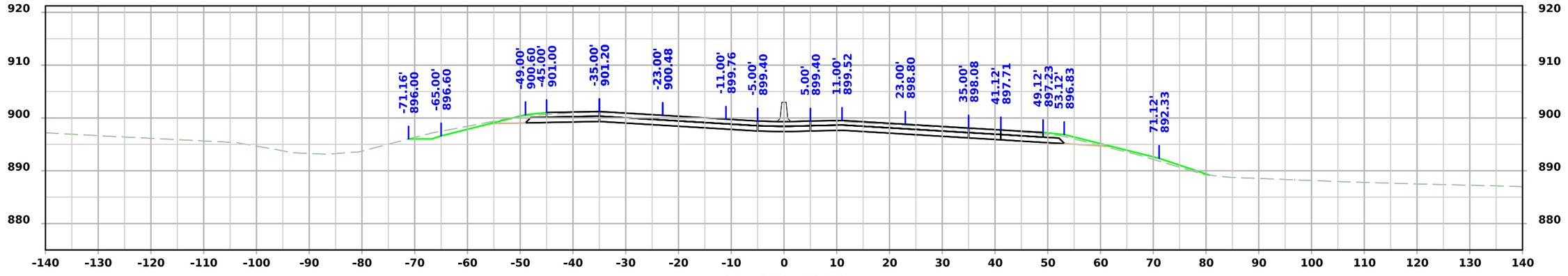
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.45 |
|---|---|---|---|---|---|

2:38:55 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

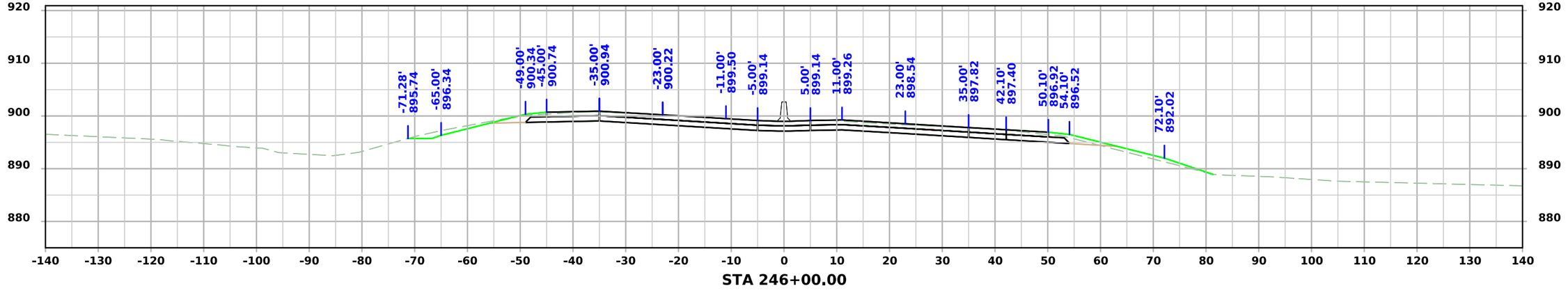
# ML - IA58




STA 247+00.00




STA 246+50.00

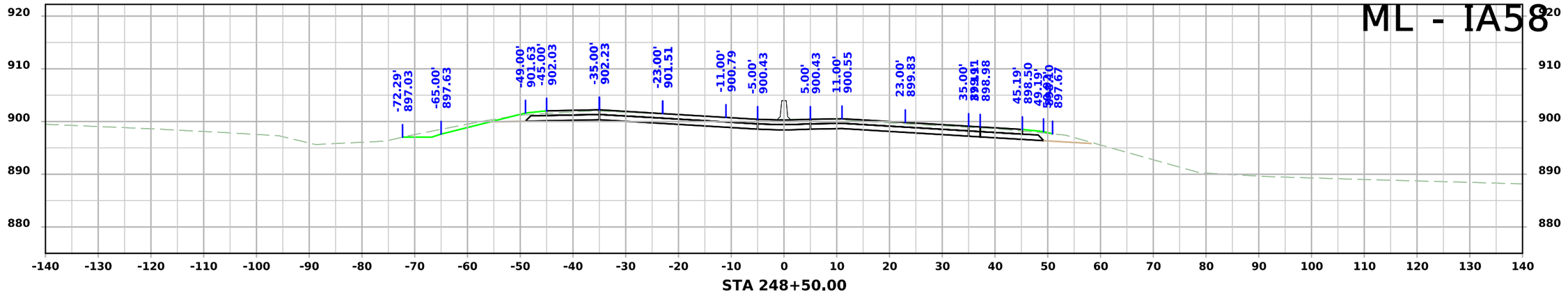


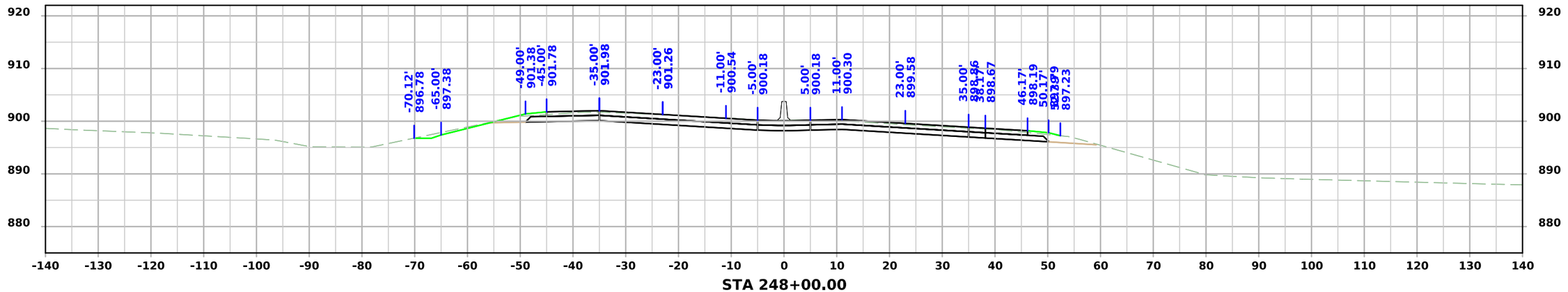

STA 246+00.00

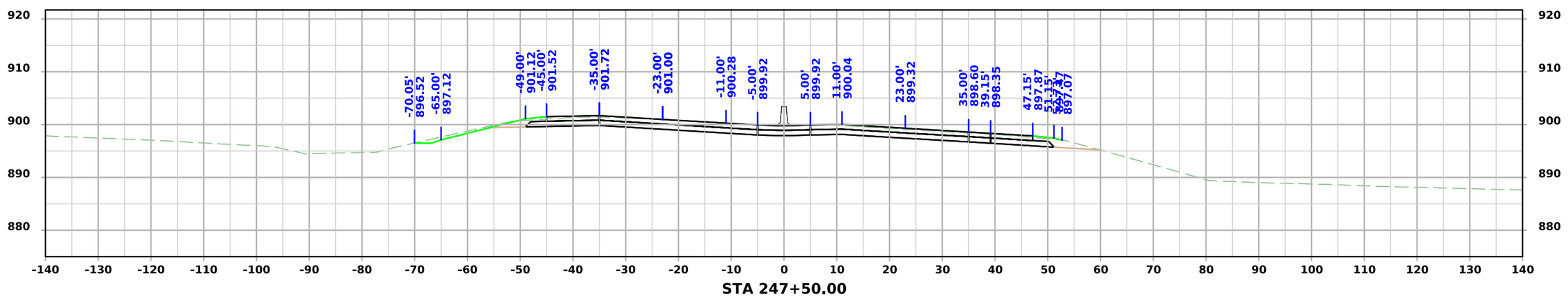
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.46 |
|---|---|---|---|---|---|

2:38:56 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58



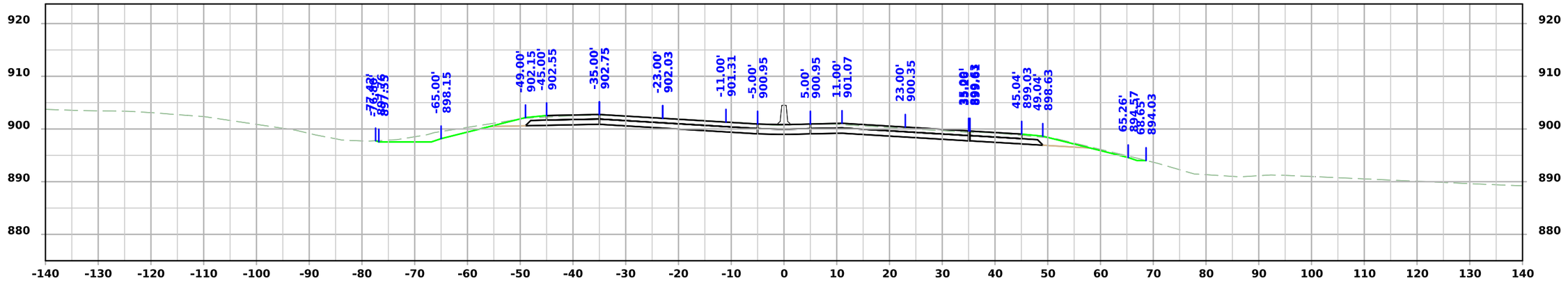



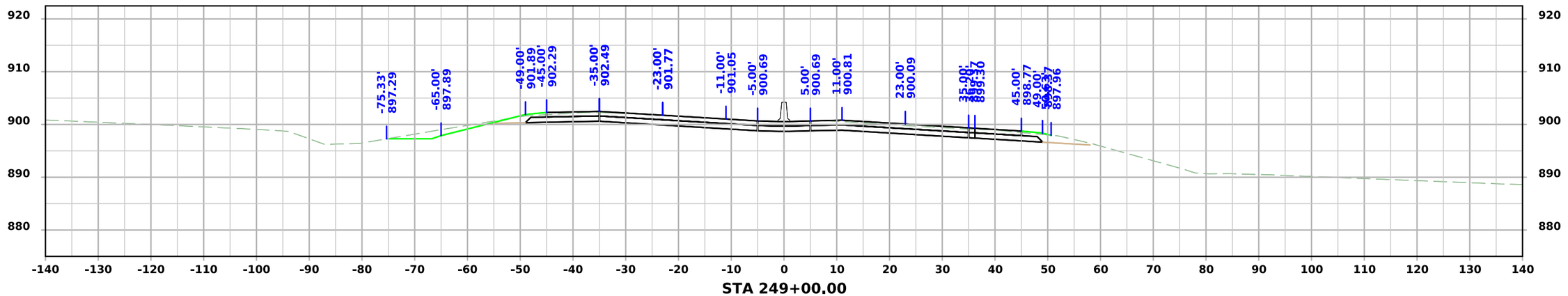

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.47 |
|---|---|---|---|---|---|

2:38:58 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 249+50.00

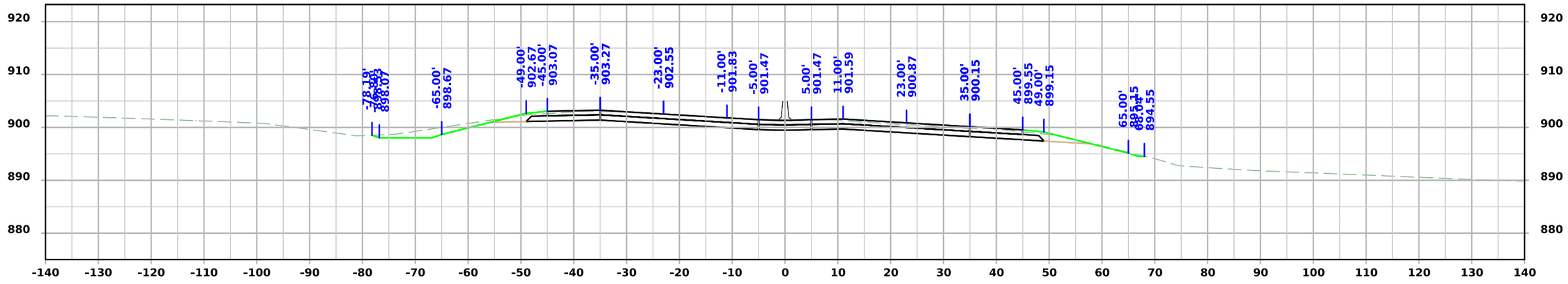



STA 249+00.00

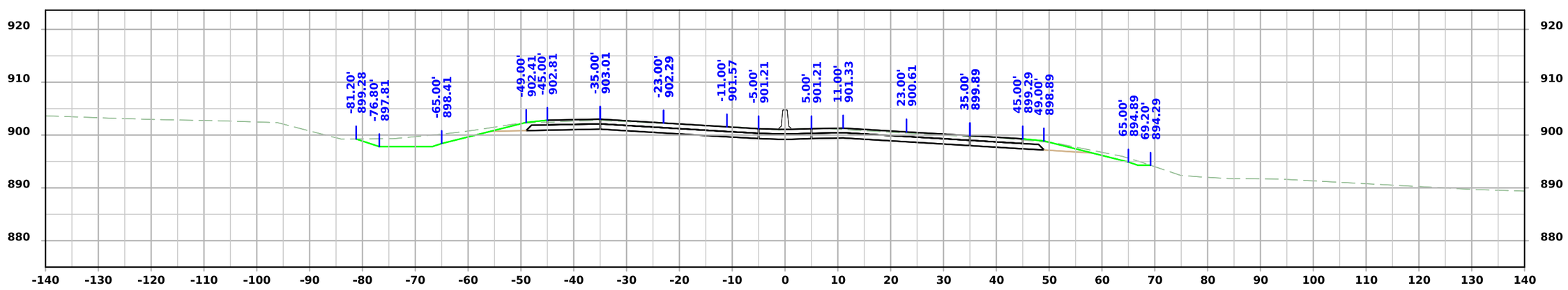
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.48 |
|---|---|---|---|---|---|

2:38:59 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 250+50.00

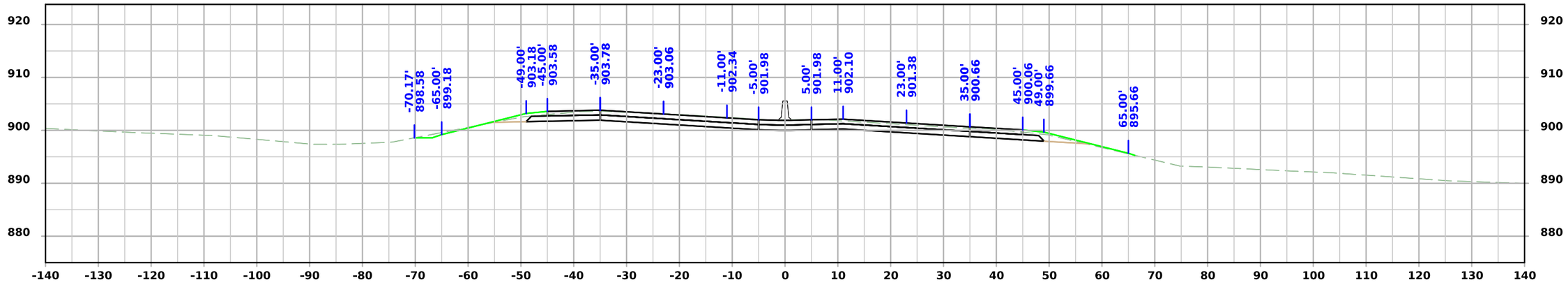



STA 250+00.00

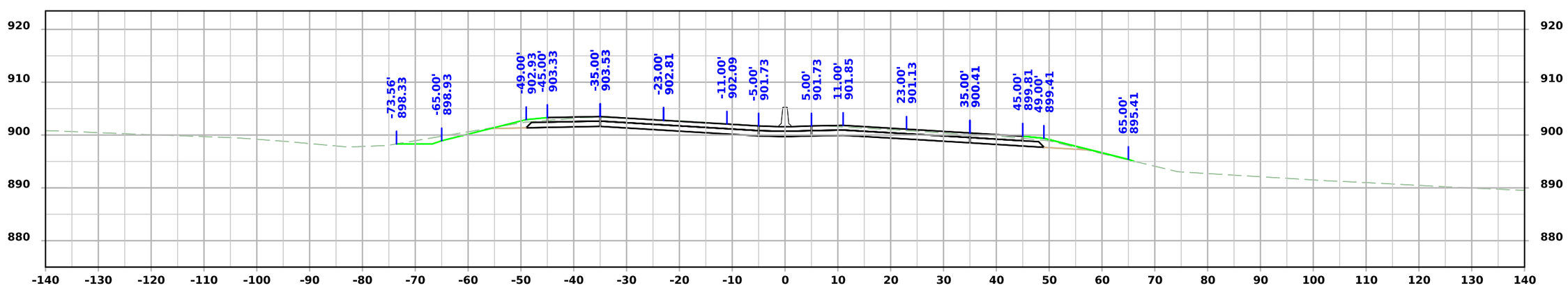
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.49 |
|---|---|---|---|---|---|

2:39:01 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 251+50.00**

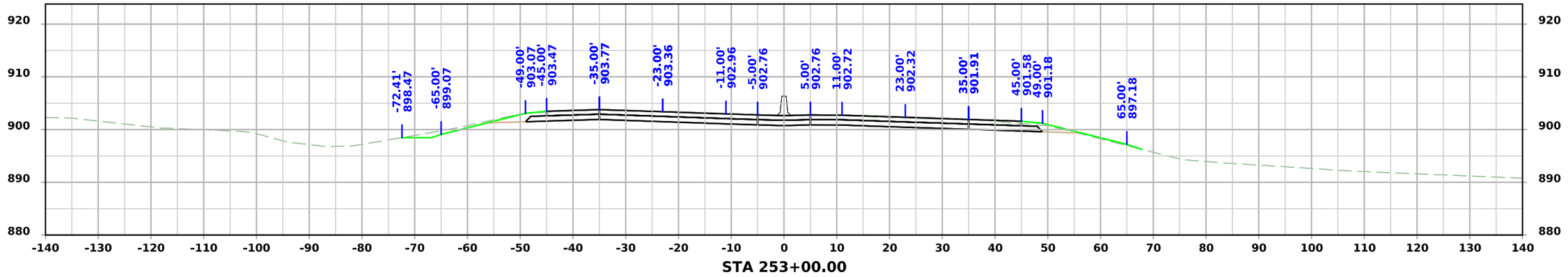



**STA 251+00.00**

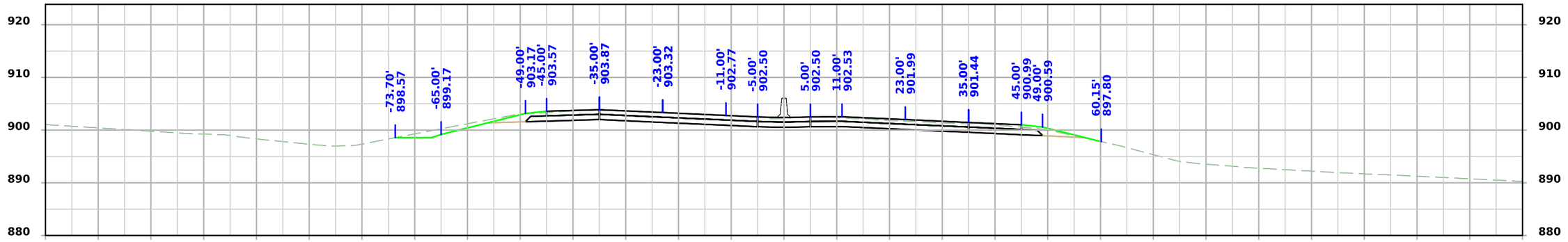
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.50 |
|---|---|---|---|---|---|

2:39:02 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

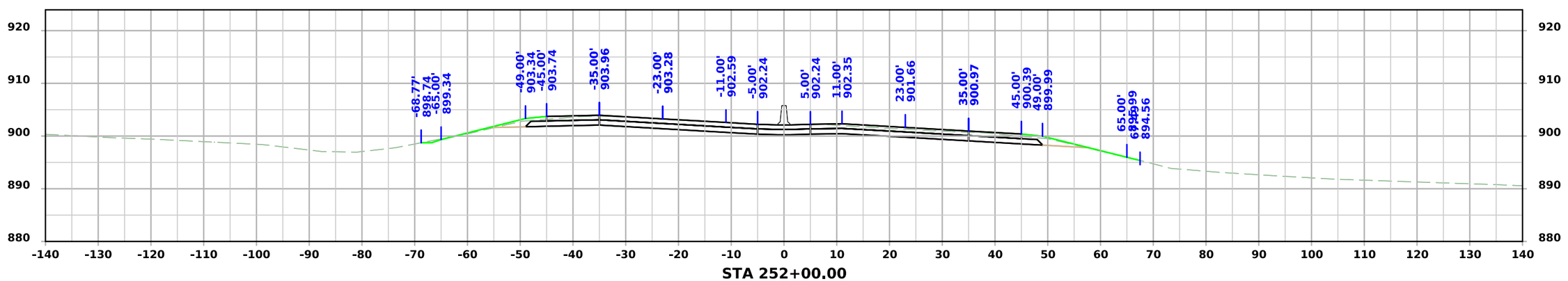
# ML - IA58




STA 253+00.00




STA 252+50.00

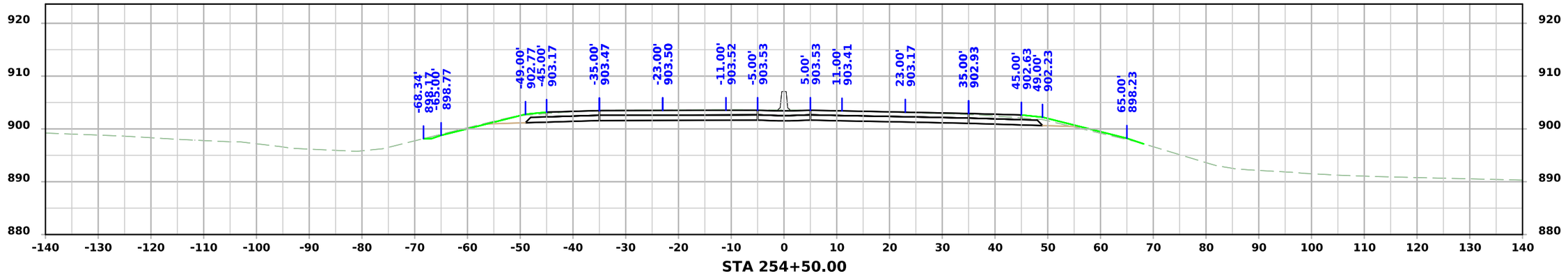



STA 252+00.00

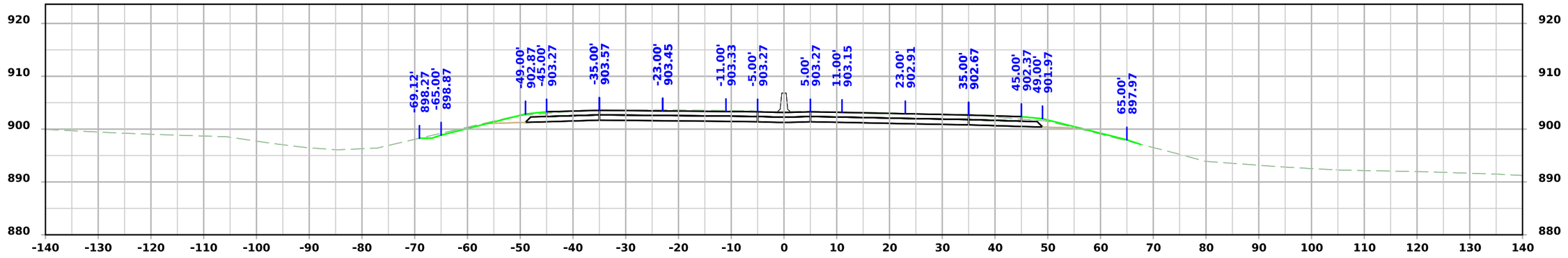
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.51 |
|---|---|---|---|---|---|

2:39:04 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

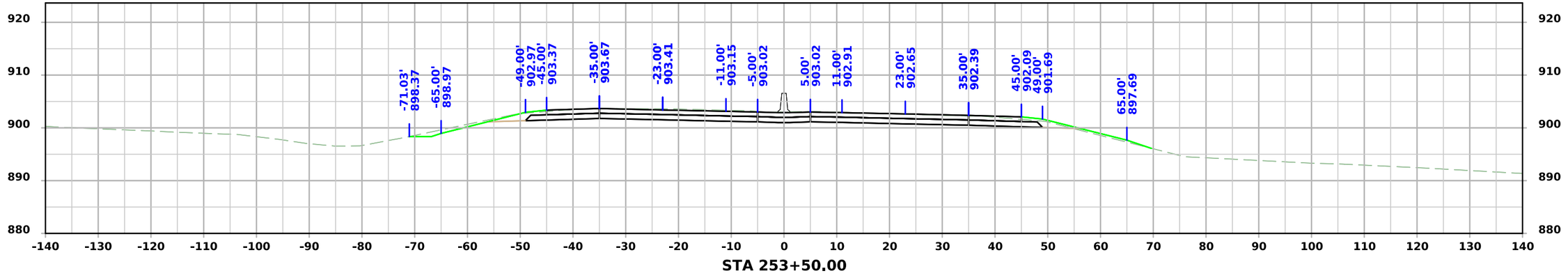
# ML - IA58




STA 254+50.00




STA 254+00.00




STA 253+50.00

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.52 |
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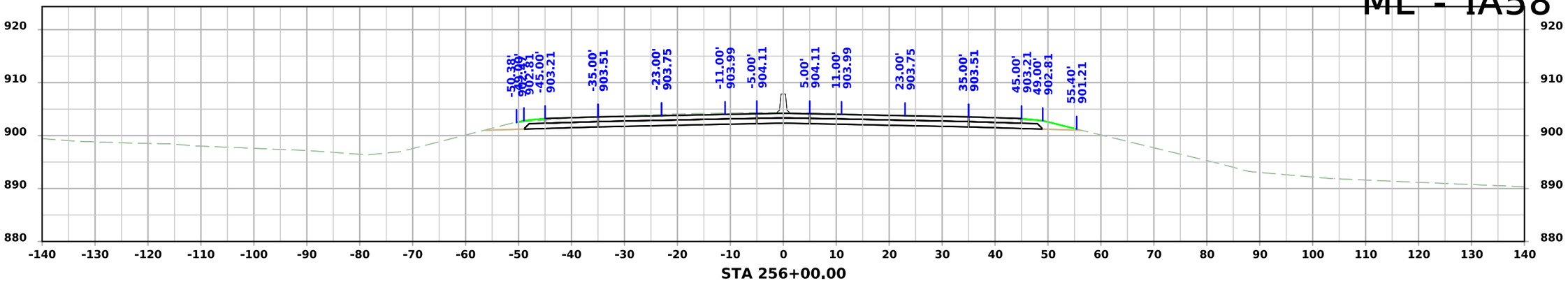
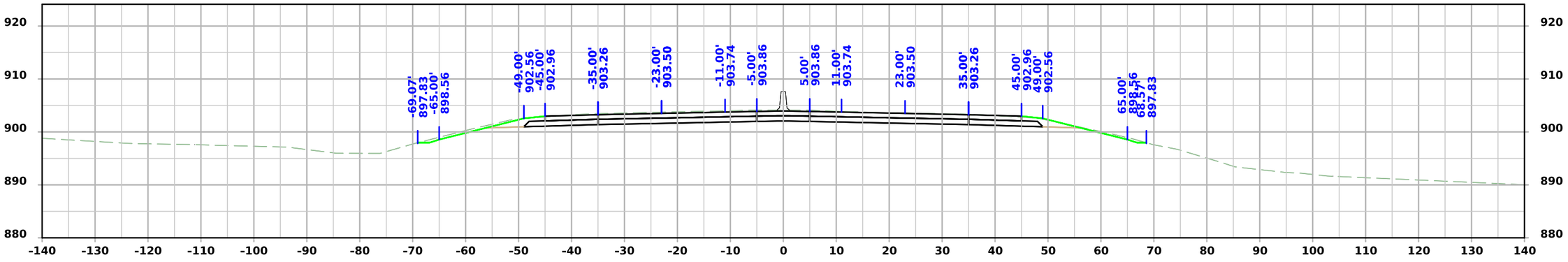
2:39:05 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

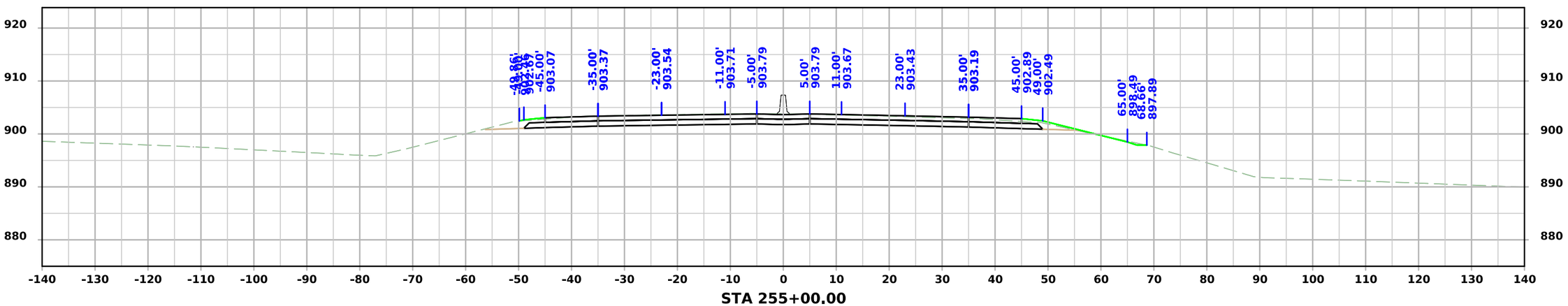
# ML - IA58




**STA 256+00.00**




**STA 255+50.00**




**STA 255+00.00**

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.53 |
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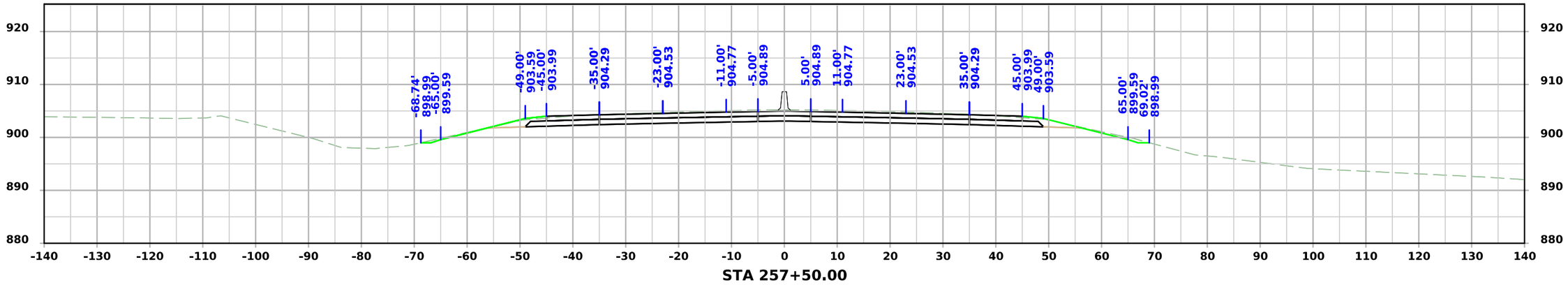
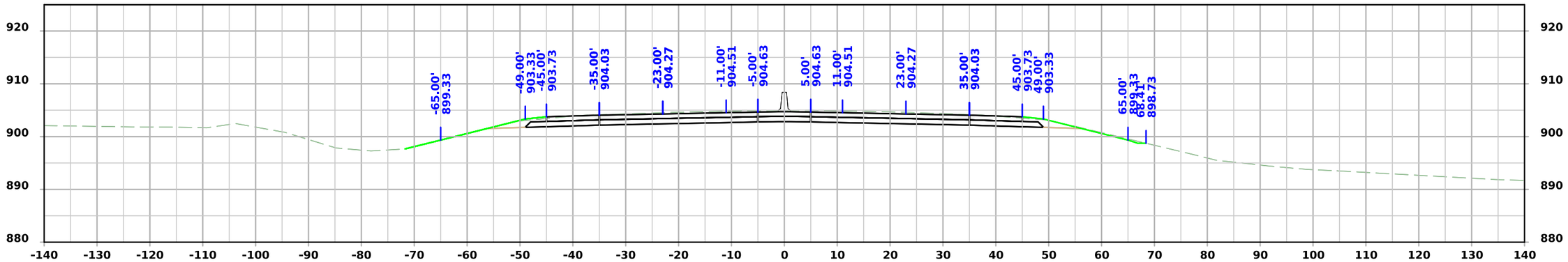
2:39:07 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

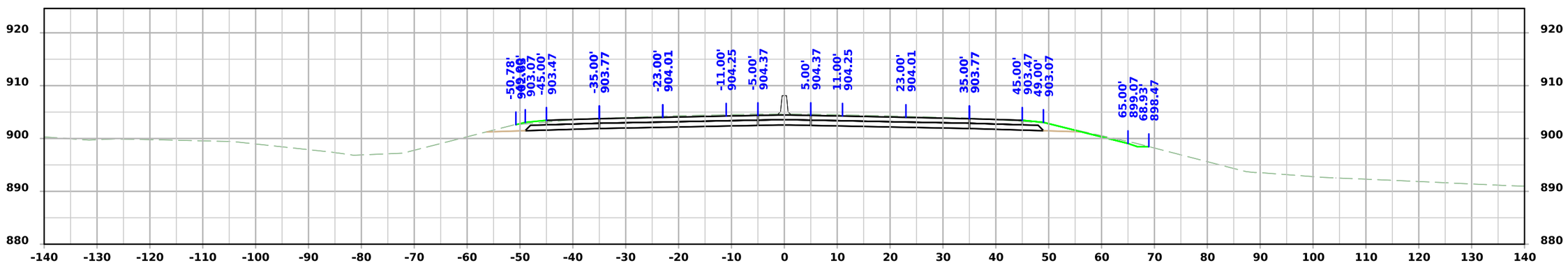
# ML - IA58




**STA 257+50.00**




**STA 257+00.00**




**STA 256+50.00**

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.54 |
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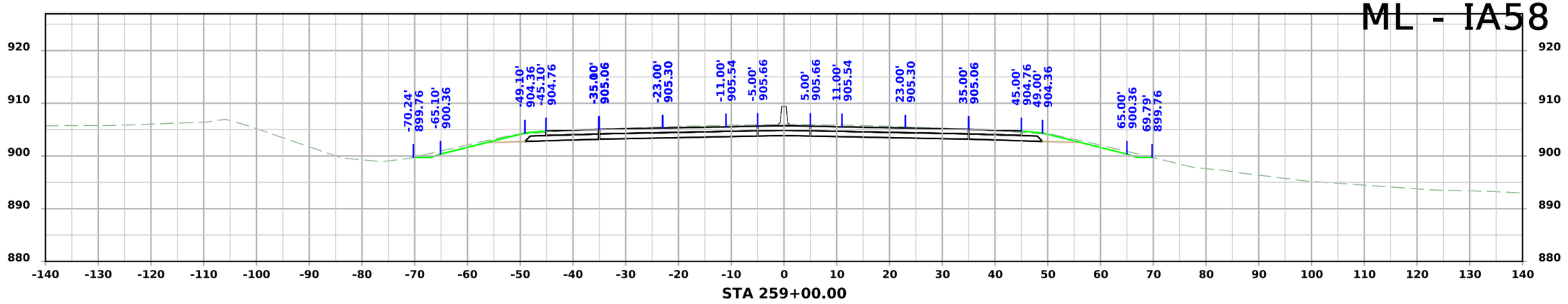
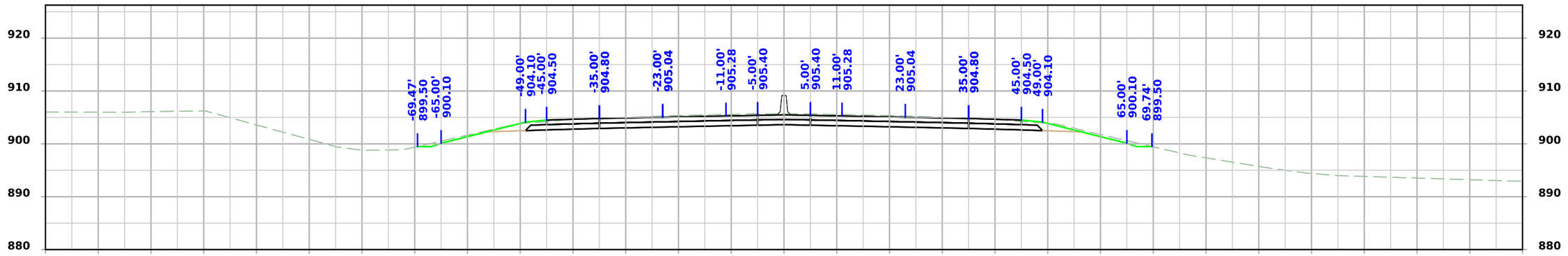
2:39:08 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

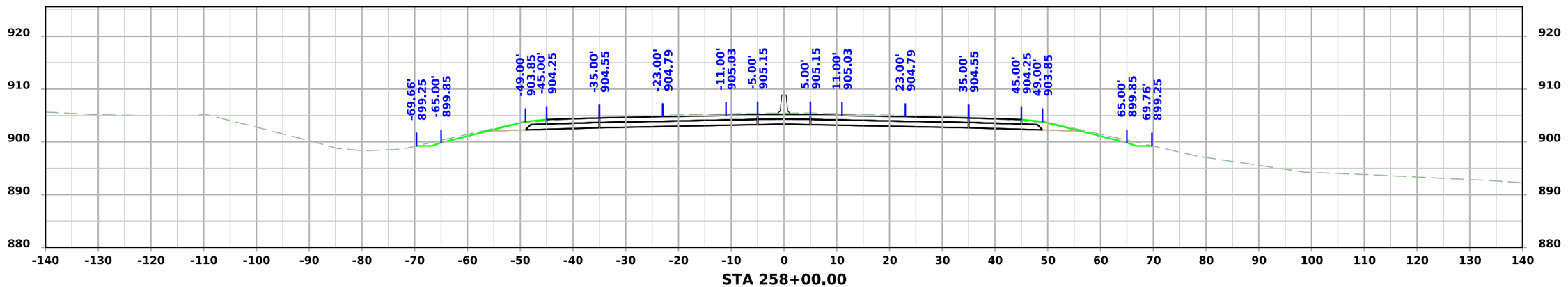
# ML - IA58




**STA 259+00.00**




**STA 258+50.00**




**STA 258+00.00**

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.55 | |
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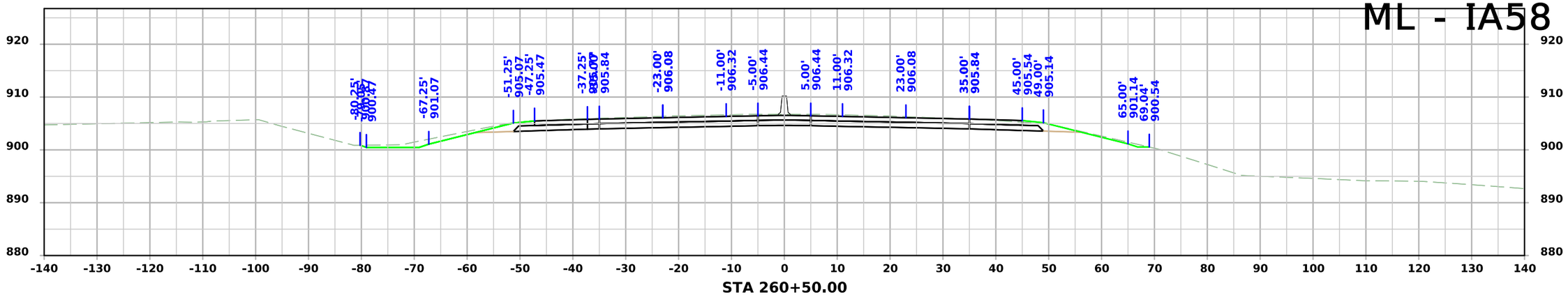
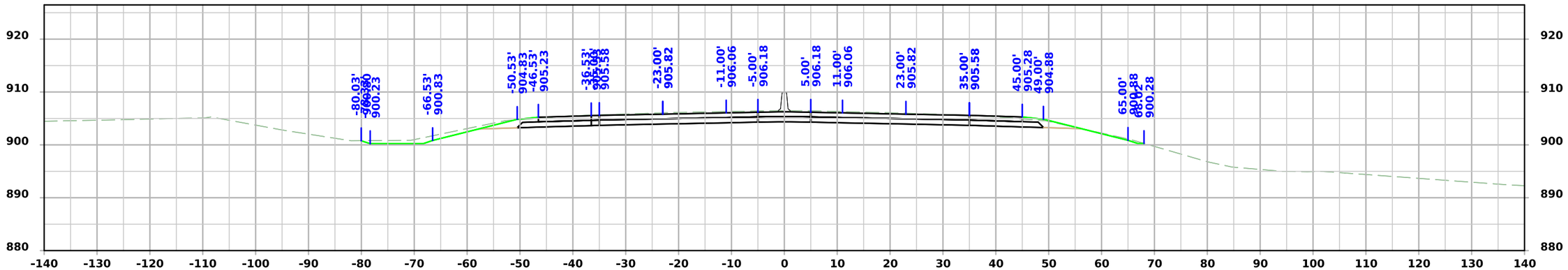
2:39:10 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

