

KEOKUK CO.
PCC PAVEMENT - GRADE AND REPLACE
NHSN-092-8(36)--2R-54
 LETTING DATE
 01-19-2022

| INDEX OF SHEETS | |
|-----------------|---|
| No. | DESCRIPTION |
| A Sheets | Title Sheets |
| * A.1 | Title Sheet |
| B Sheets | Typical Cross Sections and Details |
| B.1 - 4 | Typical Cross Sections and Details |
| C Sheets | Quantities and General Information |
| C.1 | Project Description |
| C.1 | Estimated Project Quantities |
| C.1 | Estimate Reference Information |
| C.1 | Standard Road Plans |
| D Sheets | Mainline Plan and Profile Sheets |
| * D.1 | Plan & Profile Legend & Symbol Information Sheet |
| * D.2 - 7 | IA 92 |
| E Sheets | Side Road Plan and Profile Sheets |
| * E.1 | IA 21 |
| * E.2 | Co Rd V33 |
| F Sheets | Detour or Temporary Pavement Sheets |
| * F.1 - 16 | Detour Plan and Profile Sheets |
| G Sheets | Survey Sheets |
| G.1 - 3 | Reference Ties and Bench Marks |
| G.4 - 5 | Horizontal Control Tab. & Super for all Alignments |
| J Sheets | Traffic Control and Staging Sheets |
| * J.1 | Traffic Control Plan |
| * J.1 | Staging Notes |
| * J.2 | Traffic Control & Staging Legend & Symbol Info. Sheet |
| * J.3 - 24 | Staging and Traffic Control Sheets |
| L Sheets | Geometric, Staking and Jointing Sheets |
| L.1 - 17 | IA 21 |
| L.18 - 33 | Co Rd V33 |



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

KEOKUK COUNTY

PCC PAVEMENT - GRADE AND REPLACE

IA 92 / IA 21 and IA 92 / Co Rd V33 Intersections

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

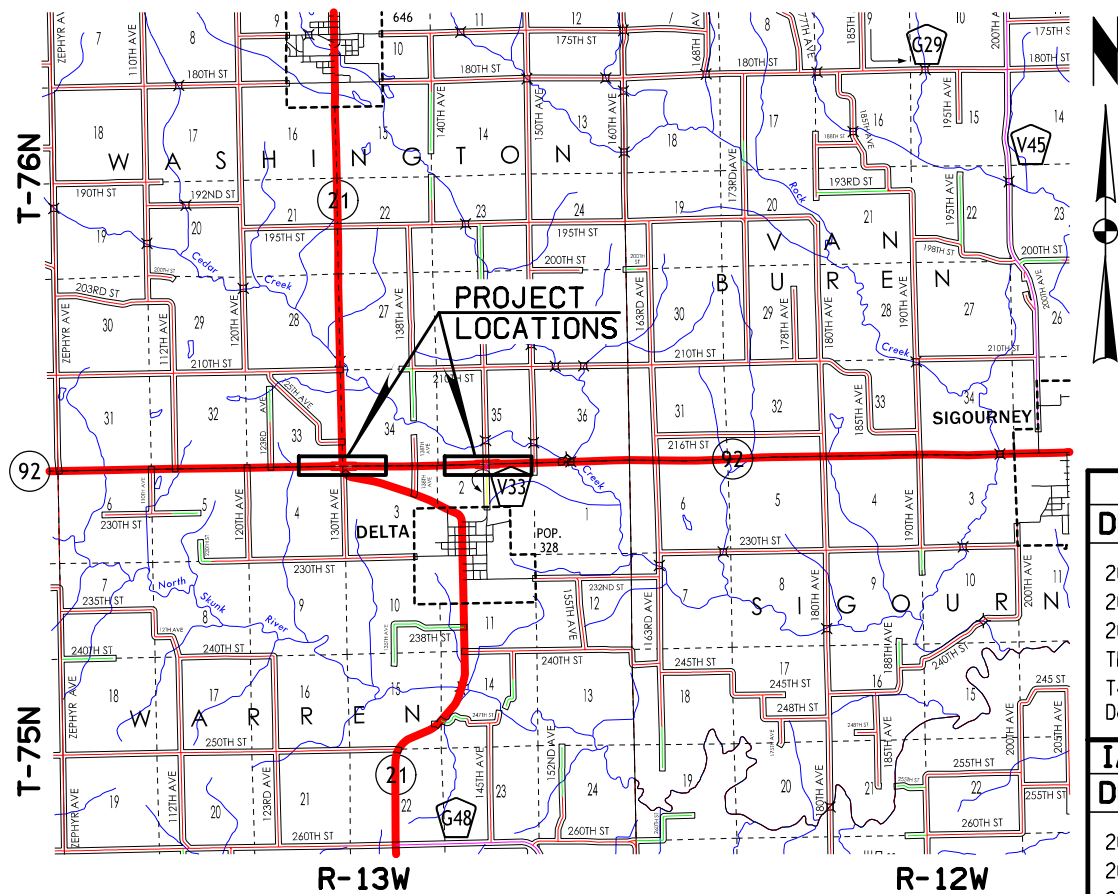
Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

| | |
|-------------------------------|-----------------------|
| TOTAL | 240 |
| PROJECT IDENTIFICATION NUMBER | 16-54-092-030 |
| PROJECT NUMBER | NHSN-092-8(36)--2R-54 |
| R.O.W. PROJECT NUMBER | NHSN-092-8(39)--2R-54 |

| INDEX OF SHEETS | |
|-----------------|---|
| No. | DESCRIPTION |
| N Sheets | Traffic Signal Sheets |
| * N.1 - 10 | Pavement Markings |
| P Sheets | Lighting Layout Sheets |
| * P.1 | Highway Lighting Layout |
| P.2 | Highway Lighting Details |
| * P.3 | Lighting Removals |
| R Sheets | Erosion Control Sheets |
| RC.1 - 2 | Est. Quantities, PPP, General Notes and Tabulations |
| T Sheets | Earthwork Quantity Sheets |
| * T.1A - 1B | Earthwork Legend Sheets |
| T.2 - 15 | Earthwork Quantity Sheets |
| W Sheets | Mainline Cross Sections |
| W.1 | Cross Sections Legend & Symbol Information Sheet |
| W.2 - 38 | IA 92 Cross Sections |
| X Sheets | Side Road Cross Sections |
| X.1 - 5 | IA 21 Cross Sections |
| X.6 - 8 | Co Rd V33 Cross Sections |
| X.9 - 25 | Stage 1A Detour |
| X.26 - 42 | Stage 1B Detour |
| X.43 - 55 | Stage 3 Detour |
| X.56 - 78 | Stage 5A Detour |
| | * Color Plan Sheets |



| IA 92 / IA 21 | | |
|-------------------|------|--------|
| DESIGN DATA RURAL | | |
| 2021 AADT | 2870 | V.P.D. |
| 2041 AADT | 3530 | V.P.D. |
| 20 -- DHV | -- | V.P.H. |
| TRUCKS | 15 | % |
| Total | | |
| Design ESALs | -- | |

| IA 92 / Co Rd V33 | | |
|-------------------|------|--------|
| DESIGN DATA RURAL | | |
| 2021 AADT | 2590 | V.P.D. |
| 2041 AADT | 3180 | V.P.D. |
| 20 -- DHV | -- | V.P.H. |
| TRUCKS | 11 | % |
| Total | | |
| Design ESALs | -- | |

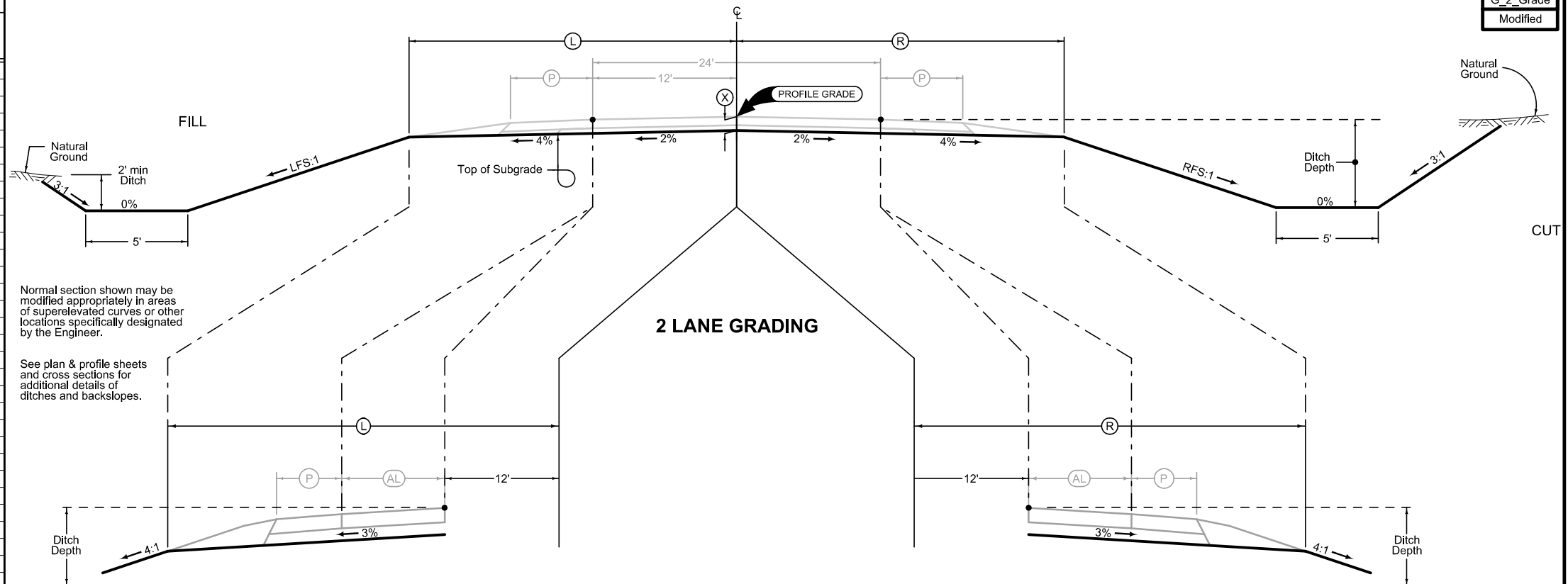
| INDEX OF SEALS | | |
|----------------|----------------|-------------------------|
| SHEET NO. | NAME | TYPE |
| A.1 | Taylor Theulen | Primary Signature Block |
| P.1 | Lane E. Ingram | Lighting Design |
| | | |
| | | |
| | | |

PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: 09-06-2019

| ROAD IDENTIFICATION | LOCATION | | DIMENSIONS | | | | |
|---------------------|--------------------|------------|------------|-----------|-------------|------|------|
| | STATION TO STATION | | Ⓐ Feet | Ⓑ Feet | ⓧ Inches | LFS | RFS |
| IA 92 | 144+11.57 | 144+40.00 | 25.3-41.3 | 25.3-51 | 21.5 | 3:1 | 4:1 |
| | 144+40.00 | 144+55.00 | | | | 25:1 | 4:1 |
| | 144+55.00 | 147+10.00 | | | | 25:1 | 25:1 |
| | 147+10.00 | 150+65.00 | | | | 3:1 | 25:1 |
| | 150+65.00 | 152+00.00 | | | | 3:1 | 4:1 |
| | 152+00.00 | 153+15.00 | | | | 3:1 | 25:1 |
| | 153+15.00 | 154+70.00 | | | | N/A | 25:1 |
| | 154+70.00 | 155+92.76 | | | | N/A | 4:1 |
| | 157+60.00 | 158+67.03 | | | | 25:1 | N/A |
| | 158+67.03 | 159+75.00 | 25.3-69.3 | 25.3 | 21.5 | 25:1 | 25:1 |
| | 159+75.00 | 167+50.00 | | | | 3:1 | 25:1 |
| | 167+50.00 | 167+65.00 | | | | 25:1 | 25:1 |
| | 167+65.00 | 167+80.00 | | | | 25:1 | 4:1 |
| | 167+80.00 | 168+86.25 | | | | 4:1 | 4:1 |
| IA 92 | 223+61.49 | 223+68.00 | 25.3-41.3 | 25.3 | 21.5 | 3:1 | 4:1 |
| | 223+68.00 | 224+30.00 | | | | 4:1 | 4:1 |
| | 224+30.00 | 225+80.00 | | | | 4:1 | 25:1 |
| | 225+80.00 | 226+30.00 | | | | N/A | 25:1 |
| | 226+30.00 | 227+10.00 | | | | 25:1 | 25:1 |
| | 227+10.00 | 228+70.00 | | | | 4:1 | 25:1 |
| | 228+70.00 | 231+75.00 | | | | 3:1 | 25:1 |
| | 231+75.00 | 234+78.80 | | | | 4:1 | 25:1 |
| | 234+78.80 | 235+00.00 | | | | 4:1 | N/A |
| | 235+00.00 | 236+40.00 | | | | N/A | N/A |
| | 236+40.00 | 237+73.53 | | | | 4:1 | N/A |
| | 237+73.53 | 238+46.00 | | | | 4:1 | 25:1 |
| | 238+46.00 | 244+04.00 | | | | 4:1 | 25:1 |
| | 244+04.00 | 244+40.00 | | | | N/A | 25:1 |
| 244+40.00 | 246+20.00 | | | | 4:1 | 25:1 | |
| 246+20.00 | 247+50.00 | | | | N/A | 25:1 | |
| 247+50.00 | 254+00.00 | | | | N/A | 4:1 | |
| IA 21 | 1154+50.00 | 1156+59.09 | 31.6 | 31.6 | 21.5 | 4:1 | 4:1 |
| | 1156+59.23 | 1159+12.83 | 31.6 | 31.6 | 21.5 | 25:1 | 25:1 |
| V33 | 1231+00.00 | 1235+60.70 | 31.6 | 31.6 | 21.5 | 4:1 | 4:1 |



Normal section shown may be modified appropriately in areas of super-elevated curves or other locations specifically designated by the Engineer.
See plan & profile sheets and cross sections for additional details of ditches and backslopes.

Auxiliary Lane Grading

| LOCATION | | Ⓑ Feet |
|---------------------|-----------------------|-----------|
| ROAD IDENTIFICATION | STATION TO STATION | |
| IA 92 | 157+57.43 - 166+03.04 | 76.6-44.6 |
| | | |
| | | |

Auxiliary Lane Grading

| LOCATION | | Ⓑ Feet |
|---------------------|-----------------------|-----------|
| ROAD IDENTIFICATION | STATION TO STATION | |
| IA 92 | 148+08.93 - 155+93.94 | 31.6-57.3 |
| | | |
| | | |

Full Depth HMA Shoulder

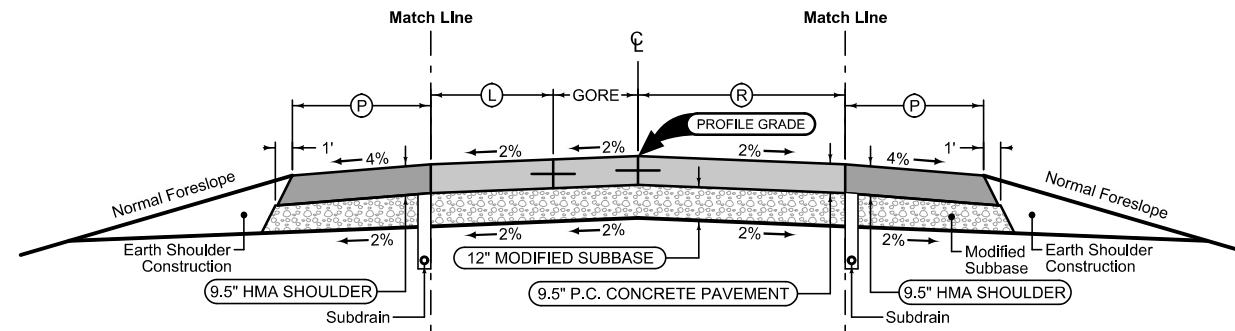
Shoulder Jointing:
Longitudinal joint: B

| 2_P_FullHMA_10-19-10 | | |
|----------------------|-----------|-------------|
| STATION TO STATION | | (P) Feet |
| 134+25.00 | 154+88.36 | 10 |
| 166+03.04 | 178+50.00 | 10 |
| 218+25.00 | 254+00.00 | 10 |

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

| 2_P_FullHMA_10-19-10 | | |
|----------------------|-----------|-------------|
| STATION TO STATION | | (P) Feet |
| 134+25.00 | 148+08.93 | 10 |
| 158+61.62 | 178+50.00 | 10 |
| 218+25.00 | 234+78.80 | 10 |
| 237+73.53 | 254+00.00 | 10 |



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

| 2P_10-19-10 | | | | |
|--------------------|-------------|--------------|-------------|----|
| STATION TO STATION | (L) Feet | GORE Feet | (R) Feet | |
| 143+86.62 | 153+36.22 | 12 | 0 - 16 | 12 |
| 153+36.22 | 160+06.57 | 12 | 16 | 12 |
| 160+06.57 | 168+86.25 | 12 | 16 - 0 | 12 |
| 223+61.49 | 232+37.70 | 12 | 0 - 16 | 12 |
| 232+37.70 | 239+07.70 | 12 | 16 | 12 |
| 239+07.70 | 247+83.91 | 12 | 16 - 0 | 12 |

Full Depth HMA Shoulder

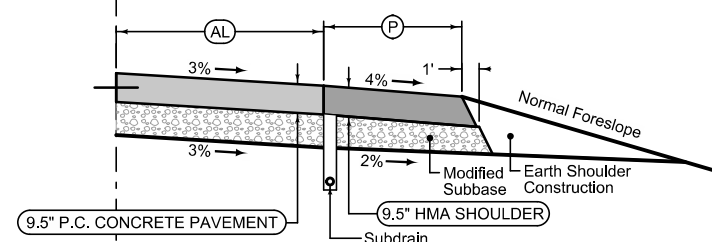
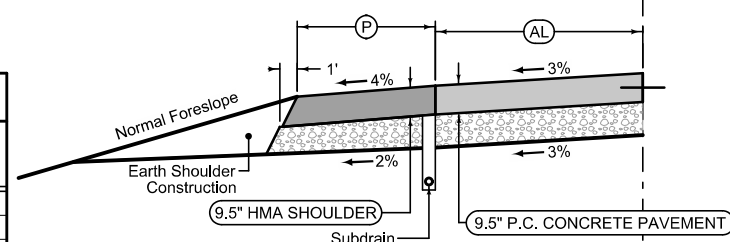
Shoulder Jointing:
Longitudinal joint: B

| 2_P_FullHMA_10-19-10 | | |
|----------------------|-----------|-------------|
| STATION TO STATION | | (P) Feet |
| 157+57.43 | 164+83.29 | 6 |
| 164+83.29 | 166+03.04 | 6 - 10 |

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

| 2_AuxLane_PCC_10-18-16 | | |
|------------------------|-----------|--------------|
| STATION TO STATION | | (AL) Feet |
| 157+57.43 | 166+03.04 | 32.7 - 0 |



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

| 2_AuxLane_PCC_10-18-16 | | |
|------------------------|-----------|--------------|
| STATION TO STATION | | (AL) Feet |
| 148+08.93 | 155+93.94 | 0 - 29.7 |

Full Depth HMA Shoulder

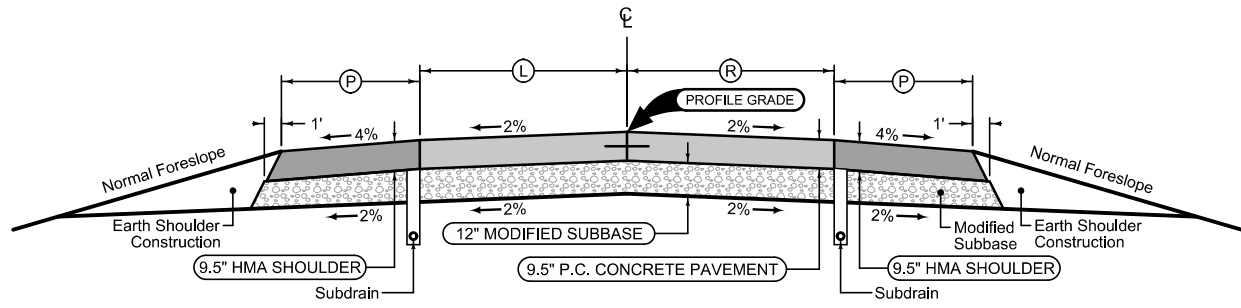
Shoulder Jointing:
Longitudinal joint: B

| 2_P_FullHMA_10-19-10 | | |
|----------------------|-----------|-------------|
| STATION TO STATION | | (P) Feet |
| 148+08.93 | 148+97.46 | 10 - 6 |
| 148+97.46 | 155+93.94 | 6 |

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

| 2_P_FullHMA_10-19-10 | | |
|----------------------|------------|------|
| STATION TO STATION | (P) | Feet |
| 1154+00.00 | 1156+59.09 | 6 |
| 1156+99.23 | 1159+12.83 | 6 |



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

| 2P_10-19-10 | | | |
|--------------------|------------|-----|------|
| STATION TO STATION | (L) | (R) | Feet |
| 1154+50.00 | 1156+59.09 | 11 | 11 |
| 1156+99.23 | 1159+12.83 | 11 | 11 |

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

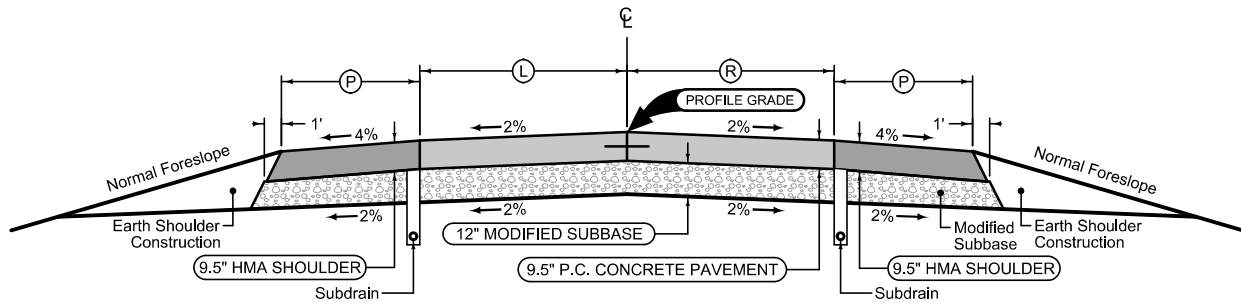
| 2_P_FullHMA_10-19-10 | | |
|----------------------|------------|------|
| STATION TO STATION | (P) | Feet |
| 1154+50.00 | 1156+59.09 | 6 |
| 1156+99.23 | 1159+12.83 | 6 |

IA 21

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

| 2_P_FullHMA_10-19-10 | | |
|----------------------|------------|------|
| STATION TO STATION | (P) | Feet |
| 1231+00.00 | 1235+60.70 | 6 |



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

| 2P_10-19-10 | | | |
|--------------------|------------|-----|------|
| STATION TO STATION | (L) | (R) | Feet |
| 1231+00.00 | 1235+60.70 | 12 | 12 |

Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

| 2_P_FullHMA_10-19-10 | | |
|----------------------|------------|------|
| STATION TO STATION | (P) | Feet |
| 1231+00.00 | 1235+60.70 | 6 |

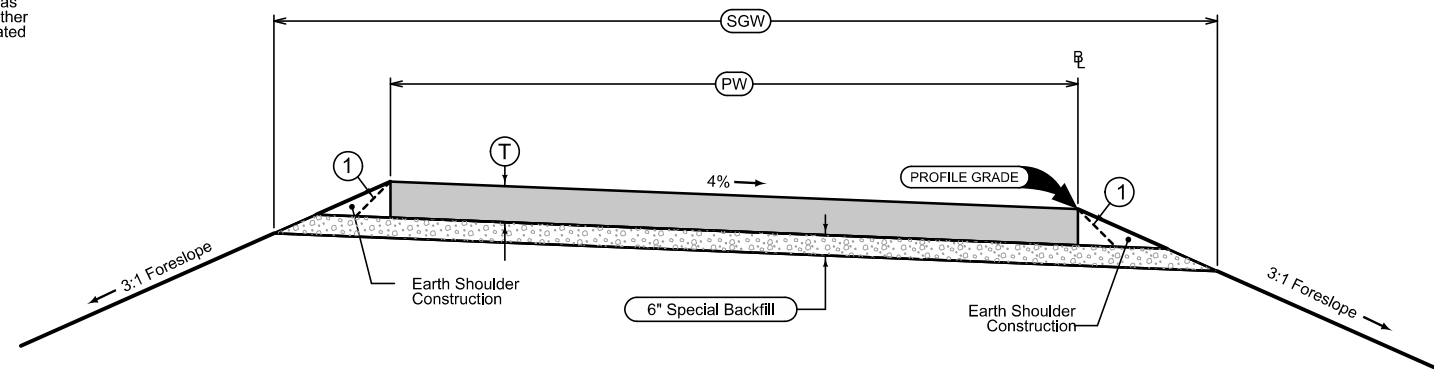
Co Rd V33

| ROAD IDENTIFICATION | LOCATION STATION TO STATION | | DIMENSIONS | | | | | | | 6" Special Backfill Tons/Station | Earth Shoulder Construction Station |
|---------------------|--------------------------------|------------|------------|-------------|-------------|------------|-------------|-------------|-------------|-------------------------------------|--|
| | | | HMA | | | PCC | | | | | |
| | | | PW Feet | T Inches | SGW Feet | PW Feet | T Inches | SGW Feet | SGW Feet | | |
| DET01 | 2134+45.06 | 2154+63.79 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET02 | 2157+65.60 | 2178+61.26 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET03 | 3150+41.50 | 3156+21.14 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET04 | 3157+05.03 | 3163+42.12 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET05 | 4135+52.50 | 4154+70.99 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET06 | 4157+65.03 | 4178+50.16 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET07 | 5150+41.50 | 5154+70.23 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET08 | 5157+65.03 | 5163+42.12 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET09 | 6138+64.98 | 6151+12.34 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET10 | 6157+66.66 | 6174+10.19 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET11 | 7210+70.40 | 7235+07.11 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET12 | 7236+39.34 | 7260+75.21 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET13 | 8230+98.49 | 8235+35.20 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |
| DET14 | 8236+36.93 | 8240+75.13 | VARIES | 8 | VARIES | VARIES | 7 | VARIES | | | |

Quantity calculations based on vertical pavement edges.

Normal section shown may be modified appropriately in areas of super-elevated curves or other locations specifically designated by the Engineer.

① Possible HMA 1:1 slope

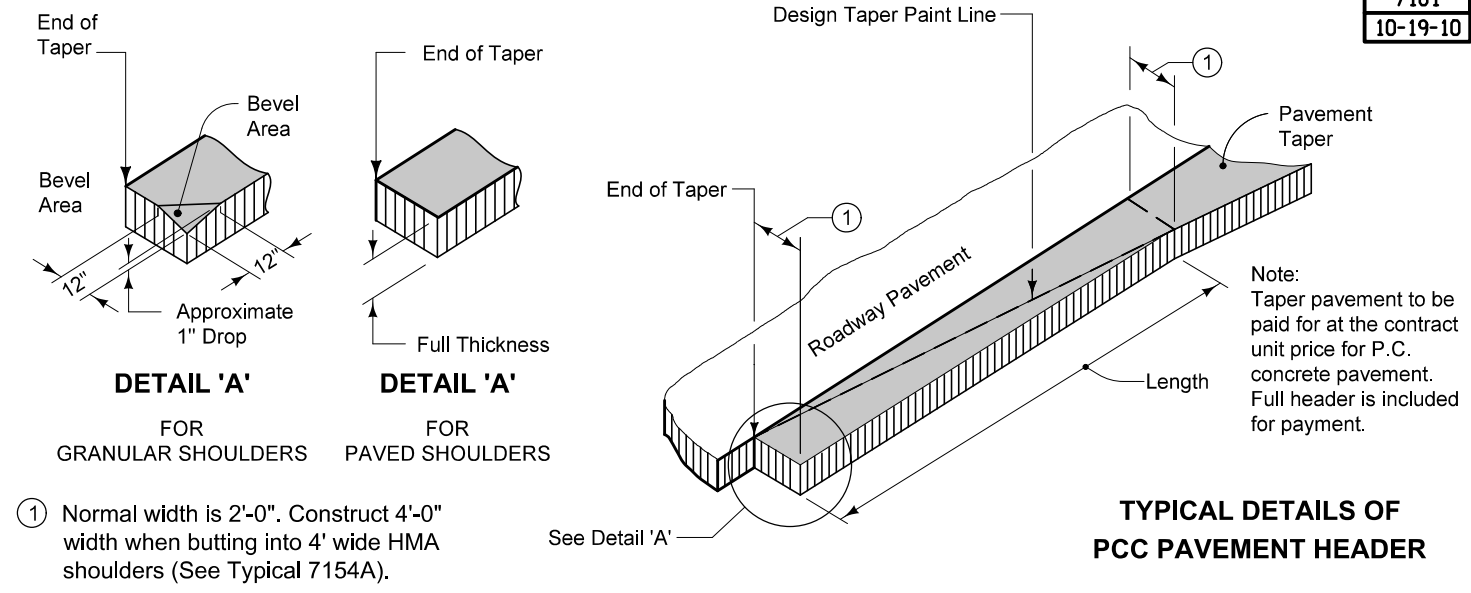


DETOUR PAVING

D_Detour
10-21-14

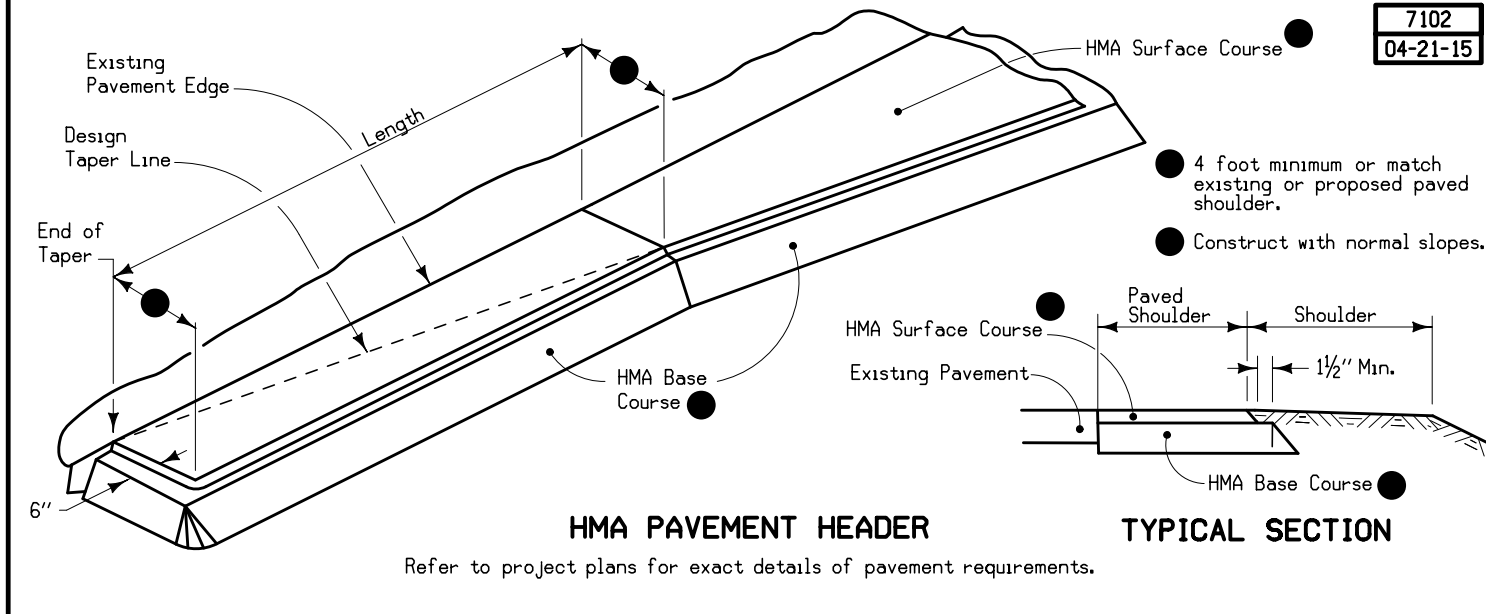
DESIGNER INFO

7101
10-19-10

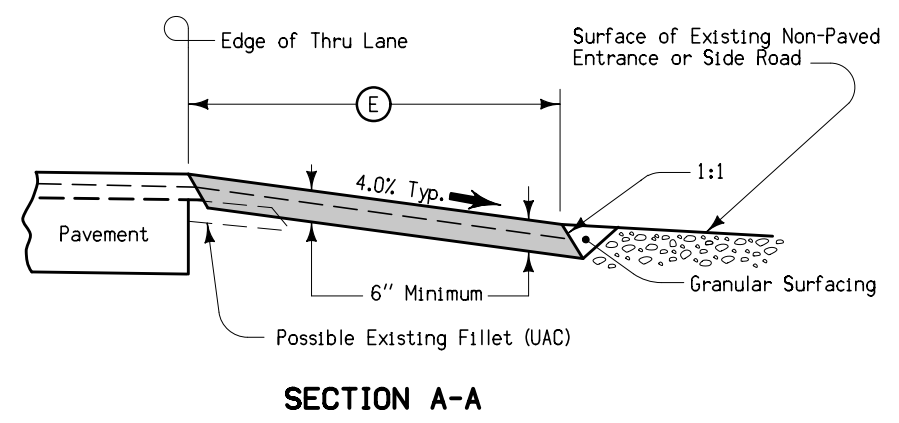
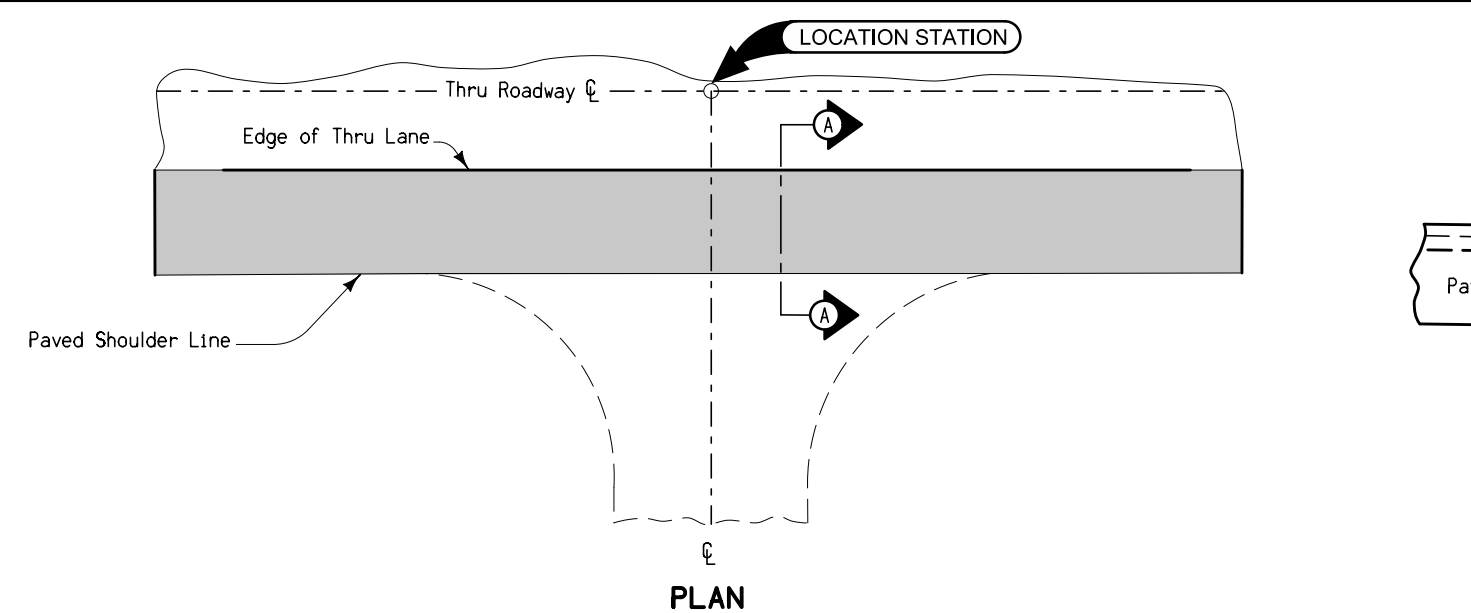


① Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).

7102
04-21-15



7148
Modified



Special shaping of existing surface prior to placement of fillet may be required by the Engineer and is incidental to other work on the project.
Quantities included with mainline quantities.

FILLET FOR NON-PAVED ENTRANCES OR SIDE ROADS

100-1D
10-18-05

PROJECT DESCRIPTION

This project involves the reconstruction of the IA 92 / IA 21 intersection and the IA 92 / County Road V33 intersection in Keokuk County.

100-1C
04-17-12

**ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)**

| Item No. | Item Code | Item | Unit | Estimated Quantities | | | | | | As Built | | | | | | |
|----------|-----------|------|------|----------------------|------------|------------|------------|------------|-------|------------|------------|------------|------------|------------|--|--|
| | | | | Division 1 | Division 2 | Division 3 | Division 4 | Division 5 | Total | Division 1 | Division 2 | Division 3 | Division 4 | Division 5 | | |
| | | | | | | | | | | | | | | | | |

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

| Item No. | Item Code | Description |
|----------|-----------|-------------|
| | | |

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

| Number | Date | Title |
|--------|----------|--|
| BA-401 | 10-15-19 | Temporary Barrier Rail (Precast Concrete) |
| BA-500 | 04-19-16 | Temporary Crash Cushions Sand Barrel |
| DR-101 | 04-18-17 | Pipe Culvert (Bedding and Backfill) |
| DR-102 | 04-21-15 | Pipe Culvert (Cover and Camber) |
| DR-103 | 04-21-15 | Pipe Culvert (Installation Details) |
| DR-121 | 10-17-17 | Connected Pipe Joints |
| DR-201 | 10-16-18 | Concrete Aprons |
| DR-203 | 04-21-15 | Metal Pipe Aprons and Beveled Ends |
| DR-213 | 10-17-17 | Pipe Apron Guard |
| DR-303 | 10-17-17 | Subdrains (Longitudinal) |
| DR-306 | 10-16-18 | Precast Concrete Headwall for Subdrain Outlets |
| DR-601 | 04-18-17 | Reinforced Concrete Pipe Culvert |
| DR-621 | 04-18-17 | Pipe Extension |
| EC-101 | 04-19-16 | Wood Excelsior Mat for Ditch Protection |
| EC-103 | 04-21-15 | Wood Excelsior Mat for Slope Protection |
| EC-104 | 04-17-18 | Turf Reinforced Mat (TRM) |
| EC-201 | 10-15-19 | Silt Fence |
| EC-204 | 04-18-17 | Perimeter and Slope Sediment Control Devices |
| EC-303 | 04-16-19 | Stabilized Construction Entrance |
| EC-502 | 04-21-15 | Seeding in Rural Areas |
| EC-601 | 10-16-18 | Temporary Sediment Control Basin |
| EW-101 | 10-17-17 | Embankment and Rebuilding Embankments |
| EW-102 | 10-20-15 | Allowable Placement of Unsuitable Soil in Embankments |
| EW-103 | 10-20-15 | Embankment Subgrade Treatment, Moisture Density Control and Special Compaction |
| EW-105 | 04-21-15 | Reshaping Slopes and Ditches |
| EW-503 | 10-20-15 | Side Road Grading |
| LI-101 | 10-21-14 | Light Pole Location |
| LI-103 | 10-21-14 | Conduit and Precast Handholes |
| LI-130 | 10-17-17 | Temporary Floodlighting Luminaires |
| LI-141 | 10-21-14 | Electrical Installation (Roadway Ducts) |
| LI-142 | 04-21-15 | Electrical Installation (Bases) |
| LI-201 | 04-18-17 | Light Pole Foundation |
| LI-210 | 10-21-14 | Transformer Base (Cast Aluminum) |
| PM-110 | 10-16-18 | Line Types |
| PM-111 | 04-21-15 | Symbols and Legends |
| PM-120 | 10-21-14 | Stop Lines and Islands |
| PM-522 | 04-16-19 | Two-Lane Roadway with Left Turn Lanes |
| PV-3 | 04-16-19 | Safety Edge |
| PV-101 | 04-16-19 | Joints |
| SI-101 | 04-19-16 | Locations - Type 'A' Signs |
| SI-131 | 10-18-16 | Installation - Type 'A' Signs |
| SI-133 | 10-17-17 | Installation - Type "A" Sign Shim |
| SI-171 | 04-18-17 | Reference Location Sign Posts |
| SI-172 | 04-19-16 | Delineators |
| SI-881 | 04-16-19 | Special Signs for Workzones |
| TC-1 | 10-15-19 | Work Not Affecting Traffic (Two-Lane or Multi-Lane) |
| TC-81 | 10-15-19 | Restricted Width Signing (Less Than 14.5 Feet) |
| TC-202 | 04-21-15 | Work Within 15 ft of Traveled Way |
| TC-233 | 10-17-17 | Pavement Marking Operations Two-Lane |
| TC-252 | 04-19-16 | Routes Closed to Traffic |

SURVEY SYMBOLS

- FENO FENO Monument
- CP Control Point
- PLG Location of General Photo
- PCP Photo Control Point
- CU Back of Curb
- GU Gutter In Front of Curb
- EP Edge of Paved Roads (ML or SR)
- SH Paved Shoulder
- D Centerline Draw or Stream (Down)
- GR Ground Shot
- LIN Miscellaneous Line
- SNP Unpaved Shoulder
- C Centerline BL of Road (ML or SR)
- TILE TIL Tile Line
- OUT Tile Outlet
- ENU Edge Unpaved Entrance & Parking
- ENT Centerline BL of Entrance
- BL Topo Breakline
- EG Edge of Gravel Road
- DTM Photogrammetry Elv Control Check
- PRO Profile Shot
- PIP Pipe Culvert
- SOP Size of Pipe or Culvert
- CUL Culvert
- IN Storm Sewer Intake
- UE Utility Elevation
- CON Concrete or A/C Slab
- REF Reference Tie Point
- PI Tangent Point
- PC Curve Point
- PT Curve Point
- SCR Section Corner
- POT Tangent Point
- WC Wild Card (Misc. Field Shot)
- T1 TL1D Telephone Line Co. 1 - Quality D
- F0 FO1D Fiber Optic Co. 1 - Quality D
- TP TPD Telephone Pedestal
- E1 EL1D Electric Line Co. 1 - Quality D
- T2 TL2D Telephone Line Co. 2 - Quality D
- LUM Luminaire
- PPA Power Pole Co. 1
- PR Electric Riser Pole
- W WL1D Water Line Co. 1 - Quality D
- WV Water Valve
- ROW Right of Way Mark
- FW Wire Fence
- DU Centerline Draw or Stream (Up)
- GDL Guard Rail Steel

UTILITY LEGEND

- T1 Windstream
Kelly Eggers
101 West Madison
Mt. Pleasant, IA 52641
319-385-5004
- Alliant Energy
Heather Doe
200 1st St. SE
Cedar Rapids, IA 52401
319-786-8196
- T2 ICN
Mike Broderick
400 E 14th Street
Grimes State Office Bldg
Des Moines, IA 50319
515-725-4610
- W Wapello Rural Water Association
Krista Huffman
PO Box 538
Ottumwa, IA 52501
641-682-8351
- E1 State of Iowa Highway Maintenance
Supervisor - Transportation
Douglas Swan
207 E. 227th Street
Fairfield, IA 52556
641-472-5367

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

| LINEWORK | Design Color No. | Description |
|------------------|------------------|--|
| 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. | Description | |
| Yellow | (4) | Highlight for Critical Notes or Features |
| Red | (3) | Delineates Restricted Areas |
| Lavender | (9) | Temporary Pavement Shading |
| Gray, Light | (48) | Proposed Pavement Shading |
| Gray, Med | (80) | Proposed Granular Shading |
| Gray, Dark | (112) | Proposed Grade and Pave Shading "In conjunction with a paving project" |
| Brown, Light | (236) | Grading Shading |
| Tan | (8) | Proposed Sidewalk Shading |
| Blue, Light | (230) | Proposed Sidewalk Landing Shading |
| Pink | (11) | Proposed Sidewalk Ramp Shading |

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

| LINEWORK | Design Color No. | Description |
|-------------|------------------|---------------------------------|
| Green | (2) | 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

Pavement Obliterate

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
- Access Control
- Property Line

SURVEYED UTILITY OWNER SYMBOLS

Sub-Surface Utility Mapping Quality Level is in accordance with CI/ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.

Remark Abbreviations

- QLA Quality Level A Highest guideline quality level
- QLD Quality Level D Lowest guideline quality level

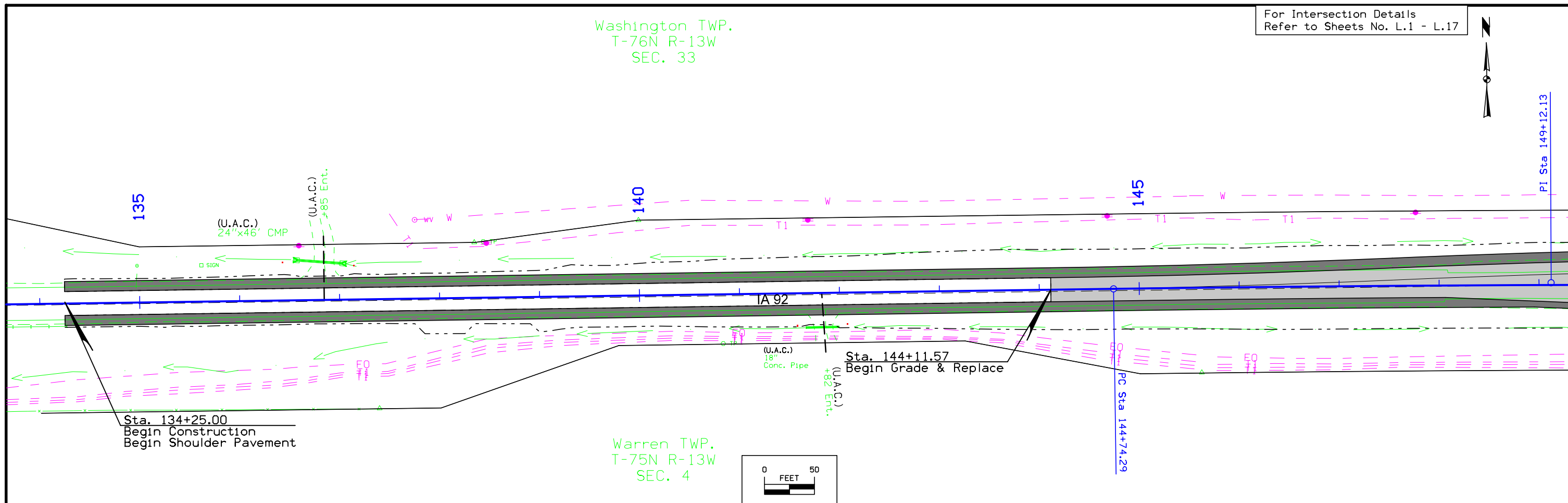
- T1 - TL1D Windstream Communications - Quality D
- F0 - FO1D Windstream Communications - Quality D
- E1 - EL1D Iowa DOT- Quality D
- T2 - TL2D Iowa Communications Network - Quality D
- PPA Alliant Energy
- PR Iowa DOT
- W - WL1D Wapello Rural Water Association - Quality D

PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET

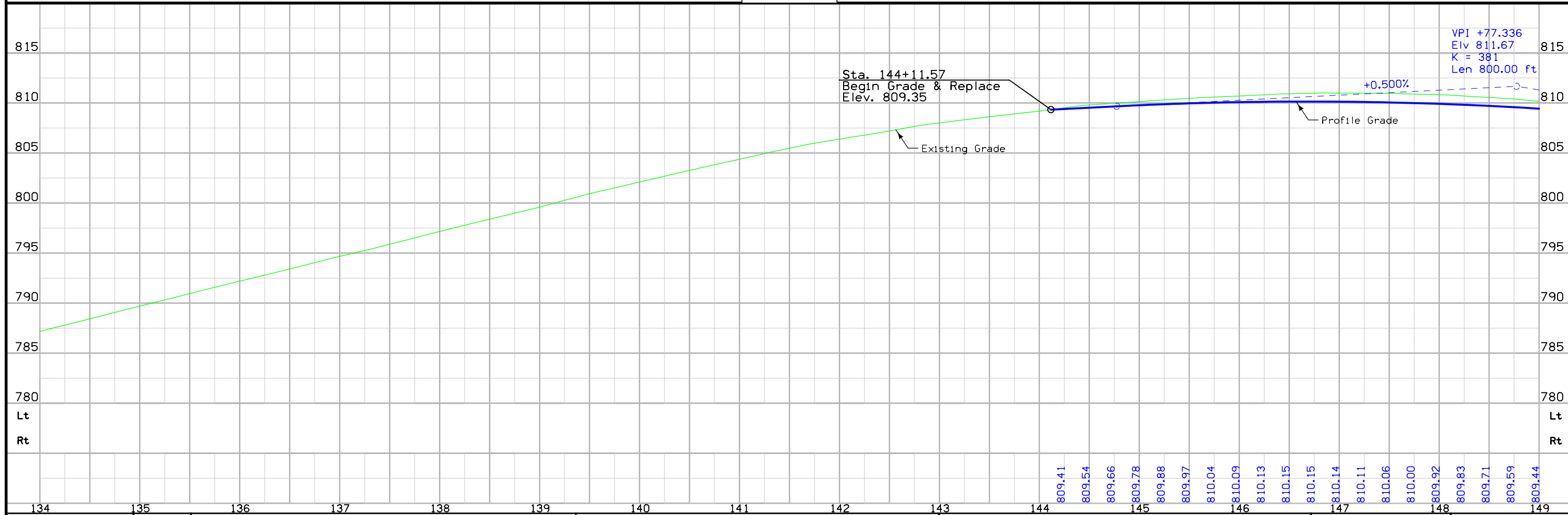
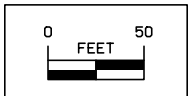
(COVERS SHEET SERIES D, E, F, & K)

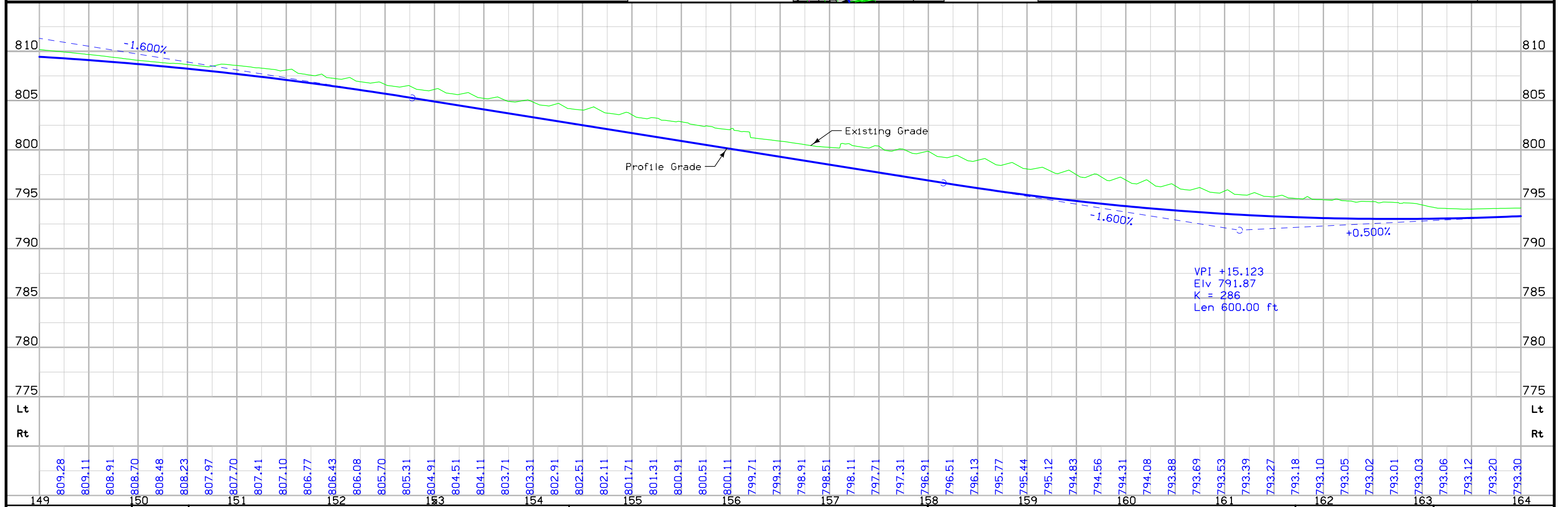
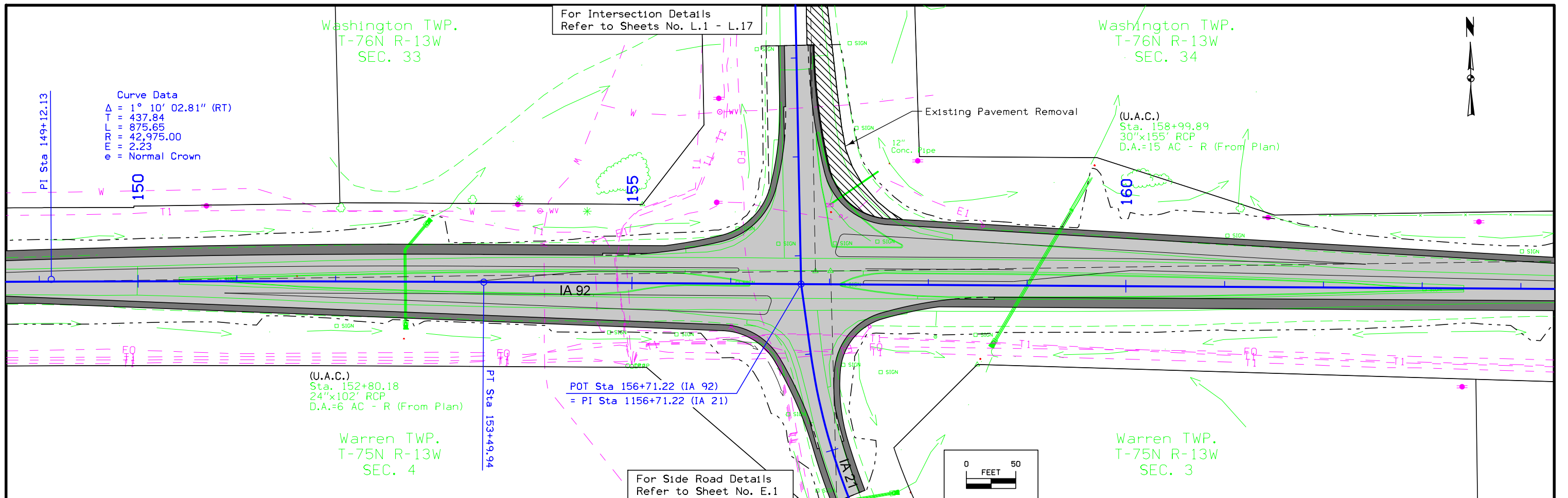
Washington TWP.
T-76N R-13W
SEC. 33

For Intersection Details
Refer to Sheets No. L.1 - L.17



Warren TWP.
T-75N R-13W
SEC. 4

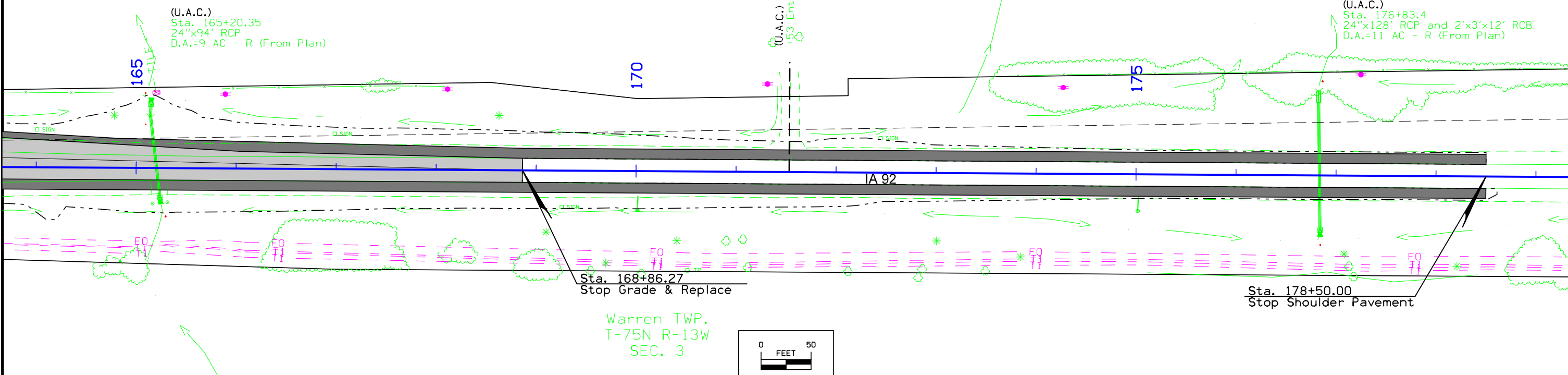




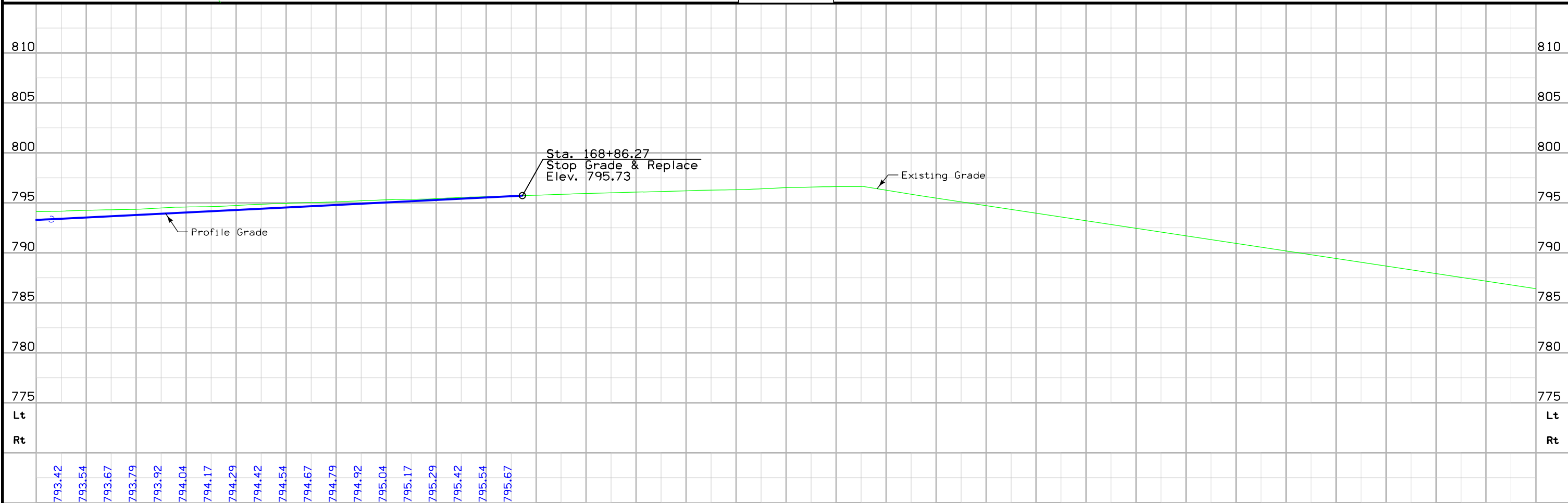
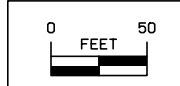
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For Intersection Details
Refer to Sheets No. L.1 - L.17

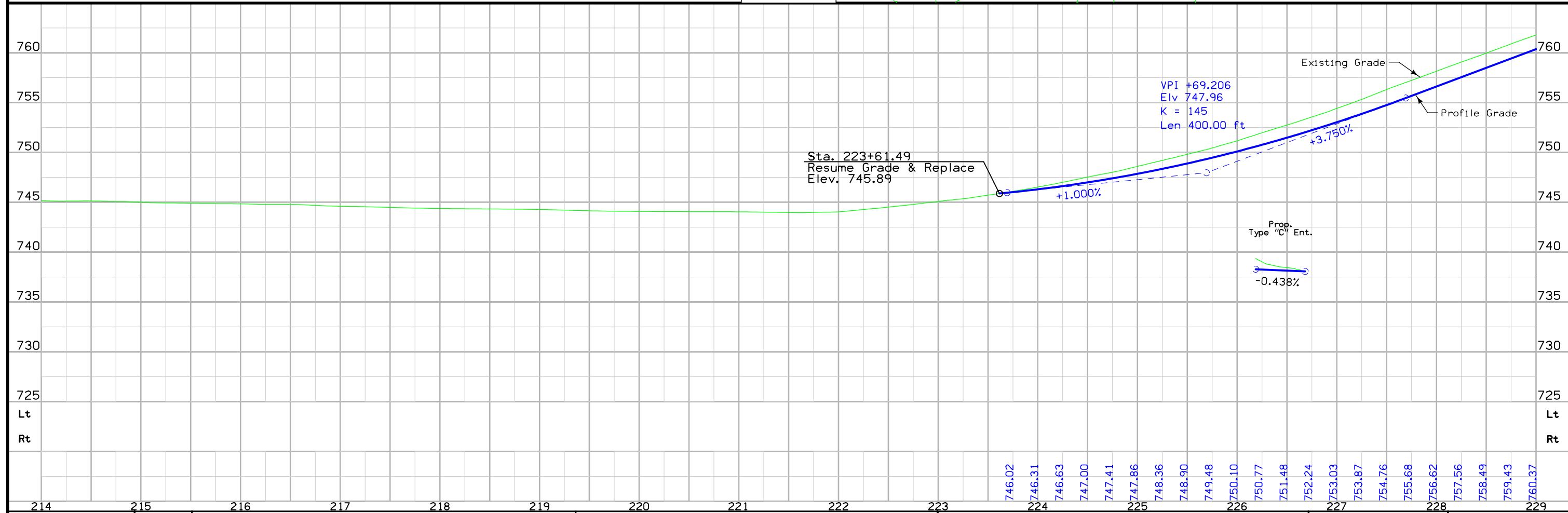
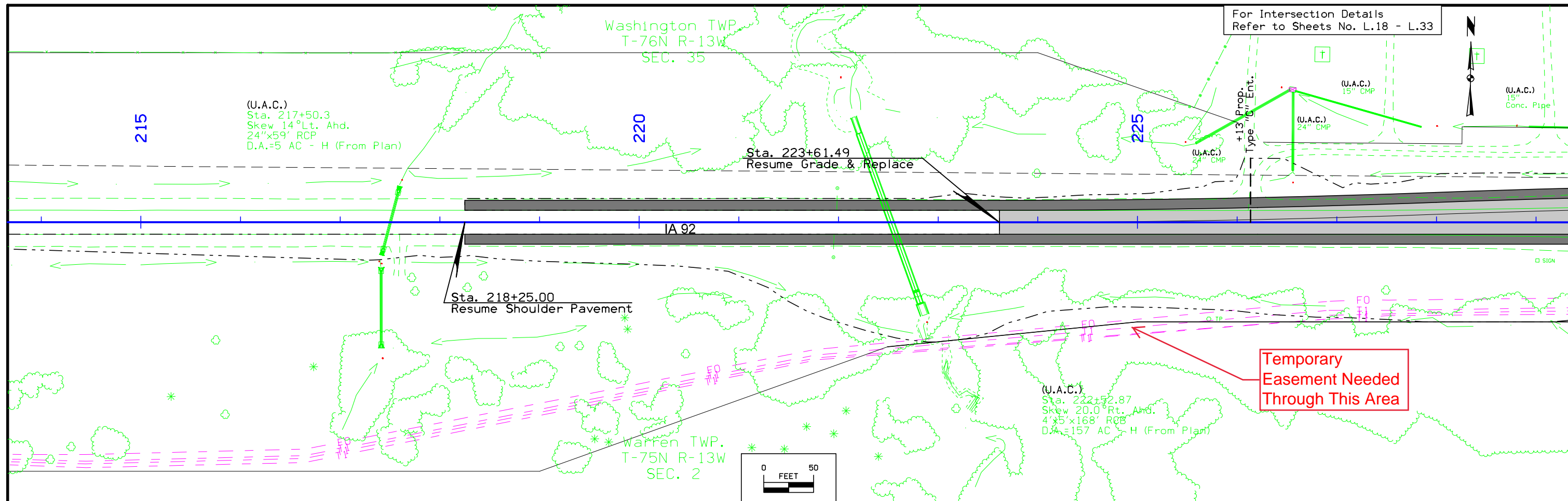
Washington TWP.
T-76N R-13W
SEC. 34

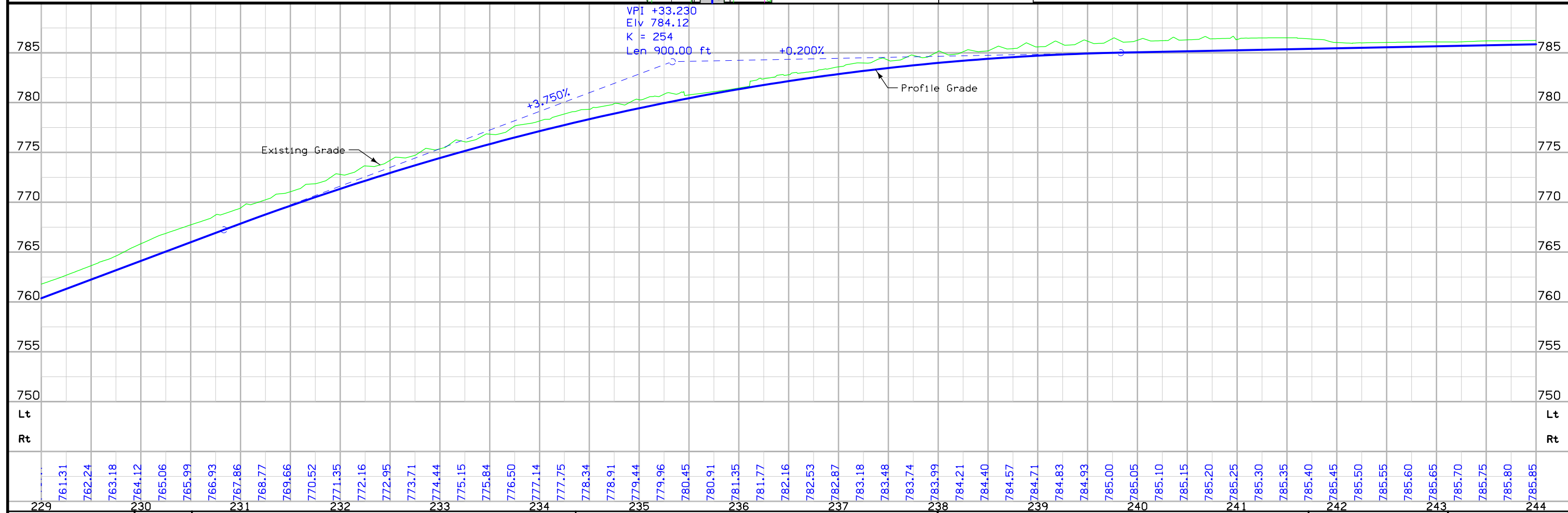
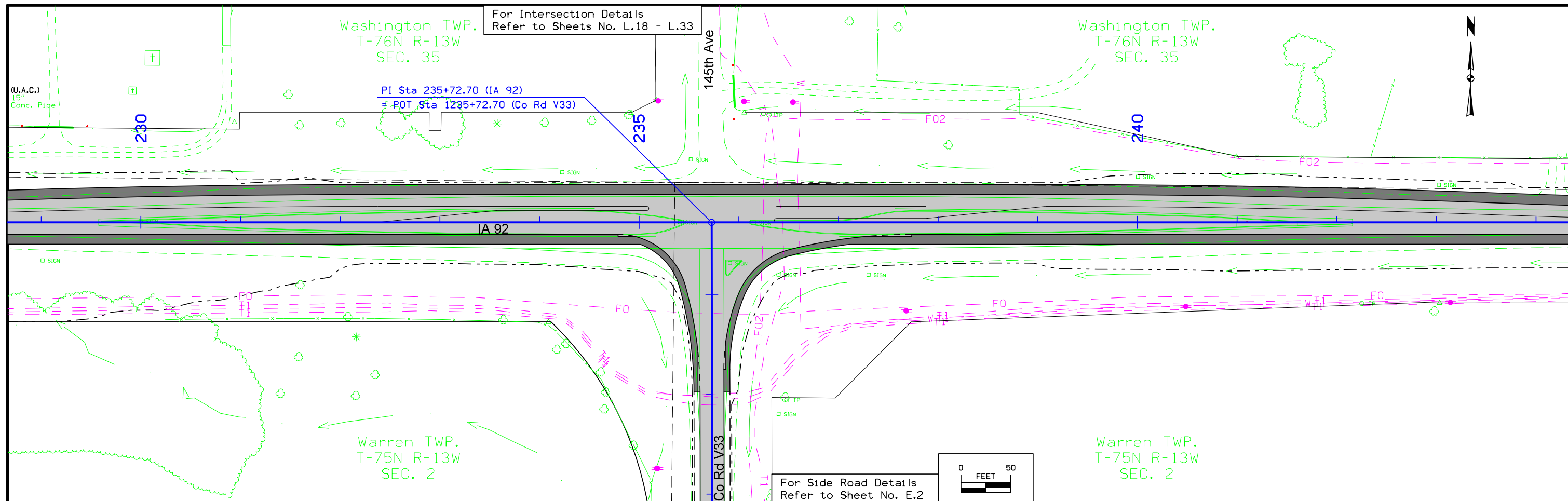


Warren TWP.
T-75N R-13W
SEC. 3



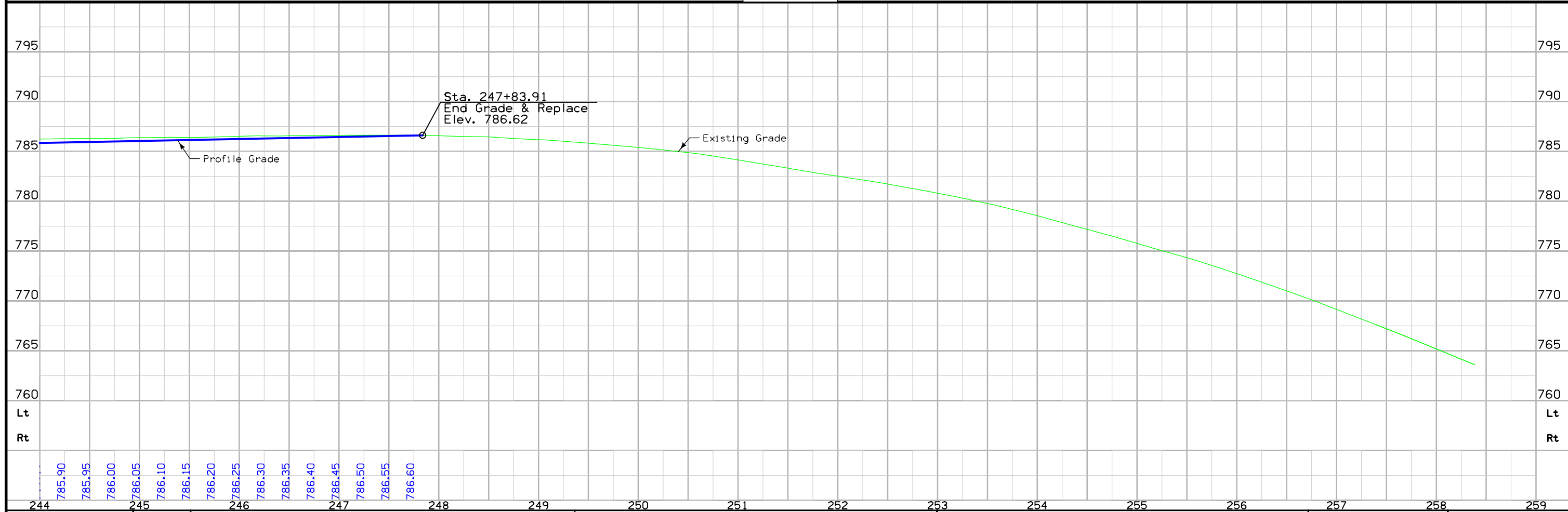
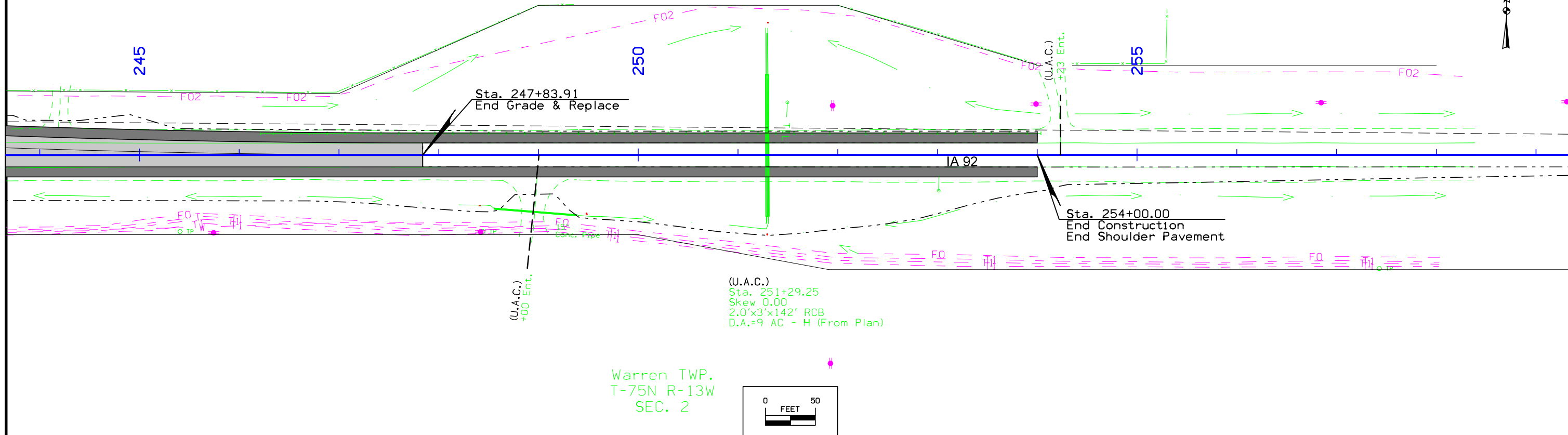
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| 793.42 | 793.54 | 793.67 | 793.79 | 793.92 | 794.04 | 794.17 | 794.29 | 794.42 | 794.54 | 794.67 | 794.79 | 794.92 | 795.04 | 795.17 | 795.29 |
| 795.42 | 795.54 | 795.67 | | | | | | | | | | | | | |



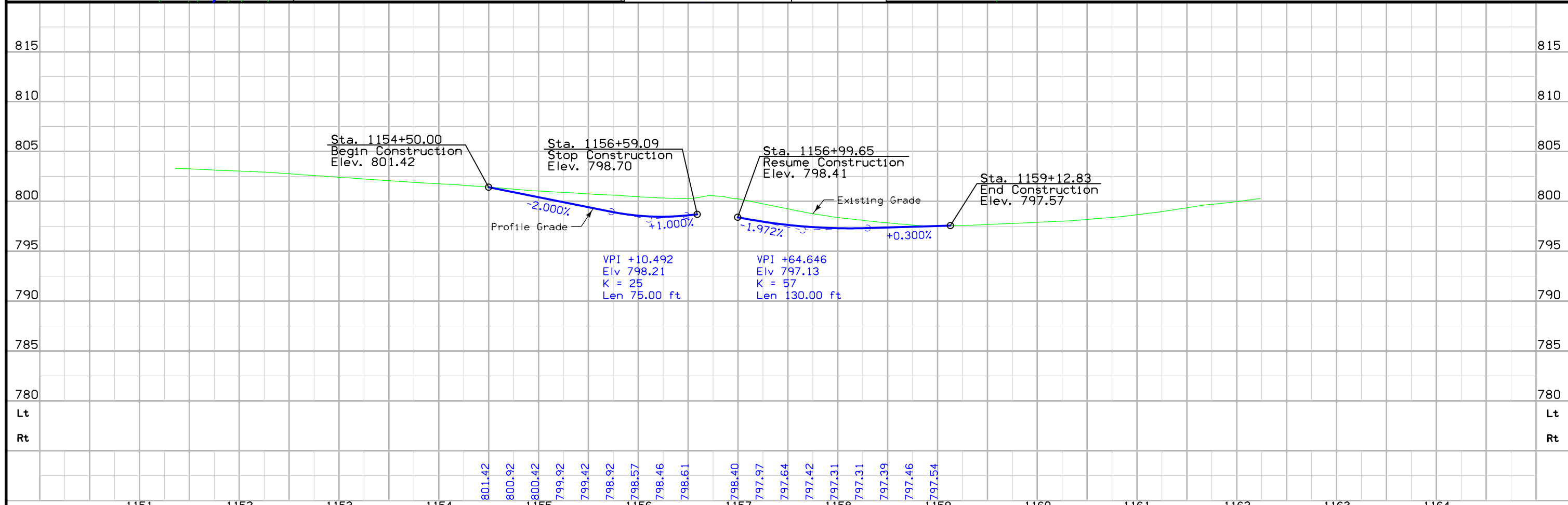
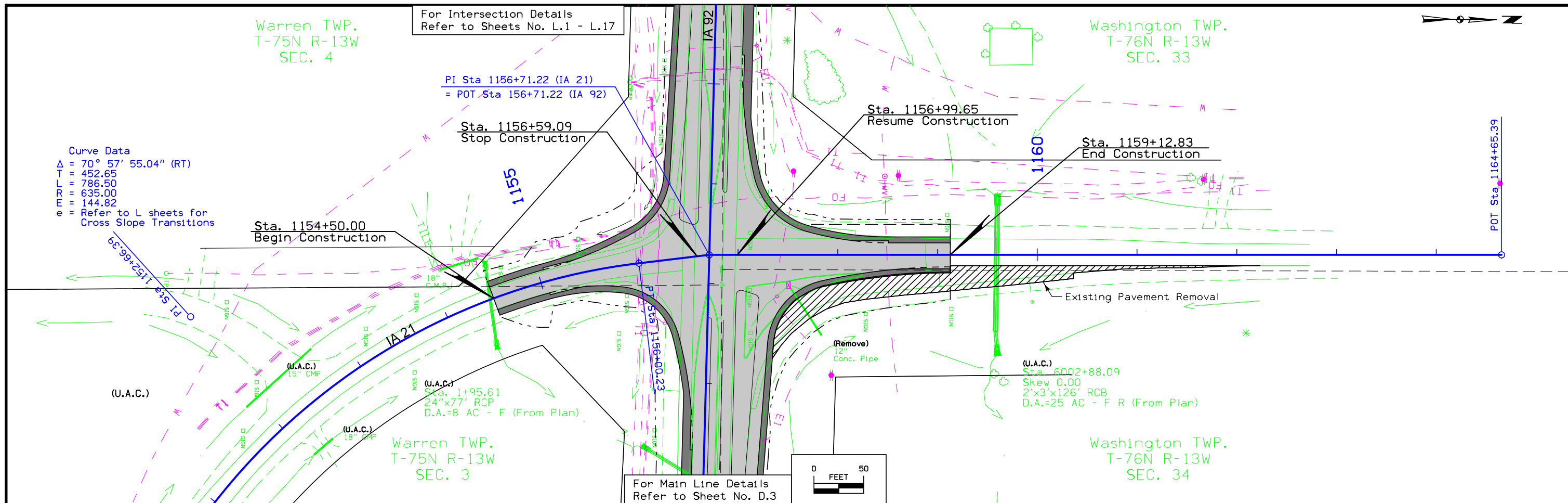


For Intersection Details
Refer to Sheets No. L.18 - L.33

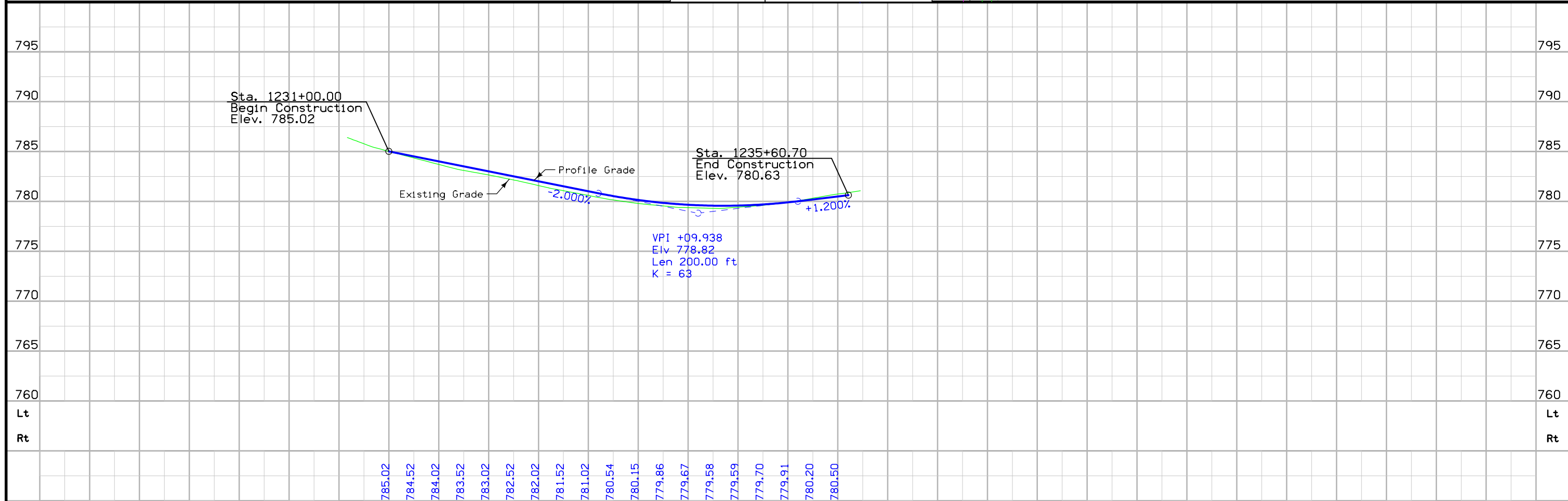
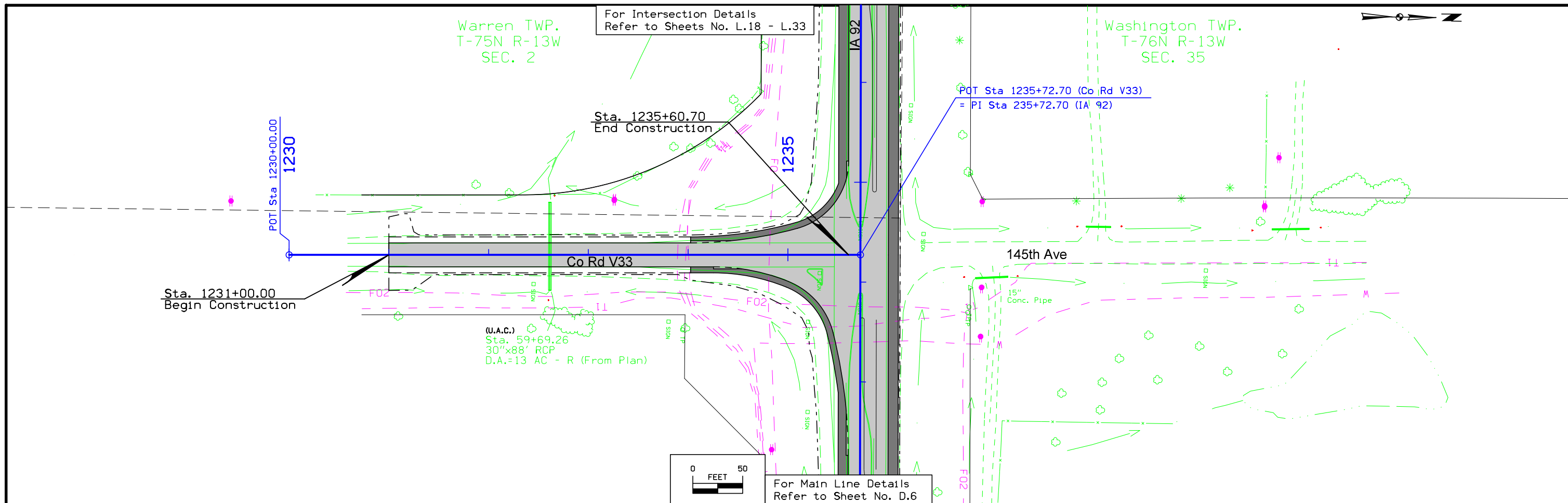
Washington TWP.
T-76N R-13W
SEC. 35



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| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | SHEET NUMBER | D.7 |
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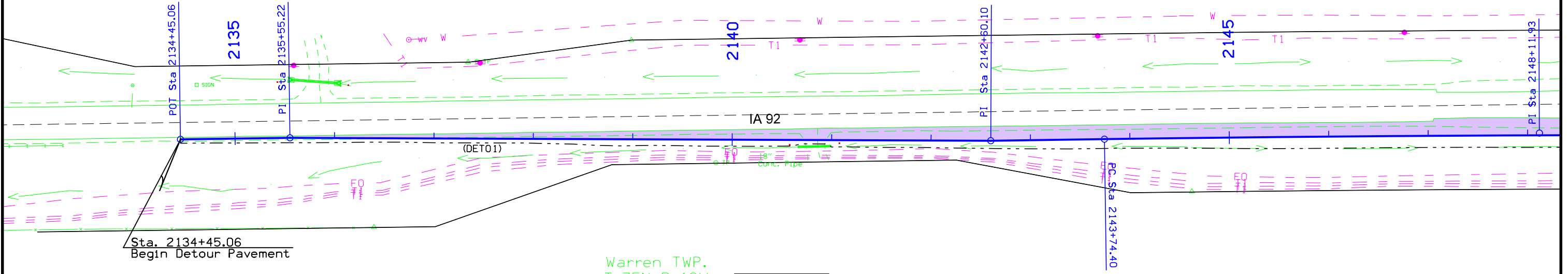


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| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | SHEET NUMBER | E.1 |
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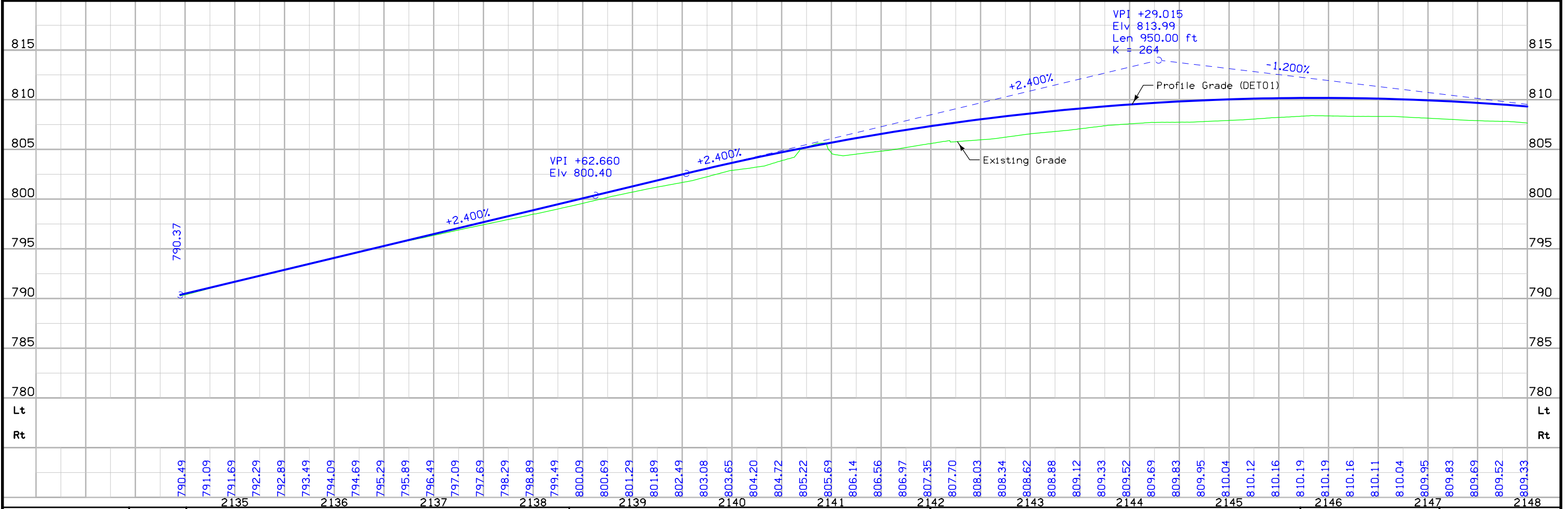
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Washington TWP.
T-76N R-13W
SEC. 33

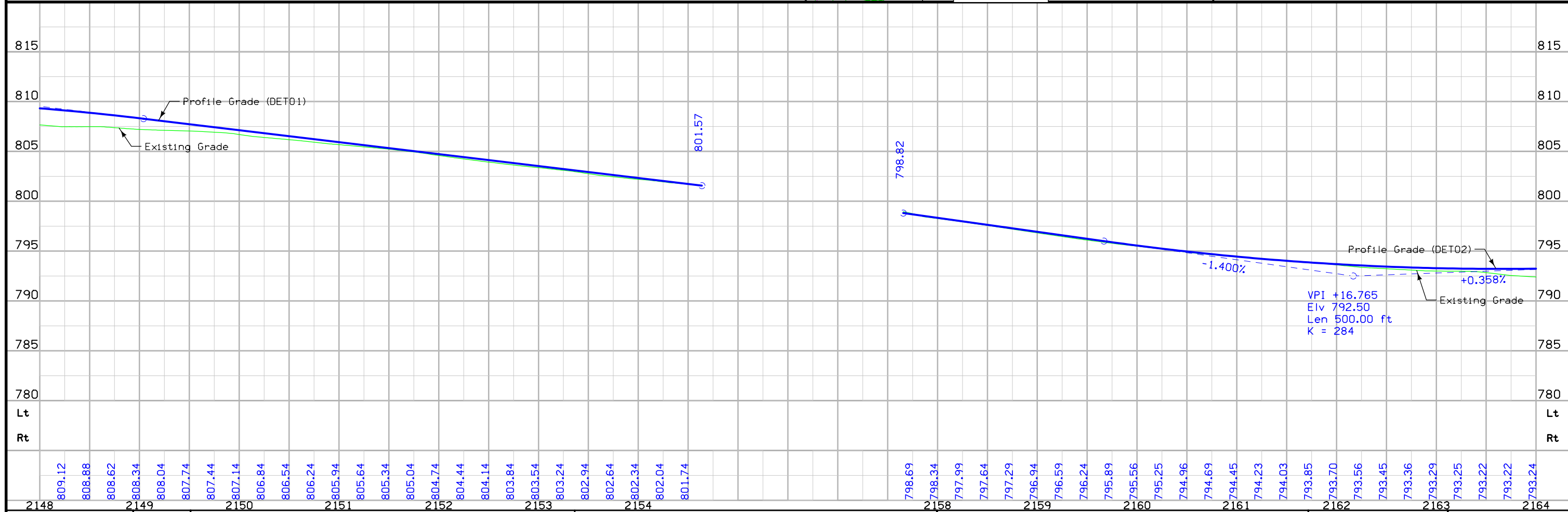
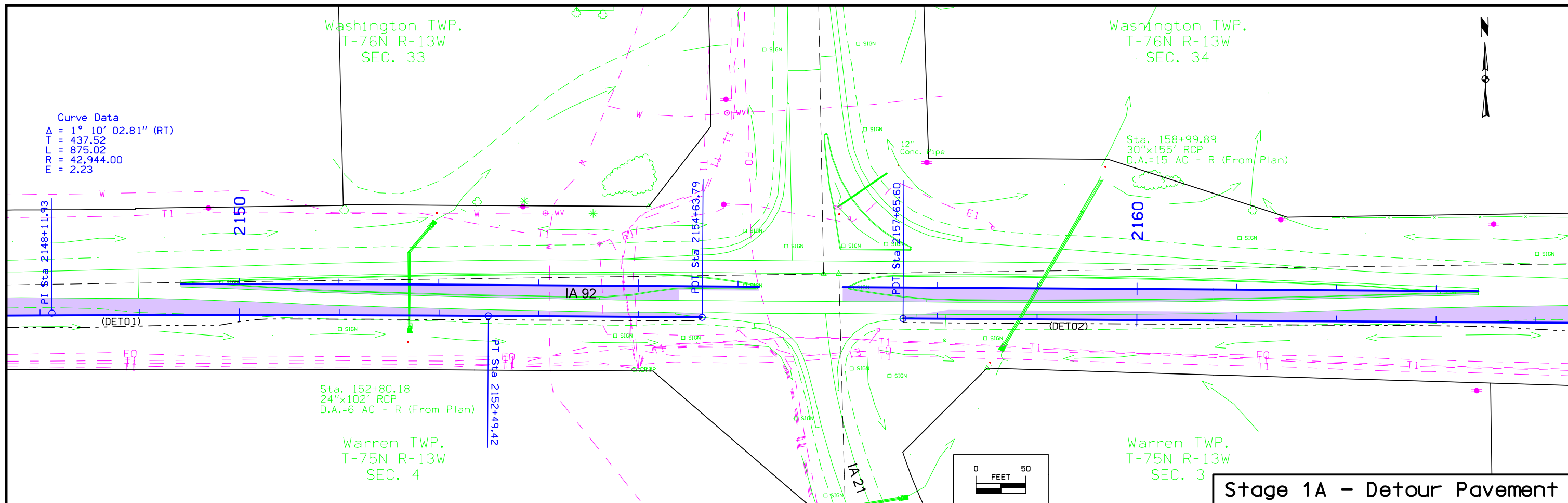


Warren TWP.
T-75N R-13W
SEC. 4

Stage 1A - Detour Pavement



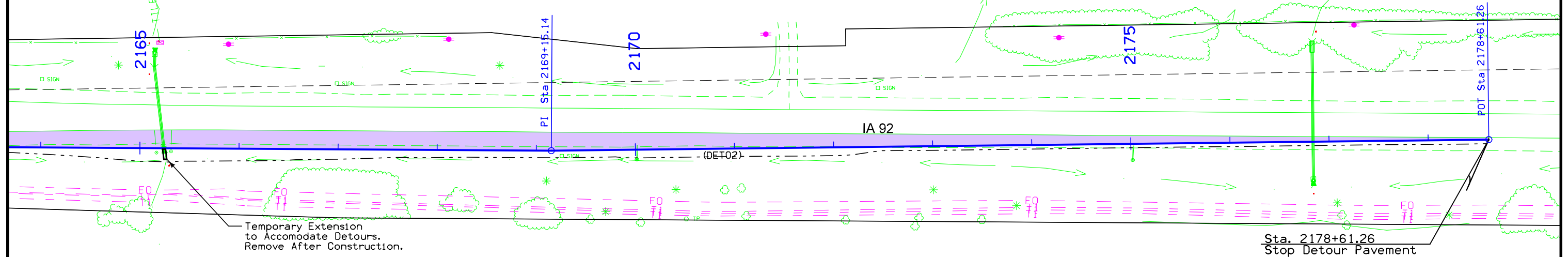
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| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | SHEET NUMBER | F.1 |
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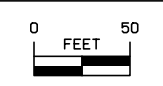
Washington TWP.
T-76N R-13W
SEC. 34



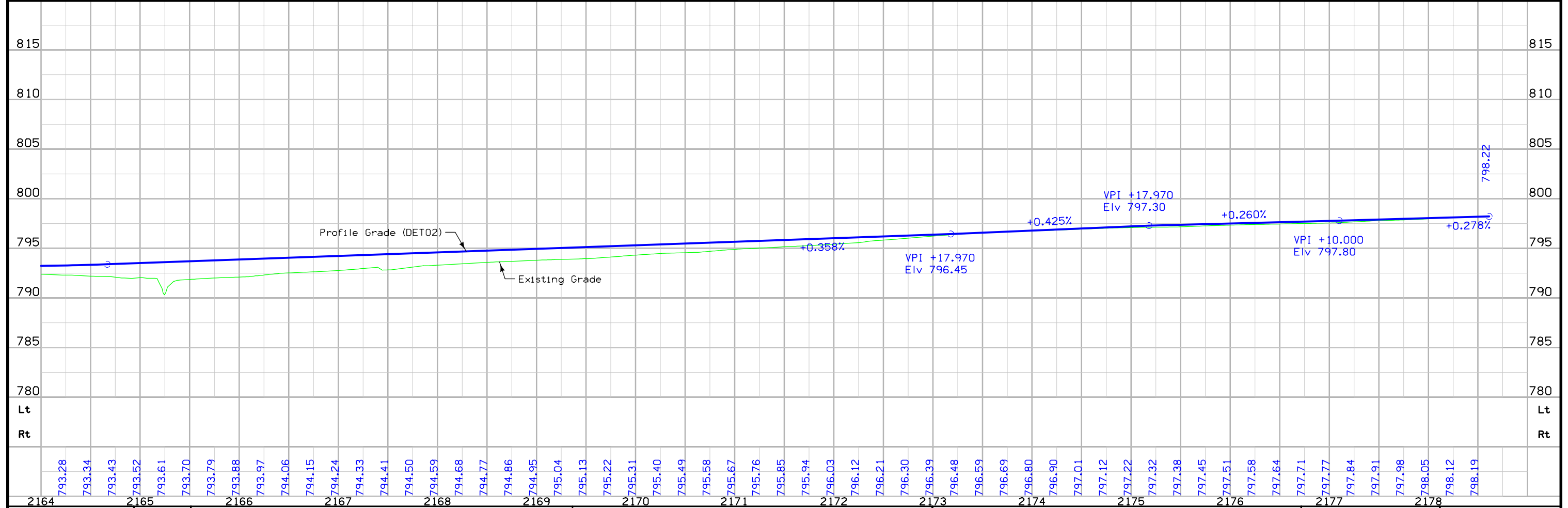
Sta. 165+20.35
24"x94' RCP
D.A.=9 AC - R (From Plan)



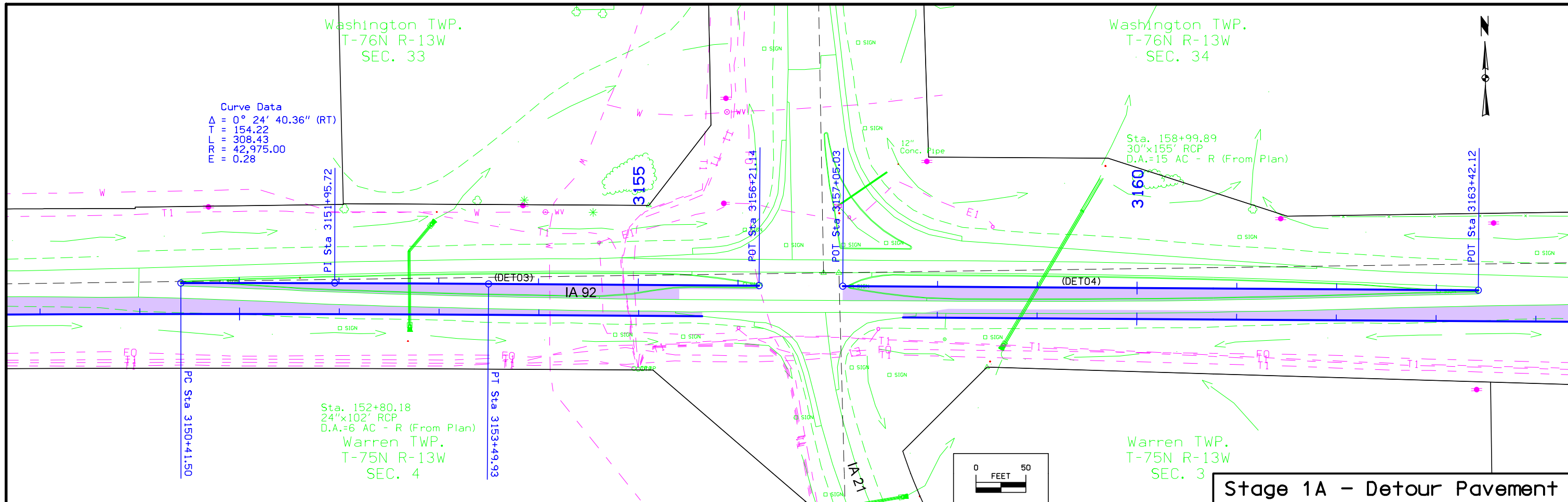
Warren TWP.
T-75N R-13W
SEC. 3



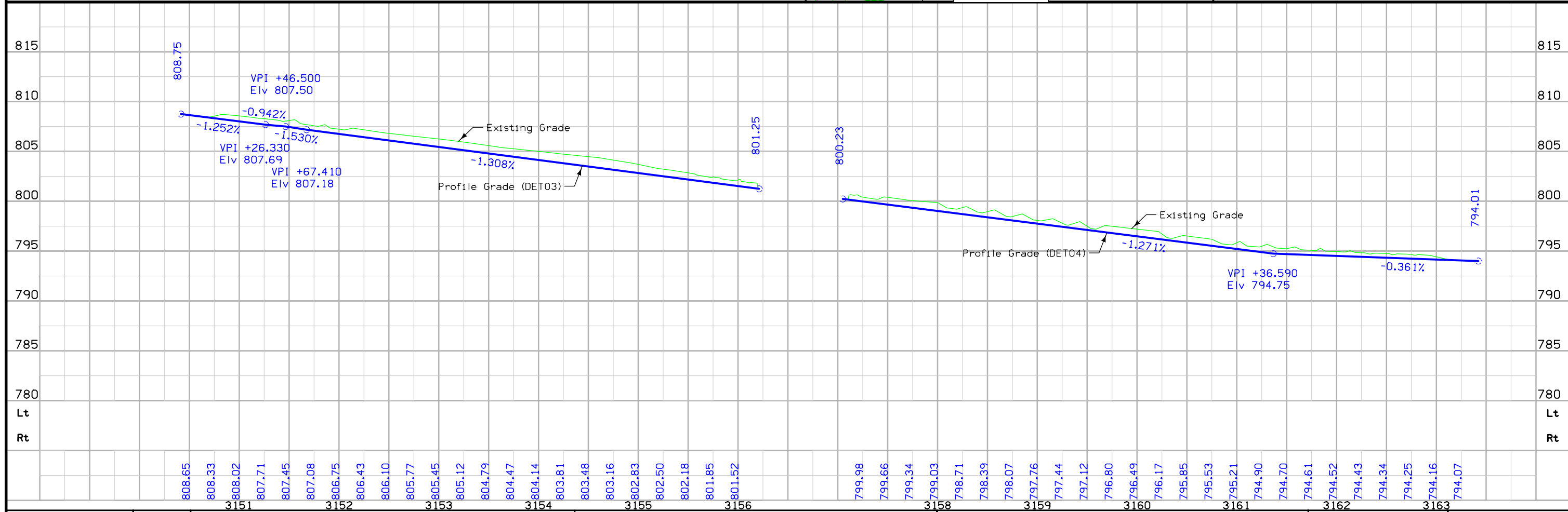
Stage 1A - Detour Pavement



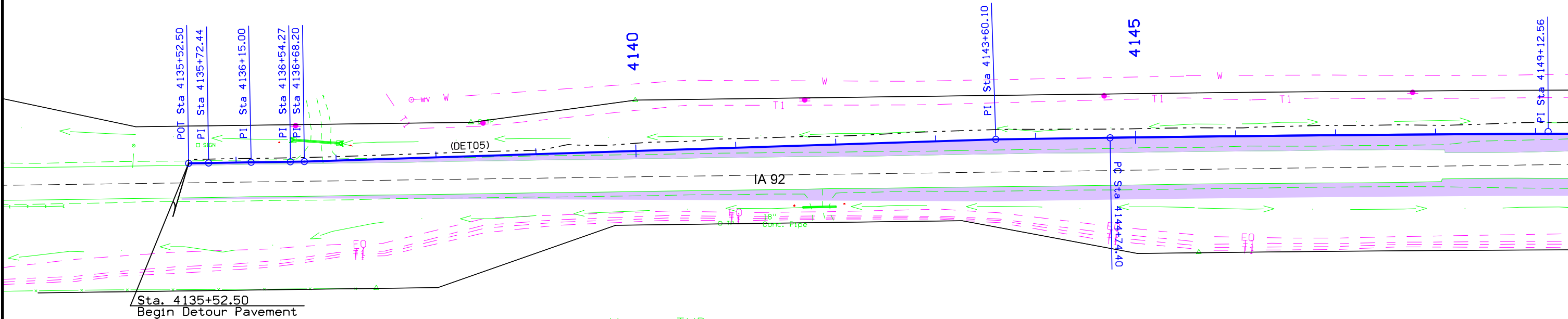
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| 2164 | 793.28 | 793.34 | 793.43 | 793.52 | 793.61 | 793.70 | 793.79 | 793.88 | 793.97 | 794.06 | 794.15 | 794.24 | 794.33 | 794.41 | 794.50 | 794.59 | 794.68 | 794.77 | 794.86 | 794.95 | 795.04 | 795.13 | 795.22 | 795.31 | 795.40 | 795.49 | 795.58 | 795.67 | 795.76 | 795.85 | 795.94 | 796.03 | 796.12 | 796.21 | 796.30 | 796.39 | 796.48 | 796.59 | 796.69 | 796.80 | 796.90 | 797.01 | 797.12 | 797.22 | 797.32 | 797.38 | 797.45 | 797.51 | 797.58 | 797.64 | 797.71 | 797.77 | 797.84 | 797.91 | 797.98 | 798.05 | 798.12 | 798.19 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|



Stage 1A - Detour Pavement

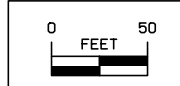


Washington TWP.
T-76N R-13W
SEC. 33

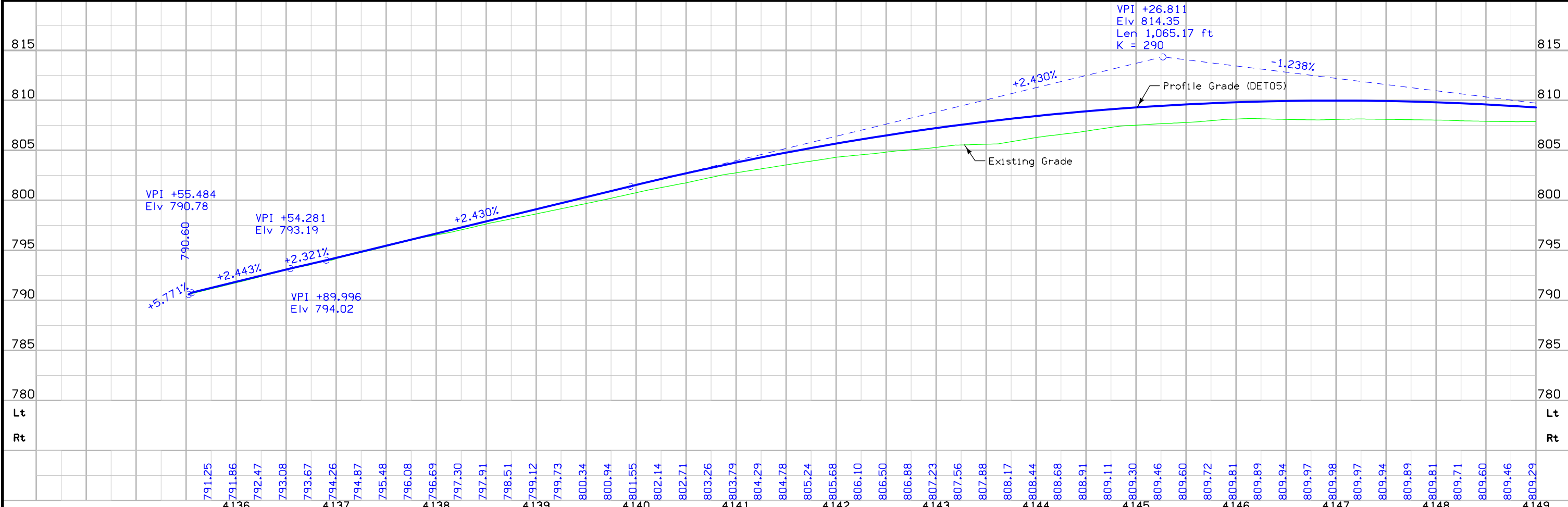


Sta. 4135+52.50
Begin Detour Pavement

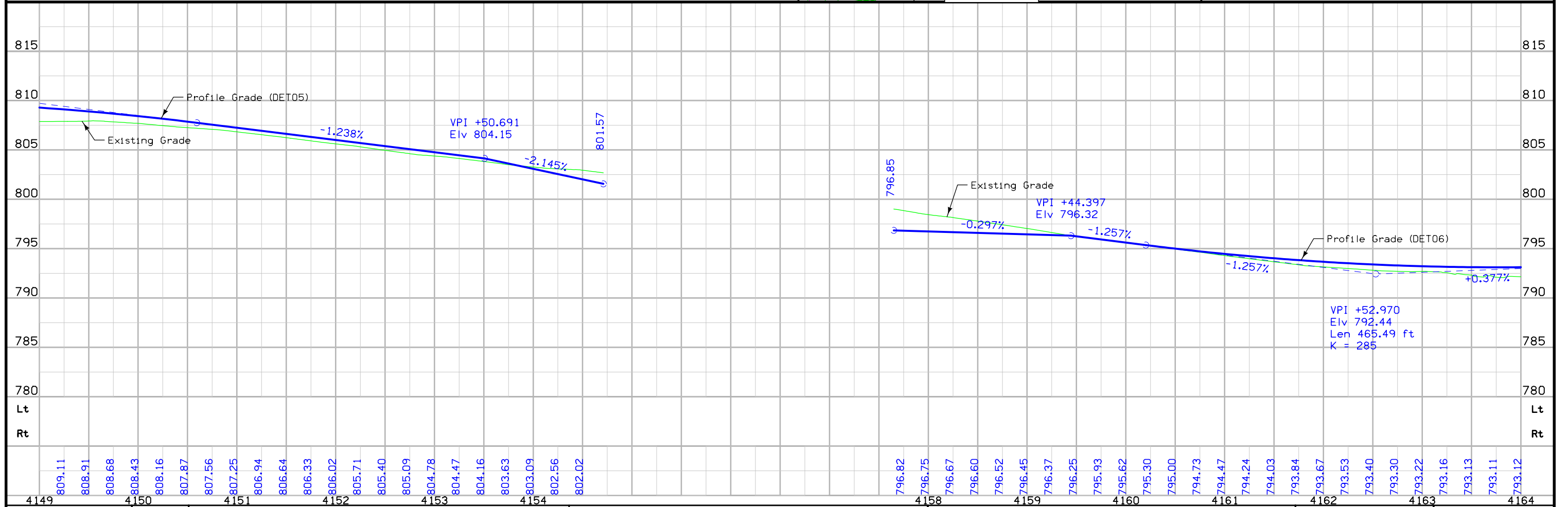
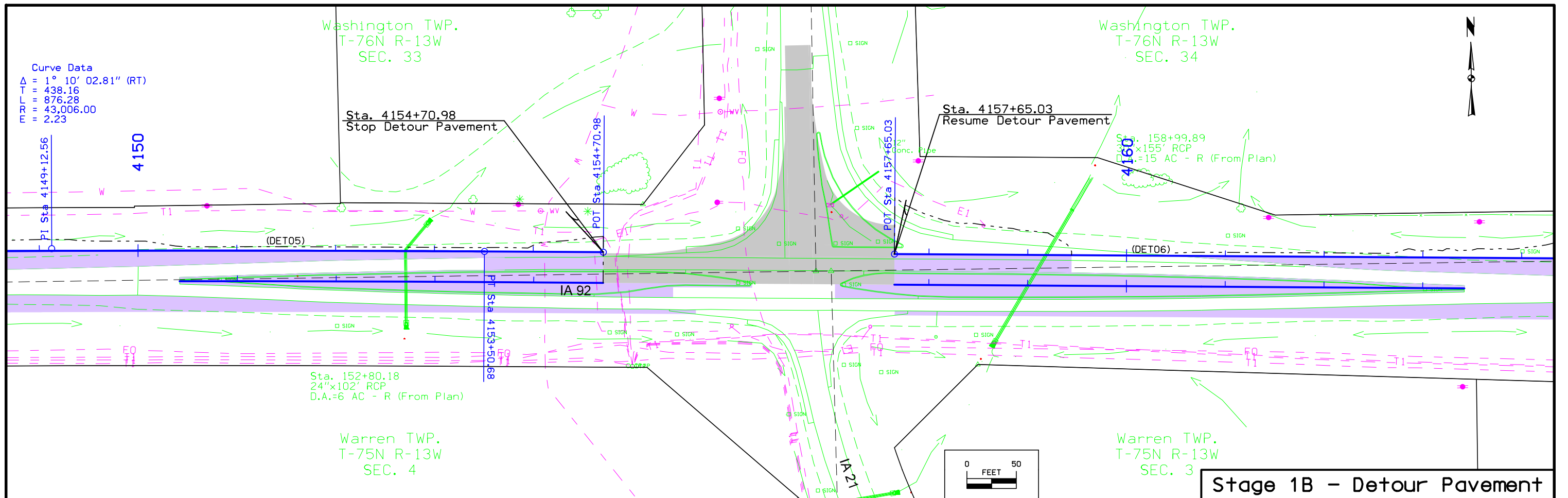
Warren TWP.
T-75N R-13W
SEC. 4



Stage 1B - Detour Pavement

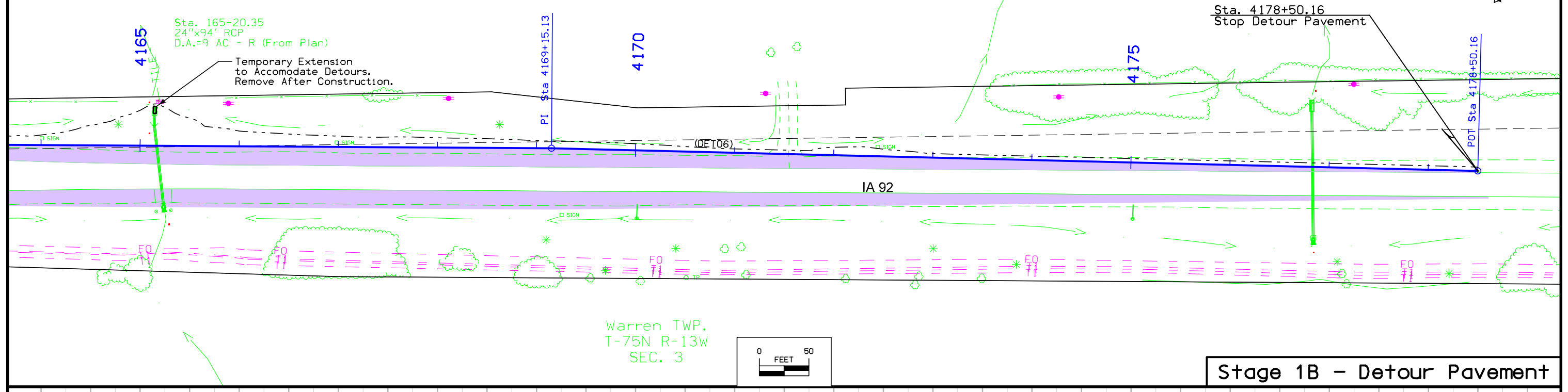


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| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | SHEET NUMBER | F.5 |
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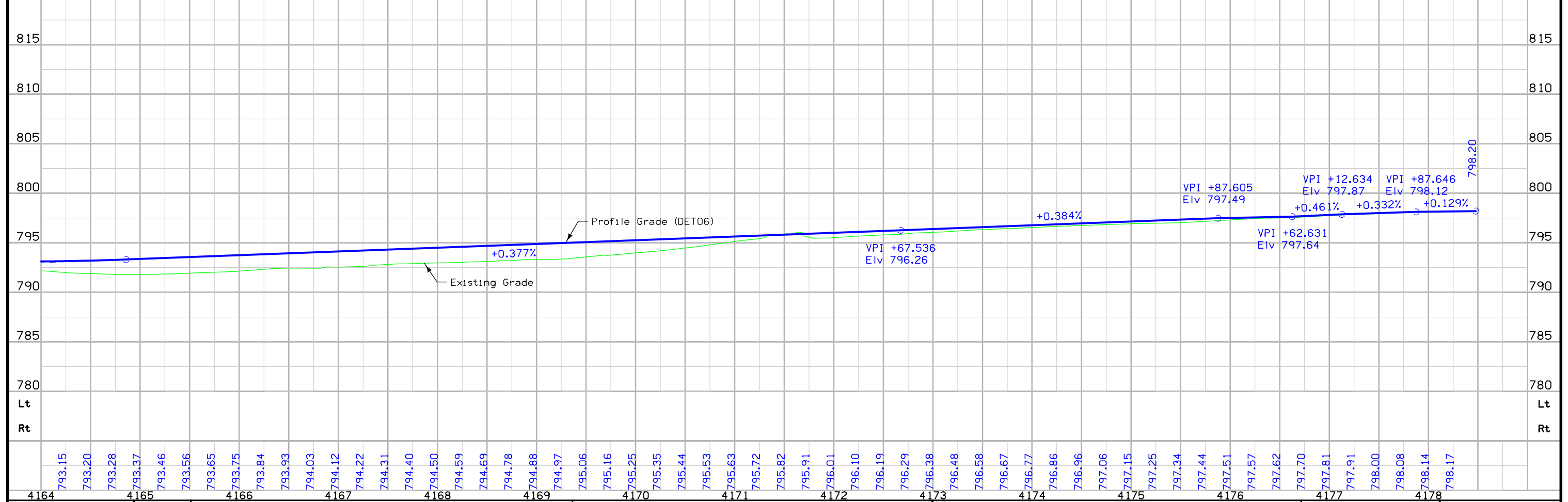


Washington TWP.
T-76N R-13W
SEC. 34

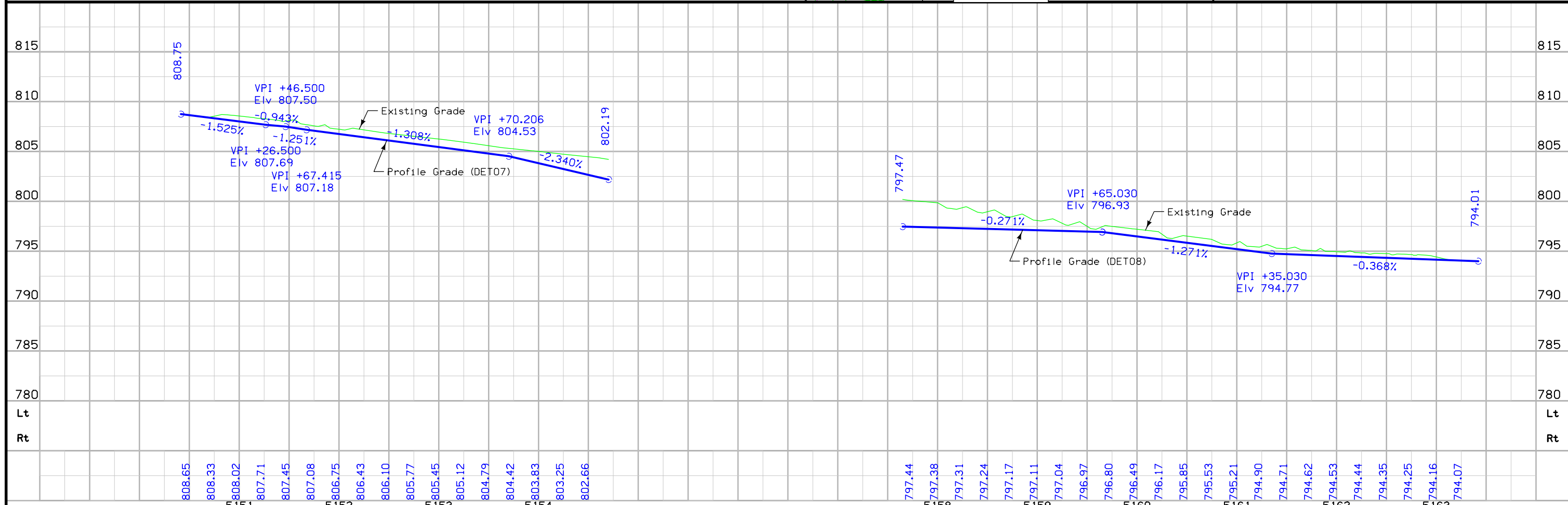
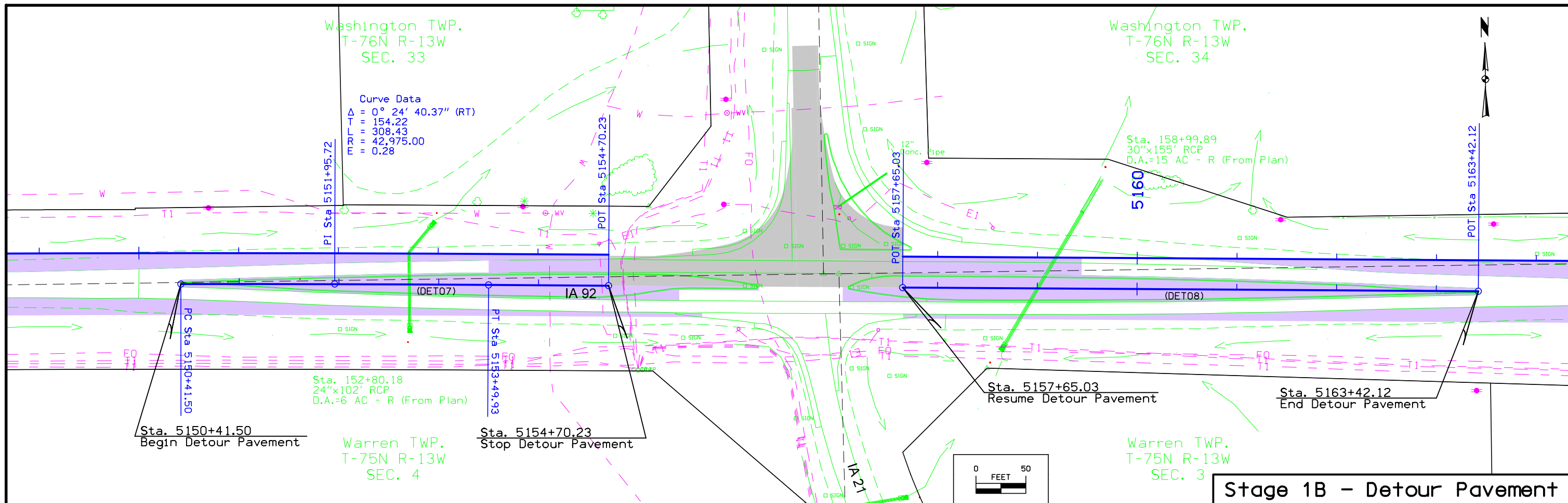
Warren TWP.
T-75N R-13W
SEC. 3



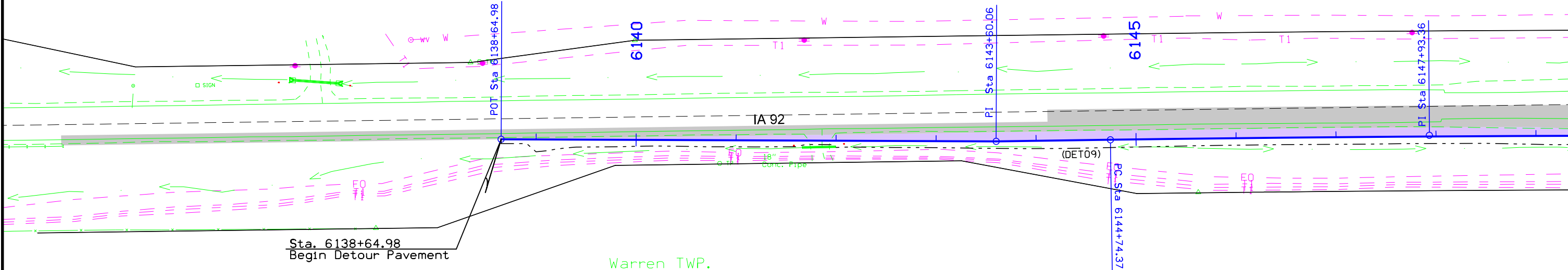
Stage 1B - Detour Pavement



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|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 4164 | 793.15 | 793.20 | 793.28 | 793.37 | 793.46 | 793.56 | 793.65 | 793.75 | 793.84 | 793.93 | 794.03 | 794.12 | 794.22 | 794.31 | 794.40 | 794.50 | 794.59 | 794.69 | 794.78 | 794.88 | 794.97 | 795.06 | 795.16 | 795.25 | 795.35 | 795.44 | 795.53 | 795.63 | 795.72 | 795.82 | 795.91 | 796.01 | 796.10 | 796.19 | 796.29 | 796.38 | 796.48 | 796.58 | 796.67 | 796.77 | 796.86 | 796.96 | 797.06 | 797.15 | 797.25 | 797.34 | 797.44 | 797.51 | 797.57 | 797.62 | 797.70 | 797.81 | 797.91 | 798.00 | 798.08 | 798.14 | 798.17 | 798.20 |
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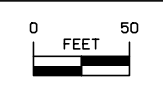


Washington TWP.
T-76N R-13W
SEC. 33

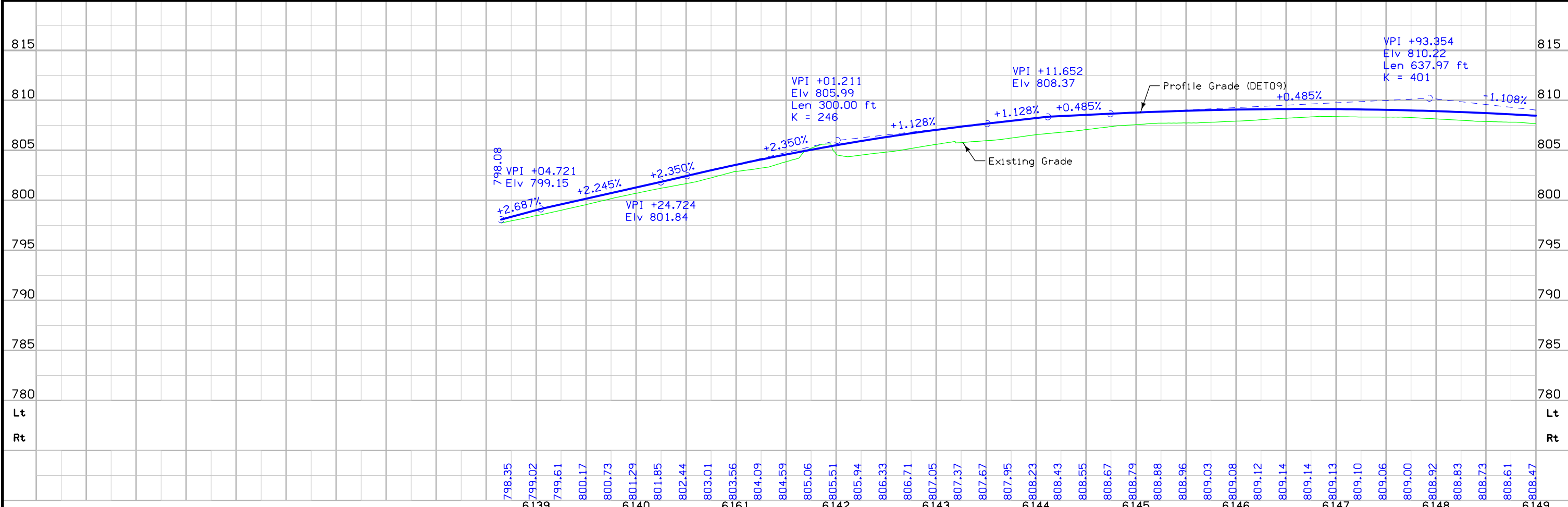


Sta. 6138+64.98
Begin Detour Pavement

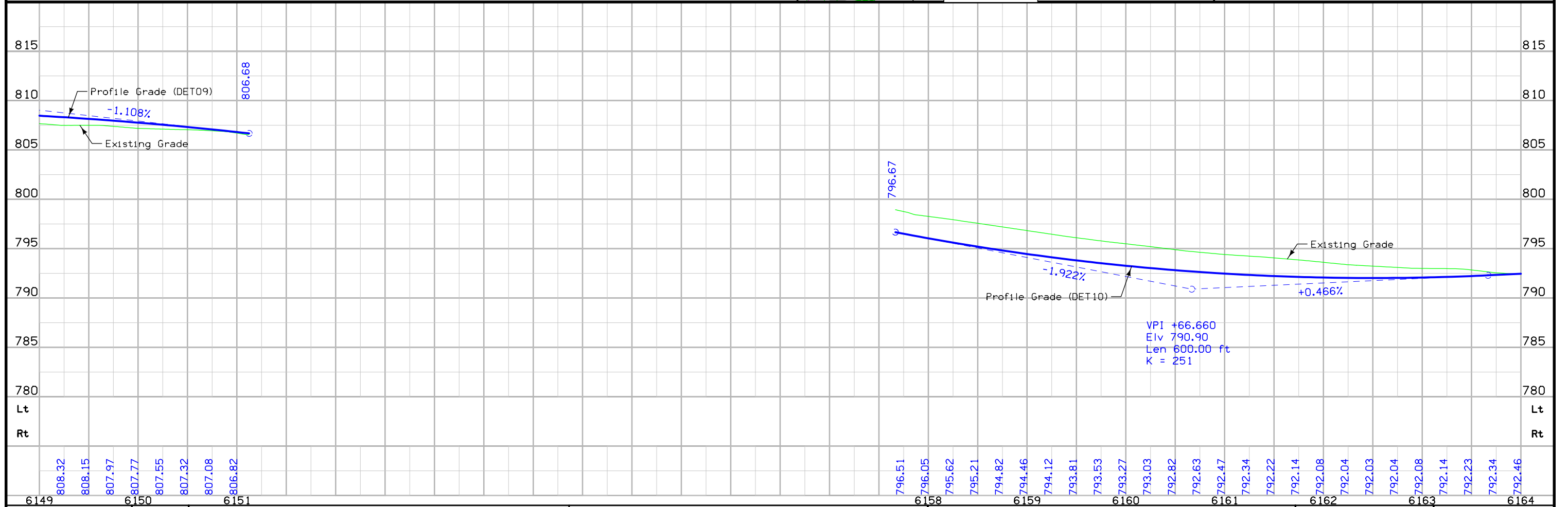
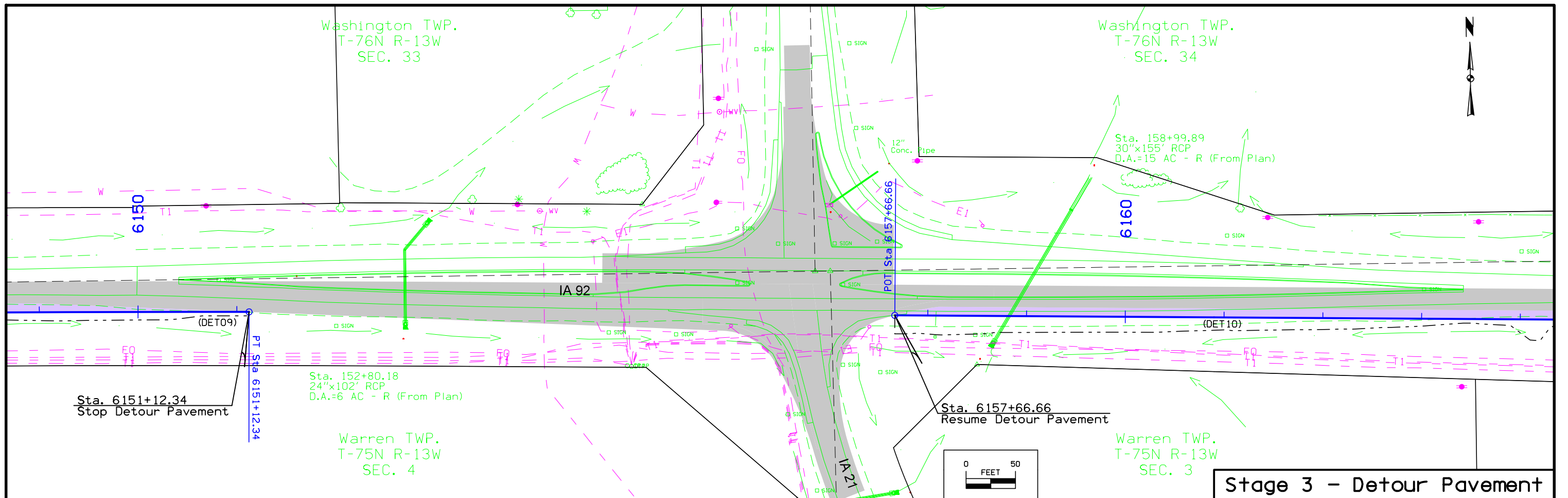
Warren TWP.
T-75N R-13W
SEC. 4