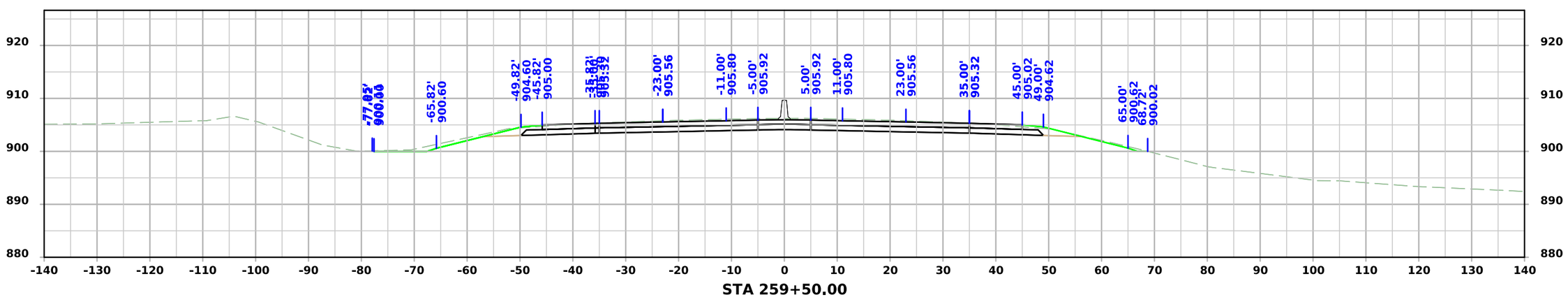
# ML - IA58




**STA 260+50.00**




**STA 260+00.00**

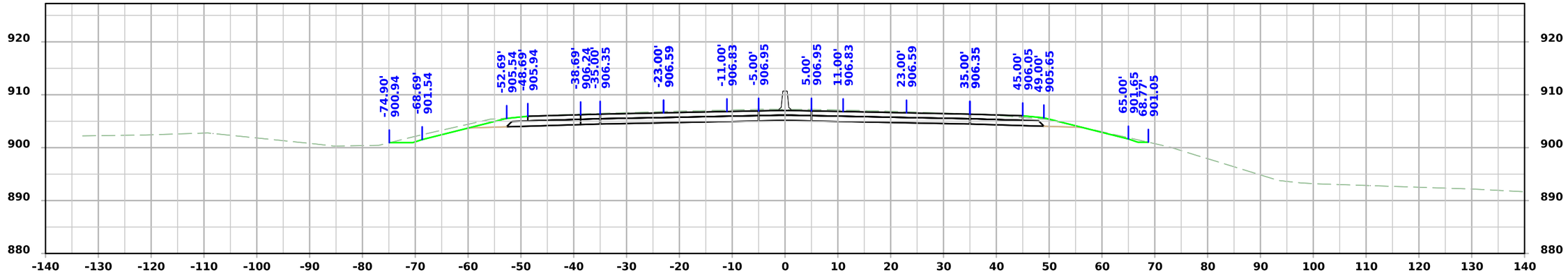



**STA 259+50.00**

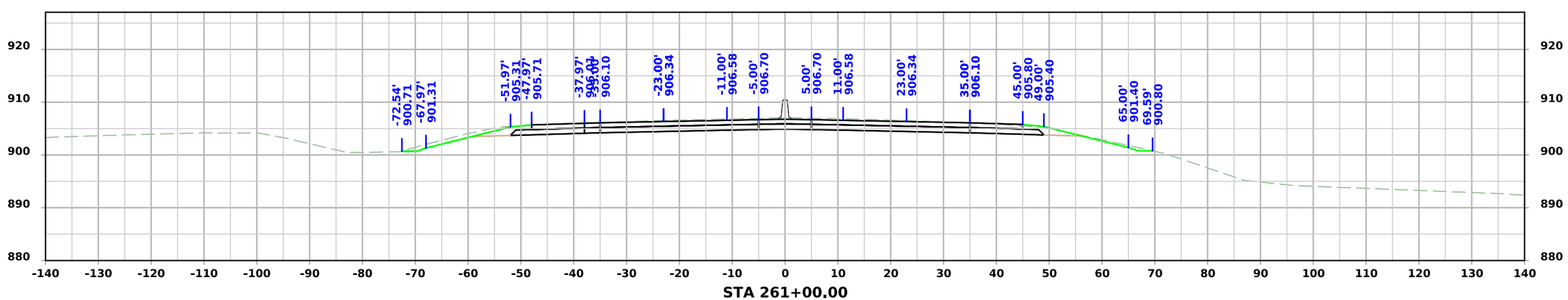
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.56 |
|---|---|---|---|---|---|

2:39:11 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 261+50.00**

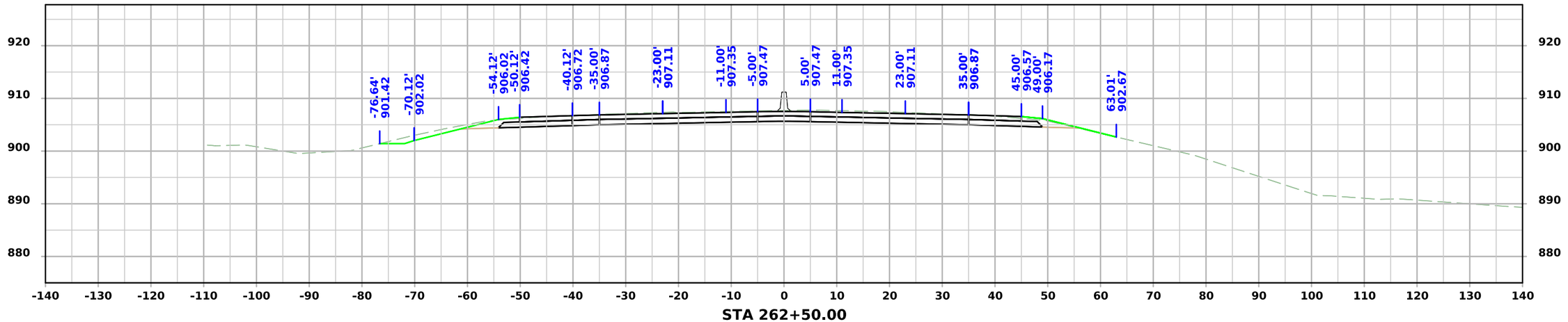



**STA 261+00.00**

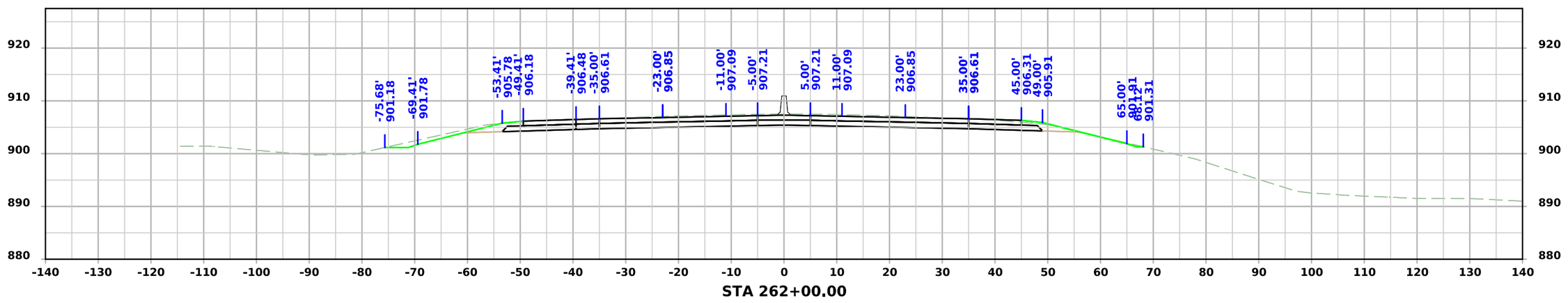
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.57 |
|---|---|---|---|---|---|

2:39:13 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




**STA 262+50.00**

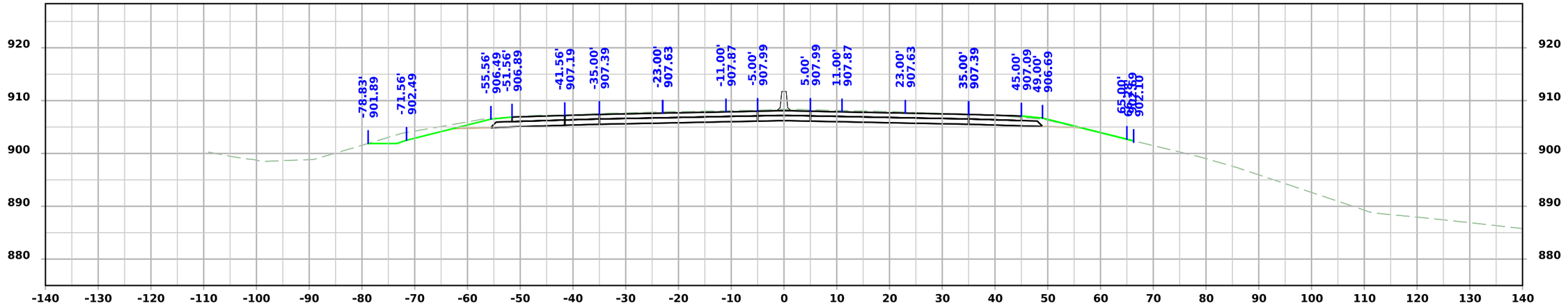



**STA 262+00.00**

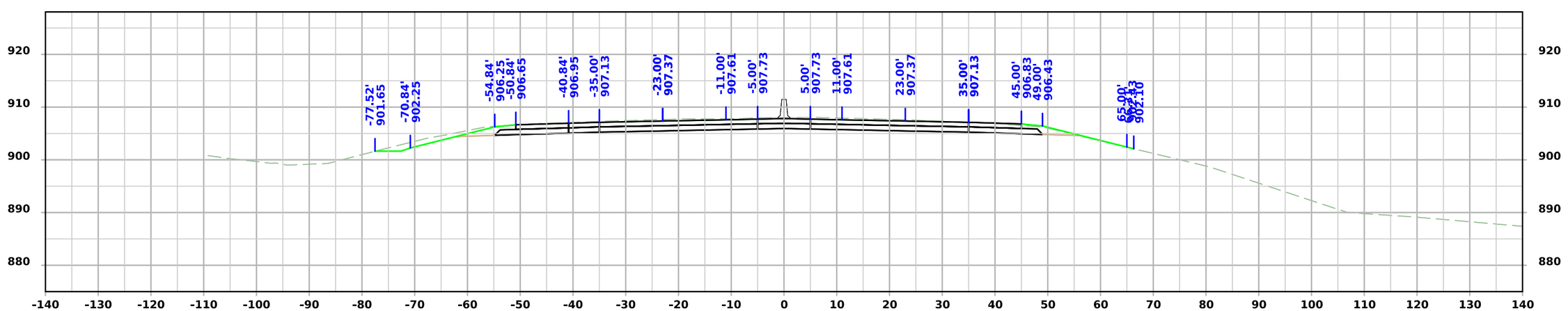
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.58 |
|---|---|---|---|---|---|

2:39:14 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 263+50.00

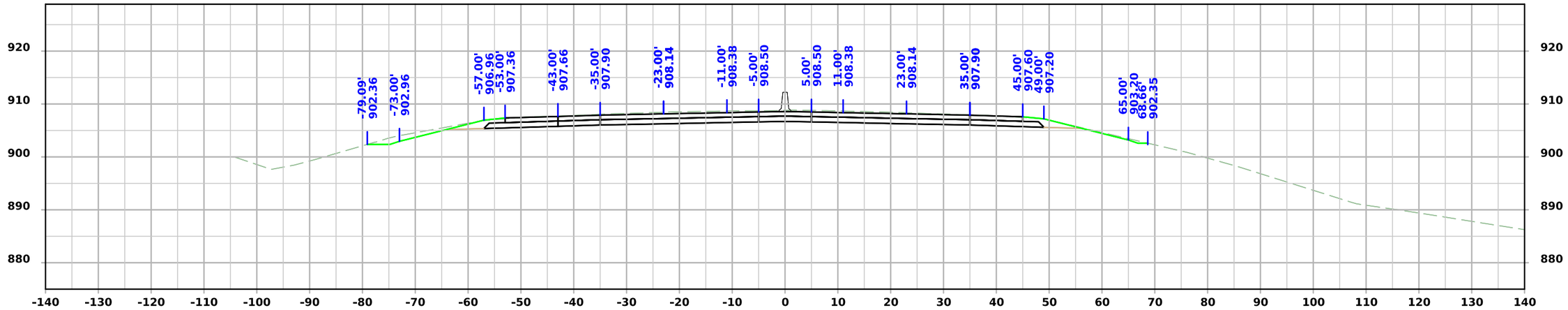



STA 263+00.00

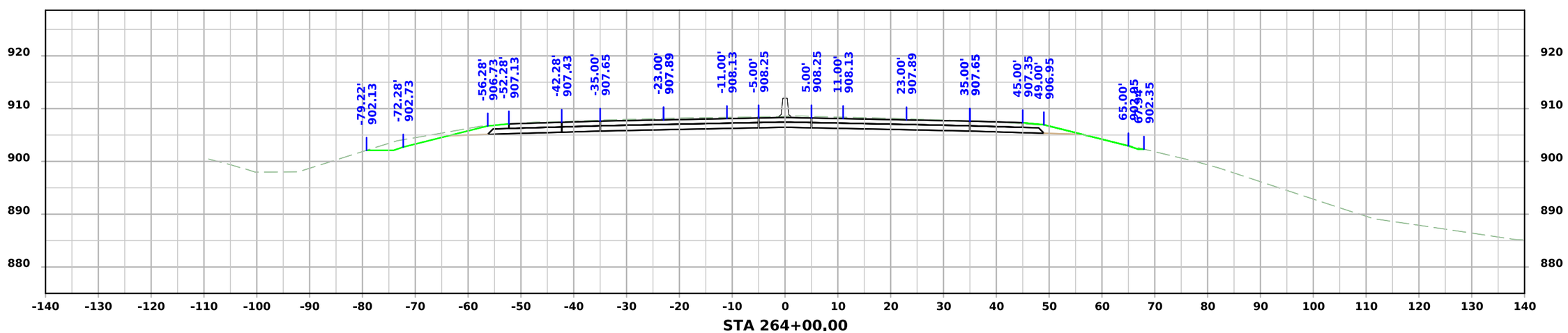
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.59 |
|---|---|---|---|---|---|

2:39:15 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

# ML - IA58




STA 264+50.00

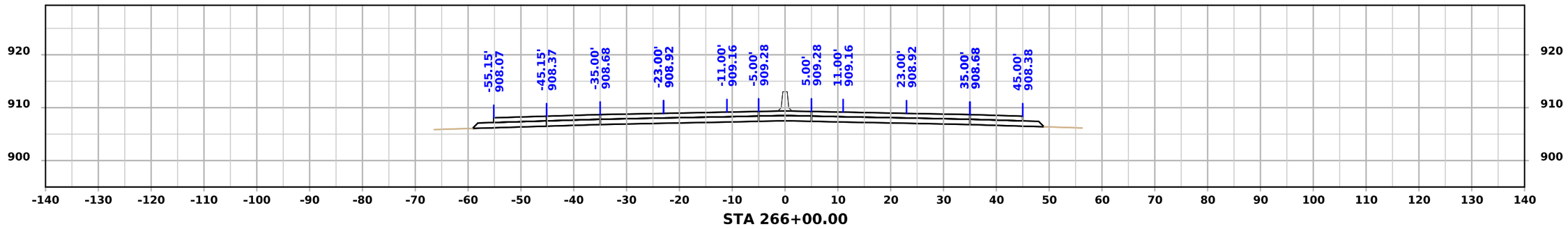



STA 264+00.00

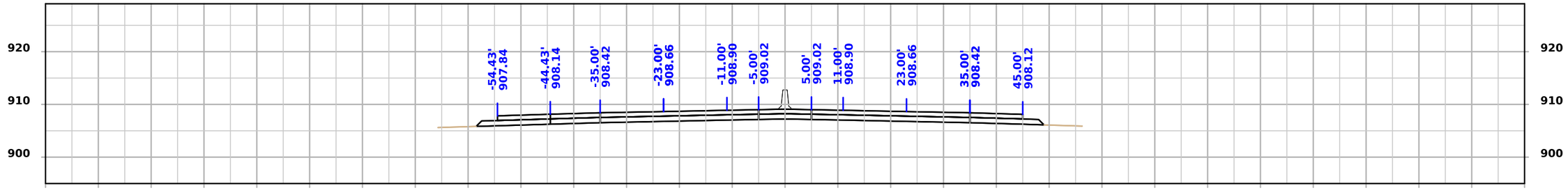
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.60 |
|---|---|---|---|---|---|

2:39:17 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

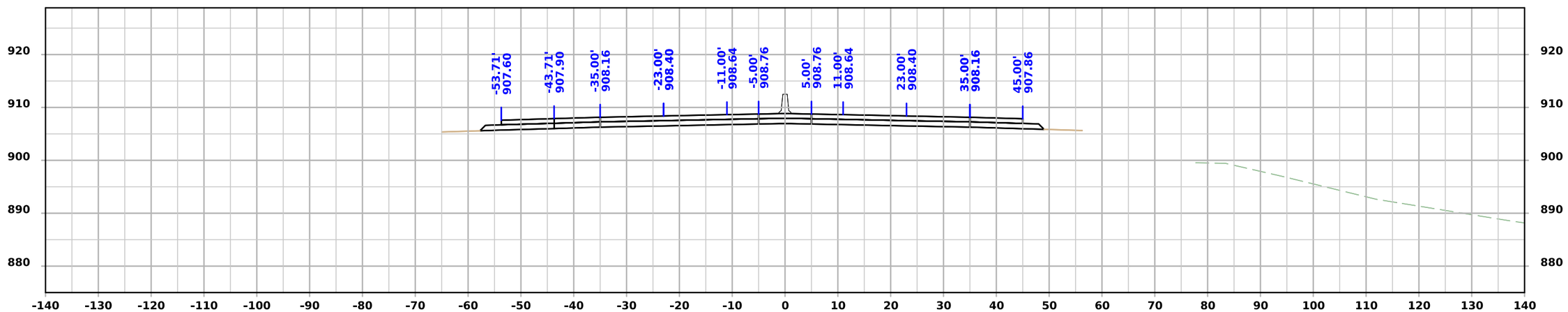
# ML - IA58




STA 266+00.00




STA 265+50.00

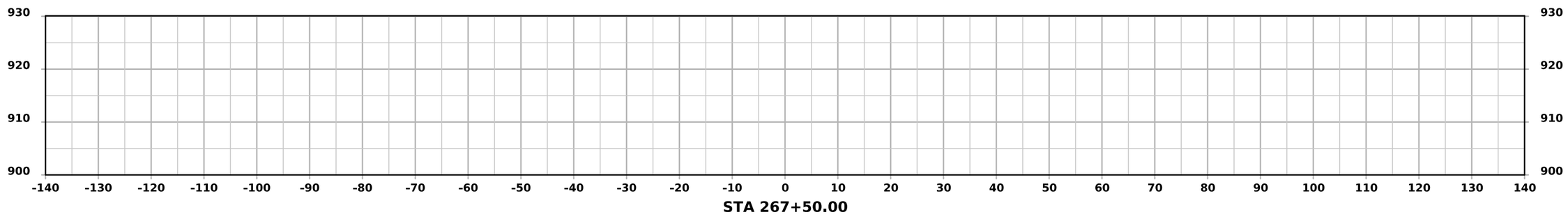



STA 265+00.00

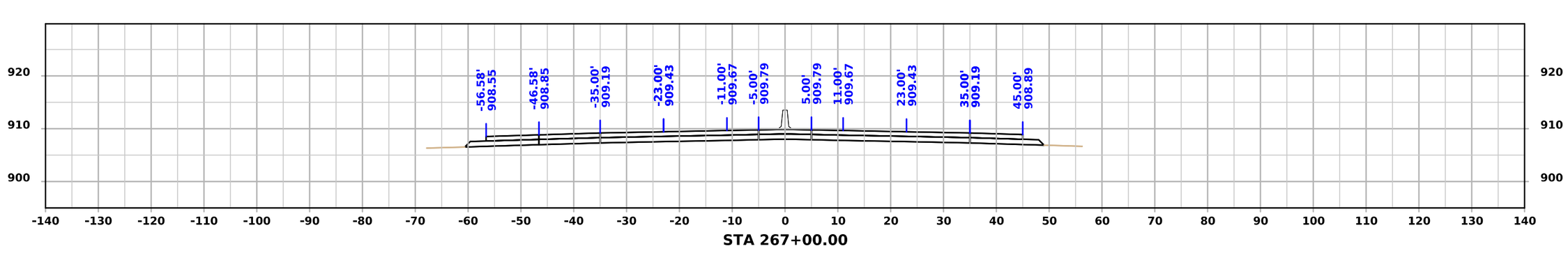
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.61 |
|---|---|---|---|---|---|

2:39:18 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

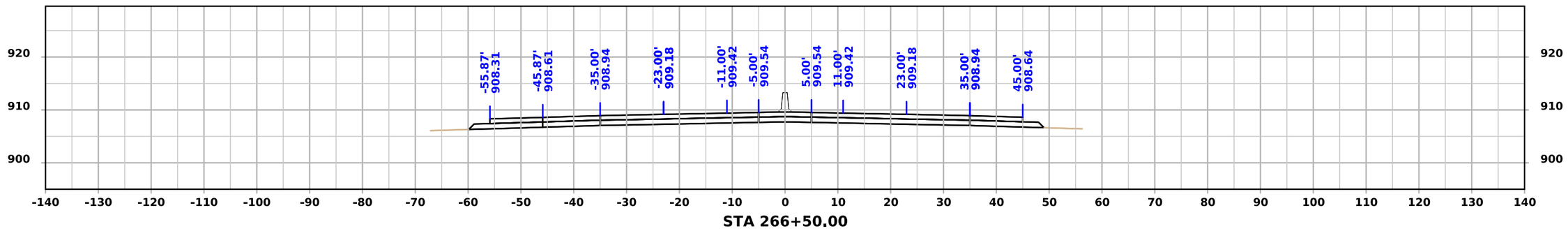
# ML - IA58




**STA 267+50.00**




**STA 267+00.00**

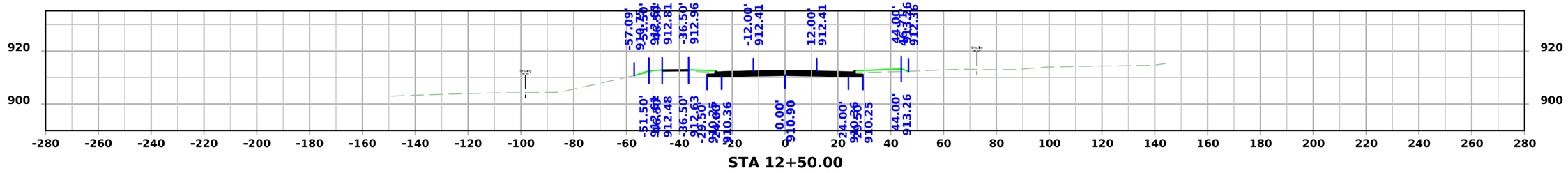



**STA 266+50.00**

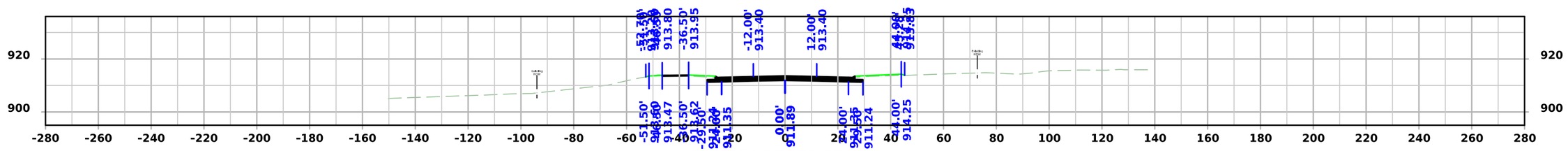
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER W.62 |
|---|---|---|---|---|---|

2:39:20 PM 7/12/2024 Michael.Degen pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhiII_Rd_ORD\CADD_Files\Cross_Sections\XS_ML_58_0705801012.dgn

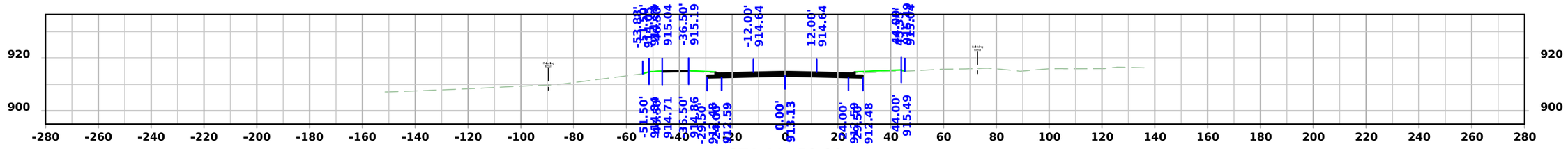
# Greenhill Rd



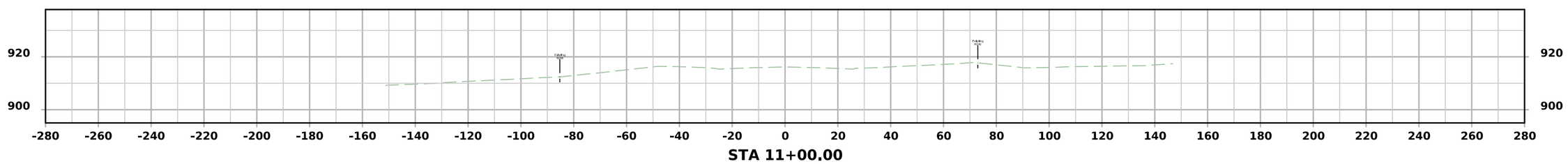

STA 12+50.00




STA 12+00.00




STA 11+50.00

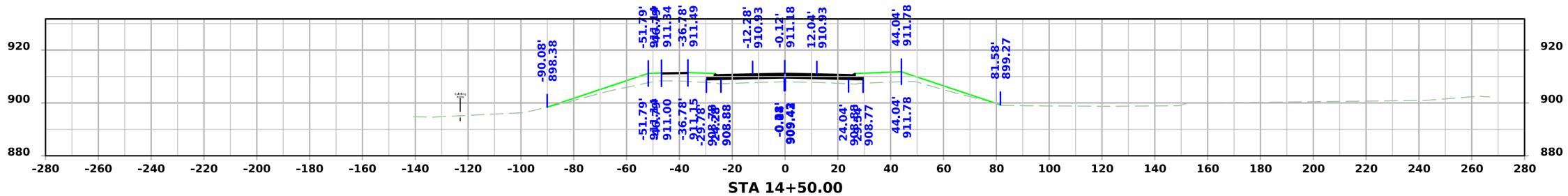



STA 11+00.00

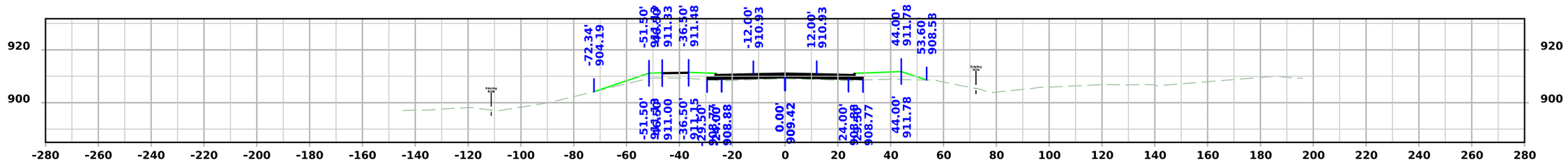
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.1** |
|---|---|---|---|---|---|

11:20:56 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

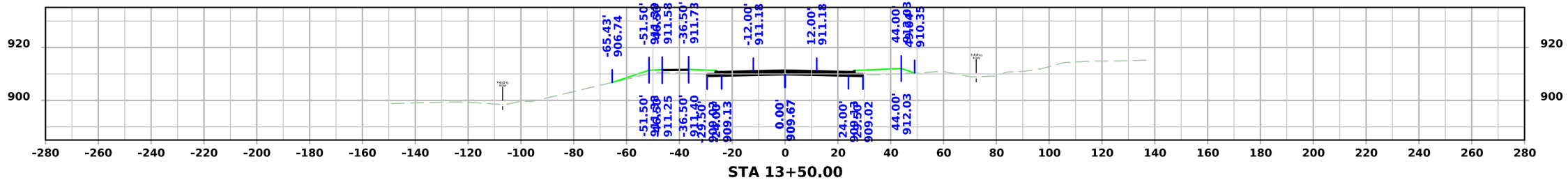
# Greenhill Rd



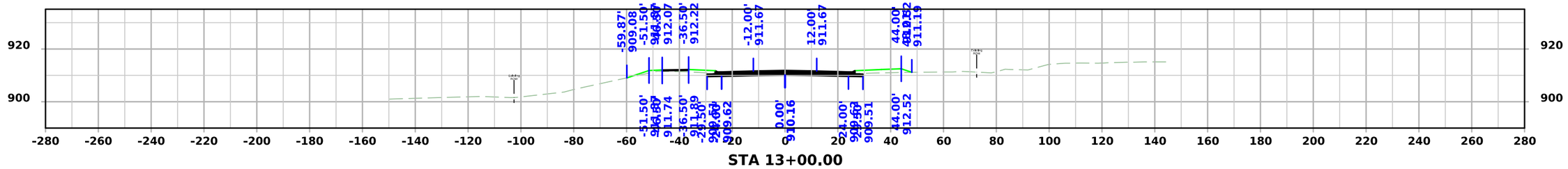

STA 14+50.00




STA 14+00.00




STA 13+50.00

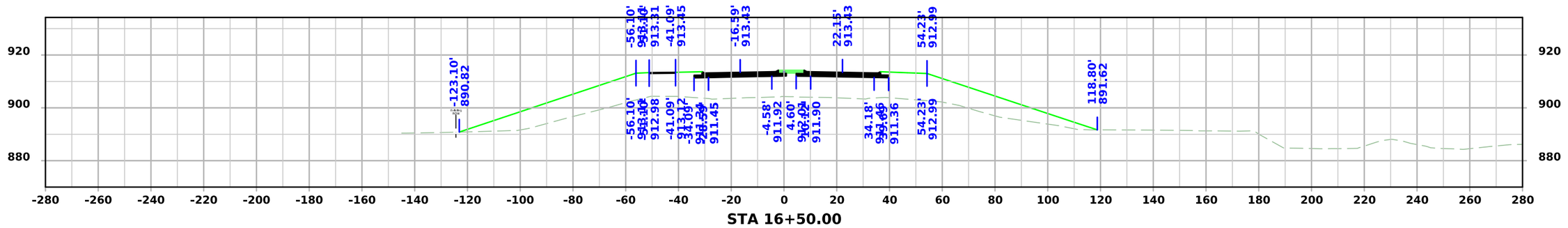



STA 13+00.00

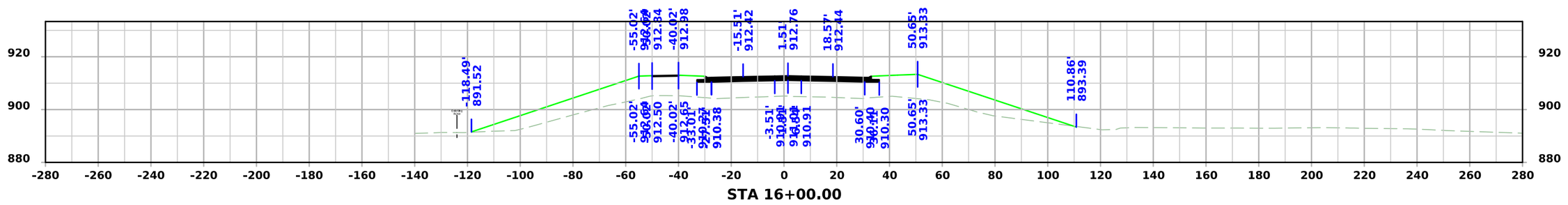
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.2** |
|---|---|---|---|---|---|

11:20:58 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

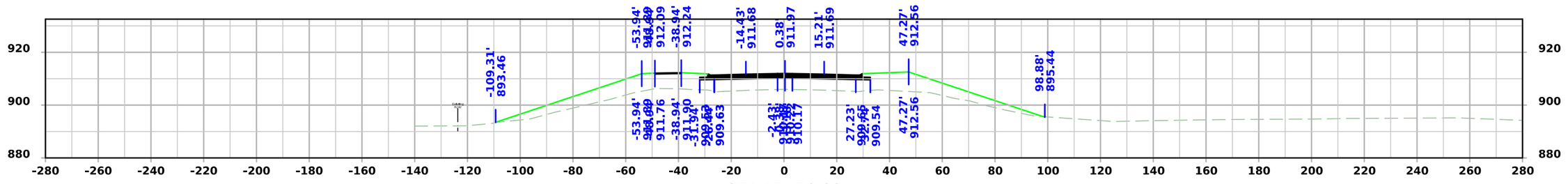
# Greenhill Rd



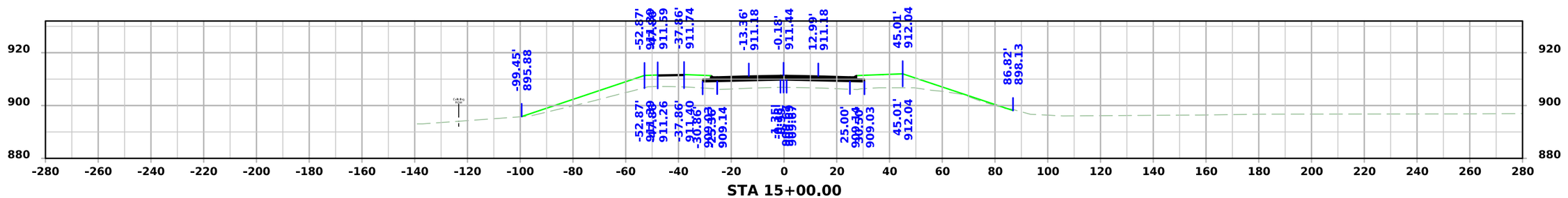

STA 16+50.00




STA 16+00.00




STA 15+50.00

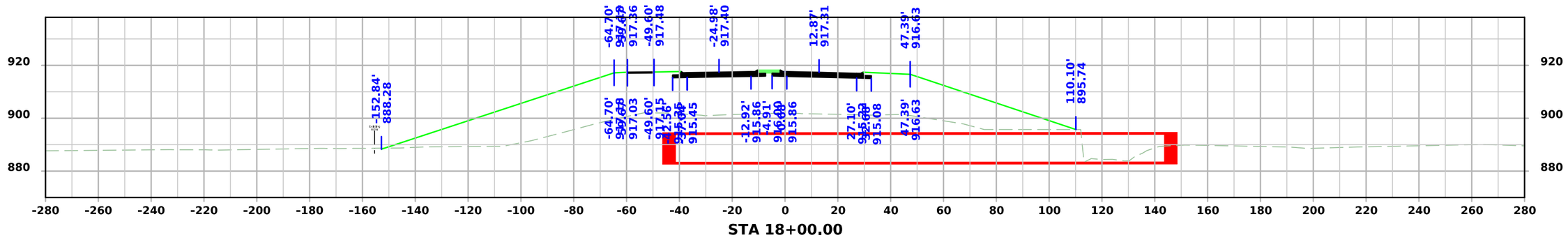



STA 15+00.00

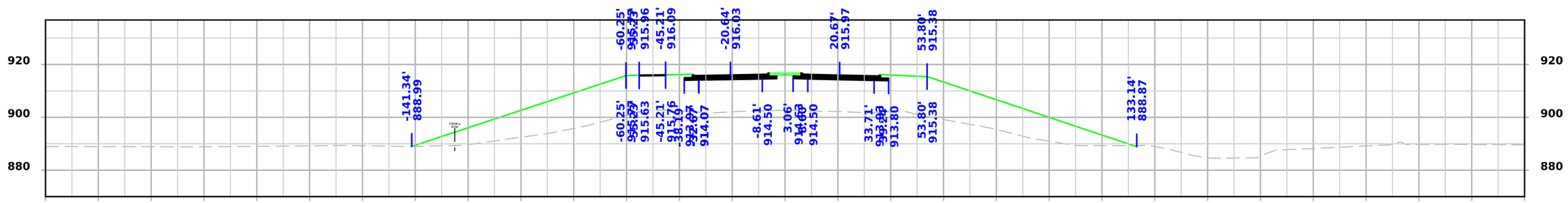
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.3** |
|---|---|---|---|---|---|

11:21:00 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

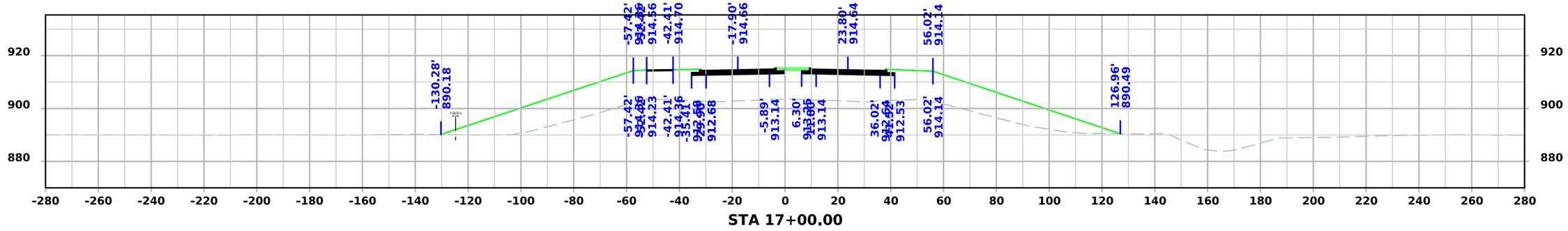
# Greenhill Rd




STA 18+00.00




STA 17+50.00

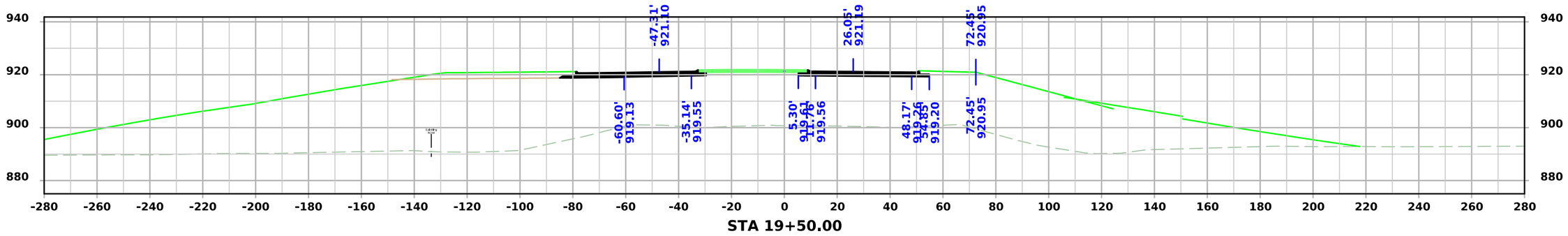



STA 17+00.00

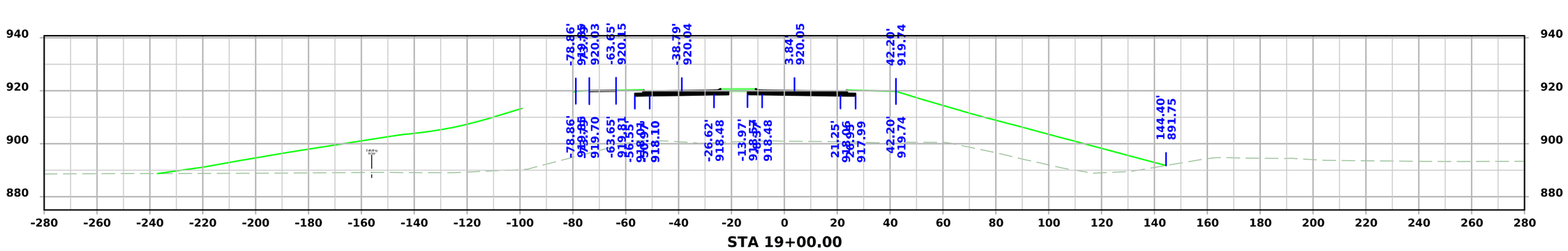
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.4** |
|---|---|---|---|---|---|

11:21:02 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

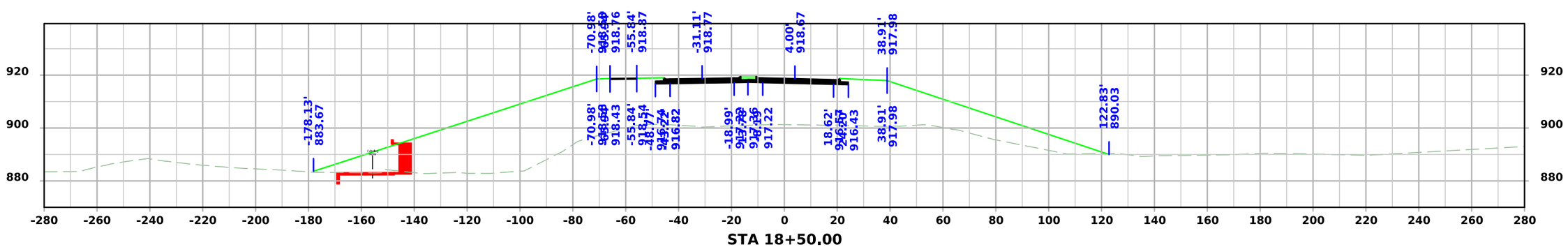
# Greenhill Rd




STA 19+50.00




STA 19+00.00

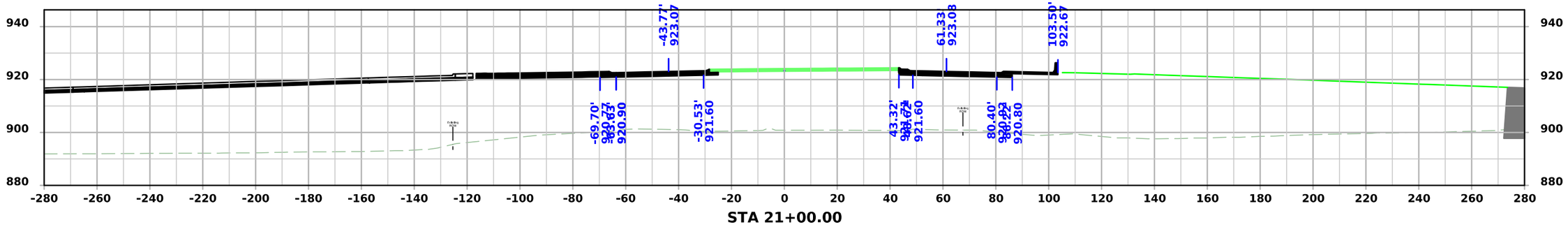



STA 18+50.00

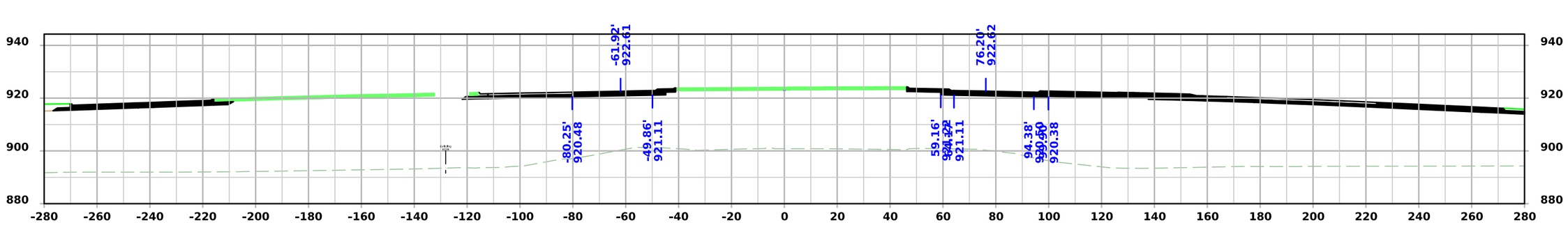
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.5** |
|---|---|---|---|---|---|

11:21:04 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

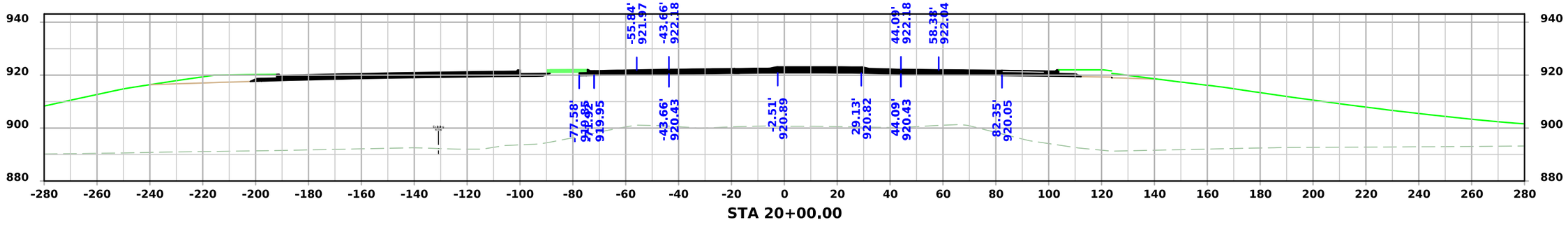
# Greenhill Rd




STA 21+00.00




STA 20+50.00

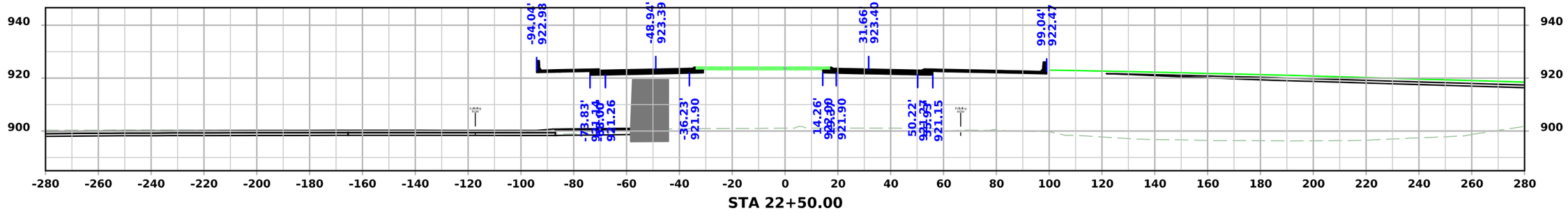



STA 20+00.00

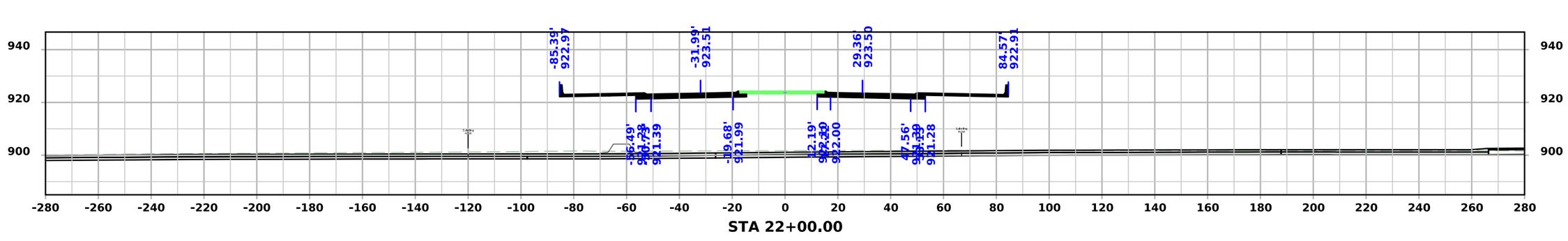
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.6** |
|---|---|---|---|---|---|

11:21:07 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

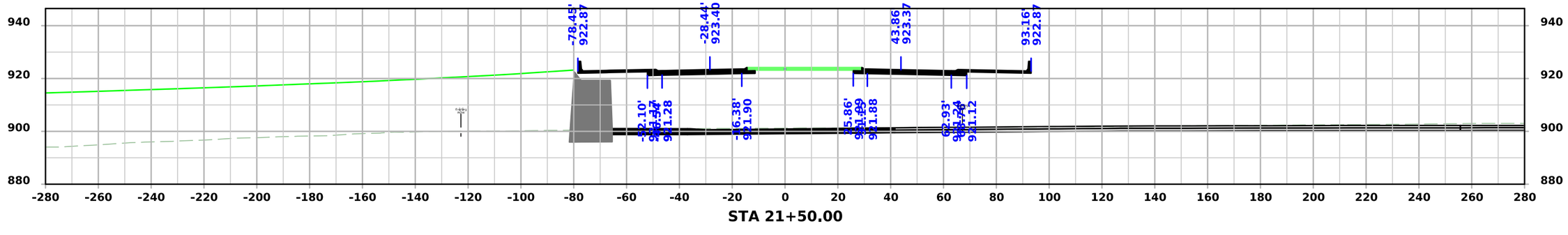
# Greenhill Rd




STA 22+50.00




STA 22+00.00

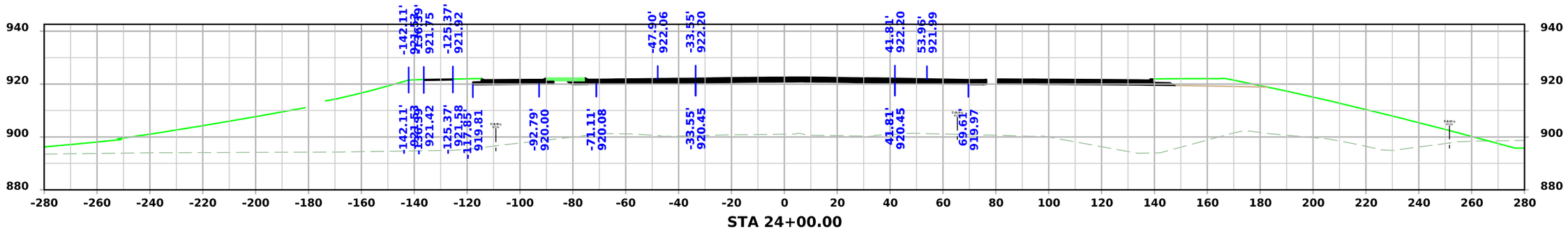


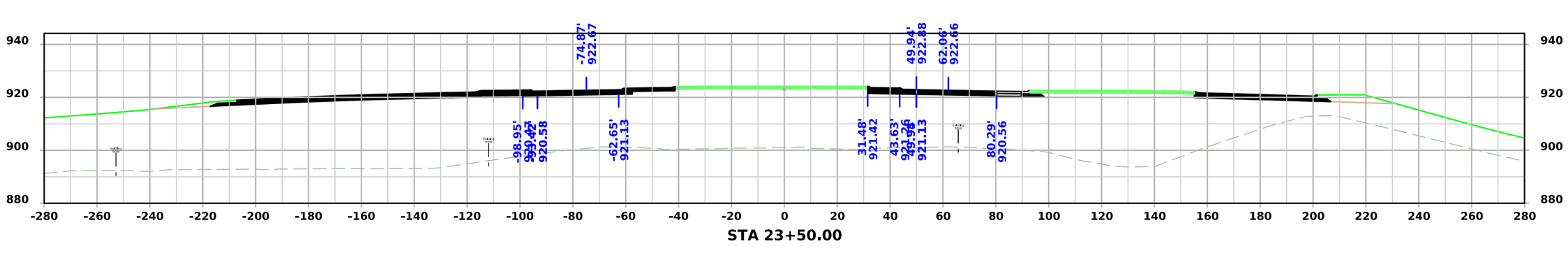

STA 21+50.00

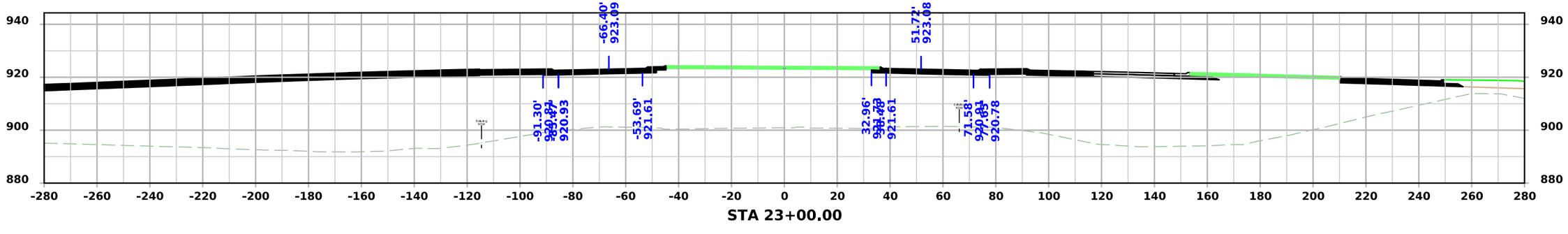
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.7** |
|---|---|---|---|---|---|

11:21:10 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

# Greenhill Rd



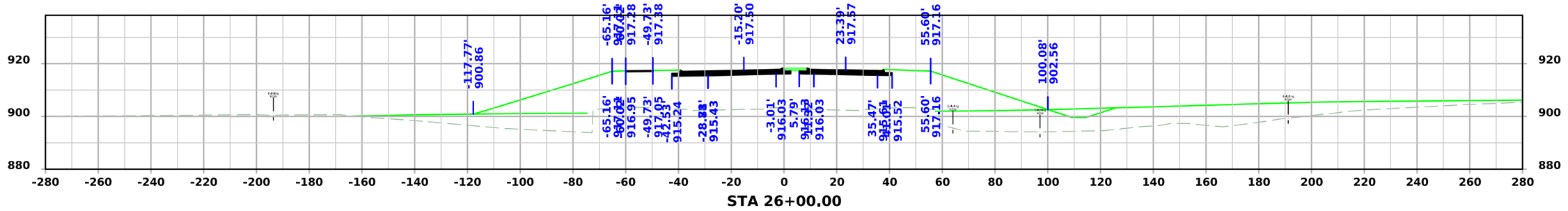



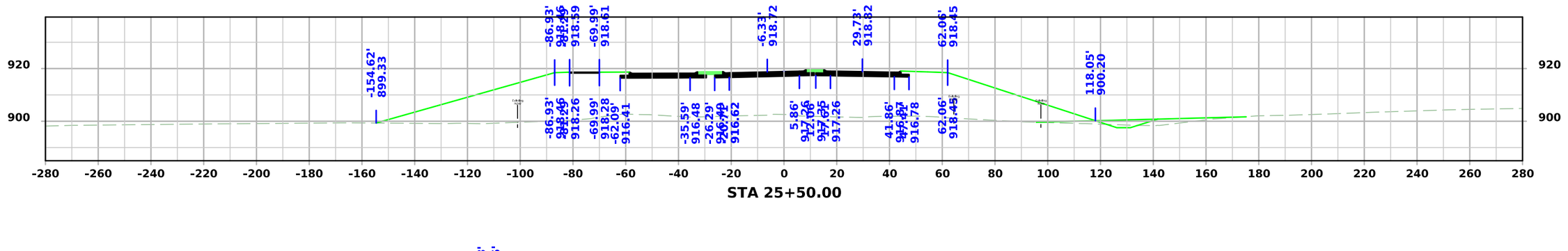

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.8** |
|---|---|---|---|---|---|

11:21:13 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

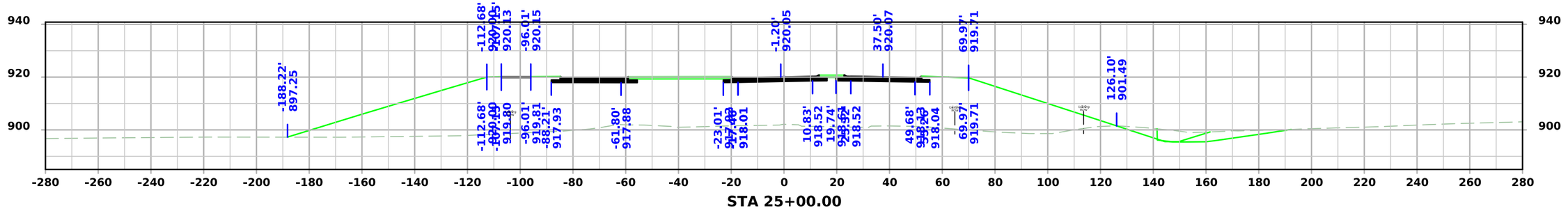
# Greenhill Rd



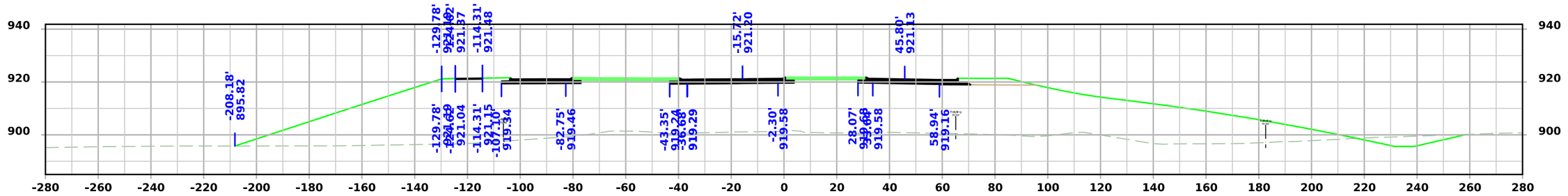

STA 26+00.00




STA 25+50.00




STA 25+00.00

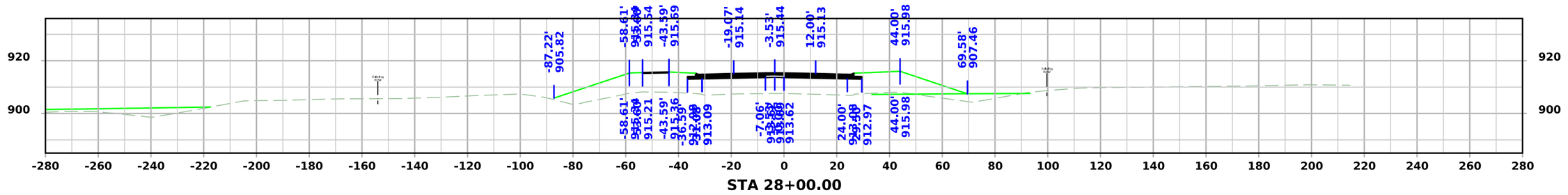



STA 24+50.00

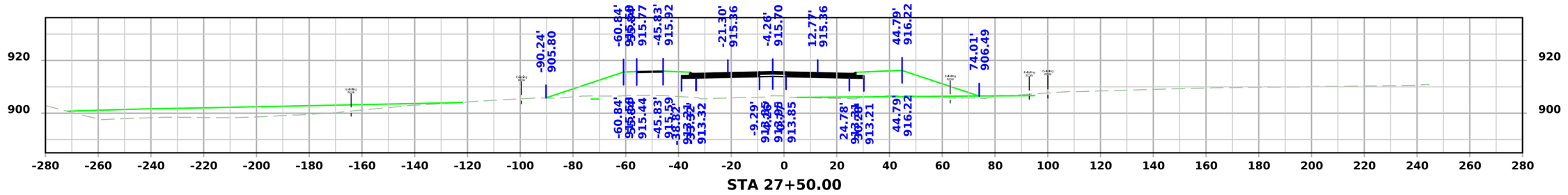
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.9** |
|---|---|---|---|---|---|

11:21:15 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

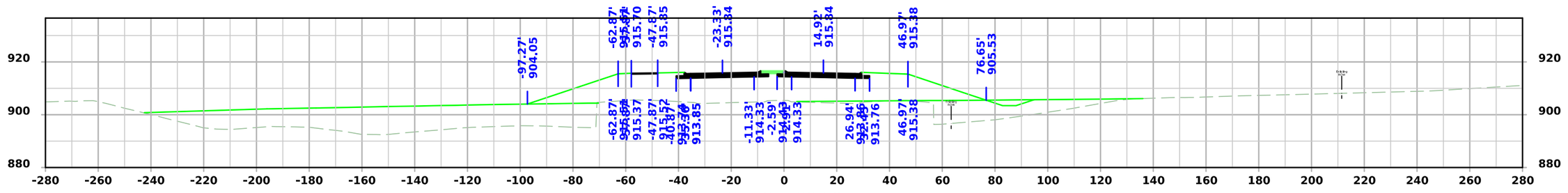
# Greenhill Rd



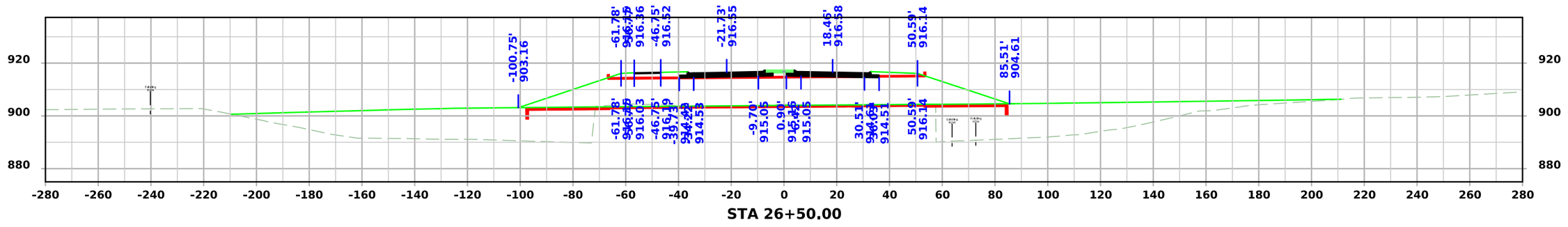

STA 28+00.00




STA 27+50.00




STA 27+00.00

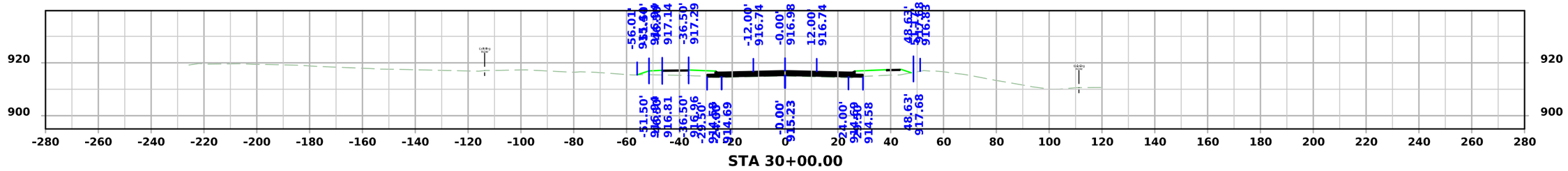



STA 26+50.00

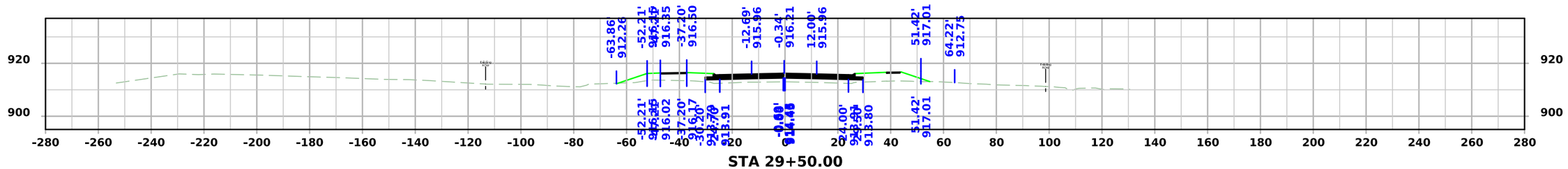
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.10** |
|---|---|---|---|---|---|

11:21:18 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

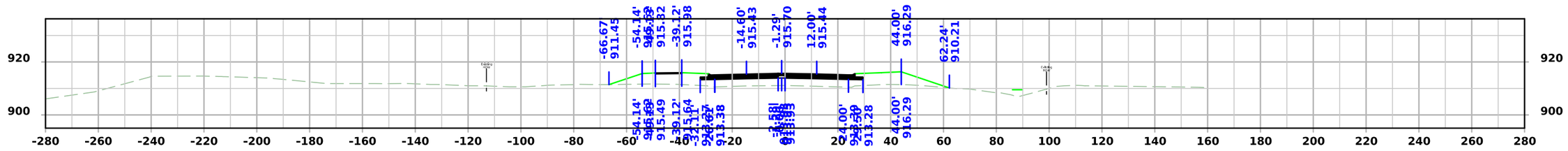
# Greenhill Rd



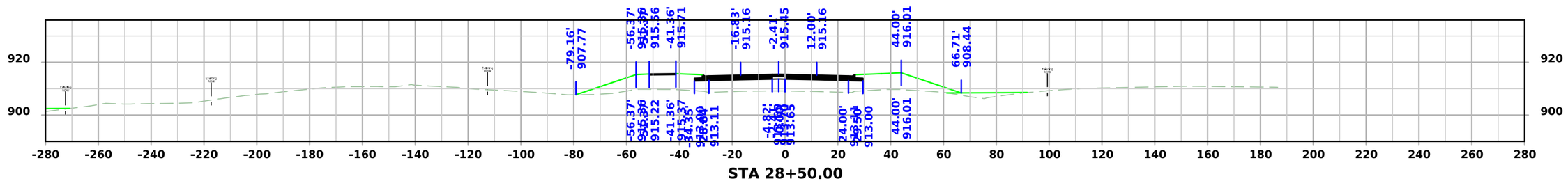

STA 30+00.00




STA 29+50.00




STA 29+00.00

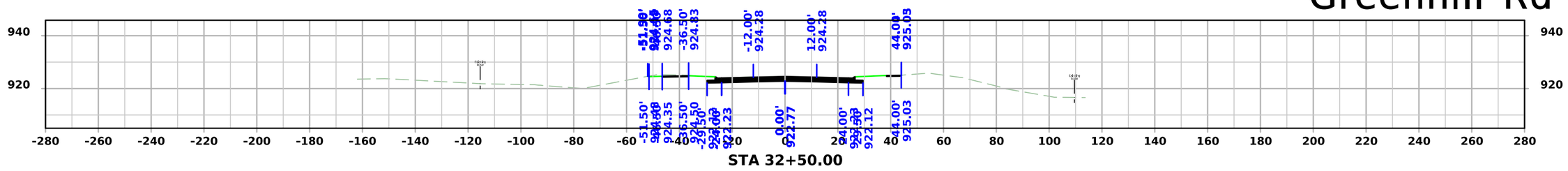



STA 28+50.00

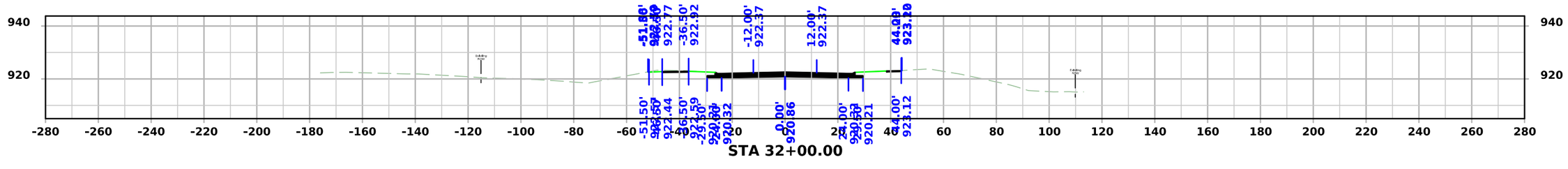
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.11** |
|---|---|---|---|---|---|

11:21:20 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

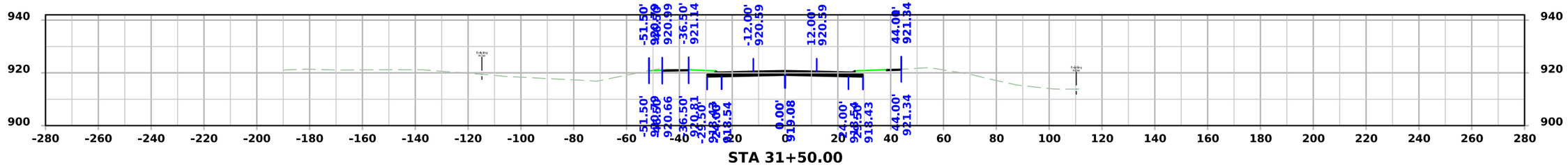
# Greenhill Rd



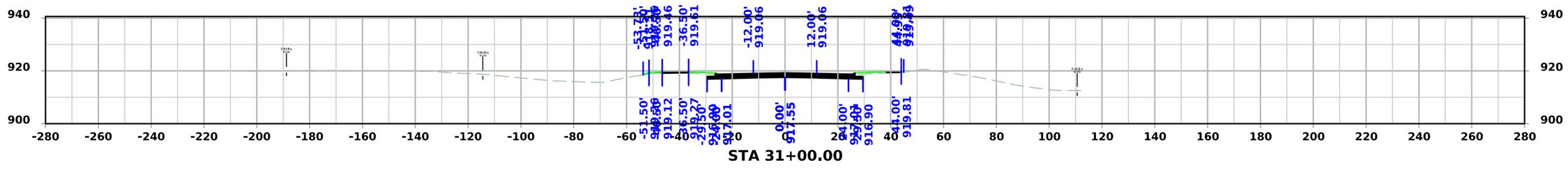

STA 32+50.00




STA 32+00.00




STA 31+50.00

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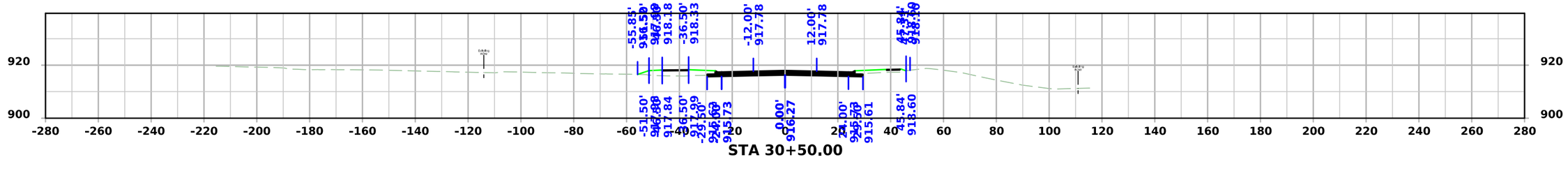
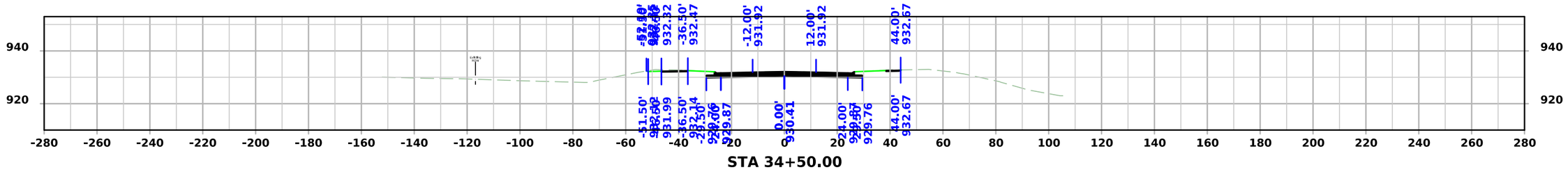



STA 30+50.00

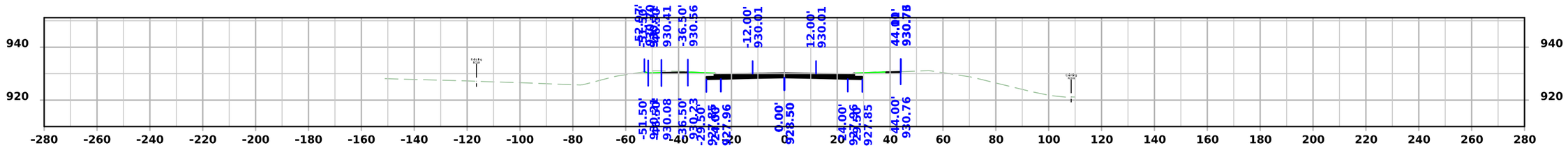
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.12** |
|---|---|---|---|---|---|

11:21:22 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

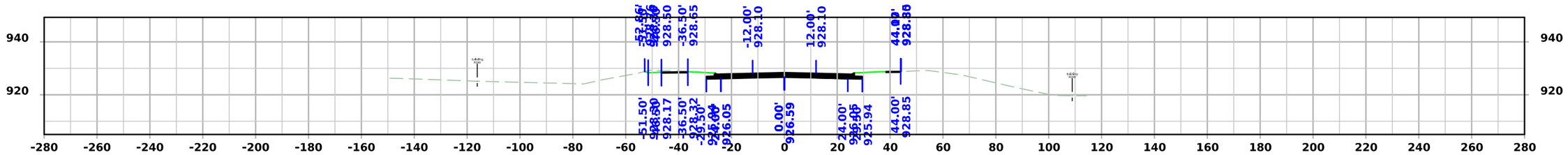
# Greenhill Rd



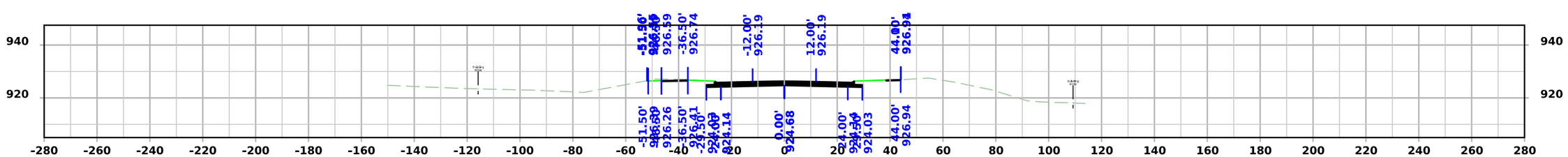

STA 34+50.00




STA 34+00.00




STA 33+50.00

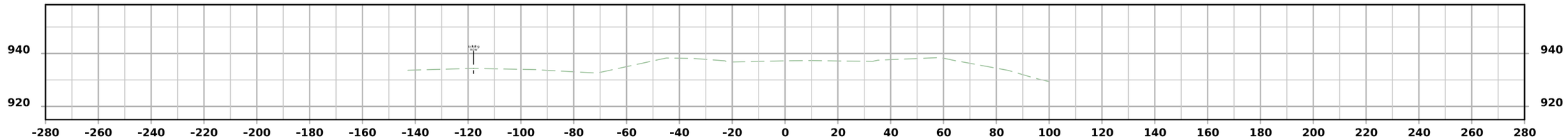



STA 33+00.00

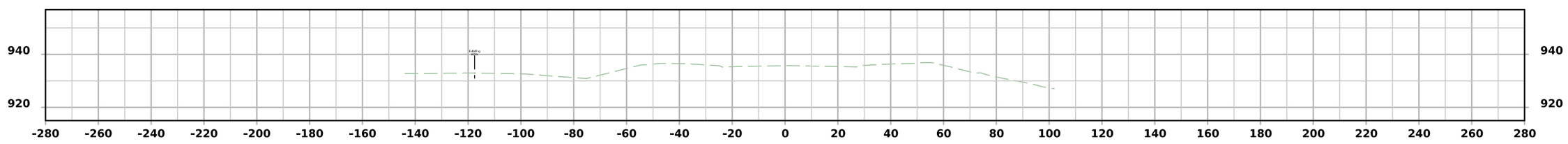
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.13** |
|---|---|---|---|---|---|

11:21:24 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

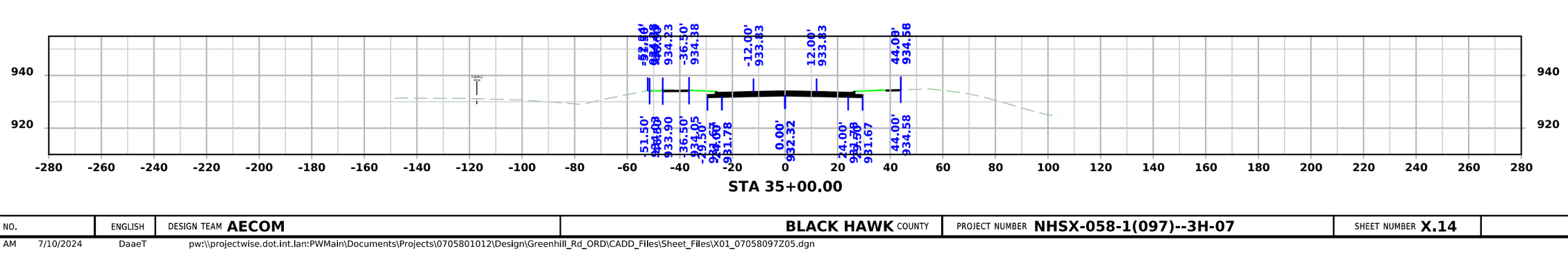
# Greenhill Rd




STA 36+00.00




STA 35+50.00

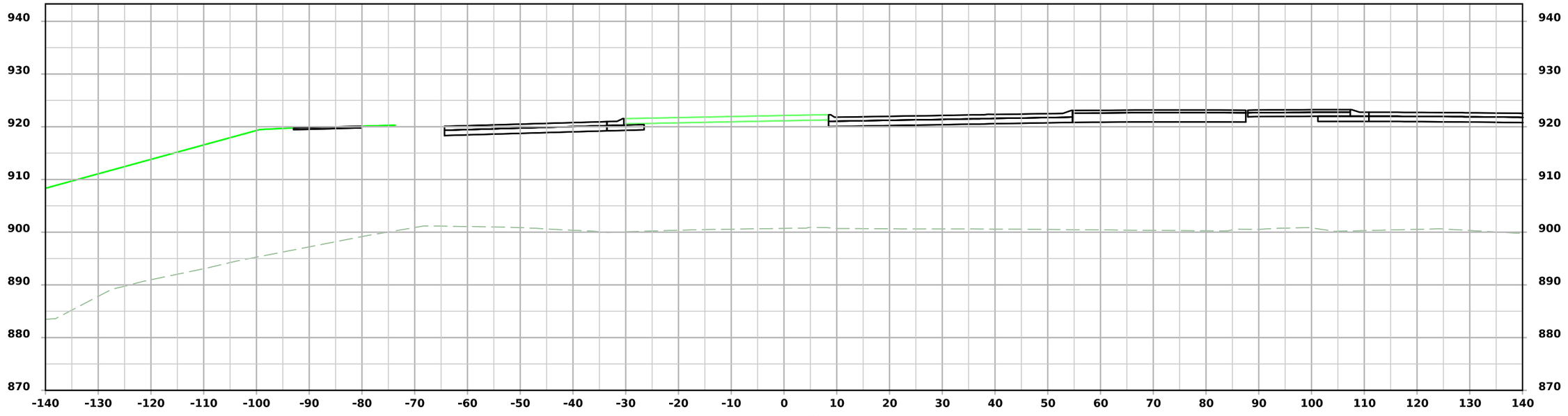



STA 35+00.00

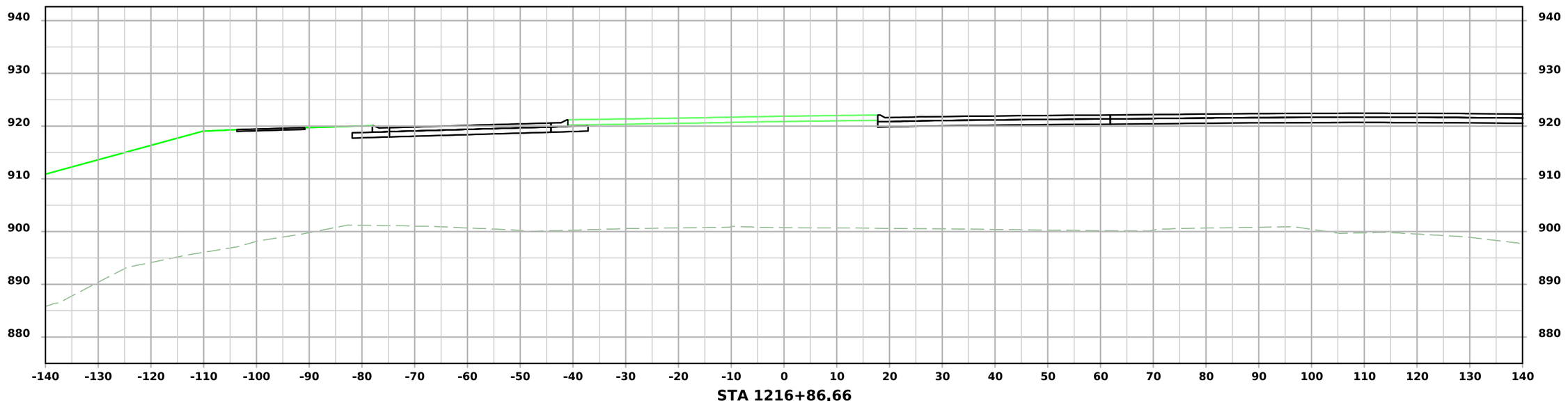
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **X.14** | |
|---|---|---|---|---|---|---|

11:21:25 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\X01_07058097Z05.dgn

# Ramp A




**STA 1217+00.00**

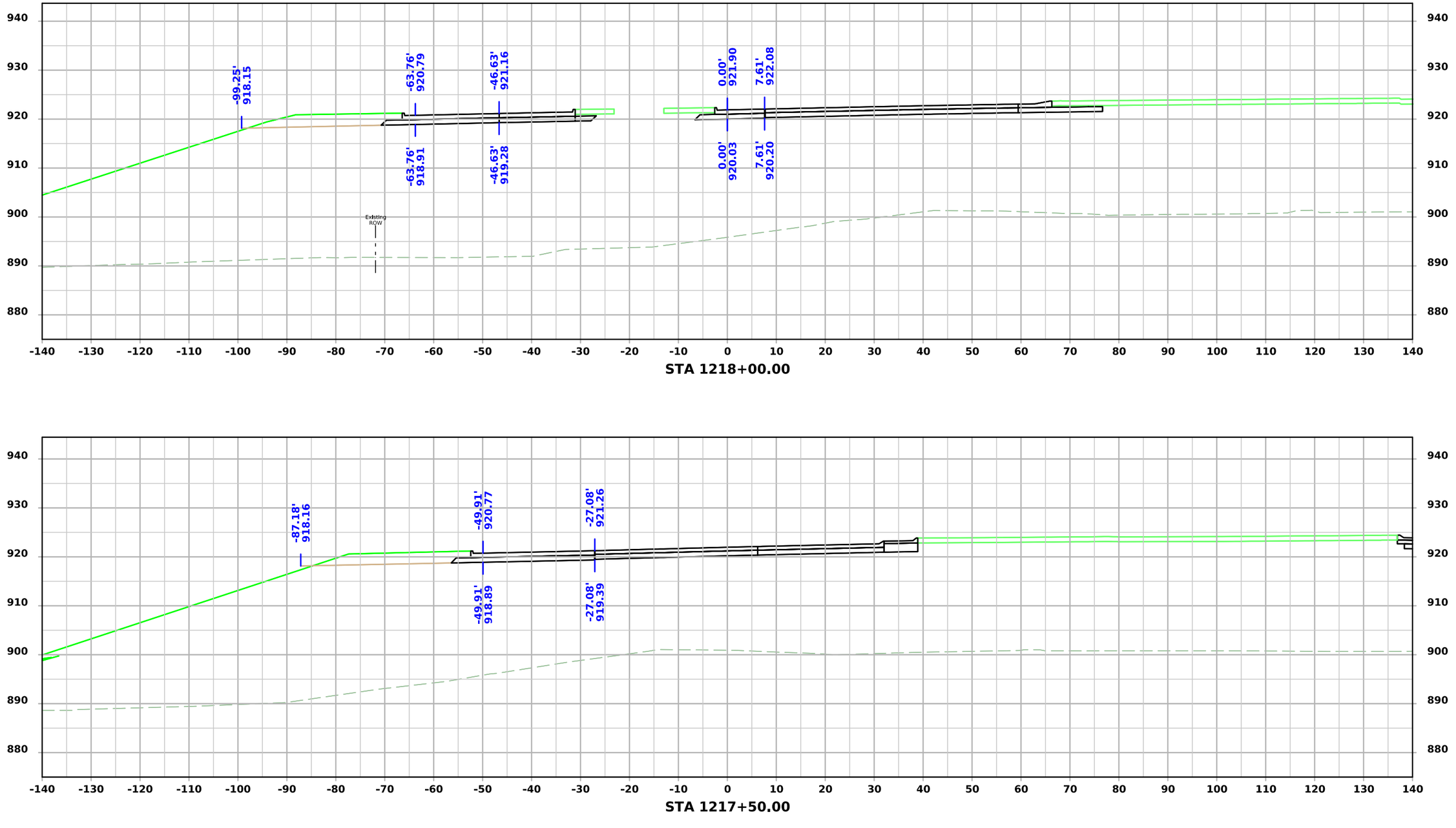



**STA 1216+86.66**

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.1** |
|---|---|---|---|---|---|