Stage 3 - Detour Pavement



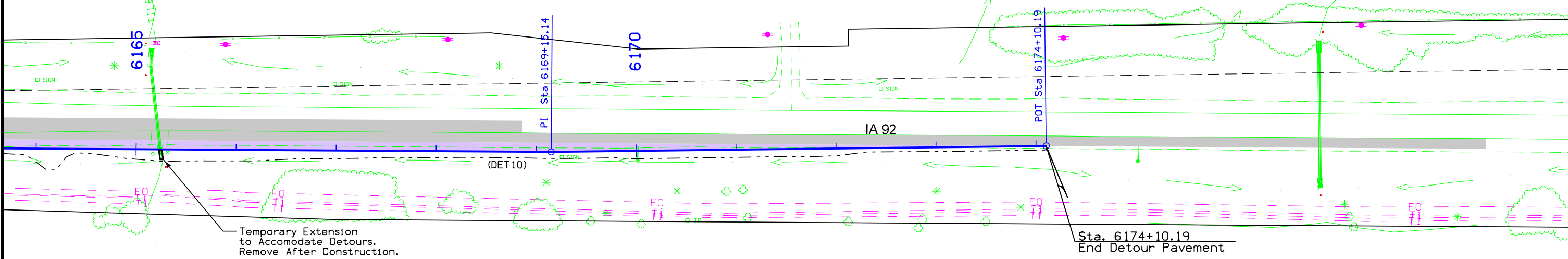
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|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|-----|



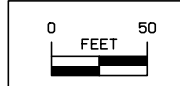
Washington TWP.
T-76N R-13W
SEC. 34



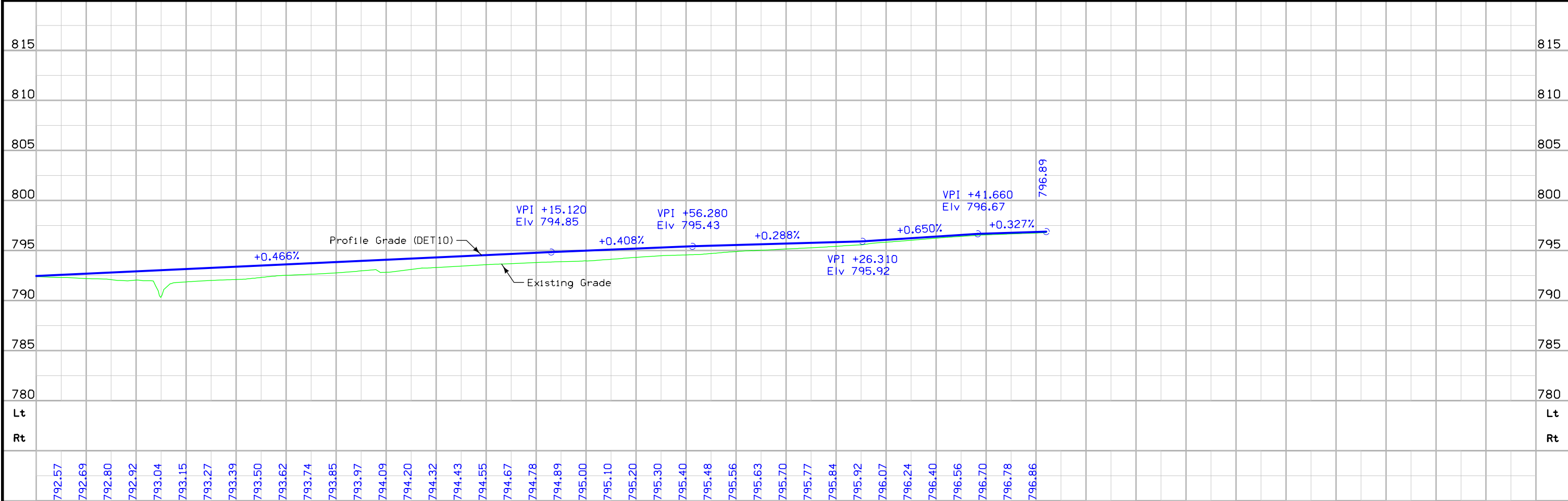
Sta. 165+20.35
24"x94' RCP
D.A.=9 AC - R (From Plan)



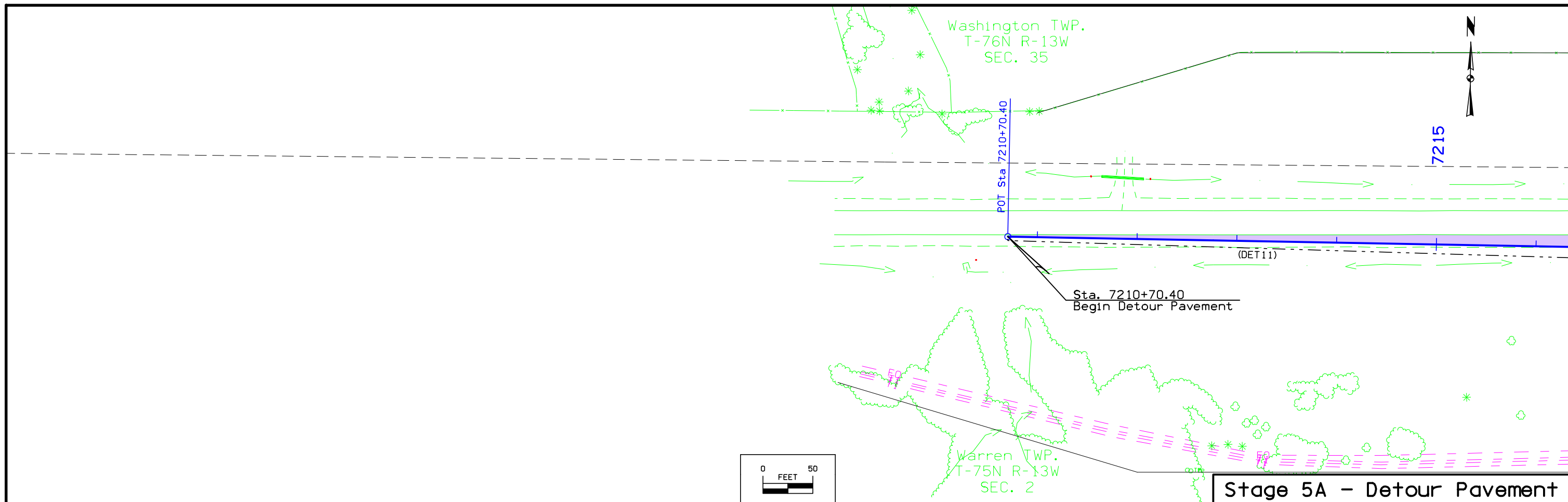
Warren TWP.
T-75N R-13W
SEC. 3



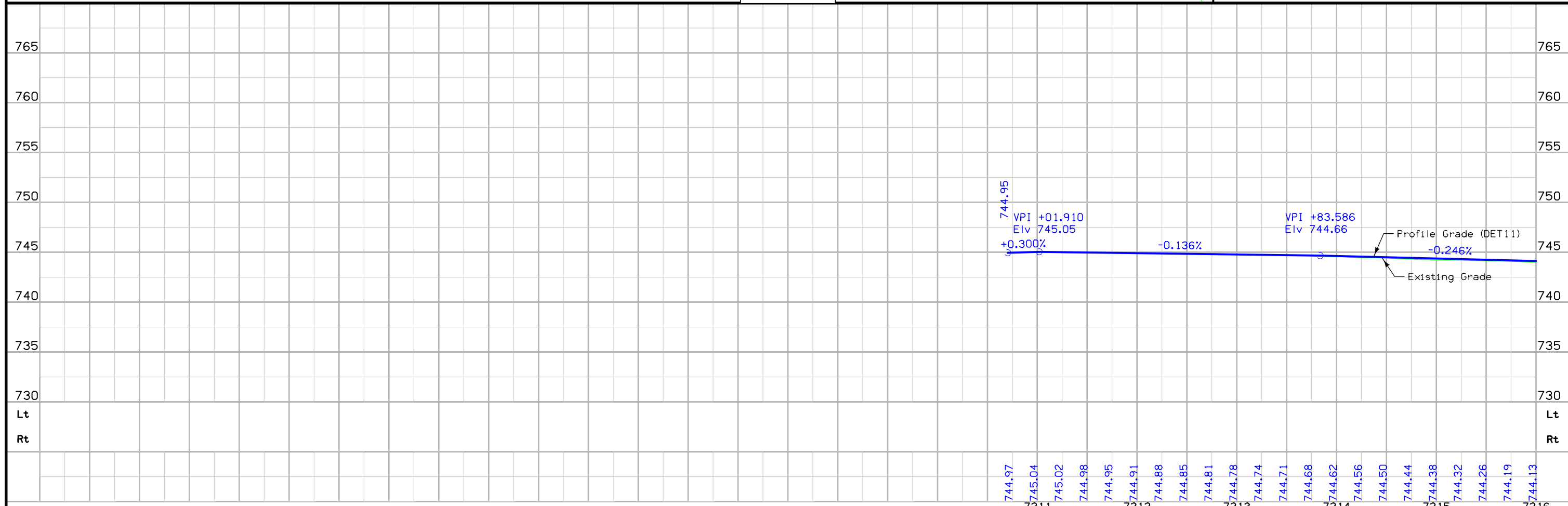
Stage 3 - Detour Pavement

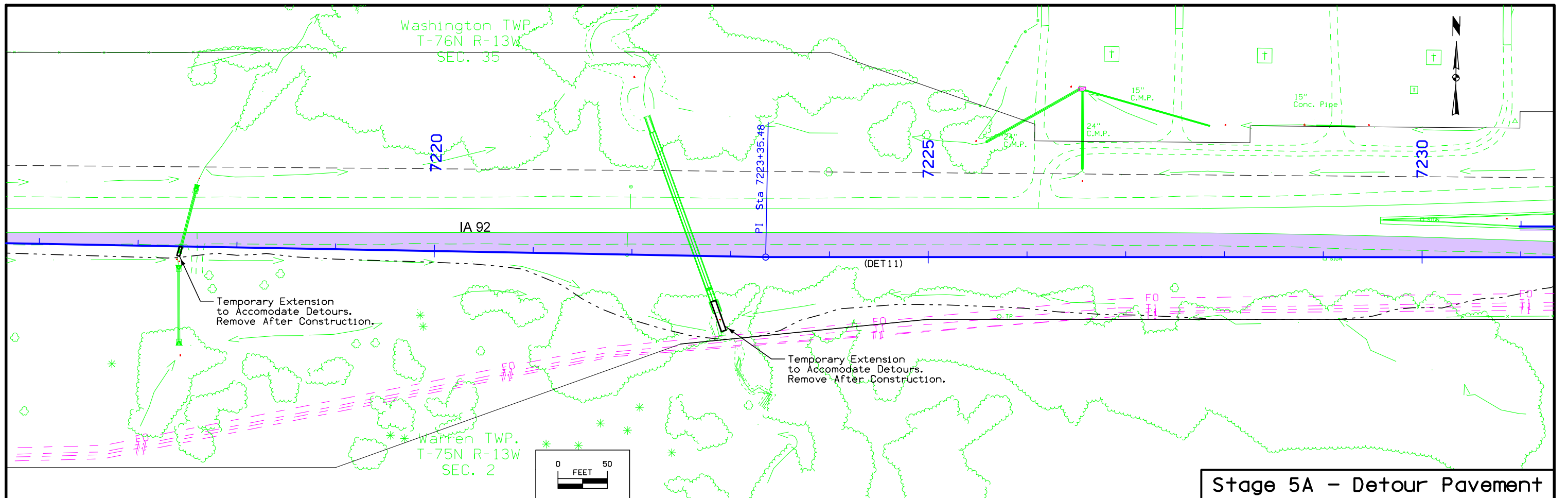


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| 6164 | 792.57 | 792.69 | 792.80 | 792.92 | 793.04 | 793.15 | 793.27 | 793.39 | 793.50 | 793.62 | 793.74 | 793.85 | 793.97 | 794.09 | 794.20 | 794.32 | 794.43 | 794.55 | 794.67 | 794.78 | 794.89 | 795.00 | 795.10 | 795.20 | 795.30 | 795.40 | 795.48 | 795.56 | 795.63 | 795.70 | 795.77 | 795.84 | 795.92 | 796.07 | 796.24 | 796.40 | 796.56 | 796.70 | 796.78 | 796.86 | 6174 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|

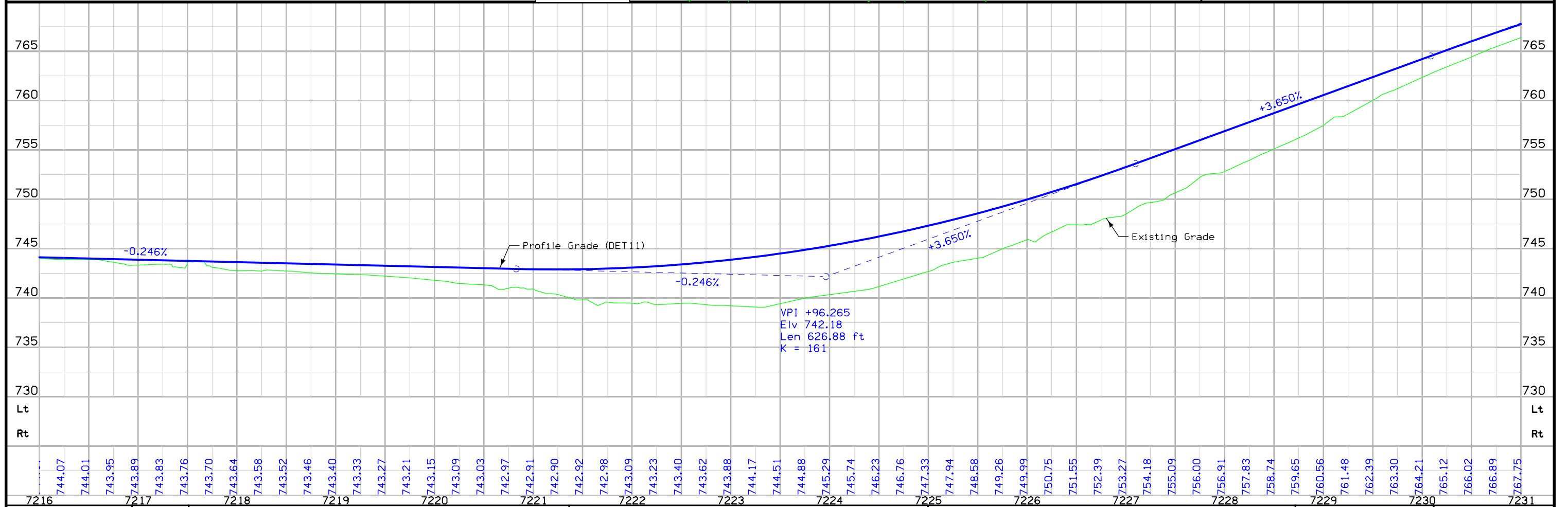


Stage 5A - Detour Pavement

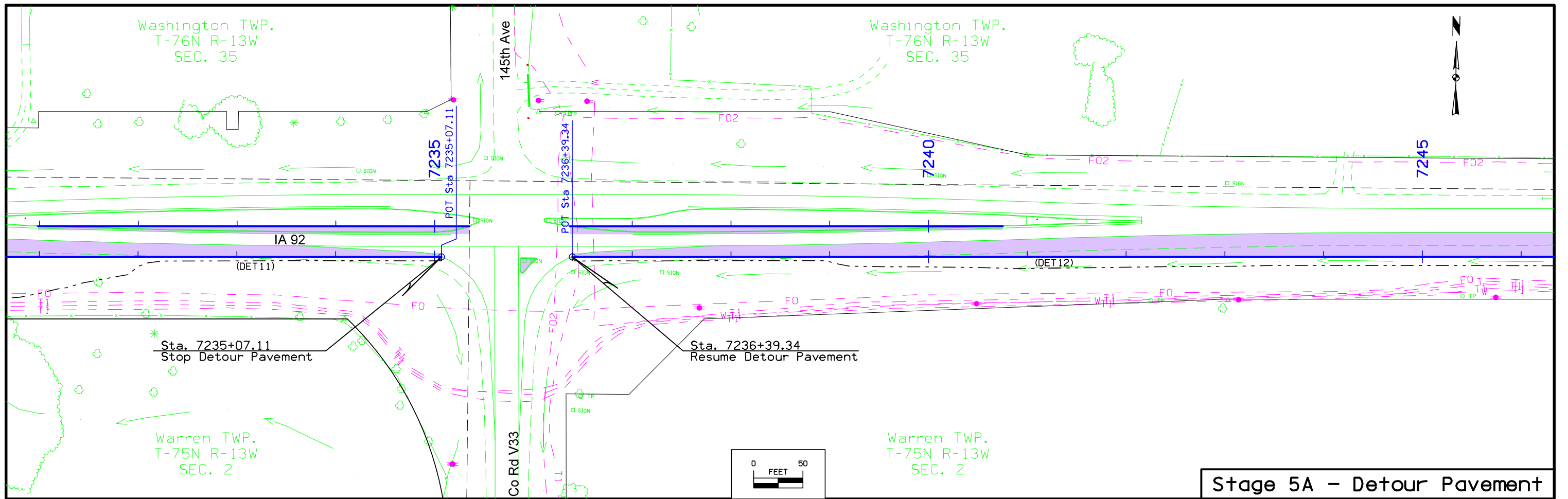




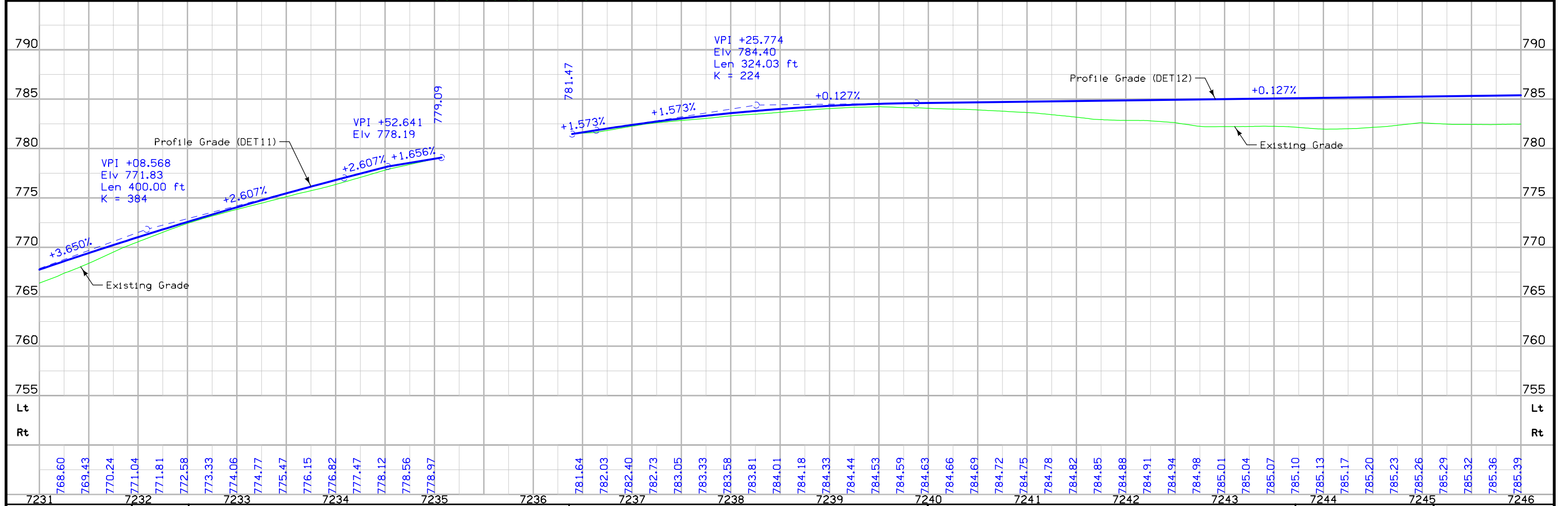
Stage 5A - Detour Pavement



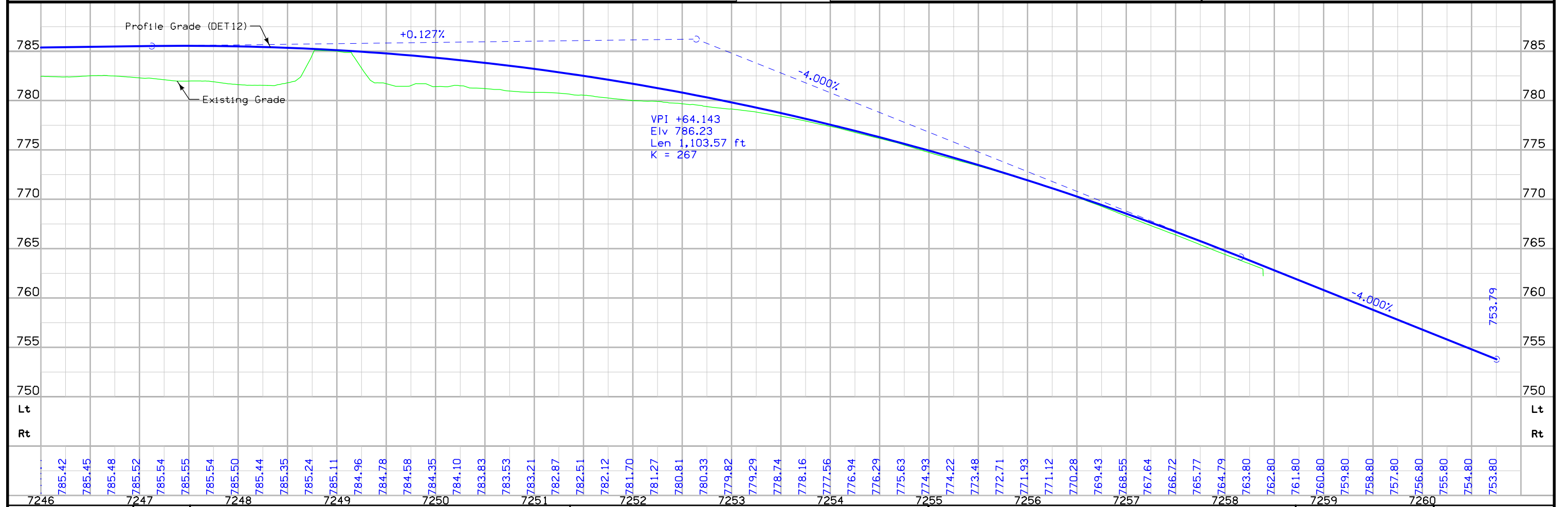
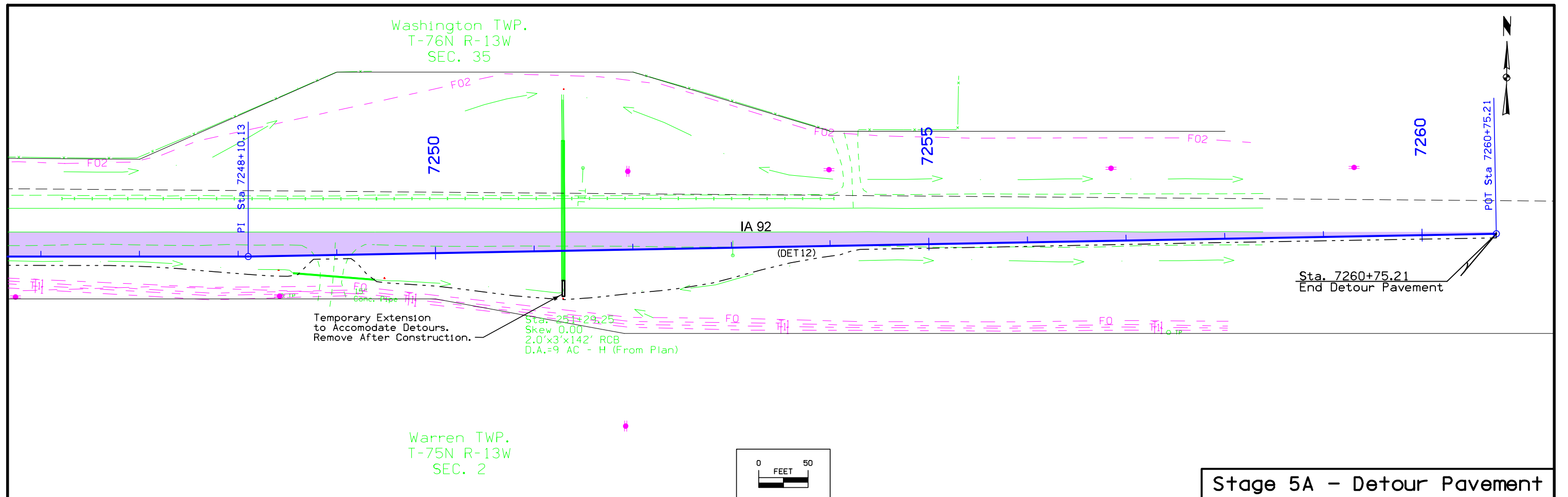
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|
| 7216 | 744.07 | 744.01 | 743.95 | 743.89 | 743.83 | 743.76 | 743.70 | 743.64 | 743.58 | 743.52 | 743.46 | 743.40 | 743.33 | 743.27 | 743.21 | 743.15 | 743.09 | 743.03 | 742.97 | 742.91 | 742.90 | 742.92 | 742.98 | 743.09 | 743.23 | 743.40 | 743.62 | 743.88 | 744.17 | 744.51 | 744.88 | 745.29 | 745.74 | 746.23 | 746.76 | 747.33 | 747.94 | 748.58 | 749.26 | 749.99 | 750.75 | 751.55 | 752.39 | 753.27 | 754.18 | 755.09 | 756.00 | 756.91 | 757.83 | 758.74 | 759.65 | 760.56 | 761.48 | 762.39 | 763.30 | 764.21 | 765.12 | 766.02 | 766.89 | 767.75 | 7231 |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|



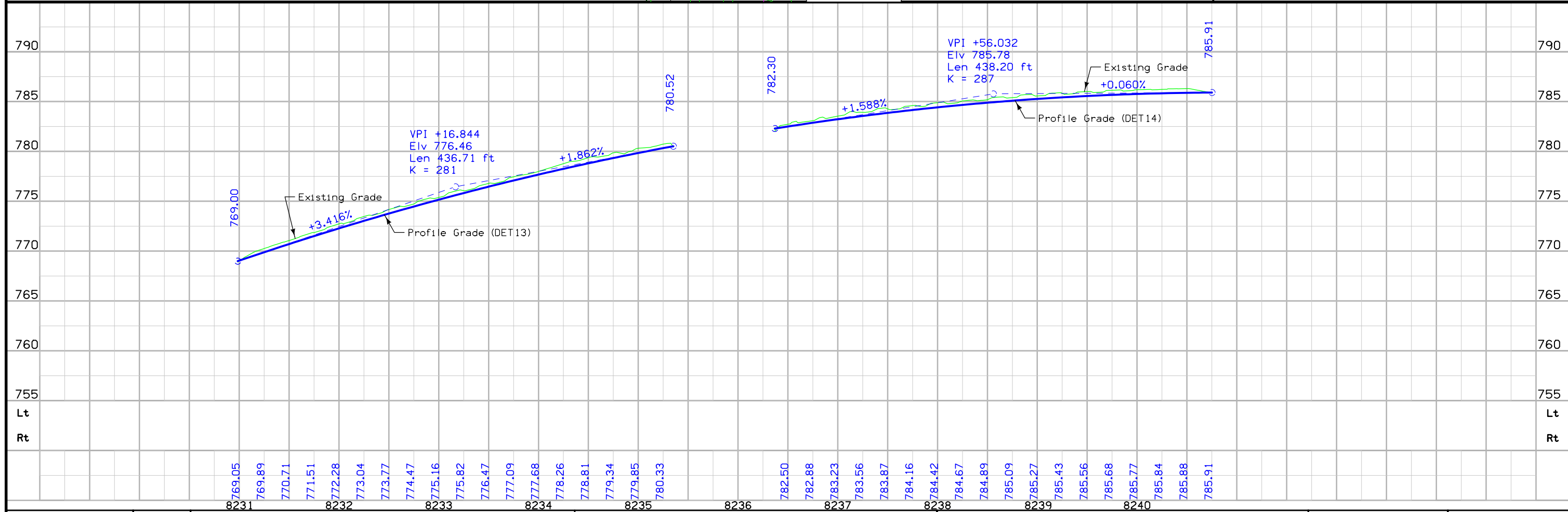
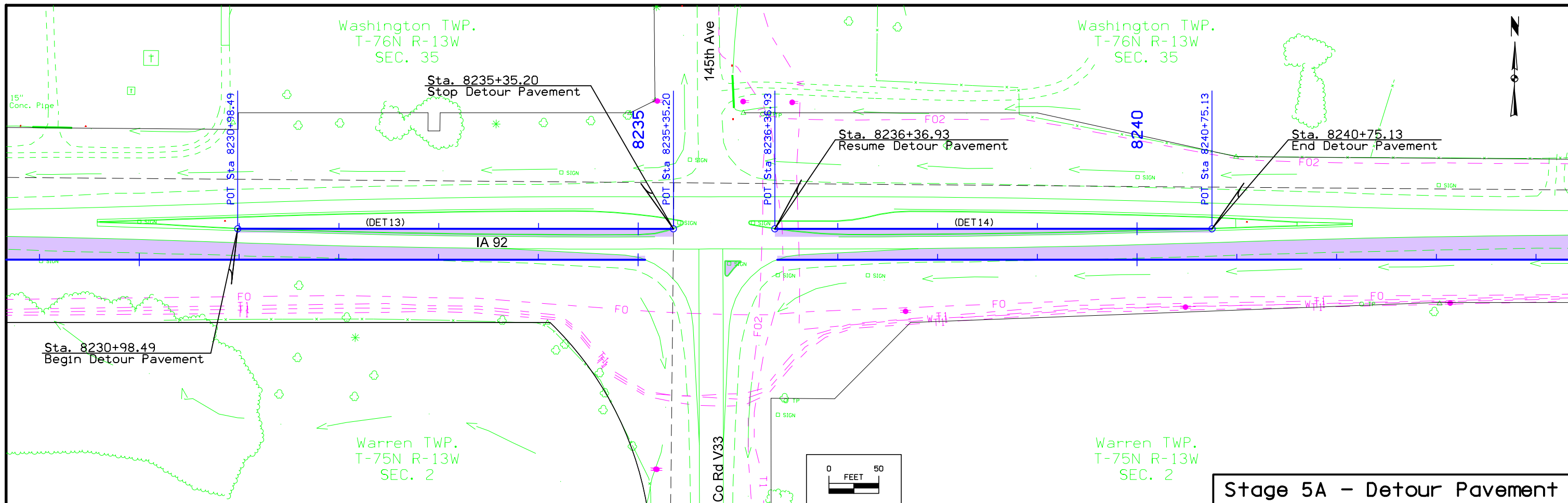
Stage 5A - Detour Pavement



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|---------|-------------|-----------------------------------|--------|---------------|----------------|-----------------------|--------|--------------|--------|--------|--------|--------|--------|--------|--------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|
| 7231 | 768.60 | 769.43 | 770.24 | 771.04 | 771.81 | 772.58 | 773.33 | 774.06 | 774.77 | 775.47 | 776.15 | 776.82 | 777.47 | 778.12 | 778.56 | 778.97 | 7235 | 781.64 | 782.03 | 782.40 | 782.73 | 783.05 | 783.33 | 783.58 | 783.81 | 784.01 | 784.18 | 784.33 | 784.44 | 784.53 | 784.59 | 784.63 | 784.66 | 784.69 | 784.72 | 784.75 | 784.78 | 784.82 | 784.85 | 784.88 | 784.91 | 784.94 | 784.98 | 785.01 | 785.04 | 785.07 | 785.10 | 785.13 | 785.17 | 785.20 | 785.23 | 785.26 | 785.29 | 785.32 | 785.36 | 785.39 | 7246 |
| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | | SHEET NUMBER | F.14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| | | | | | | | | |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|------|
| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | SHEET NUMBER | F.15 |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|------|



Survey Information

County: Keokuk
 PIN: 16-54-092-030
 Project Number: NHSN-092-8(36)--2R-54
 Location: NW and N of Delta (District-5)
 Type of Work: Reconstruction of the IA 92 and IA 21 intersection and the IA 92 and County Rd V33 intersection
 Project Directory: 5409203016
 SAP 0932

General Information

Measurement units for this survey are US survey feet. This survey is proposed for two intersection replacements. The IA 92 and IA 21 intersection NW of Delta and the IA 92 and V33 intersection N of Delta. Project datum and control information is provided by Design Survey Office. This project is a Partial DTM with Photo control.

Vertical Control

Vertical datum for this survey is NAVD88 (Computed using Geoid12B). Benchmarks were placed throughout the project using post processed static observations relative to laRTN Base Network. A minimum of 6hrs of data was simultaneously collected on each of these primary control points.

Keokuk County Control Pt. 412 was checked for vertical tolerance. The vertical difference is about 0.1 ft.
 Keokuk County Control Pt. 419 was checked for vertical tolerance. The vertical difference is about 0.1 ft.

Horizontal Control

The project coordinate system for this survey is laRCS Zone 13 (U.S. Survey Feet). This survey control is relative to laRTN reference stations. laRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00.

Keokuk County Control Pt. 412 was checked for horizontal tolerance. The horizontal difference is about 0.05 ft.
 Keokuk County Control Pt. 419 was checked for horizontal tolerance. The horizontal difference is about 0.1 ft.

Point Name Northing Easting Elevation Feature Definition

303 6796024.608 23389066.700 784.83 FENO3 MONUMENT 1304' EAST OF THE INTERSECTION OF IA92 AND V33 41' SOUTH OF CENTERLINE IA92 AND WEST OF DRIVEWAY.

419 6796482.253 23397059.776 781.55 BM COUNTY MONUMENT #419 BERNTSEN TOP SECURITY ROD MONUMENT EITH A 2-1/2" DIA DOMED CAP AND A PERMANENT MAGNET INCASED IN A 5"DIA PVC PIPE WITH A NGS STYLE ALUMINUM ACCESS COVER.

302 6796066.353 23386470.482 743.71 FENO2 MONUMENT 1293' WEST OF THE INTERSECTION OF IA92 AND V33 24.5' NORTH OF CENTERLINE IA92.

412 6796167.686 23378996.388 809.04 BM COUNTY MONUMENT #412 BERNTSEN TOP SECURITY ROD MONUMENT EITH A 2-1/2" DIA DOMED CAP AND A PERMANENT MAGNET INCASED IN A 5"DIA PVC PIPE WITH A NGS STYLE ALUMINUM ACCESS COVER.

301 6796092.641 23382200.835 796.09 FENO1 MONUMENT 2337' EAST OF THE INTERSECTION OF IA92 AND IA21 45' NORTH OF CENTERLINE IA92 AND EAST OF FIELD ENTRANCE.

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans Project No. F-34(5), No.452, Keokuk County No. S-1832, and No. F-961(1).

Survey stationing was equated to the plan PI at STA 143+59 for alignment SURML092W and ran ahead without equation throughout the survey.

Survey stationing was equated to the plan POT at Sta. 235+72.7 for alignment SURML092E and ran back and ahead without equation throughout the survey.

Survey stationing was equated to the plan POT at Sta. 6000+00 for alignment SURSR021N and ran ahead without equation throughout the survey.

Survey stationing was equated to the plan POT at Sta. 0+00 for alignment SURSR021S and ran ahead without equation throughout the survey.

Survey stationing was equated to the plan POT at Sta. 62+80.6 for alignment SURSRV33S and ran back without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

SURML092W Alignment

PI Sta. 143+59 As-built Plans Project No. F-34(5)
 Survey PI Sta. 143+59

PC Sta. 145+61 As-built Plans Project No. F-34(5)
 Survey PC Sta. 145+61.36

PI Sta. 149+48.6 As-built Plans Project No. F-34(5)
 Survey PI Sta. 149+48.69

PT Sta. 153+36 As-built Plans Project No. F-34(5)
 Survey PT Sta. 153+36

POE Sta. 187+03.71 Survey Best Fit

SURML092E Alignment

POT Sta. 207+98.4 As-built Plans Project No. F-34(5)
 Survey POT Sta. 207+99.8

POT Sta. 235+72.7 As-built Plans Project No. F-34(5)
 Survey POT Sta. 235+72.7

POE Sta. 258+48.66 Survey Best Fit

SURSR021N Alignment

POT Sta. 6000+00 As-built Plans Project No. 452
 Survey POT Sta. 6000+00

Survey $\frac{7}{32}$ Best Fit Centerline $\frac{9}{32}$ POT Sta. 6007+94.19

SURSR021S Alignment

POT Sta. 0+00 As-built Plans Keokuk County Project No. S-1832
 Survey POT Sta. 0+00

PC Sta. 0+22.4 As-built Plans Keokuk County Project No. S-1832
 Survey PC Sta. 0+22.4

PI Sta. 4+92.4 As-built Plans Keokuk County Project No. S-1832
 Survey PI Sta. 4+92.41

PT Sta. 8+32.2 As-built Plans Keokuk County Project No. S-1832
 Survey PT Sta. 8+32.2

Survey $\frac{7}{32}$ Best Fit Centerline $\frac{9}{32}$ POT Sta. 11+46.89

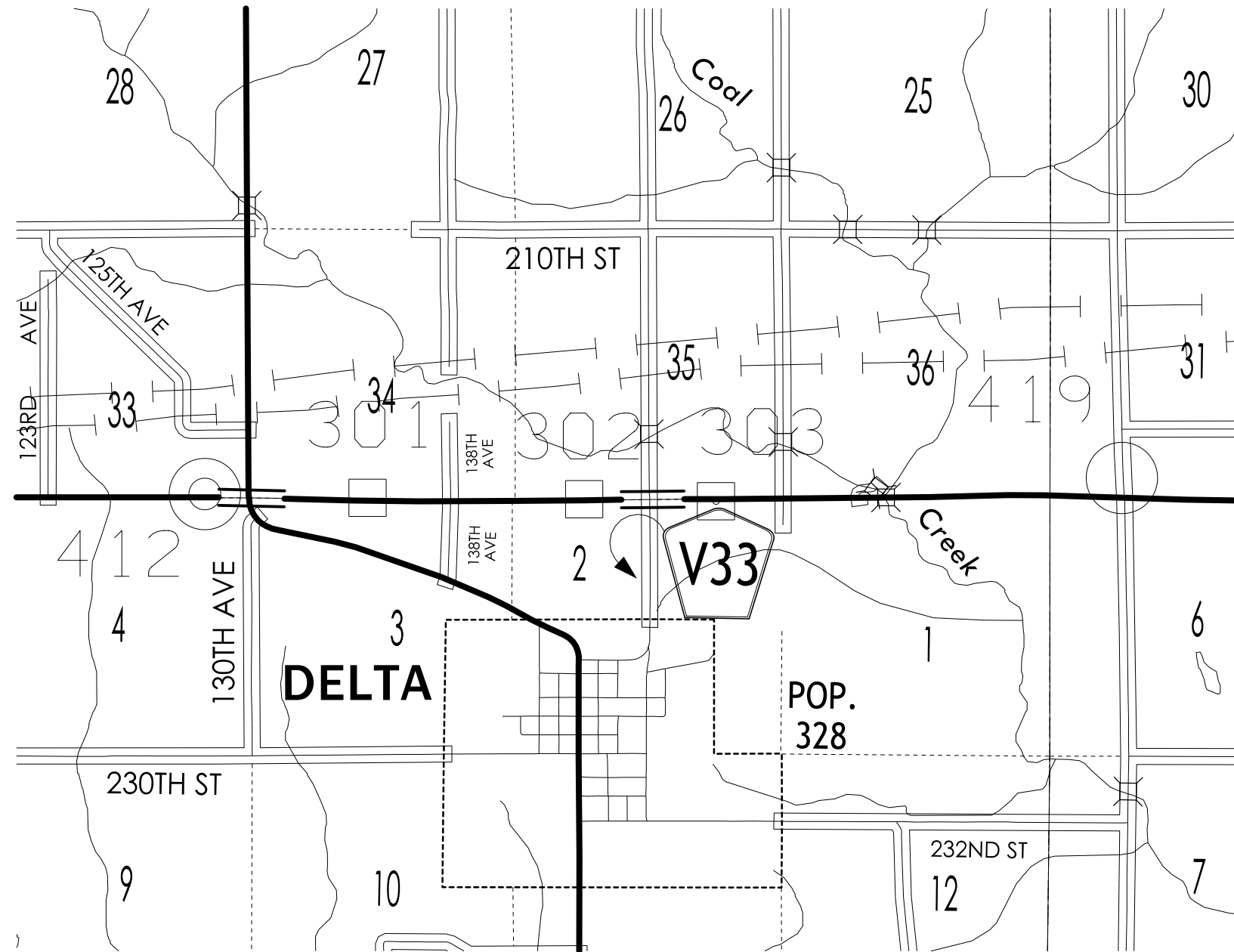
SURSRV33S

PT Sta. 54+92.5 As-built Plans Project No. F-961(1)
 Survey PT Sta. 54+92.5

POT Sta. 62+80.6 As-built Plans Project No. F-961(1)
 Survey POT Sta. 62+80.6

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) EPOCH 2010

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 13

Coordinate listing from next sheet will be used with 1aRTN for monument recovery. No other reference ties are given.

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 13

| Point Name | Northing | Easting | Elevation | Feature | Definition |
|------------|-------------|--------------|-----------|---------|--|
| 303 | 6796024.608 | 23389066.700 | 784.83 | FENO3 | MONUMENT 1304' EAST OF THE INTERSECTION OF IA92 AND V33 41' SOUTH OF CENTERLINE IA92 AND WEST OF DRIVEWAY. |
| 419 | 6796482.253 | 23397059.776 | 781.55 | BM | COUNTY MONUMENT #419 BERNTSEN TOP SECURITY ROD MONUMENT EITH A 2-1/2" DIA DOMED CAP AND A PERMANENT MAGNET INCASED IN A 5"DIA PVC PIPE WITH A NGS STYLE ALUMINUM ACCESS COVER. |
| 302 | 6796066.353 | 23386470.482 | 743.71 | FENO2 | MONUMENT 1293' WEST OF THE INTERSECTION OF IA92 AND V33 24.5' NORTH OF CENTERLINE IA92. |
| 412 | 6796167.686 | 23378996.388 | 809.04 | BM | COUNTY MONUMENT #412 BERNTSEN TOP SECURITY ROD MONUMENT EITH A 2-1/2" DIA DOMED CAP AND A PERMANENT MAGNET INCASED IN A 5"DIA PVC PIPE WITH A NGS STYLE ALUMINUM ACCESS COVER. |
| 301 | 6796092.641 | 23382200.835 | 796.09 | FENO1 | MONUMENT 2337' EAST OF THE INTERSECTION OF IA92 AND IA21 45' NORTH OF CENTERLINE IA92 AND EAST OF FIELD ENTRANCE. |

ALIGNMENT COORDINATES

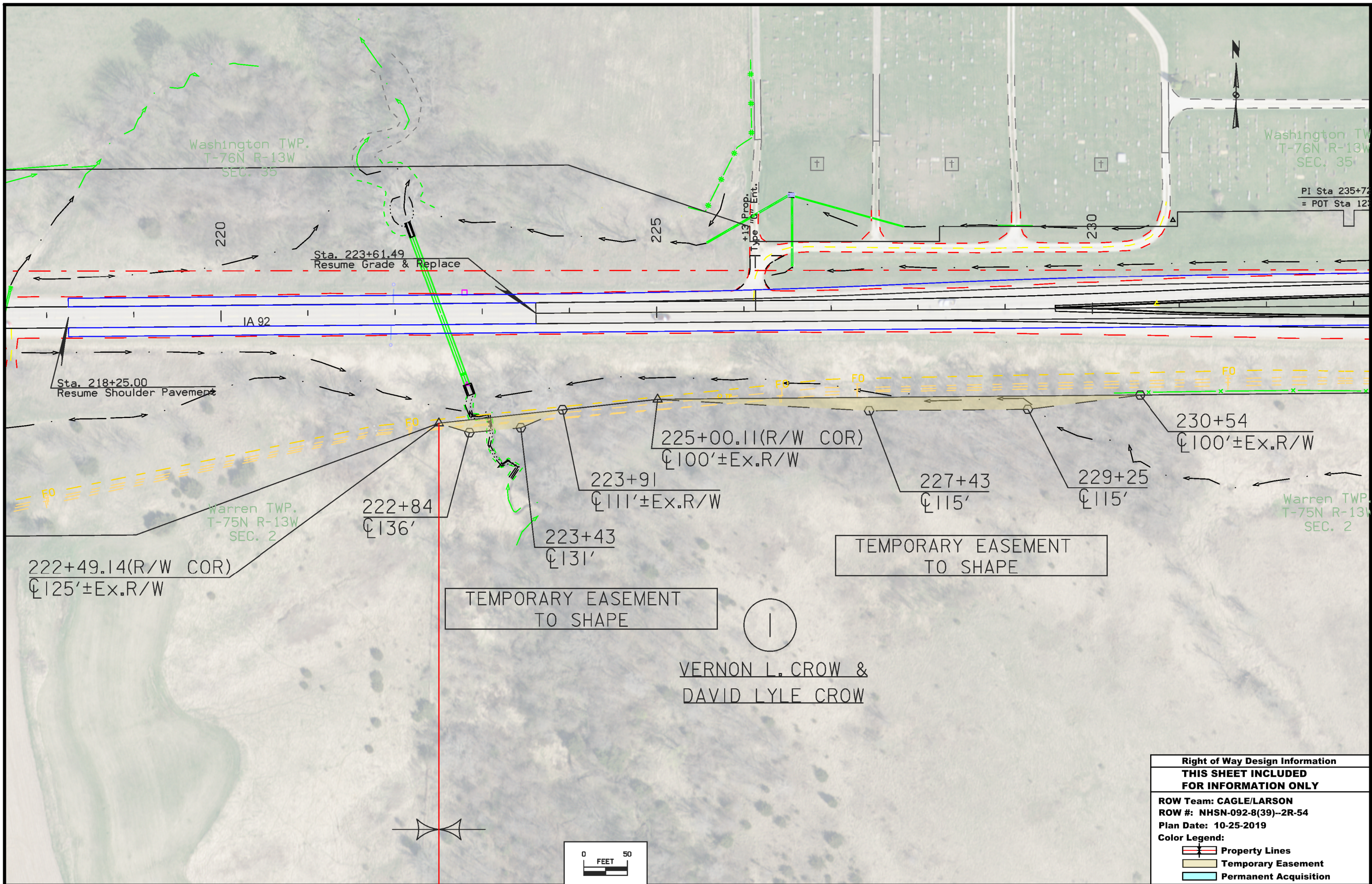
| Name | Location | Point on Tangent | | | Begin Spiral | | | Begin Curve | | | Simple Curve PI or Master PI of SCS | | | End Curve | | | End Spiral | | |
|------|----------|------------------|--------------|-------------|--------------|--------------|-------------|-------------|--------------|-------------|-------------------------------------|--------------|-------------|------------|--------------|-------------|------------|--------------|-------------|
| | | Station | Coordinates | | Station | Coordinates | | Station | Coordinates | | Station | Coordinates | | Station | Coordinates | | Station | Coordinates | |
| | | | Y (Northing) | X (Easting) | | Y (Northing) | X (Easting) | | Y (Northing) | X (Easting) | | Y (Northing) | X (Easting) | | Y (Northing) | X (Easting) | | Y (Northing) | X (Easting) |
| 1 | ML092W | 133+50.00 | 6796099.95 | 23377542.54 | | | | | | | | | | | | | | | |
| 2 | ML092W | | | | | | | 144+74.29 | 6796099.34 | 23378666.83 | 149+12.13 | 6796099.10 | 23379104.67 | 153+49.94 | 6796089.94 | 23379542.42 | | | |
| 3 | ML092W | 181+00.00 | 6796032.42 | 23382291.88 | | | | | | | | | | | | | | | |
| 4 | ML092E | 207+00.00 | 6796028.06 | 23384890.73 | | | | | | | | | | | | | | | |
| 5 | ML092E | 235+72.70 | 6796053.65 | 23387763.32 | | | | | | | | | | | | | | | |
| 6 | ML092E | 260+00.00 | 6796075.70 | 23390190.52 | | | | | | | | | | | | | | | |
| 7 | SR021 | 1144+96.99 | 6795404.90 | 23380681.46 | | | | | | | | | | | | | | | |
| 8 | SR021 | | | | | | | 1148+13.74 | 6795470.25 | 23380371.53 | 1152+66.39 | 6795563.63 | 23379928.61 | 1156+00.23 | 6796012.78 | 23379872.44 | | | |
| 9 | SR021 | 1156+71.22 | 6796083.22 | 23379863.63 | | | | | | | | | | | | | | | |
| 10 | SR021 | 1164+65.39 | 6796877.37 | 23379859.02 | | | | | | | | | | | | | | | |
| 11 | SRV33 | 1230+00.00 | 6795480.99 | 23387769.57 | | | | | | | | | | | | | | | |
| 12 | SRV33 | 1235+72.70 | 6796053.65 | 23387763.32 | | | | | | | | | | | | | | | |
| 13 | DET01 | 2134+45.06 | 6796081.65 | 23377737.59 | | | | | | | | | | | | | | | |
| 14 | DET01 | 2135+55.22 | 6796081.59 | 23377847.75 | | | | | | | | | | | | | | | |
| 15 | DET01 | 2142+60.10 | 6796068.40 | 23378552.51 | | | | | | | | | | | | | | | |
| 16 | DET01 | | | | | | | 2143+74.40 | 6796068.34 | 23378666.81 | 2148+11.93 | 6796068.10 | 23379104.34 | 2152+49.42 | 6796058.95 | 23379541.77 | | | |
| 17 | DET01 | 2154+63.79 | 6796054.46 | 23379756.09 | | | | | | | | | | | | | | | |
| 18 | DET02 | 2157+65.60 | 6796050.25 | 23379957.33 | | | | | | | | | | | | | | | |
| 19 | DET02 | 2169+15.14 | 6796026.21 | 23381106.62 | | | | | | | | | | | | | | | |
| 20 | DET02 | 2178+61.26 | 6796023.62 | 23382052.74 | | | | | | | | | | | | | | | |
| 21 | DET03 | | | | | | | 3150+41.50 | 6796095.28 | 23379234.03 | 3151+95.72 | 6796093.16 | 23379388.23 | 3153+49.93 | 6796089.94 | 23379542.42 | | | |
| 22 | DET03 | 3156+21.14 | 6796084.27 | 23379813.57 | | | | | | | | | | | | | | | |
| 23 | DET04 | 3157+05.03 | 6796082.51 | 23379897.43 | | | | | | | | | | | | | | | |
| 24 | DET04 | 3163+42.12 | 6796069.19 | 23380534.39 | | | | | | | | | | | | | | | |
| 25 | DET05 | 4135+52.50 | 6796118.15 | 23377745.06 | | | | | | | | | | | | | | | |
| 26 | DET05 | 4135+72.45 | 6796118.16 | 23377765.00 | | | | | | | | | | | | | | | |
| 27 | DET05 | 4136+15.00 | 6796118.31 | 23377807.55 | | | | | | | | | | | | | | | |
| 28 | DET05 | 4136+54.28 | 6796118.21 | 23377846.83 | | | | | | | | | | | | | | | |
| 29 | DET05 | 4136+68.21 | 6796118.19 | 23377860.75 | | | | | | | | | | | | | | | |
| 30 | DET05 | 4143+60.11 | 6796130.40 | 23378552.55 | | | | | | | | | | | | | | | |
| 31 | DET05 | | | | | | | 4144+74.41 | 6796130.34 | 23378666.85 | 4149+12.57 | 6796130.10 | 23379105.00 | 4153+50.69 | 6796120.93 | 23379543.06 | | | |
| 32 | DET05 | 4154+70.99 | 6796118.42 | 23379663.33 | | | | | | | | | | | | | | | |
| 33 | DET06 | 4157+65.03 | 6796112.25 | 23379958.07 | | | | | | | | | | | | | | | |
| 34 | DET06 | 4169+15.13 | 6796088.19 | 23381107.92 | | | | | | | | | | | | | | | |
| 35 | DET06 | 4178+50.16 | 6796051.65 | 23382042.23 | | | | | | | | | | | | | | | |
| 36 | DET07 | | | | | | | 5150+41.50 | 6796095.28 | 23379234.03 | 5151+95.72 | 6796093.16 | 23379388.23 | 5153+49.93 | 6796089.94 | 23379542.42 | | | |
| 37 | DET07 | 5154+70.23 | 6796087.42 | 23379662.68 | | | | | | | | | | | | | | | |
| 38 | DET08 | 5157+65.03 | 6796081.26 | 23379957.42 | | | | | | | | | | | | | | | |
| 39 | DET08 | 5163+42.12 | 6796069.19 | 23380534.39 | | | | | | | | | | | | | | | |
| 40 | DET09 | 6138+64.98 | 6796077.67 | 23378057.51 | | | | | | | | | | | | | | | |
| 41 | DET09 | 6143+60.06 | 6796068.40 | 23378552.51 | | | | | | | | | | | | | | | |
| 42 | DET09 | | | | | | | 6144+74.37 | 6796068.34 | 23378666.81 | 6147+93.36 | 6796068.16 | 23378985.81 | 6151+12.34 | 6796063.25 | 23379304.76 | | | |
| 43 | DET10 | 6157+66.66 | 6796050.23 | 23379958.40 | | | | | | | | | | | | | | | |
| 44 | DET10 | 6169+15.12 | 6796026.21 | 23381106.60 | | | | | | | | | | | | | | | |
| 45 | DET10 | 6169+15.14 | 6796026.21 | 23381106.62 | | | | | | | | | | | | | | | |
| 46 | DET10 | 6174+10.19 | 6796024.85 | 23381601.68 | | | | | | | | | | | | | | | |
| 47 | DET11 | 7210+70.40 | 6796017.36 | 23385261.24 | | | | | | | | | | | | | | | |
| 48 | DET11 | 7223+35.48 | 6796005.63 | 23386526.27 | | | | | | | | | | | | | | | |
| 49 | DET11 | 7235+07.11 | 6796016.07 | 23387697.86 | | | | | | | | | | | | | | | |
| 50 | DET12 | 7236+39.34 | 6796017.26 | 23387830.29 | | | | | | | | | | | | | | | |
| 51 | DET12 | 7248+10.13 | 6796027.89 | 23389001.03 | | | | | | | | | | | | | | | |
| 52 | DET12 | 7260+75.21 | 6796062.38 | 23390265.64 | | | | | | | | | | | | | | | |
| 53 | DET13 | 8230+98.49 | 6796043.43 | 23387289.18 | | | | | | | | | | | | | | | |
| 54 | DET13 | 8235+35.20 | 6796047.32 | 23387725.87 | | | | | | | | | | | | | | | |
| 55 | DET14 | 8236+36.93 | 6796048.24 | 23387827.61 | | | | | | | | | | | | | | | |
| 56 | DET14 | 8240+75.13 | 6796052.22 | 23388265.79 | | | | | | | | | | | | | | | |

SPIRAL OR CIRCULAR CURVE DATA

| Name | Location | ΔSCS | Horizontal Alignment Data | | | | | | | | | | | | Remarks | | |
|------|----------|------|---------------------------|----|----|----|----|----|------------|------|----|---|--------------|--------|---------|----------|--------|
| | | | Spiral Data | | | | | | Curve Data | | | | | | | | |
| | | | θS | Ls | Ts | Es | Xc | Yc | L.T. | S.T. | ΔC | T | L | R | | E | |
| C1 | ML092W | | | | | | | | | | | | 1°10'02.81" | 437.84 | 875.65 | 42975.00 | 2.23 |
| C2 | SR021 | | | | | | | | | | | | 70°57'55.04" | 452.65 | 786.50 | 635.00 | 144.82 |
| C3 | DET01 | | | | | | | | | | | | 1°10'02.81" | 437.52 | 875.02 | 42944.00 | 2.23 |
| C4 | DET03 | | | | | | | | | | | | 0°24'40.36" | 154.22 | 308.43 | 42975.00 | 0.28 |
| C5 | DET05 | | | | | | | | | | | | 1°10'02.81" | 438.16 | 876.28 | 43006.00 | 2.23 |
| C6 | DET07 | | | | | | | | | | | | 0°24'40.37" | 154.22 | 308.43 | 42975.00 | 0.28 |
| C7 | DET09 | | | | | | | | | | | | 0°51'04.23" | 318.99 | 637.97 | 42944.00 | 1.18 |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

| Keokuk | ROW: NHSN-092-8(39)--2R-54 | | | PIN | 16-54-092-030 | | | | | | | | | | | | | | |
|------------|---|-------|------|--------|---------------|------|------|--------|-----------|--------|------|------------|-------|-------|-------------|----------|------------|---------|--|
| | IA 21 and Co Rd V33 Intersections | | | | | | | | | | | | | | | | | | |
| | | STATE | | COUNTY | | CITY | | | TEMP EASE | BORROW | | | | | | | | | |
| PARCEL NO. | OWNER NAME | FEE | EASE | FEE | EASE | FEE | EASE | EXCESS | | FEE | T.E. | MITIGATION | OTHER | HOUSE | BUILDING(S) | A/C ONLY | TOTAL ACQ. | | |
| 1 | David Lyle Crow - Fee Vernon L. Crow - Fee | | | | | | | | | | | | | | | | | 0.16 AC | |
| 1 Parcel | "TOTALS | 0 AC | 0 AC | 0 AC | 0 AC | 0 AC | 0 AC | 0 AC | 0.16 AC | 0 AC | 0 AC | 0 AC | | | | | | | |
| | | 0 SF | 0 SF | 0 SF | 0 SF | 0 SF | 0 SF | 0 SF | 0 SF | 0 SF | | | | | | | | | |

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.



| | |
|---|-----------------------|
| Right of Way Design Information | |
| THIS SHEET INCLUDED FOR INFORMATION ONLY | |
| ROW Team: CAGLE/LARSON | |
| ROW #: NHSN-092-8(39)--2R-54 | |
| Plan Date: 10-25-2019 | |
| Color Legend: | |
| | Property Lines |
| | Temporary Easement |
| | Permanent Acquisition |

TRAFFIC CONTROL PLAN

- IA 92
- Maintain traffic on existing IA 92 at all times utilizing on-site detours.
 - Maintain traffic to all residents, businesses, farmsteads, and field entrances at all times.
- IA 21
- Close for a maximum of 21 calendar days during construction.
 - During closure, detour NB IA 21 traffic to Co Rd V33 to IA 92 to IA 149 to IA 22 to IA 21.
 - During closure, detour SB IA 21 traffic to IA 22 to IA 21 to IA 149 to IA 92 to IA 21.
- Co Rd V33/145th Ave
- Close during construction.
 - IA 21 and Co Rd V33 intersections cannot be closed at the same time as City of Delta traffic to use IA 21 to access IA 92.
 - During closure, detour NB Co Rd V33 traffic to IA 21 to IA 92.
 - During closure, detour SB 145th Ave traffic to 210th St to 150th Ave to IA 92.
- Cemetery (NW corner of Co Rd V33/145th Ave)
- Access to cemetery shall be provided at all times during the project. Stage IA 92 work to keep one point of access open at all times.

STAGING NOTES

- Stage 5B Traffic (IA 92/Co Rd V33):
- Install traffic control including TBR as shown on J sheets and shift two-way traffic south utilizing EB lane and detour pavement.
 - Close 145th Ave north of intersection. Maintain local access.
 - Co Rd V33 to remain open south of intersection to access IA 92.
- Stage 5B Construction (IA 92/Co Rd V33):
- Construct north half improvements as shown in the J Sheets.
- Stage 6 Traffic (IA 92/Co Rd V33):
- Install traffic control including TBR as shown on J sheets and shift two-way traffic north utilizing previously constructed pavement.
 - Open 145th Ave to traffic.
 - After Stage 6 construction is complete, open all traffic to normal operations.
- Stage 6 Construction (IA 92/Co Rd V33):
- Remove previously installed on-site detours on the south.
 - Construct south half improvements as shown in the J Sheets.

STAGING NOTES

It is not the intent of the sequence of construction to confine the Contractor's activities to the area of suggested stages alone. It is understood that some of the various steps, though listed in numerical order, may occur simultaneously. Therefore, the Contractor may conduct several operations concurrently on the project, provided that the existing traffic is maintained and that these operations do not conflict with the staging indicated here in.

It is recognized that as various activities related to the construction progress, certain situations may arise which will preclude adhering to the original construction sequence or, which in the opinion of the Contractor, would readily adhere itself to a more efficient staging operation. Should this occur, and the Contractor desires to deviate from the original plan, they shall submit an alternate plan for approval by the Engineer.

Stage 1A Traffic (IA 92/IA 21):

- Install traffic control per Standard Road Plan TC-214 shifting all traffic onto the WB lane utilizing pilot car and flaggers. Maintain traffic on IA 21.

Stage 1A Construction (IA 92/IA 21):

- Construct on-site detours as shown in the F Sheets.

Stage 1B Traffic (IA 92/IA 21):

- Install traffic control including TBR as shown on J sheets and shift two-way traffic south utilizing EB lane and detour pavement.
- Close IA 21 north of IA 92/IA 21 intersection for a maximum of 14 calendar days.
- IA 21 south of IA 92/IA 21 intersection to remain open to access IA 92.

Stage 1B Construction (IA 92/IA 21):

- Construct north half of IA 92/IA 21 intersection improvements as shown in the J Sheets.
- Construct on-site detours as shown in the F Sheets.

Stage 2 Traffic (IA 92/IA 21):

- Install traffic control including TBR as shown on J sheets and shift two-way traffic north utilizing WB lane and detour pavement.
- Close IA 21 south of intersection for a maximum of 7 calendar days.
- IA 21 to remain open north of intersection to access IA 92.