11:24:31 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhilI_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

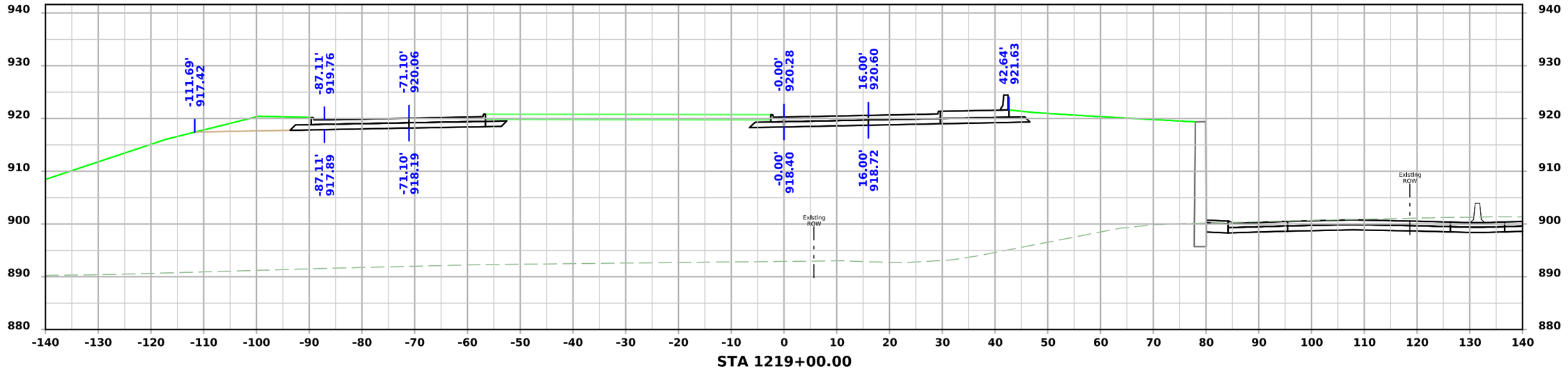
# Ramp A



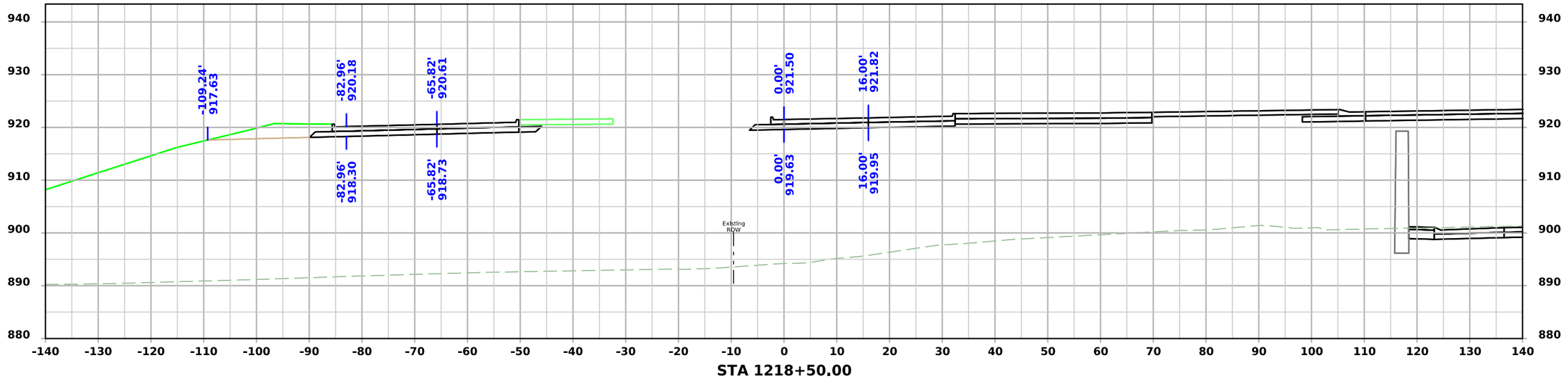

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.2** |
|---|---|---|---|---|---|

11:24:33 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp A




STA 1219+00.00

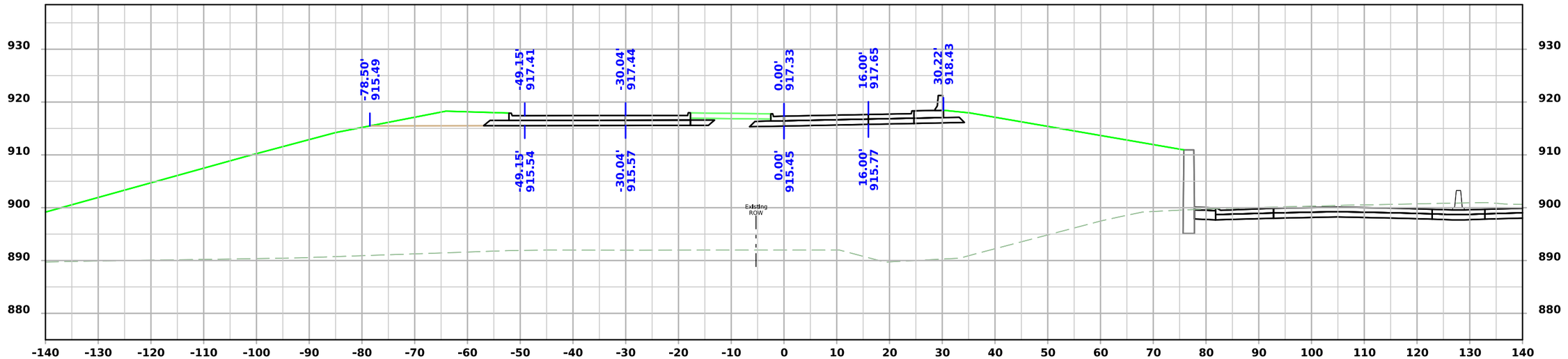



STA 1218+50.00

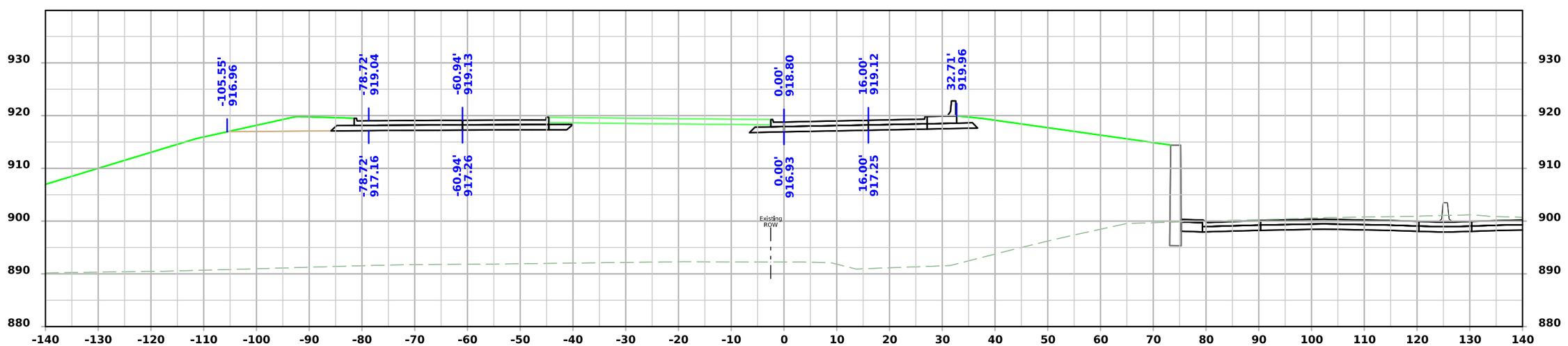
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.3** | |
|---|---|---|---|---|---|---|

11:24:35 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp A




STA 1220+00.00

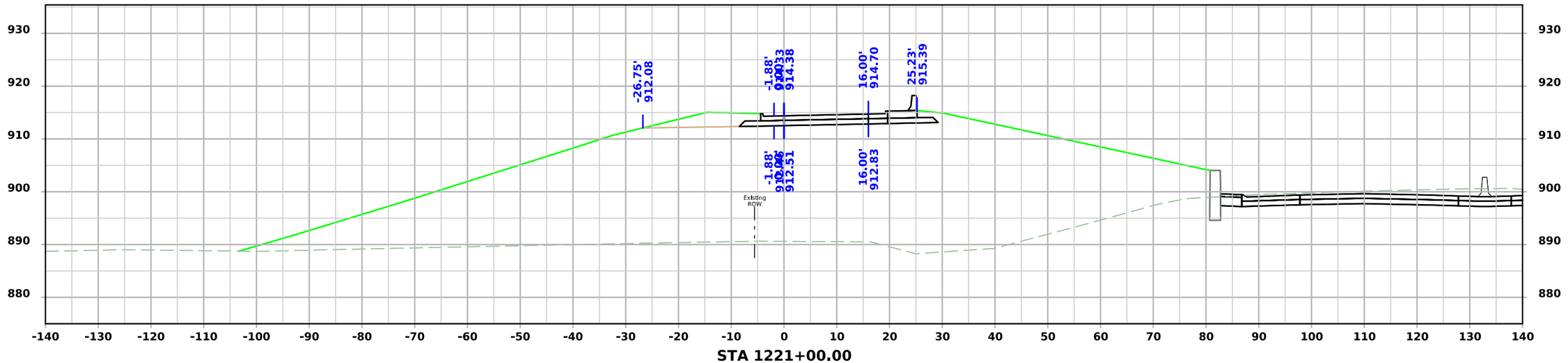



STA 1219+50.00

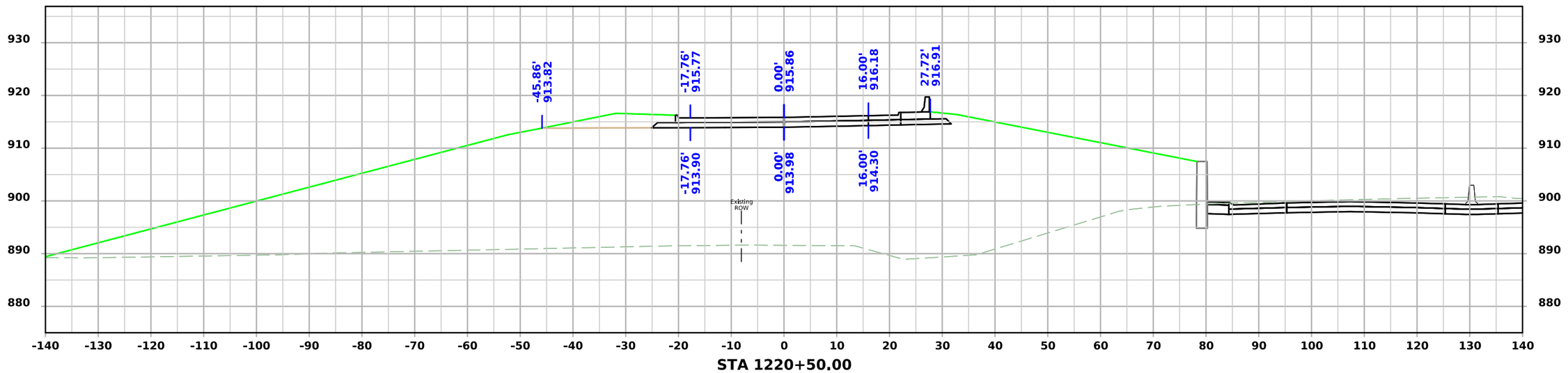
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.4** |
|---|---|---|---|---|---|

11:24:37 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp A




STA 1221+00.00

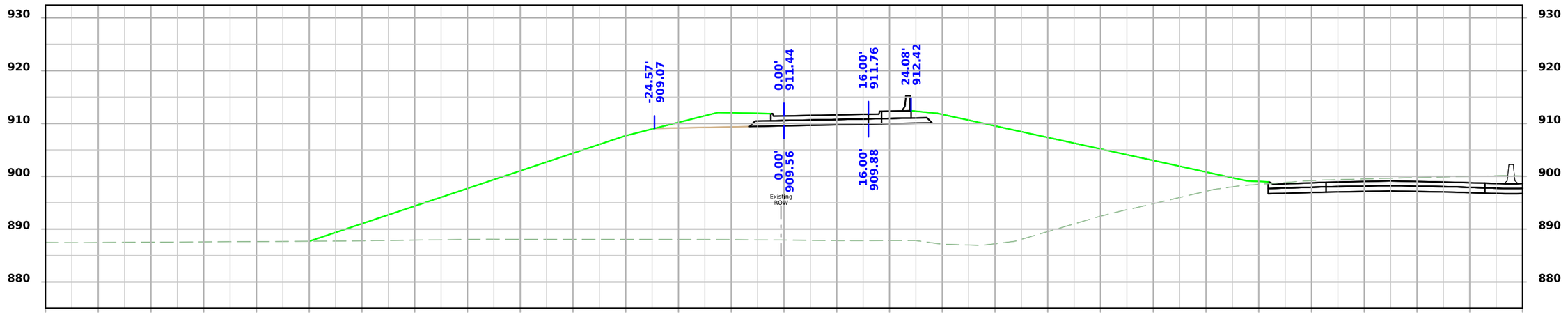



STA 1220+50.00

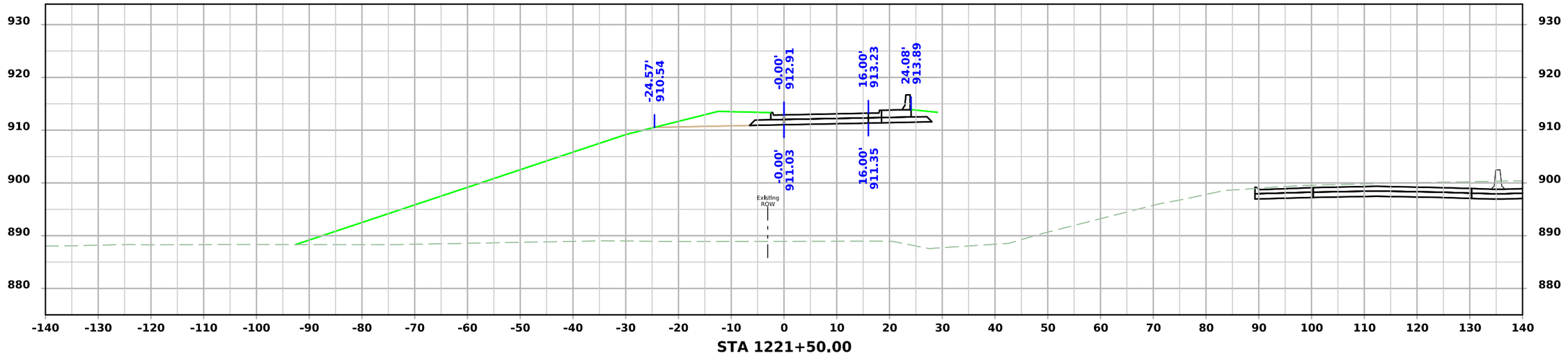
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.5** | |
|---|---|---|---|---|---|---|

11:24:38 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp A




STA 1222+00.00

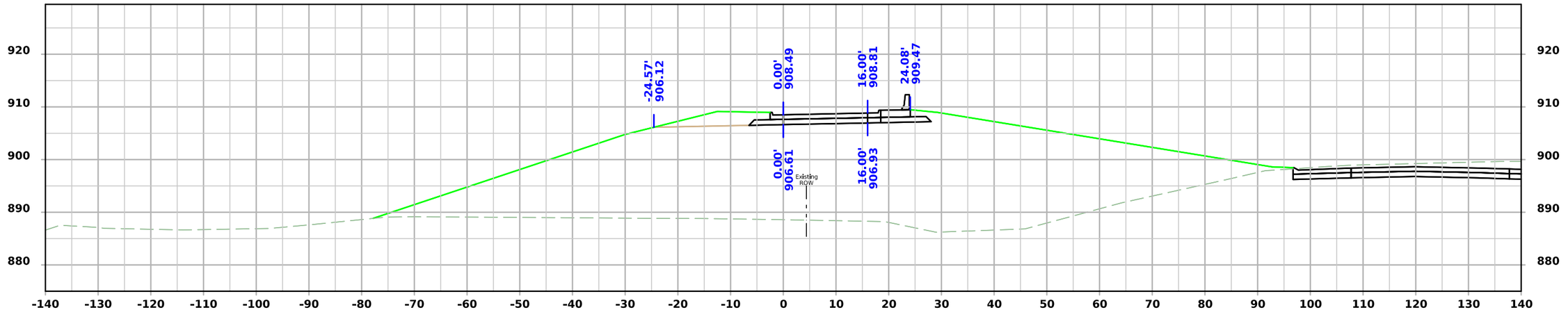



STA 1221+50.00

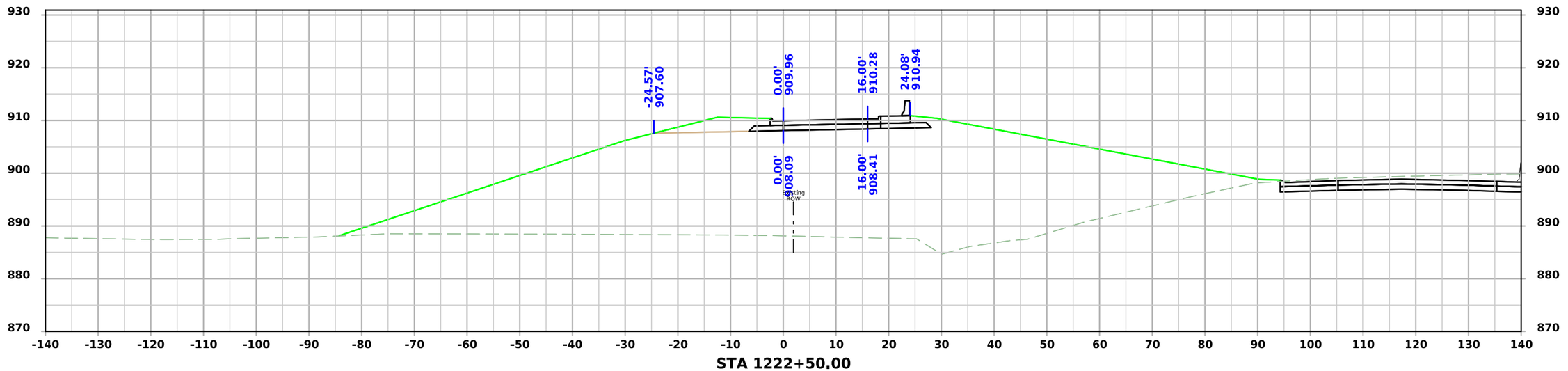
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.6** |
|---|---|---|---|---|---|

11:24:39 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp A




STA 1223+00.00

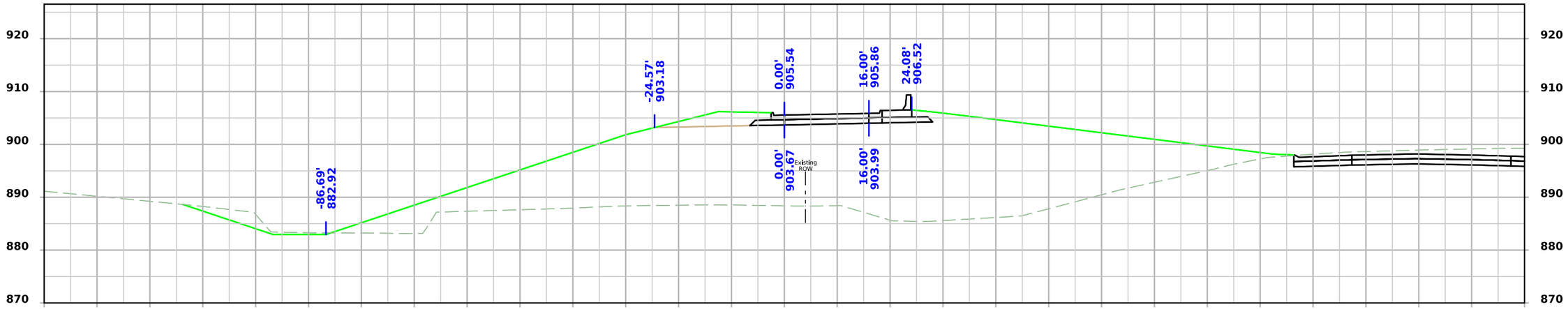



STA 1222+50.00

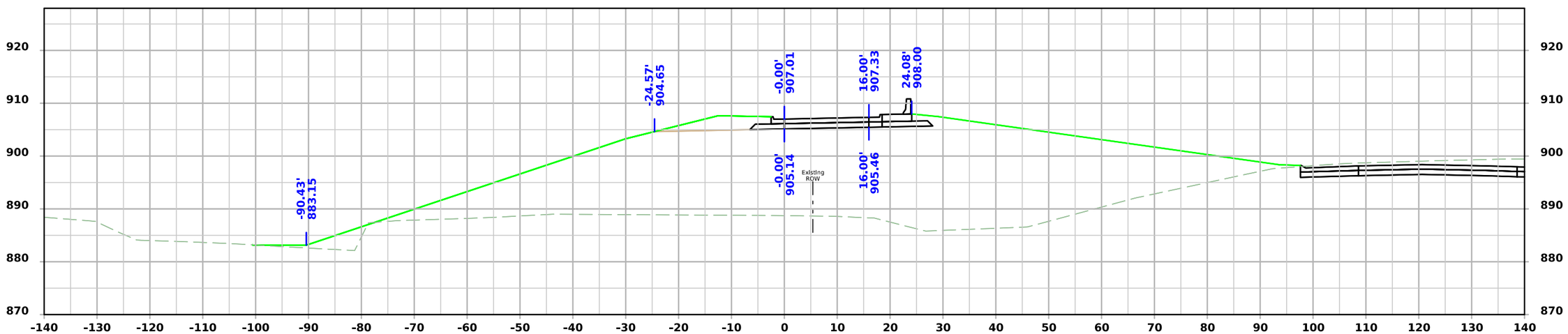
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.7** |
|---|---|---|---|---|---|

11:24:40 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp A




STA 1224+00.00

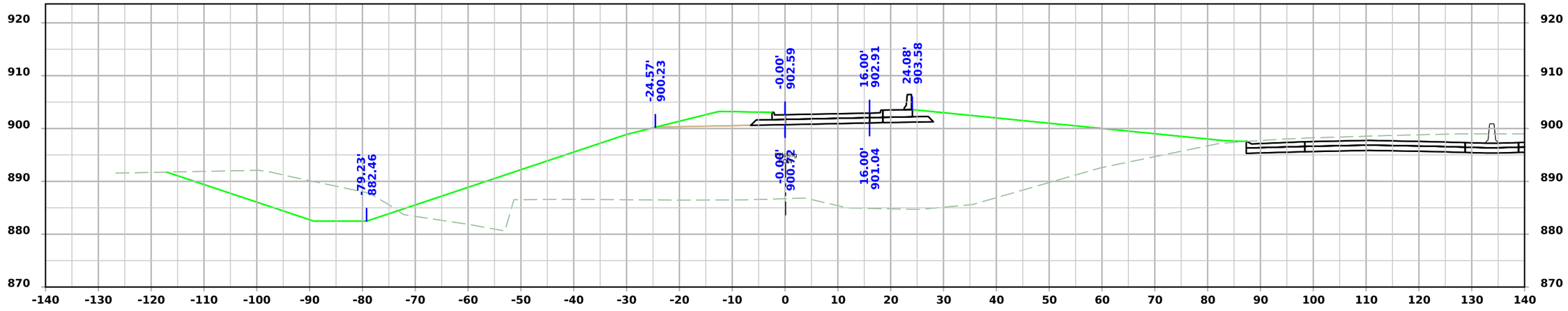



STA 1223+50.00

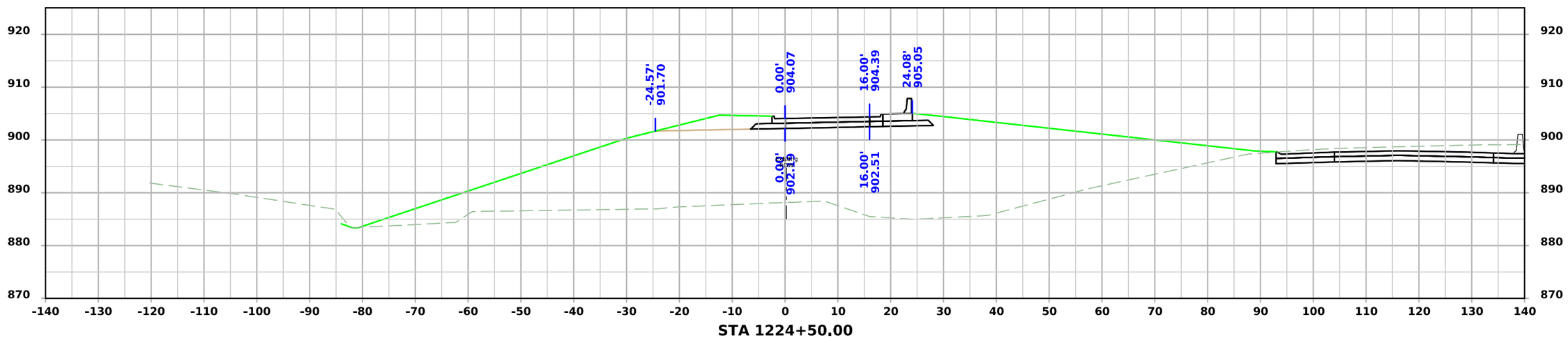
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.8** |
|---|---|---|---|---|---|

11:24:42 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp A




STA 1225+00.00

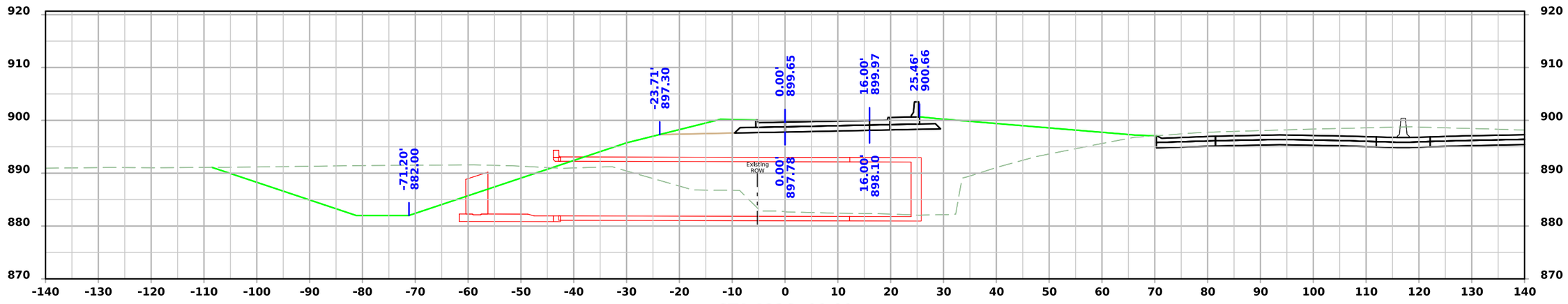



STA 1224+50.00

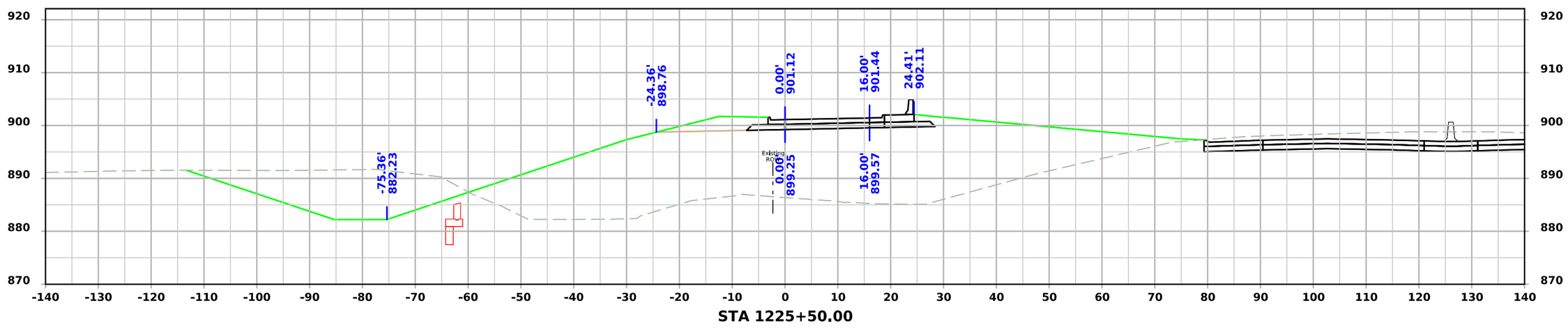
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.9** |
|---|---|---|---|---|---|

11:24:43 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp A




STA 1226+00.00

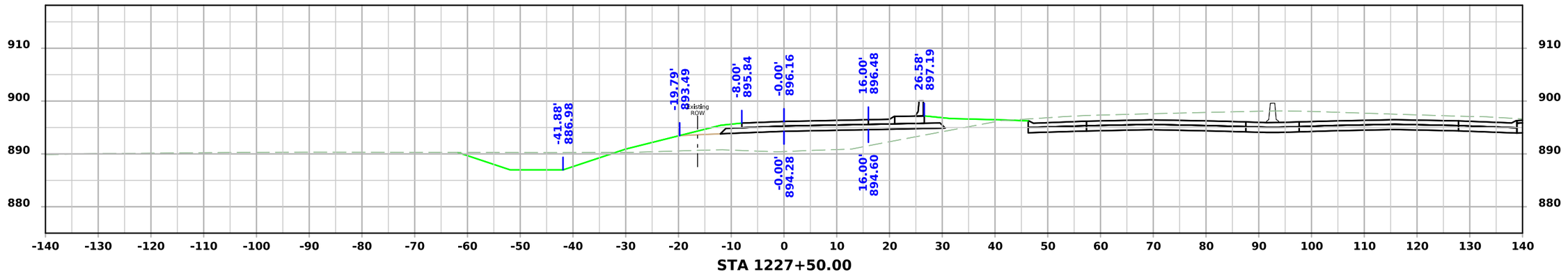



STA 1225+50.00

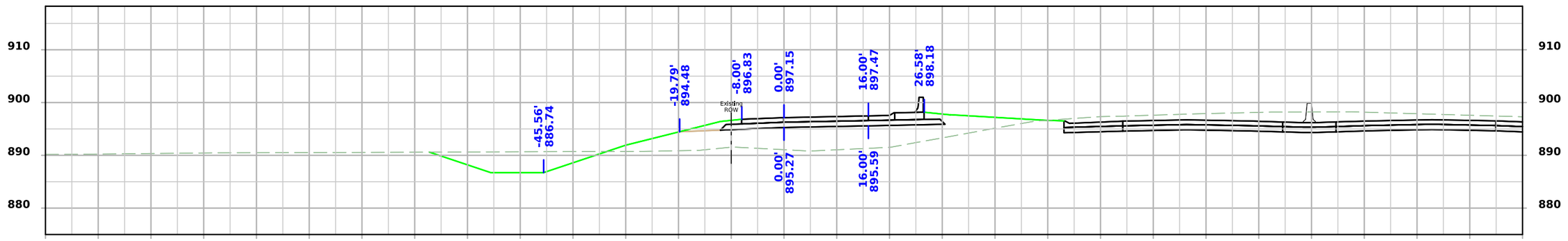
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.10** |
|---|---|---|---|---|---|

11:24:45 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

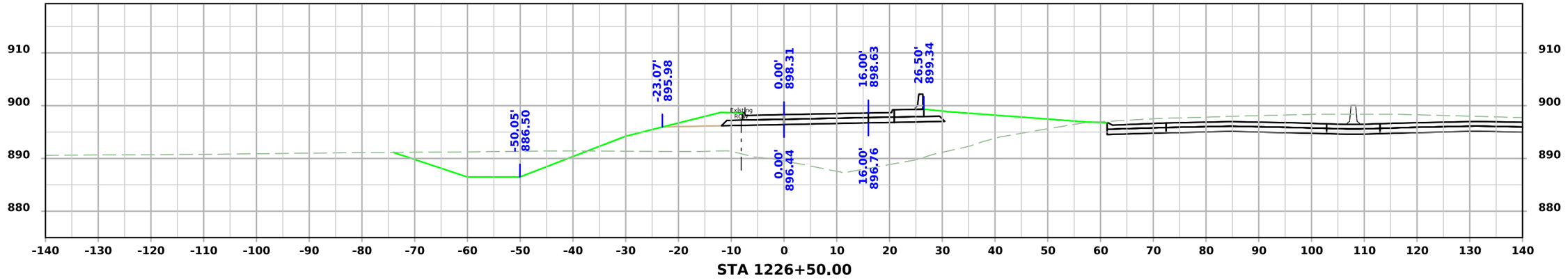
# Ramp A




**STA 1227+50.00**




**STA 1227+00.00**

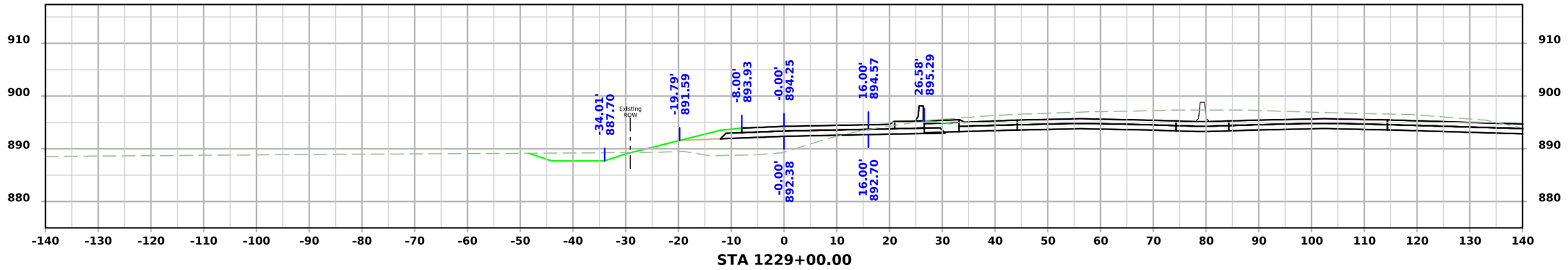



**STA 1226+50.00**

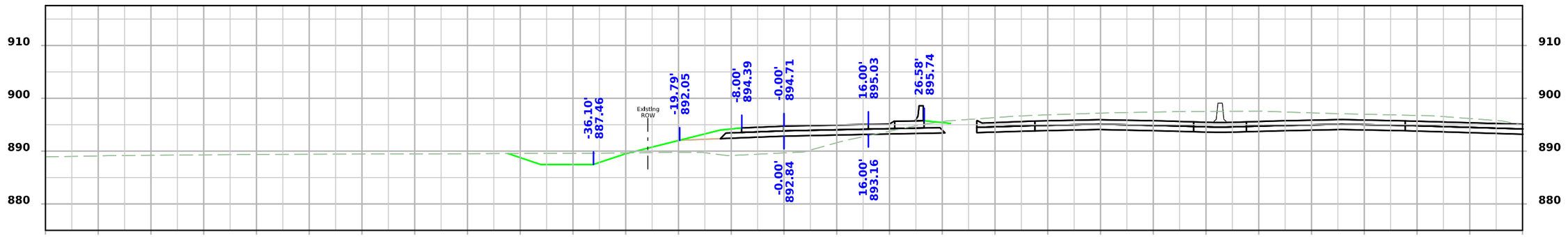
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.11** | |
|---|---|---|---|---|---|---|

11:24:46 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

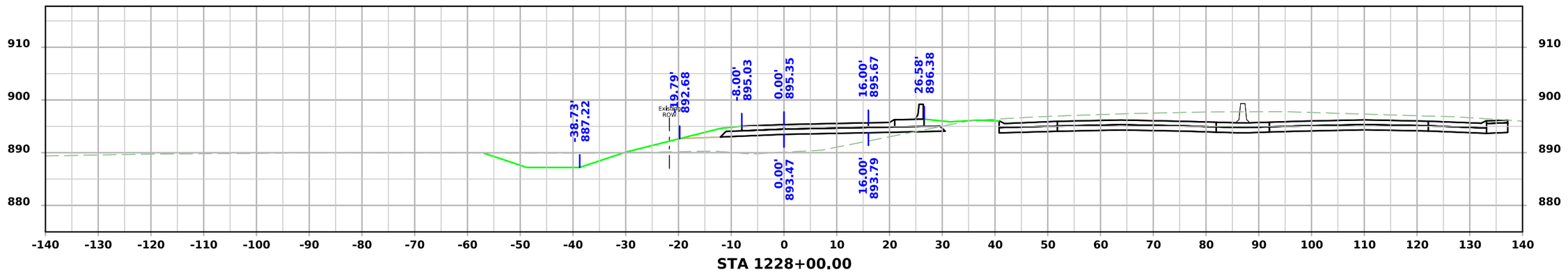
# Ramp A




STA 1229+00.00




STA 1228+50.00

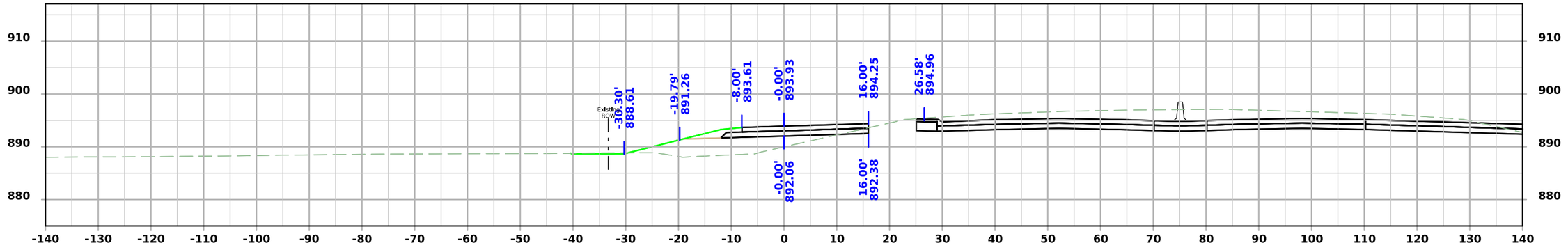



STA 1228+00.00

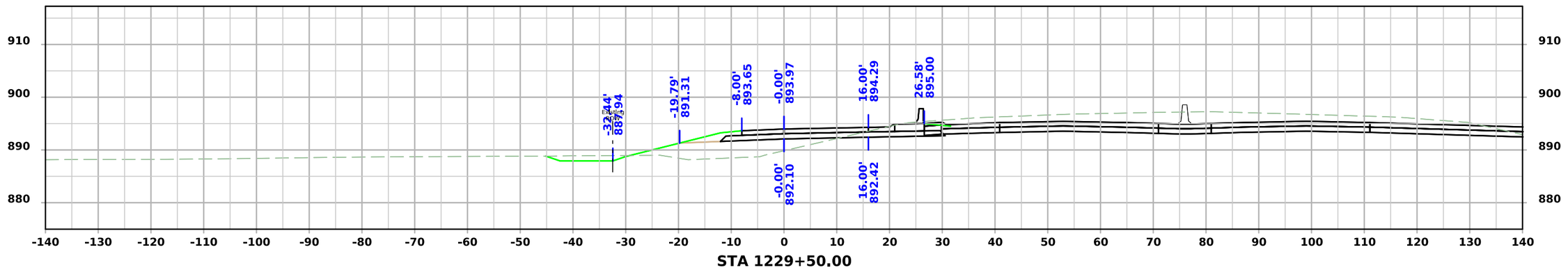
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.12** |
|---|---|---|---|---|---|

11:24:48 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp A




STA 1229+62.60

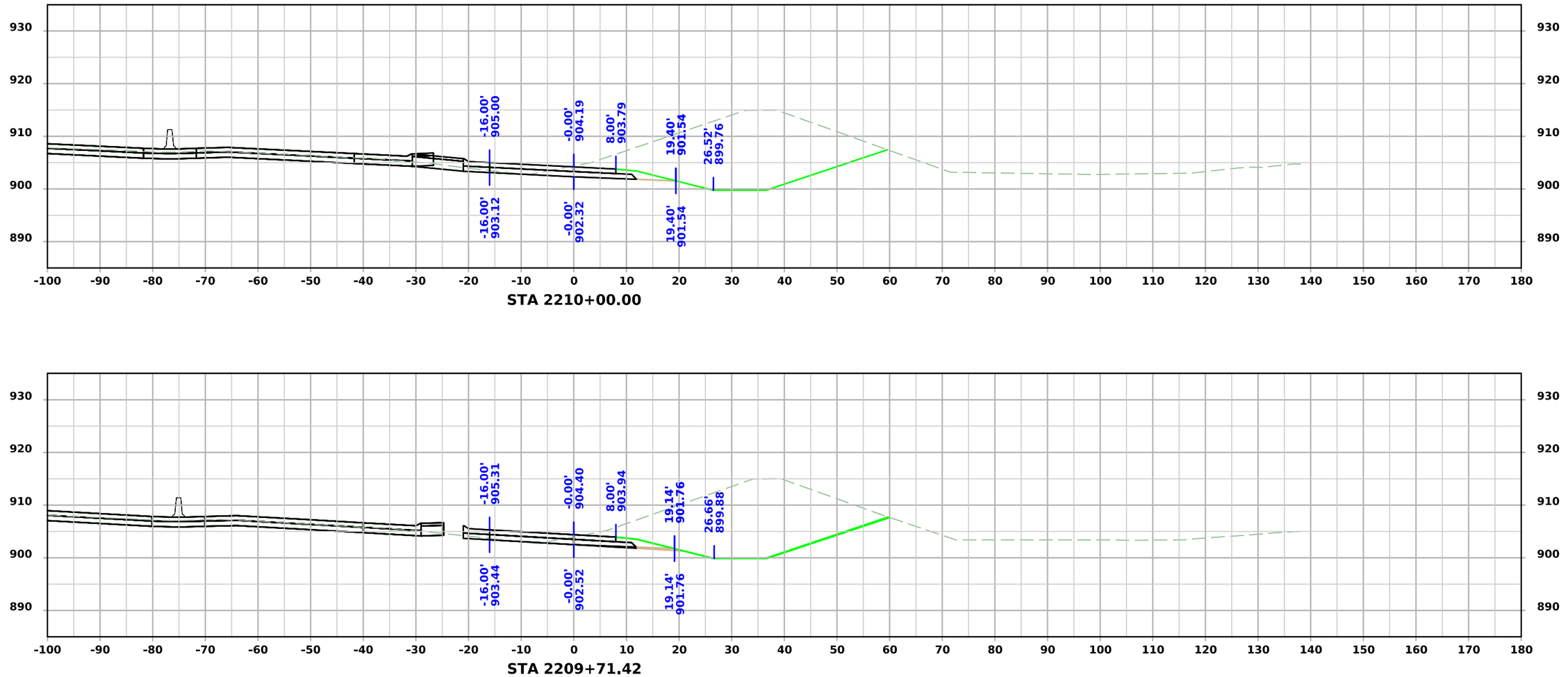



STA 1229+50.00

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.13** |
|---|---|---|---|---|---|

11:24:49 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

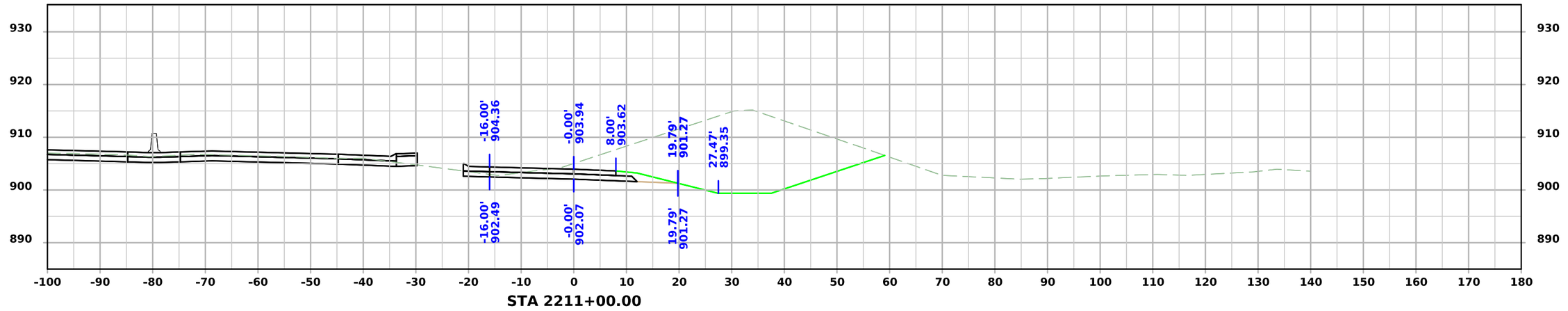
# Ramp B



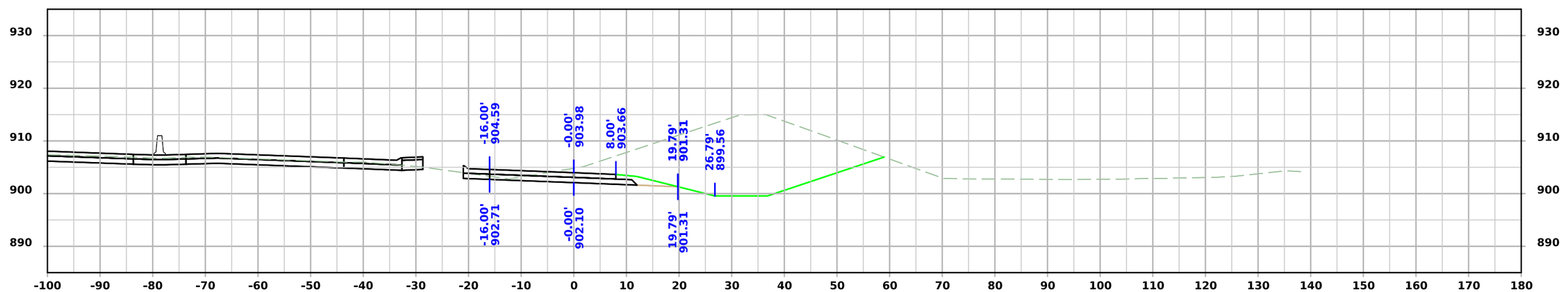

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.14 |
|---|---|---|---|---|---|

11:24:52 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B




STA 2211+00.00

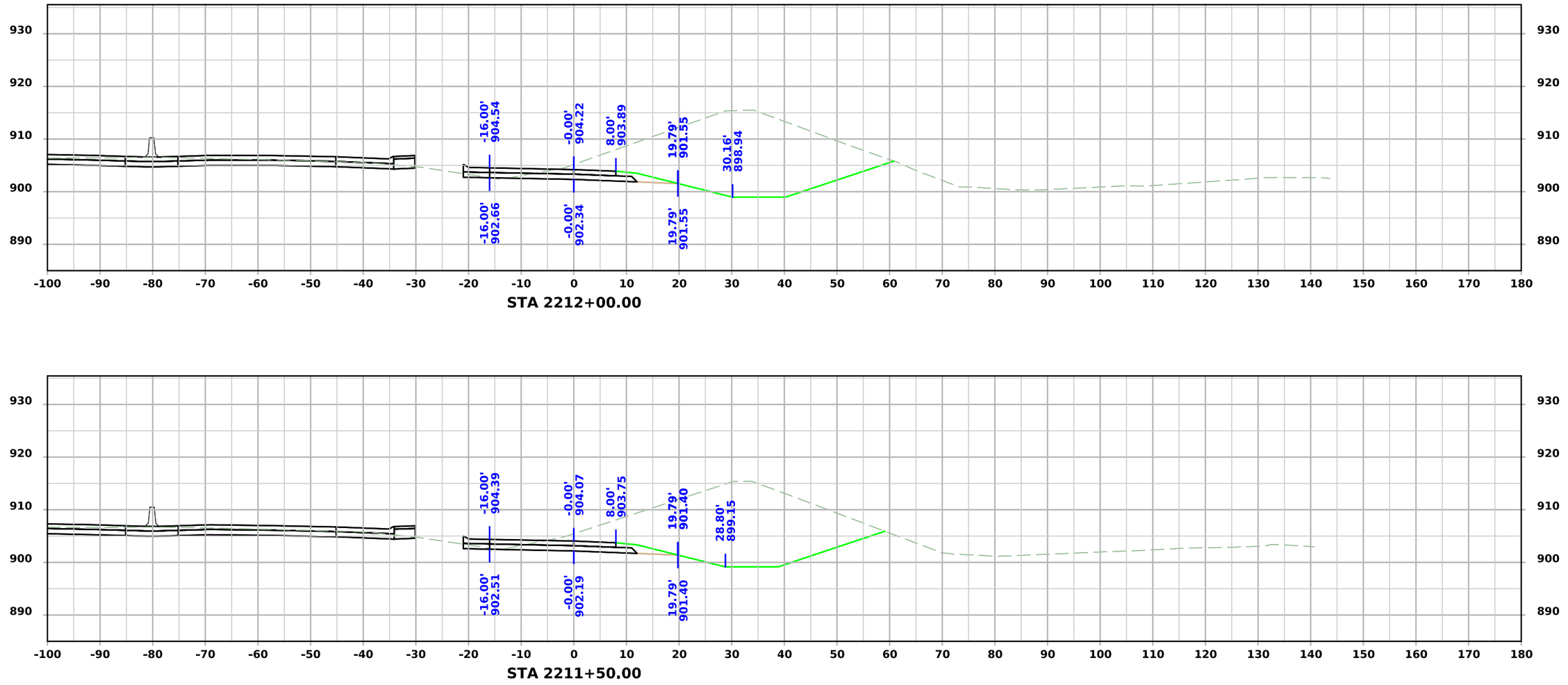



STA 2210+50.00

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.15 |
|---|---|---|---|---|---|

11:24:53 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

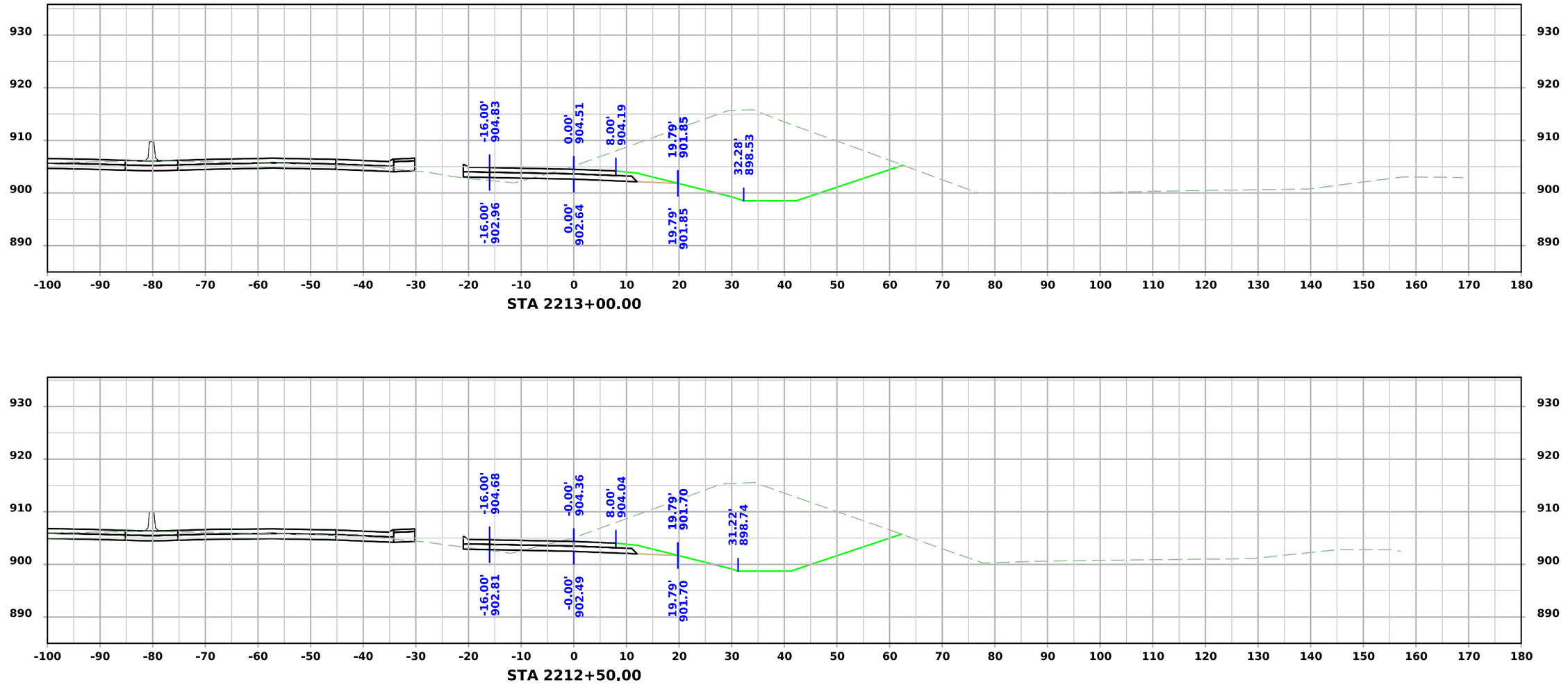
# Ramp B




| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.16 |
|---|---|---|---|---|---|

11:24:54 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

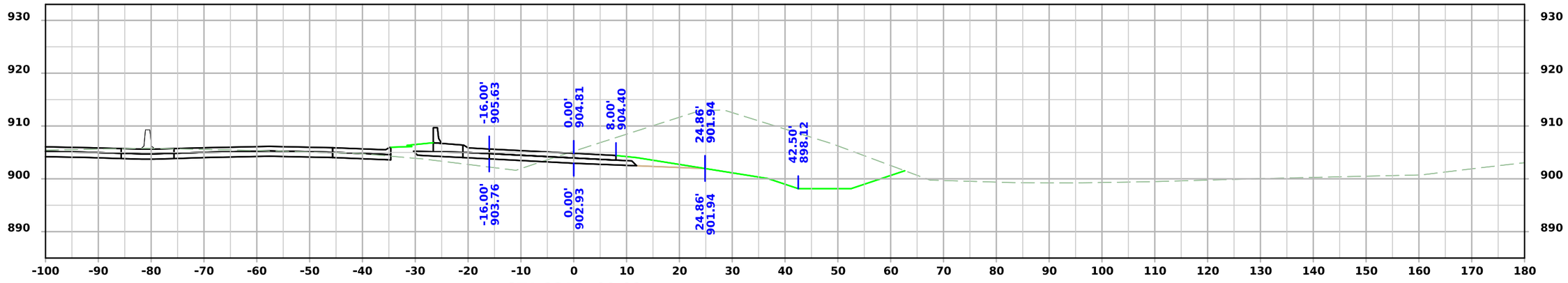
# Ramp B



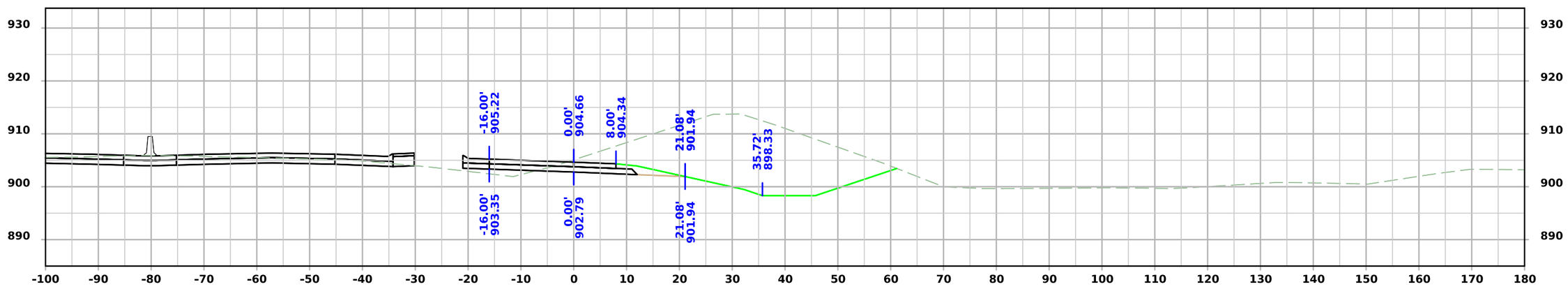

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.17 |
|---|---|---|---|---|---|

11:24:55 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B




**STA 2214+00.00**

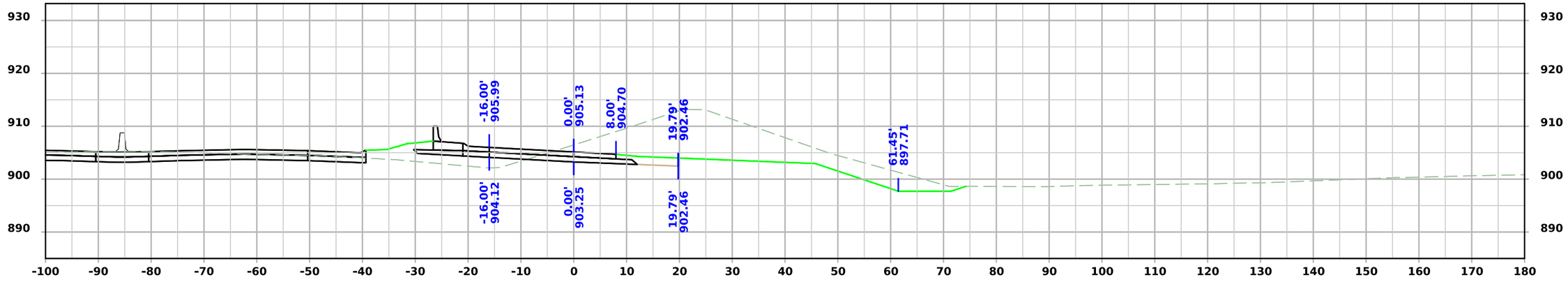



**STA 2213+50.00**

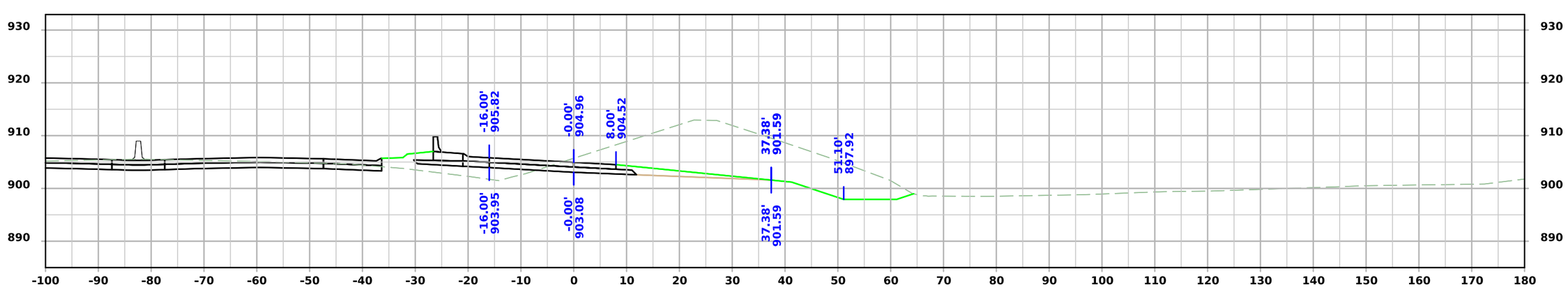
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.18 |
|---|---|---|---|---|---|

11:24:56 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B




STA 2215+00.00

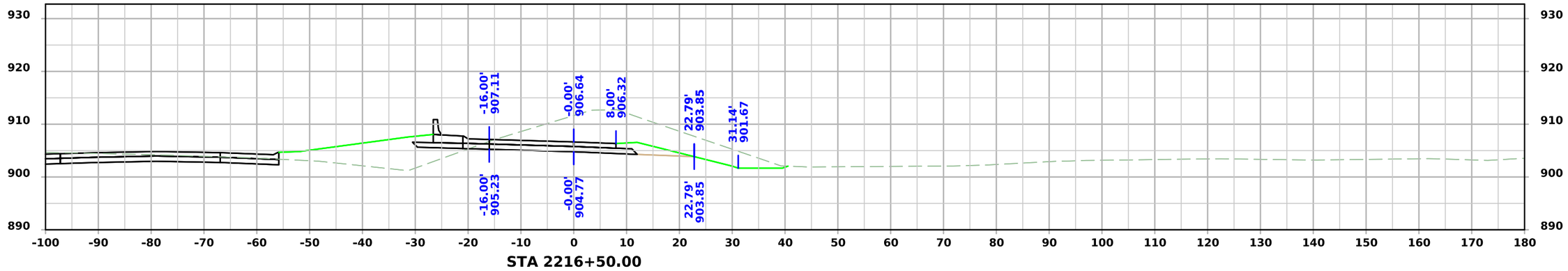



STA 2214+50.00

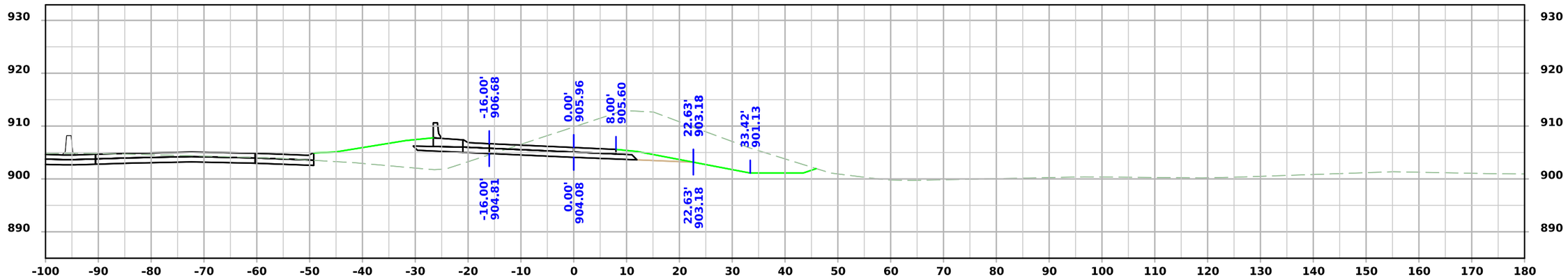
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.19 | |
|---|---|---|---|---|---|---|

11:24:57 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

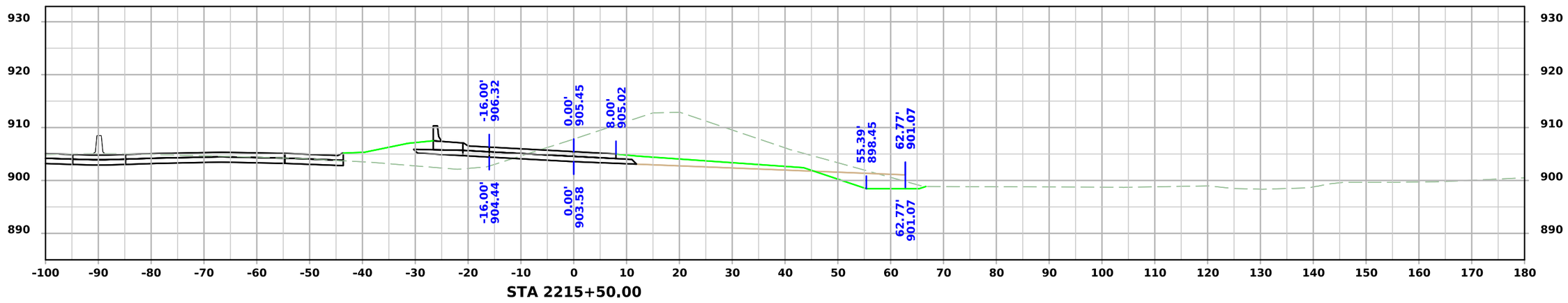
# Ramp B




STA 2216+50.00




STA 2216+00.00



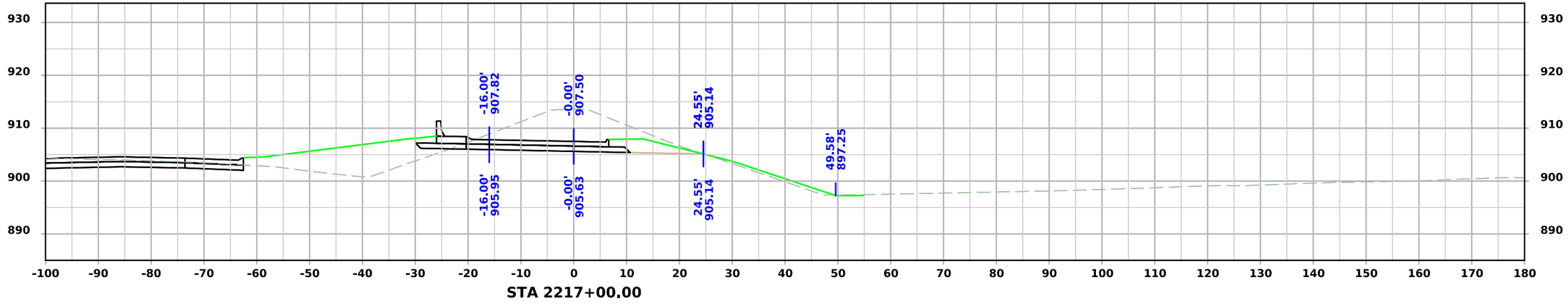

STA 2215+50.00

| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.20 | |
|---|---|---|---|---|---|---|

11:24:58 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B


STA 2217+50.00

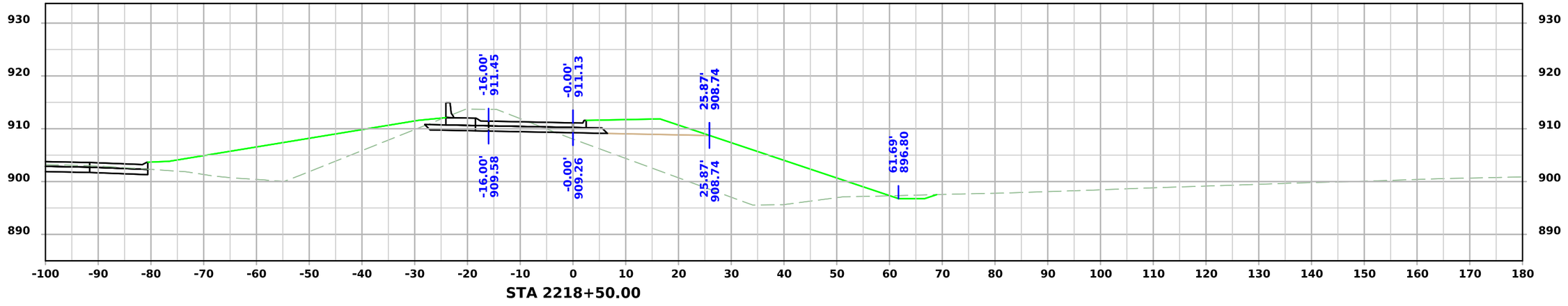



STA 2217+00.00

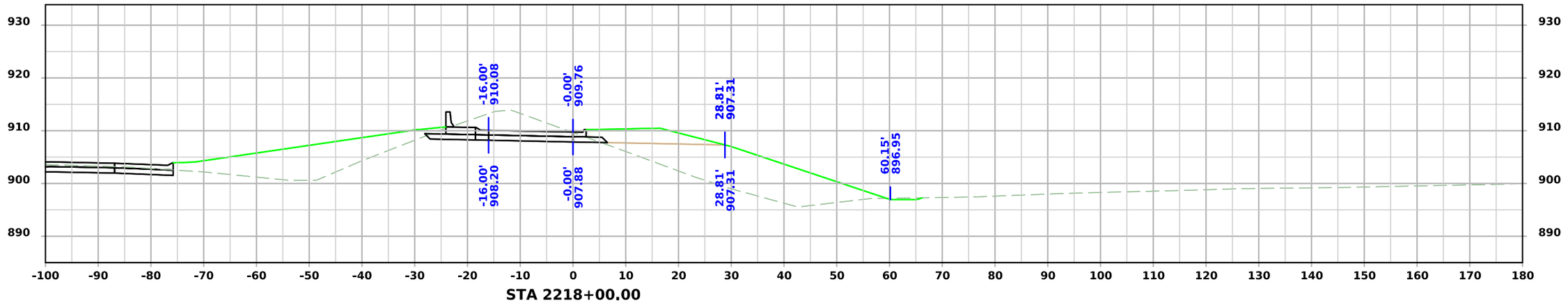
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.21 |
|---|---|---|---|---|---|

11:24:59 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhiII_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B




STA 2218+50.00

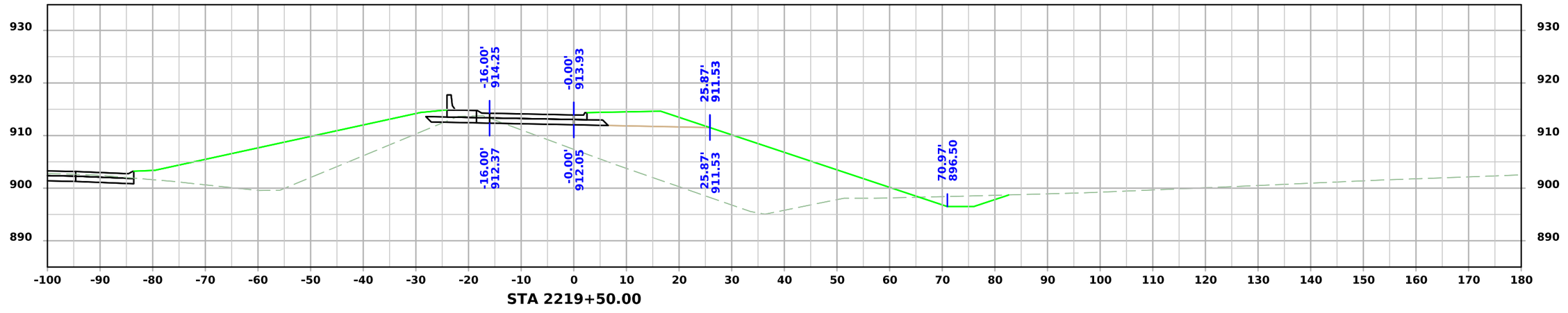



STA 2218+00.00

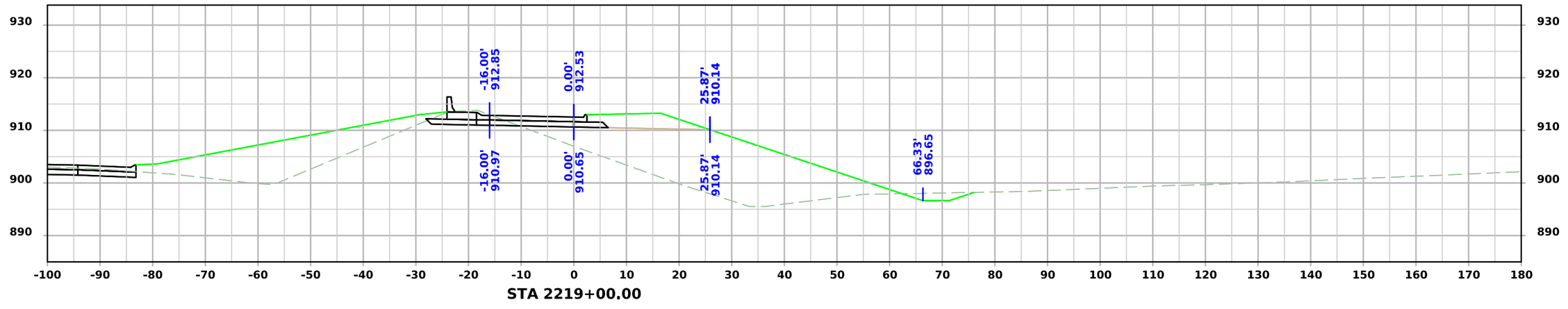
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.22 | |
|---|---|---|---|---|---|---|

11:25:00 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B




STA 2219+50.00

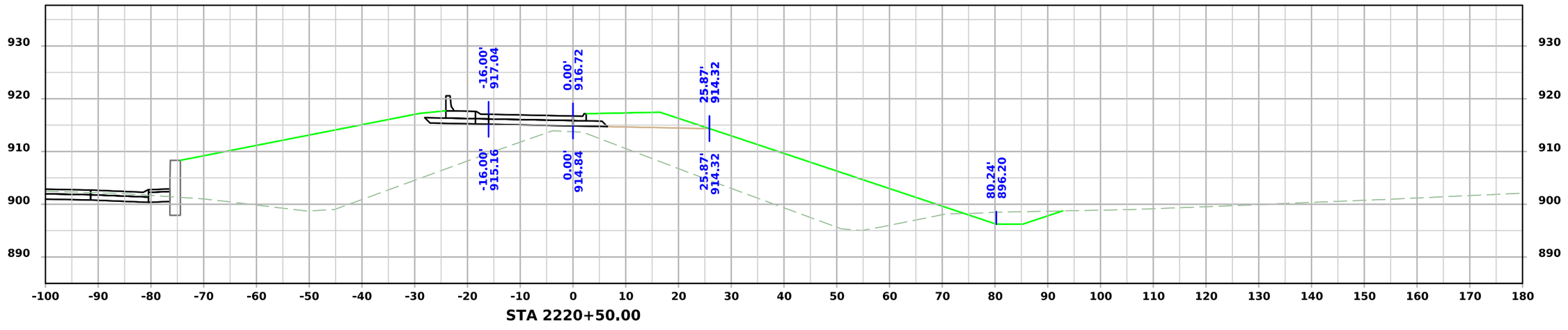



STA 2219+00.00

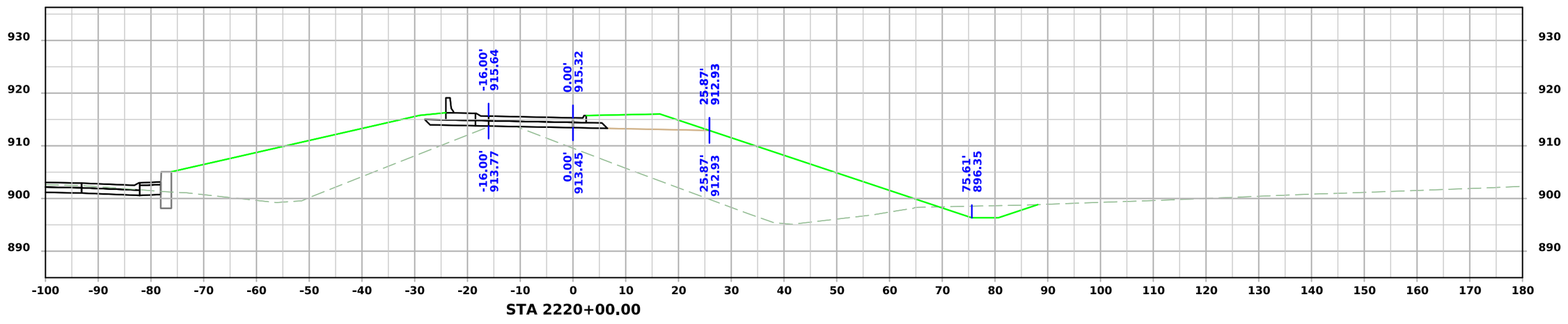
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.23 | |
|---|---|---|---|---|---|---|

11:25:01 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B




STA 2220+50.00

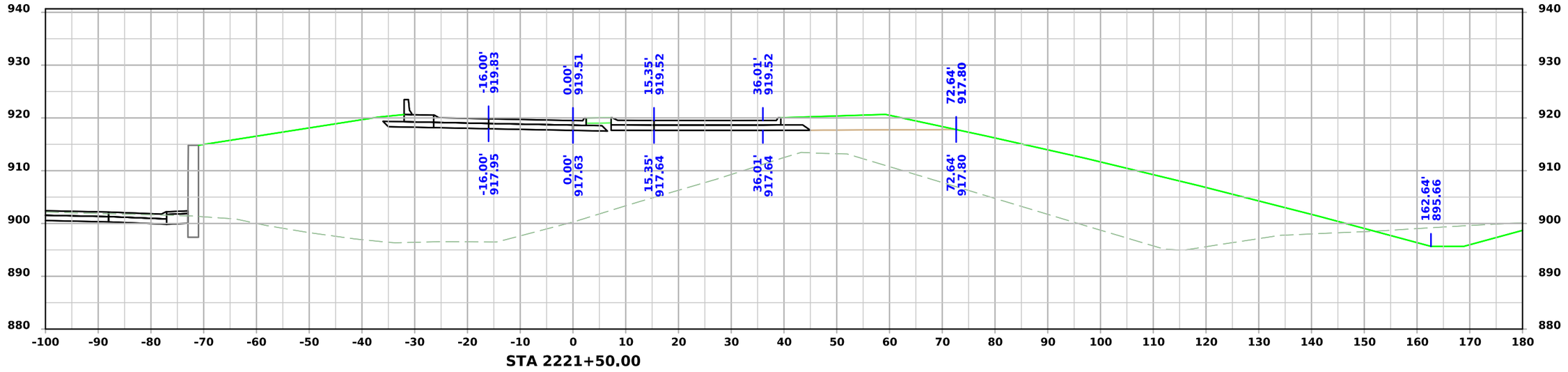



STA 2220+00.00

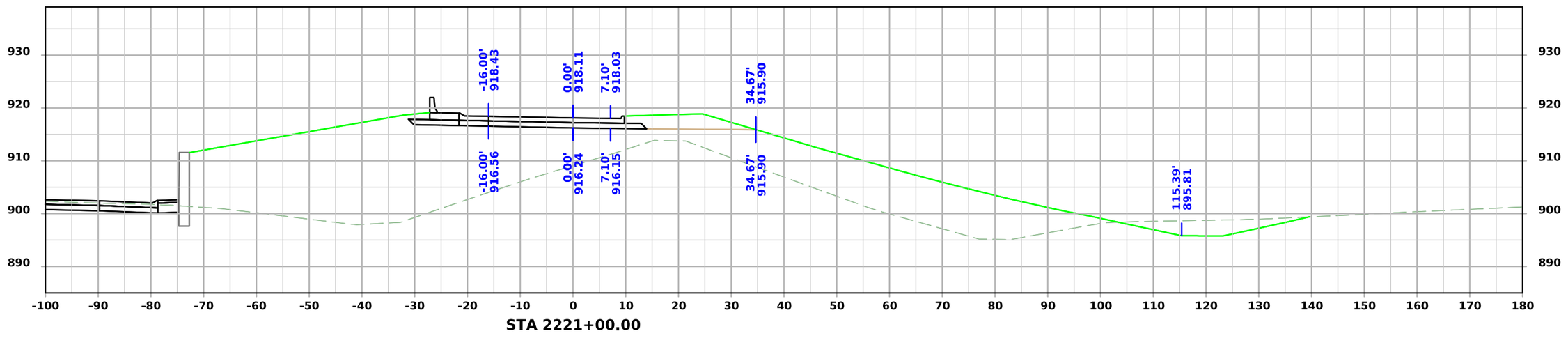
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.24 |
|---|---|---|---|---|---|

11:25:02 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B




STA 2221+50.00

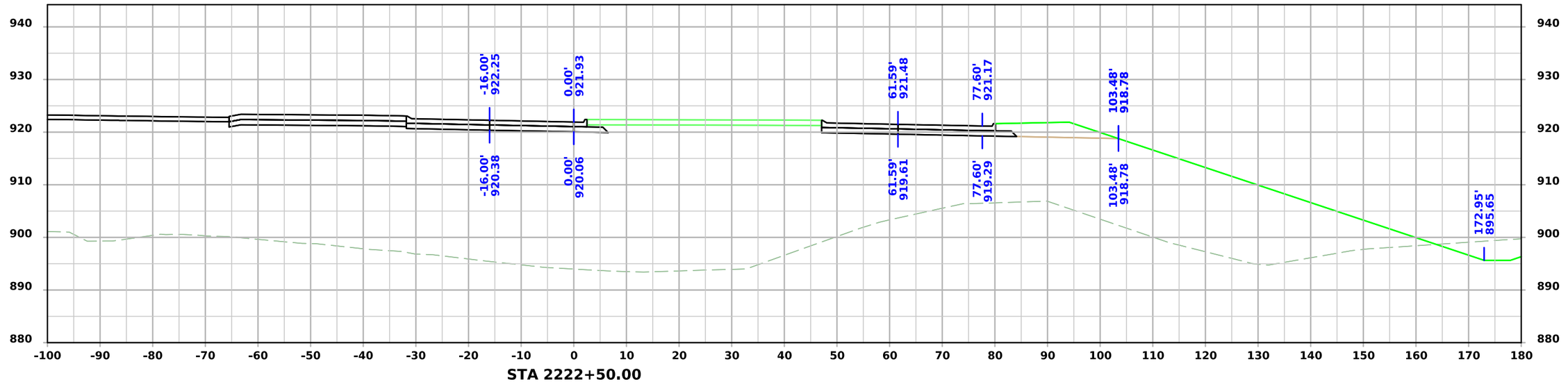



STA 2221+00.00

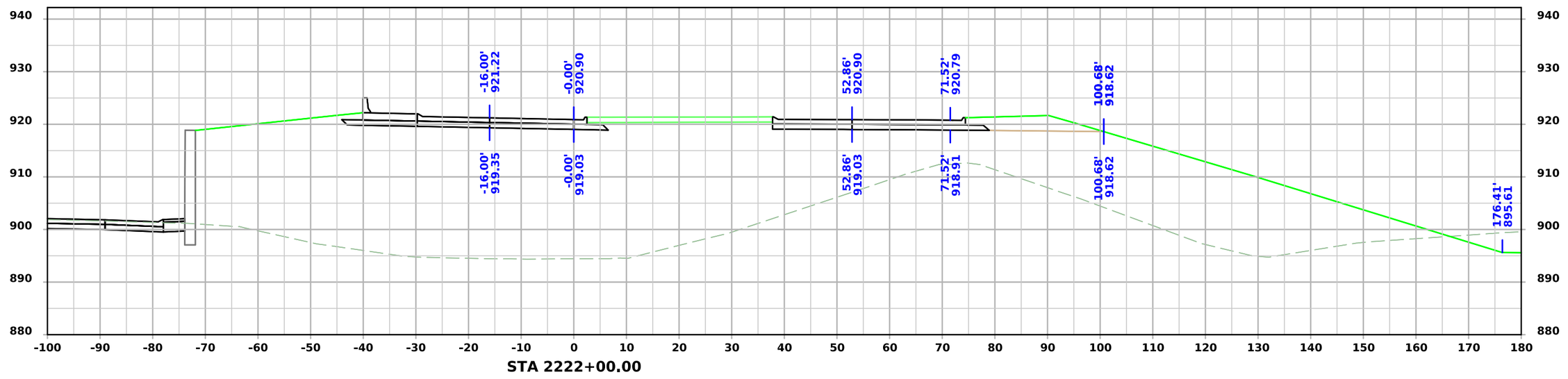
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.25 |
|---|---|---|---|---|---|