Stage 2 Construction (IA 92/IA 21):

- Construct south half of IA 92/IA 21 intersection improvements as shown in the J Sheets.

Stage 3 Traffic (IA 92/IA 21):

- Adjust traffic control as shown on J sheets and open the IA 92/IA 21 intersection to traffic.

Stage 3 Construction (IA 92/IA 21):

- Remove previously installed on-site detours on the south.
- Construct the remainder of the south half improvements as shown in the J Sheets.
- Construct on-site detours as shown in the F Sheets.

Stage 4 Traffic (IA 92/IA 21):

- Install traffic control including TBR as shown on J sheets and shift two-way traffic south utilizing EB lane and detour pavement.
- IA 92/IA 21 intersection to remain open to traffic.
- After Stage 4 construction is complete, open all traffic to normal operations.

Stage 4 Construction (IA 92/IA 21):

- Construct the remainder of the north half improvements as shown in the J Sheets.
- Remove the remainder of the previously installed on-site detours on the south.

Stage 5A Traffic (IA 92/Co Rd V33):

- Install traffic control per Standard Road Plan TC-214 shifting all traffic onto the WB lane utilizing pilot car and flaggers. Maintain traffic on Co Rd V33 and 145th Ave.









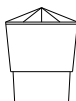
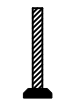
Stage 5A Construction (IA 92/Co Rd V33):

- Construct on-site detours as shown in the F Sheets.

**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 |
|  | Temporary Sand Barrel |  | 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 |
| 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 |

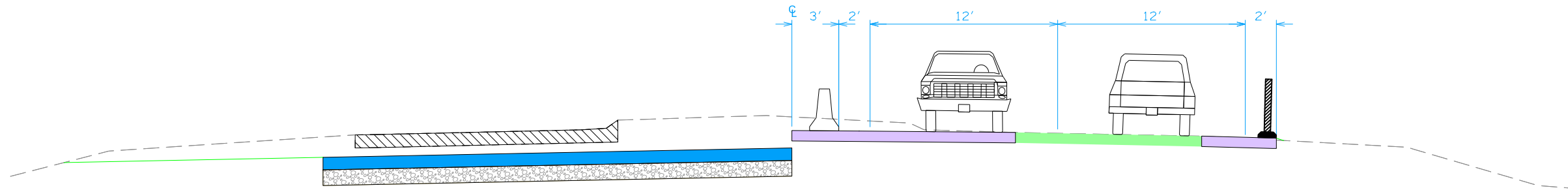
**PLAN VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

| | | | |
|---|--------------------------|---|------------------------------|
|  | Channelizing Device |  | Crash Cushion (Temp or Perm) |
|  | Drum |  | Traffic Signal |
|  | Temporary Lane Separator |  | Flagger |
|  | Tubular Marker |  | Temporary Floodlighting |
|  | Single White Delineators |  | 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 |  | Lane Identification |

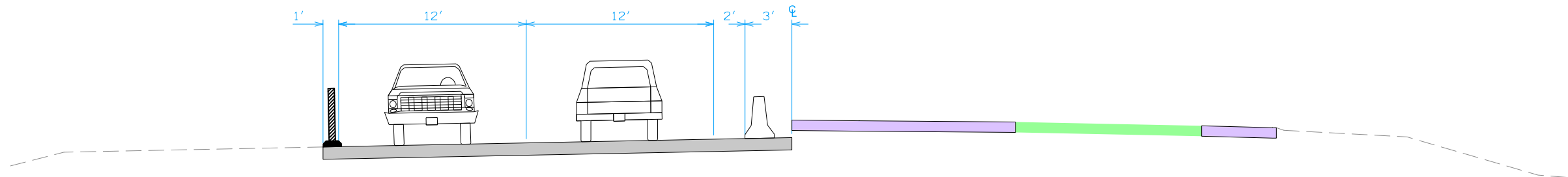
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

**TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET**

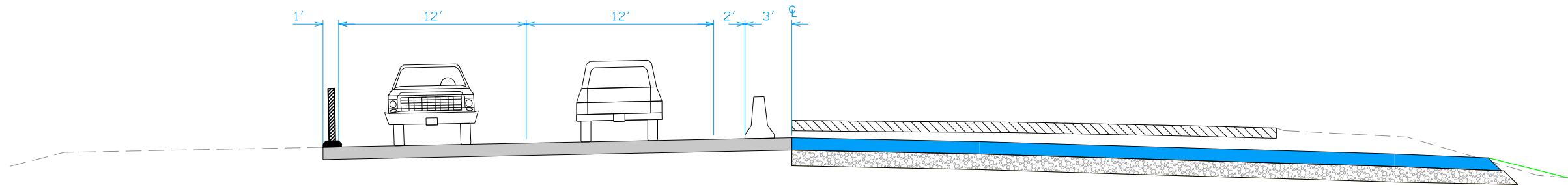
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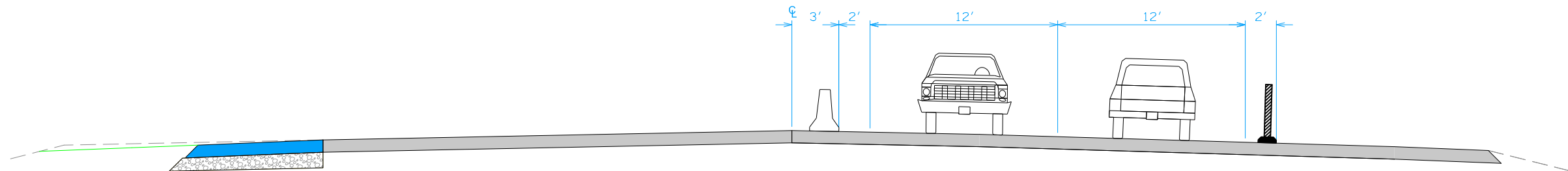
STAGE 1B
(STA. 155+00.00 SHOWN)



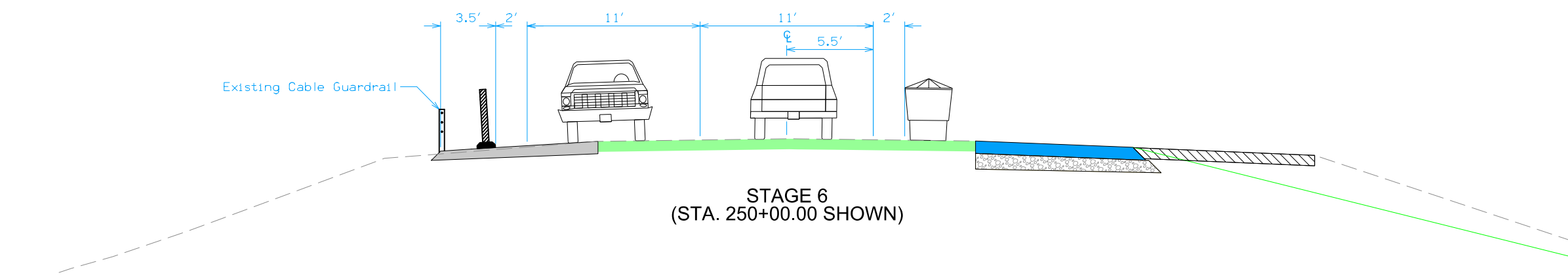
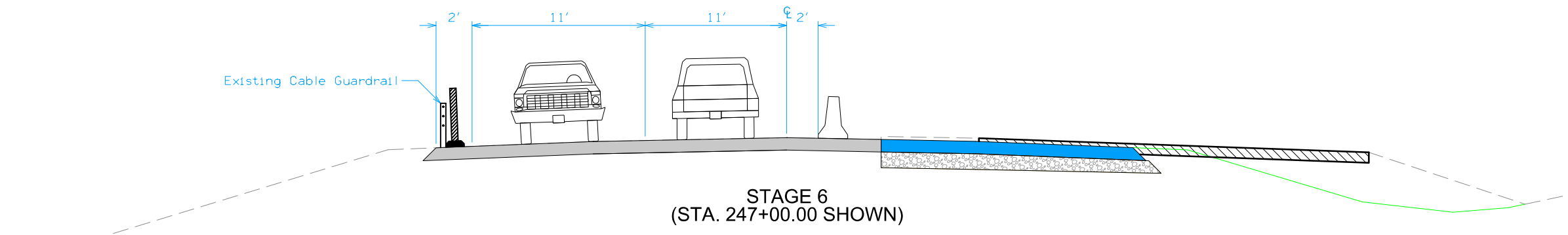
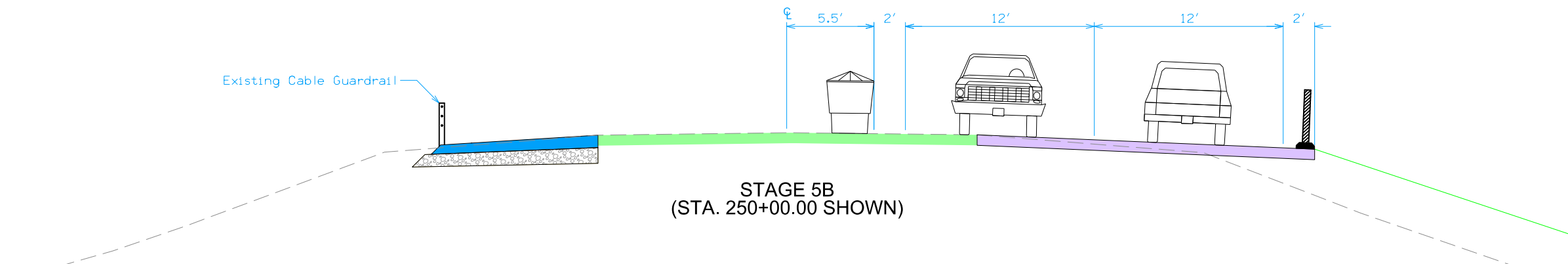
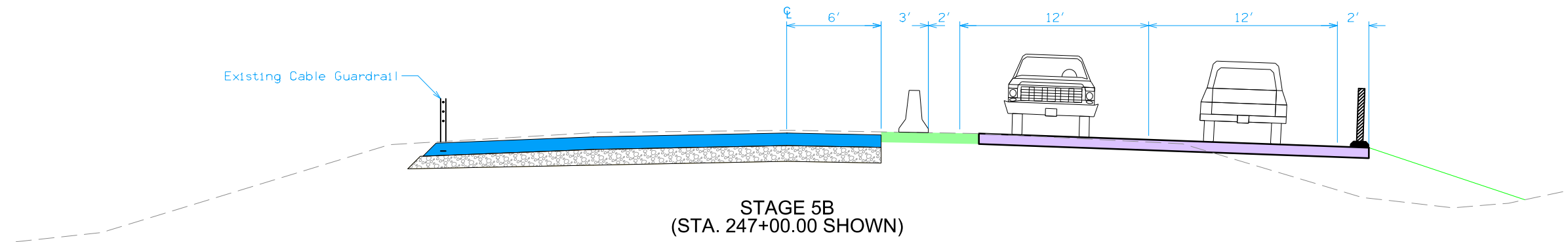
STAGE 2
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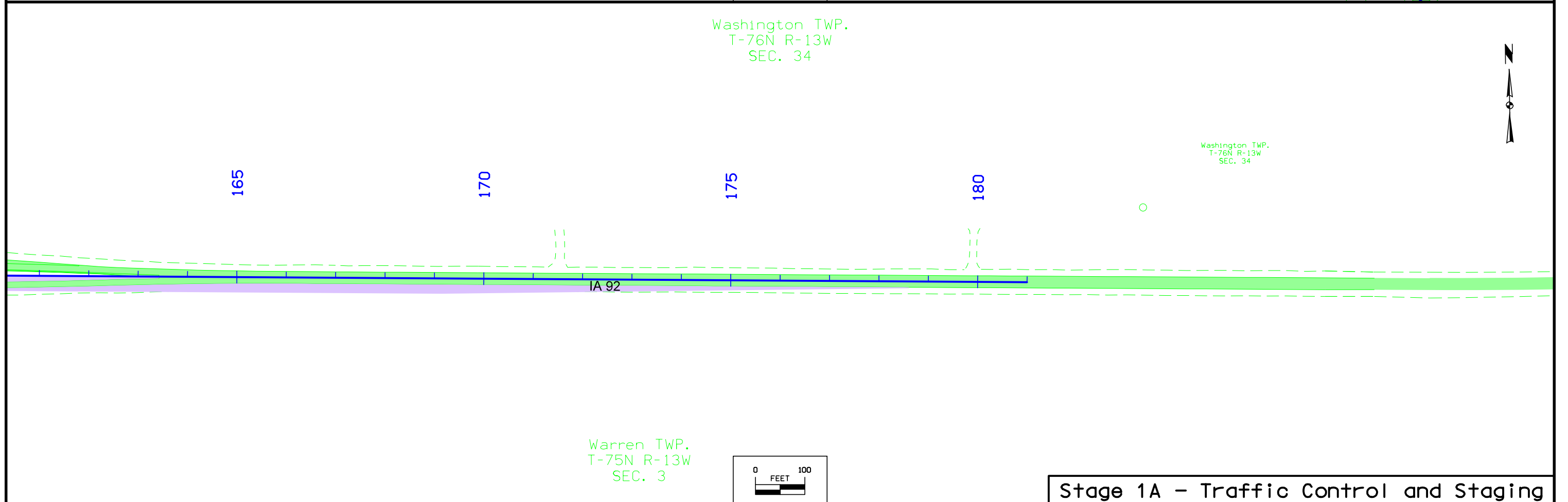
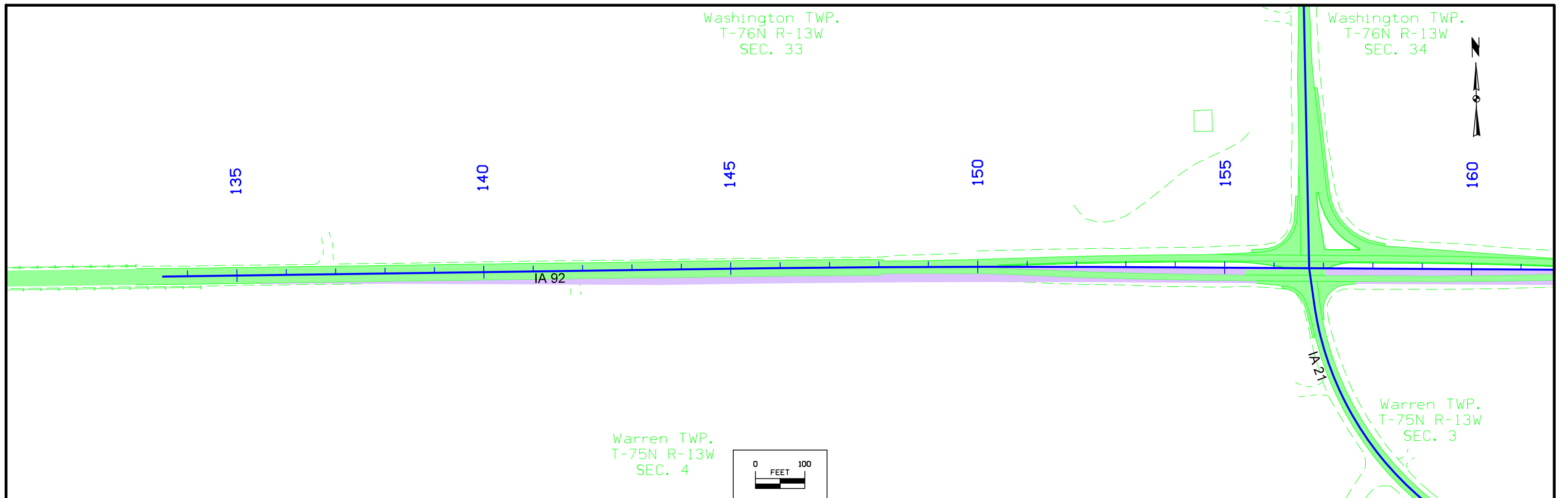


STAGE 3
(STA. 155+00.00 SHOWN)



STAGE 4
(STA. 155+00.00 SHOWN)





Stage 1A - Traffic Control and Staging

| | | | | | | | | |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|-----|
| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | SHEET NUMBER | J.5 |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|-----|

Washington TWP.
T-76N R-13W
SEC. 33



1000'

1000'

1000'

END
ROAD WORK

G20-2A
48" x 24"



W14-3
48" X 60" X 60"

IA 92

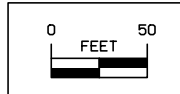


W20-1
48" x 48"



R4-1
36" x 48"

Warren TWP.
T-75N R-13W
SEC. 4



50
M.P.H.



W13-1
24" x 24"

W1-4R
48" x 48"

Washington TWP.
T-76N R-13W
SEC. 33



135

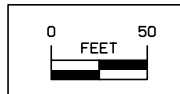
140

145

IA 92

Begin TBR

Warren TWP.
T-75N R-13W
SEC. 4



Stage 1B - Traffic Control and Staging

FILE NO.

ENGLISH

DESIGN TEAM

Van Dyke\Stanley Consultants Inc.

KEOKUK COUNTY

PROJECT NUMBER

NHSN-092-8(36)--2R-54

SHEET NUMBER

J.6

11:19:40 AM 7/31/2019 3994

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Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34



150

155

160

50
M.P.H.
W13-1
24" x 24"



W1-4R
48" x 48"

IA 92

50
M.P.H.
W13-1
24" x 24"

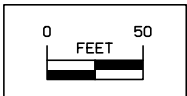


W1-4L
48" x 48"



W20-1
48" x 48"

Warren TWP.
T-75N R-13W
SEC. 3



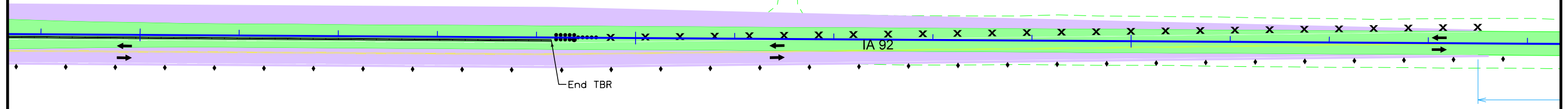
Stage 1B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 34

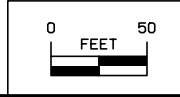
165

170

175



Warren TWP.
T-75N R-13W
SEC. 3



Washington TWP.
T-76N R-13W
SEC. 34



W1-4L
48" x 48"



W13-1
24" x 24"



R4-1
36" x 48"



W20-1
48" x 48"

180



1000'

1000'

1000'

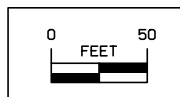


W14-3
48" X 60" X 60"



G20-2A
48" x 24"

Warren TWP.
T-75N R-13W
SEC. 3



Stage 1B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33



1000'

1000'

1000'

END
ROAD WORK

G20-2A
48" x 24"



W14-3
48" X 60" X 60"

IA 92



W20-1
48" x 48"



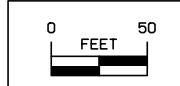
R4-1
36" x 48"

Warren TWP.
T-75N R-13W
SEC. 4



50
M.P.H.

W1-4L
48" x 48"



Washington TWP.
T-76N R-13W
SEC. 33



135

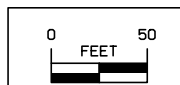
140

145

Begin TBR

IA 92

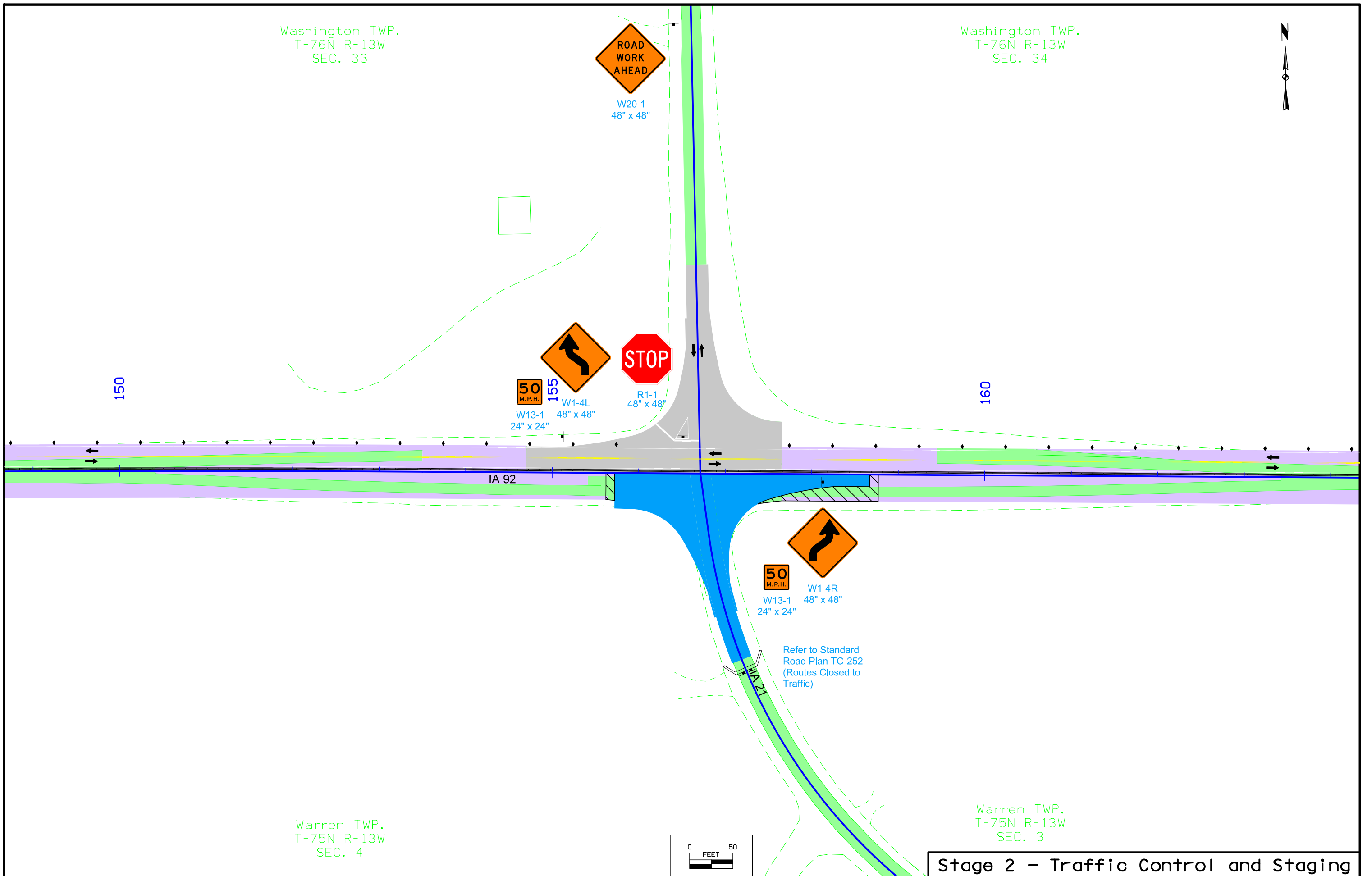
Warren TWP.
T-75N R-13W
SEC. 4



Stage 2 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34



150

160

IA 92

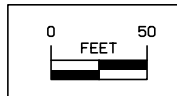
50
M.P.H.

W13-1 24" x 24"
W1-4R 48" x 48"

Refer to Standard
Road Plan TC-252
(Routes Closed to
Traffic)

Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3



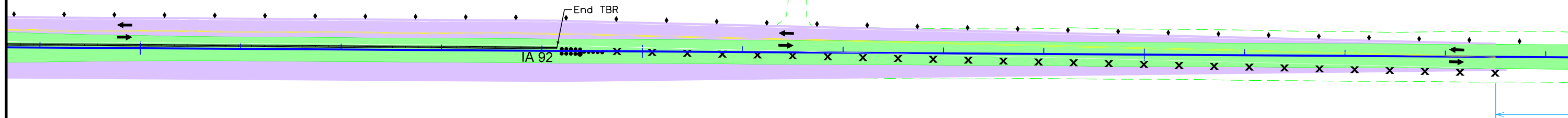
Stage 2 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 34

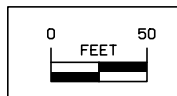
165

170

175



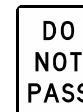
Warren TWP.
T-75N R-13W
SEC. 3



Washington TWP.
T-76N R-13W
SEC. 34



W13-1
24" x 24"

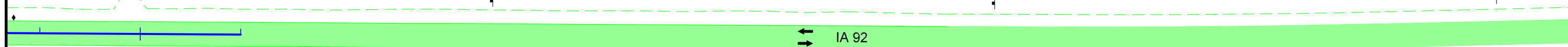


R4-1
36" x 48"



W20-1
48" x 48"

180



1000'

1000'

1000'

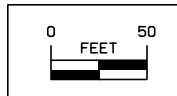


W14-3
48" X 60" X 60"



G20-2A
48" x 24"

Warren TWP.
T-75N R-13W
SEC. 3



Stage 2 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33



1000'

1000'

1000'

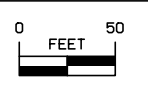
END
ROAD WORK

G20-2A
48" x 24"



W14-3
48" X 60" X 60"

IA 92



W20-1
48" x 48"

DO
NOT
PASS

R4-1
36" x 48"

Warren TWP.
T-75N R-13W
SEC. 4



50
M.P.H.

W13-1
24" x 24"

W1-4L
48" x 48"

Washington TWP.
T-76N R-13W
SEC. 33



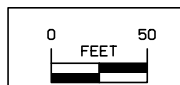
135

140

145

Begin TBR

IA 92

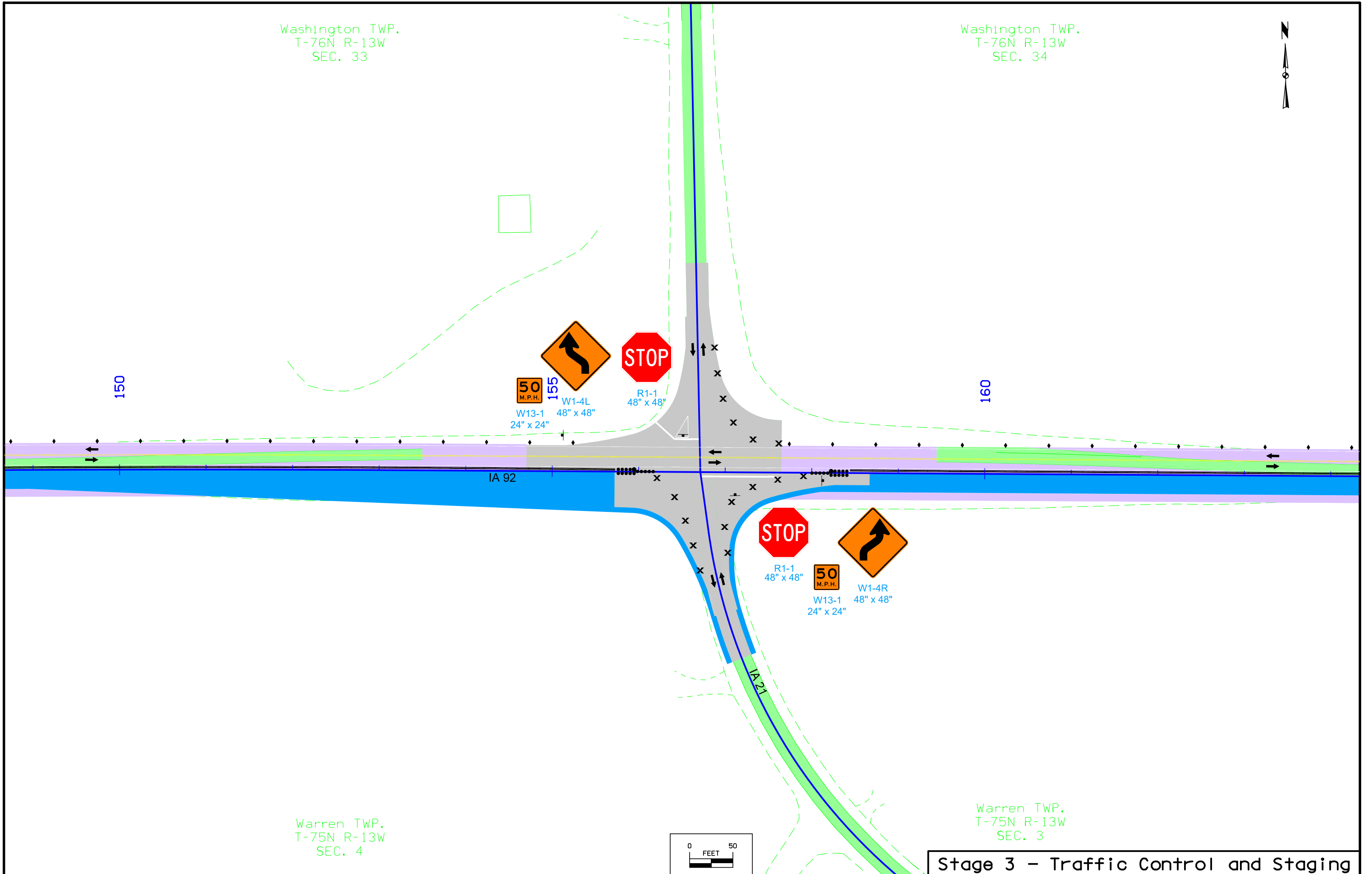


Warren TWP.
T-75N R-13W
SEC. 4

Stage 3 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34



150

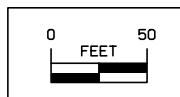
160

IA 92

IA 21

Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3



Stage 3 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 34



165

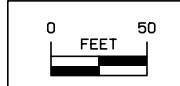
170

175

End TBR

IA 92

Warren TWP.
T-75N R-13W
SEC. 3



Washington TWP.
T-76N R-13W
SEC. 34



W1-4R
48" x 48"



W13-1
24" x 24"



R4-1
36" x 48"



W20-1
48" x 48"

180

IA 92

1000'

1000'

1000'

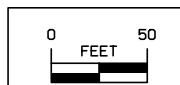


W14-3
48" X 60" X 60"



G20-2A
48" x 24"

Warren TWP.
T-75N R-13W
SEC. 3



Stage 3 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 33



1000'

1000'

1000'

END
ROAD WORK

G20-2A
48" x 24"



W14-3
48" X 60" X 60"

IA 92

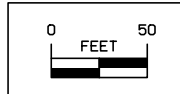


W20-1
48" x 48"



R4-1
36" x 48"

Warren TWP.
T-75N R-13W
SEC. 4



50
M.P.H.



W13-1
24" x 24"

W1-4R
48" x 48"

Washington TWP.
T-76N R-13W
SEC. 33



135

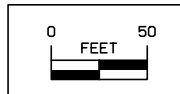
140

145

Begin TBR

IA 92

Warren TWP.
T-75N R-13W
SEC. 4



Stage 4 - Traffic Control and Staging

FILE NO.

ENGLISH

DESIGN TEAM

Van Dyke\Stanley Consultants Inc.

KEOKUK COUNTY

PROJECT NUMBER

NHSN-092-8(36)--2R-54

SHEET NUMBER

J.15

11:20:01 AM 7/31/2019 3994

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Washington TWP.
T-76N R-13W
SEC. 33

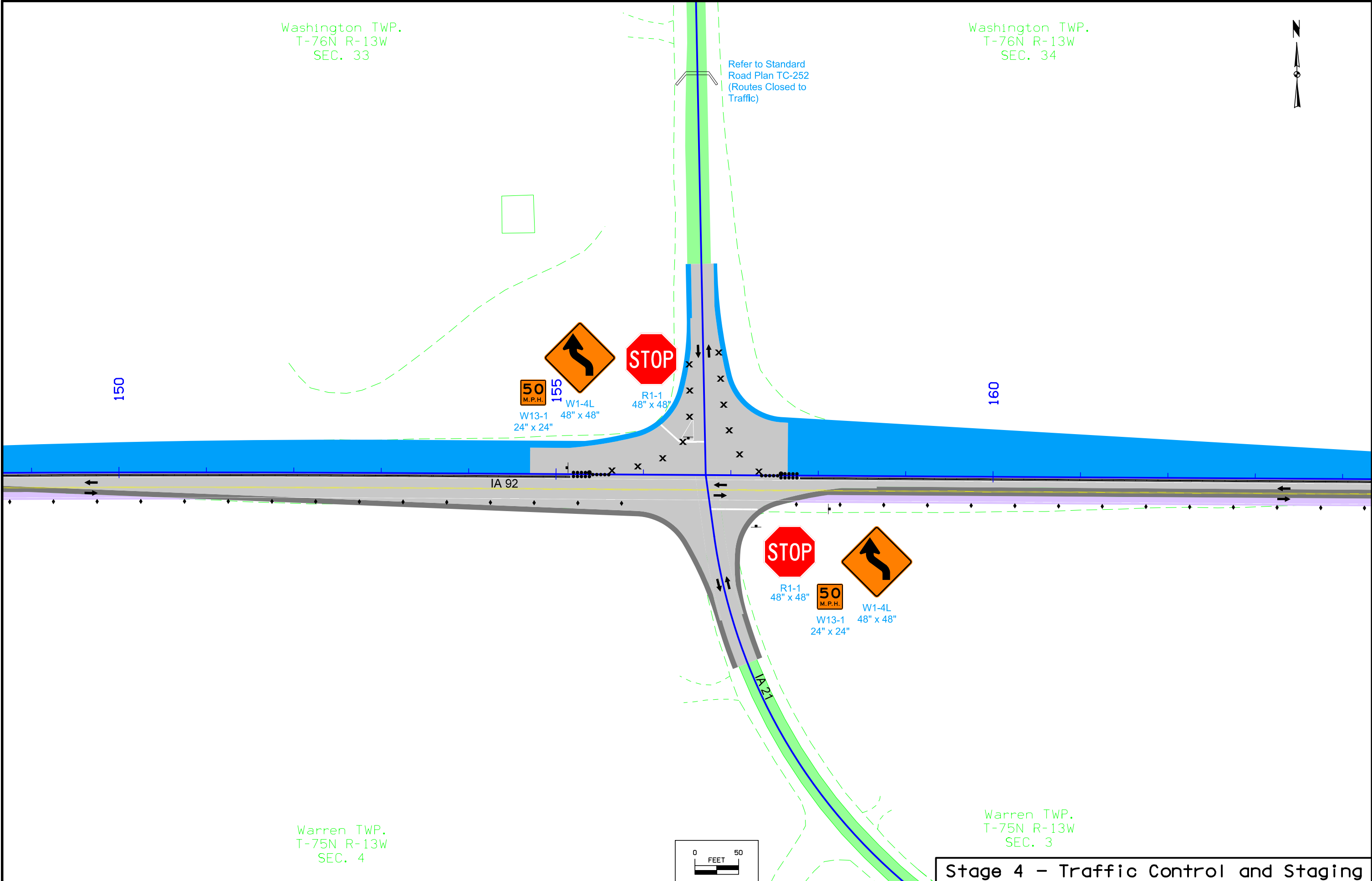
Washington TWP.
T-76N R-13W
SEC. 34



Refer to Standard
Road Plan TC-252
(Routes Closed to
Traffic)

150

160



IA 92

IA 21

Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3

Stage 4 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 34

165

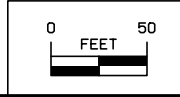
170

175

End TBR

IA 92

Warren TWP.
T-75N R-13W
SEC. 3



Washington TWP.
T-76N R-13W
SEC. 34



W1-4L
48" x 48"



W13-1
24" x 24"

180



R4-1
36" x 48"



W20-1
48" x 48"

IA 92

1000'

1000'

1000'

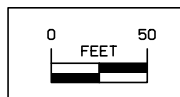


W14-3
48" X 60" X 60"

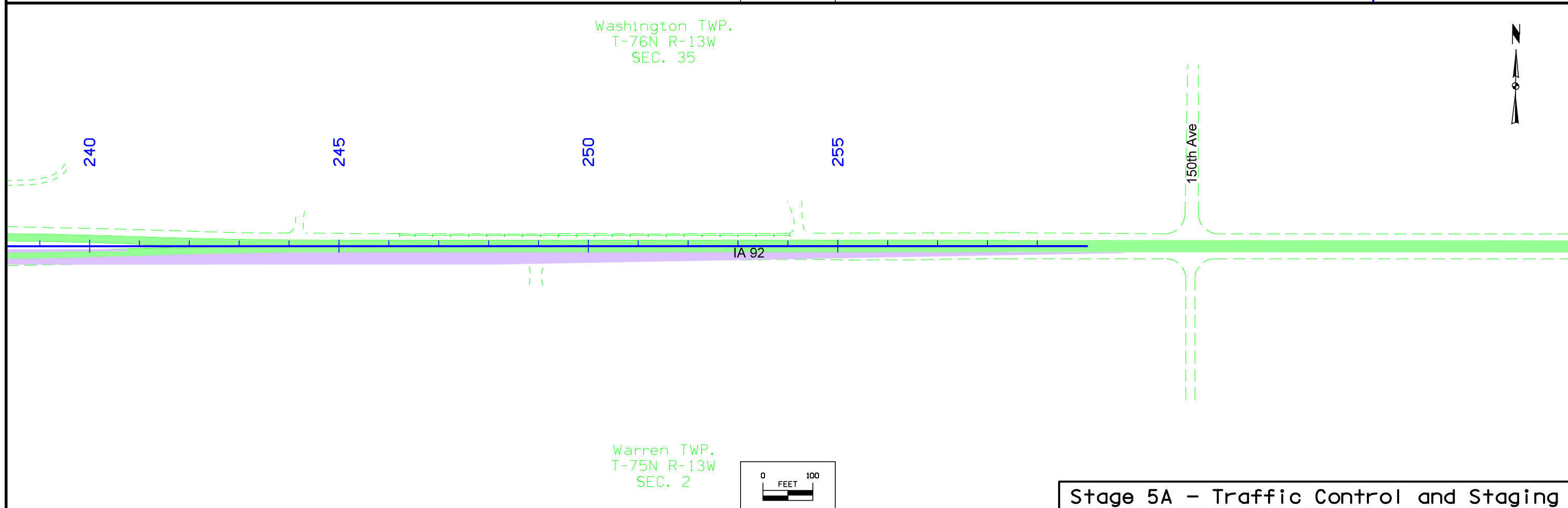
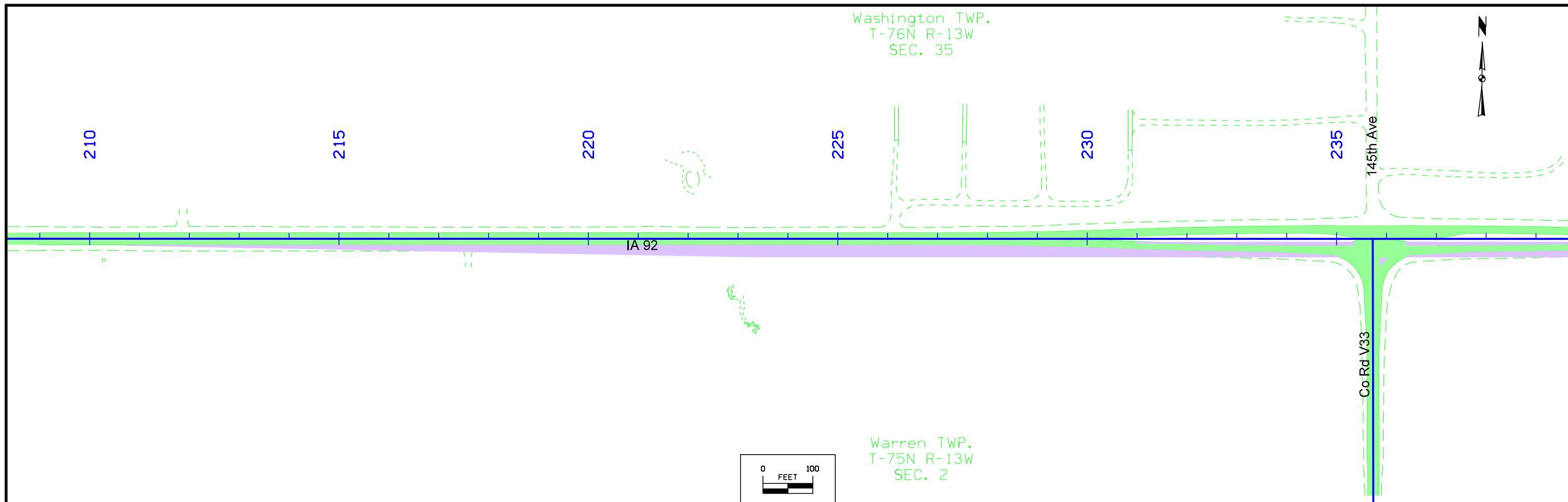


G20-2A
48" x 24"

Warren TWP.
T-75N R-13W
SEC. 3



Stage 4 - Traffic Control and Staging



Stage 5A - Traffic Control and Staging

| | | | | | | | | |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|------|
| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | SHEET NUMBER | J.18 |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|------|

Washington TWP.
T-76N R-13W
SEC. 34

Washington TWP.
T-76N R-13W
SEC. 35



END
ROAD WORK

G20-2A
48" x 24"

NO
PASSING
ZONE

W14-3
48" X 60" X 60"

210

IA 92

ROAD
WORK
AHEAD

W20-1
48" x 48"

1000'

DO
NOT
PASS

R4-1
36" x 48"

50
M.P.H.

W13-1
24" x 24"

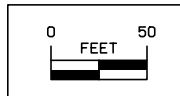
W1-4R
48" x 48"

1000'

1000'

Warren TWP.
T-75N R-13W
SEC. 3

Warren TWP.
T-75N R-13W
SEC. 2



Washington TWP.
T-76N R-13W
SEC. 35



215

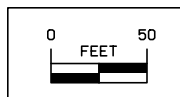
220

225

IA 92

Begin TBR

Warren TWP.
T-75N R-13W
SEC. 2



Stage 5B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 35

Washington TWP.
T-76N R-13W
SEC. 35



230

50
M.P.H.
W13-1
24" x 24"



W1-4R
48" x 48"

145th Ave

Refer to Standard
Road Plan TC-252
(Routes Closed to
Traffic)

240

IA 92

Co Rd V33

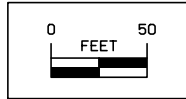
50
M.P.H.
W13-1
24" x 24"



W1-4L
48" x 48"

Warren TWP.
T-75N R-13W
SEC. 2

Warren TWP.
T-75N R-13W
SEC. 2



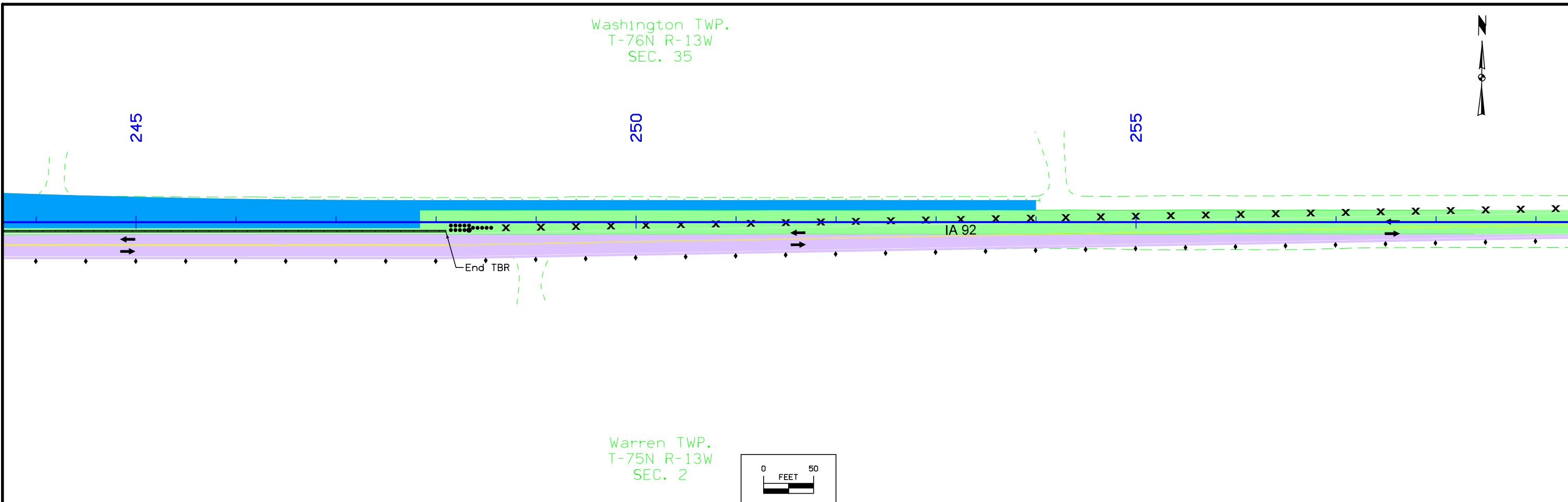
Stage 5B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 35

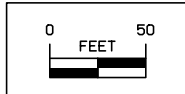
245

250

255



Warren TWP.
T-75N R-13W
SEC. 2



Washington TWP.
T-76N R-13W
SEC. 35

150th Ave



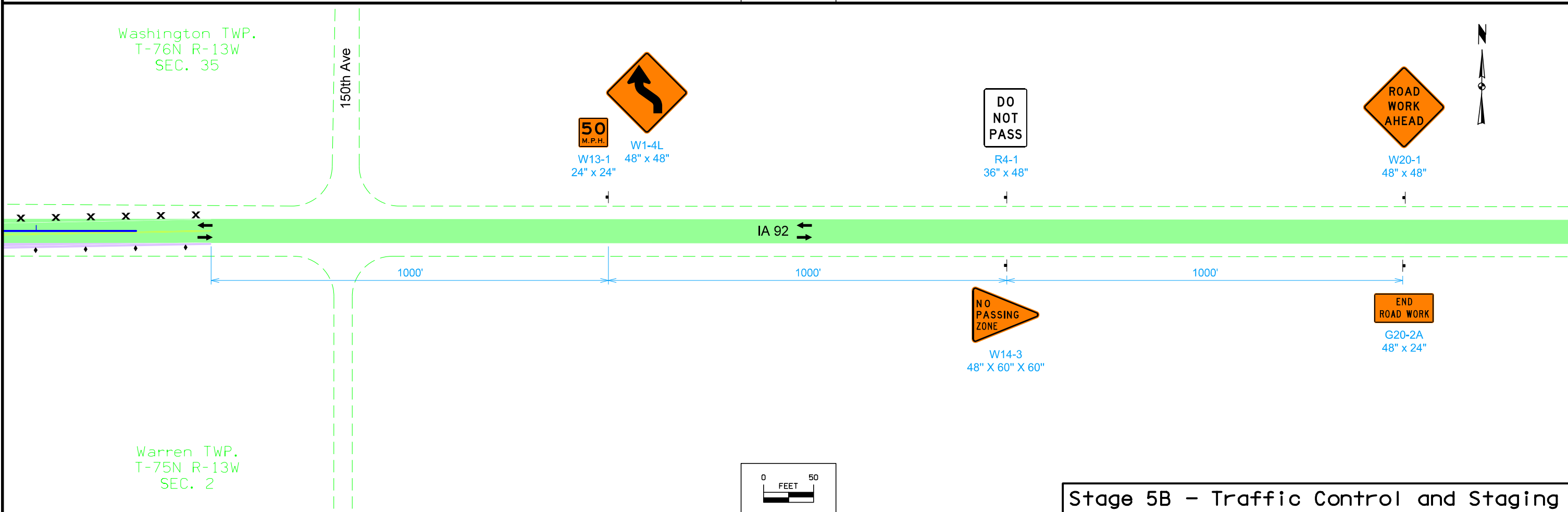
50
M.P.H.
W13-1
24" x 24"

W1-4L
48" x 48"

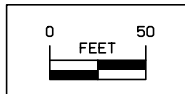
DO
NOT
PASS
R4-1
36" x 48"



W20-1
48" x 48"



Warren TWP.
T-75N R-13W
SEC. 2



Stage 5B - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 34

Washington TWP.
T-76N R-13W
SEC. 35

END
ROAD WORK

G20-2A
48" x 24"

NO
PASSING
ZONE

W14-3
48" X 60" X 60"

210

IA 92

ROAD
WORK
AHEAD

W20-1
48" x 48"

DO
NOT
PASS

R4-1
36" x 48"

1000'

1000'

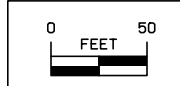
50
M.P.H.

W13-1
24" x 24"

W1-4L
48" x 48"

Warren TWP.
T-75N R-13W
SEC. 3

Warren TWP.
T-75N R-13W
SEC. 2



Washington TWP.
T-76N R-13W
SEC. 35

215

220

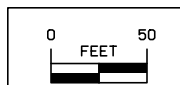
225

Begin TBR

IA 92

1000'

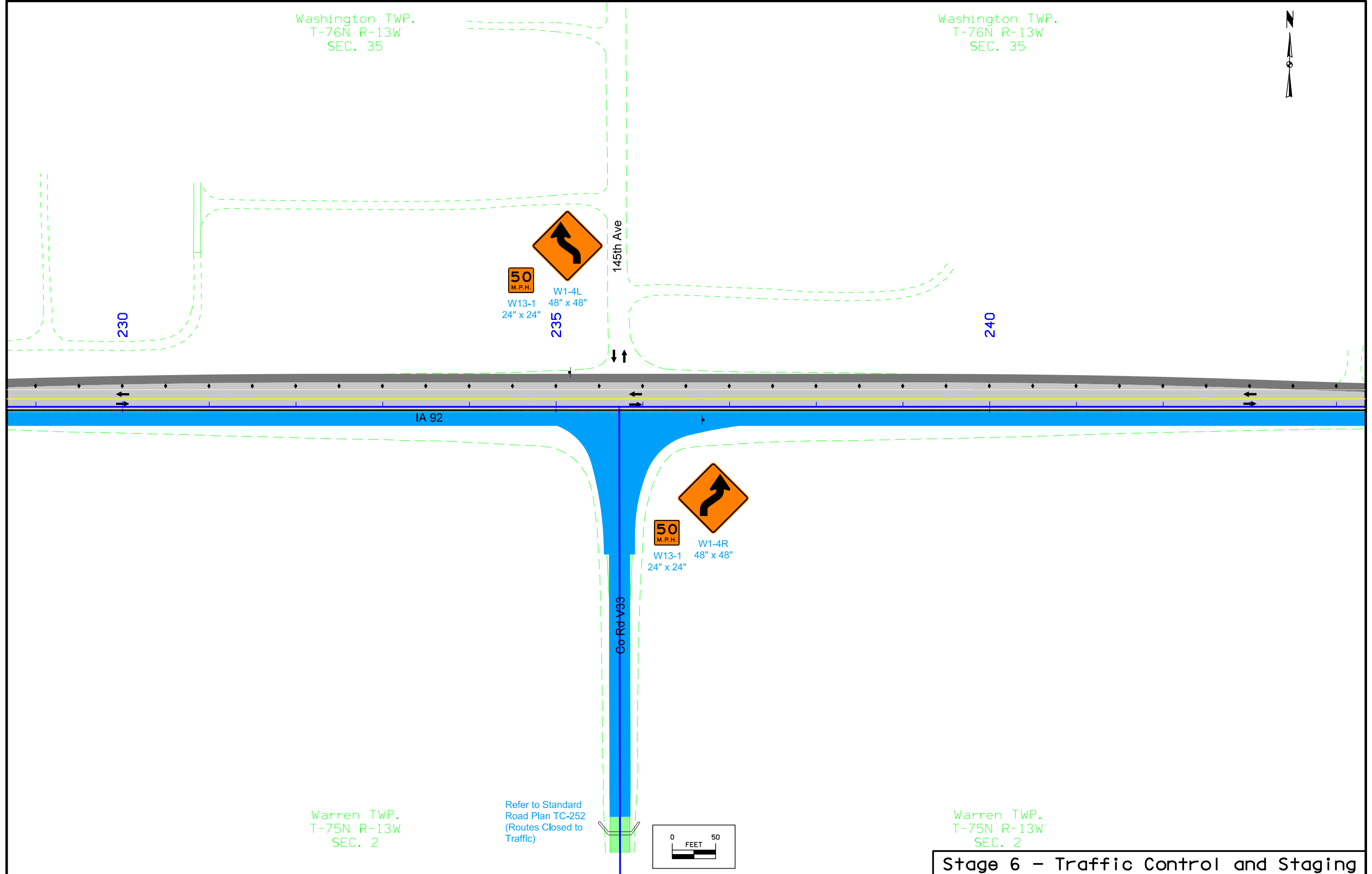
Warren TWP.
T-75N R-13W
SEC. 2



Stage 6 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 35

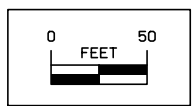
Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2

Warren TWP.
T-75N R-13W
SEC. 2

Refer to Standard
Road Plan TC-252
(Routes Closed to
Traffic)



Stage 6 - Traffic Control and Staging

Washington TWP.
T-76N R-13W
SEC. 35

245

250

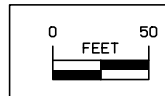
255

End TBR

IA 92

1000'

Warren TWP.
T-75N R-13W
SEC. 2



Washington TWP.
T-76N R-13W
SEC. 35



50
M.P.H.

W13-1
24" x 24"

W1-4R
48" x 48"

150th Ave

DO
NOT
PASS

R4-1
36" x 48"



W20-1
48" x 48"

IA 92

1000'

1000'

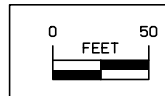


W14-3
48" X 60" X 60"



G20-2A
48" x 24"

Warren TWP.
T-75N R-13W
SEC. 2



Stage 6 - Traffic Control and Staging

FILE NO.

ENGLISH

DESIGN TEAM

Van Dyke\Stanley Consultants Inc.

KEOKUK COUNTY

PROJECT NUMBER

NHSN-092-8(36)--2R-54

SHEET NUMBER

J.24

Washington TWP.
T-76N R-13W
SEC. 33



142

143

Sta 144+11.57 12.00 Lt IA 92

144

145

146

Sta 147+53.72 17.79 Lt IA 92

147

IA 92

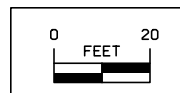
12.00'

12.00'

Varies

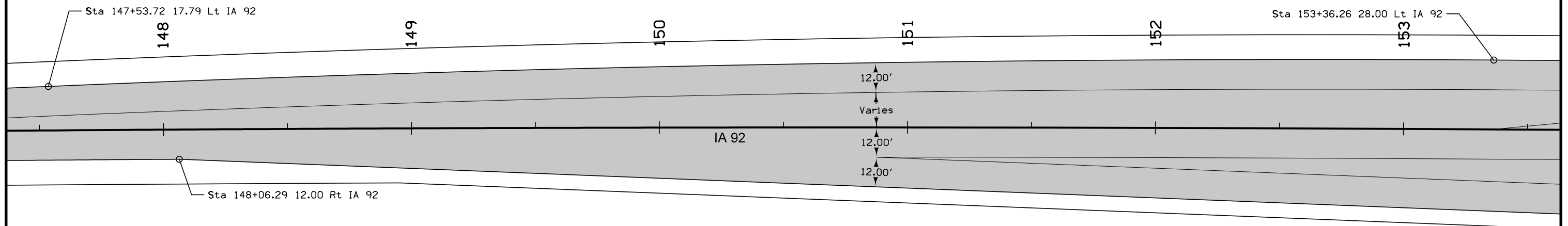
Warren TWP.
T-75N R-13W
SEC. 4

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.



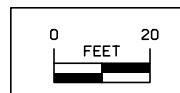
Geometric Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 33



Warren TWP.
T-75N R-13W
SEC. 4

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.



Geometric Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34

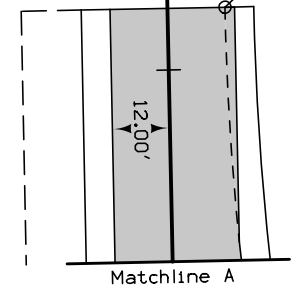


Radius Point
Curve RETBSRIA21_3
153+55.53 171.34 Lt

Radius Point
Curve RETBSRIA21_1
154+70.23 528.00 Lt

Radius Point
Curve RETASRIA21_1
1159+12.83 611.00 Rt

Sta 1159+12.83 12.00 Rt IA 21
= Sta 10+00.00 RETASRIA21



Sta 1158+50.93 12.00 Lt IA 21
= Sta 22+85.49 RETBSRIA21

RETASRIA21

Radius Point
Curve RETASRIA21_2
157+62.08 130.59 Lt

Radius Point
Curve RETBSRIA21_2
155+72.45 115.48 Lt

Sta 1157+84.32 25.95 Rt IA 21
= Sta 11+29.52 RETASRIA21

Sta 1157+68.65 23.54 Lt IA 21
= Sta 22+02.14 RETBSRIA21

Sta 157+58.48 60.68 Lt IA 92
= Sta 12+18.87 RETASRIA21

Sta 154+70.23 28.00 Lt IA 92
= Sta 20+00.00 RETBSRIA21

Sta 154+70.23 28.00 Lt IA 92
= Sta 21+21.45 RETBSRIA21

154

155

156

157

158

159

12.00'

12.00'

12.00'

Varies

12.00'

88°28'09.54"

81°40'20.98"

12.00'

Varies

12.00'

12.00'

12.00'

4.00'

IA 92

Sta 158+67.03 12.00 Rt IA 92
= Sta 42+68.68 RETDSRIA21

Sta 155+92.76 41.64 Rt IA 92
= Sta 30+00.00 RETCSRIA21

Sta 157+51.65 29.00 Rt IA 92
= Sta 41+51.64 RETDSRIA21

Sta 1155+99.63 31.57 Lt IA 21
= Sta 30+69.61 RETCSRIA21

Radius Point
Curve RETDSRIA21_2
1155+61.43 83.89 Rt

RETDSRIA21

Radius Point
Curve RETCSRIA21_1
155+90.43 111.61 Rt

Sta 1155+80.09 21.18 Rt IA 21
= Sta 40+73.49 RETDSRIA21

Radius Point
Curve RETDSRIA21_1
1155+05.68 211.00 Rt

Warren TWP.
T-75N R-13W
SEC. 4

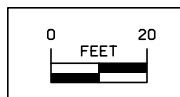
Warren TWP.
T-75N R-13W
SEC. 3

Radius Point
Curve RETDSRIA21_3
158+67.03 412.00 Rt

Sta 1155+05.69 12.00 Lt IA 21
= Sta 31+68.89 RETCSRIA21

Radius Point
Curve RETCSRIA21_2
1155+05.68 411.00 Lt

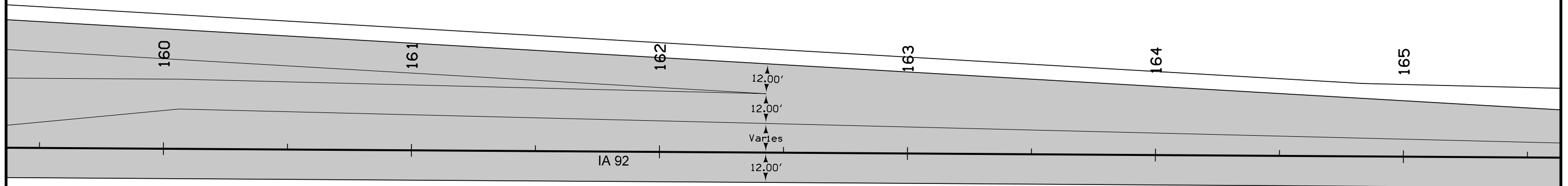
Sta 1155+05.68 12.00 Rt IA 21
= Sta 40+00.00 RETDSRIA21



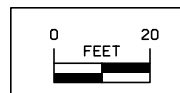
Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

Geometric Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 34



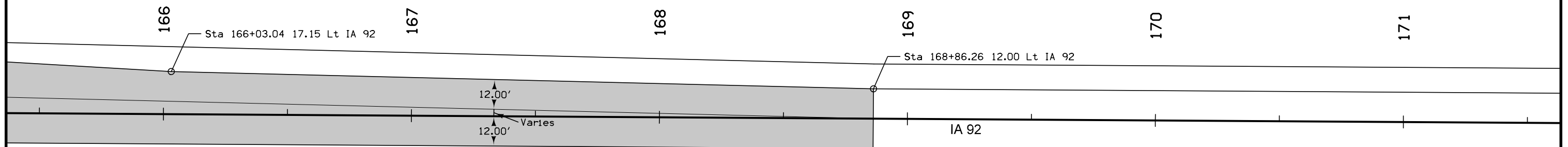
Warren TWP.
T-75N R-13W
SEC. 3



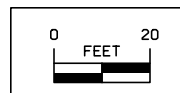
Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

Geometric Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 3



Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.