11:25:03 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B




STA 2222+50.00

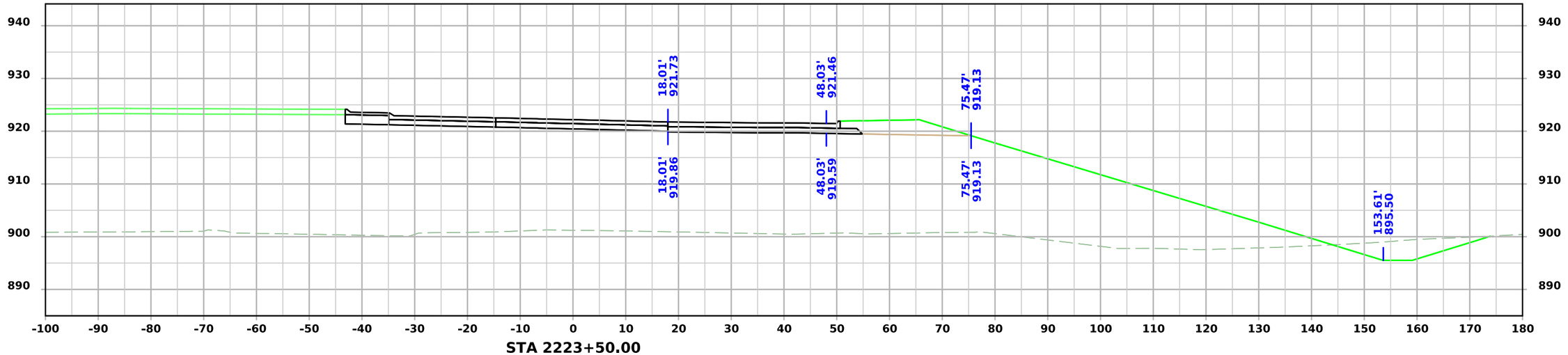



STA 2222+00.00

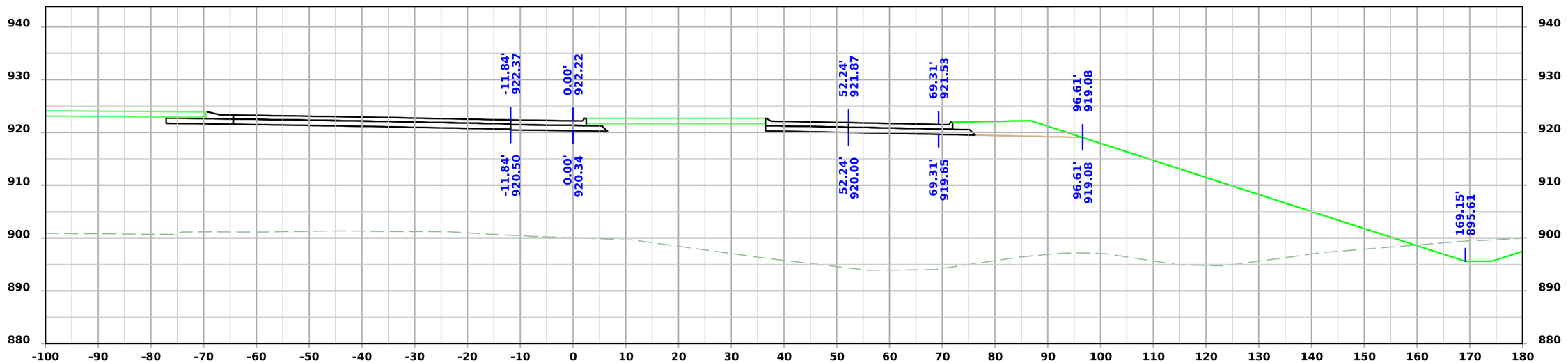
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.26 |
|---|---|---|---|---|---|

11:25:05 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B




STA 2223+50.00

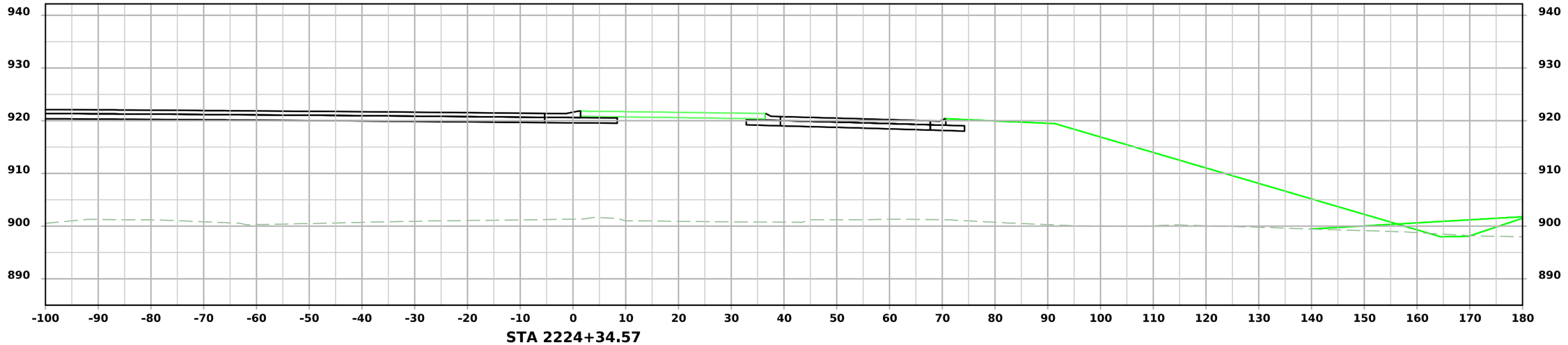



STA 2223+00.00

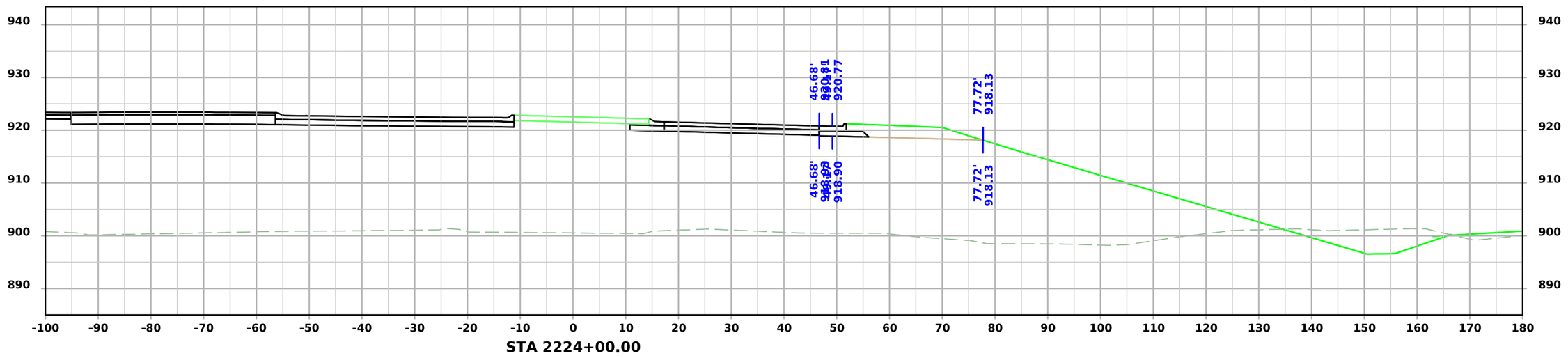
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.27 |
|---|---|---|---|---|---|

11:25:06 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp B




STA 2224+34.57

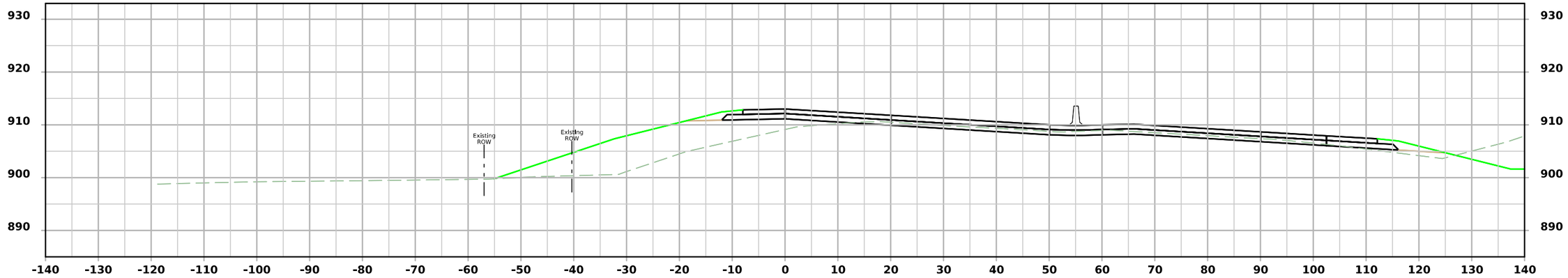



STA 2224+00.00

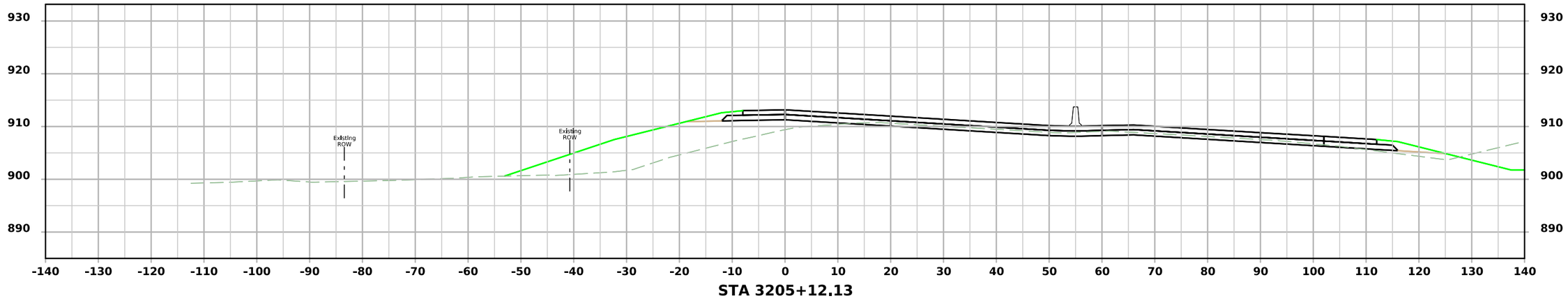
| FILE NO. | ENGLISH | DESIGN TEAM AECOM | BLACK HAWK COUNTY | PROJECT NUMBER NHSX-058-1(097)--3H-07 | SHEET NUMBER Y.28 |
|---|---|---|---|---|---|

11:25:08 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




**STA 3205+50.00**

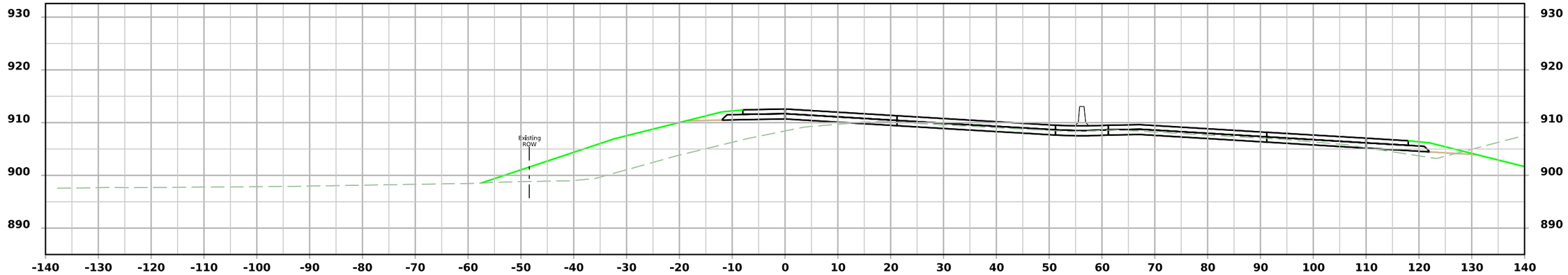



**STA 3205+12.13**

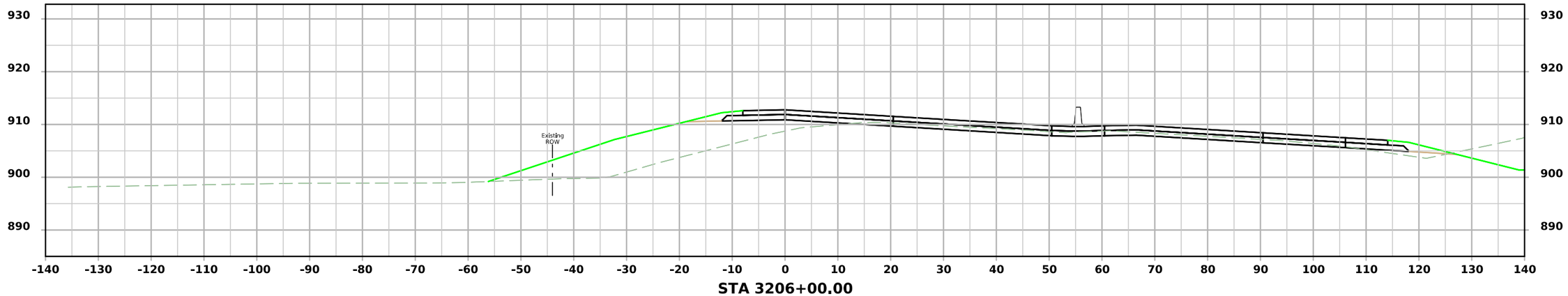
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.29** |
|---|---|---|---|---|---|

11:25:09 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




**STA 3206+50.00**

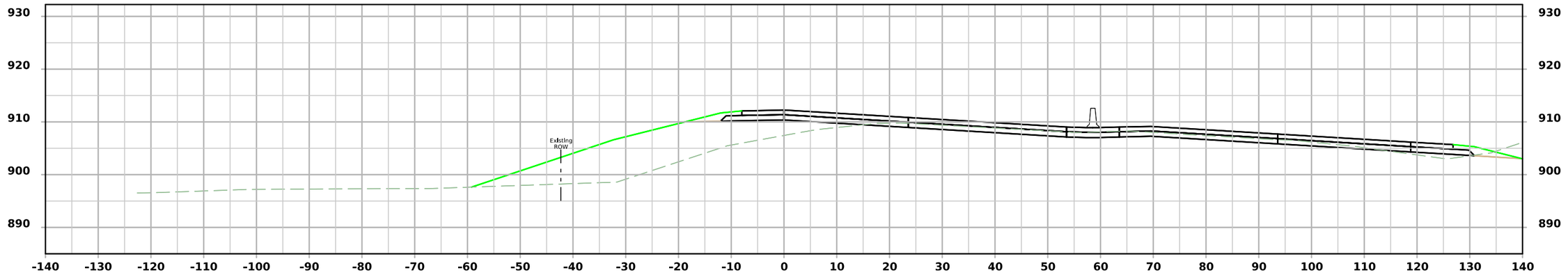



**STA 3206+00.00**

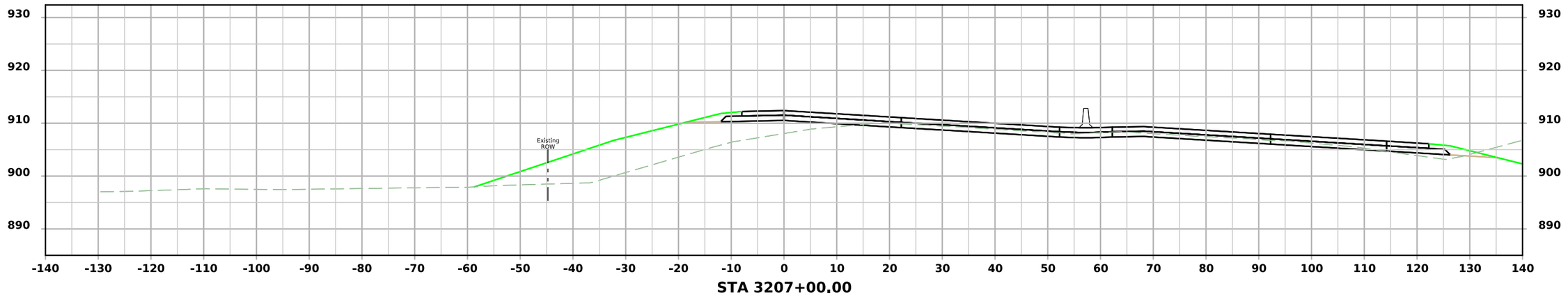
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.30** |
|---|---|---|---|---|---|

11:25:10 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




**STA 3207+50.00**

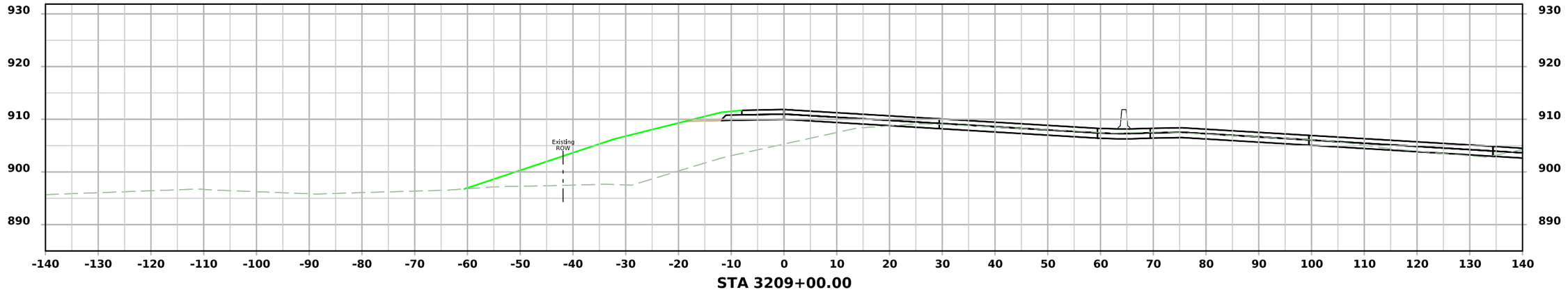



**STA 3207+00.00**

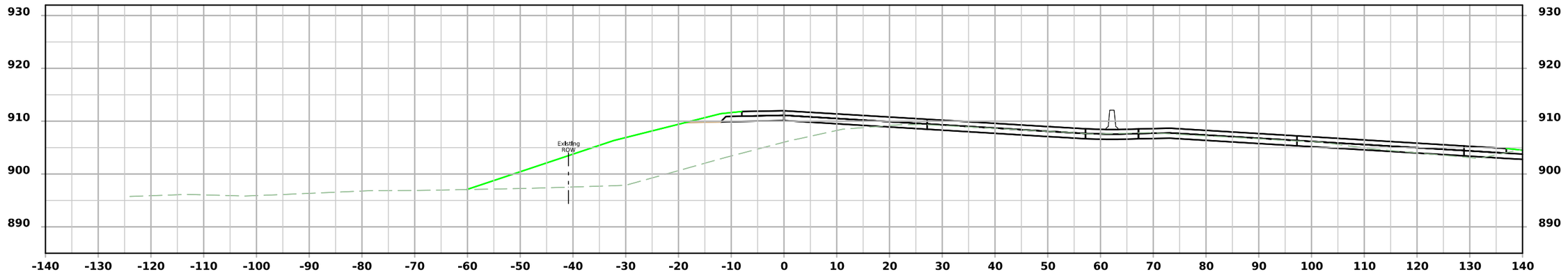
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.31** |
|---|---|---|---|---|---|

11:25:11 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

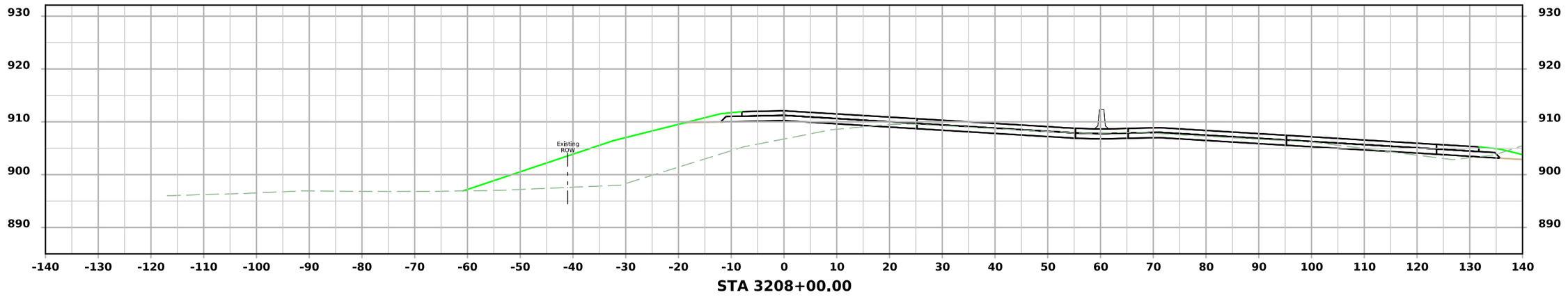
# Ramp C




**STA 3209+00.00**




**STA 3208+50.00**

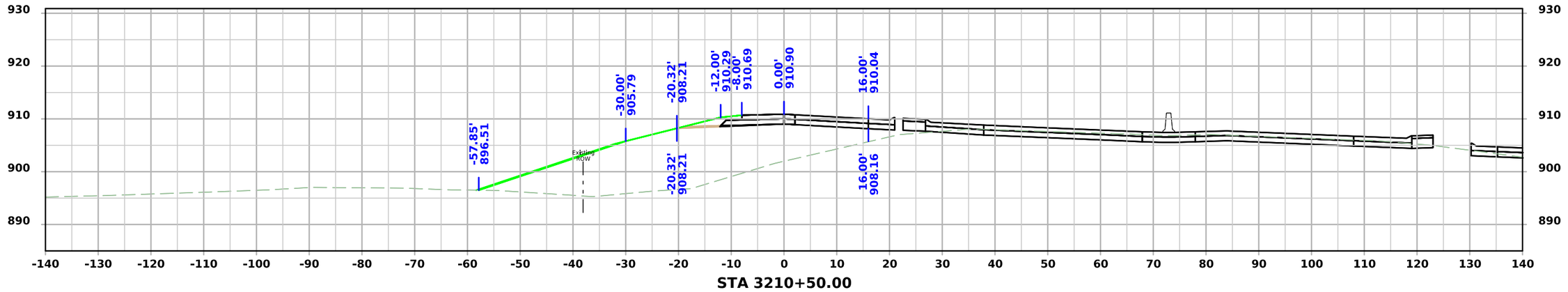



**STA 3208+00.00**

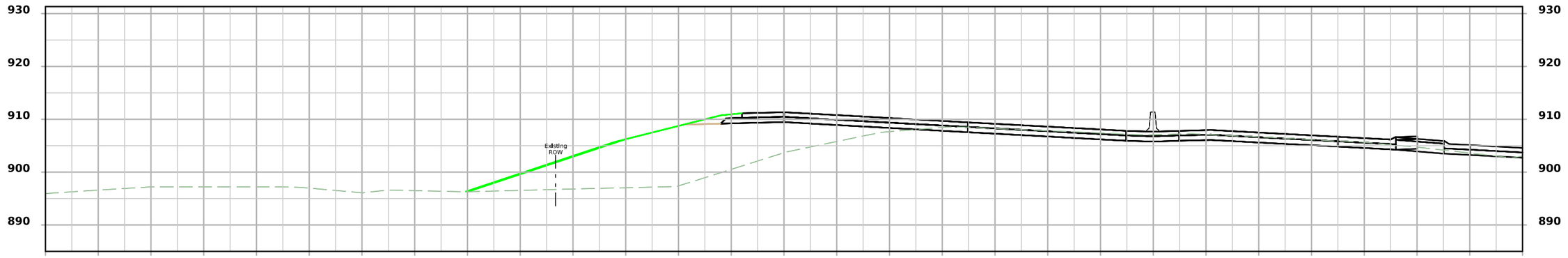
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.32** |
|---|---|---|---|---|---|

11:25:12 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

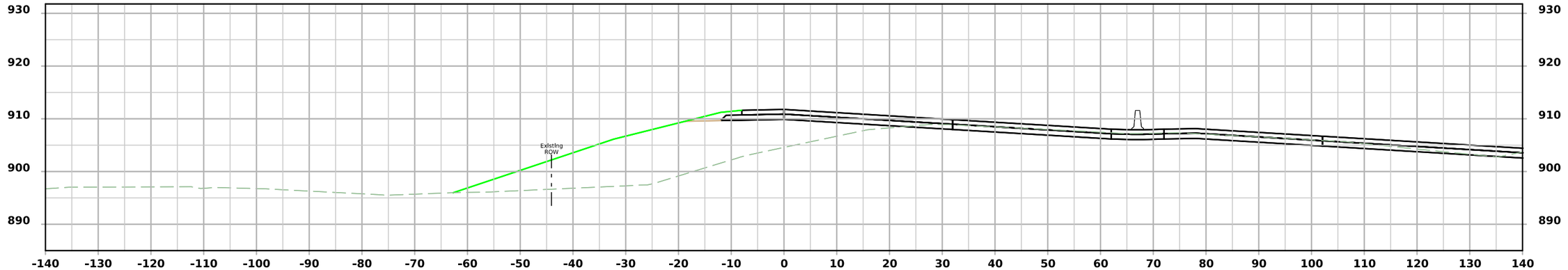
# Ramp C




STA 3210+50.00




STA 3210+00.00

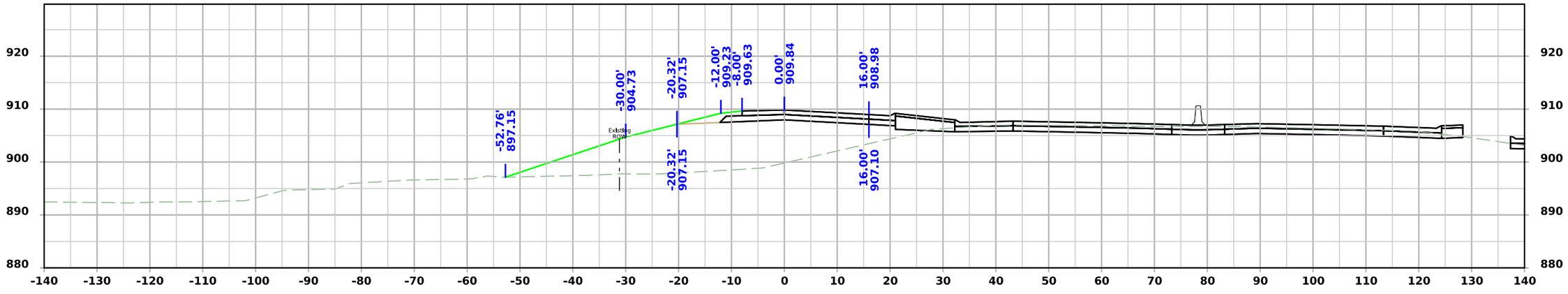



STA 3209+50.00

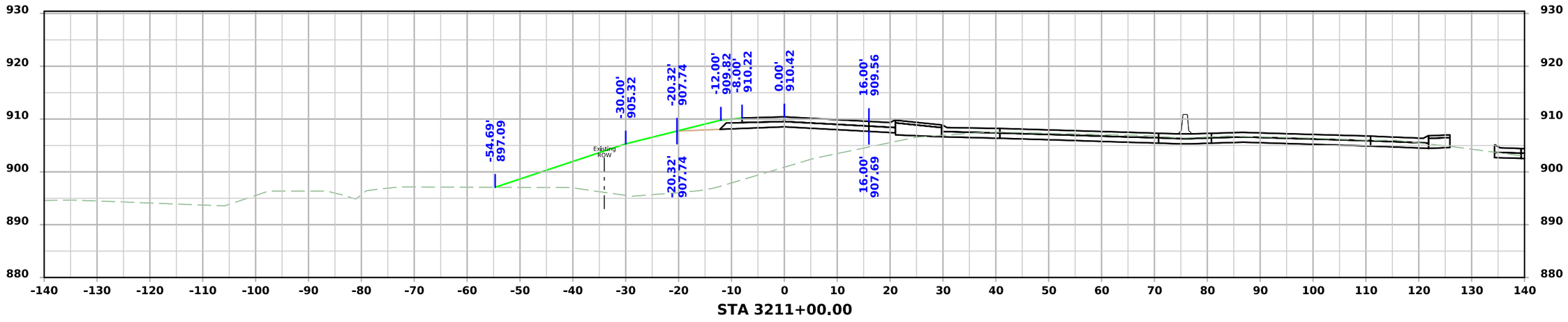
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.33** | |
|---|---|---|---|---|---|---|

11:25:14 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




STA 3211+50.00

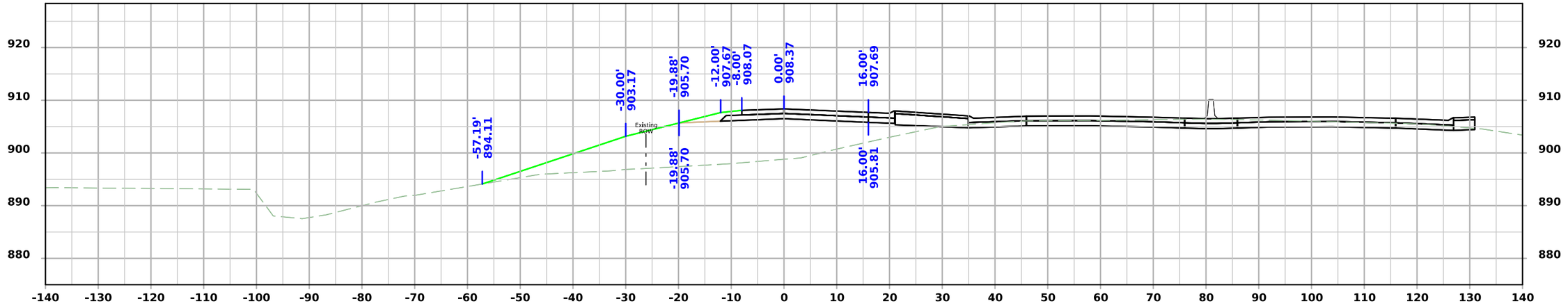



STA 3211+00.00

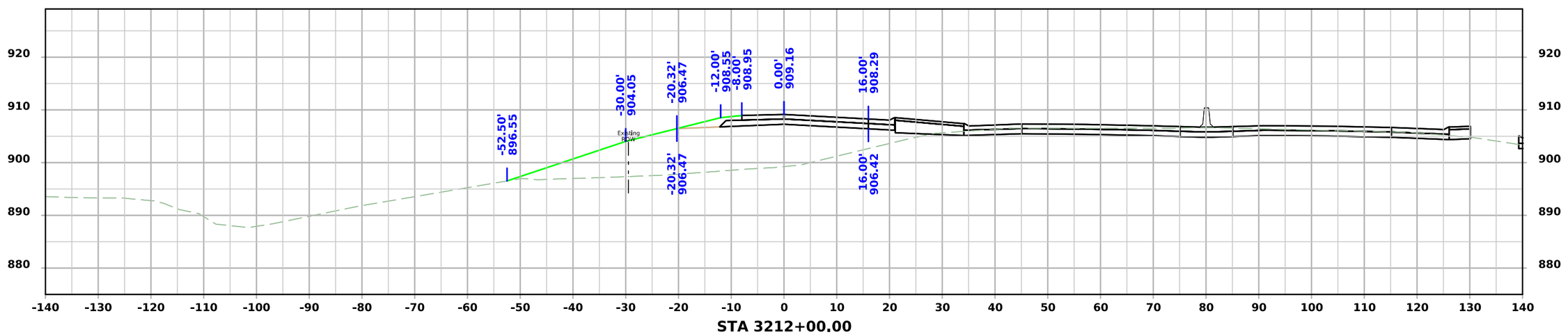
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.34** |
|---|---|---|---|---|---|

11:25:15 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C



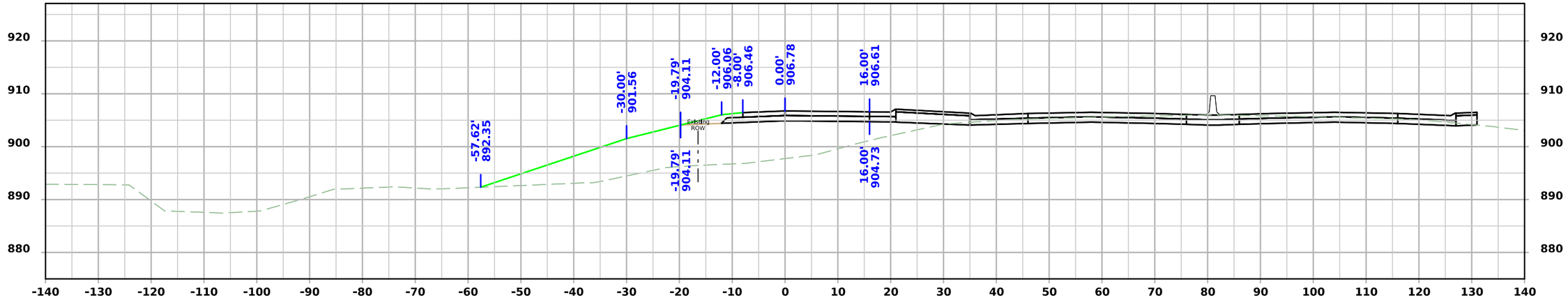

STA 3212+50.00



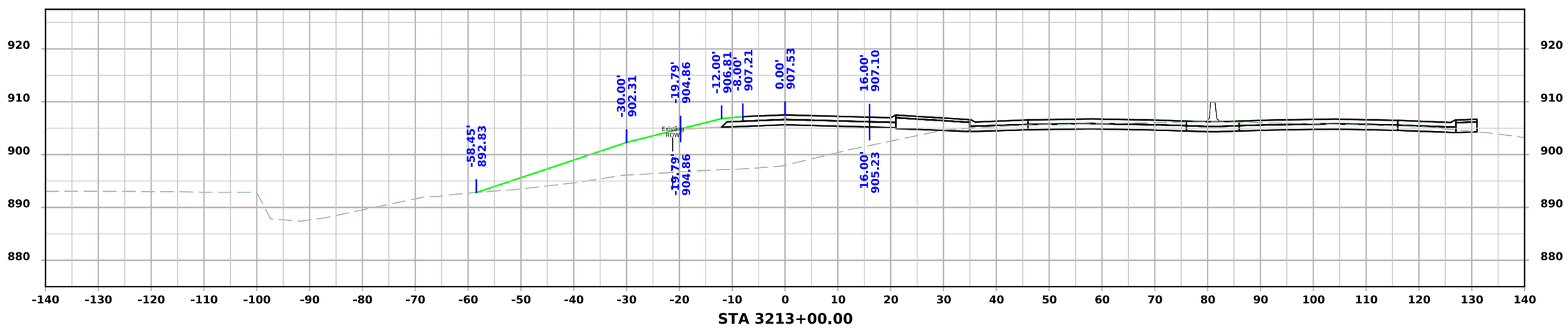

STA 3212+00.00

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.35** |
|---|---|---|---|---|---|

# Ramp C




STA 3213+50.00

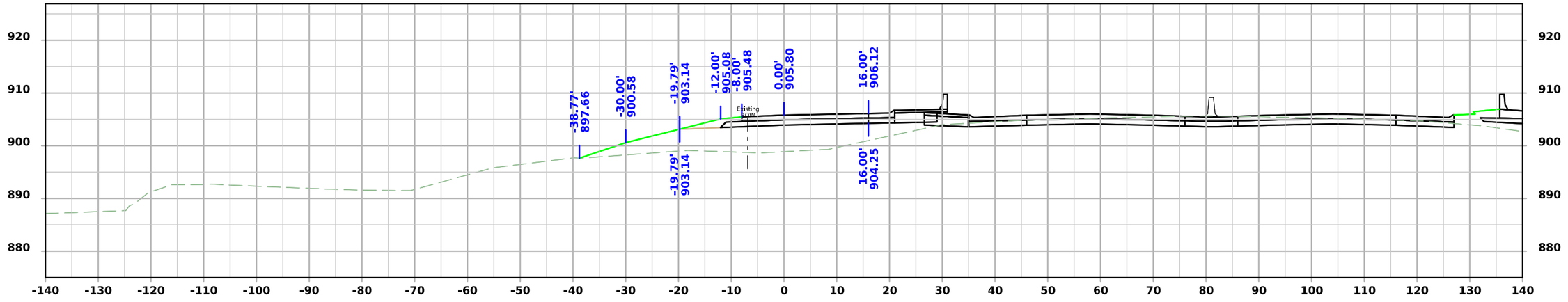



STA 3213+00.00

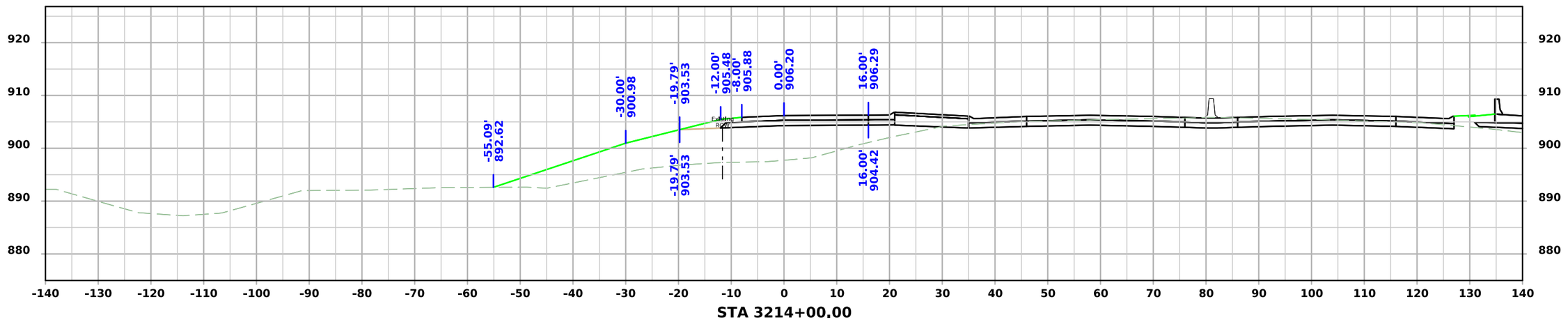
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.36** | |
|---|---|---|---|---|---|---|

11:25:17 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




STA 3214+50.00

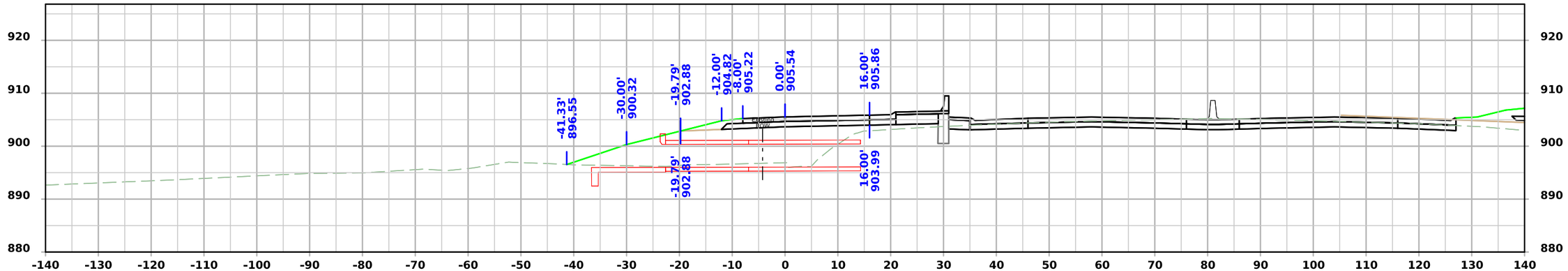



STA 3214+00.00

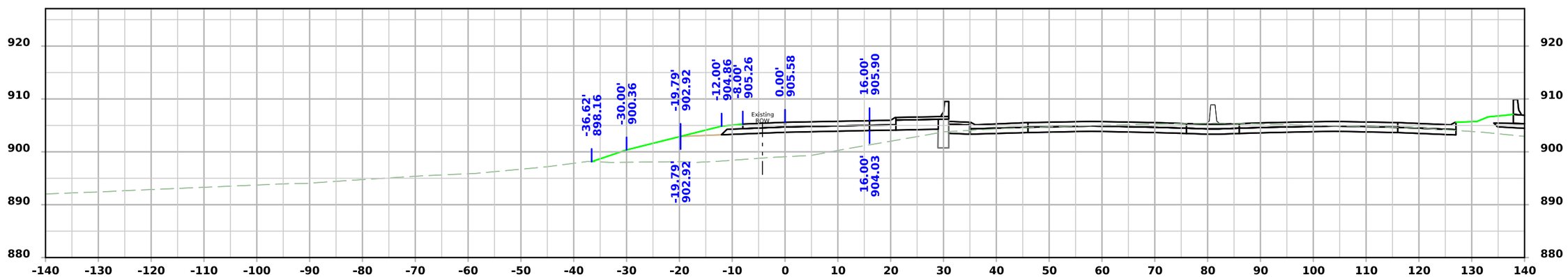
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.37** |
|---|---|---|---|---|---|