Geometric Details
Intersection of
IA 92 and IA 21

| | | | | | |
|----------|---------|--|----------------------|---|-------------------------|
| FILE NO. | ENGLISH | DESIGN TEAM Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER NHSN-092-8(36)--2R-54 | SHEET NUMBER L.5 |
|----------|---------|--|----------------------|---|-------------------------|

Washington TWP.
T-76N R-13W
SEC. 33



142

143

144

145

146

147

IA 92

809.13

809.35

809.13

1.8%
12.0'

Constant 2% Slope

Constant 2% Slope

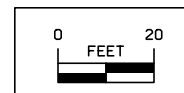
809.84

810.12

809.88

2.0%
12.0'

Warren TWP.
T-75N R-13W
SEC. 4



Staking Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 33



148

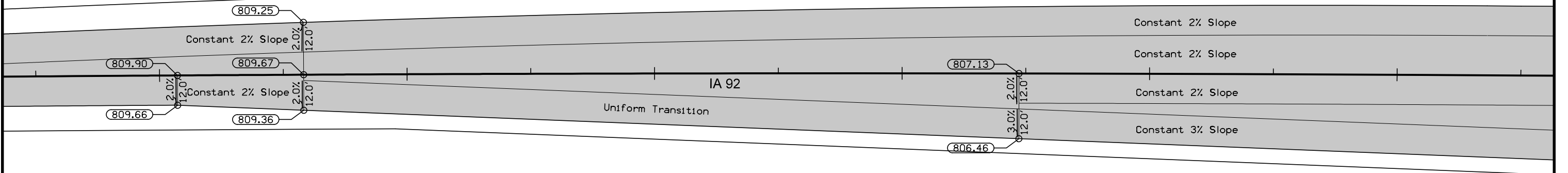
149

150

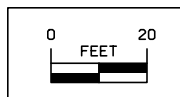
151

152

153



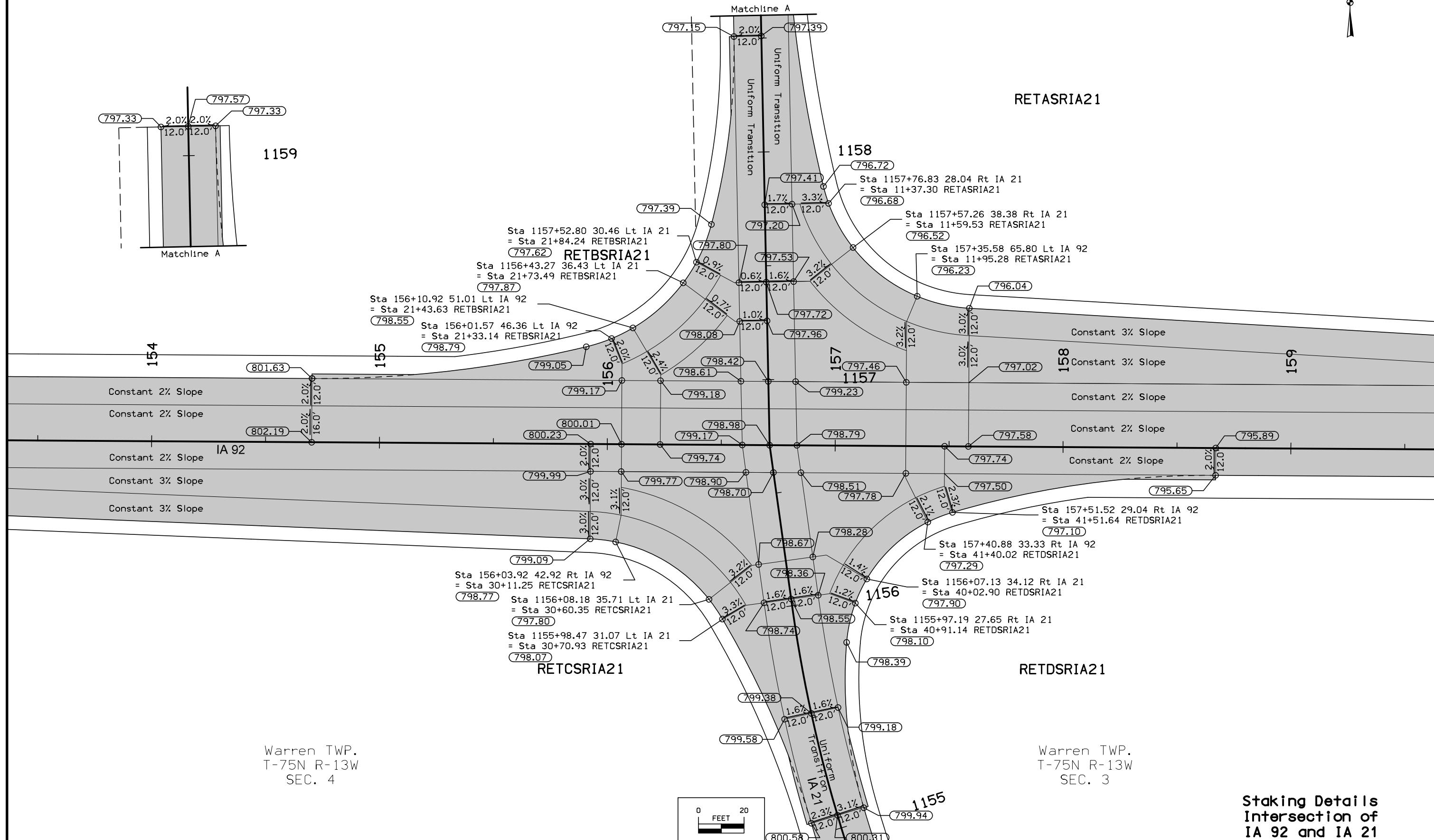
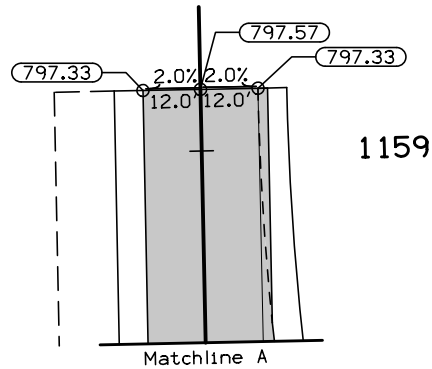
Warren TWP.
T-75N R-13W
SEC. 4



Staking Details
Intersection of
IA 92 and IA 21

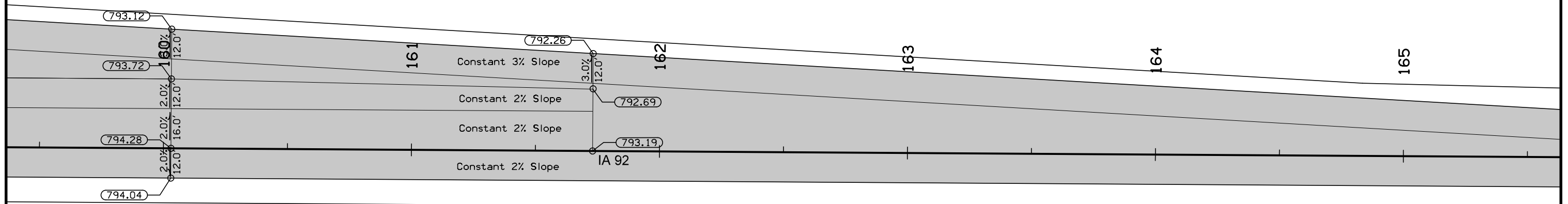
Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34

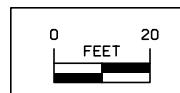


Staking Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 3



Staking Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 34



166

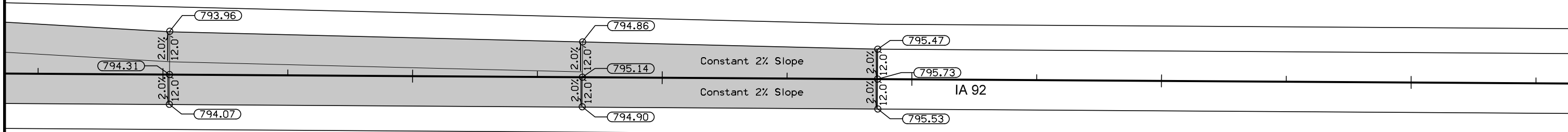
167

168

169

170

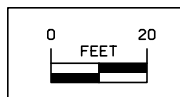
171



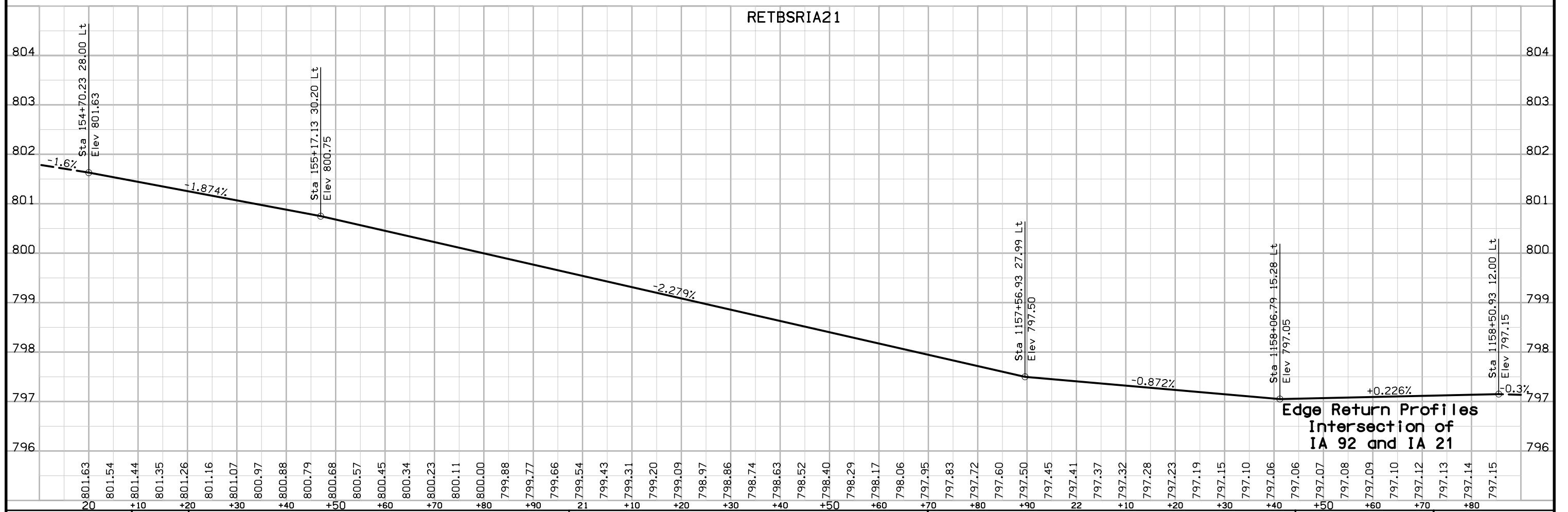
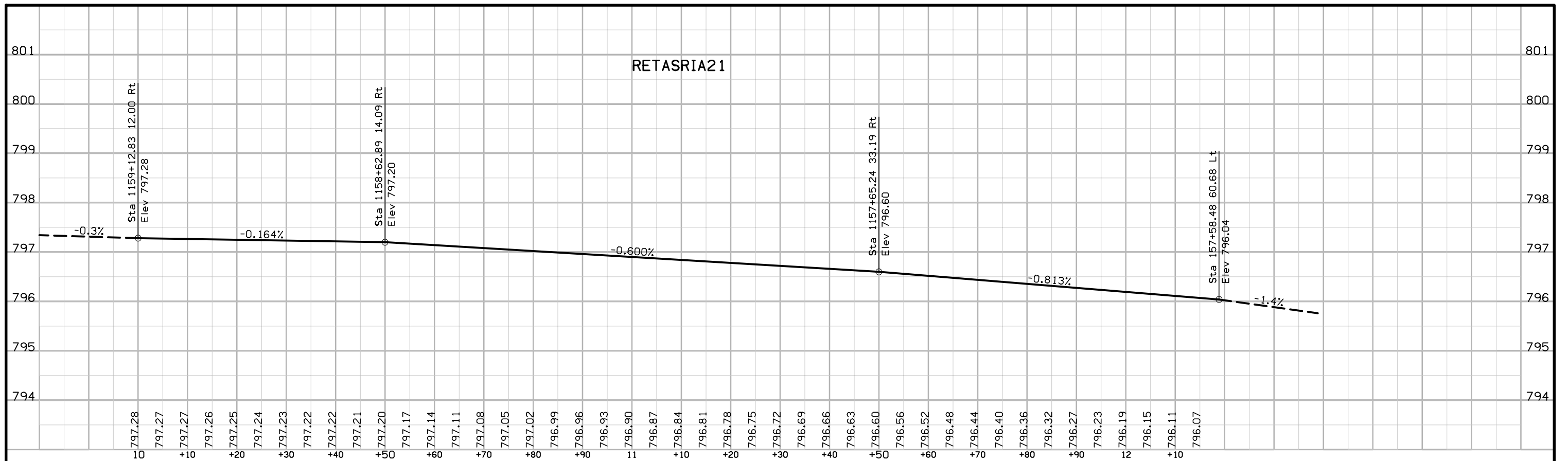
Constant 2% Slope
Constant 2% Slope

IA 92

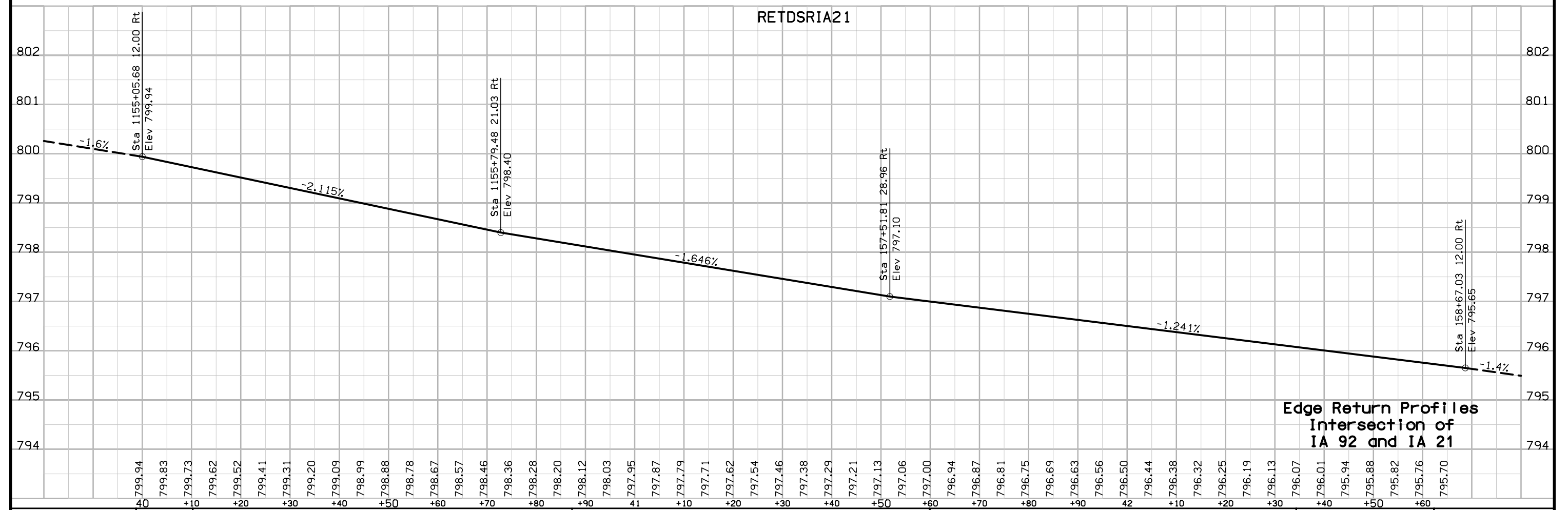
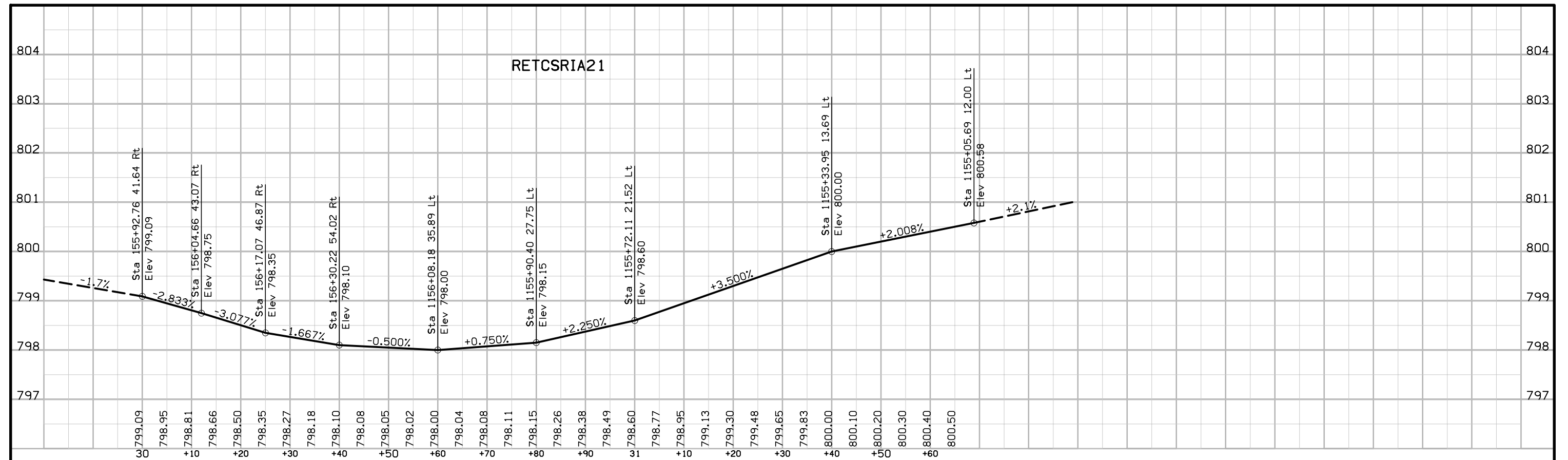
Warren TWP.
T-75N R-13W
SEC. 3



Staking Details
Intersection of
IA 92 and IA 21



**Edge Return Profiles
Intersection of
IA 92 and IA 21**



Edge Return Profiles
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 33



142

143

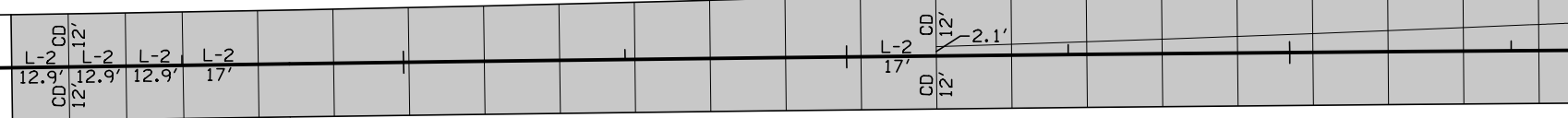
144

145

146

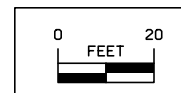
147

IA 92



Warren TWP.
T-75N R-13W
SEC. 4

NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



Jointing Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 33



148

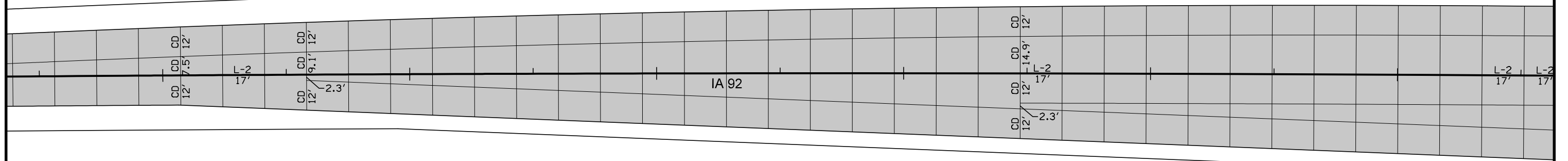
149

150

151

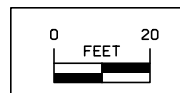
152

153



Warren TWP.
T-75N R-13W
SEC. 4

NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.

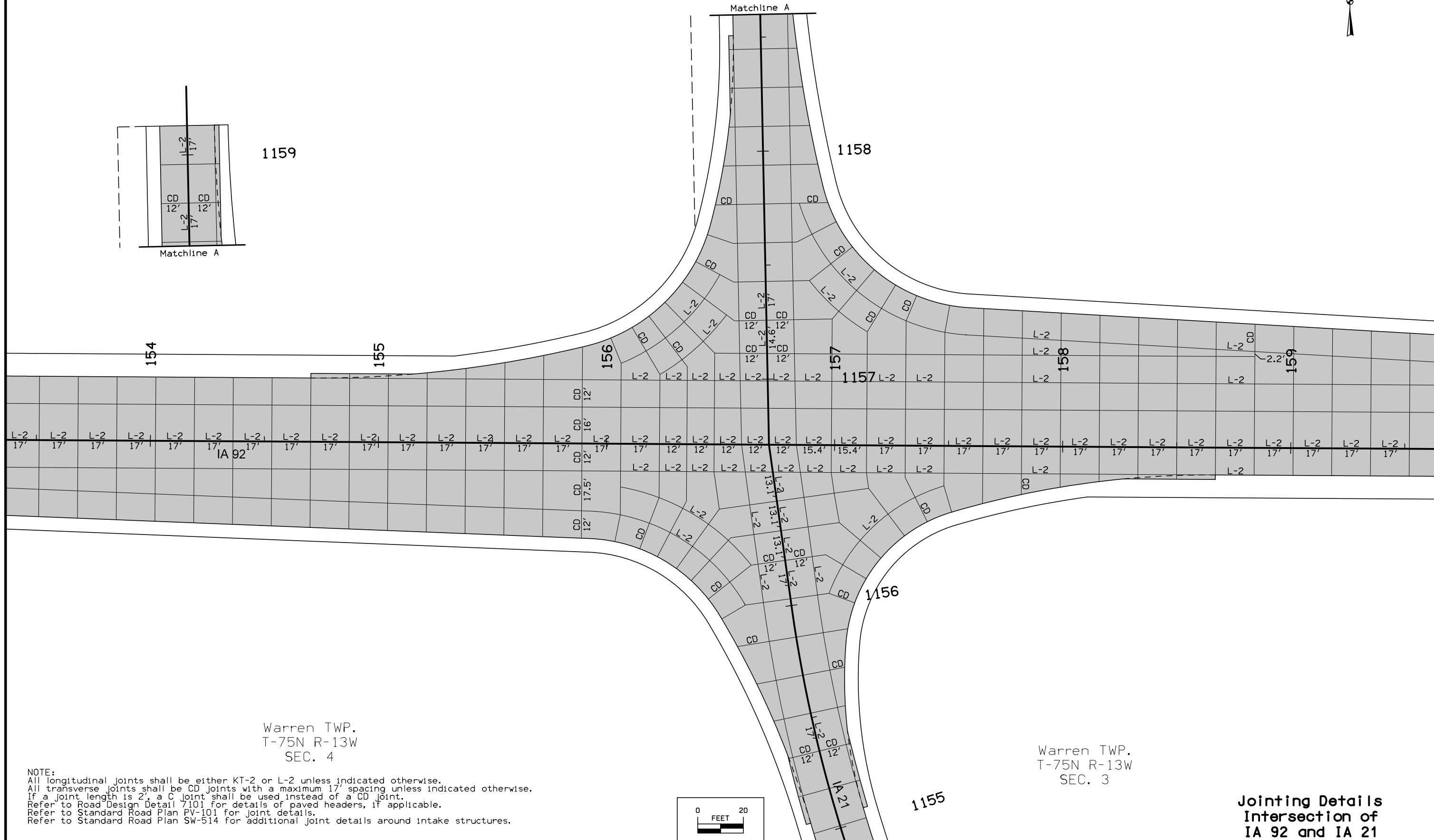
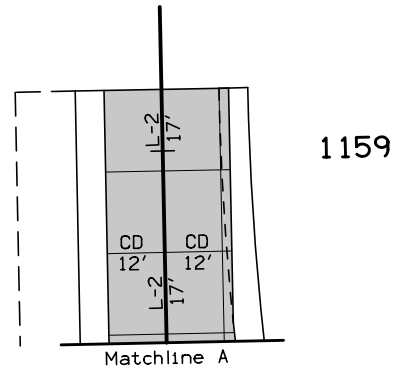


Jointing Details
Intersection of
IA 92 and IA 21

| | | | | | | | | |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|------|
| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | SHEET NUMBER | L.14 |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|------|

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3

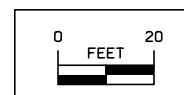
NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.

**Jointing Details
Intersection of
IA 92 and IA 21**

Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 3



NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.

Jointing Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 34



166

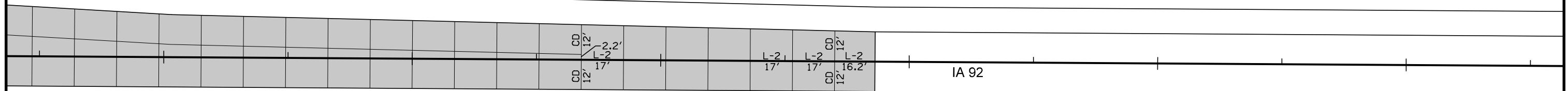
167

168

169

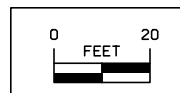
170

171



Warren TWP.
T-75N R-13W
SEC. 3

NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



Jointing Details
Intersection of
IA 92 and IA 21

Washington TWP.
T-76N R-13W
SEC. 35



221

222

223

224

225

226

Sta 223+61.49 12.00 Lt IA 92

IA 92

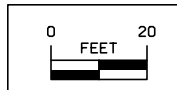
12.00'

12.00'

Varies

Warren TWP.
T-75N R-13W
SEC. 2

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.



Geometric Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



227

Sta 227+99.59 20.00 Lt IA 92

228

229

230

231

Sta 232+37.70 28.00 Lt IA 92

232

12.00'

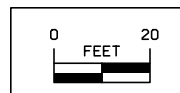
Varies

12.00'

IA 92

Warren TWP.
T-75N R-13W
SEC. 2

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.



Geometric Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35

Washington TWP.
T-76N R-13W
SEC. 35



233

234

235

236

237

238

145th Ave

IA 92

Co Rd V33

Sta 234+78.80 12.00 Rt IA 92
= Sta 30+00.00 RETCSR33

Sta 237+73.53 12.00 Rt IA 92
= Sta 42+71.78 RETDSRV33

Radius Point
Curve RETCSR33.1
234+78.80 82.00 Rt

RETCSR33

Sta 1235+09.64 26.62 Lt Co Rd V33
= Sta 30+90.83 RETCSR33

Sta 236+50.68 27.33 Rt IA 92
= Sta 41+47.66 RETDSRV33

Radius Point
Curve RETDSRV33.2
1234+72.50 96.23 Rt

RETDSRV33

Sta 1235+00.79 26.77 Rt Co Rd V33
= Sta 40+77.34 RETDSRV33

Radius Point
Curve RETDSRV33.1
1234+25.36 212.00 Rt

Radius Point
Curve RETCSR33.2
1234+02.48 412.00 Lt

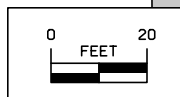
Warren TWP.
T-75N R-13W
SEC. 2

Sta 1234+25.37 12.00 Rt Co Rd V33
= Sta 40+00.00 RETDSRV33

Warren TWP.
T-75N R-13W
SEC. 2

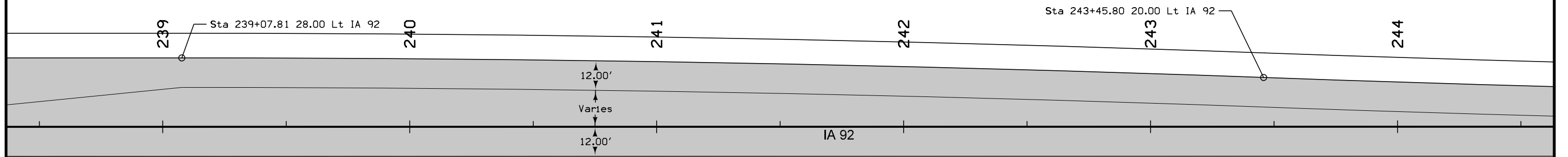
Radius Point
Curve RETDSRV33.3
237+73.53 512.00 Rt

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.



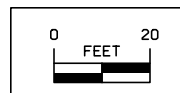
Geometric Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.



Geometric Details
Intersection of
IA 92 and Co Rd V33

| | | | | | |
|----------|---------|--|---------------|---|--------------------------|
| FILE NO. | ENGLISH | DESIGN TEAM Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER NHSN-092-8(36)--2R-54 | SHEET NUMBER L.21 |
|----------|---------|--|---------------|---|--------------------------|

Washington TWP.
T-76N R-13W
SEC. 35



245

246

247

248

249

250

Sta 247+83.91 12.00 Lt IA 92

12.00'

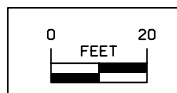
12.00'

Varies

IA 92

Warren TWP.
T-75N R-13W
SEC. 2

Note:
Dimensions shown are to the edge of pavement.
Refer to G sheets for horizontal alignment information.
Refer to appropriate Standard Road Plans for additional information.



Geometric Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



221

222

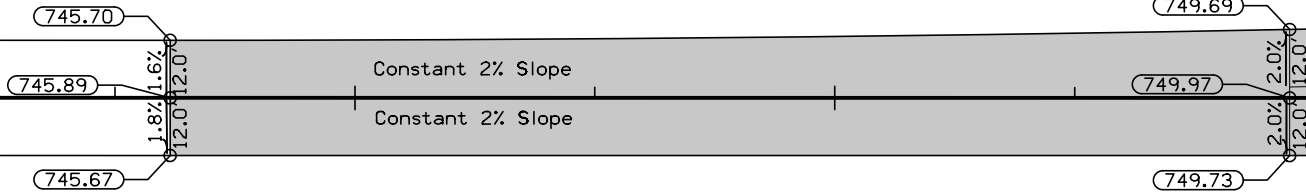
223

224

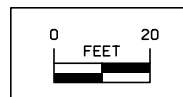
225

226

IA 92



Warren TWP.
T-75N R-13W
SEC. 2



Staking Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



227

228

229

230

231

232

Constant 2% Slope

Constant 2% Slope

Constant 2% Slope

IA 92

772.10

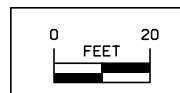
690.85

772.34

772.42

2.0%
12.0'
2.0%
16.0'
2.0%
12.0'

Warren TWP.
T-75N R-13W
SEC. 2



Staking Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35

Washington TWP.
T-76N R-13W
SEC. 35



233

234

235

236

237

238

145th Ave

IA 92

Co Rd V33

RETCSR33

RETDSRV33

1235

Sta 1235+00 26.45 Rt V33
= Sta 40+99.37 RETDSRV33
(779.75)

1234

(779.13)
(779.37)

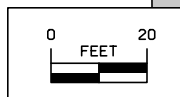
Sta 235+22.33 27.19 Rt IA 92
= Sta 30+46.99 RETCSR33
(779.36)

Sta 1235+17.00 29.11 Lt V33
= Sta 30+83.06 RETCSR33
(779.40)

Sta 236+41.88 30.14 Rt IA 92
= Sta 41+61.30 RETDSRV33
(780.88)

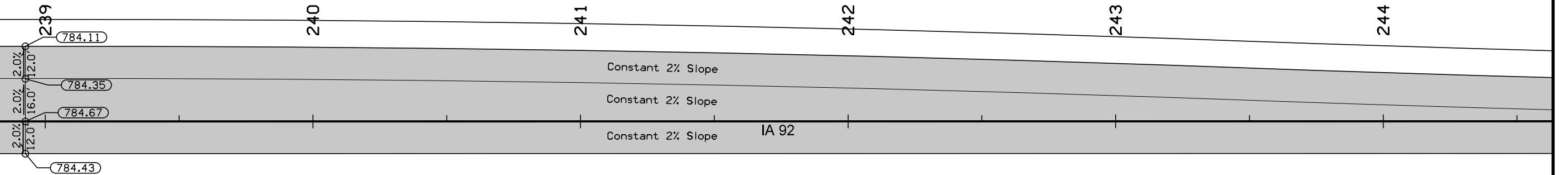
Warren TWP.
T-75N R-13W
SEC. 2

Warren TWP.
T-75N R-13W
SEC. 2

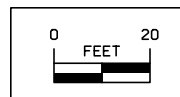


Staking Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2



Staking Details
Intersection of
IA 92 and Co Rd V33

| | | | | | | | | |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|------|
| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | SHEET NUMBER | L.26 |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|------|

Washington TWP.
T-76N R-13W
SEC. 35



245

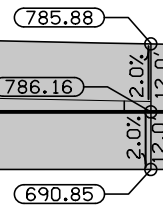
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247

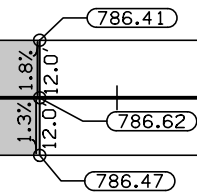
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249

250

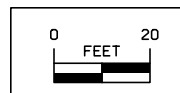


Constant 2% Slope
Constant 2% Slope

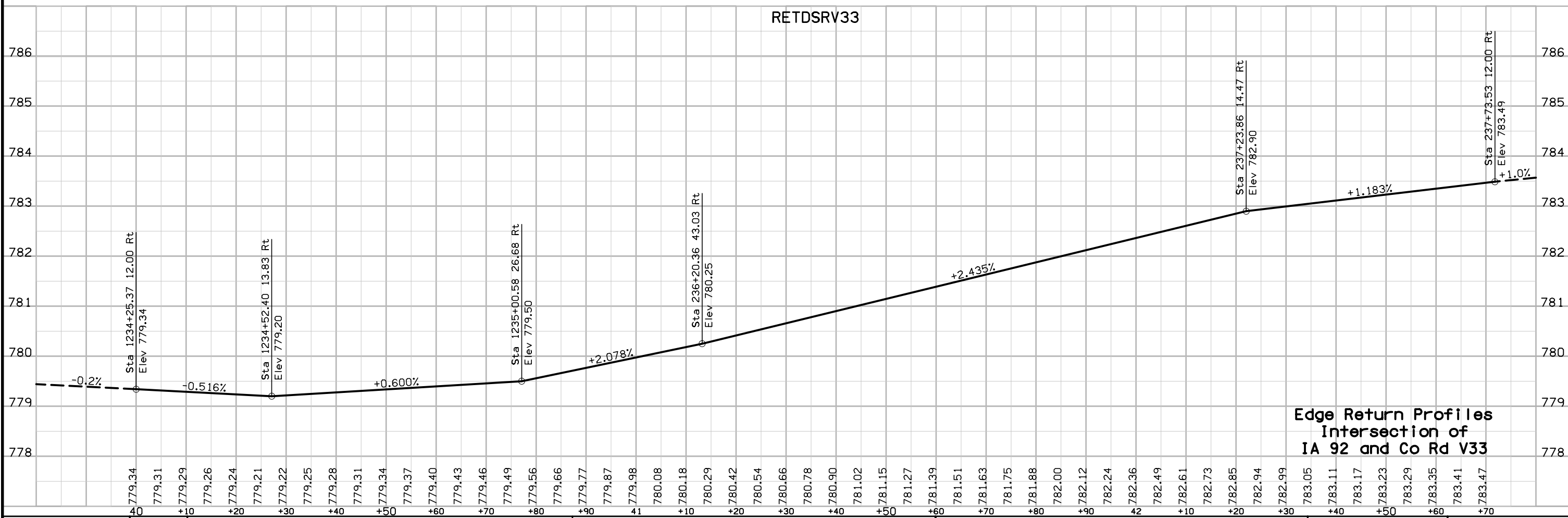
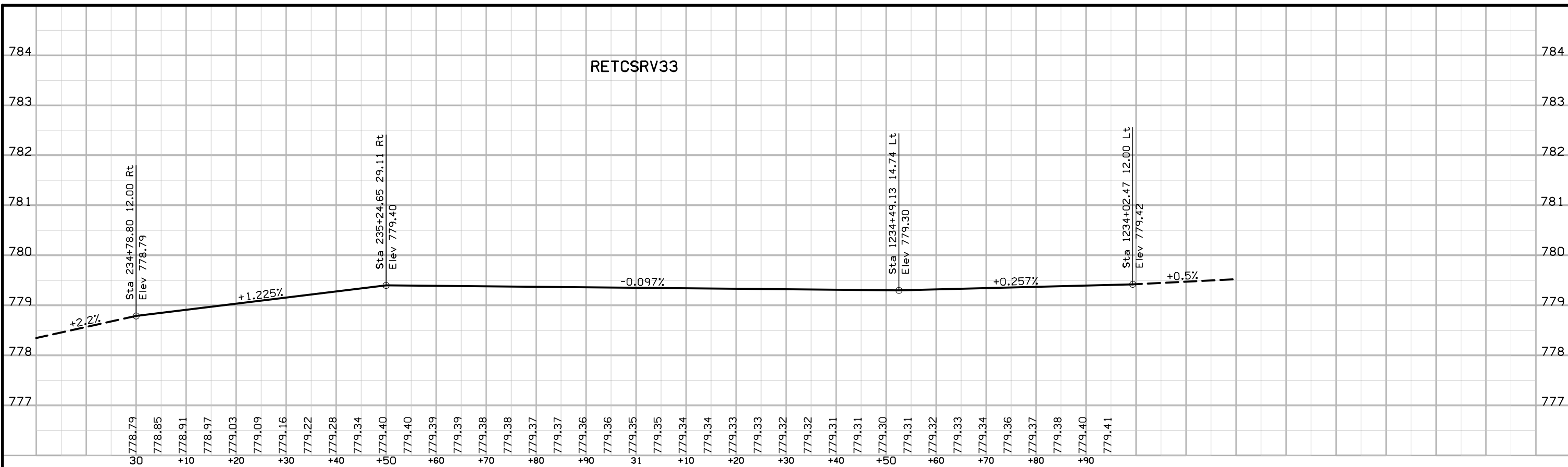


IA 92

Warren TWP.
T-75N R-13W
SEC. 2



Staking Details
Intersection of
IA 92 and Co Rd V33



**Edge Return Profiles
Intersection of
IA 92 and Co Rd V33**

Washington TWP.
T-76N R-13W
SEC. 35



221

222

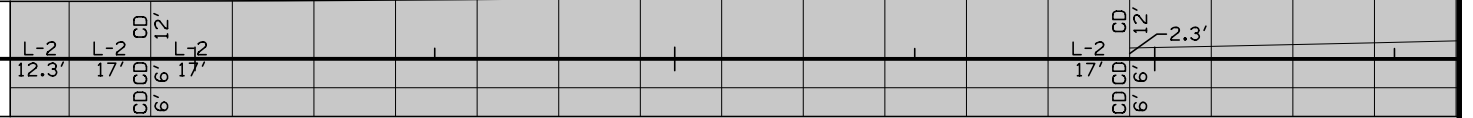
223

224

225

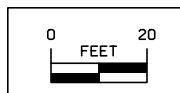
226

IA 92



Warren TWP.
T-75N R-13W
SEC. 2

NOTE:
 All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
 All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
 If a joint length is 2', a C joint shall be used instead of a CD joint.
 Refer to Road Design Detail 7101 for details of paved headers, if applicable.
 Refer to Standard Road Plan PV-101 for joint details.
 Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



**Jointing Details
 Intersection of
 IA 92 and Co Rd V33**

Washington TWP.
T-76N R-13W
SEC. 35



227

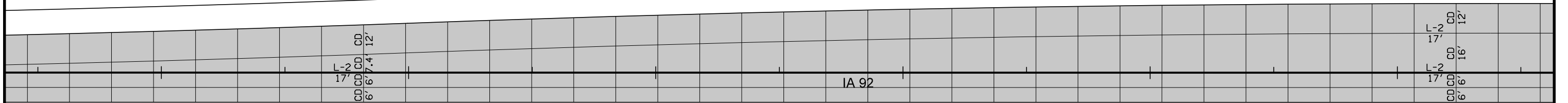
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229

230

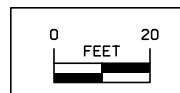
231

232



Warren TWP.
T-75N R-13W
SEC. 2

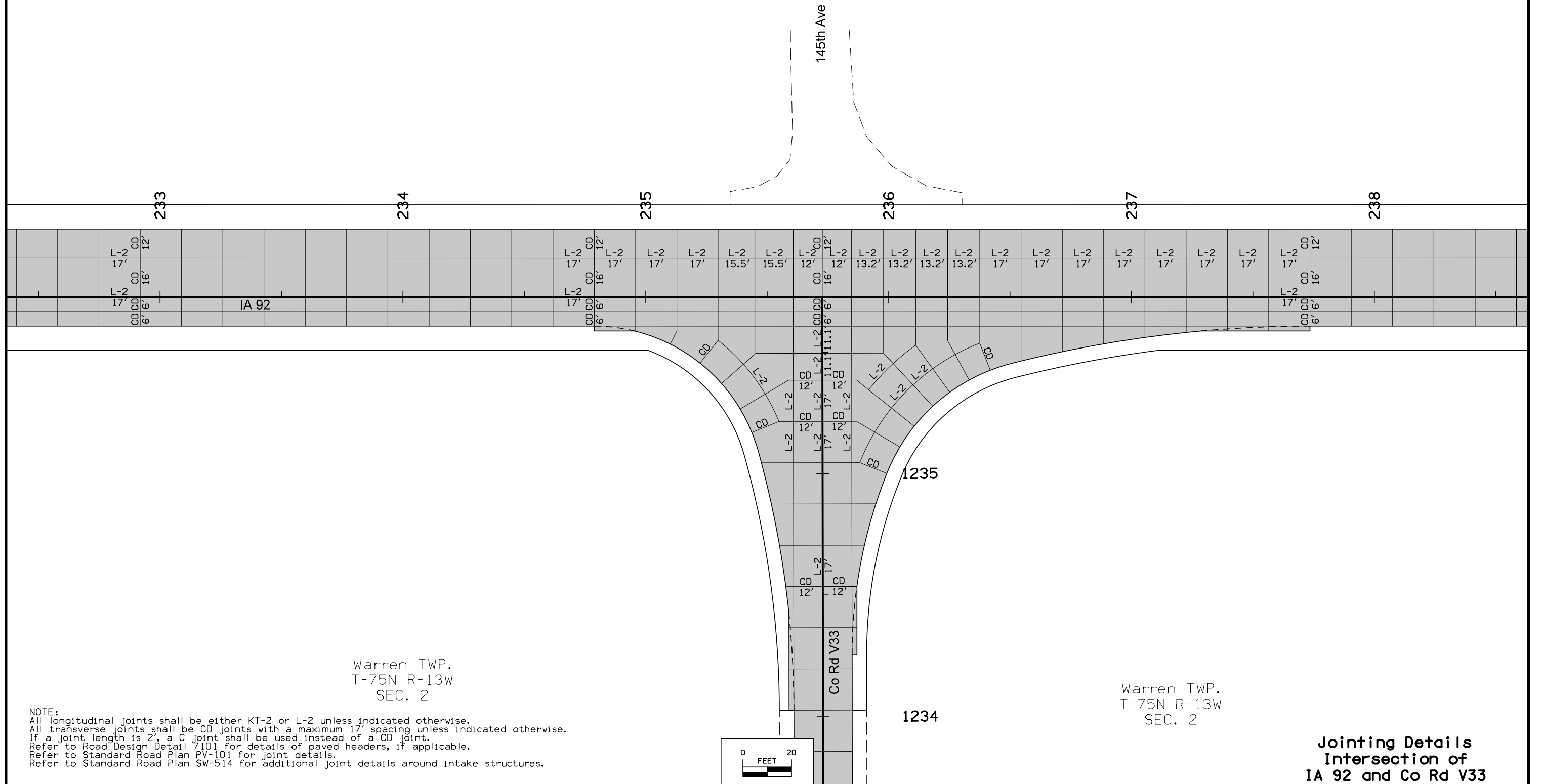
NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
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If a joint length is 2', a C joint shall be used instead of a CD joint.
Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



Jointing Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 35

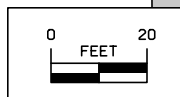
Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2

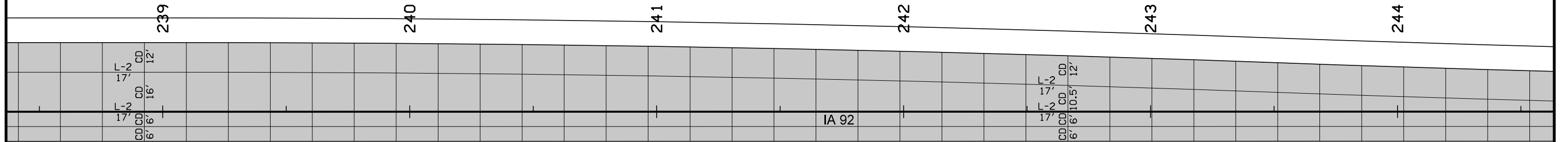
Warren TWP.
T-75N R-13W
SEC. 2

NOTE:
 All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
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 Refer to Road Design Detail 7101 for details of paved headers, if applicable.
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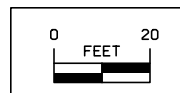
**Jointing Details
 Intersection of
 IA 92 and Co Rd V33**

Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2

NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
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Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



Jointing Details
Intersection of
IA 92 and Co Rd V33

| | | | | | | | | |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|------|
| FILE NO. | ENGLISH | DESIGN TEAM | Van Dyke\Stanley Consultants Inc. | KEOKUK COUNTY | PROJECT NUMBER | NHSN-092-8(36)--2R-54 | SHEET NUMBER | L.32 |
|----------|---------|-------------|-----------------------------------|---------------|----------------|-----------------------|--------------|------|

Washington TWP.
T-76N R-13W
SEC. 35



245

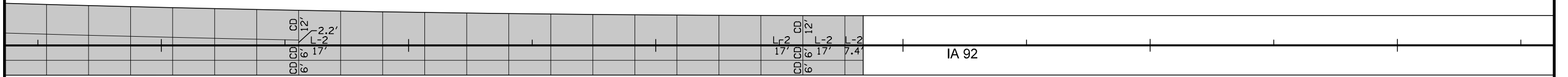
246

247

248

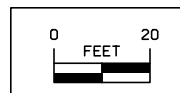
249

250



Warren TWP.
T-75N R-13W
SEC. 2

NOTE:
All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.
All transverse joints shall be CD joints with a maximum 17' spacing unless indicated otherwise.
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Refer to Road Design Detail 7101 for details of paved headers, if applicable.
Refer to Standard Road Plan PV-101 for joint details.
Refer to Standard Road Plan SW-514 for additional joint details around intake structures.



Jointing Details
Intersection of
IA 92 and Co Rd V33

Washington TWP.
T-76N R-13W
SEC. 33



142

143

144

145

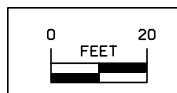
146

147

IA 92

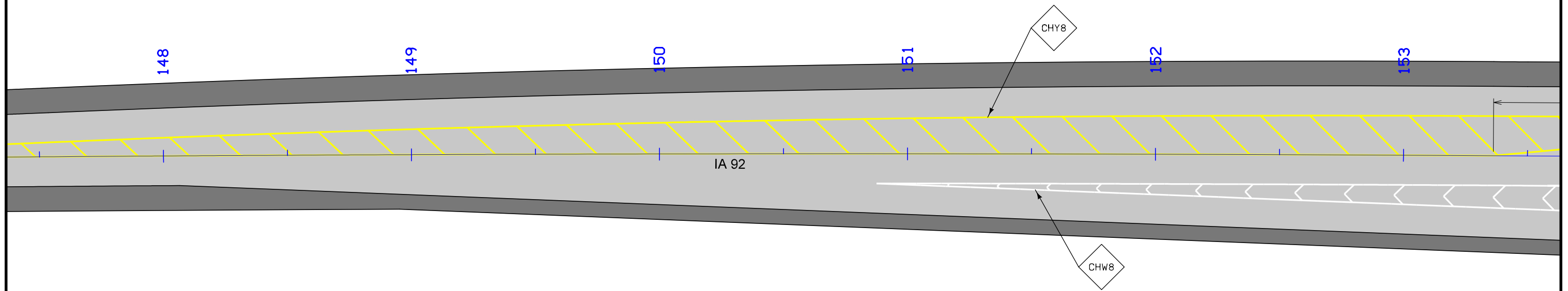
CHY8

Warren TWP.
T-75N R-13W
SEC. 4

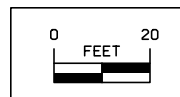


Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 33



Warren TWP.
T-75N R-13W
SEC. 4



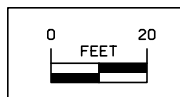
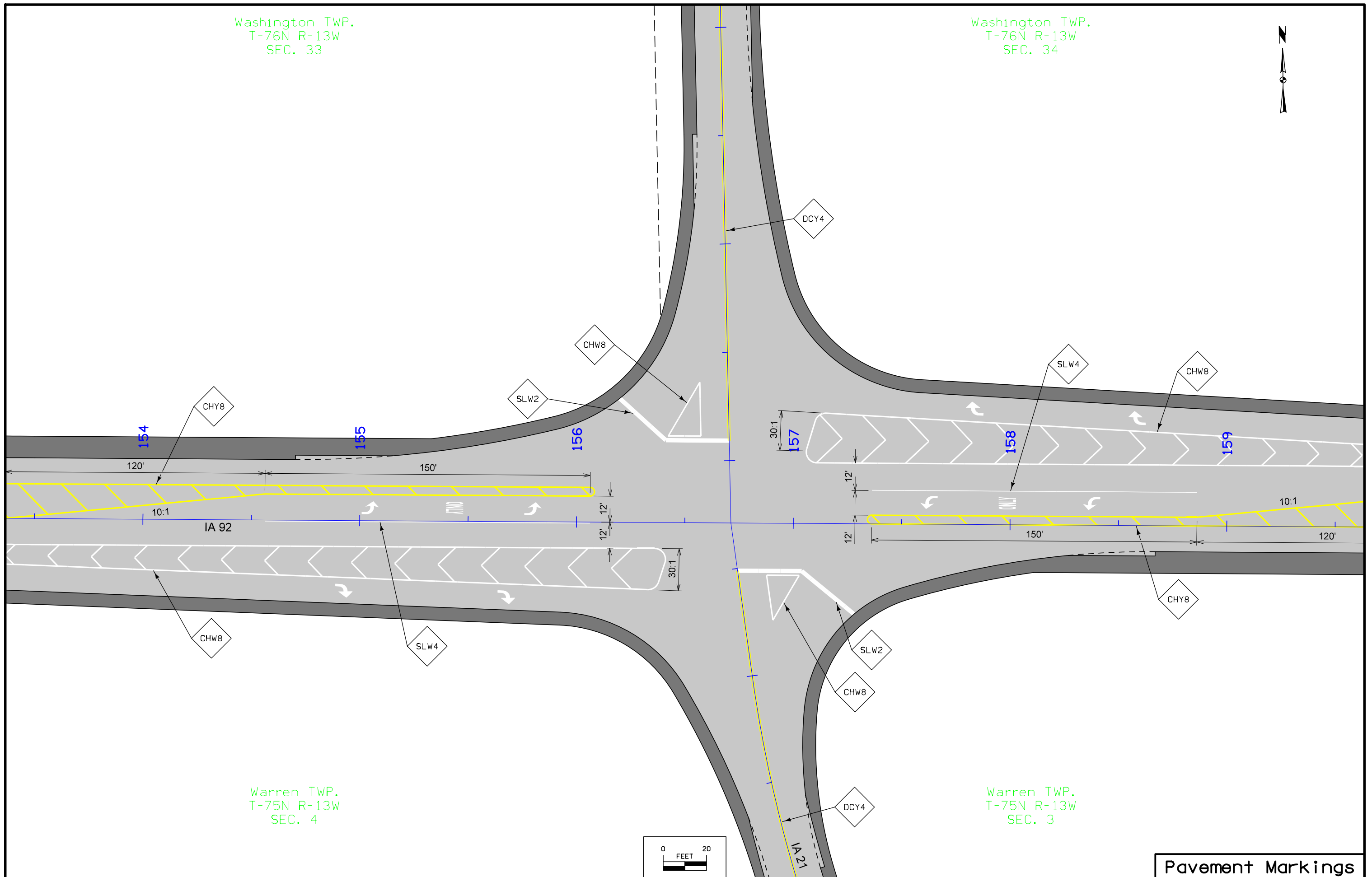
Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34

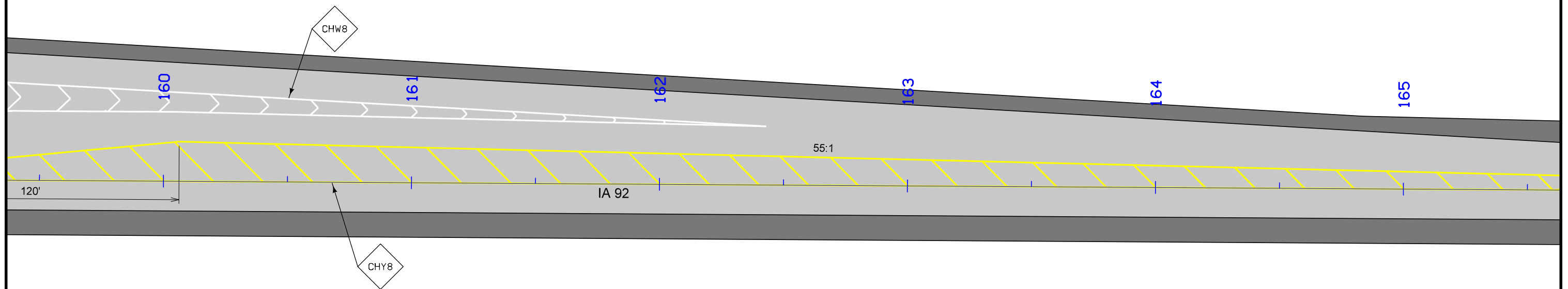
Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3

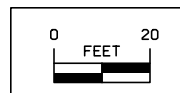


Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 34



Warren TWP.
T-75N R-13W
SEC. 3



Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 34



166

CHY8

167

168

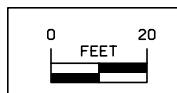
169

170

171

IA 92

Warren TWP.
T-75N R-13W
SEC. 3



Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 35



221

222

223

224

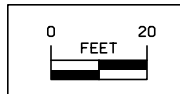
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226



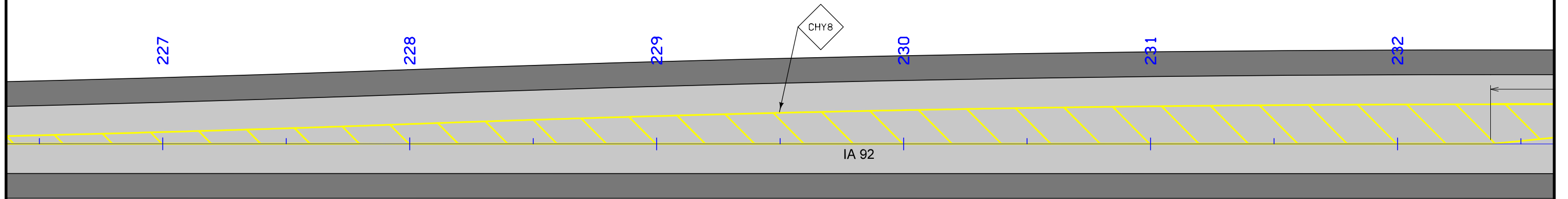
IA 92

Warren TWP.
T-75N R-13W
SEC. 2

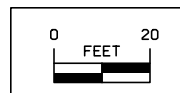


Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 35



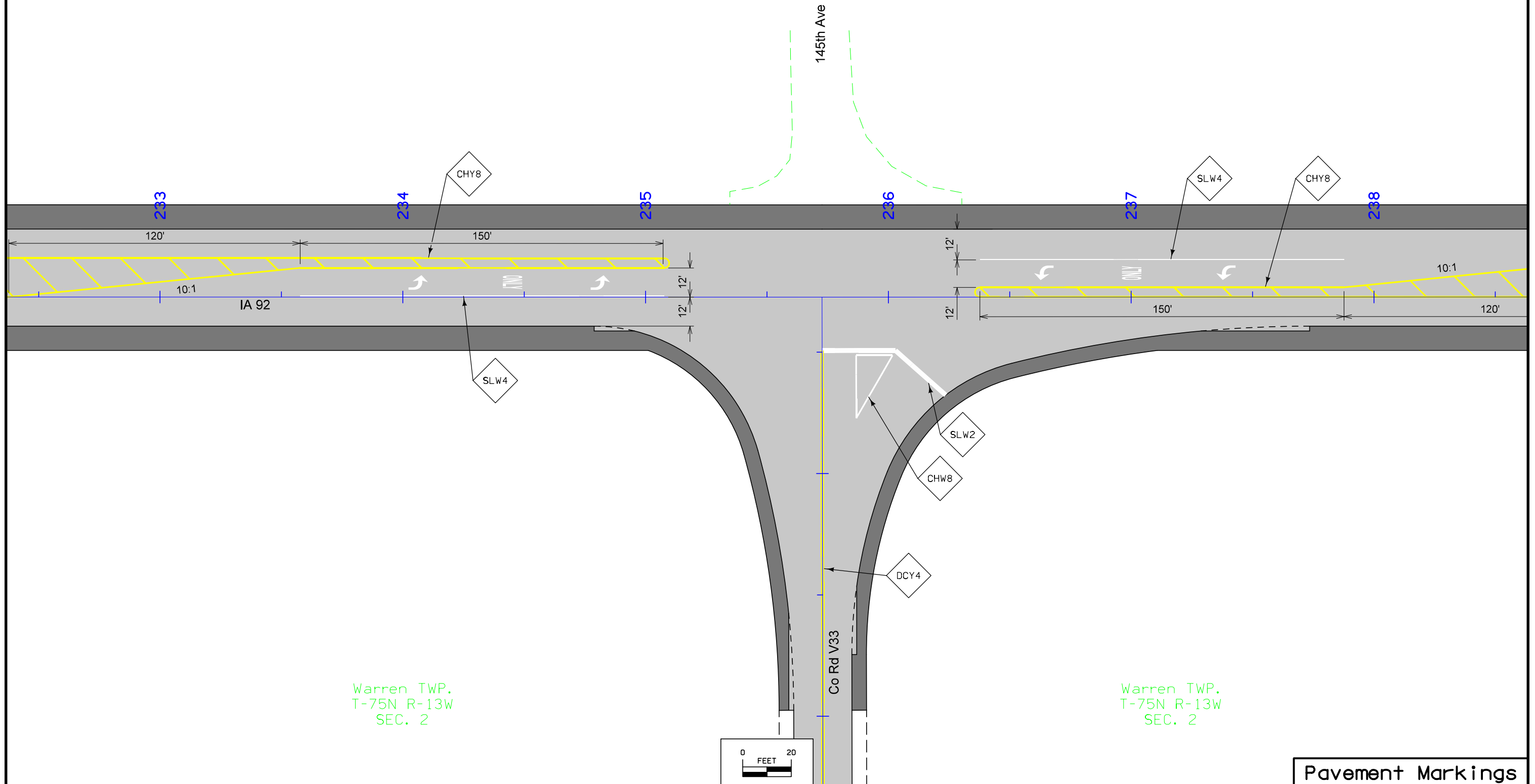
Warren TWP.
T-75N R-13W
SEC. 2



Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 35

Washington TWP.
T-76N R-13W
SEC. 35

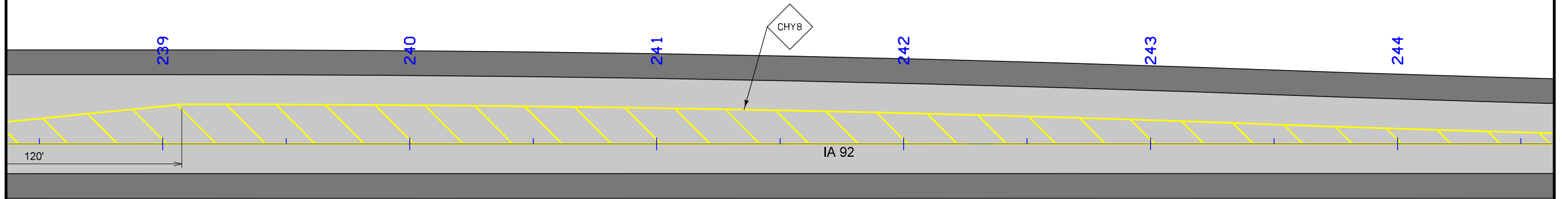


Warren TWP.
T-75N R-13W
SEC. 2

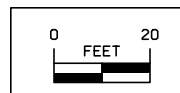
Warren TWP.
T-75N R-13W
SEC. 2

Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 35



Warren TWP.
T-75N R-13W
SEC. 2



Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 35



245



246

247

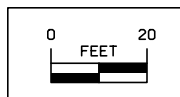
248

249

250

IA 92

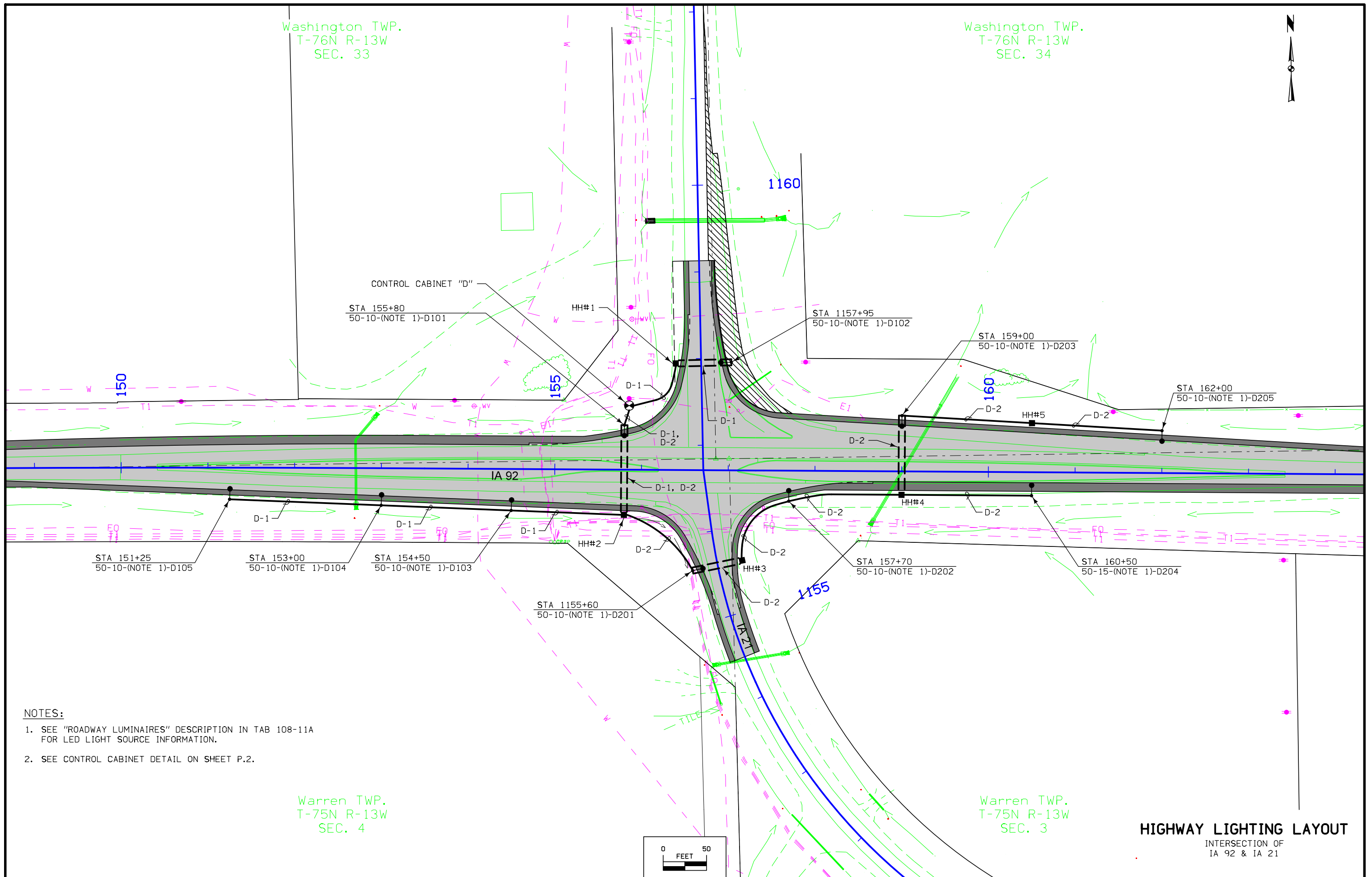
Warren TWP.
T-75N R-13W
SEC. 2



Pavement Markings

Washington TWP.
T-76N R-13W
SEC. 33

Washington TWP.
T-76N R-13W
SEC. 34

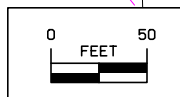


NOTES:

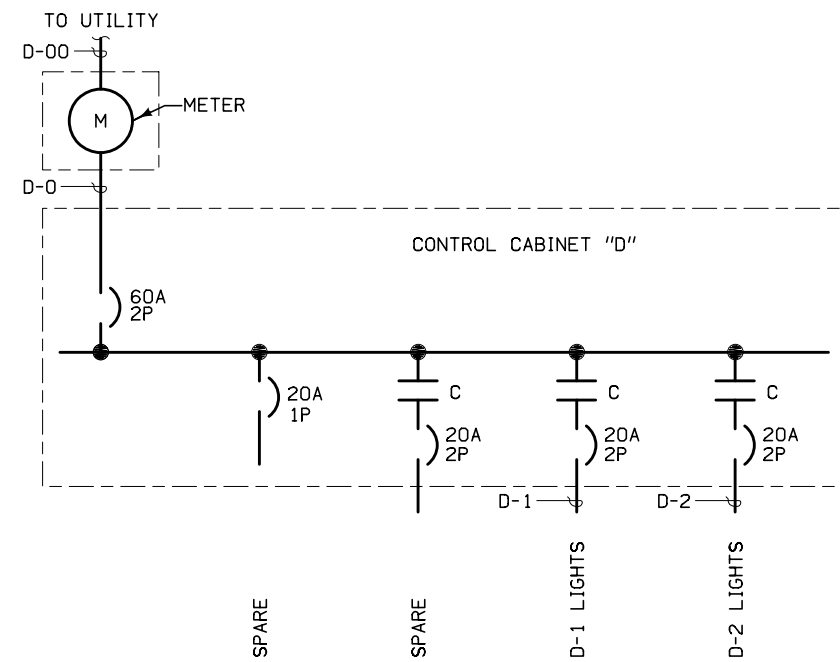
1. SEE "ROADWAY LUMINAIRES" DESCRIPTION IN TAB 108-11A FOR LED LIGHT SOURCE INFORMATION.
2. SEE CONTROL CABINET DETAIL ON SHEET P.2.

Warren TWP.
T-75N R-13W
SEC. 4

Warren TWP.
T-75N R-13W
SEC. 3

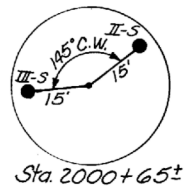


HIGHWAY LIGHTING LAYOUT
INTERSECTION OF
IA 92 & IA 21

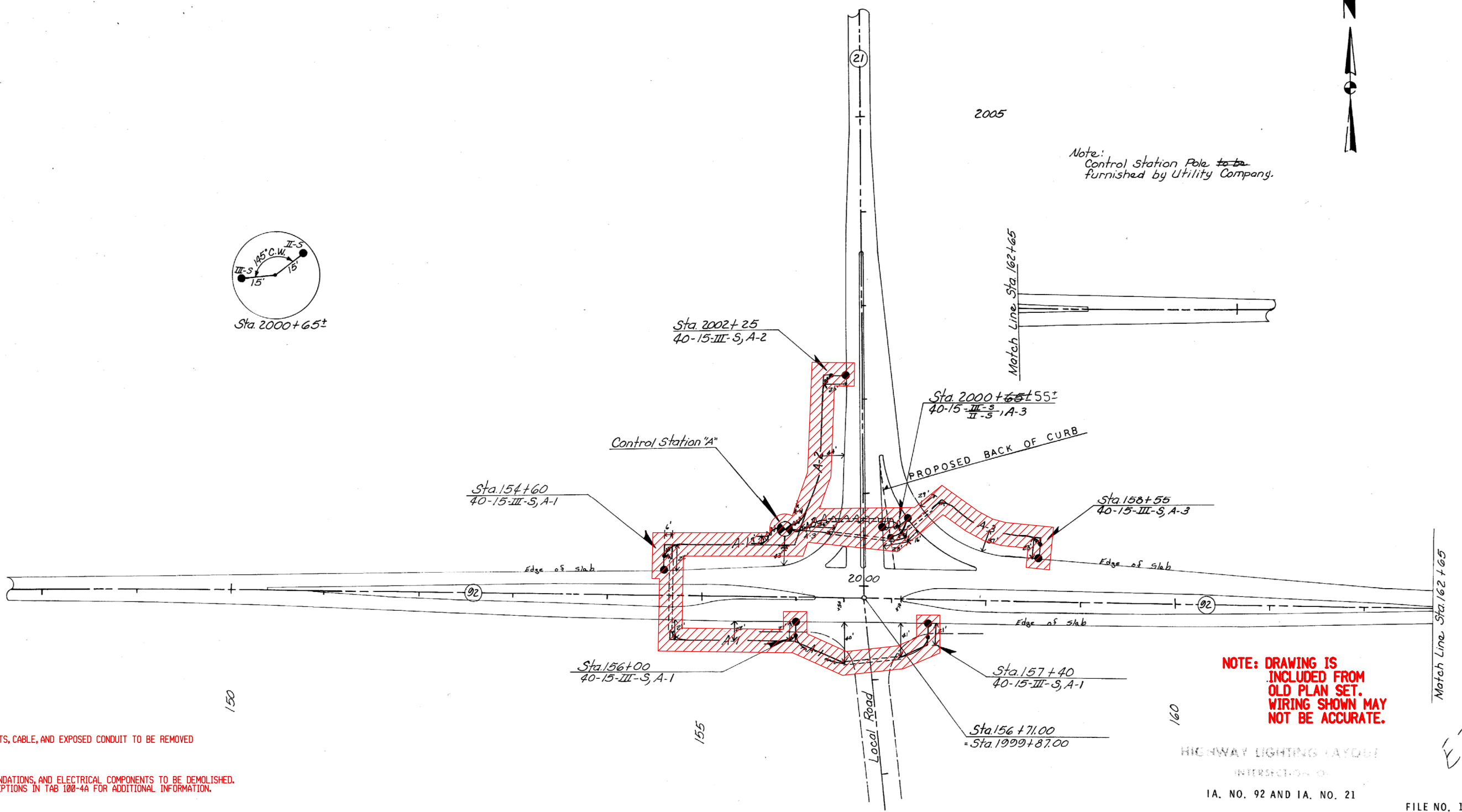


CABINET D ONE-LINE DIAGRAM

HIGHWAY LIGHTING DETAILS



Note:
Control Station Pole to be
furnished by Utility Company.



LEGEND:
 LIGHTS, CABLE, AND EXPOSED CONDUIT TO BE REMOVED

NOTES:
 1. POLES, FOUNDATIONS, AND ELECTRICAL COMPONENTS TO BE DEMOLISHED.
 SEE DESCRIPTIONS IN TAB 100-4A FOR ADDITIONAL INFORMATION.

**NOTE: DRAWING IS
 INCLUDED FROM
 OLD PLAN SET.
 WIRING SHOWN MAY
 NOT BE ACCURATE.**

HIGHWAY LIGHTING LAYOUT

INTERSECTION OF
 IA. NO. 92 AND IA. NO. 21

FILE NO. 169

Keokuk COUNTY

| | | | | | |
|-------------------|-------|---------------------|-------------|-----------|--------------|
| PROJECT NUMBER | STATE | FED. ROAD DIST. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| FN-92-8(7)--21-54 | IOWA | 5 | | 3 | 10 |

STORMWATER DRAINAGE BASIN AND STORAGE

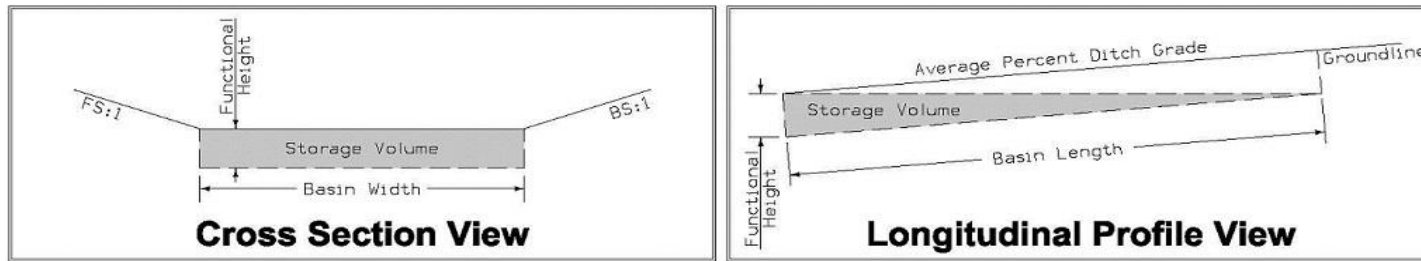
Refer to EC Standards and 570s Details.

| Basin No. | Drainage Basin Location | | | | | Summary of Stormwater Storage | | | Best Management Practice | Total Storage Volume Provided CF | Total Storage Volume Required CF | Storage Volume Met? Yes/No | Remarks |
|-----------|-------------------------|-----------|-------|-----------------|-------|-------------------------------|---|--|---|-------------------------------------|-------------------------------------|-------------------------------|---------|
| | Station to Station | | Side | Discharge Point | | Total Disturbed Area | Disturbed Area with Storage Provided Acres | Disturbed Area without Storage Provided Acres | | | | | |
| | Station | Station | | Side | Side | Acres | | | | | | | |
| 1 | 134+25.00 | 146+05.00 | Left | 134+25.00 | Left | 0.6 | | 0.6 | Vegetated Buffer | | 0.0 | | |
| 2 | 134+25.00 | 146+50.00 | Right | 134+25.00 | Right | 0.6 | | 0.6 | Vegetated Buffer | | 0.0 | | |
| 3 | 146+05.00 | 154+84.00 | Both | 153+18.00 | Left | 1.5 | 1.5 | 0.0 | Silt Fence for Ditch Check (EC-201) / Silt Basin (EW-403) | 5463.1 | 5400.0 | Yes | |
| 4 | 152+80.00 | 157+48.00 | Right | 157+81.00 | Right | 0.8 | 0.8 | 0.0 | Silt Fence for Ditch Check (EC-201) / Silt Basin (EW-403) | 3012.7 | 2880.0 | Yes | |
| 5 | 154+84.00 | 157+66.00 | Left | 157+84.00 | Left | 0.7 | 0.7 | 0.0 | Silt Fence for Ditch Check (EC-201) / Silt Basin (EW-403) | 2811.7 | 2520.0 | Yes | |
| 6 | 156+71.00 | 163+17.00 | Both | 159+67.00 | Left | 1.2 | 1.2 | 0.0 | Silt Fence for Ditch Check (EC-201) / Silt Basin (EW-403) | 5013.0 | 4320.0 | Yes | |
| 7 | 160+35.00 | 163+64.00 | Left | 161+13.00 | Left | 0.4 | 0.4 | 0.0 | Silt Fence for Ditch Check (EC-201) | 1671.6 | 1440.0 | Yes | |
| 8 | 163+15.00 | 173+40.00 | Both | 165+13.00 | Left | 1.5 | 1.5 | 0.0 | Silt Fence for Ditch Check (EC-201) / Silt Basin (EW-403) | 5703.0 | 5400.0 | Yes | |
| 9 | 171+52.00 | 173+62.00 | Left | 173+41.00 | Right | 0.1 | | 0.1 | Vegetated Buffer | | 0.0 | | |
| 10 | 173+40.00 | 178+61.00 | Right | 176+85.00 | Left | 0.3 | | 0.3 | Vegetated Buffer | | 0.0 | | |
| 11 | 210+70.00 | 235+72.00 | Both | 221+57.00 | Left | 4.4 | 4.4 | 0.0 | Silt Fence for Ditch Check (EC-201) / Silt Basin (EW-403) | 16027.0 | 15840.0 | Yes | |
| 12 | 234+98.00 | 246+66.00 | Right | 235+12.00 | Right | 1.7 | 1.7 | 0.0 | Silt Fence for Ditch Check (EC-201) / Silt Basin (EW-403) | 6295.0 | 6120.0 | Yes | |
| 13 | 235+72.00 | 244+18.00 | Left | 235+95.00 | Left | 0.8 | 0.8 | 0.0 | Silt Fence for Ditch Check (EC-201) / Silt Basin (EW-403) | 3404.7 | 2880.0 | Yes | |
| 14 | 244+18.00 | 246+66.00 | Left | 245+19.00 | Left | 0.2 | | 0.2 | Vegetated Buffer | | 0.0 | | |
| 15 | 246+66.00 | 254+00.00 | Left | 251+29.00 | Left | 0.2 | | 0.2 | Vegetated Buffer | | 0.0 | | |
| 16 | 246+66.00 | 254+00.00 | Right | 251+29.00 | Right | 0.8 | 0.8 | 0.0 | Silt Fence for Ditch Check (EC-201) / Silt Basin (EW-403) | 3402.8 | 2880.0 | Yes | |

100-14
10-17-17

SILT BASINS

Possible Standard: EW-403



* The functional height used in the volume equation is 95% of effective height. Effective height is 3 feet as shown in EW-403.

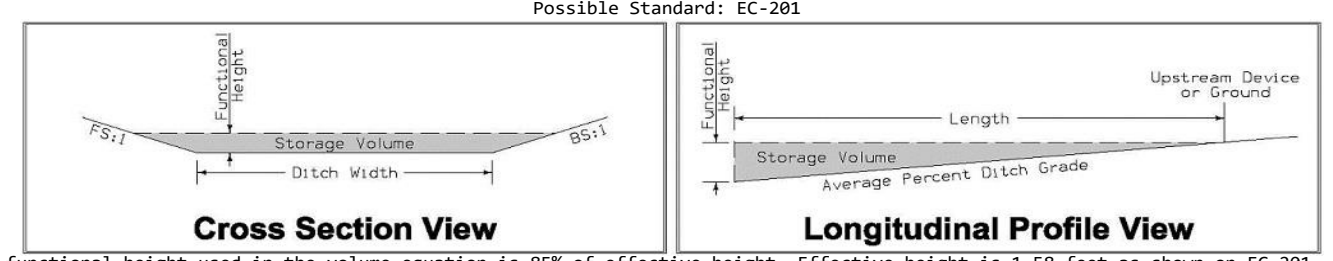
* Volume equation: (0.5*Length*(Width*Height+Width*(Height-Length*Avg%Slope)))

| Basin No. | Location | | Bid Items | | Stormwater Storage Volume Summary | | | | | | Remarks |
|-----------|-----------|-------|-------------------|--------------|-----------------------------------|-----------------|-----------|--------------|------------|--|---------|
| | Station | Side | Installation EACH | Removal EACH | Basin Width FT | Basin Length FT | Height FT | Avg. % Slope | Volume* CF | | |
| 3 | 152+41.00 | Right | 1 | 1 | 5.0 | 50.0 | 2.85 | 1.7% | 606.3 | | |
| 3 | 152+70.00 | Left | 1 | 1 | 5.0 | 50.0 | 2.85 | 8.0% | 356.3 | | |
| 3 | 153+45.00 | Left | 1 | 1 | 5.0 | 50.0 | 2.85 | 4.5% | 431.3 | | |
| 4 | 156+72.00 | Right | 1 | 1 | 5.0 | 50.0 | 2.85 | 2.0% | 587.5 | | |
| 5 | 155+98.00 | Left | 1 | 1 | 5.0 | 50.0 | 2.85 | 2.2% | 575.0 | | |
| 5 | 157+70.00 | Left | 1 | 1 | 5.0 | 50.0 | 2.85 | 8.7% | 356.3 | | |
| 6 | 158+22.00 | Right | 1 | 1 | 5.0 | 50.0 | 2.85 | 7.0% | 356.3 | | |
| 6 | 158+99.00 | Right | 1 | 1 | 5.0 | 50.0 | 2.85 | 0.2% | 700.0 | | |
| 6 | 159+31.00 | Left | 1 | 1 | 5.0 | 50.0 | 2.85 | 10.0% | 356.3 | | |
| 8 | 164+82.00 | Left | 1 | 1 | 5.0 | 50.0 | 2.85 | 10.0% | 356.3 | | |
| 8 | 165+20.00 | Right | 1 | 1 | 5.0 | 50.0 | 2.85 | 3.0% | 525.0 | | |
| 8 | 165+54.00 | Left | 1 | 1 | 5.0 | 50.0 | 2.85 | 7.0% | 356.3 | | |
| 11 | 221+19.00 | Left | 1 | 1 | 5.0 | 100.0 | 3.80 | 16.0% | 950.0 | | |
| 11 | 222+36.00 | Right | 1 | 1 | 5.0 | 100.0 | 3.80 | 7.0% | 950.0 | | |
| 11 | 222+71.00 | Left | 1 | 1 | 5.0 | 100.0 | 3.80 | 7.0% | 950.0 | | |
| 11 | 223+96.00 | Right | 1 | 1 | 5.0 | 100.0 | 3.80 | 4.0% | 950.0 | | |
| 11 | 225+24.00 | Left | 1 | 1 | 5.0 | 100.0 | 3.80 | 6.0% | 950.0 | | |
| 11 | 227+13.00 | Left | 1 | 1 | 5.0 | 100.0 | 3.80 | 3.0% | 1150.0 | | |
| 11 | 227+43.00 | Right | 1 | 1 | 5.0 | 100.0 | 3.80 | 3.0% | 1150.0 | | |
| 11 | 230+02.00 | Right | 1 | 1 | 5.0 | 100.0 | 3.80 | 6.0% | 950.0 | | |
| 12 | 235+16.00 | Right | 1 | 1 | 5.0 | 50.0 | 2.85 | 8.0% | 356.3 | | |
| 12 | 236+11.00 | Right | 1 | 1 | 5.0 | 50.0 | 2.85 | 1.0% | 650.0 | | |
| 12 | 236+12.00 | Right | 1 | 1 | 5.0 | 50.0 | 2.85 | 2.0% | 587.5 | | |
| 13 | 236+05.00 | Left | 1 | 1 | 5.0 | 50.0 | 2.85 | 1.5% | 618.8 | | |
| 16 | 250+94.00 | Right | 1 | 1 | 5.0 | 100.0 | 3.80 | 5.0% | 950.0 | | |
| 16 | 251+64.00 | Right | 1 | 1 | 5.0 | 100.0 | 3.80 | 3.0% | 1150.0 | | |

100-18
10-16-18

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



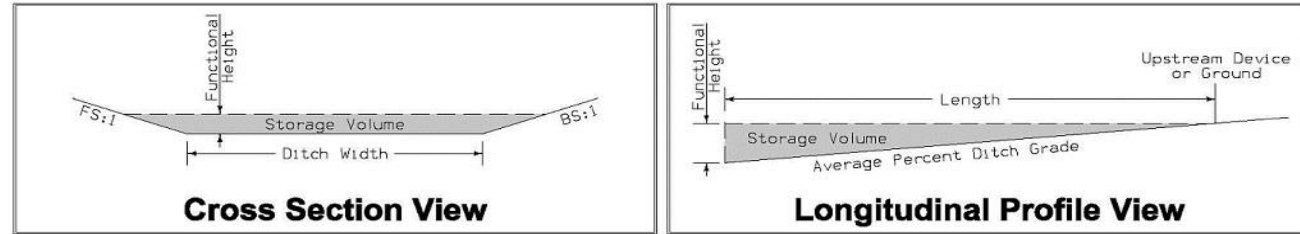
* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.

* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

| Basin No. | Type | Location | | Bid Items | | | Stormwater Storage Volume Summary | | | | | | Remarks |
|-----------|------|----------|------|-----------------|----------------|------------|-----------------------------------|----------------|----------------|--------------------------|------------|--|---------|
| | | Station | Side | Installation LF | Maintenance LF | Removal LF | Foreslope FS:1 | Backslope BS:1 | Ditch Width FT | Avg. % Slope Ditch Grade | Volume* CF | | |
| 3 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 4.0% | 278.6 | | |
| 3 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.5% | 417.9 | | |
| 3 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | | |
| 3 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 1.0% | 1079.5 | | |
| 3 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 0.2% | 1079.5 | | |
| 3 | | | | 25.0 | 2.5 | 25.0 | 3.0 | 10.0 | 5.0 | 1.8% | 691.5 | | |
| 4 | | | | 25.0 | 2.5 | 25.0 | 3.0 | 3.0 | 5.0 | 1.7% | 454.7 | | |
| 4 | | | | 25.0 | 2.5 | 25.0 | 3.0 | 3.0 | 5.0 | 1.2% | 454.7 | | |
| 4 | | | | 25.0 | 2.5 | 25.0 | 3.0 | 3.0 | 5.0 | 0.5% | 1515.7 | | |
| 5 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 5.5% | 208.9 | | |
| 5 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 5.5% | 208.9 | | |
| 5 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 5.5% | 208.9 | | |
| 5 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 5.5% | 208.9 | | |
| 5 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 5.5% | 208.9 | | |
| 5 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 5.5% | 208.9 | | |
| 6 | | | | 25.0 | 2.5 | 25.0 | 10.0 | 10.0 | 5.0 | 5.5% | 371.3 | | |
| 6 | | | | 25.0 | 2.5 | 25.0 | 10.0 | 10.0 | 5.0 | 5.5% | 371.3 | | |
| 6 | | | | 25.0 | 2.5 | 25.0 | 3.0 | 10.0 | 5.0 | 1.0% | 1429.0 | | |
| 6 | | | | 25.0 | 2.5 | 25.0 | 3.0 | 10.0 | 5.0 | 1.0% | 1429.0 | | |
| 7 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 278.6 | | |
| 7 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 278.6 | | |
| 7 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 278.6 | | |
| 7 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 278.6 | | |
| 7 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 278.6 | | |
| 7 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 278.6 | | |
| 8 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 4.0% | 278.6 | | |
| 8 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 4.0% | 278.6 | | |
| 8 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 3.0 | 5.0 | 2.0% | 488.5 | | |
| 8 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 3.0 | 5.0 | 2.0% | 488.5 | | |
| 8 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 3.0 | 5.0 | 2.0% | 488.5 | | |
| 8 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 3.0 | 5.0 | 2.0% | 488.5 | | |

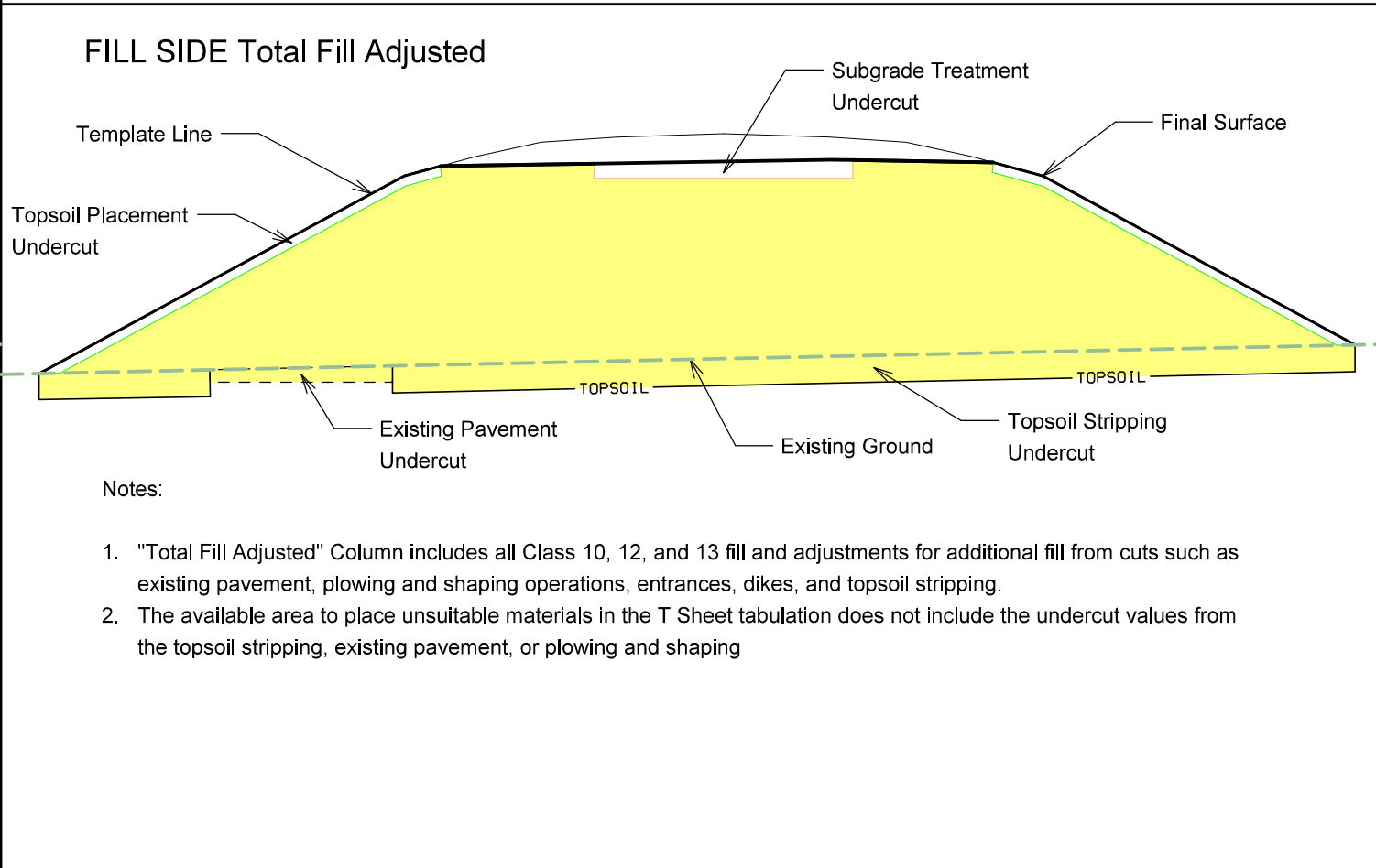
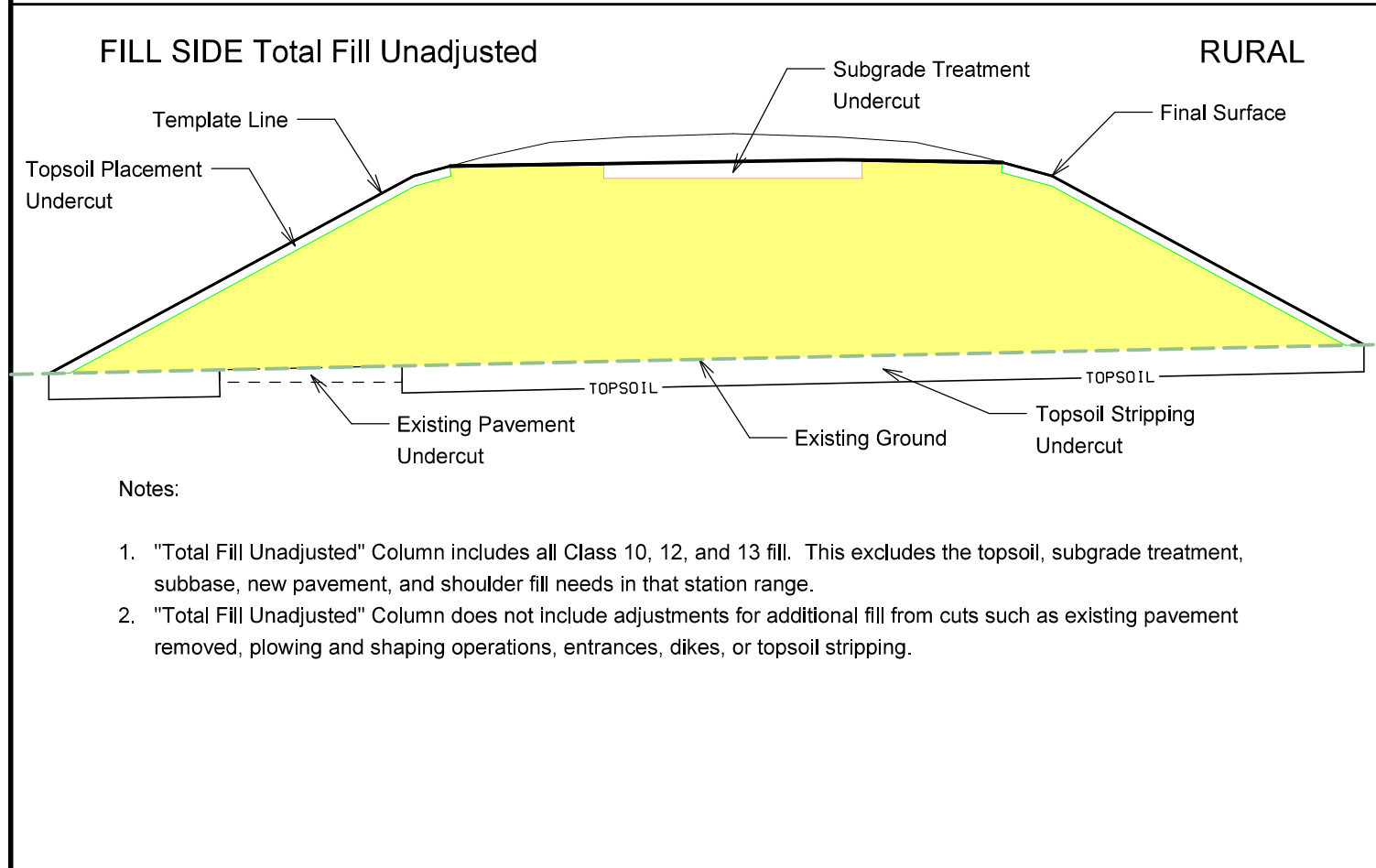
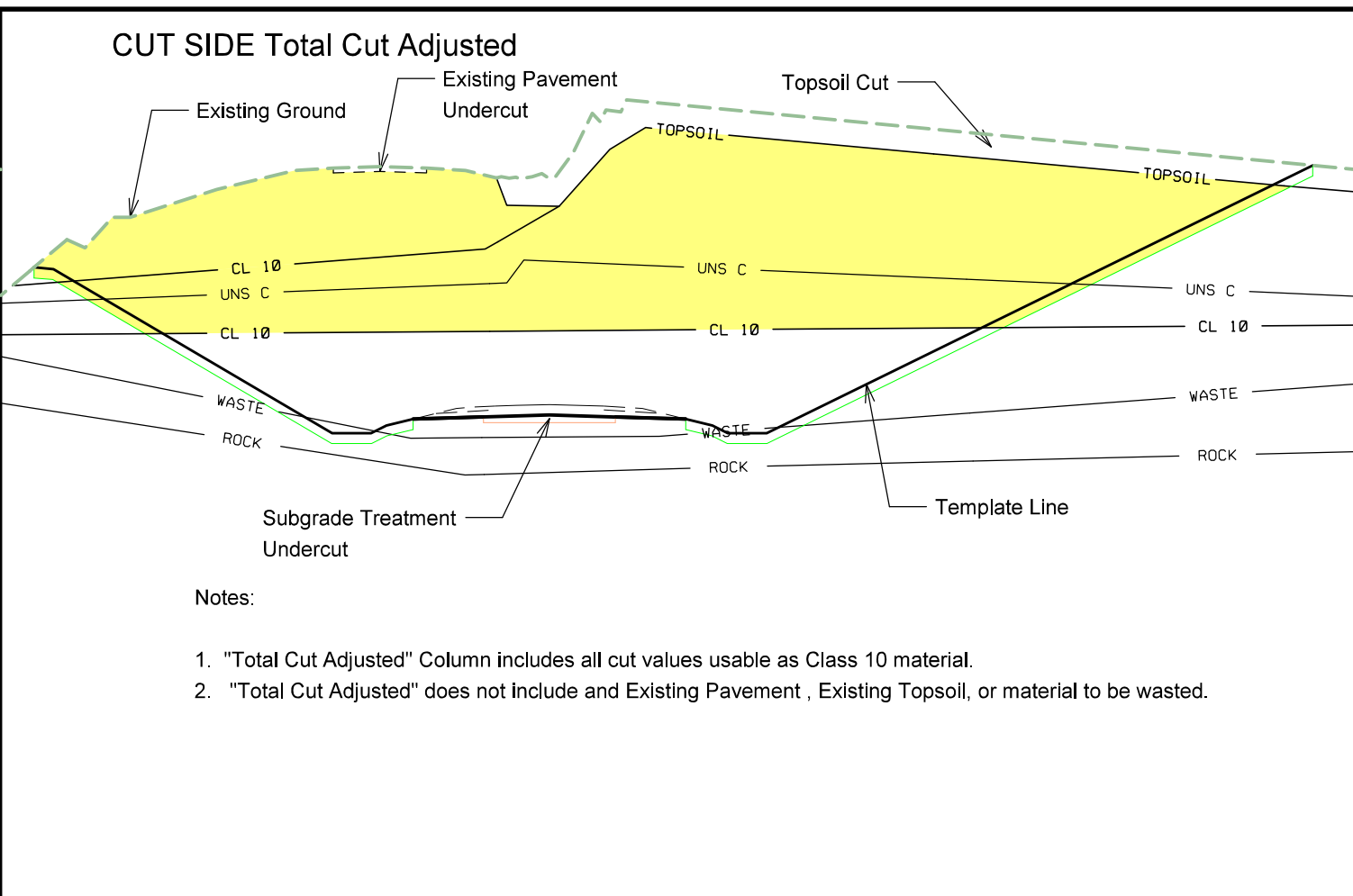
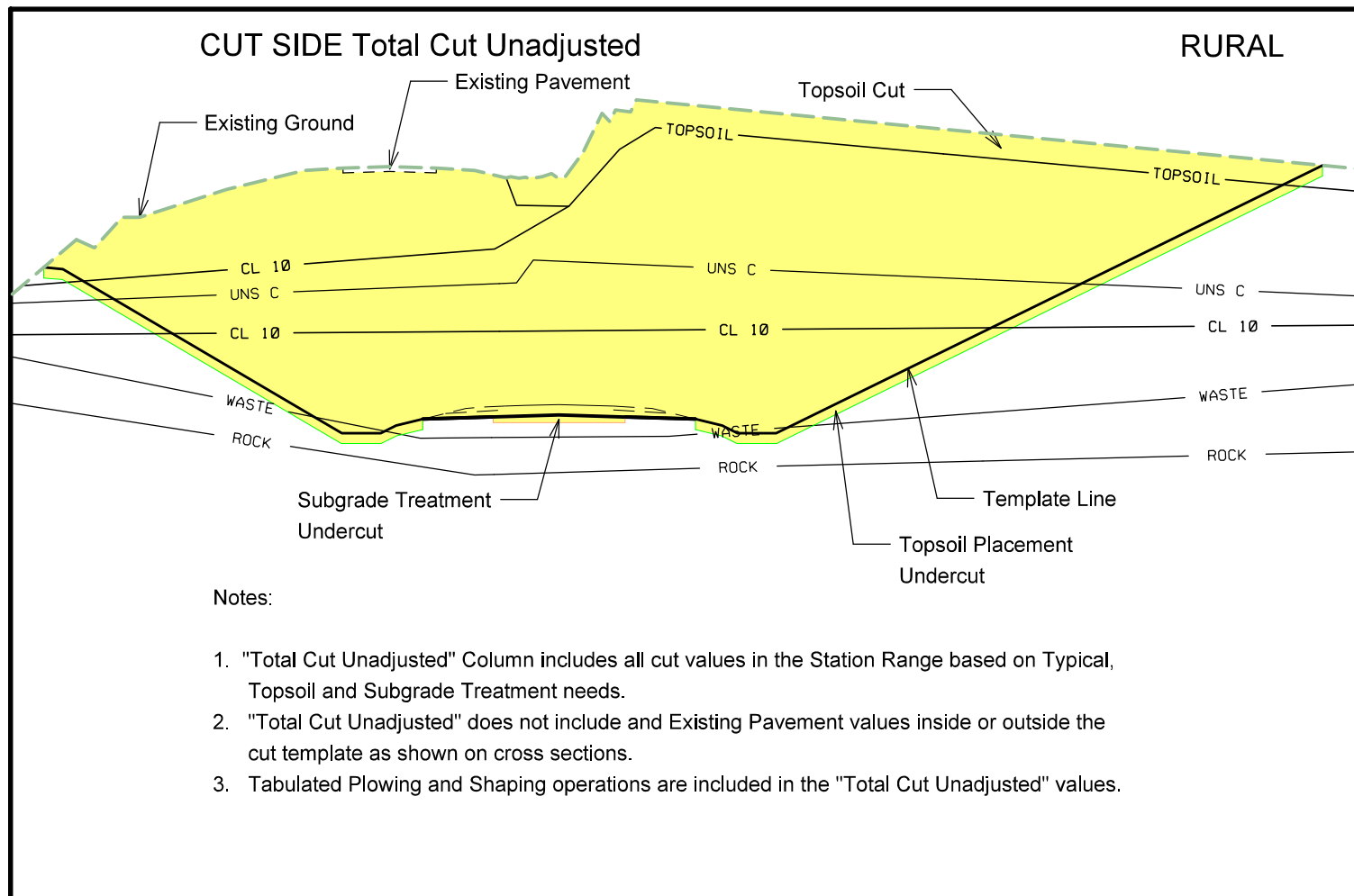
SILT FENCES FOR DITCH CHECKS

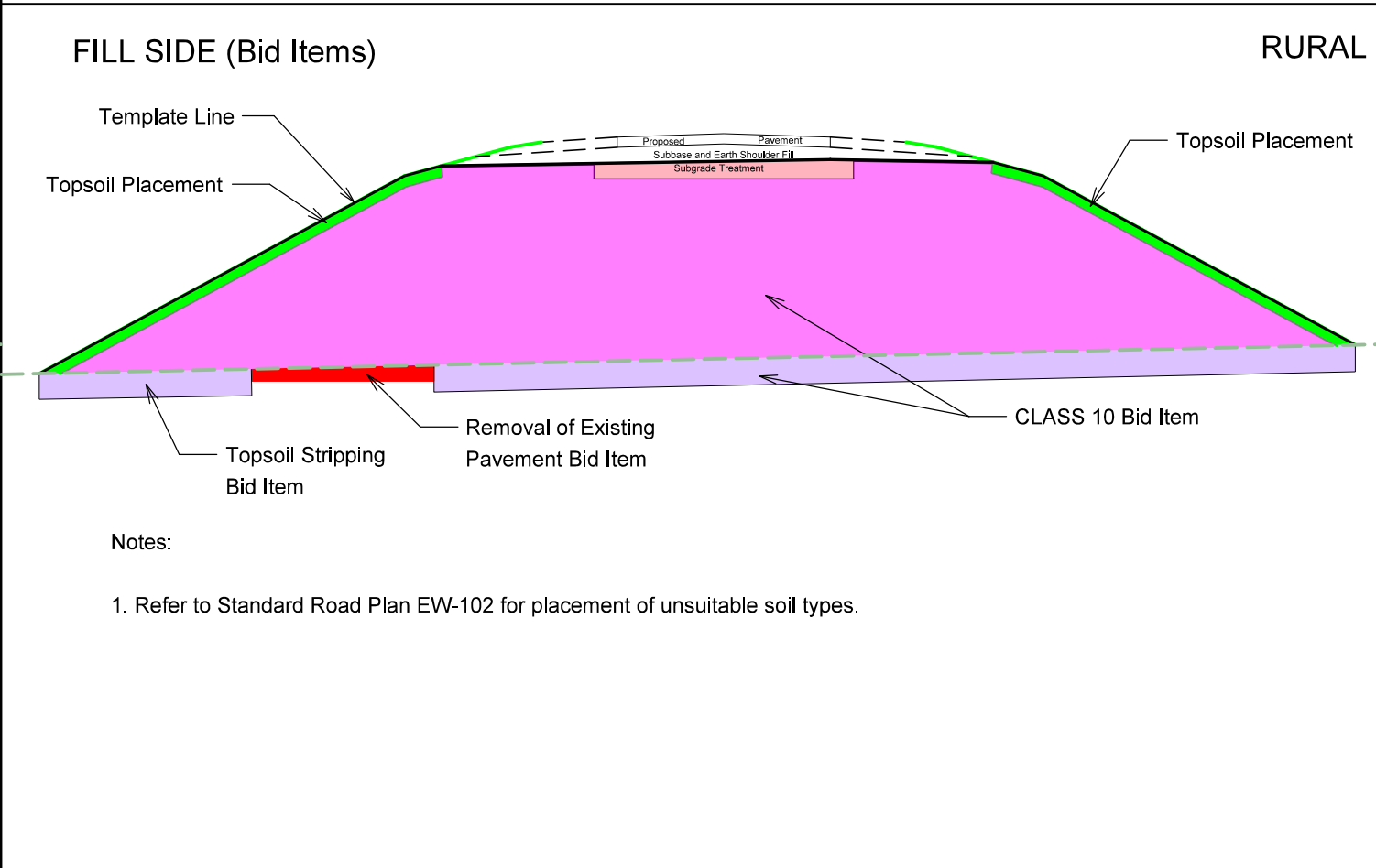
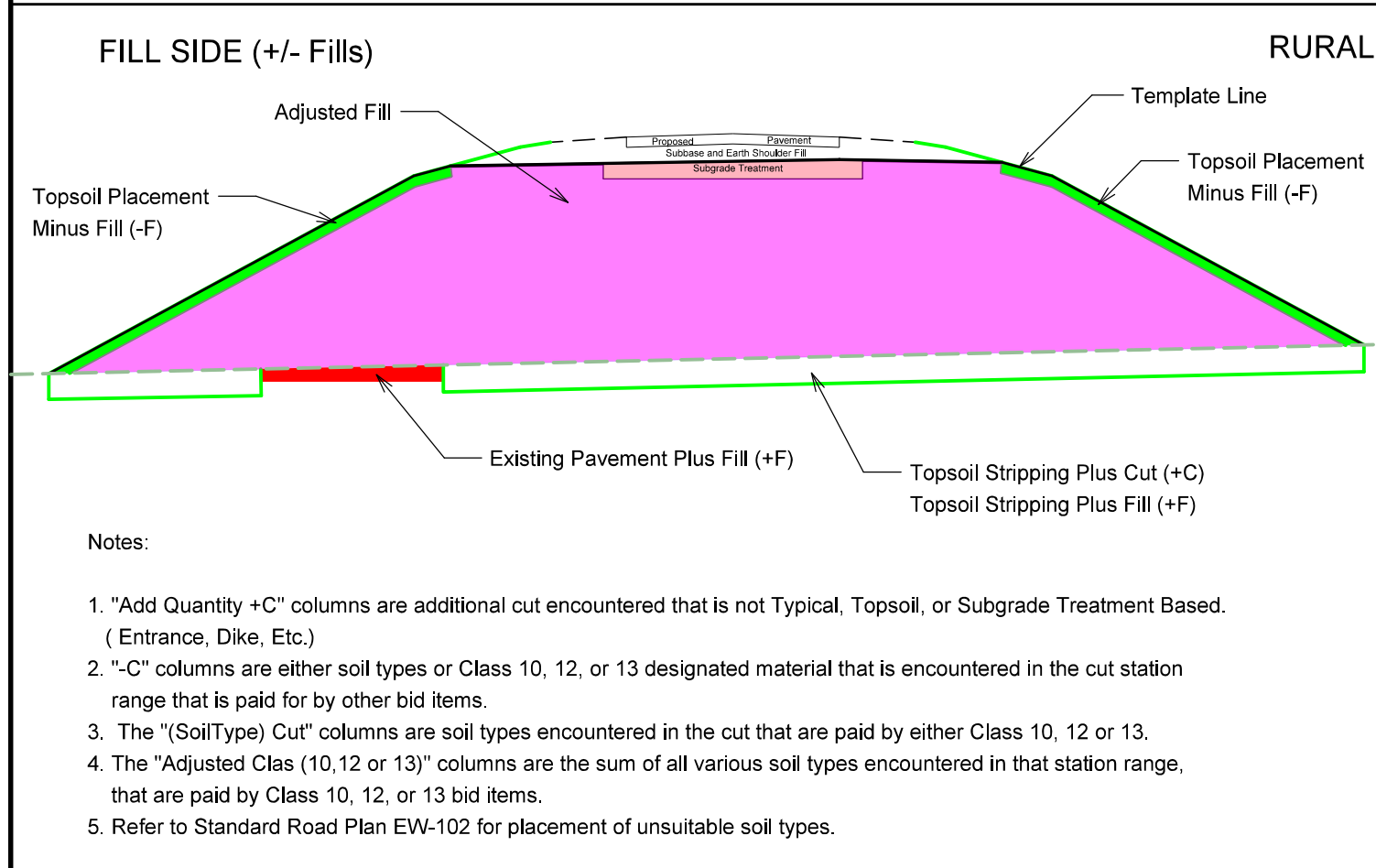
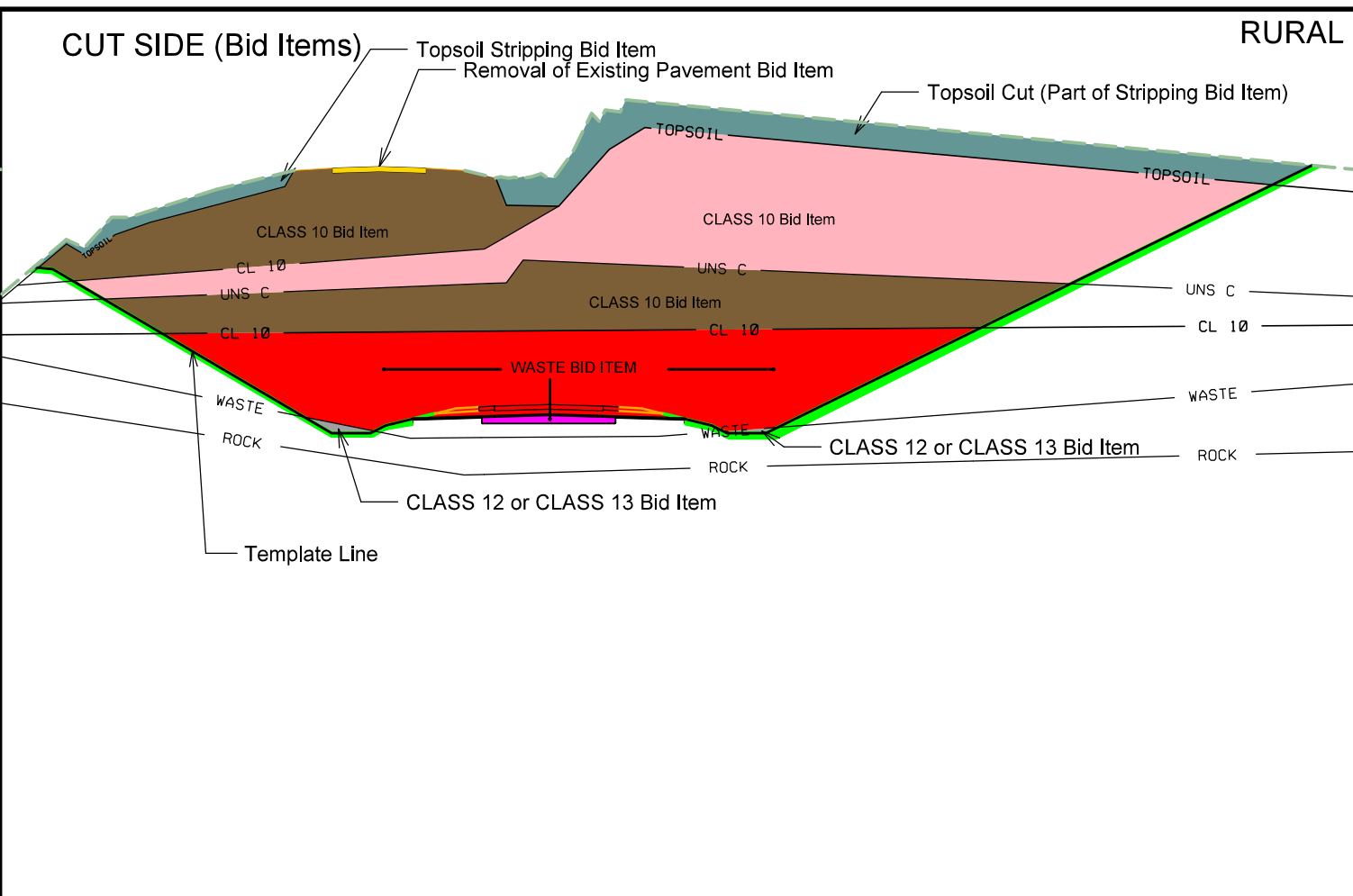
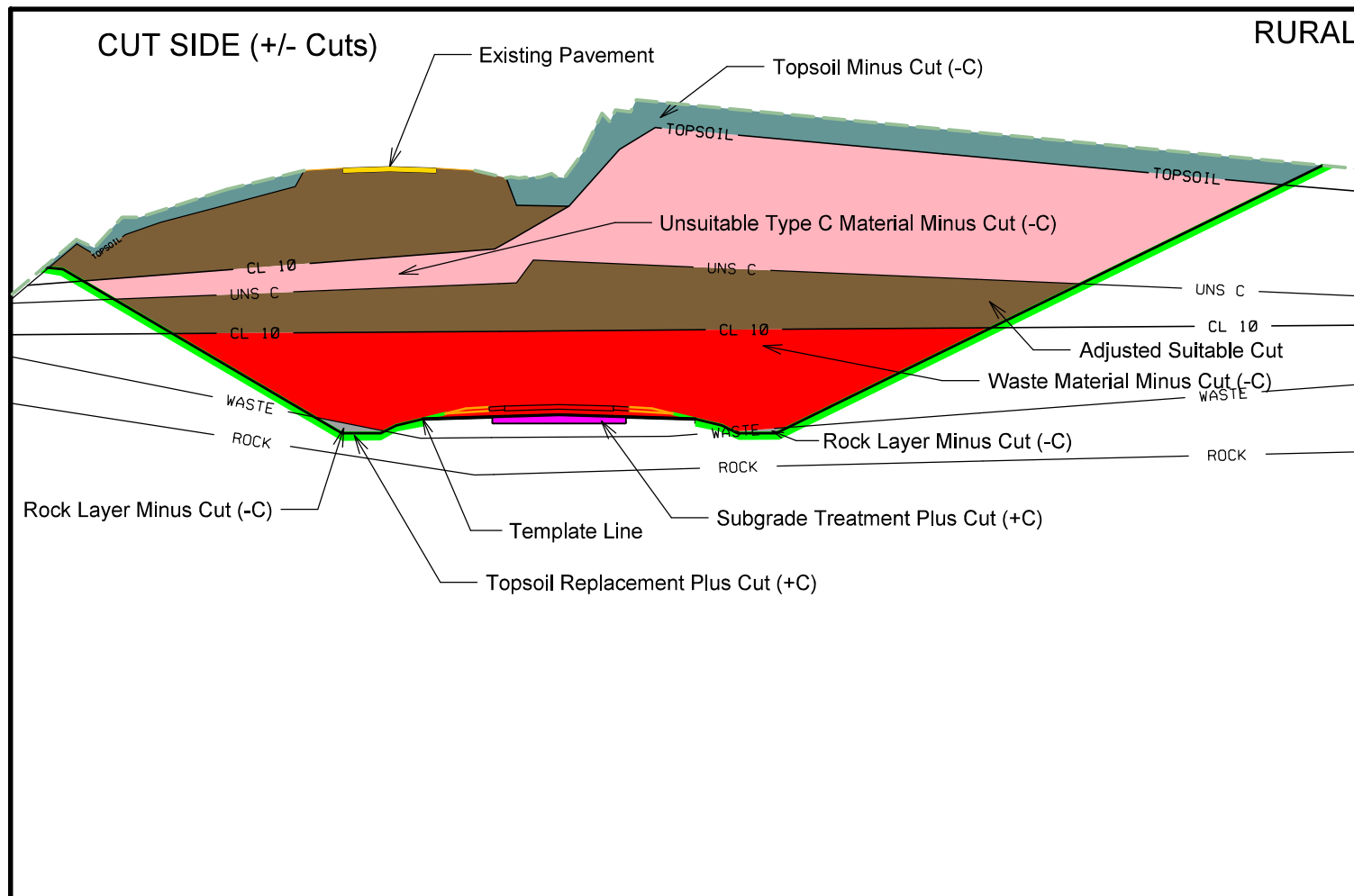
Possible Standard: EC-201



* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
 * Volume equation: $[0.5 * \text{Spacing} * (0.5 * H^2 * FS + DW * H + 0.5 * H^2 * BS)]$

| Basin No. | Type | Location | | Bid Items | | | Stormwater Storage Volume Summary | | | | | Remarks |
|-----------|------|----------|------|-----------------|----------------|------------|-----------------------------------|----------------|----------------|-------------------------|------------|---------|
| | | Station | Side | Installation LF | Maintenance LF | Removal LF | Foreslope FS:1 | Backslope BS:1 | Ditch Width FT | Avg.% Slope Ditch Grade | Volume* CF | |
| 8 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 3.0 | 5.0 | 2.0% | 488.5 | |
| 8 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 3.0 | 5.0 | 2.0% | 488.5 | |
| 8 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 3.0 | 5.0 | 2.0% | 488.5 | |
| 8 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 3.0 | 5.0 | 2.0% | 488.5 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 6.0 | 6.0 | 5.0 | 5.0% | 306.9 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 6.0 | 6.0 | 5.0 | 5.0% | 306.9 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 6.0 | 6.0 | 5.0 | 5.0% | 306.9 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 6.0 | 6.0 | 5.0 | 5.0% | 306.9 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 6.0 | 6.0 | 5.0 | 5.0% | 306.9 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 6.0 | 6.0 | 5.0 | 5.0% | 306.9 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 6.0 | 6.0 | 5.0 | 5.0% | 306.9 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 6.0 | 6.0 | 5.0 | 5.0% | 306.9 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 11 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 3.0% | 348.2 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 12 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 2.0% | 522.4 | |
| 13 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 1.5% | 696.5 | |
| 13 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 1.5% | 696.5 | |
| 13 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 1.5% | 696.5 | |
| 13 | | | | 25.0 | 2.5 | 25.0 | 4.0 | 4.0 | 5.0 | 1.5% | 696.5 | |
| 16 | | | | 25.0 | 2.5 | 25.0 | 3.0 | 4.0 | 5.0 | 1.0% | 651.4 | |
| 16 | | | | 25.0 | 2.5 | 25.0 | 3.0 | 4.0 | 5.0 | 1.0% | 651.4 | |





TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station | Cut | | | | Fill | | | | | | Checks (EW-102) | | Topsoil | | | | [18] | [19] | [20] | [21] | [22] | |
|-----------|-----------------------------|----------------------------------|--------------------|----------------------------------|--------------------|------------------------------|--|------------------------------------|---------------------|---|---|--|--|-----------------------------------|-----------------------------------|--|------|------|------|------|------|--|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | | | | | | [17] |
| | Total Cut Unadjusted Volume | Total Class 10 Unadjusted Volume | Topsoil Cut Volume | Template Pavement Removal Volume | Total Cut Adjusted | Total Fill Unadjusted Volume | Existing Topsoil Stripping Undercut (+ Fill) | Existing Pavement Undercut (+Fill) | Total Fill Adjusted | Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor | Total Cut Adjusted Minus Fill w/ Shrink | Approx. Fill Vol. Below 5' & Above 20' w/ Shrink | Approx. Fill Volume Below 3' w/ Shrink | Topsoil Stripping Undercut Volume | Topsoil Placement Undercut Volume | Topsoil Placement With 1.4 Shrink Factor | | | | | | Topsoil Stripping Minus Topsoil Placement w/Shrink |
| ML092W | | | | | | | | | | | | | | | | | | | | | | |
| 134+25.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 134+50.00 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 5 | 7 | -7 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | | | | | |
| 135+00.00 | 80 | 73 | 7 | 7 | 73 | 486 | 7 | 493 | 641 | -568 | 0 | 0 | 7 | 7 | 10 | -3 | | | | | | |
| 135+50.00 | 83 | 70 | 13 | 0 | 70 | 0 | 13 | 0 | 13 | 53 | 0 | 0 | 13 | 3 | 4 | 9 | | | | | | |
| 136+00.00 | 83 | 70 | 13 | 0 | 70 | 0 | 13 | 0 | 13 | 53 | 0 | 0 | 13 | 4 | 6 | 7 | | | | | | |
| 136+50.00 | 84 | 71 | 13 | 0 | 71 | 0 | 13 | 0 | 13 | 54 | 0 | 0 | 13 | 4 | 6 | 7 | | | | | | |
| 137+00.00 | 85 | 71 | 14 | 0 | 71 | 0 | 14 | 0 | 14 | 53 | 0 | 0 | 14 | 3 | 4 | 10 | | | | | | |
| 137+50.00 | 77 | 64 | 13 | 7 | 64 | 0 | 13 | 0 | 13 | 47 | 0 | 0 | 13 | 3 | 4 | 9 | | | | | | |
| 138+00.00 | 75 | 62 | 13 | 13 | 62 | 0 | 13 | 0 | 13 | 45 | 0 | 0 | 13 | 10 | 14 | -1 | | | | | | |
| 138+50.00 | 75 | 61 | 14 | 14 | 61 | 0 | 14 | 0 | 14 | 43 | 0 | 0 | 14 | 9 | 13 | 1 | | | | | | |
| 139+00.00 | 71 | 57 | 14 | 14 | 57 | 0 | 14 | 51 | 65 | 85 | -28 | 0 | 14 | 2 | 3 | 11 | | | | | | |
| 139+50.00 | 71 | 57 | 14 | 14 | 57 | 0 | 14 | 0 | 14 | 39 | 0 | 0 | 14 | 3 | 4 | 10 | | | | | | |
| 140+00.00 | 70 | 57 | 13 | 13 | 57 | 0 | 13 | 0 | 13 | 40 | 0 | 0 | 13 | 3 | 4 | 9 | | | | | | |
| 140+50.00 | 73 | 60 | 13 | 13 | 60 | 0 | 13 | 0 | 13 | 43 | 0 | 0 | 13 | 6 | 8 | 5 | | | | | | |
| 141+00.00 | 74 | 61 | 13 | 13 | 61 | 0 | 13 | 0 | 13 | 44 | 0 | 0 | 13 | 7 | 10 | 3 | | | | | | |
| 141+50.00 | 72 | 59 | 13 | 13 | 59 | 0 | 13 | 0 | 13 | 42 | 0 | 0 | 13 | 5 | 7 | 6 | | | | | | |
| 142+00.00 | 78 | 65 | 13 | 7 | 65 | 0 | 13 | 0 | 13 | 48 | 0 | 0 | 13 | 5 | 7 | 6 | | | | | | |
| 142+50.00 | 80 | 67 | 13 | 6 | 67 | 0 | 13 | 9 | 22 | 29 | 0 | 0 | 13 | 7 | 10 | 3 | | | | | | |
| 143+00.00 | 77 | 64 | 13 | 13 | 64 | 0 | 13 | 2 | 15 | 20 | 45 | 0 | 13 | 11 | 15 | -2 | | | | | | |
| 143+50.00 | 79 | 66 | 13 | 13 | 66 | 0 | 13 | 5 | 18 | 23 | 43 | 0 | 13 | 15 | 21 | -8 | | | | | | |
| 143+86.62 | 10 | 0 | 10 | 0 | 0 | 0 | 10 | 11 | 21 | 27 | -27 | 0 | 10 | 0 | 0 | 10 | | | | | | |
| 144+00.00 | 67 | 63 | 4 | 14 | 63 | 0 | 4 | 0 | 4 | 58 | 0 | 0 | 4 | 11 | 15 | -11 | | | | | | |
| 144+50.00 | 122 | 90 | 32 | 32 | 90 | 0 | 32 | 0 | 32 | 42 | 48 | 0 | 32 | 3 | 4 | 28 | | | | | | |
| 145+00.00 | 175 | 125 | 50 | 50 | 125 | 0 | 50 | 0 | 50 | 65 | 60 | 0 | 50 | 1 | 1 | 49 | | | | | | |
| 145+50.00 | 188 | 138 | 50 | 50 | 138 | 0 | 50 | 0 | 50 | 65 | 73 | 0 | 50 | 2 | 3 | 47 | | | | | | |
| 145+60.95 | 11 | 0 | 11 | 0 | 0 | 0 | 11 | 1 | 12 | 16 | -16 | 0 | 11 | 0 | 0 | 11 | | | | | | |
| 146+00.00 | 191 | 152 | 39 | 50 | 152 | 0 | 39 | 0 | 39 | 51 | 101 | 0 | 39 | 2 | 3 | 36 | | | | | | |
| 146+50.00 | 219 | 169 | 50 | 50 | 169 | 0 | 50 | 0 | 50 | 65 | 104 | 0 | 50 | 3 | 4 | 46 | | | | | | |
| 147+00.00 | 235 | 184 | 51 | 50 | 184 | 0 | 51 | 0 | 51 | 66 | 118 | 0 | 51 | 4 | 6 | 45 | | | | | | |
| 147+50.00 | 245 | 194 | 51 | 52 | 194 | 0 | 51 | 0 | 51 | 66 | 128 | 0 | 51 | 7 | 10 | 41 | | | | | | |
| 148+00.00 | 250 | 200 | 50 | 51 | 200 | 0 | 50 | 0 | 50 | 65 | 135 | 0 | 50 | 9 | 13 | 37 | | | | | | |
| 148+50.00 | 247 | 202 | 45 | 45 | 202 | 0 | 45 | 0 | 45 | 59 | 144 | 0 | 45 | 11 | 15 | 30 | | | | | | |
| 149+00.00 | 242 | 202 | 40 | 40 | 202 | 2 | 40 | 0 | 42 | 55 | 147 | 0 | 40 | 12 | 17 | 23 | | | | | | |
| 149+48.59 | 41 | 0 | 41 | 0 | 0 | 0 | 41 | 18 | 59 | 77 | -77 | 0 | 41 | 0 | 0 | 41 | | | | | | |
| 149+50.00 | 200 | 199 | 1 | 42 | 199 | 3 | 1 | 0 | 4 | 5 | 194 | 0 | 1 | 12 | 17 | -16 | | | | | | |
| 150+00.00 | 238 | 194 | 44 | 44 | 194 | 2 | 44 | 0 | 46 | 60 | 134 | 0 | 44 | 10 | 14 | 30 | | | | | | |
| 150+50.00 | 239 | 192 | 47 | 47 | 192 | 2 | 47 | 0 | 49 | 64 | 128 | 0 | 47 | 9 | 13 | 34 | | | | | | |
| 151+00.00 | 251 | 202 | 49 | 49 | 202 | 2 | 49 | 0 | 51 | 66 | 136 | 0 | 49 | 9 | 13 | 36 | | | | | | |
| 151+50.00 | 265 | 218 | 47 | 47 | 218 | 3 | 47 | 0 | 50 | 65 | 153 | 0 | 47 | 10 | 14 | 33 | | | | | | |
| 152+00.00 | 284 | 237 | 47 | 47 | 237 | 2 | 47 | 0 | 49 | 64 | 173 | 0 | 47 | 13 | 18 | 29 | | | | | | |
| 152+50.00 | 309 | 262 | 47 | 47 | 262 | 1 | 47 | 0 | 48 | 62 | 200 | 0 | 47 | 13 | 18 | 29 | | | | | | |
| 152+80.18 | 28 | 0 | 28 | 0 | 0 | 0 | 28 | 16 | 44 | 57 | -57 | 0 | 28 | 0 | 0 | 28 | | | | | | |
| 152+80.19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 153+00.00 | 312 | 294 | 18 | 46 | 294 | 5 | 18 | 0 | 23 | 30 | 264 | 0 | 18 | 20 | 28 | -10 | | | | | | |
| 153+36.21 | 33 | 0 | 33 | 0 | 0 | 0 | 33 | 17 | 50 | 65 | -65 | 0 | 33 | 0 | 0 | 33 | | | | | | |
| 153+50.00 | 337 | 324 | 13 | 46 | 324 | 5 | 13 | 0 | 18 | 23 | 301 | 0 | 13 | 15 | 21 | -8 | | | | | | |
| 154+00.00 | 406 | 360 | 46 | 46 | 360 | 0 | 46 | 0 | 46 | 60 | 300 | 0 | 46 | 2 | 3 | 43 | | | | | | |
| 154+50.00 | 458 | 412 | 46 | 47 | 412 | 0 | 46 | 0 | 46 | 60 | 352 | 0 | 46 | 8 | 11 | 35 | | | | | | |
| 155+00.00 | 507 | 456 | 51 | 51 | 456 | 0 | 51 | 0 | 51 | 66 | 390 | 0 | 51 | 13 | 18 | 33 | | | | | | |
| 155+50.00 | 541 | 475 | 66 | 66 | 475 | 0 | 66 | 0 | 66 | 86 | 389 | 0 | 66 | 14 | 20 | 46 | | | | | | |
| 156+00.00 | 620 | 531 | 89 | 89 | 531 | 0 | 89 | 0 | 89 | 116 | 415 | 0 | 89 | 9 | 13 | 76 | | | | | | |
| 157+00.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 157+50.00 | 2,456 | 2,126 | 330 | 330 | 2,126 | 0 | 330 | 0 | 330 | 429 | 1,697 | 0 | 330 | 73 | 102 | 228 | | | | | | |
| 158+00.00 | 878 | 776 | 102 | 102 | 776 | 0 | 102 | 0 | 102 | 133 | 643 | 0 | 102 | 37 | 52 | 50 | | | | | | |
| 158+50.00 | 794 | 714 | 80 | 80 | 714 | 0 | 80 | 0 | 80 | 104 | 610 | 0 | 80 | 29 | 41 | 39 | | | | | | |
| 158+99.89 | 72 | 0 | 72 | 0 | 0 | 0 | 72 | 34 | 106 | 138 | -138 | 0 | 72 | 0 | 0 | 72 | | | | | | |
| 159+00.00 | 693 | 693 | 0 | 72 | 693 | 0 | 0 | 0 | 0 | 0 | 693 | 0 | 0 | 26 | 36 | -36 | | | | | | |
| 159+50.00 | 719 | 651 | 68 | 68 | 651 | 0 | 68 | 0 | 68 | 88 | 563 | 0 | 68 | 24 | 34 | 34 | | | | | | |
| 160+00.00 | 678 | 615 | 63 | 63 | 615 | 0 | 63 | 0 | 63 | 82 | 533 | 0 | 63 | 30 | 42 | 21 | | | | | | |
| 160+50.00 | 633 | 574 | 59 | 59 | 574 | 0 | 59 | 0 | 59 | 77 | 497 | 0 | 59 | 41 | 57 | 2 | | | | | | |
| 161+00.00 | 567 | 512 | 55 | 55 | 512 | 12 | 55 | 0 | 67 | 87 | 425 | 0 | 55 | 44 | 62 | -7 | | | | | | |
| 161+50.00 | 501 | 449 | 52 | 52 | 449 | 29 | 52 | 0 | 81 | 105 | 344 | 0 | 52 | 42 | 59 | -7 | | | | | | |
| 162+00.00 | 447 | 398 | 49 | 49 | 398 | 24 | 49 | 0 | 73 | 95 | 303 | 0 | 49 | 37 | 52 | -3 | | | | | | |
| 162+50.00 | 399 | 352 | 47 | 47 | 352 | 10 | 47 | 0 | 57 | 74 | 278 | 0 | 47 | 30 | 42 | 5 | | | | | | |
| 163+00.00 | 357 | 309 | 48 | 48 | 309 | 5 | 48 | 0 | 53 | 69 | 240 | 0 | 48 | 25 | 35 | 13 | | | | | | |
| 163+50.00 | 318 | 269 | 49 | 49 | 269 | 3 | 49 | 0 | 52 | 68 | 201 | 0 | 49 | 22 | 31 | 18 | | | | | | |
| 164+00.00 | 284 | 238 | 46 | 47 | 238 | 1 | 46 | 0 | 47 | 61 | 177 | 0 | 46 | 19 | 27 | 19 | | | | | | |