11:25:19 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




STA 3215+50.00




STA 3215+00.00

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.38** |
|---|---|---|---|---|---|

11:25:20 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

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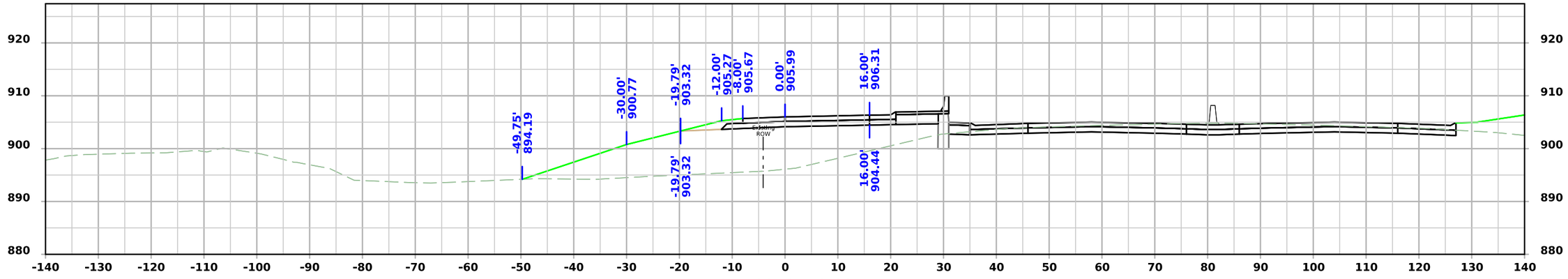
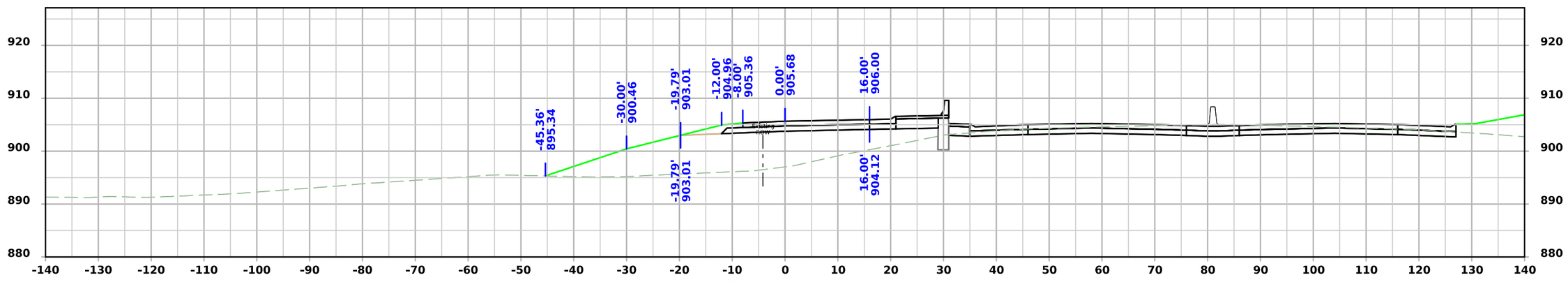



STA 3216+50.00

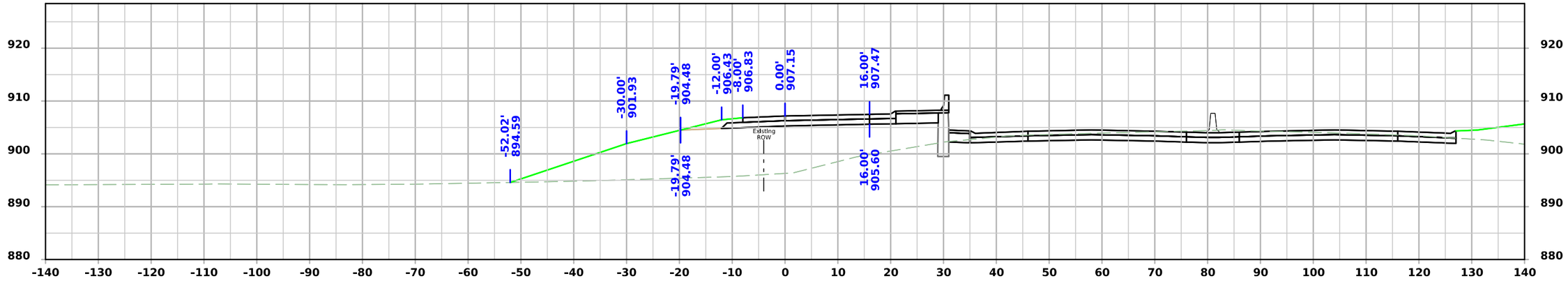



STA 3216+00.00

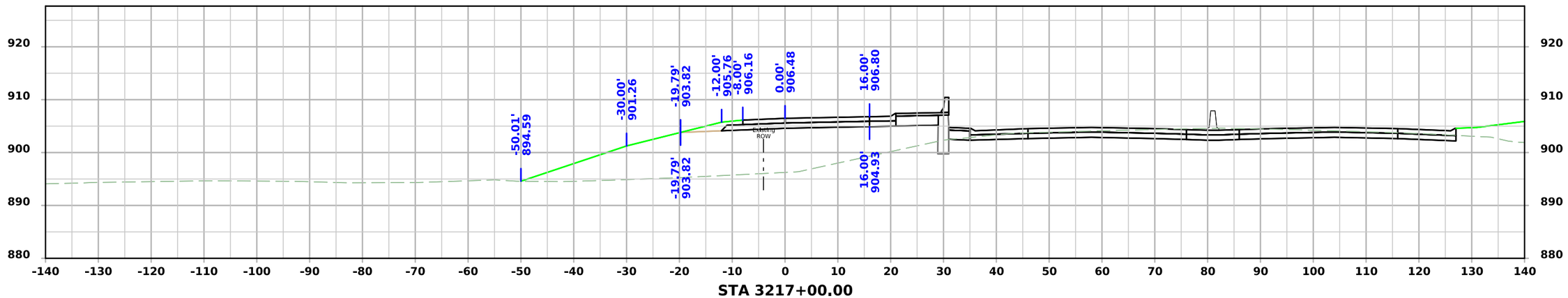
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.39** |
|---|---|---|---|---|---|

11:25:21 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhiII_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




STA 3217+50.00

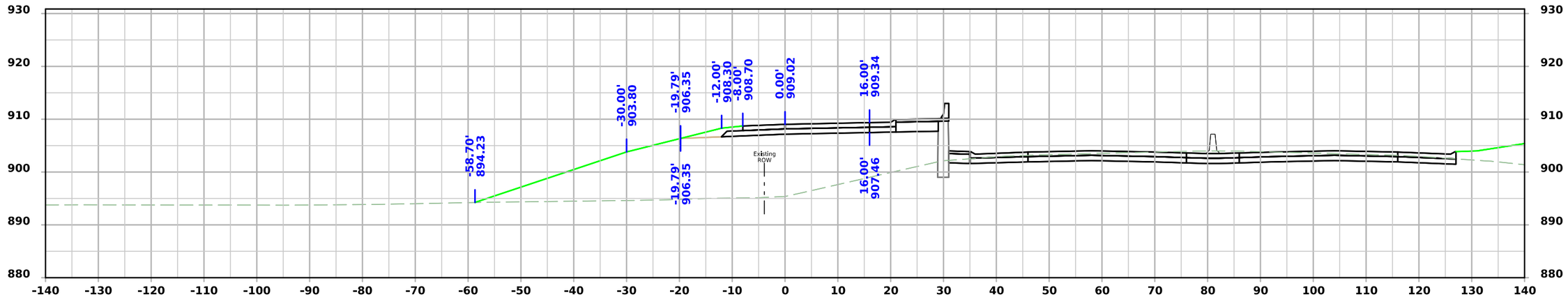



STA 3217+00.00

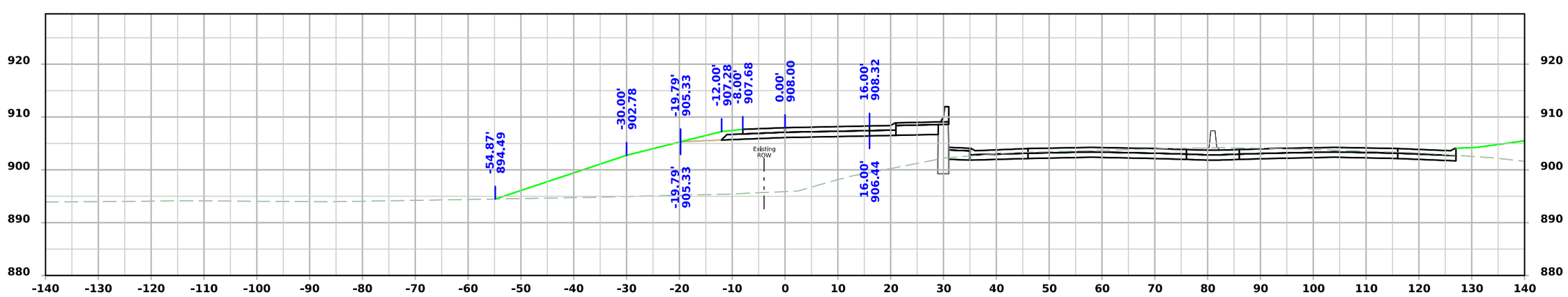
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.40** |
|---|---|---|---|---|---|

11:25:22 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




STA 3218+50.00

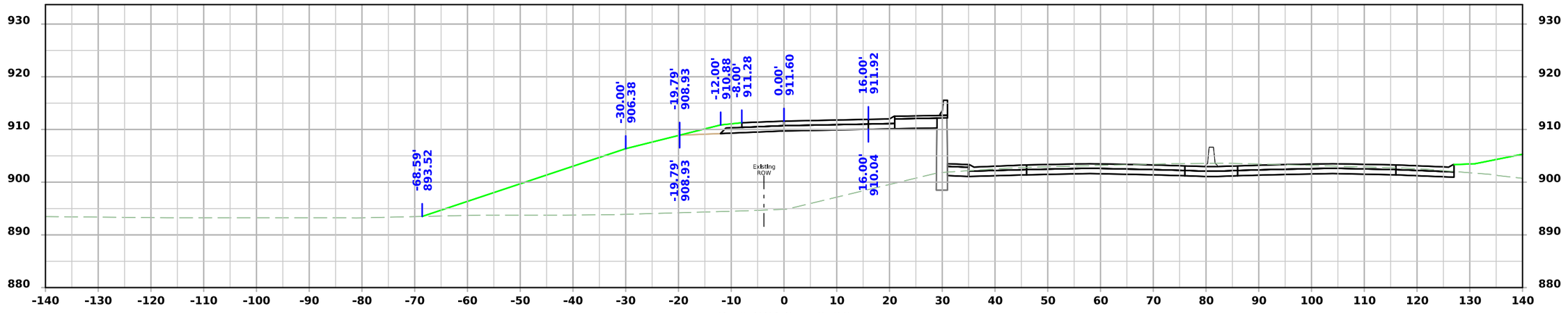



STA 3218+00.00

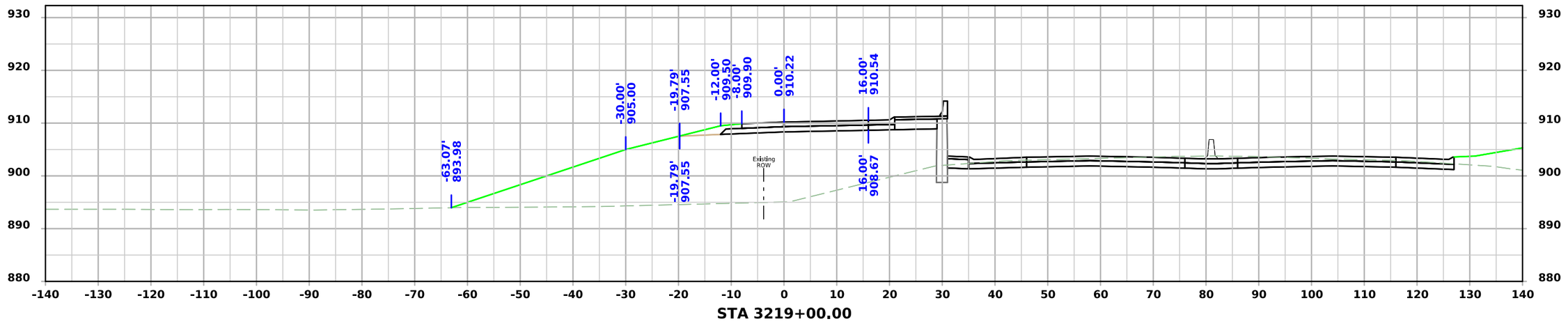
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.41** |
|---|---|---|---|---|---|

11:25:23 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




STA 3219+50.00

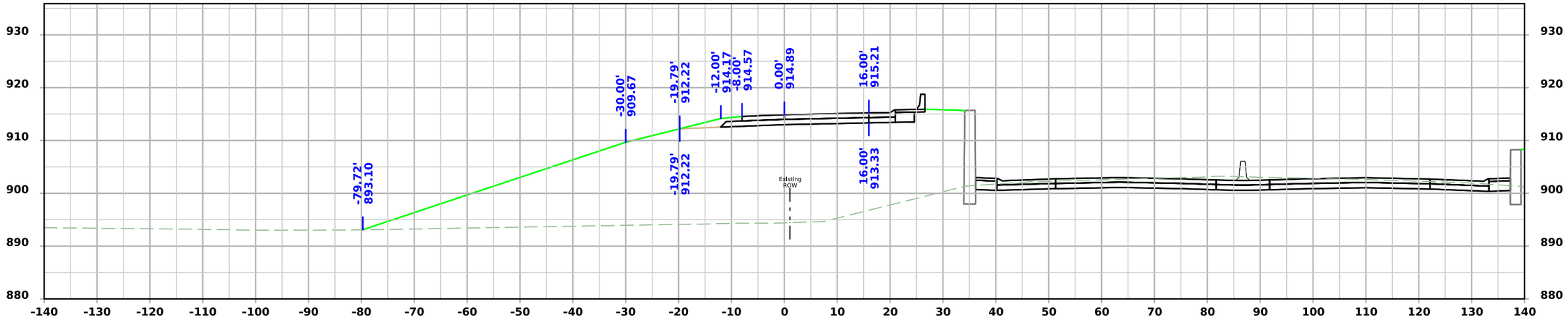



STA 3219+00.00

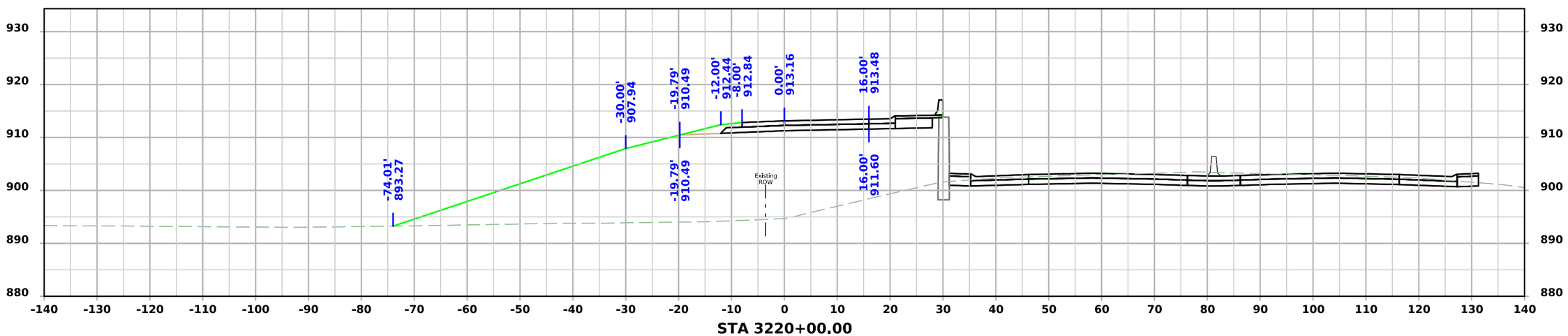
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.42** |
|---|---|---|---|---|---|

11:25:24 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




STA 3220+50.00




STA 3220+00.00

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.43** |
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11:25:25 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

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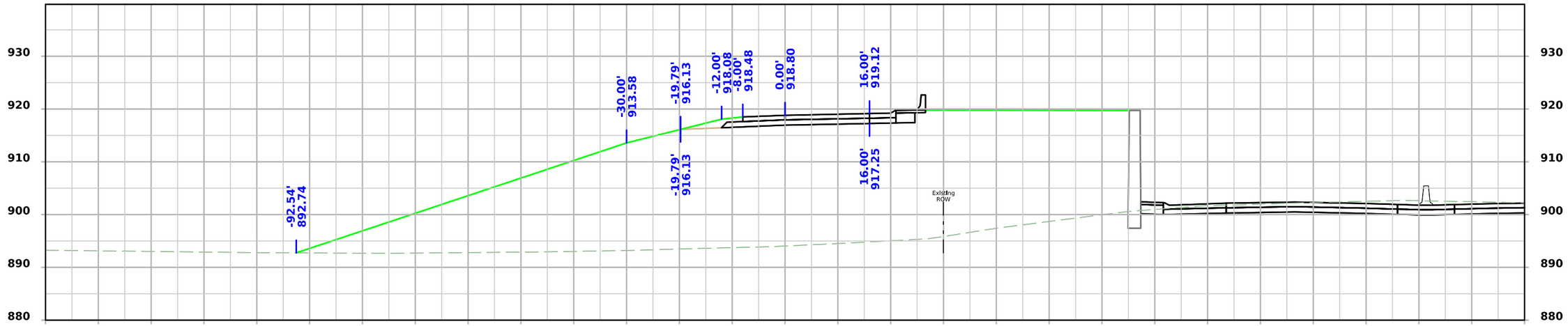
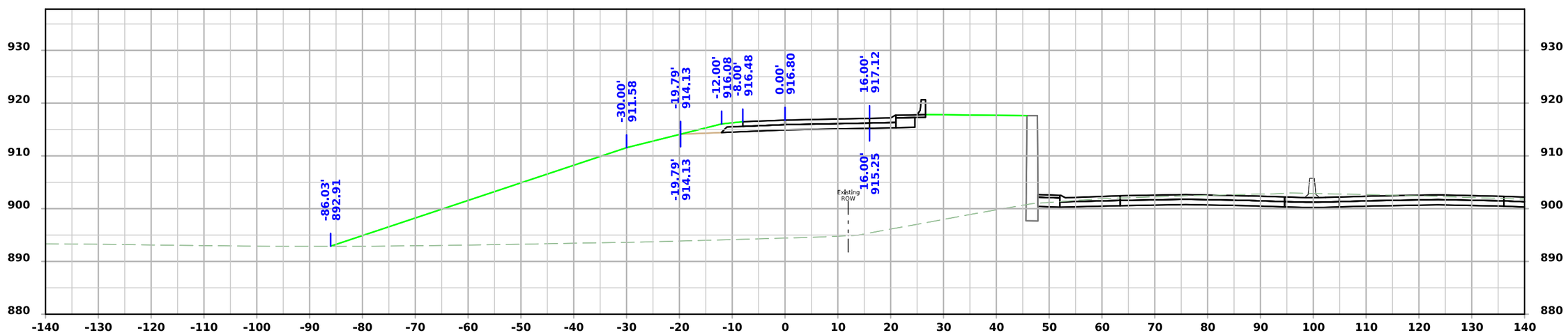



STA 3221+50.00

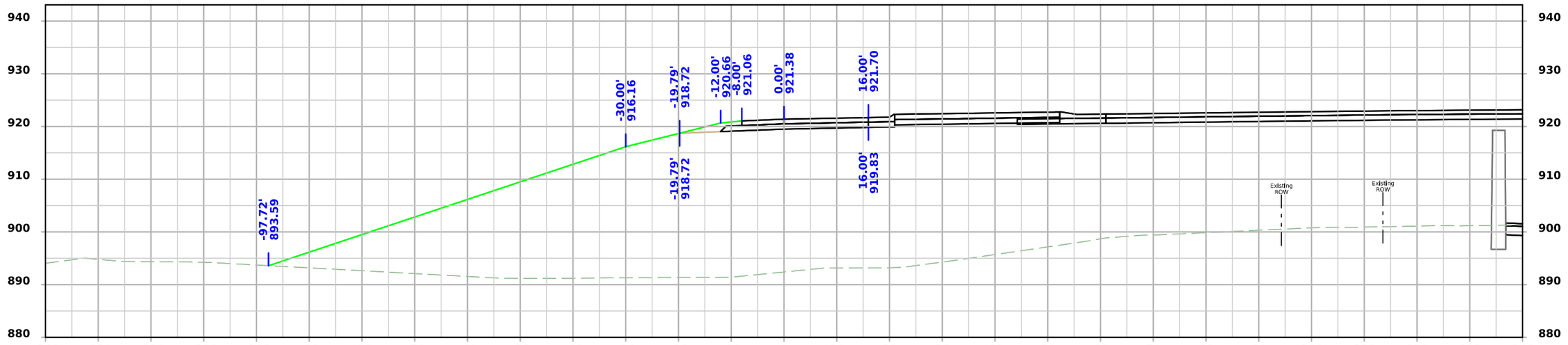



STA 3221+00.00

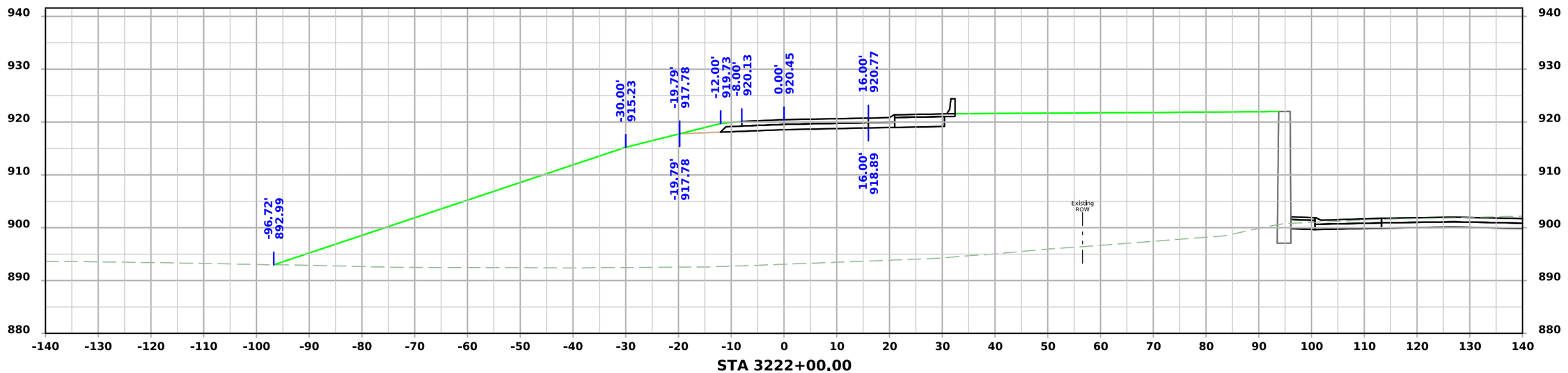
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.44** | |
|---|---|---|---|---|---|---|

11:25:27 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C




STA 3222+50.00




STA 3222+00.00

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.45** |
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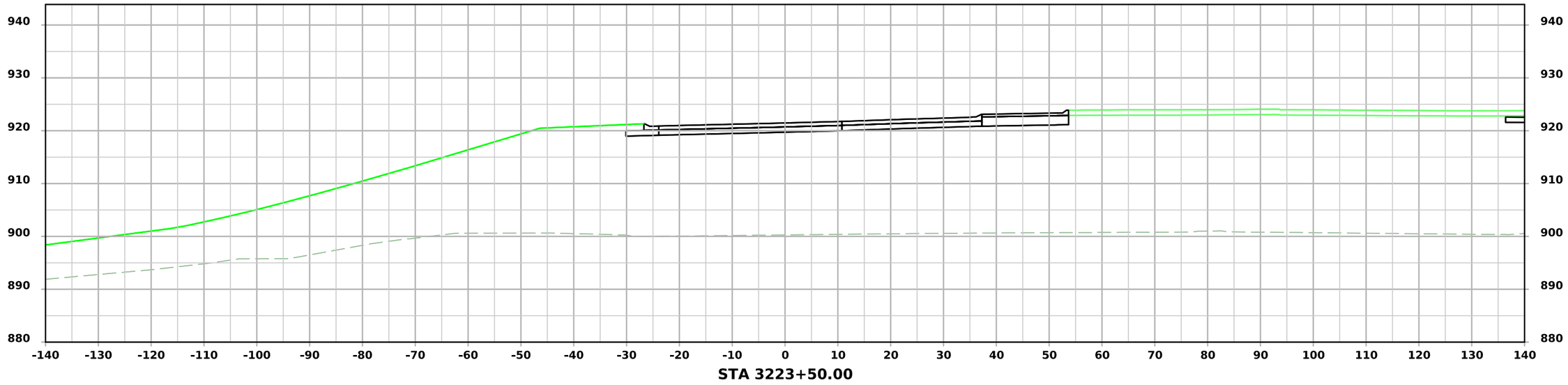
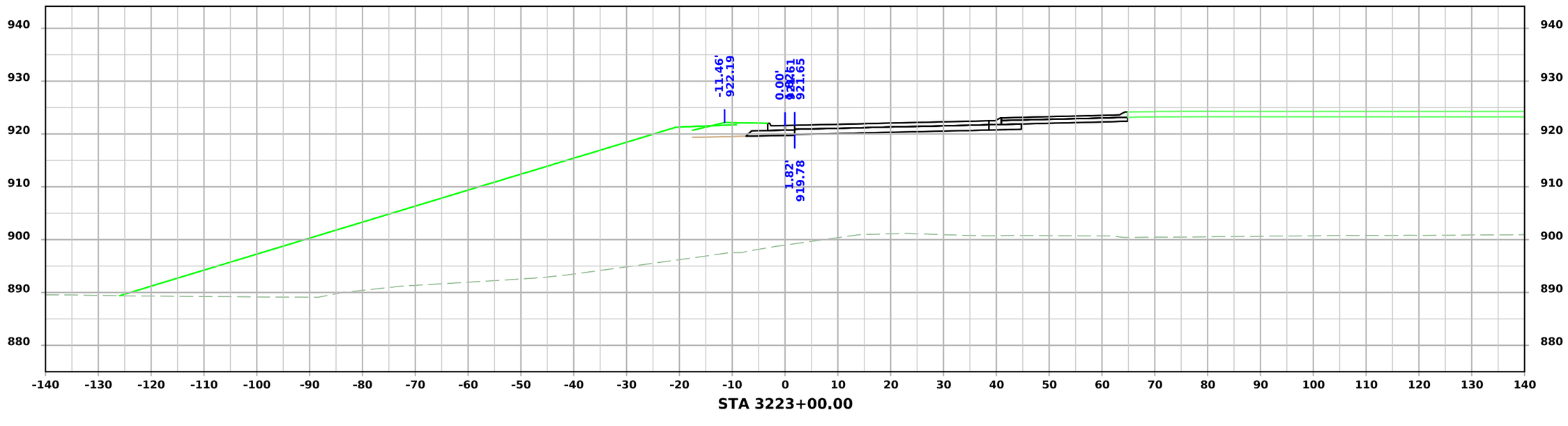
11:25:28 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp C

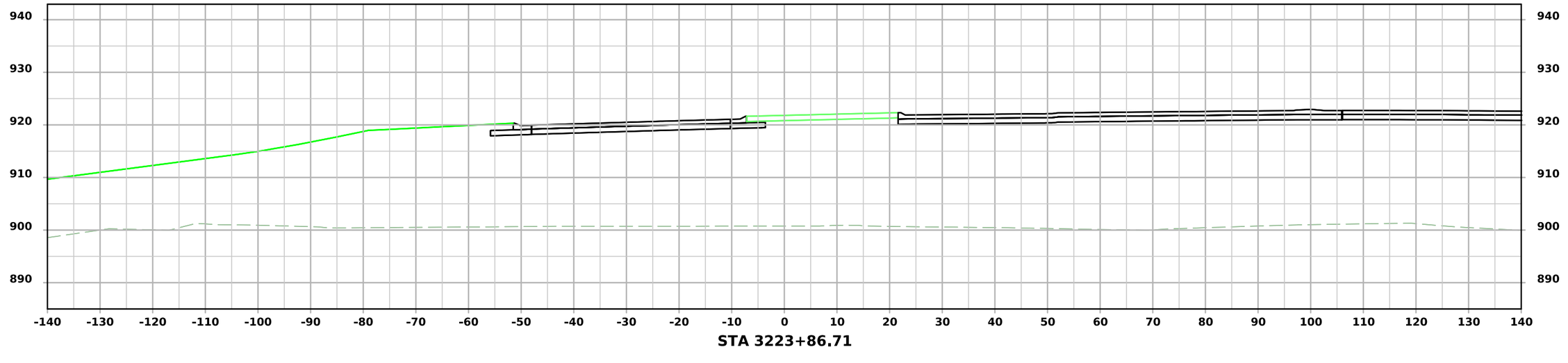



| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.46** |
|---|---|---|---|---|---|

11:25:30 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

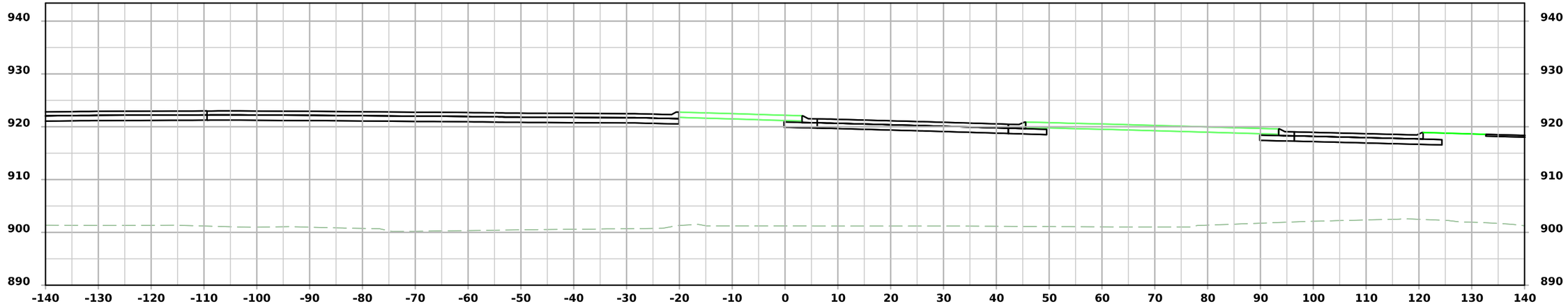
Ramp C



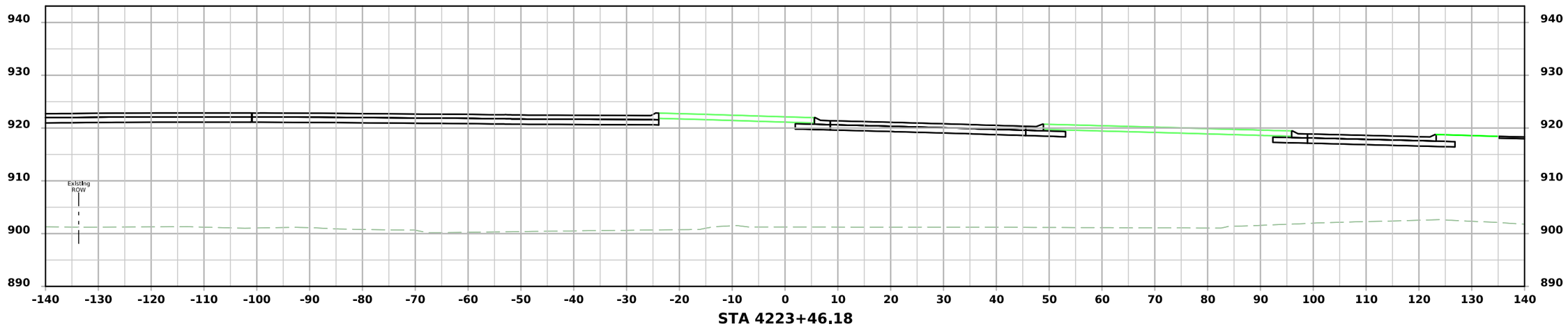

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.47** |
|---|---|---|---|---|---|

11:25:31 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp D




**STA 4223+50.00**

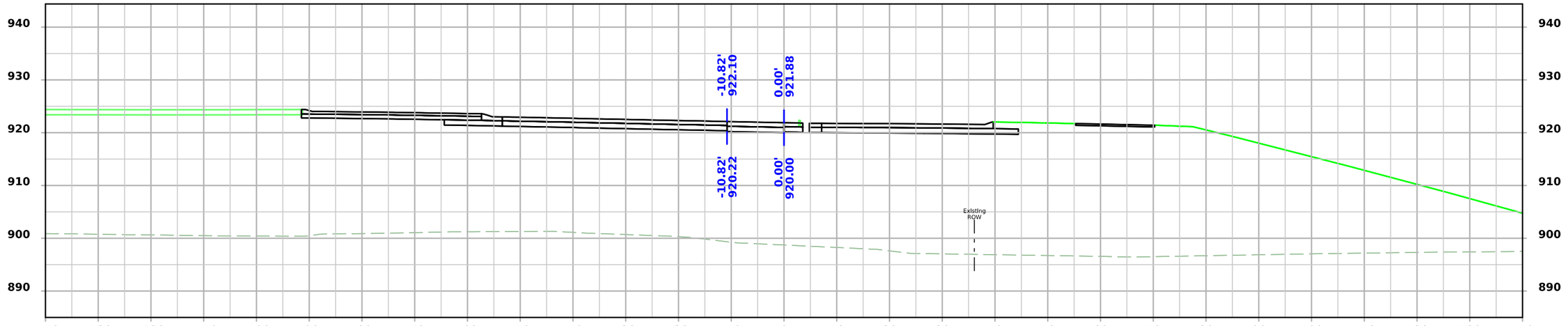



**STA 4223+46.18**

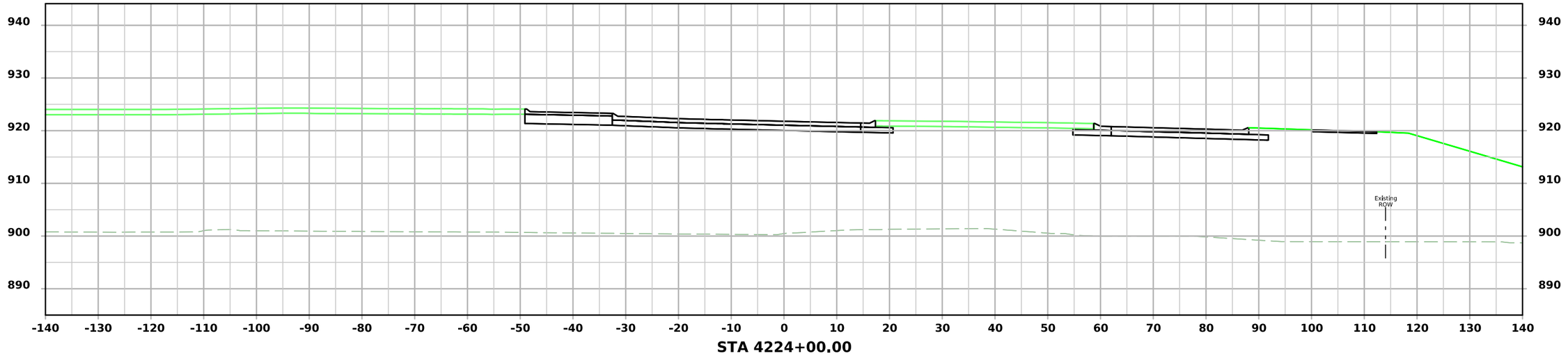
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.48** |
|---|---|---|---|---|---|

11:25:33 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp D




STA 4224+50.00

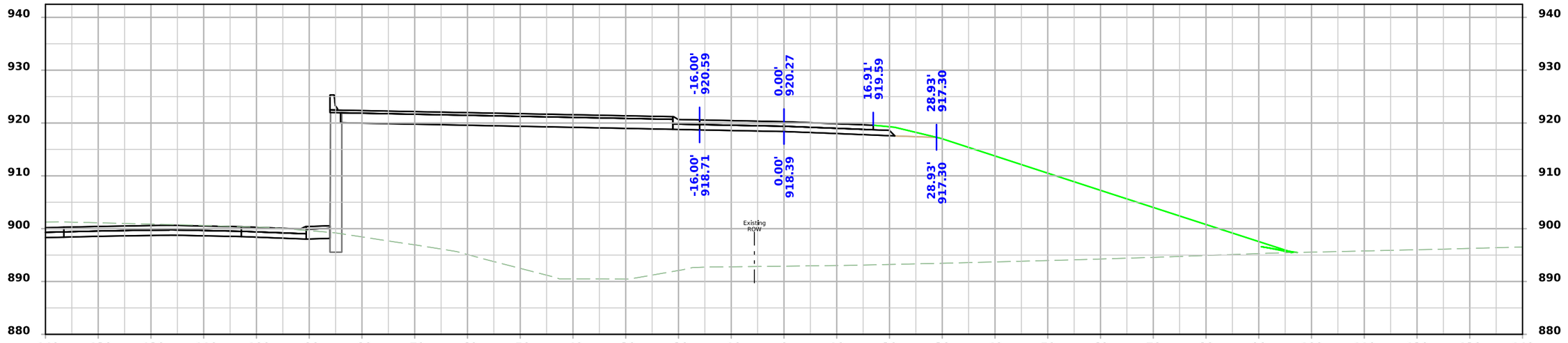



STA 4224+00.00

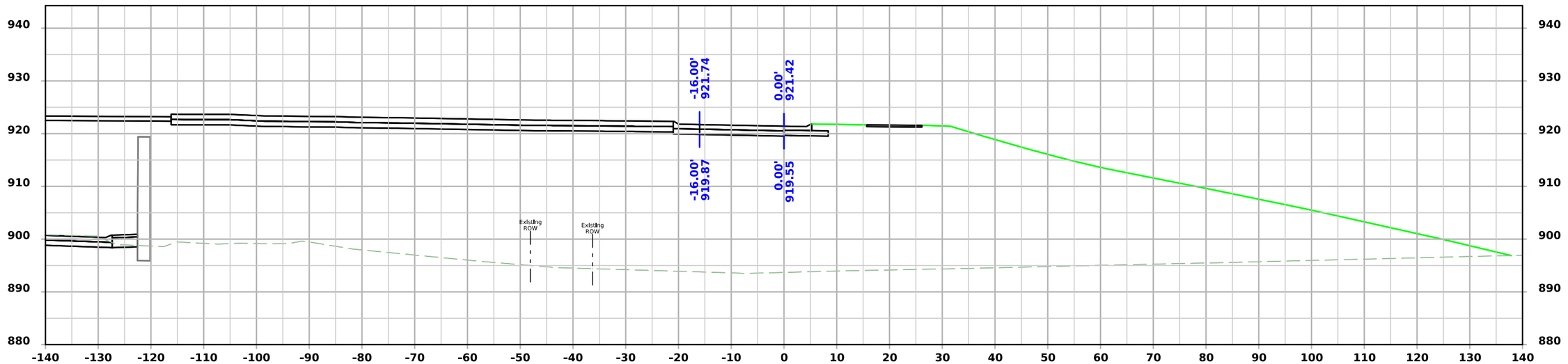
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.49** |
|---|---|---|---|---|---|

11:25:34 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp D




STA 4225+50.00

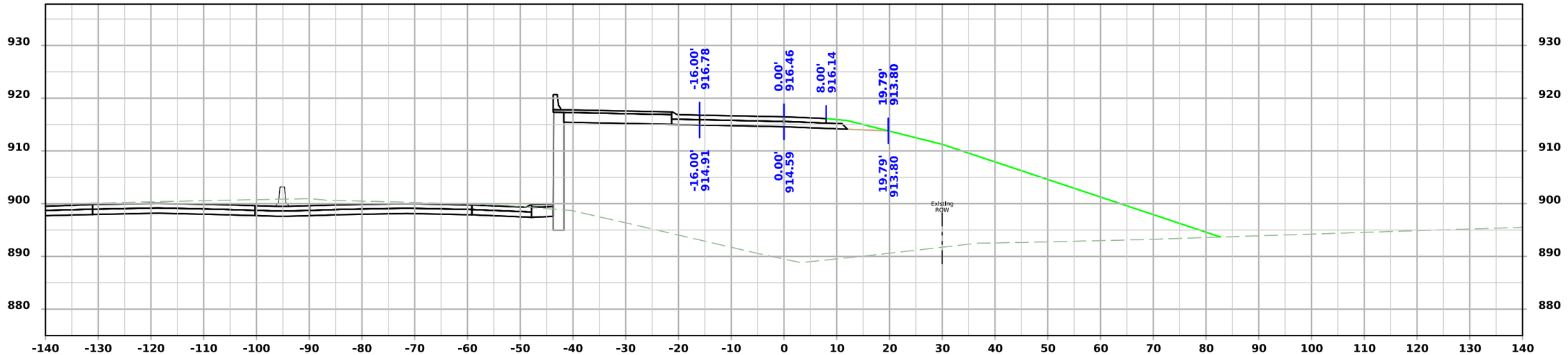



STA 4225+00.00

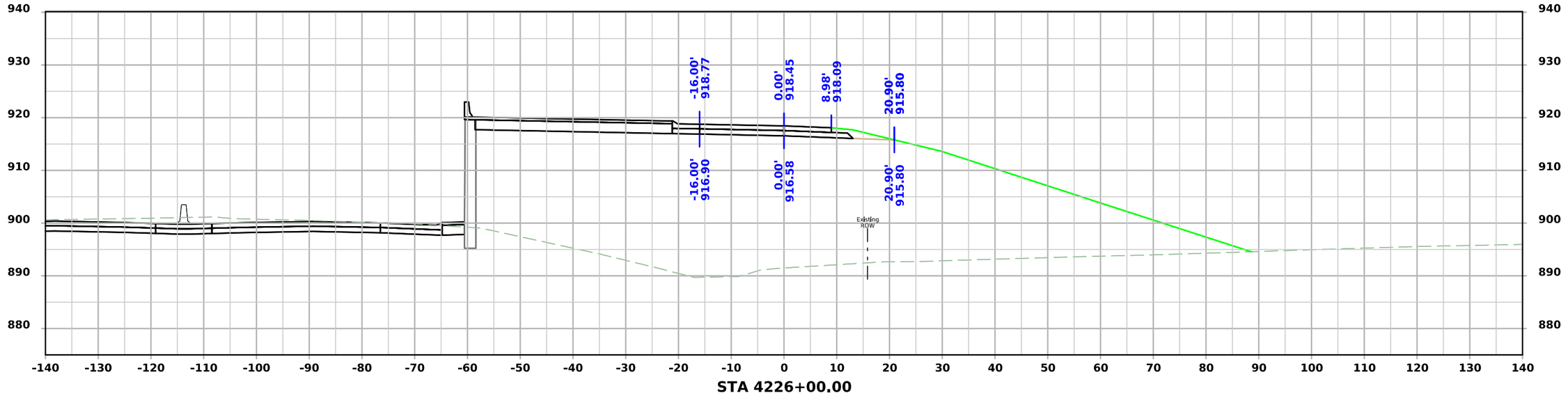
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.50** |
|---|---|---|---|---|---|

11:25:36 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp D




STA 4226+50.00

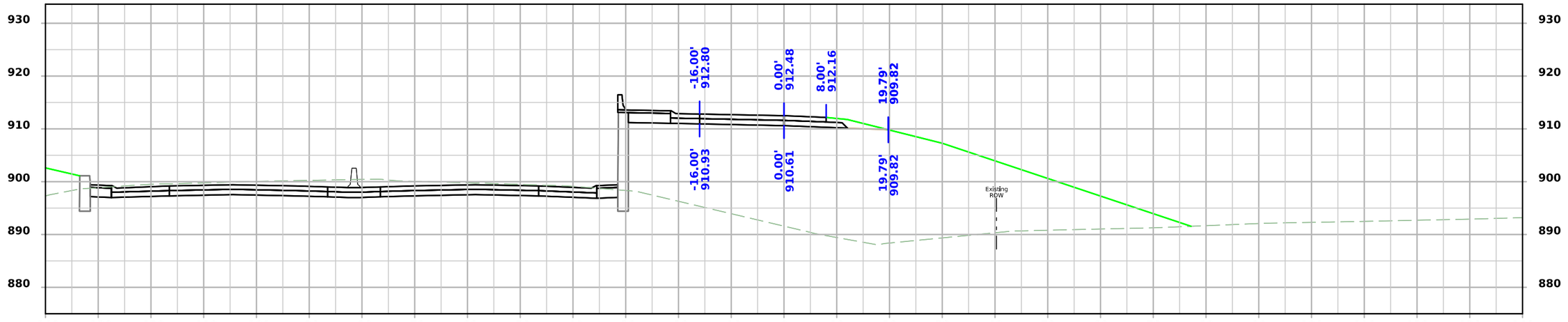



STA 4226+00.00

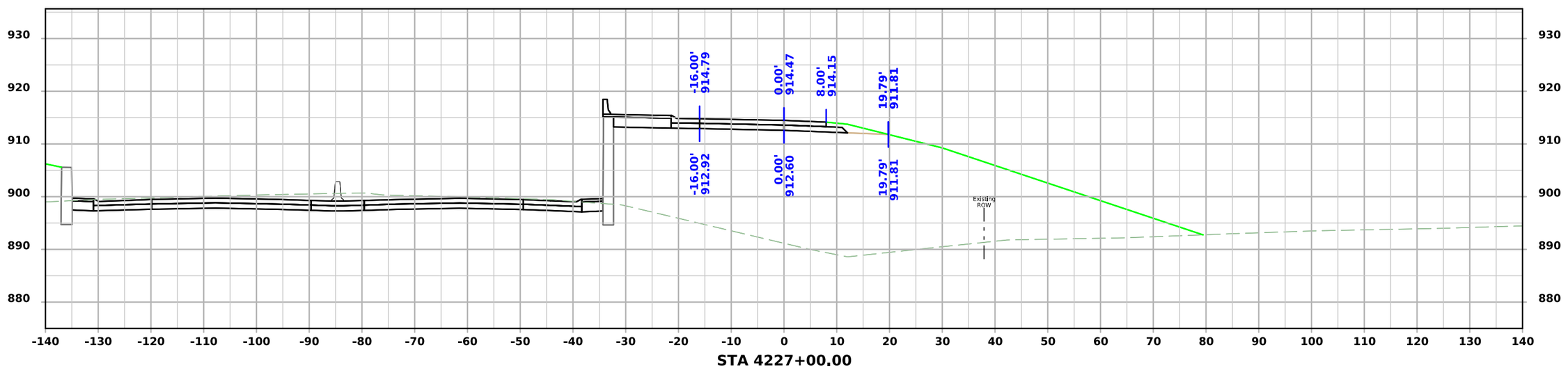
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.51** |
|---|---|---|---|---|---|

11:25:37 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp D




STA 4227+50.00

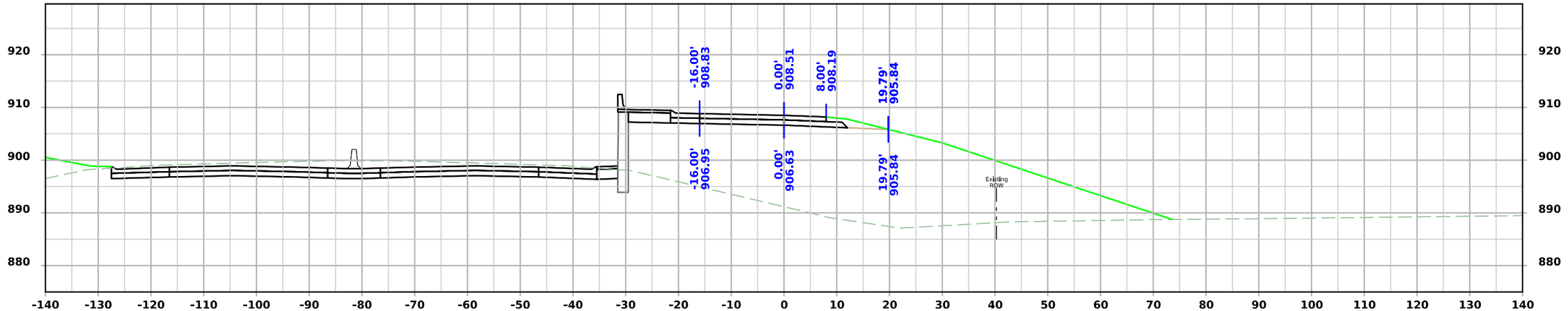



STA 4227+00.00

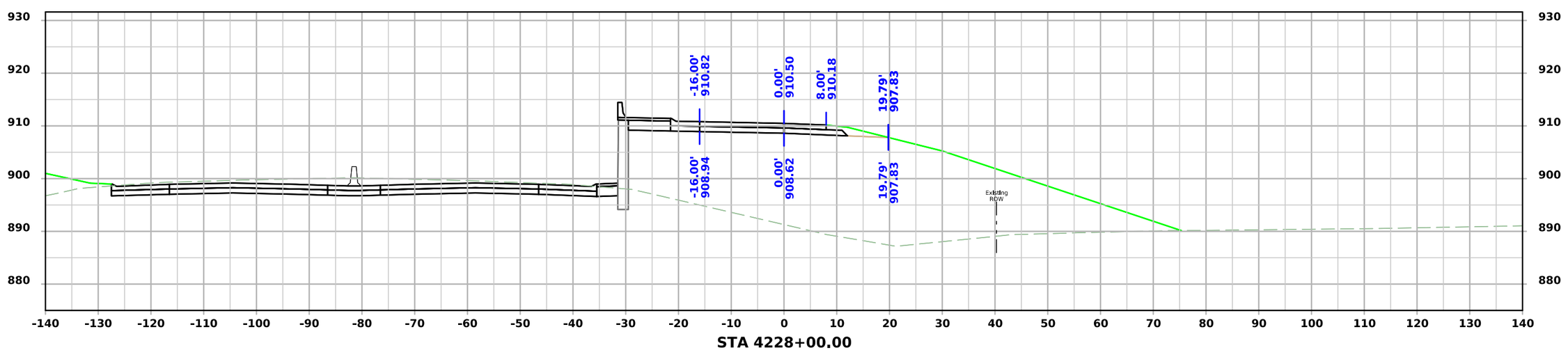
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.52** |
|---|---|---|---|---|---|

11:25:38 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp D




STA 4228+50.00

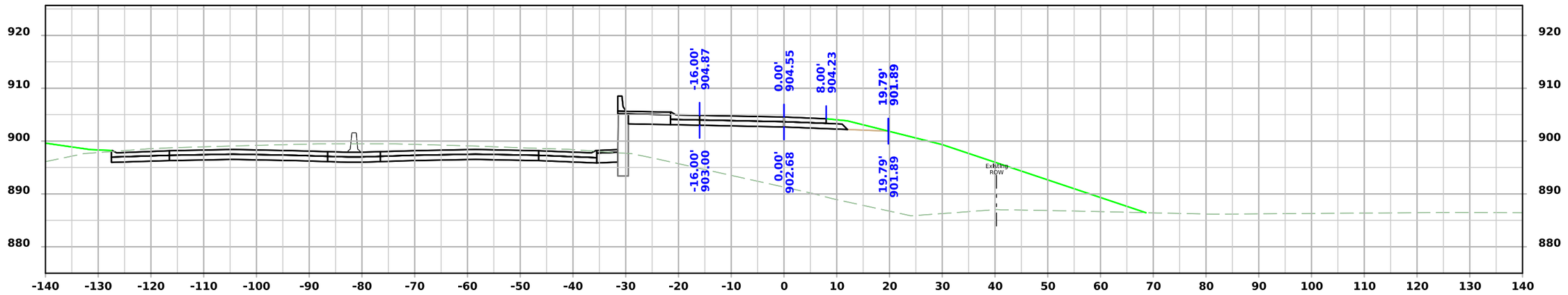



STA 4228+00.00

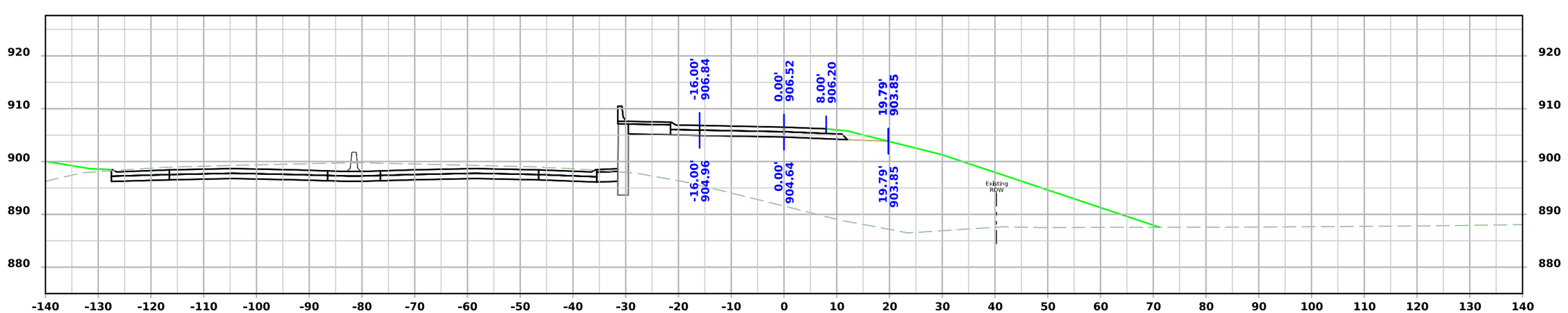
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.53** |
|---|---|---|---|---|---|

11:25:39 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp D




**STA 4229+50.00**

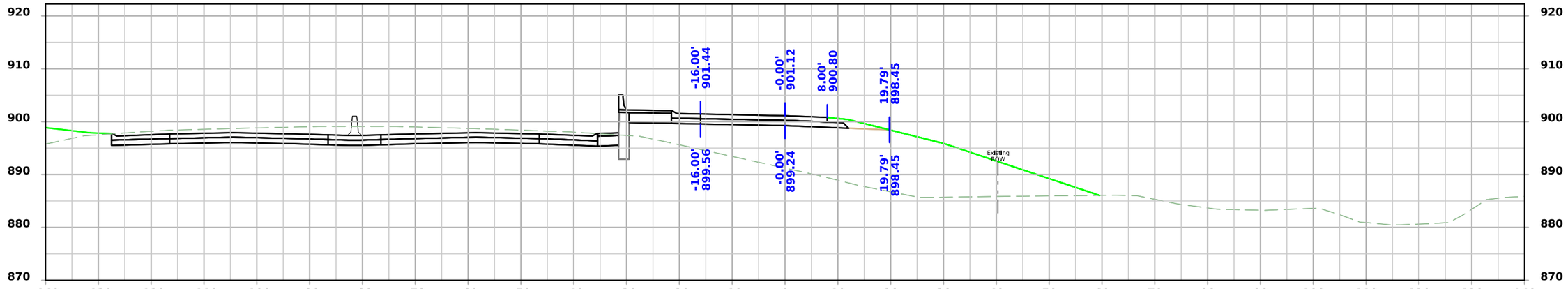



**STA 4229+00.00**

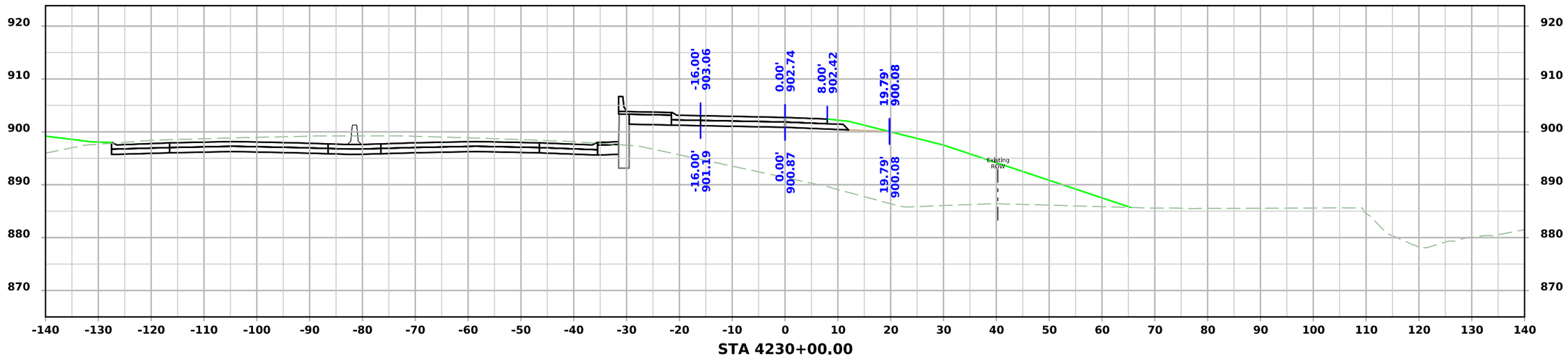
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.54** |
|---|---|---|---|---|---|

11:25:40 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp D




STA 4230+50.00

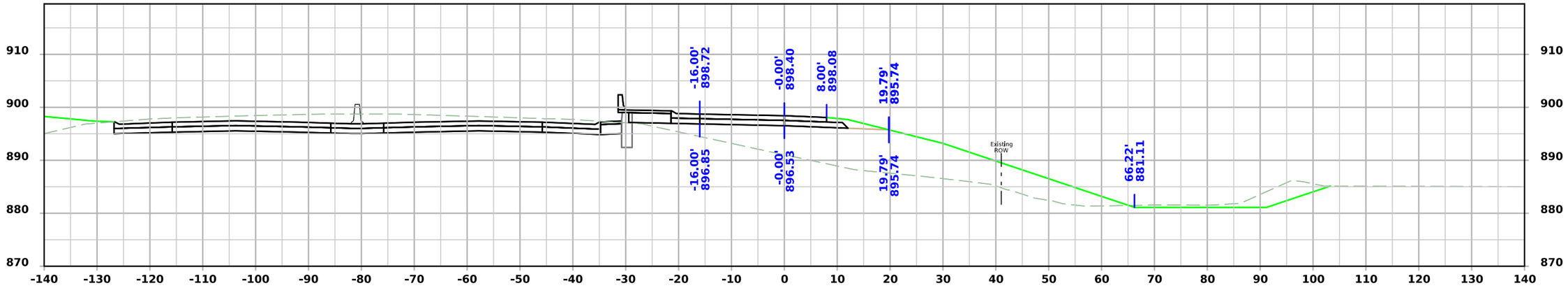



STA 4230+00.00

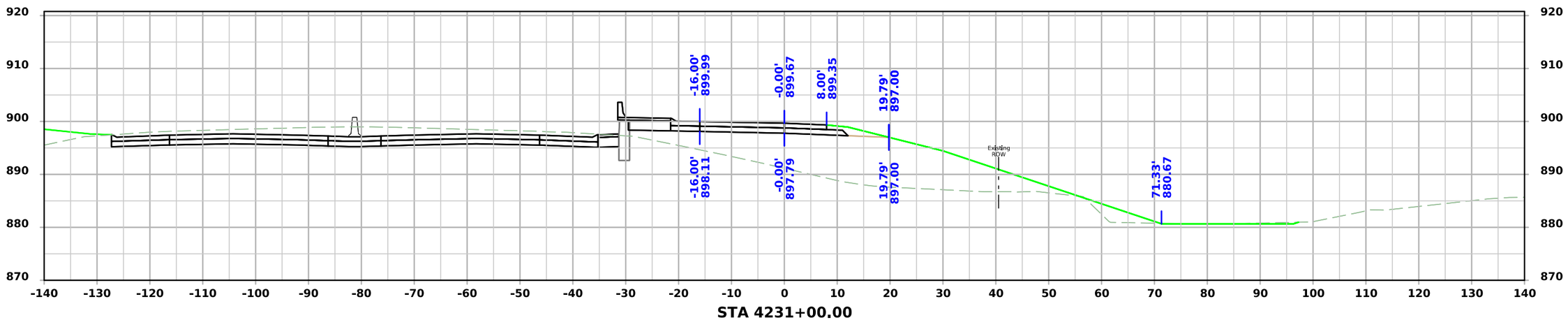
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.55** |
|---|---|---|---|---|---|

11:25:42 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

# Ramp D




STA 4231+50.00

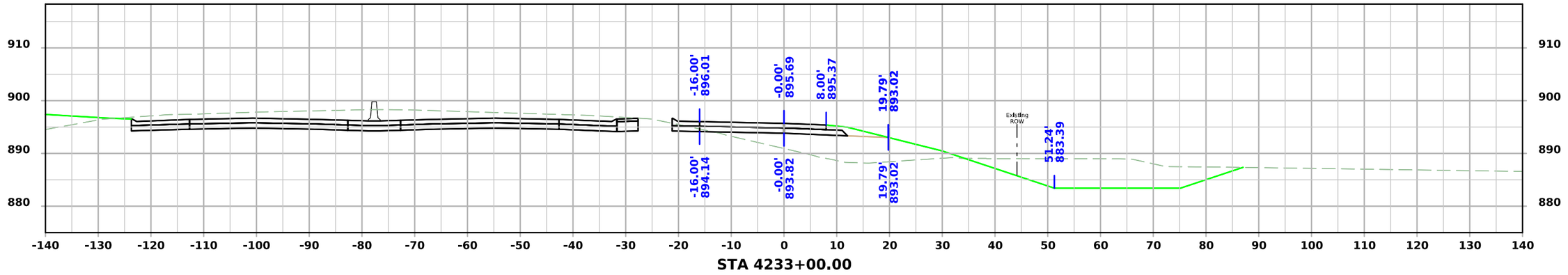



STA 4231+00.00

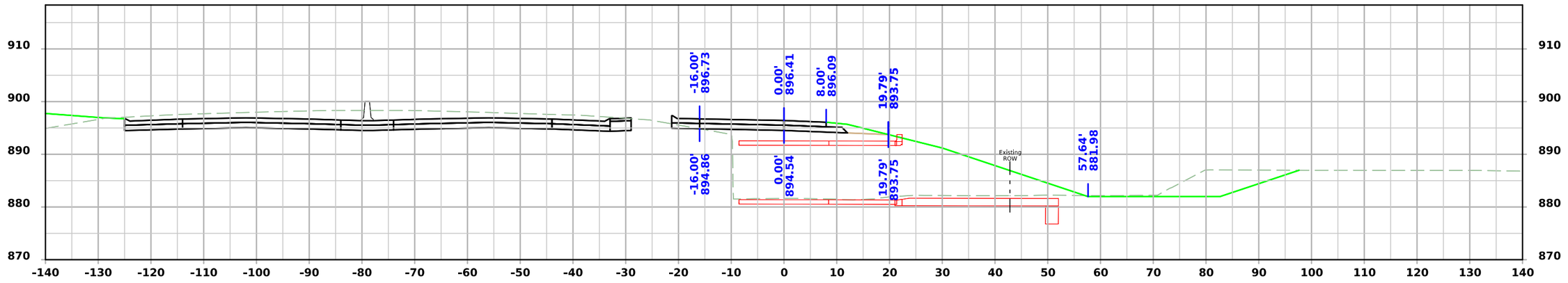
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.56** |
|---|---|---|---|---|---|

11:25:43 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

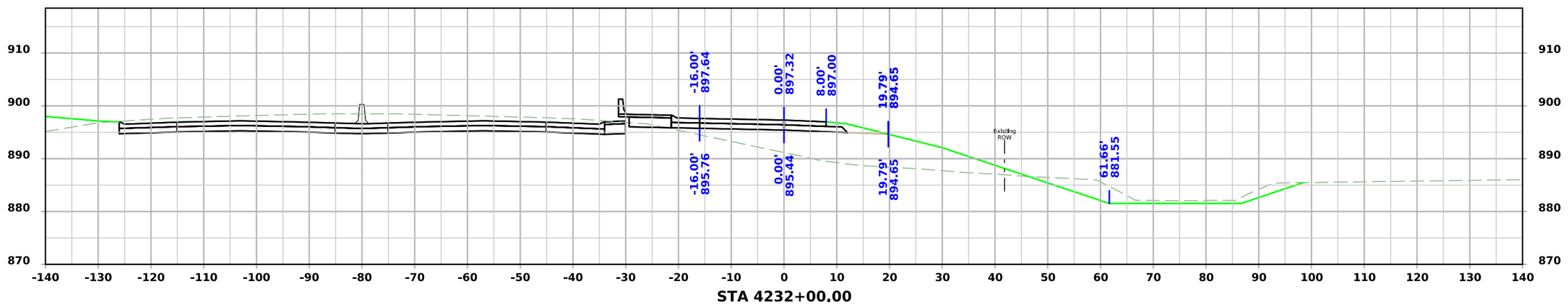
# Ramp D




STA 4233+00.00




STA 4232+50.00




STA 4232+00.00

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.57** |
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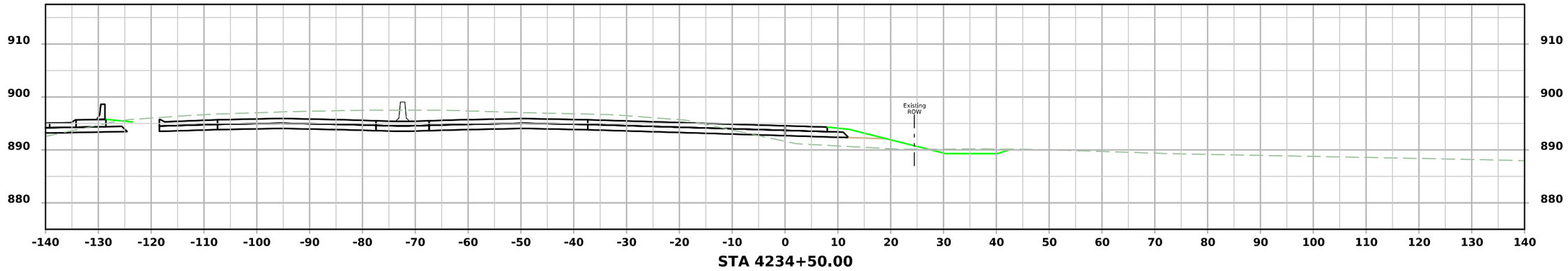
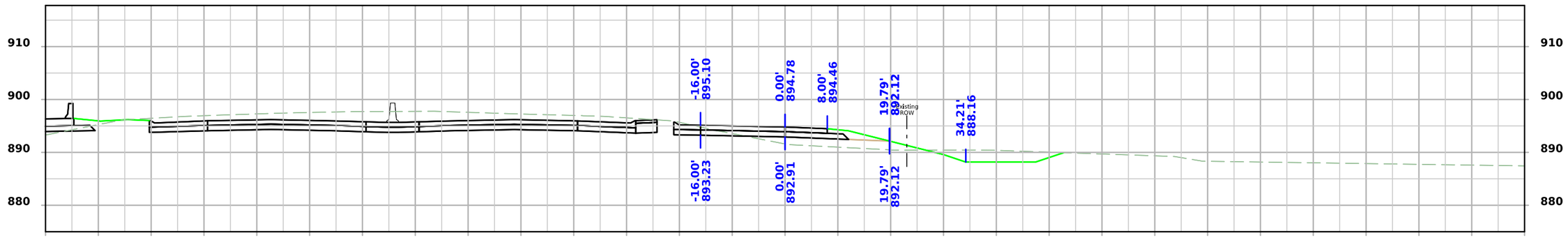
11:25:44 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

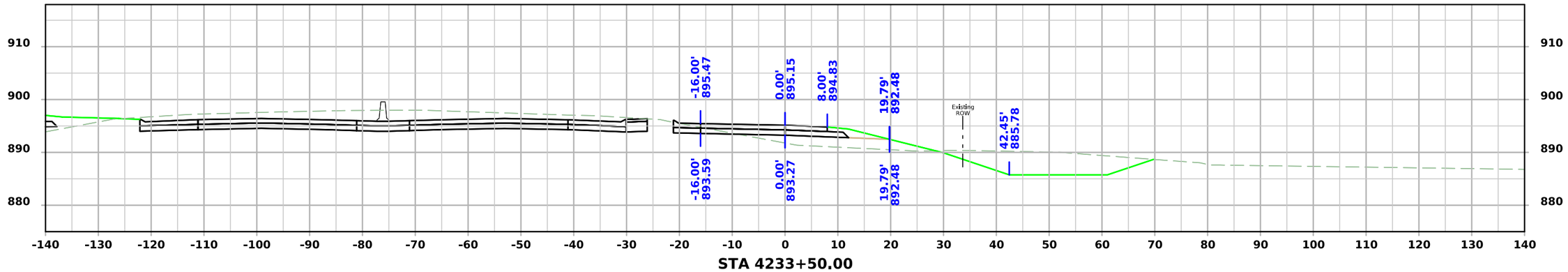
# Ramp D




**STA 4234+50.00**




**STA 4234+00.00**

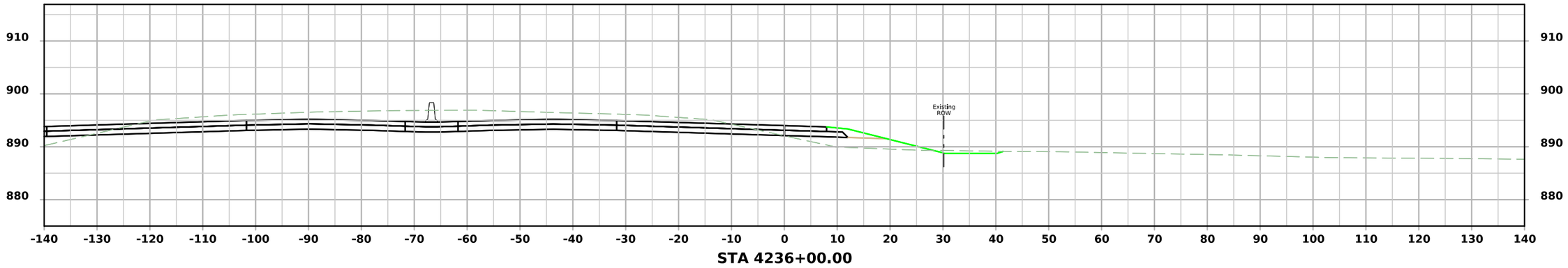



**STA 4233+50.00**

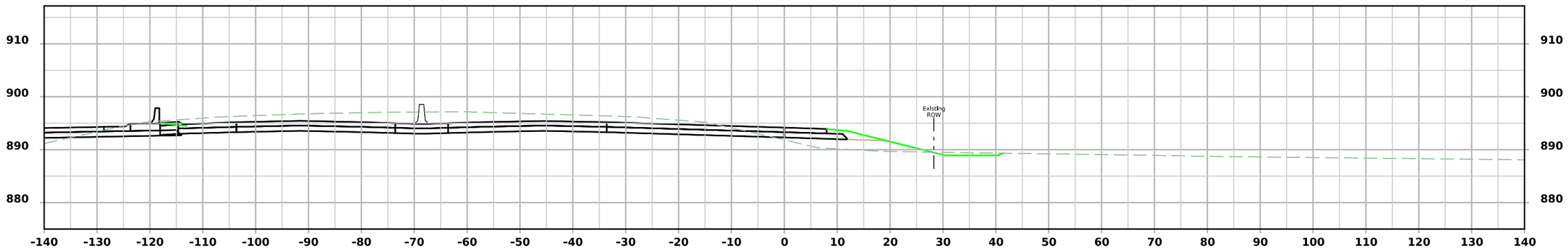
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.58** |
|---|---|---|---|---|---|

11:25:45 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

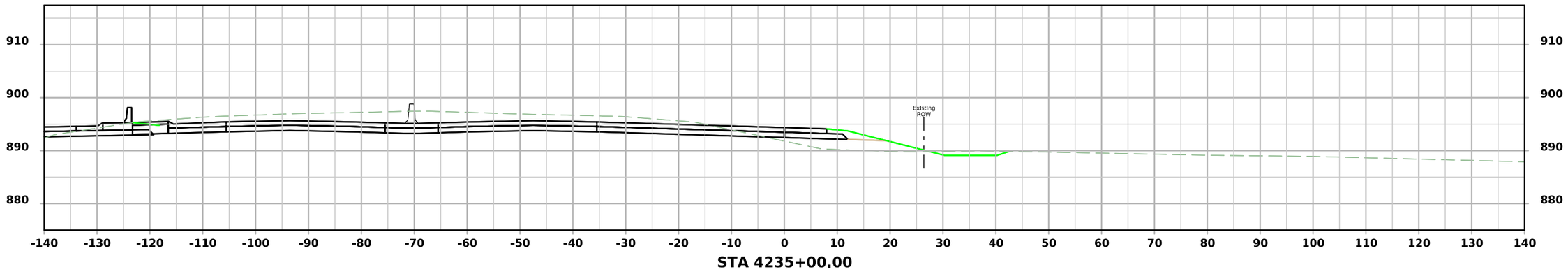
# Ramp D




**STA 4236+00.00**




**STA 4235+50.00**

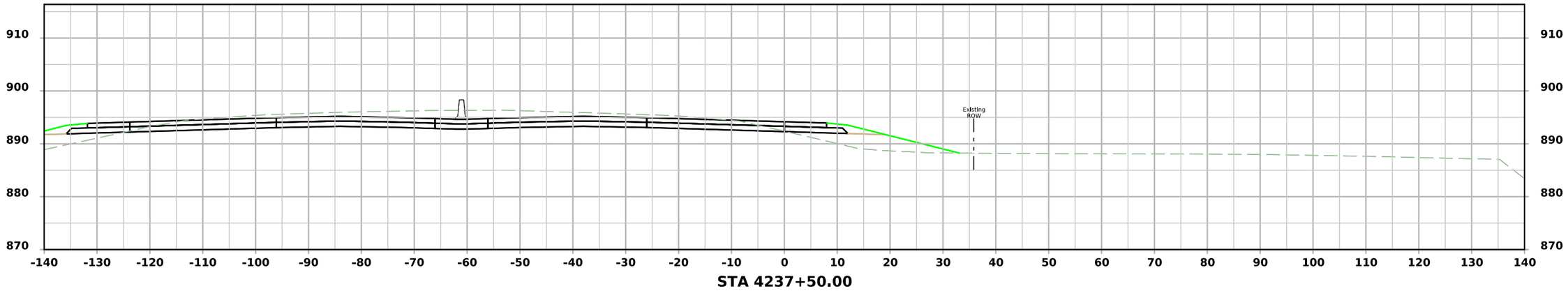



**STA 4235+00.00**

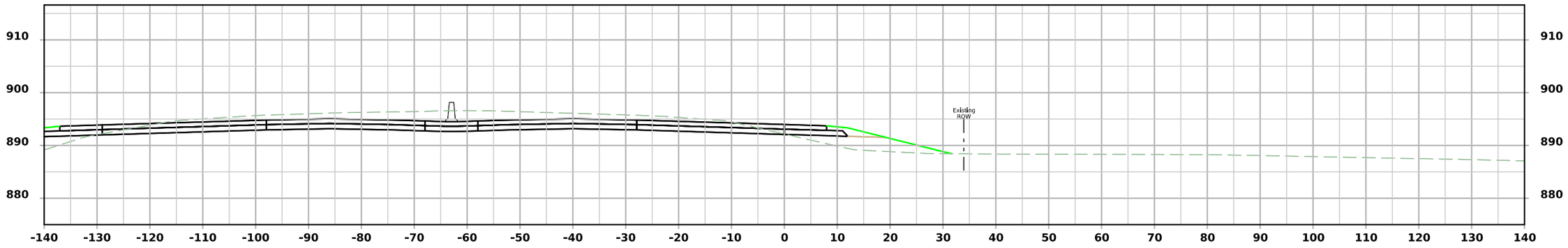
| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.59** |
|---|---|---|---|---|---|

11:25:47 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\Greenhill_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

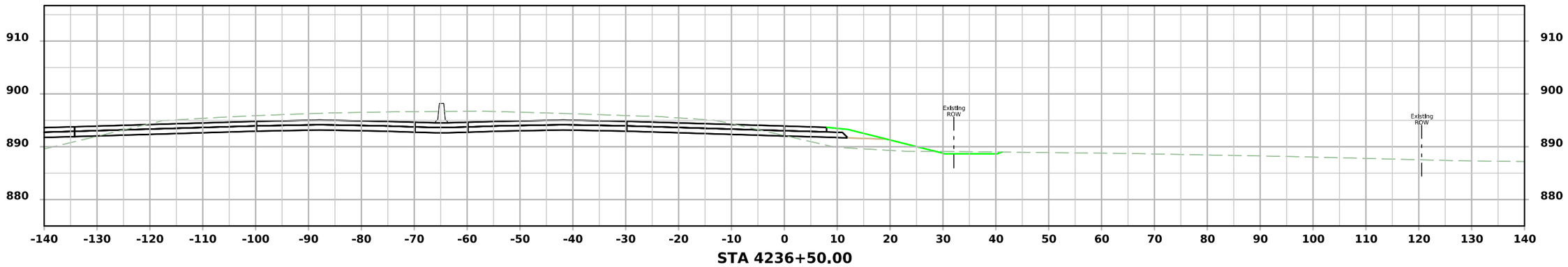
# Ramp D




**STA 4237+50.00**




**STA 4237+00.00**




**STA 4236+50.00**

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.60** |
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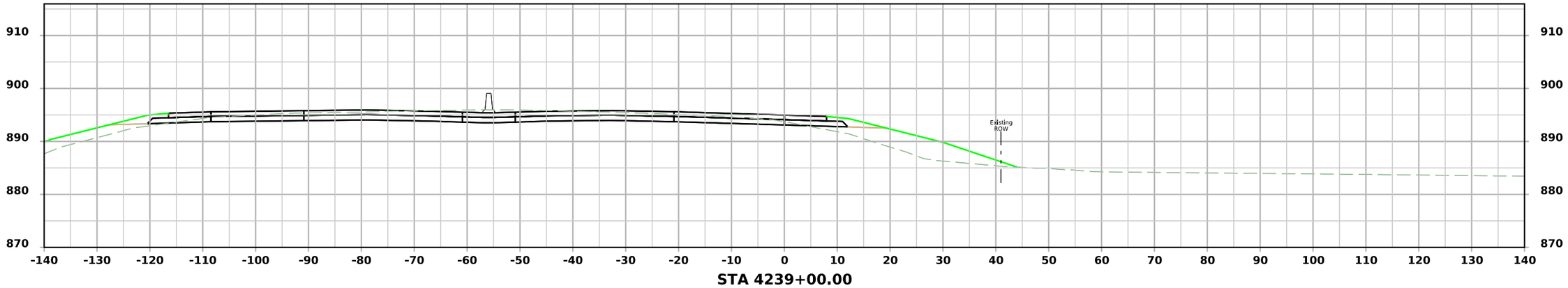
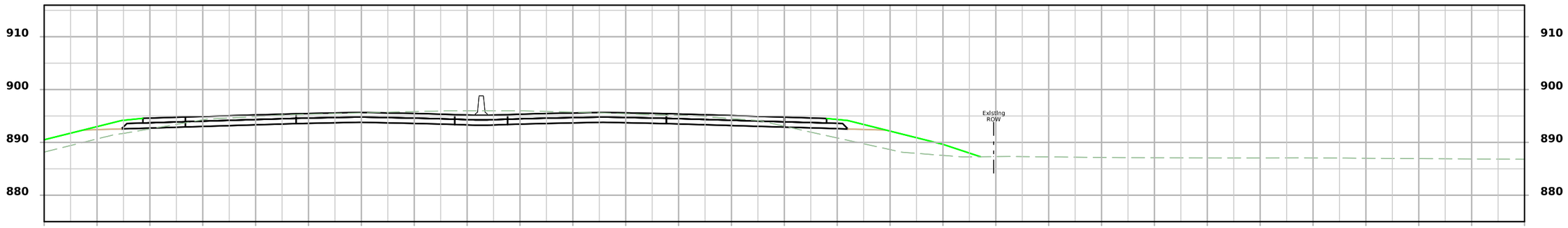
11:25:48 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

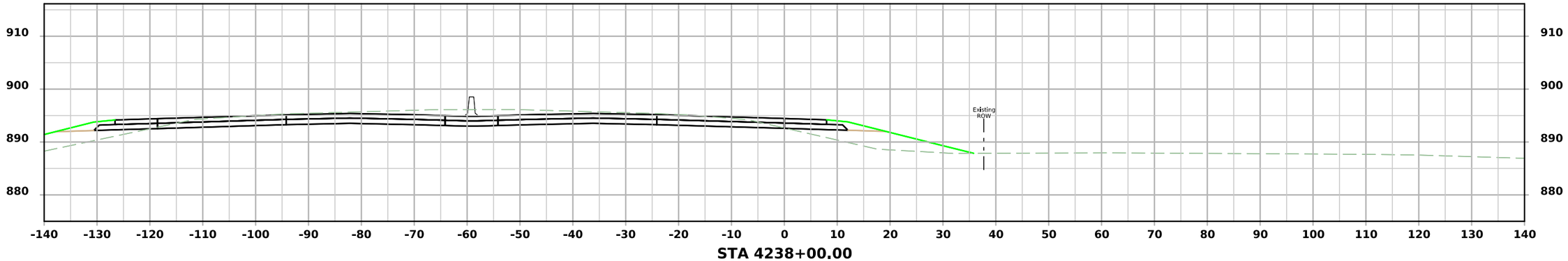
# Ramp D




**STA 4239+00.00**




**STA 4238+50.00**




**STA 4238+00.00**

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.61** |
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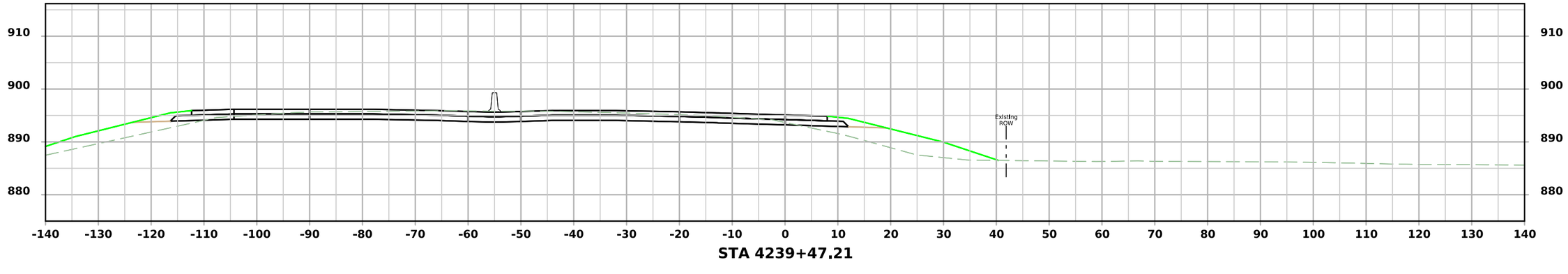
11:25:49 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn

Ramp D




STA 4239+47.21

| FILE NO. | ENGLISH | DESIGN TEAM **AECOM** | **BLACK HAWK** COUNTY | PROJECT NUMBER **NHSX-058-1(097)--3H-07** | SHEET NUMBER **Y.62** |
|---|---|---|---|---|---|

11:25:50 AM 7/10/2024 DaaeT pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\0705801012\Design\GreenhIll_Rd_ORD\CADD_Files\Sheet_Files\Y01_07058097Z05.dgn