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station | Cut | | | | | Fill | | | | | | Checks (EW-102) | | Topsoil | | | | [18] | [19] | [20] | [21] | [22] |
|----------------|-----------------------------|----------------------------------|--------------------|----------------------------------|--------------------|------------------------------|--|------------------------------------|---------------------|---|---|--|--|-----------------------------------|-----------------------------------|--|--|------|------|------|------|------|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | | | | | |
| | Total Cut Unadjusted Volume | Total Class 10 Unadjusted Volume | Topsoil Cut Volume | Template Pavement Removal Volume | Total Cut Adjusted | Total Fill Unadjusted Volume | Existing Topsoil Stripping Undercut (+ Fill) | Existing Pavement Undercut (+Fill) | Total Fill Adjusted | Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor | Total Cut Adjusted Minus Fill w/ Shrink | Approx. Fill Vol. Below 5' & Above 20' w/ Shrink | Approx. Fill Volume Below 3' w/ Shrink | Topsoil Stripping Undercut Volume | Topsoil Placement Undercut Volume | Topsoil Placement With 1.4 Shrink Factor | Topsoil Stripping Minus Topsoil Placement w/Shrink | | | | | |
| 164+50.00 | 255 | 212 | 43 | 43 | 212 | 0 | 43 | 0 | 43 | 56 | 156 | 0 | 0 | 43 | 19 | 27 | 16 | | | | | |
| 165+00.00 | 237 | 197 | 40 | 40 | 197 | 0 | 40 | 0 | 40 | 52 | 145 | 0 | 0 | 40 | 27 | 38 | 2 | | | | | |
| 165+20.00 | 16 | 0 | 16 | 0 | 0 | 0 | 16 | 21 | 37 | 48 | -48 | 0 | 0 | 16 | 0 | 0 | 16 | | | | | |
| 165+50.00 | 209 | 186 | 23 | 39 | 186 | 0 | 23 | 0 | 23 | 30 | 156 | 0 | 0 | 23 | 22 | 31 | -8 | | | | | |
| 166+00.00 | 230 | 192 | 38 | 19 | 192 | 0 | 38 | 0 | 38 | 49 | 143 | 0 | 0 | 38 | 10 | 14 | 24 | | | | | |
| 166+50.00 | 217 | 180 | 37 | 19 | 180 | 0 | 37 | 0 | 37 | 48 | 132 | 0 | 0 | 37 | 7 | 10 | 27 | | | | | |
| 167+00.00 | 185 | 148 | 37 | 37 | 148 | 0 | 37 | 0 | 37 | 48 | 100 | 0 | 0 | 37 | 4 | 6 | 31 | | | | | |
| 167+50.00 | 175 | 138 | 37 | 37 | 138 | 0 | 37 | 0 | 37 | 48 | 90 | 0 | 0 | 37 | 2 | 3 | 34 | | | | | |
| 168+00.00 | 165 | 128 | 37 | 37 | 128 | 0 | 37 | 0 | 37 | 48 | 80 | 0 | 0 | 37 | 1 | 1 | 36 | | | | | |
| 168+50.00 | 155 | 118 | 37 | 37 | 118 | 0 | 37 | 0 | 37 | 48 | 70 | 0 | 0 | 37 | 0 | 0 | 37 | | | | | |
| 168+86.25 | 27 | 0 | 27 | 0 | 0 | 0 | 27 | 0 | 27 | 35 | -35 | 0 | 0 | 27 | 0 | 0 | 27 | | | | | |
| 169+00.00 | 90 | 90 | 0 | 19 | 90 | 0 | 0 | 0 | 0 | 0 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 169+50.00 | 66 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | |
| 170+00.00 | 66 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | |
| 170+50.00 | 127 | 66 | 61 | 0 | 66 | 0 | 61 | 0 | 61 | 79 | -13 | 0 | 0 | 61 | 0 | 0 | 61 | | | | | |
| 171+00.00 | 66 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 171+50.00 | 66 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 172+00.00 | 65 | 65 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | |
| 172+50.00 | 65 | 65 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | |
| 173+00.00 | 66 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 173+50.00 | 65 | 65 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 174+00.00 | 65 | 65 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | |
| 174+50.00 | 66 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 175+00.00 | 66 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 175+50.00 | 65 | 65 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 176+00.00 | 65 | 65 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | |
| 176+50.00 | 64 | 64 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 2 | 3 | -3 | | | | | |
| 177+00.00 | 65 | 65 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | |
| 177+50.00 | 65 | 65 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | |
| 178+00.00 | 66 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | |
| 178+50.00 | 65 | 65 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | |
| Totals: | 21,721 | 18,738 | 2,983 | 2,806 | 18,738 | 597 | 2,983 | 188 | 3,768 | 4,899 | 13,840 | 0 | 0 | 2,983 | 914 | 1,280 | 1,704 | | | | | |

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station | Cut | | | | | Fill | | | | | | Checks (EW-102) | | Topsoil | | | | [18] | [19] | [20] | [21] | [22] | |
|----------------|-----------------------------|----------------------------------|--------------------|----------------------------------|--------------------|------------------------------|--|------------------------------------|---------------------|---|---|--|--|-----------------------------------|-----------------------------------|--|--|------|------|------|------|------|--|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | | | | | | |
| | Total Cut Unadjusted Volume | Total Class 10 Unadjusted Volume | Topsoil Cut Volume | Template Pavement Removal Volume | Total Cut Adjusted | Total Fill Unadjusted Volume | Existing Topsoil Stripping Undercut (+ Fill) | Existing Pavement Undercut (+Fill) | Total Fill Adjusted | Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor | Total Cut Adjusted Minus Fill w/ Shrink | Approx. Fill Vol. Below 5' & Above 20' w/ Shrink | Approx. Fill Volume Below 3' w/ Shrink | Topsoil Stripping Undercut Volume | Topsoil Placement Undercut Volume | Topsoil Placement With 1.4 Shrink Factor | Topsoil Stripping Minus Topsoil Placement w/Shrink | | | | | | |
| 246+50.00 | 185 | 148 | 37 | 37 | 144 | 0 | 37 | 0 | 37 | 48 | 96 | 0 | 0 | 37 | 4 | 6 | 31 | | | | | | |
| 247+00.00 | 181 | 144 | 37 | 37 | 135 | 0 | 37 | 0 | 37 | 48 | 87 | 0 | 0 | 37 | 3 | 4 | 33 | | | | | | |
| 247+83.91 | 172 | 135 | 37 | 37 | 126 | 0 | 0 | 0 | 0 | 0 | 126 | 0 | 0 | 0 | 3 | 4 | -4 | | | | | | |
| 248+00.00 | 126 | 126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 248+50.00 | 0 | 0 | 0 | 18 | 93 | 0 | 0 | 0 | 0 | 0 | 93 | 0 | 0 | 0 | 2 | 3 | -3 | | | | | | |
| 249+00.00 | 93 | 93 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | | |
| 249+50.00 | 64 | 64 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | | |
| 250+00.00 | 64 | 64 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | | |
| 250+50.00 | 64 | 64 | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | | |
| 251+00.00 | 63 | 63 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 2 | 3 | -3 | | | | | | |
| 251+29.25 | 60 | 60 | 0 | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 2 | 3 | -3 | | | | | | |
| 251+50.00 | 59 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 252+00.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 252+50.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 253+00.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 253+50.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Totals: | 15,383 | 12,686 | 2,697 | 2,353 | 12,686 | 26 | 2,697 | 40 | 2,763 | 3,592 | 9,095 | 0 | 0 | 2,697 | 750 | 1,050 | 1,648 | | | | | | |

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station | Cut | | | | | Fill | | | | | | Checks (EW-102) | | Topsoil | | | | [18] | [19] | [20] | [21] | [22] | |
|------------|-----------------------------|----------------------------------|--------------------|----------------------------------|--------------------|------------------------------|--|------------------------------------|---------------------|---|---|--|--|-----------------------------------|-----------------------------------|--|--|------|------|------|------|------|--|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | | | | | | |
| | Total Cut Unadjusted Volume | Total Class 10 Unadjusted Volume | Topsoil Cut Volume | Template Pavement Removal Volume | Total Cut Adjusted | Total Fill Unadjusted Volume | Existing Topsoil Stripping Undercut (+ Fill) | Existing Pavement Undercut (+Fill) | Total Fill Adjusted | Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor | Total Cut Adjusted Minus Fill w/ Shrink | Approx. Fill Vol. Below 5' & Above 20' w/ Shrink | Approx. Fill Volume Below 3' w/ Shrink | Topsoil Stripping Undercut Volume | Topsoil Placement Undercut Volume | Topsoil Placement With 1.4 Shrink Factor | Topsoil Stripping Minus Topsoil Placement w/Shrink | | | | | | |
| SR021 | | | | | | | | | | | | | | | | | | | | | | | |
| 1154+50.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 1155+00.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 1156+00.00 | 470 | 436 | 34 | 71 | 436 | 0 | 34 | 0 | 34 | 44 | 392 | 0 | 0 | 34 | 42 | 59 | -25 | | | | | | |
| 1157+00.00 | 442 | 425 | 17 | 47 | 425 | 0 | 17 | 0 | 17 | 22 | 403 | 0 | 0 | 17 | 33 | 46 | -29 | | | | | | |
| 1157+50.00 | 239 | 0 | 239 | 0 | 0 | 0 | 239 | 96 | 335 | 436 | -436 | 0 | 0 | 239 | 0 | 0 | 239 | | | | | | |
| 1158+00.00 | 576 | 170 | 126 | 50 | 170 | 1 | 126 | 0 | 127 | 165 | 5 | 0 | 0 | 126 | 45 | 63 | 63 | | | | | | |
| 1158+50.00 | 332 | 243 | 89 | 89 | 243 | 0 | 89 | 0 | 89 | 116 | 127 | 0 | 0 | 89 | 44 | 62 | 27 | | | | | | |
| 1159+00.00 | 213 | 133 | 80 | 78 | 133 | 0 | 80 | 0 | 80 | 104 | 29 | 0 | 0 | 80 | 38 | 53 | 27 | | | | | | |
| Totals: | 2,272 | 1,407 | 585 | 335 | 1,407 | 1 | 585 | 97 | 683 | 888 | 520 | 0 | 0 | 585 | 202 | 283 | 303 | | | | | | |

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station | Cut | | | | Fill | | | | | | Checks (EW-102) | | Topsoil | | | | [18] | [19] | [20] | [21] | [22] | | | |
|------------|-----------------------------|----------------------------------|--------------------|----------------------------------|--------------------|------------------------------|--|------------------------------------|---------------------|---|---|--|--|-----------------------------------|-----------------------------------|--|--|------|------|------|------|--|--|--|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | | | | | | | |
| | Total Cut Unadjusted Volume | Total Class 10 Unadjusted Volume | Topsoil Cut Volume | Template Pavement Removal Volume | Total Cut Adjusted | Total Fill Unadjusted Volume | Existing Topsoil Stripping Undercut (+ Fill) | Existing Pavement Undercut (+Fill) | Total Fill Adjusted | Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor | Total Cut Adjusted Minus Fill w/ Shrink | Approx. Fill Vol. Below 5' & Above 20' w/ Shrink | Approx. Fill Volume Below 3' w/ Shrink | Topsoil Stripping Undercut Volume | Topsoil Placement Undercut Volume | Topsoil Placement With 1.4 Shrink Factor | Topsoil Stripping Minus Topsoil Placement w/Shrink | | | | | | | |
| SRV33 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1231+00.00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| 1231+50.00 | 113 | 77 | 36 | 36 | 77 | 3 | 18 | 0 | 21 | 27 | 50 | 0 | 0 | 18 | 19 | 27 | -9 | | | | | | | |
| 1232+00.00 | 102 | 65 | 37 | 37 | 65 | 0 | 1 | 0 | 1 | 1 | 64 | 0 | 0 | 1 | 2 | 3 | -2 | | | | | | | |
| 1232+50.00 | 99 | 62 | 37 | 37 | 62 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 0 | 0 | 2 | 3 | -3 | | | | | | | |
| 1233+00.00 | 98 | 61 | 37 | 37 | 61 | 0 | 0 | 0 | 0 | 0 | 61 | 0 | 0 | 0 | 3 | 4 | -4 | | | | | | | |
| 1233+50.00 | 102 | 65 | 37 | 37 | 65 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 2 | 3 | -3 | | | | | | | |
| 1234+00.00 | 105 | 64 | 41 | 41 | 64 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 1 | 1 | -1 | | | | | | | |
| 1234+50.00 | 123 | 74 | 49 | 49 | 74 | 0 | 5 | 0 | 5 | 7 | 68 | 0 | 0 | 5 | 7 | 10 | -5 | | | | | | | |
| 1235+00.00 | 187 | 120 | 67 | 67 | 120 | 0 | 4 | 0 | 4 | 5 | 115 | 0 | 0 | 4 | 16 | 22 | -18 | | | | | | | |
| Totals: | 929 | 588 | 341 | 341 | 588 | 3 | 28 | 0 | 31 | 41 | 548 | 0 | 0 | 28 | 52 | 73 | -45 | | | | | | | |

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

| Station | Cut | | | | | Fill | | | | | Checks (EW-102) | | Topsoil | | | | | [18] | [19] | [20] | [21] | [22] |
|------------|-----------------------------|----------------------------------|--------------------|----------------------------------|--------------------|------------------------------|--|------------------------------------|---------------------|---|---|--|--|-----------------------------------|-----------------------------------|--|--|------|------|------|------|------|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | | | | | |
| | Total Cut Unadjusted Volume | Total Class 10 Unadjusted Volume | Topsoil Cut Volume | Template Pavement Removal Volume | Total Cut Adjusted | Total Fill Unadjusted Volume | Existing Topsoil Stripping Undercut (+ Fill) | Existing Pavement Undercut (+Fill) | Total Fill Adjusted | Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor | Total Cut Adjusted Minus Fill w/ Shrink | Approx. Fill Vol. Below 5' & Above 20' w/ Shrink | Approx. Fill Volume Below 3' w/ Shrink | Topsoil Stripping Undercut Volume | Topsoil Placement Undercut Volume | Topsoil Placement With 1.4 Shrink Factor | Topsoil Stripping Minus Topsoil Placement w/Shrink | | | | | |
| DETA | | | | | | | | | | | | | | | | | | | | | | |
| 134+50.00 | 7 | 7 | 0 | 0 | 7 | 0 | | | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 135+50.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 137+00.00 | 10 | 10 | 0 | 0 | 10 | 0 | | | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 137+50.00 | 12 | 12 | 0 | 0 | 12 | 0 | | | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 138+00.00 | 13 | 13 | 0 | 0 | 13 | 0 | | | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 138+50.00 | 15 | 15 | 0 | 0 | 15 | 0 | | | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 139+00.00 | 16 | 16 | 0 | 0 | 16 | 0 | | | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 139+50.00 | 17 | 17 | 0 | 0 | 17 | 0 | | | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 140+00.00 | 17 | 17 | 0 | 0 | 17 | 1 | | | 1 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 140+50.00 | 17 | 17 | 0 | 0 | 17 | 2 | | | 2 | 3 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 141+00.00 | 18 | 18 | 0 | 0 | 18 | 2 | | | 2 | 3 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 141+50.00 | 32 | 32 | 0 | 0 | 32 | 13 | | | 13 | 17 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 142+50.00 | 14 | 14 | 0 | 0 | 14 | 12 | | | 12 | 16 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 143+00.00 | 14 | 14 | 0 | 0 | 14 | 16 | | | 16 | 21 | -7 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 143+50.00 | 14 | 14 | 0 | 0 | 14 | 20 | | | 20 | 26 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 144+00.00 | 13 | 13 | 0 | 0 | 13 | 21 | | | 21 | 27 | -14 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 144+50.00 | 13 | 13 | 0 | 0 | 13 | 20 | | | 20 | 26 | -13 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 145+00.00 | 13 | 13 | 0 | 0 | 13 | 21 | | | 21 | 27 | -14 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 145+50.00 | 13 | 13 | 0 | 0 | 13 | 24 | | | 24 | 31 | -18 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 146+00.00 | 14 | 14 | 0 | 0 | 14 | 24 | | | 24 | 31 | -17 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 146+50.00 | 15 | 15 | 0 | 0 | 15 | 23 | | | 23 | 30 | -15 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 147+00.00 | 16 | 16 | 0 | 0 | 16 | 22 | | | 22 | 29 | -13 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 147+50.00 | 17 | 17 | 0 | 0 | 17 | 22 | | | 22 | 29 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 148+00.00 | 20 | 20 | 0 | 0 | 20 | 22 | | | 22 | 29 | -9 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 148+50.00 | 24 | 24 | 0 | 0 | 24 | 21 | | | 21 | 27 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 149+00.00 | 25 | 25 | 0 | 0 | 25 | 19 | | | 19 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 149+50.00 | 26 | 26 | 0 | 0 | 26 | 14 | | | 14 | 18 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 150+00.00 | 31 | 31 | 0 | 0 | 31 | 8 | | | 8 | 10 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 150+50.00 | 36 | 36 | 0 | 0 | 36 | 3 | | | 3 | 4 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 151+00.00 | 38 | 38 | 0 | 0 | 38 | 0 | | | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 151+50.00 | 40 | 40 | 0 | 0 | 40 | 0 | | | 0 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 152+00.00 | 42 | 42 | 0 | 0 | 42 | 0 | | | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 152+50.00 | 43 | 43 | 0 | 0 | 43 | 0 | | | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 153+00.00 | 42 | 42 | 0 | 0 | 42 | 0 | | | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 153+50.00 | 43 | 43 | 0 | 0 | 43 | 0 | | | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 154+00.00 | 43 | 43 | 0 | 0 | 43 | 0 | | | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 154+50.00 | 43 | 43 | 0 | 0 | 43 | 0 | | | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 155+00.00 | 29 | 29 | 0 | 0 | 29 | 0 | | | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 155+50.00 | 12 | 12 | 0 | 0 | 12 | 0 | | | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 156+00.00 | 105 | 105 | 0 | 0 | 105 | 0 | | | 0 | 0 | 105 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 158+00.00 | 44 | 44 | 0 | 0 | 44 | 0 | | | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 158+50.00 | 43 | 43 | 0 | 0 | 43 | 0 | | | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 159+00.00 | 43 | 43 | 0 | 0 | 43 | 0 | | | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 159+50.00 | 43 | 43 | 0 | 0 | 43 | 0 | | | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 160+00.00 | 43 | 43 | 0 | 0 | 43 | 0 | | | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 160+50.00 | 37 | 37 | 0 | 0 | 37 | 0 | | | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 161+00.00 | 37 | 37 | 0 | 0 | 37 | 0 | | | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 161+50.00 | 43 | 43 | 0 | 0 | 43 | 0 | | | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 162+00.00 | 42 | 42 | 0 | 0 | 42 | 0 | | | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 162+50.00 | 45 | 45 | 0 | 0 | 45 | 0 | | | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 163+00.00 | 79 | 79 | 0 | 0 | 79 | 2 | | | 2 | 3 | 76 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 164+00.00 | 28 | 28 | 0 | 0 | 28 | 4 | | | 4 | 5 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 164+50.00 | 25 | 25 | 0 | 0 | 25 | 13 | | | 13 | 17 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 165+00.00 | 24 | 24 | 0 | 0 | 24 | 25 | | | 25 | 33 | -9 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 165+50.00 | 25 | 25 | 0 | 0 | 25 | 29 | | | 29 | 38 | -13 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 166+00.00 | 26 | 26 | 0 | 0 | 26 | 22 | | | 22 | 29 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 166+50.00 | 27 | 27 | 0 | 0 | 27 | 15 | | | 15 | 20 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 167+00.00 | 28 | 28 | 0 | 0 | 28 | 12 | | | 12 | 16 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 167+50.00 | 28 | 28 | 0 | 0 | 28 | 9 | | | 9 | 12 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 168+00.00 | 29 | 29 | 0 | 0 | 29 | 6 | | | 6 | 8 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 168+50.00 | 29 | 29 | 0 | 0 | 29 | 5 | | | 5 | 7 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 169+00.00 | 28 | 28 | 0 | 0 | 28 | 5 | | | 5 | 7 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 169+50.00 | 29 | 29 | 0 | 0 | 29 | 5 | | | 5 | 7 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 170+00.00 | 29 | 29 | 0 | 0 | 29 | 5 | | | 5 | 7 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 170+50.00 | 29 | 29 | 0 | 0 | 29 | 4 | | | 4 | 5 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 171+00.00 | 26 | 26 | 0 | 0 | 26 | 3 | | | 3 | 4 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 171+50.00 | 24 | 24 | 0 | 0 | 24 | 3 | | | 3 | 4 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| 172+00.00 | | | | | | | | | | | | | | | | | | | | | | |
| Subtotals: | 1,929 | 1,929 | 0 | 0 | 1,929 | 497 | 0 | 0 | 497 | 646 | 1,283 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station | Cut | | | | | Fill | | | | | | Checks (EW-102) | | Topsoil | | | | | [18] | [19] | [20] | [21] | [22] |
|-----------|-----------------------------|----------------------------------|--------------------|----------------------------------|--------------------|------------------------------|--|------------------------------------|---------------------|---|---|--|--|-----------------------------------|-----------------------------------|--|--|------|------|------|------|------|------|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] | |
| | Total Cut Unadjusted Volume | Total Class 10 Unadjusted Volume | Topsoil Cut Volume | Template Pavement Removal Volume | Total Cut Adjusted | Total Fill Unadjusted Volume | Existing Topsoil Stripping Undercut (+ Fill) | Existing Pavement Undercut (+Fill) | Total Fill Adjusted | Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor | Total Cut Adjusted Minus Fill w/ Shrink | Approx. Fill Vol. Below 5' & Above 20' w/ Shrink | Approx. Fill Volume Below 3' w/ Shrink | Topsoil Stripping Undercut Volume | Topsoil Placement Undercut Volume | Topsoil Placement With 1.4 Shrink Factor | Topsoil Stripping Minus Topsoil Placement w/Shrink | | | | | | |
| 172+00.00 | 26 | 26 | 0 | 0 | 26 | 1 | | | 1 | 1 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 172+50.00 | 27 | 27 | 0 | 0 | 27 | 0 | | | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 173+00.00 | 52 | 52 | 0 | 0 | 52 | 0 | | | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 174+00.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 174+50.00 | 21 | 21 | 0 | 0 | 21 | 0 | | | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 175+00.00 | 19 | 19 | 0 | 0 | 19 | 0 | | | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 175+50.00 | 17 | 17 | 0 | 0 | 17 | 0 | | | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 176+00.00 | 15 | 15 | 0 | 0 | 15 | 0 | | | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 176+50.00 | 13 | 13 | 0 | 0 | 13 | 0 | | | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 177+00.00 | 11 | 11 | 0 | 0 | 11 | 0 | | | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 177+50.00 | 10 | 10 | 0 | 0 | 10 | 0 | | | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 178+00.00 | | | | | | | | | | | | | | | | | | | | | | | |
| DET1A | | | | | | | | | | | | | | | | | | | | | | | |
| Totals: | 2,164 | 2,164 | 0 | 0 | 2,164 | 498 | 0 | 0 | 498 | 648 | 1,517 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Table with columns: Station, Cut, Fill, Checks (EW-102), Topsoil. Rows include station numbers from 134+50.00 to 175+50.00 and a Subtotals row.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station | Cut | | | | | Fill | | | | | | Checks (EW-102) | | Topsoil | | | | | [18] | [19] | [20] | [21] | [22] |
|----------------|-----------------------------|----------------------------------|--------------------|----------------------------------|--------------------|------------------------------|--|------------------------------------|---------------------|---|---|--|--|-----------------------------------|-----------------------------------|--|--|--|------|------|------|------|------|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | | | | | | |
| | Total Cut Unadjusted Volume | Total Class 10 Unadjusted Volume | Topsoil Cut Volume | Template Pavement Removal Volume | Total Cut Adjusted | Total Fill Unadjusted Volume | Existing Topsoil Stripping Undercut (+ Fill) | Existing Pavement Undercut (+Fill) | Total Fill Adjusted | Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor | Total Cut Adjusted Minus Fill w/ Shrink | Approx. Fill Vol. Below 5' & Above 20' w/ Shrink | Approx. Fill Volume Below 3' w/ Shrink | Topsoil Stripping Undercut Volume | Topsoil Placement Undercut Volume | Topsoil Placement With 1.4 Shrink Factor | Topsoil Stripping Minus Topsoil Placement w/Shrink | | | | | | |
| 175+50.00 | 16 | 16 | 0 | 0 | 16 | 0 | | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 176+00.00 | 15 | 15 | 0 | 0 | 15 | 0 | | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 176+50.00 | 13 | 13 | 0 | 0 | 13 | 0 | | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 177+00.00 | 12 | 12 | 0 | 0 | 12 | 0 | | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 177+50.00 | | | | | | | | | | | | | | | | | | | | | | | |
| DET1B | | | | | | | | | | | | | | | | | | | | | | | |
| Totals: | 2,083 | 2,083 | 0 | 0 | 2,083 | 530 | 0 | 0 | 530 | 689 | 1,394 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station | Cut | | | | | Fill | | | | | | Checks (EW-102) | | Topsoil | | | | | | | | | |
|-----------|-----------------------------|----------------------------------|--------------------|----------------------------------|--------------------|------------------------------|---|------------------------------------|---------------------|---|---|--|--|-----------------------------------|-----------------------------------|--|--|------|------|------|------|------|--|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] | |
| | Total Cut Unadjusted Volume | Total Class 10 Unadjusted Volume | Topsoil Cut Volume | Template Pavement Removal Volume | Total Cut Adjusted | Total Fill Unadjusted Volume | Existing Topsoil Stripping Undercut (+Fill) | Existing Pavement Undercut (+Fill) | Total Fill Adjusted | Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor | Total Cut Adjusted Minus Fill w/ Shrink | Approx. Fill Vol. Below 5' & Above 20' w/ Shrink | Approx. Fill Volume Below 3' w/ Shrink | Topsoil Stripping Undercut Volume | Topsoil Placement Undercut Volume | Topsoil Placement With 1.4 Shrink Factor | Topsoil Stripping Minus Topsoil Placement w/Shrink | | | | | | |
| DET3 | | | | | | | | | | | | | | | | | | | | | | | |
| 134+50.00 | 19 | 19 | 0 | 0 | 19 | 0 | | | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 139+00.00 | 6 | 6 | 0 | 0 | 6 | 0 | | | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 139+50.00 | 9 | 9 | 0 | 0 | 9 | 0 | | | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 140+00.00 | 11 | 11 | 0 | 0 | 11 | 0 | | | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 140+50.00 | 13 | 13 | 0 | 0 | 13 | 0 | | | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 141+00.00 | 15 | 15 | 0 | 0 | 15 | 0 | | | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 141+50.00 | 16 | 16 | 0 | 0 | 16 | 0 | | | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 142+00.00 | 18 | 18 | 0 | 0 | 18 | 0 | | | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 142+50.00 | 20 | 20 | 0 | 0 | 20 | 0 | | | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 143+00.00 | 22 | 22 | 0 | 0 | 22 | 0 | | | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 143+50.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 144+00.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 144+50.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 145+00.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 145+50.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 146+00.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 146+50.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 147+00.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 147+50.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 148+00.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 148+50.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 149+00.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 149+50.00 | 21 | 21 | 0 | 0 | 21 | 0 | | | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 150+00.00 | 16 | 16 | 0 | 0 | 16 | 0 | | | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 150+50.00 | 12 | 12 | 0 | 0 | 12 | 0 | | | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 150+50.00 | 210 | 210 | 0 | 0 | 210 | 0 | | | 0 | 0 | 210 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 158+00.00 | 20 | 20 | 0 | 0 | 20 | 1 | | | 1 | 1 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 158+50.00 | 22 | 22 | 0 | 0 | 22 | 1 | | | 1 | 1 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 159+00.00 | 23 | 23 | 0 | 0 | 23 | 0 | | | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 159+50.00 | 23 | 23 | 0 | 0 | 23 | 0 | | | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 160+00.00 | 22 | 22 | 0 | 0 | 22 | 0 | | | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 160+50.00 | 44 | 44 | 0 | 0 | 44 | 0 | | | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 161+50.00 | 23 | 23 | 0 | 0 | 23 | 1 | | | 1 | 1 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 162+00.00 | 23 | 23 | 0 | 0 | 23 | 1 | | | 1 | 1 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 162+50.00 | 22 | 22 | 0 | 0 | 22 | 0 | | | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 163+00.00 | 22 | 22 | 0 | 0 | 22 | 0 | | | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 163+50.00 | 46 | 46 | 0 | 0 | 46 | 0 | | | 0 | 0 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 164+50.00 | 47 | 47 | 0 | 0 | 47 | 0 | | | 0 | 0 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 165+50.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 166+00.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 166+50.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 167+00.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 167+50.00 | 23 | 23 | 0 | 0 | 23 | 0 | | | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 168+00.00 | 24 | 24 | 0 | 0 | 24 | 0 | | | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 168+50.00 | 23 | 23 | 0 | 0 | 23 | 0 | | | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 169+00.00 | 43 | 43 | 0 | 0 | 43 | 0 | | | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 170+00.00 | 19 | 19 | 0 | 0 | 19 | 0 | | | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 170+50.00 | 17 | 17 | 0 | 0 | 17 | 0 | | | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 171+00.00 | 29 | 29 | 0 | 0 | 29 | 0 | | | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 172+00.00 | 12 | 12 | 0 | 0 | 12 | 0 | | | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 172+50.00 | | | | | | | | | | | | | | | | | | | | | | | |
| DET3 | | | | | | | | | | | | | | | | | | | | | | | |
| Totals: | 1,295 | 1,295 | 0 | 0 | 1,295 | 4 | 0 | 0 | 4 | 6 | 1,290 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station | Cut | | | | | Fill | | | | | | Checks (EW-102) | | Topsoil | | | | | [18] | [19] | [20] | [21] | [22] |
|-----------|-----------------------------|----------------------------------|--------------------|----------------------------------|--------------------|------------------------------|--|------------------------------------|---------------------|---|---|--|--|-----------------------------------|-----------------------------------|--|--|--|------|------|------|------|------|
| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | | | | | | |
| | Total Cut Unadjusted Volume | Total Class 10 Unadjusted Volume | Topsoil Cut Volume | Template Pavement Removal Volume | Total Cut Adjusted | Total Fill Unadjusted Volume | Existing Topsoil Stripping Undercut (+ Fill) | Existing Pavement Undercut (+Fill) | Total Fill Adjusted | Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor | Total Cut Adjusted Minus Fill w/ Shrink | Approx. Fill Vol. Below 5' & Above 20' w/ Shrink | Approx. Fill Volume Below 3' w/ Shrink | Topsoil Stripping Undercut Volume | Topsoil Placement Undercut Volume | Topsoil Placement With 1.4 Shrink Factor | Topsoil Stripping Minus Topsoil Placement w/Shrink | | | | | | |
| 249+00.00 | 36 | 36 | 0 | 0 | 36 | 78 | | | 78 | 101 | -65 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 249+50.00 | 26 | 26 | 0 | 0 | 26 | 166 | | | 166 | 216 | -190 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 250+00.00 | 25 | 25 | 0 | 0 | 25 | 210 | | | 210 | 273 | -248 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 250+50.00 | 26 | 26 | 0 | 0 | 26 | 264 | | | 264 | 343 | -317 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 251+00.00 | 27 | 27 | 0 | 0 | 27 | 267 | | | 267 | 347 | -320 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 251+50.00 | 27 | 27 | 0 | 0 | 27 | 216 | | | 216 | 281 | -254 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 252+00.00 | 26 | 26 | 0 | 0 | 26 | 155 | | | 155 | 202 | -176 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 252+50.00 | 27 | 27 | 0 | 0 | 27 | 89 | | | 89 | 116 | -89 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 253+00.00 | 30 | 30 | 0 | 0 | 30 | 31 | | | 31 | 40 | -10 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 253+50.00 | 32 | 32 | 0 | 0 | 32 | 6 | | | 6 | 8 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 254+00.00 | 31 | 31 | 0 | 0 | 31 | 1 | | | 1 | 1 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 254+50.00 | 29 | 29 | 0 | 0 | 29 | 0 | | | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 255+00.00 | 27 | 27 | 0 | 0 | 27 | 0 | | | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 255+50.00 | 26 | 26 | 0 | 0 | 26 | 0 | | | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 256+00.00 | 25 | 25 | 0 | 0 | 25 | 0 | | | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 256+50.00 | 22 | 22 | 0 | 0 | 22 | 0 | | | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| 257+00.00 | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| DET5A | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Totals: | 2,560 | 2,560 | 0 | 0 | 2,560 | 12,131 | 0 | 0 | 12,131 | 15,771 | -13,211 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | |

LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

- Existing Ground Line
- ===== Proposed Template
- ===== Proposed Topsoil Placement
- Additional Topsoil Removal
- Subgrade Treatment
- Granular Shoulder
- ===== Pavement
- Existing Pipe\R/CB
- ===== Proposed Pipe\R/CB
- ===== Proposed Dike
- ===== All Elements Associated with Proposed Entrances

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TS ----- Topsoil (Class 10)
- SLOPE DRESSING ----- Slope Dressing Only
- CL 10 ----- Class 10 Materials
- SEL LO ----- Select Loams And Clay-Loams
- SEL SA ----- Select Sand
- UNS A ----- Unsuitable Type A Disposal
- UNS B ----- Unsuitable Type B Disposal
- UNS C ----- Unsuitable Type C Disposal
- SHALE ----- Shale
- WASTE ----- Waste
- B&W LS ----- Broken and Weathered Rock
- ROCK ----- Solid Rock
- BLDRS ----- Boulders

Note: All layer lines and descriptions identify layers above the line.

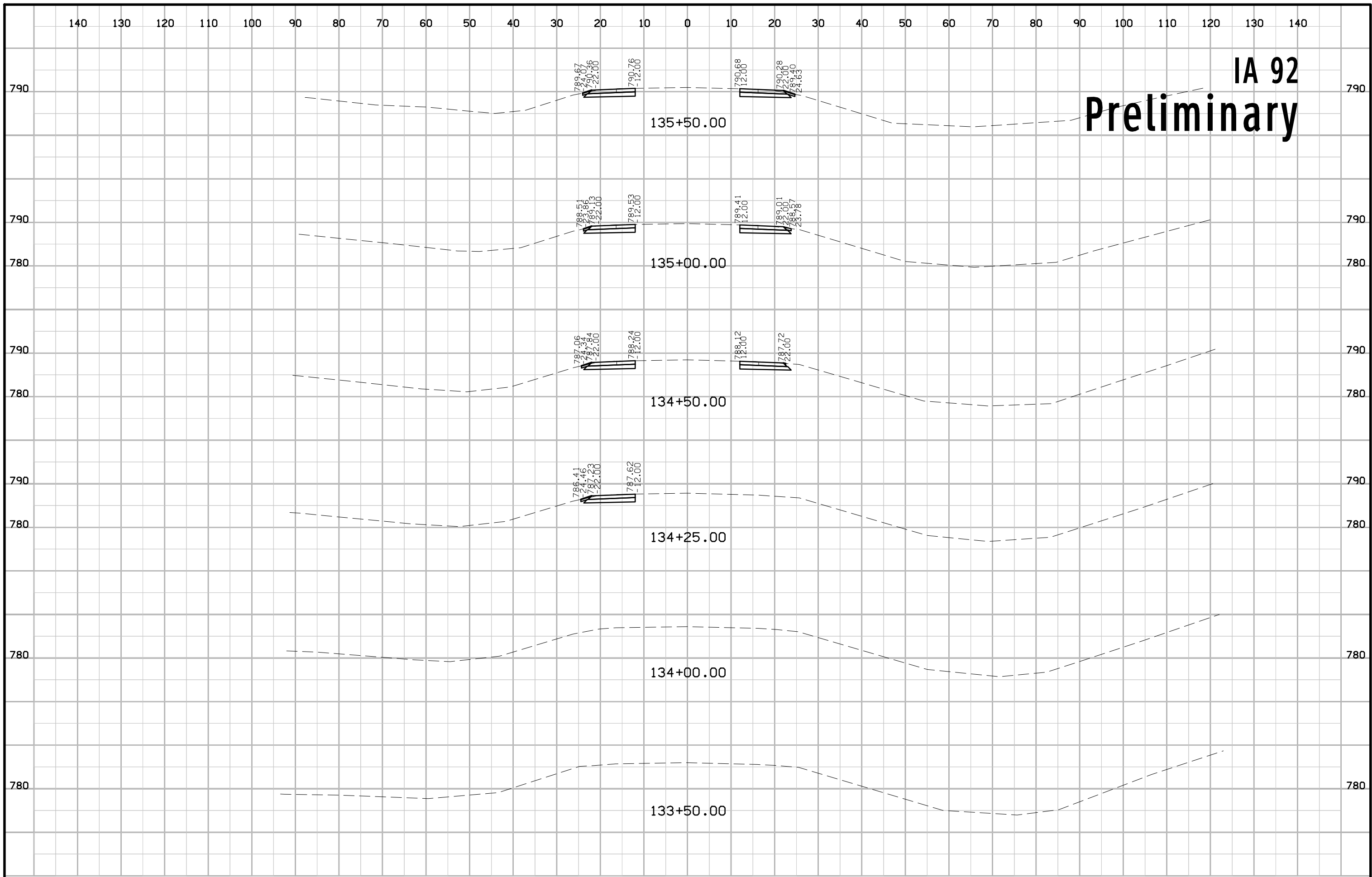
Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

SYMBOL LEGEND OF CROSS SECTION SHEETS

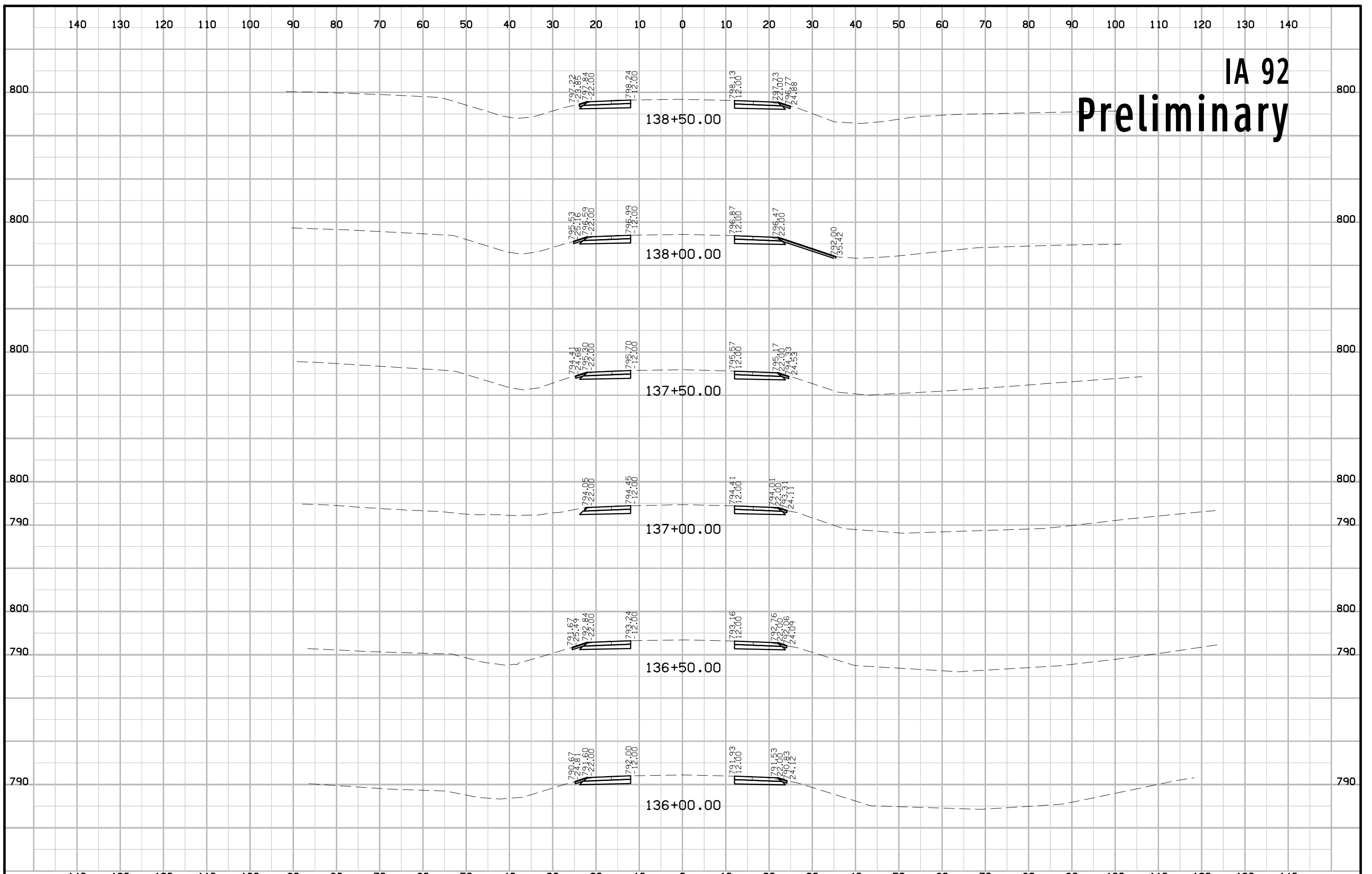
- Existing ROW
----- Existing Right-of-Way Limit
- Proposed ROW
----- Proposed Right-of-Way Limit
- Temporary ROW
----- Temporary Right-of-Way Limit

**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET**

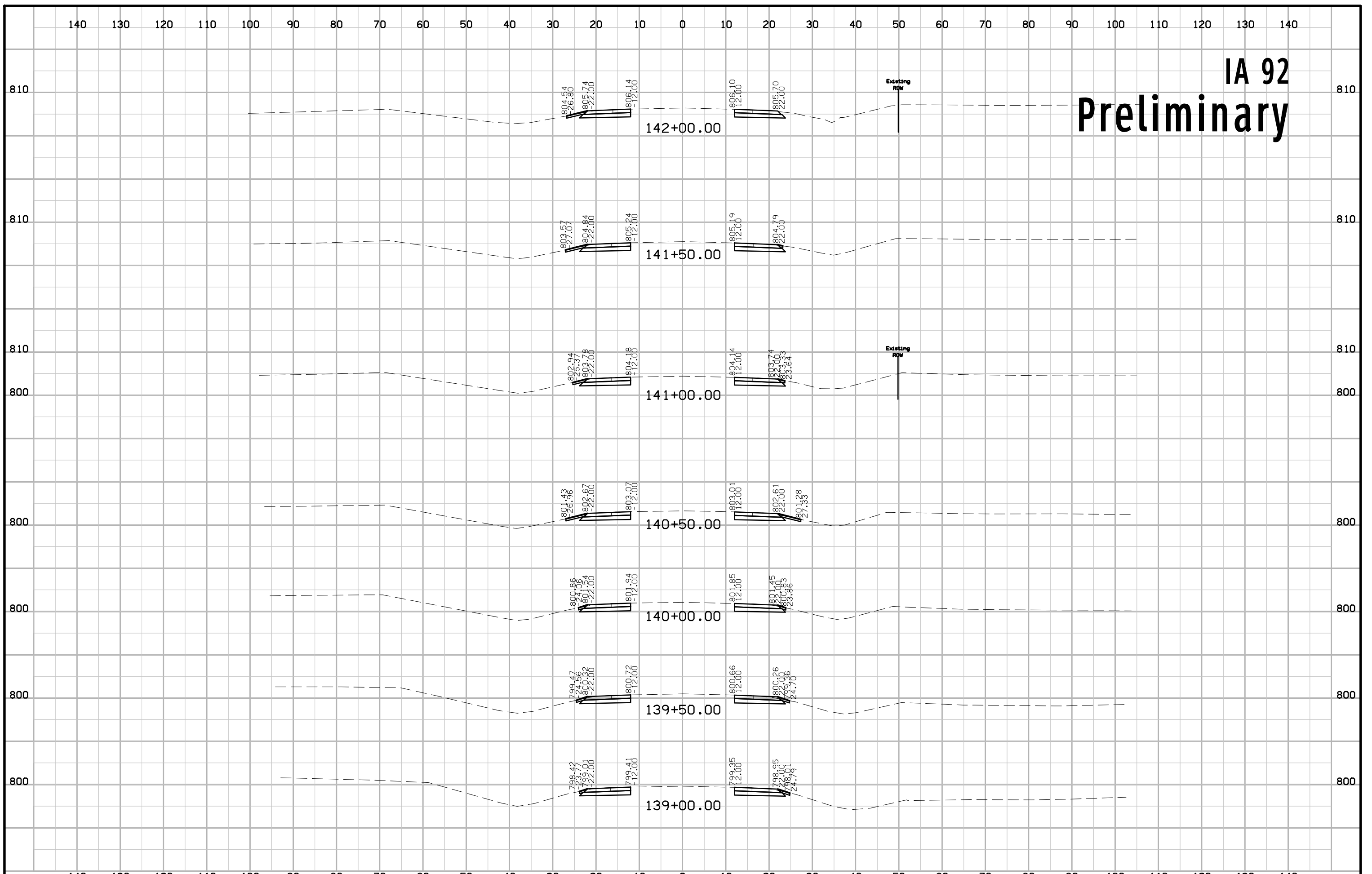
(COVERS SHEET SERIES W, X, Y, & Z)



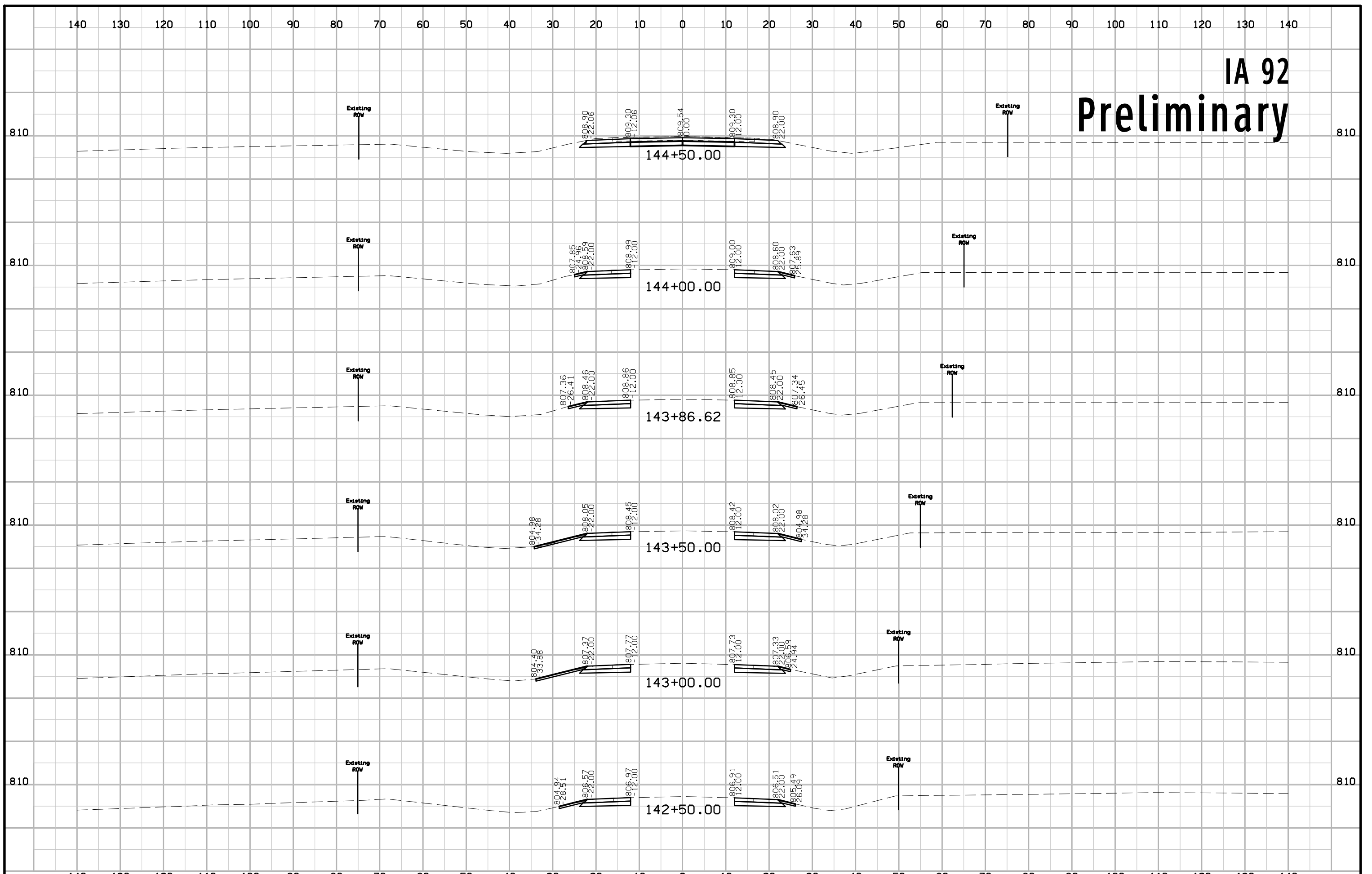
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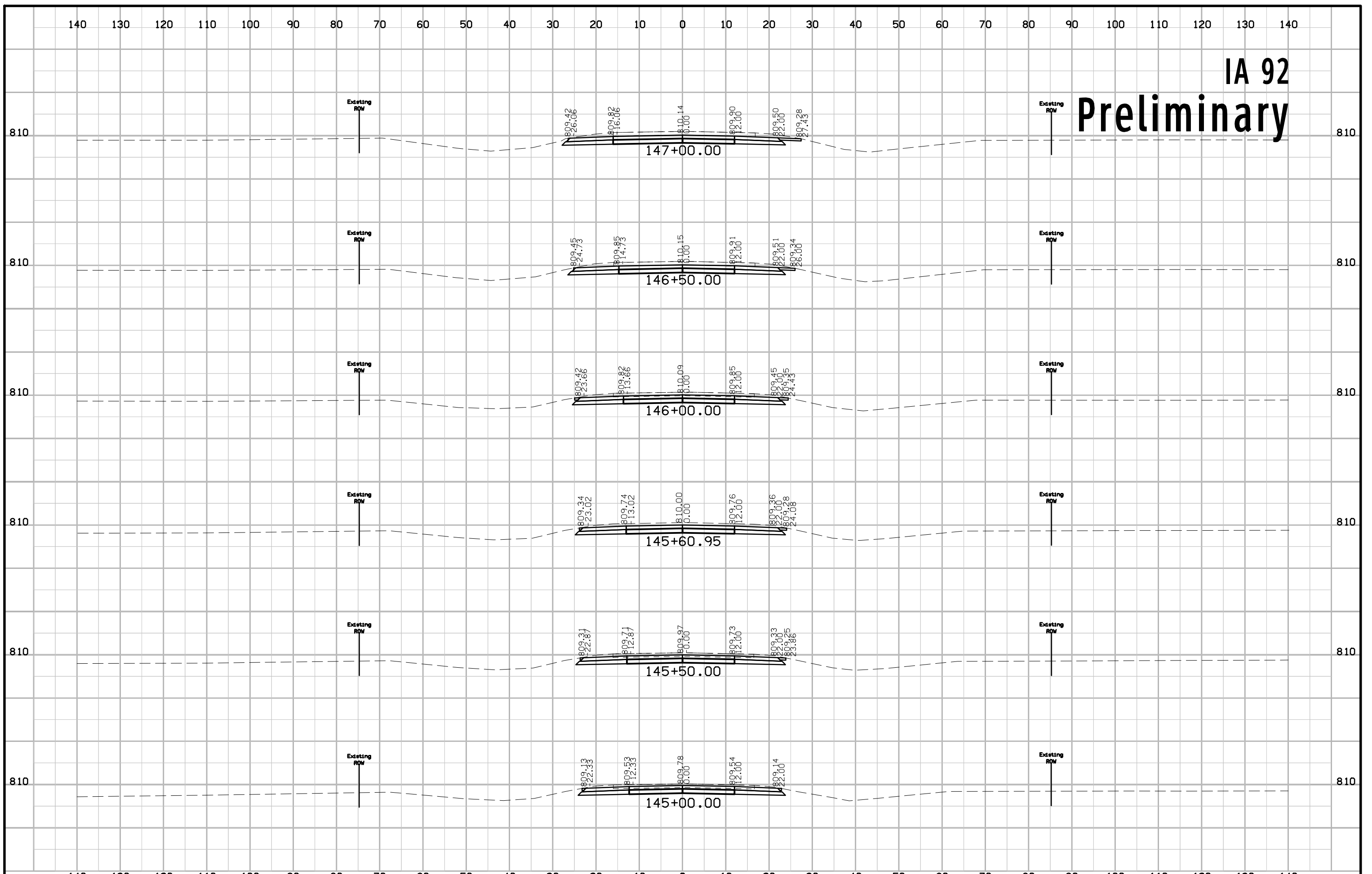
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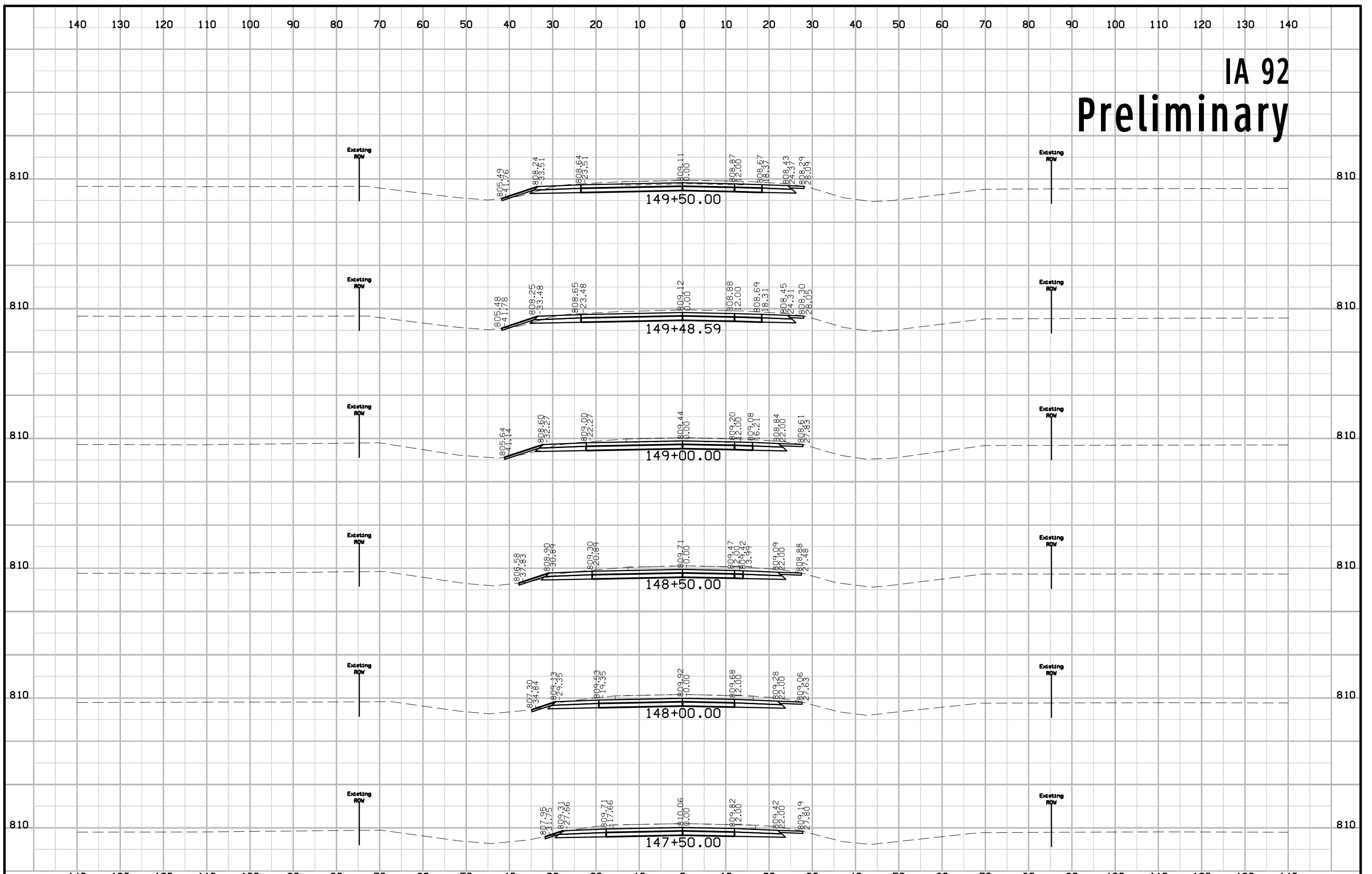
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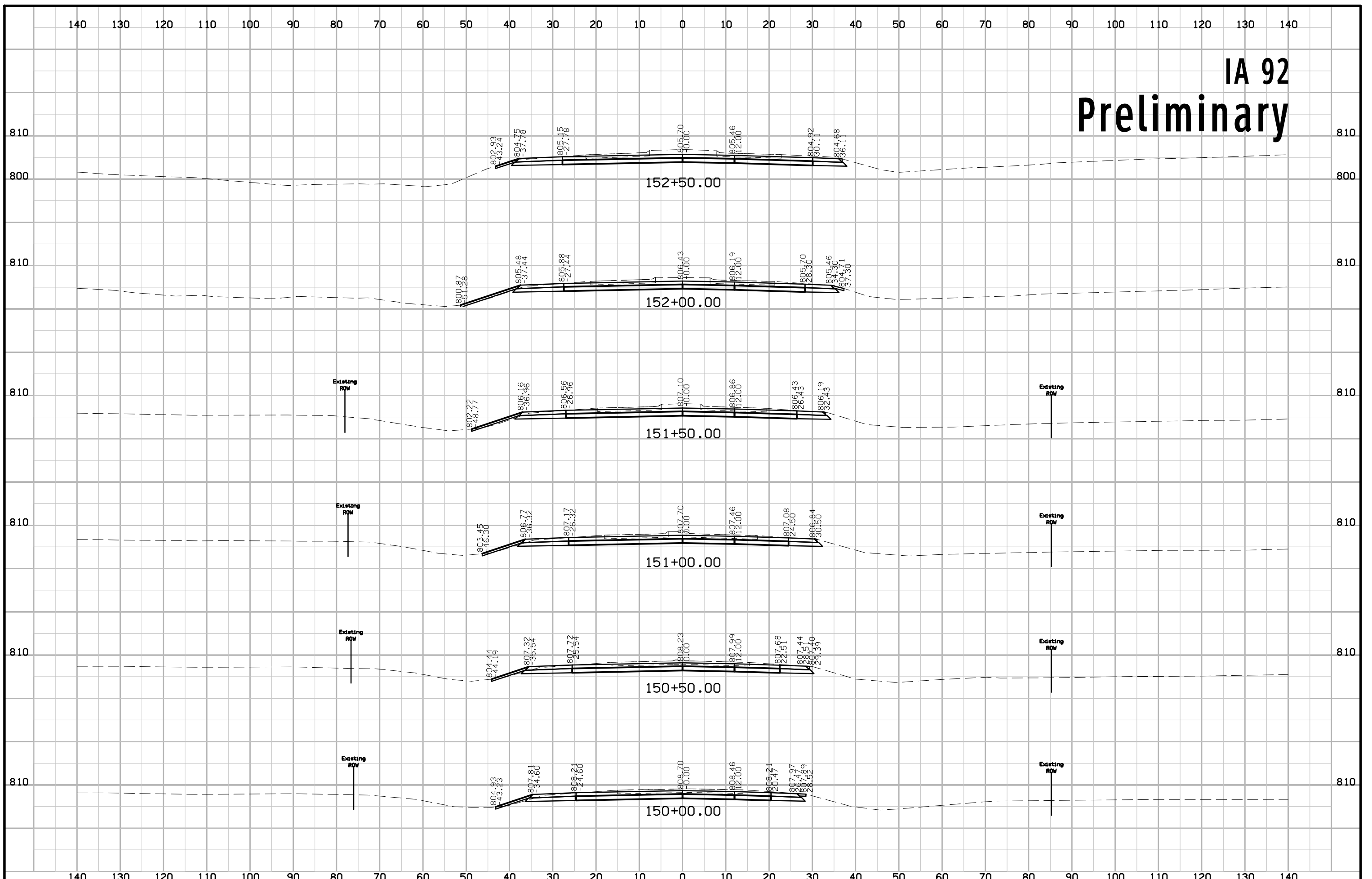
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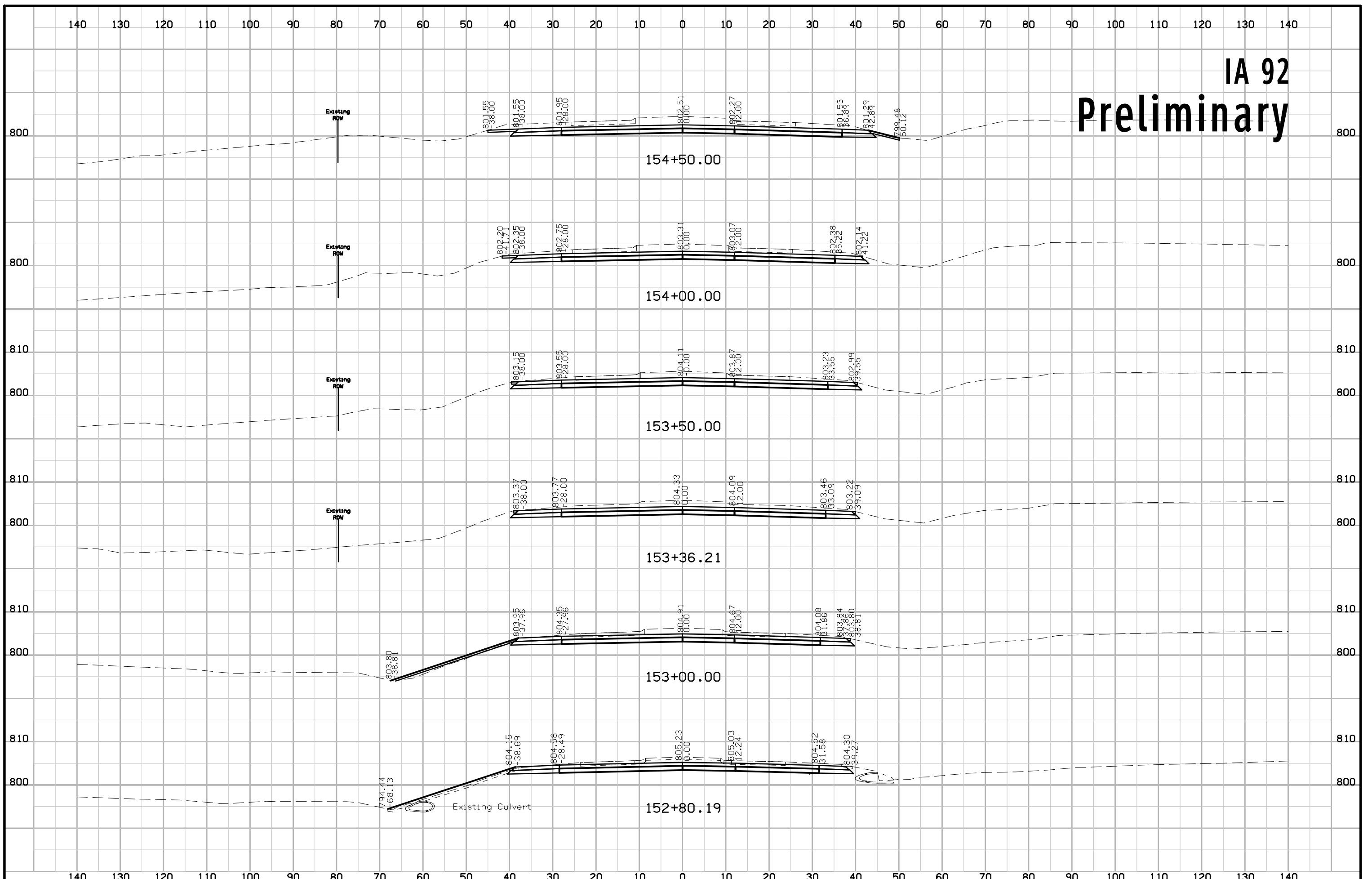
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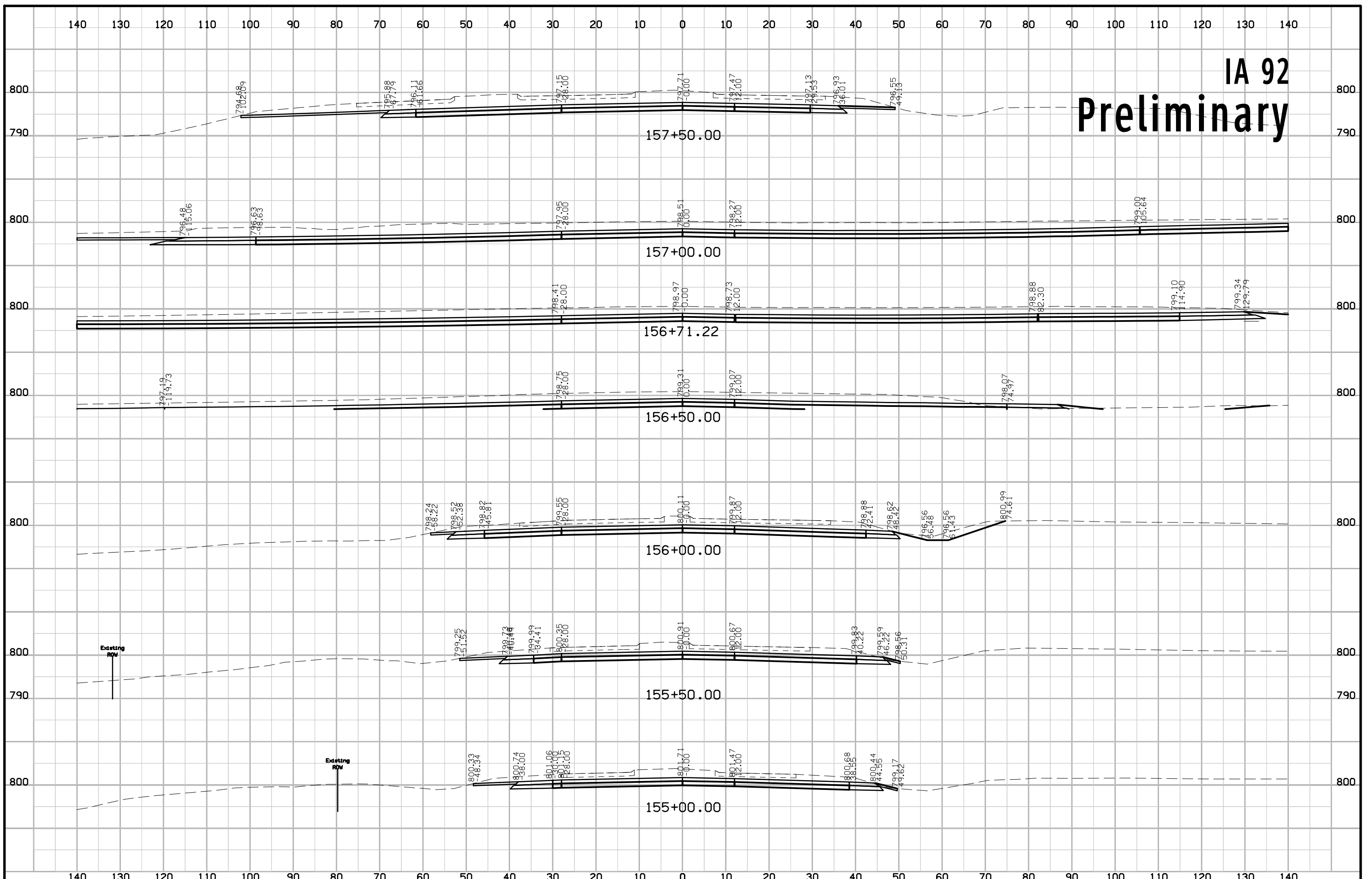
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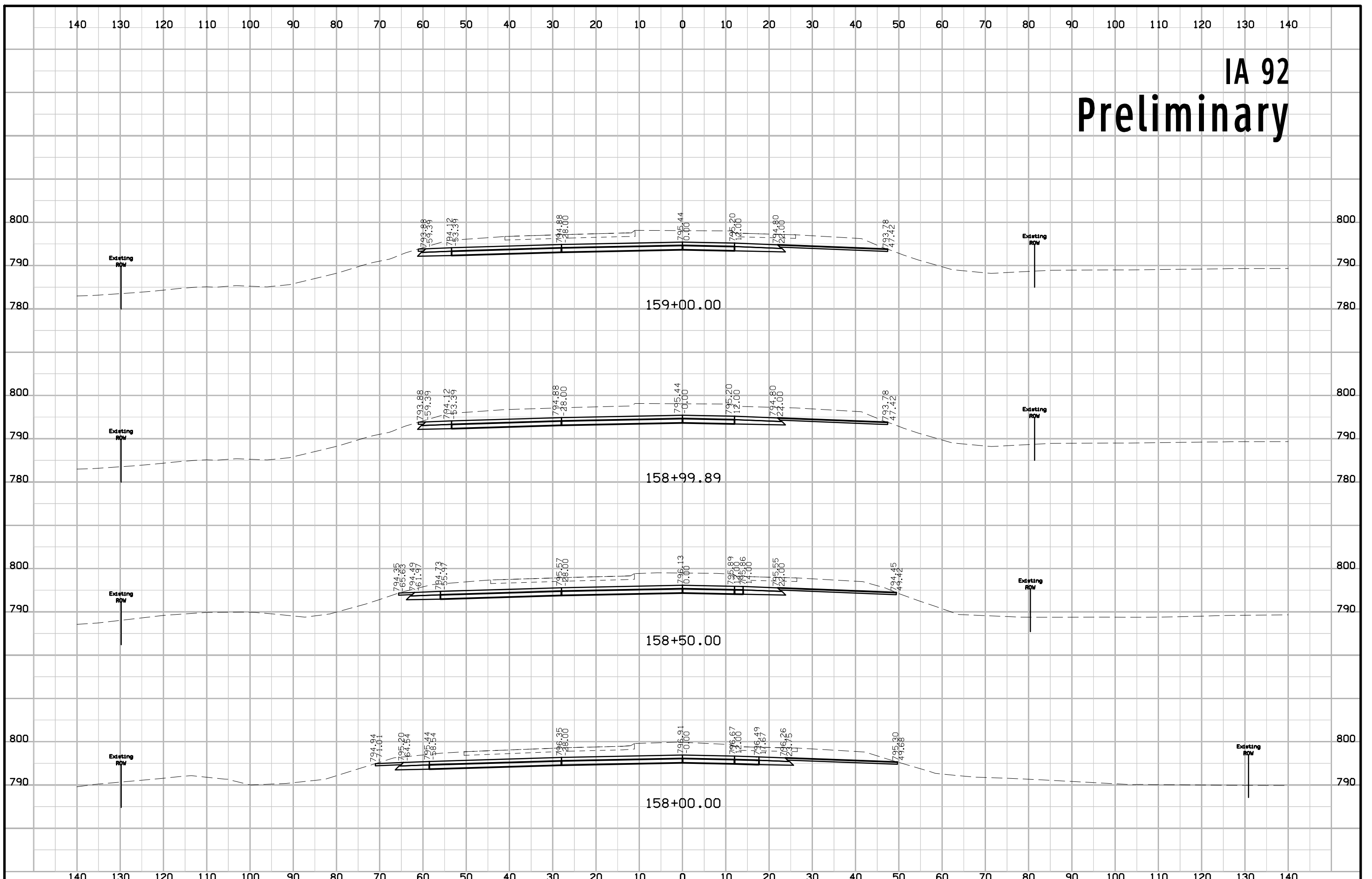
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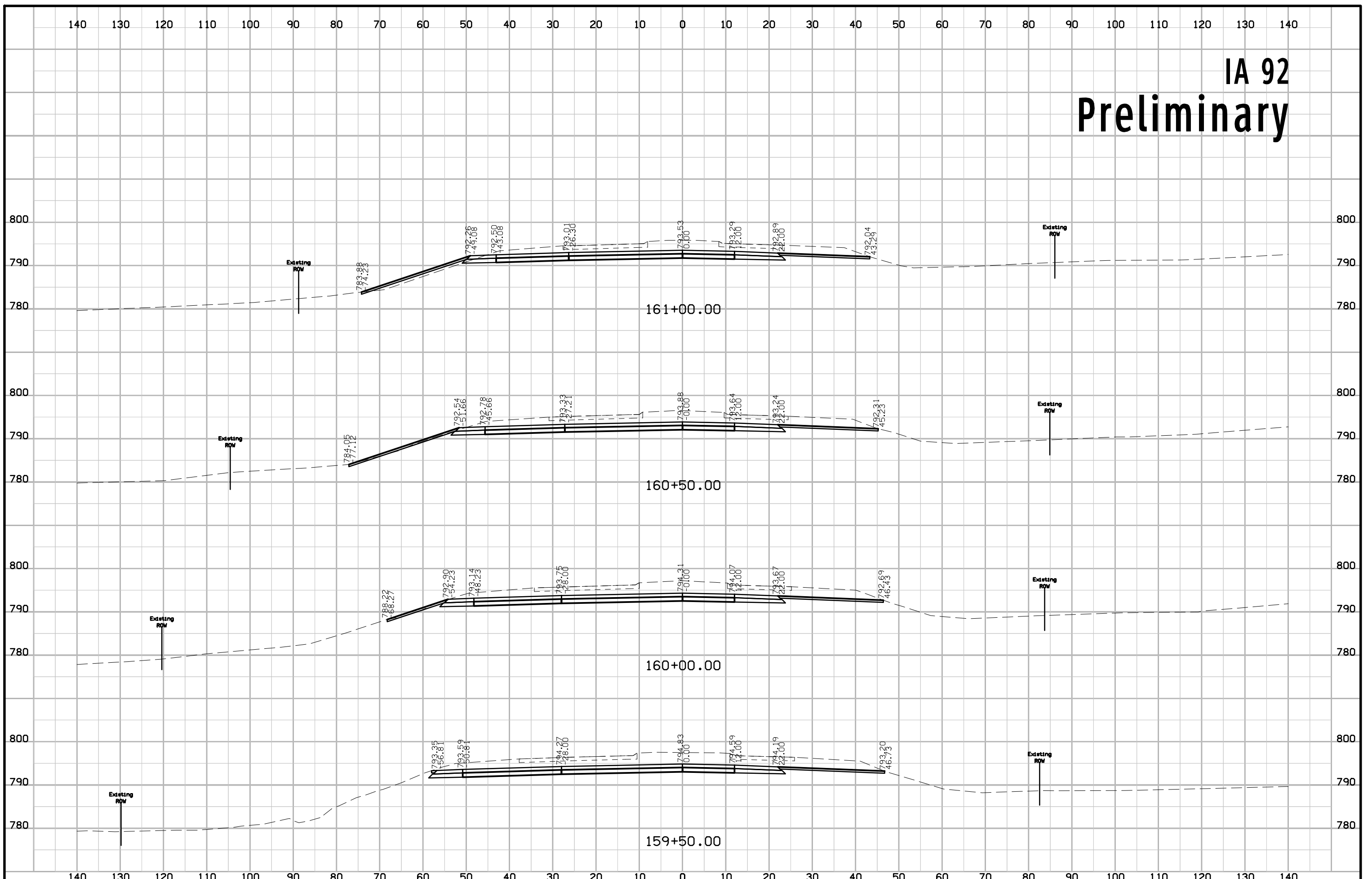
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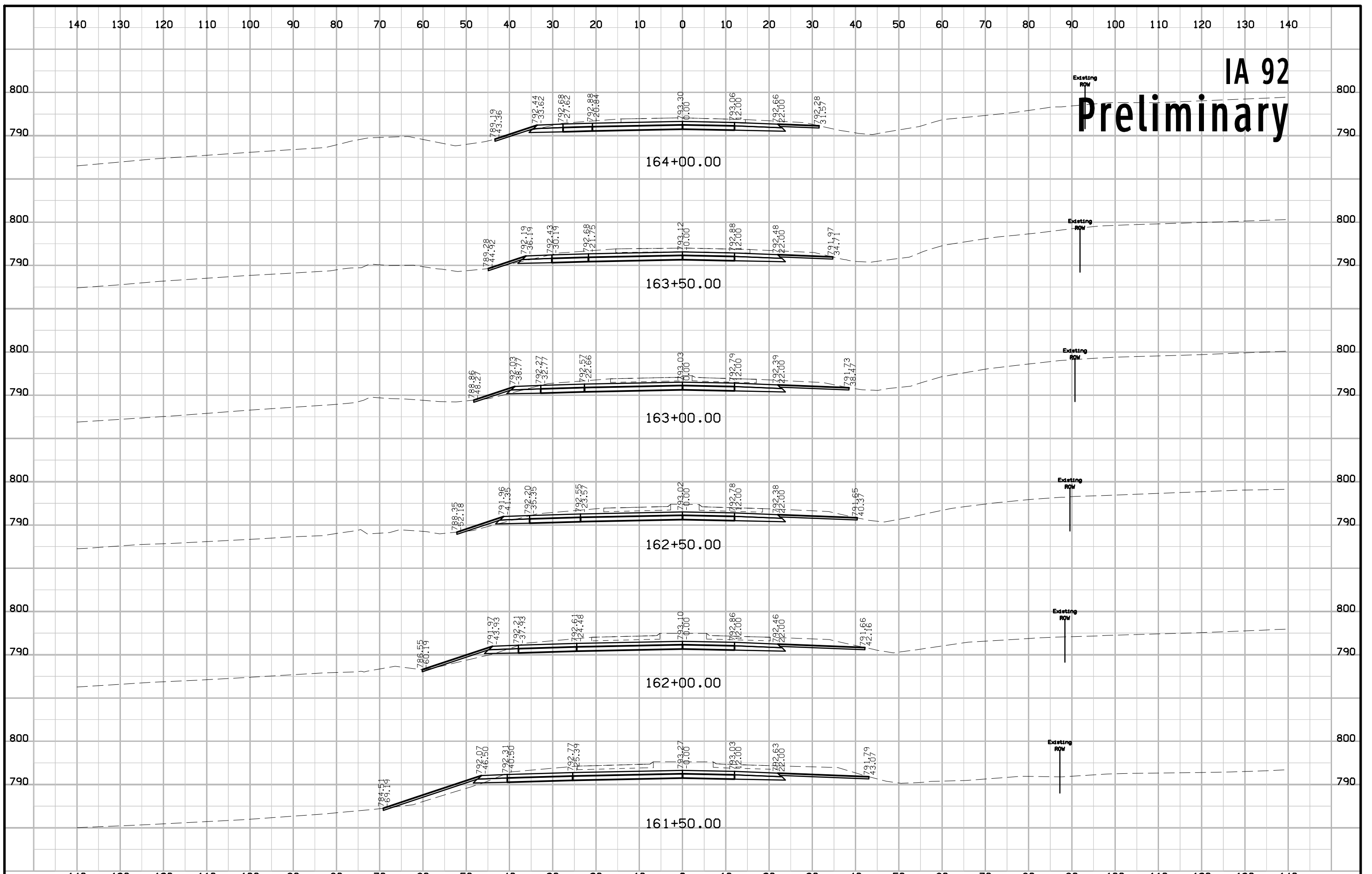


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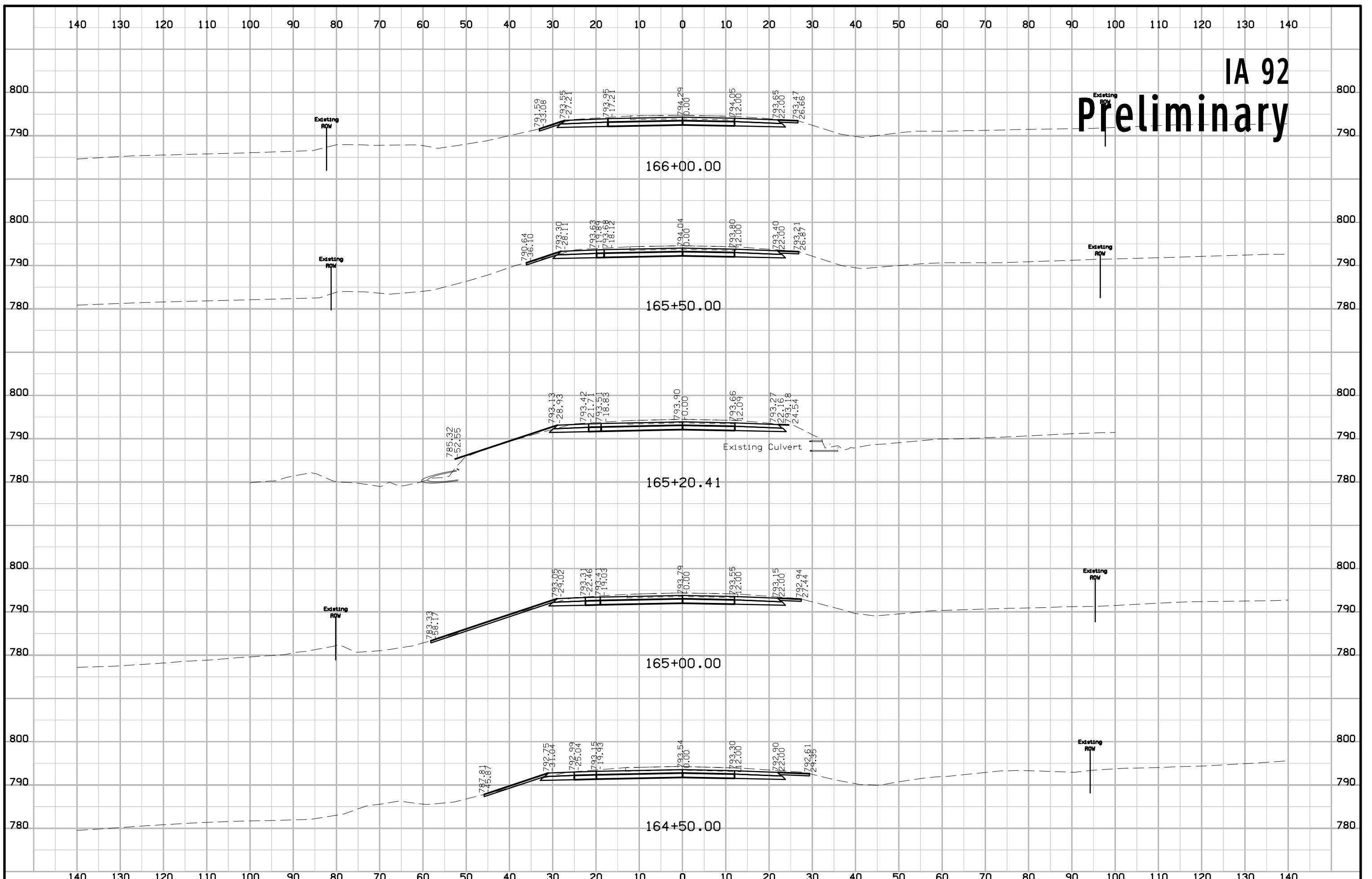
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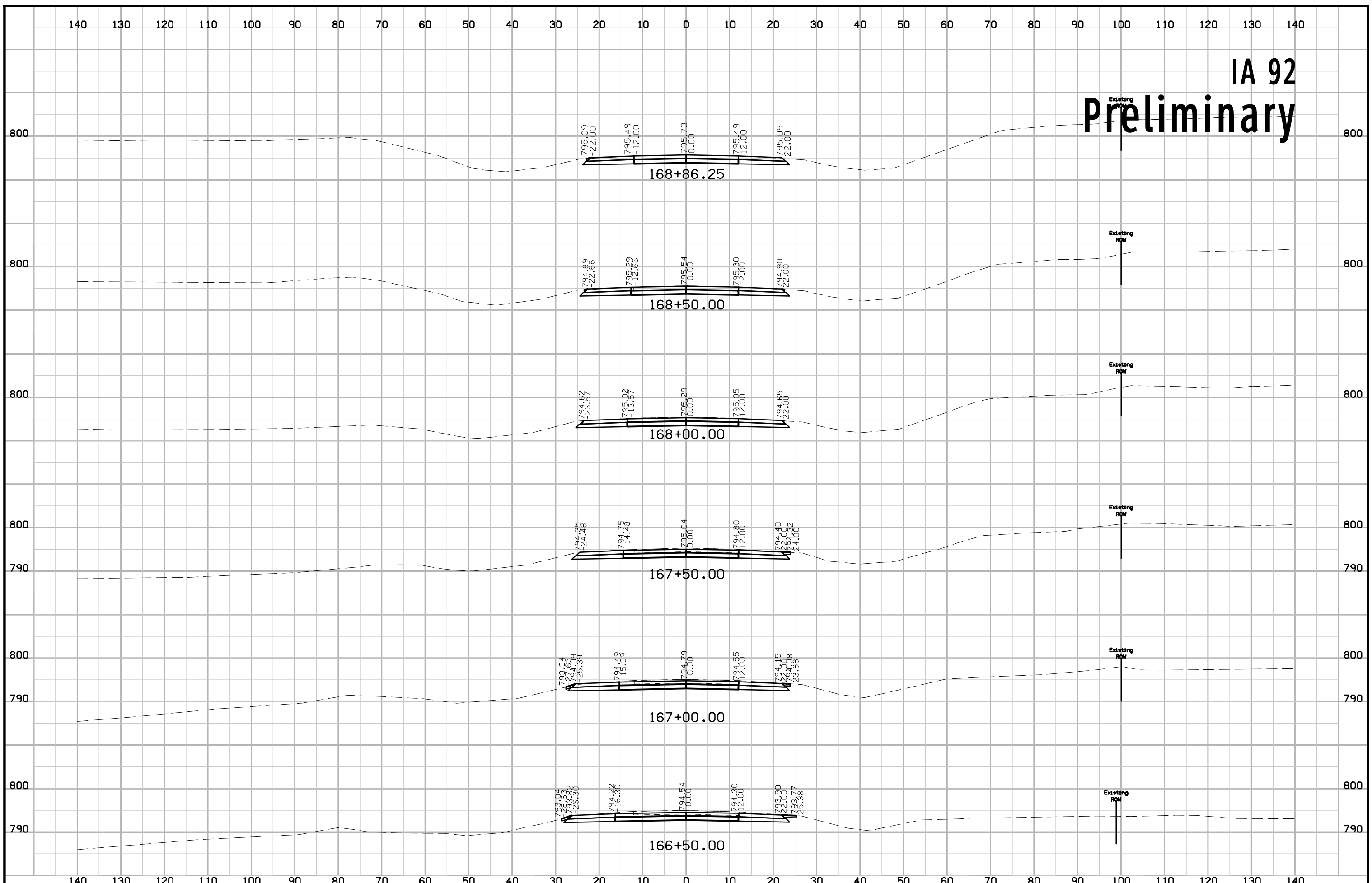
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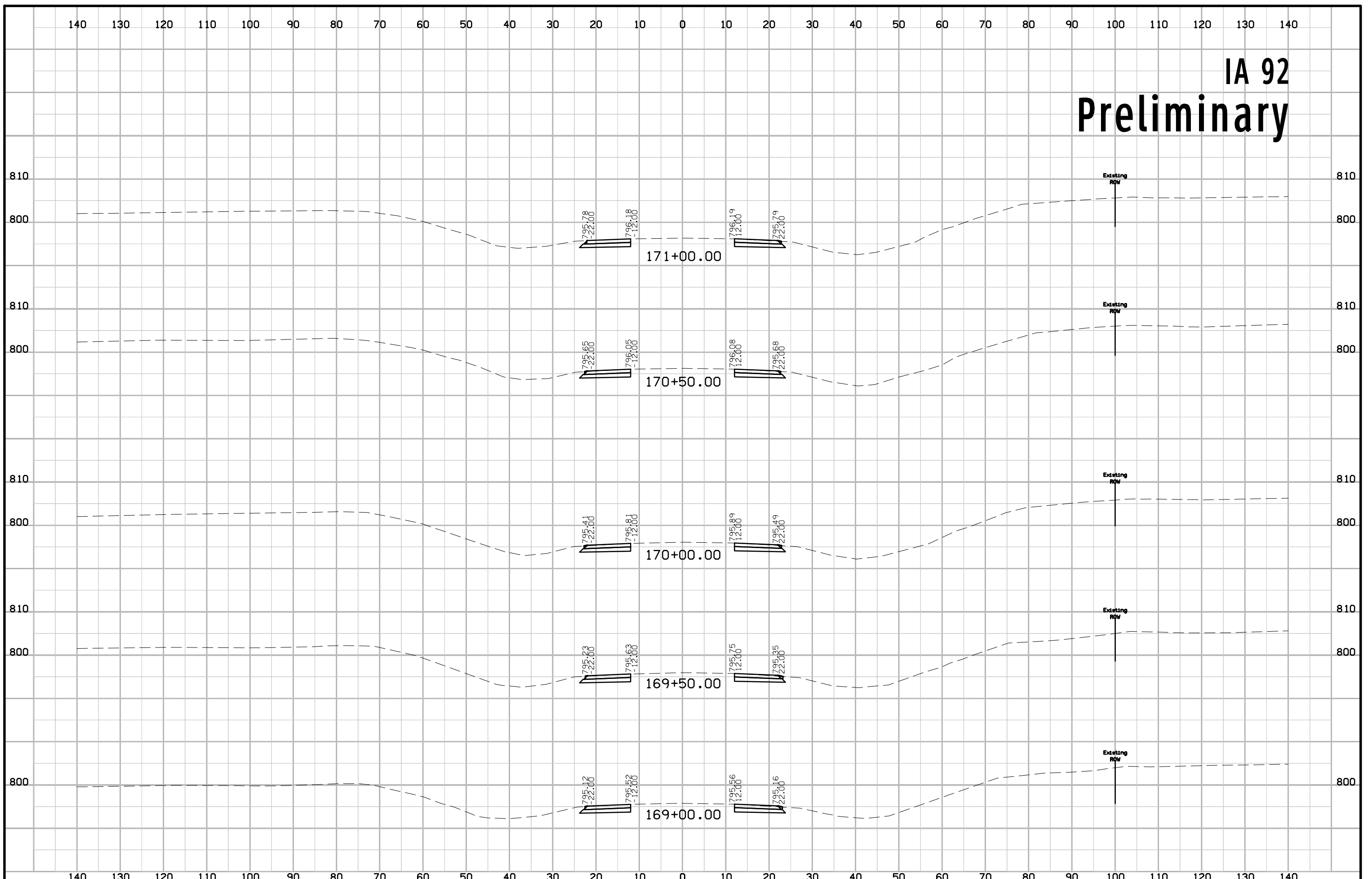


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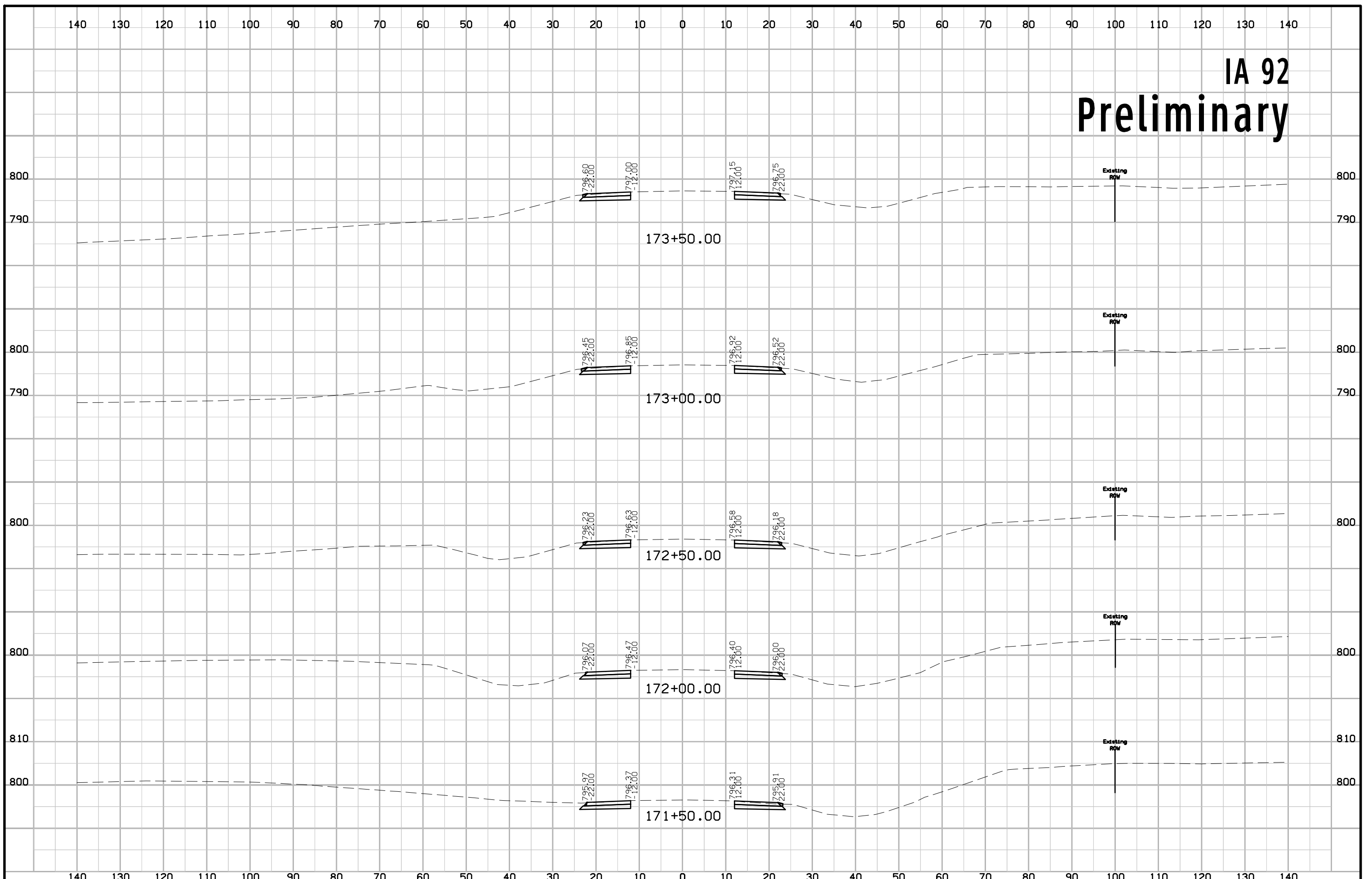
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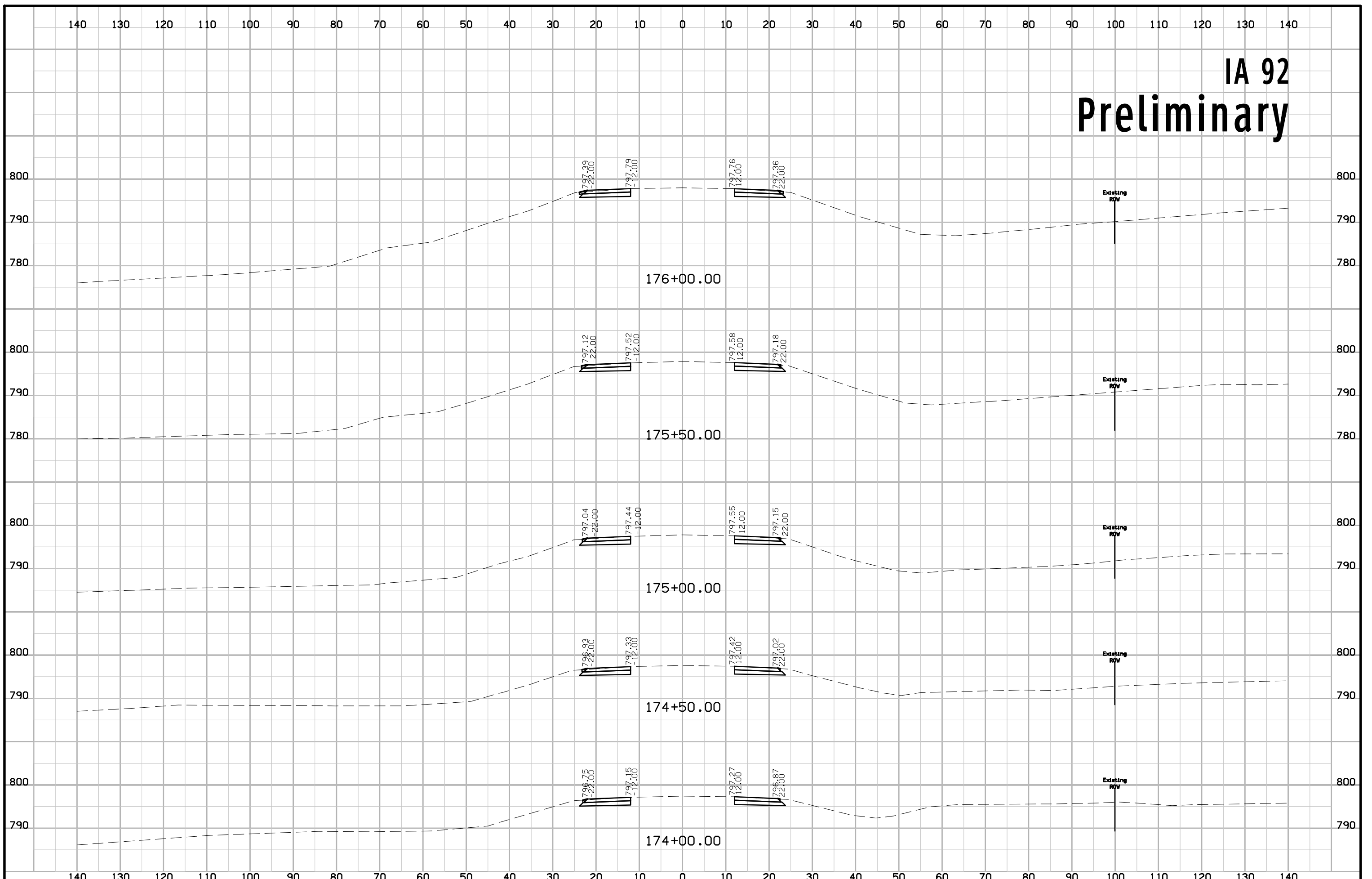
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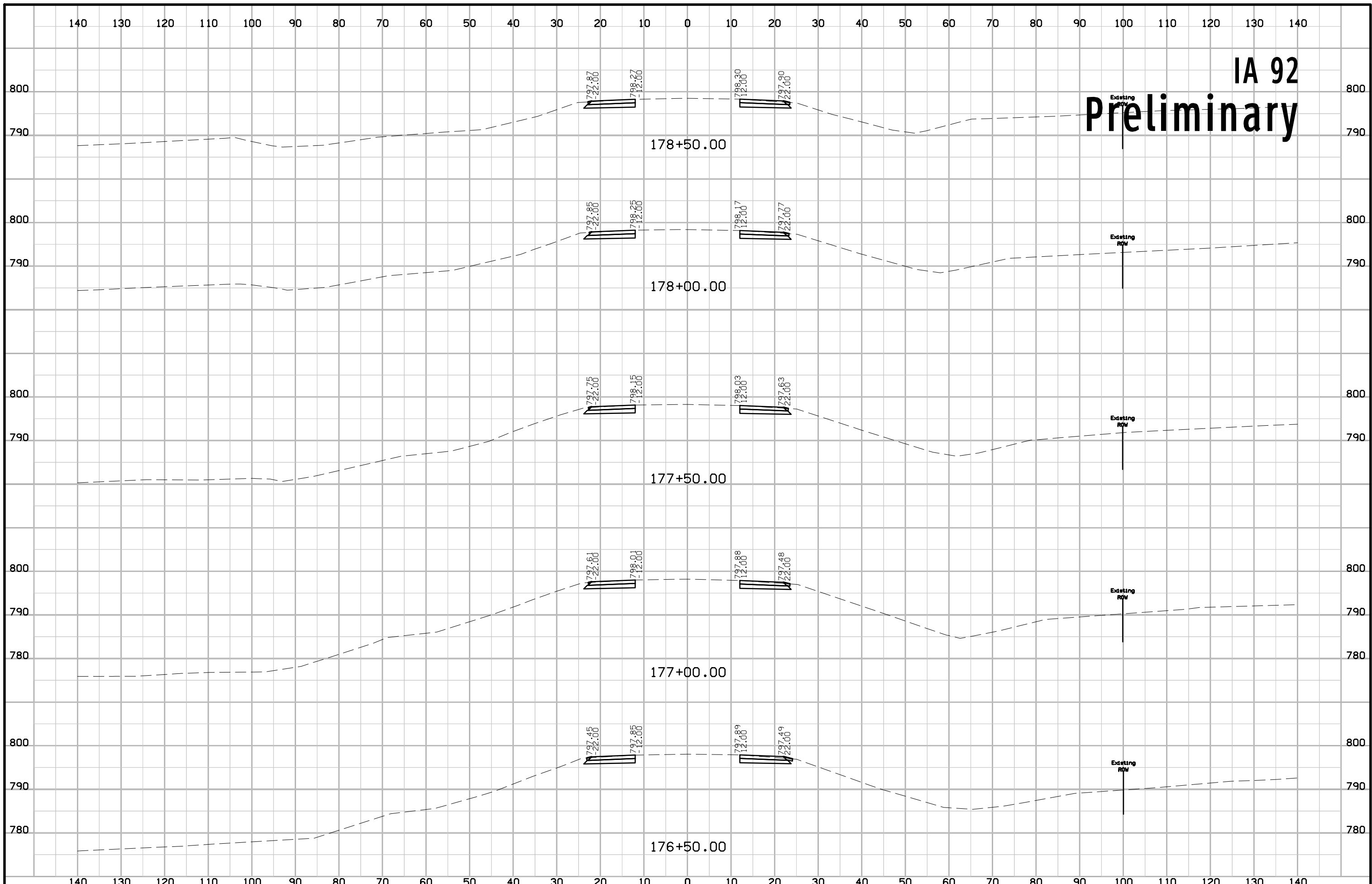


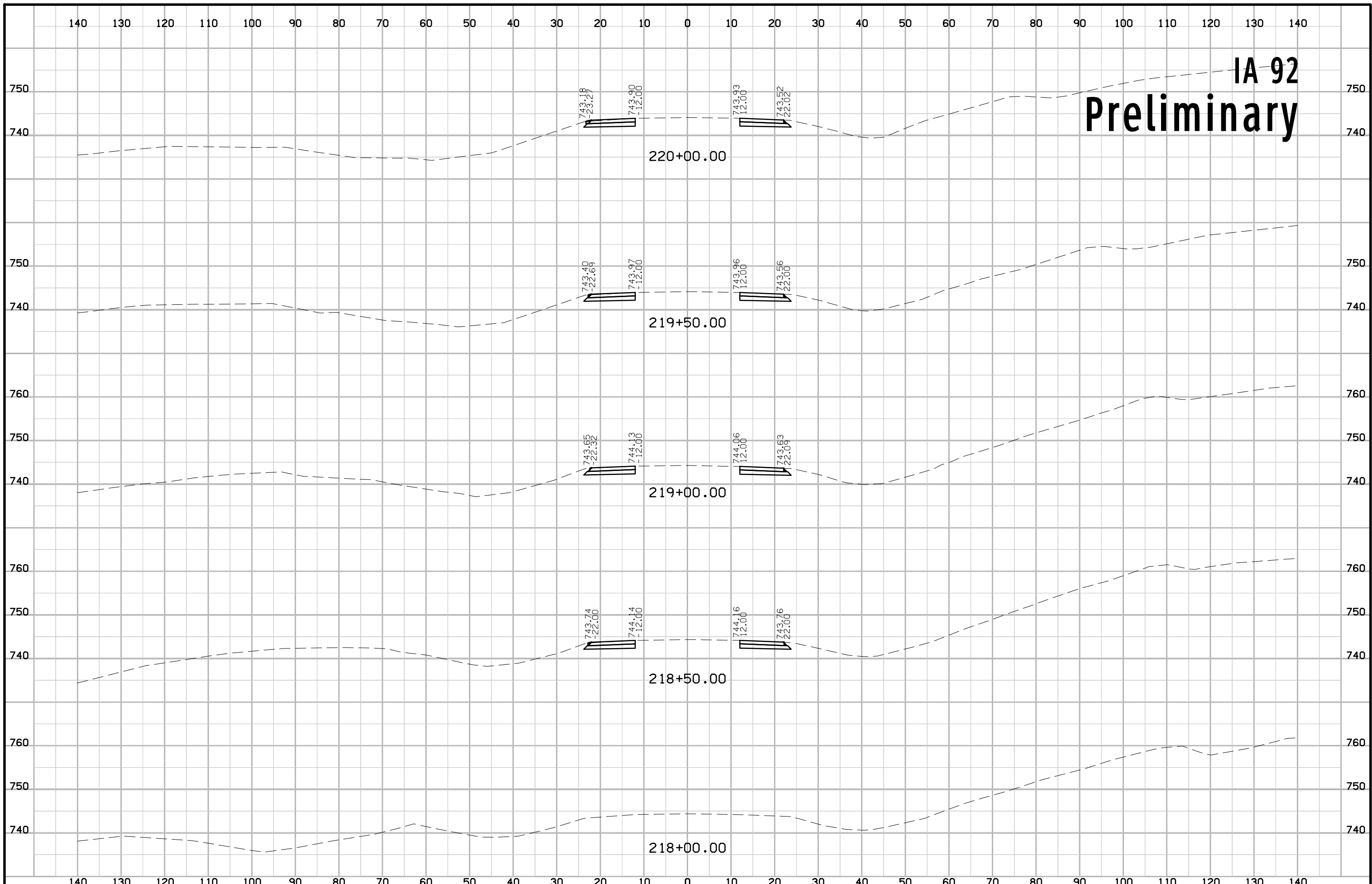
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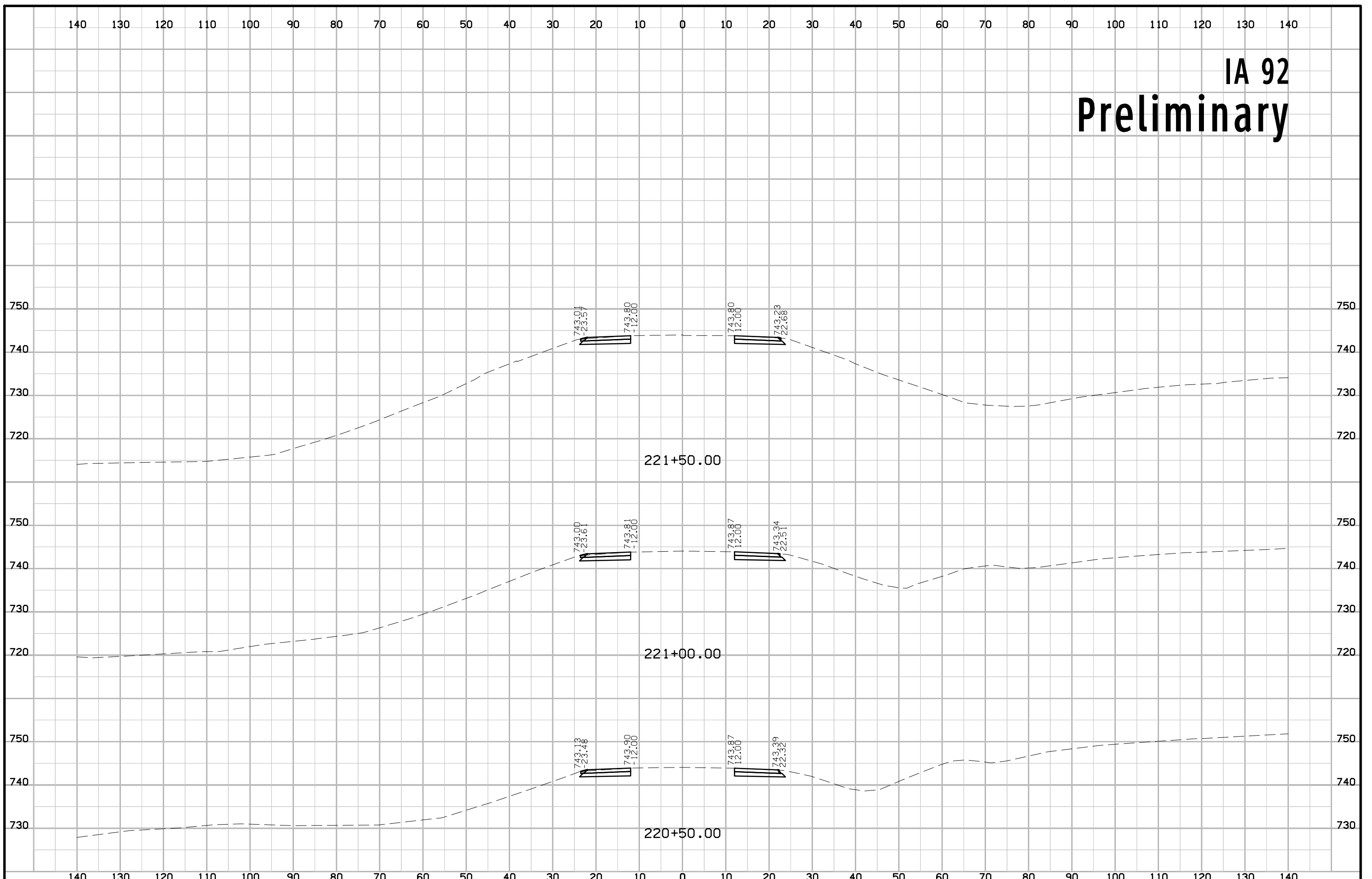
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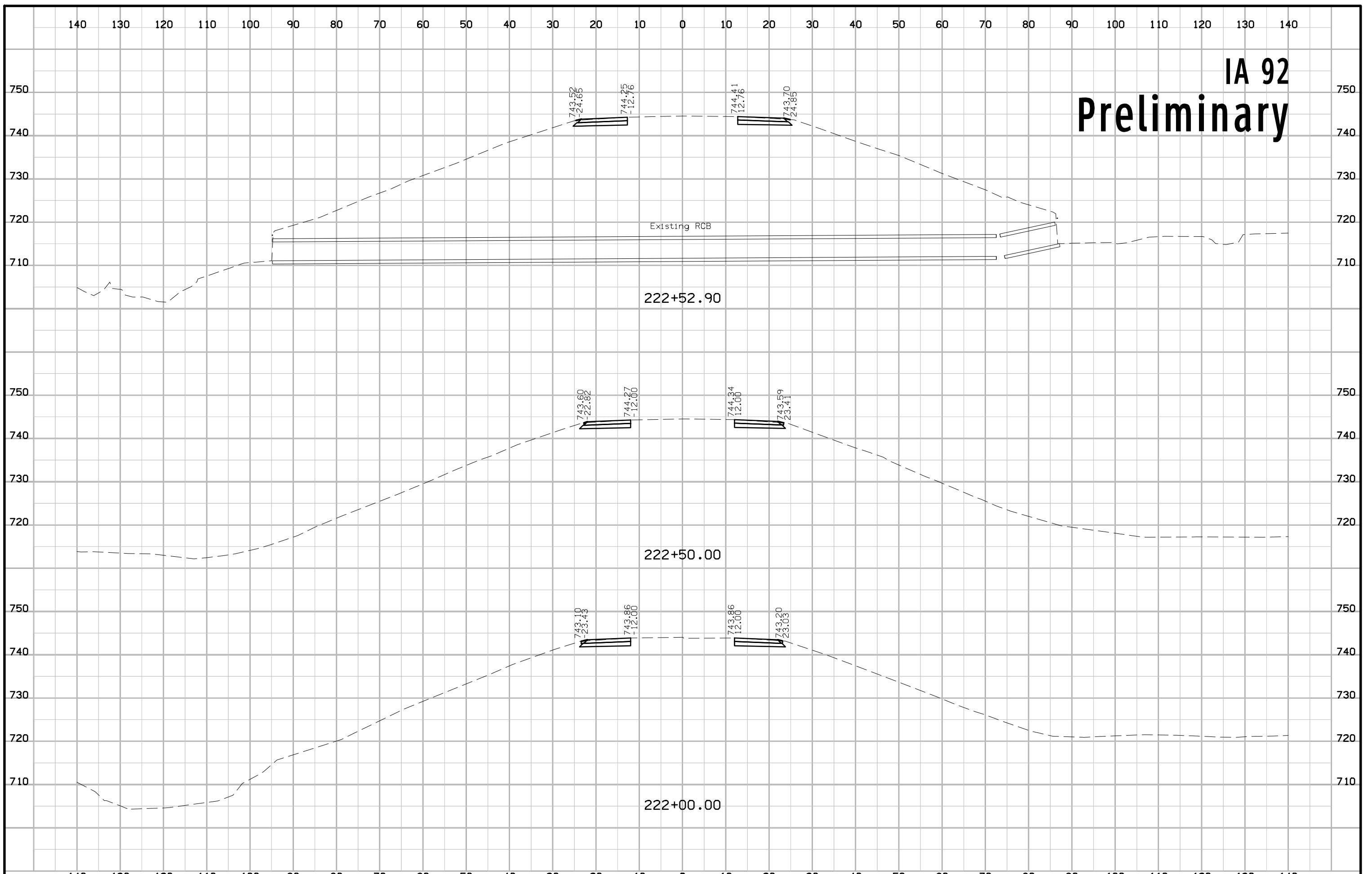




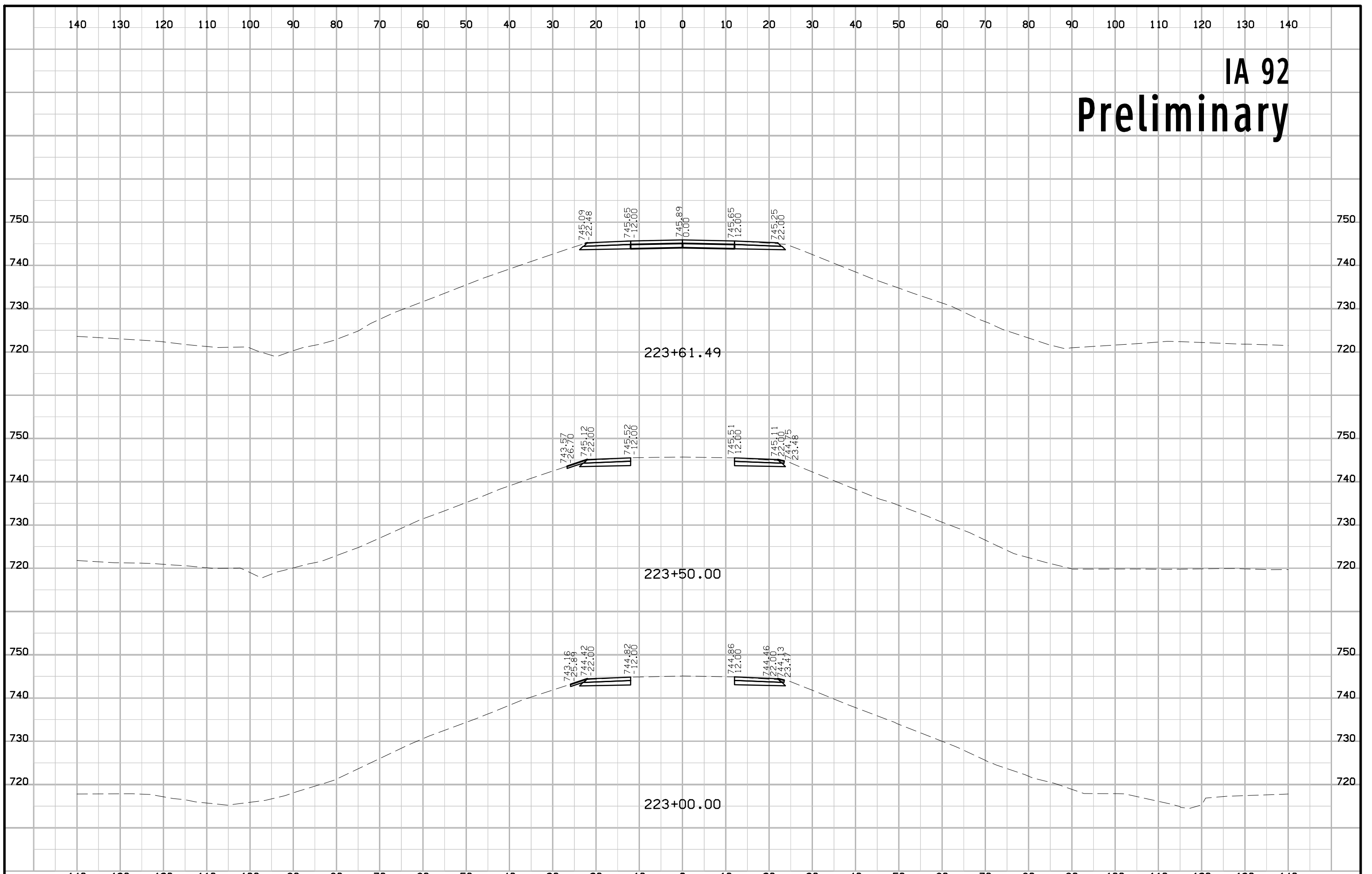
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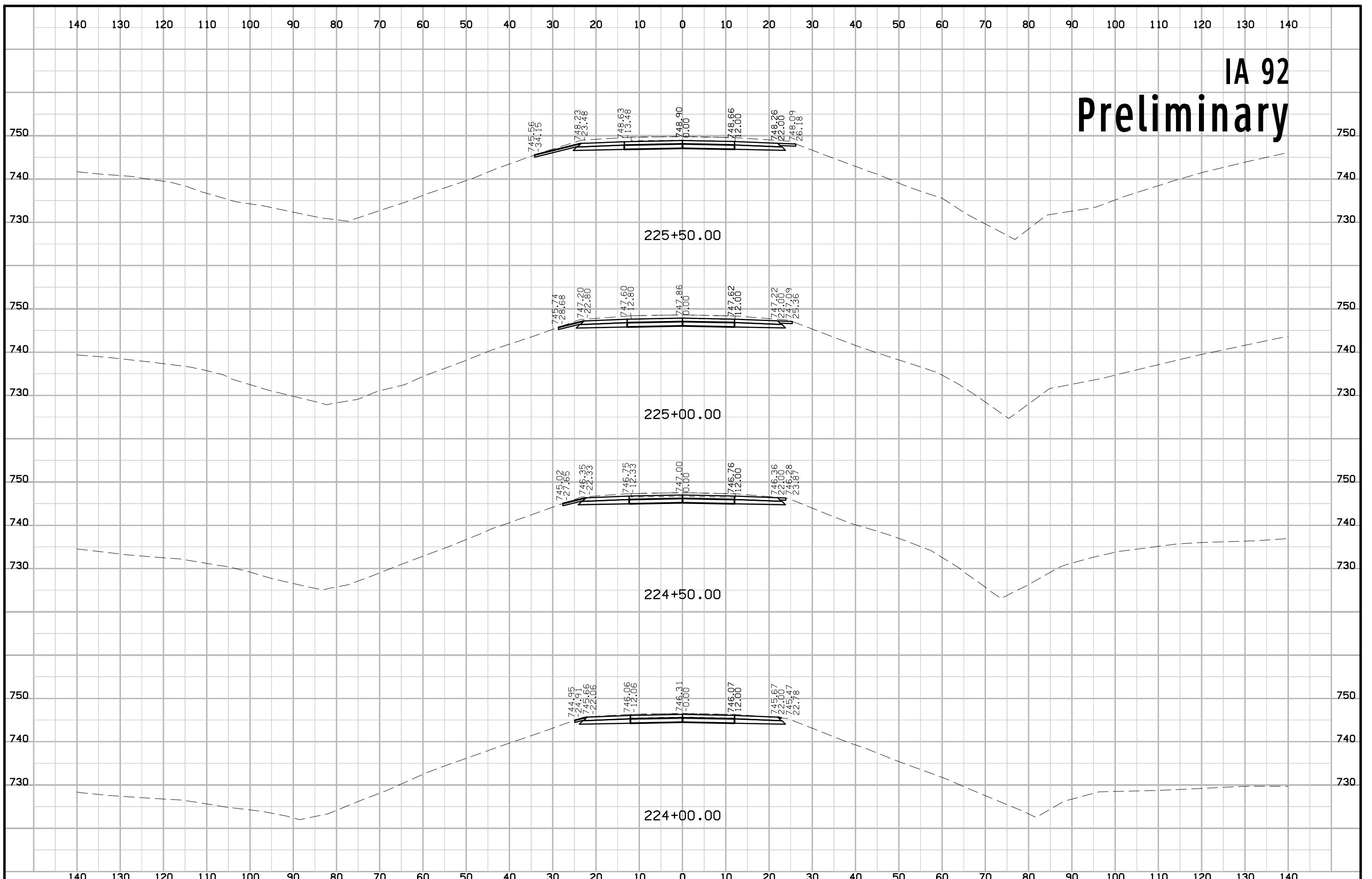
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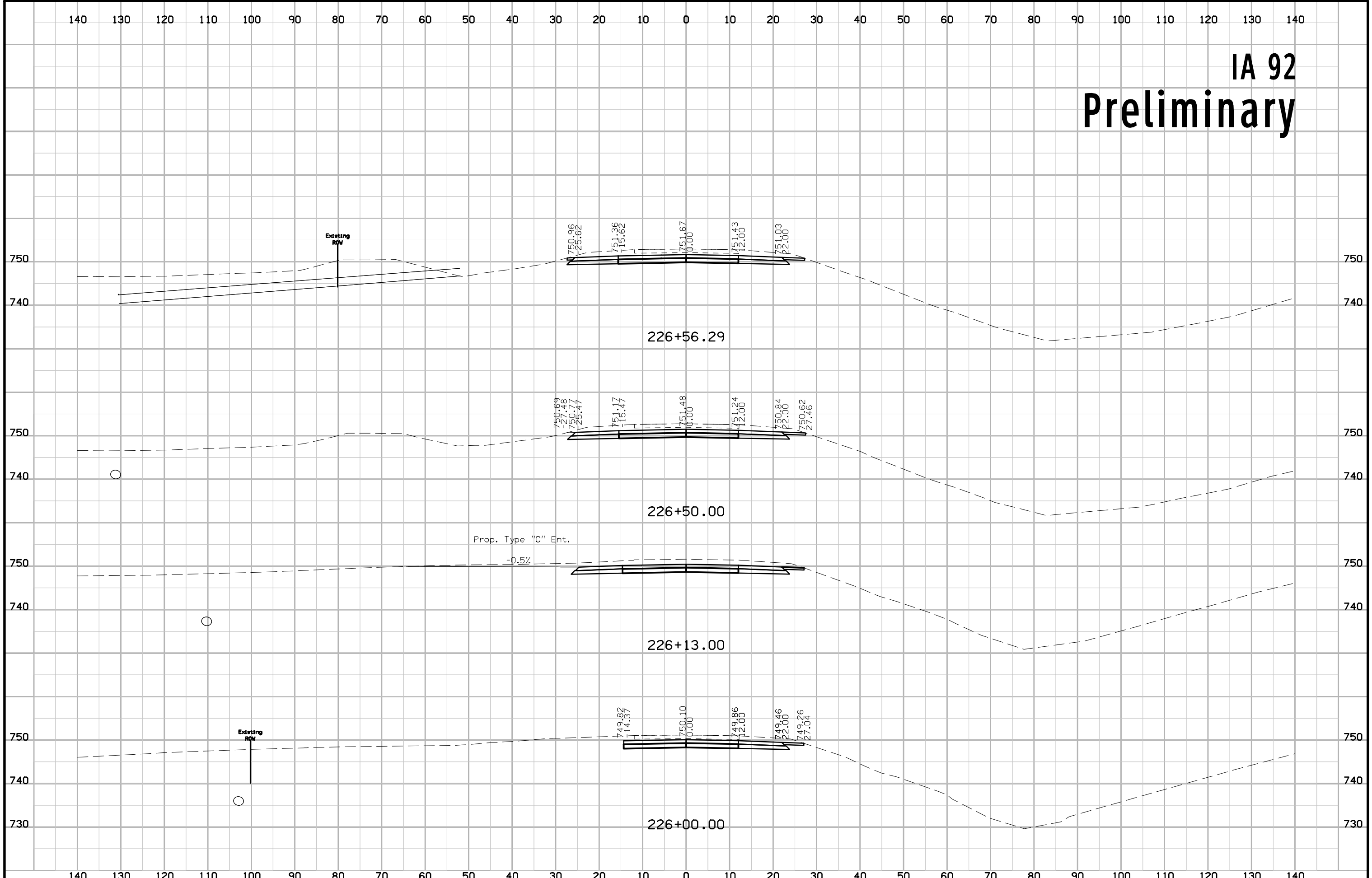
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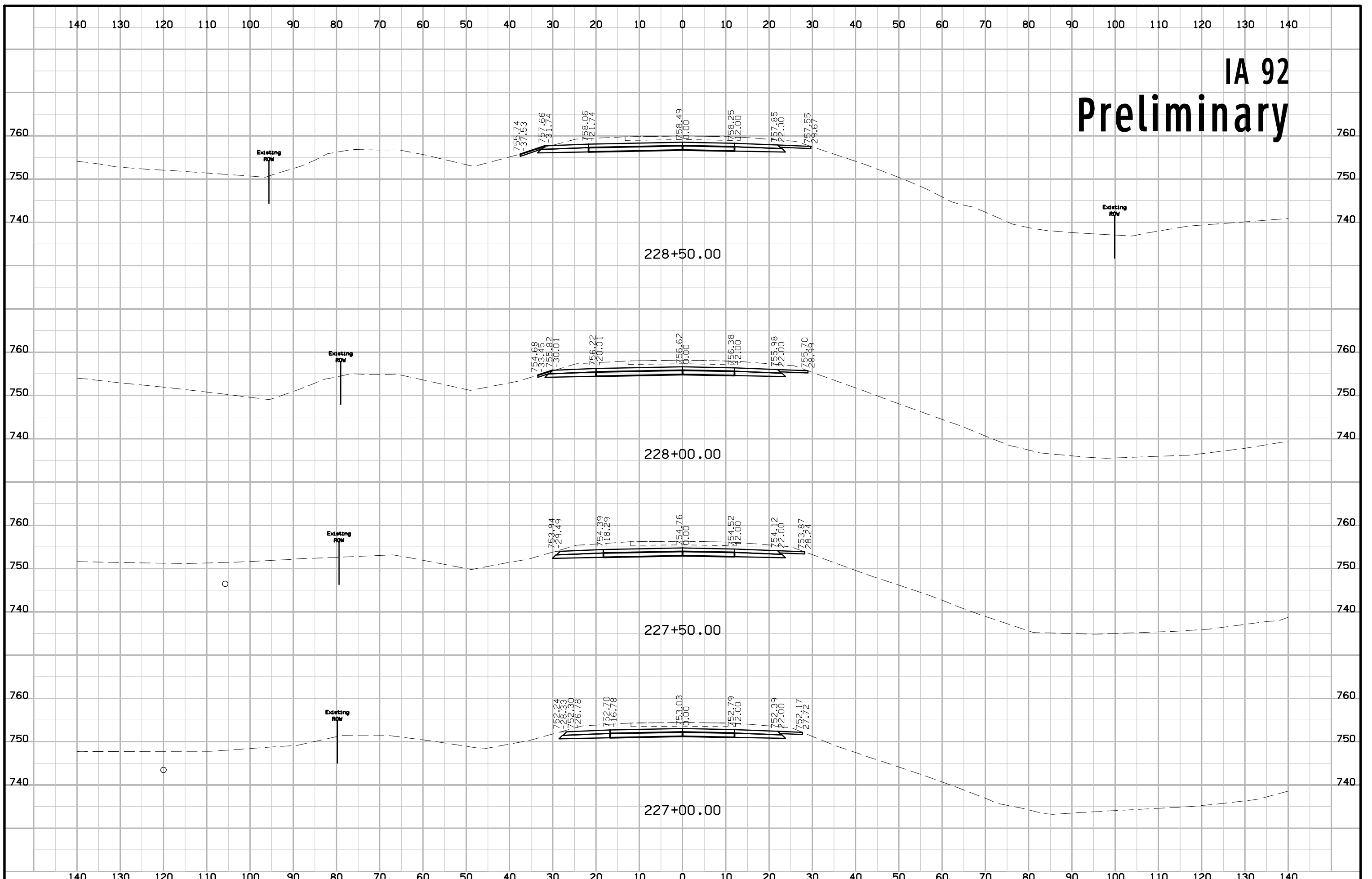
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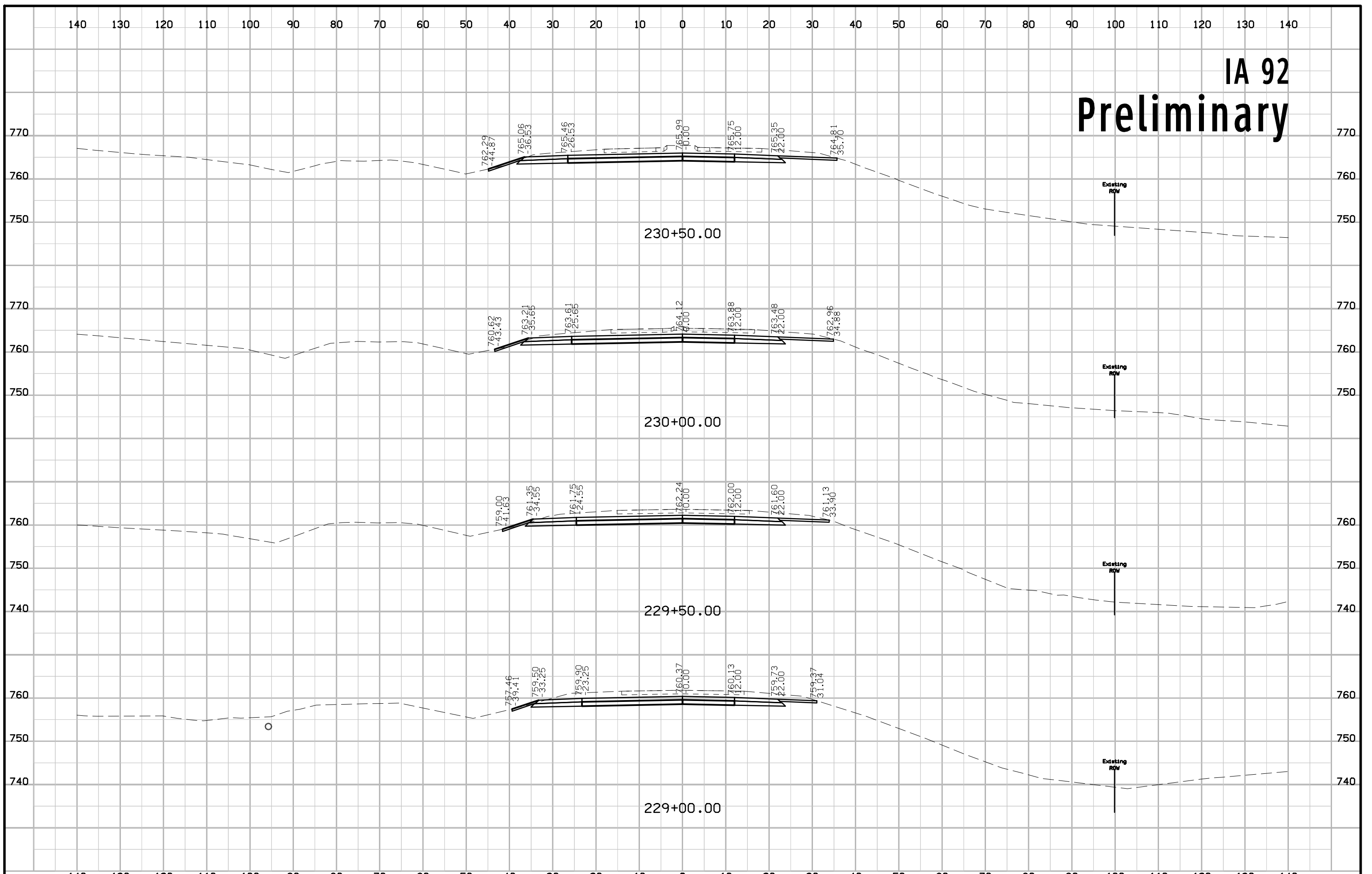
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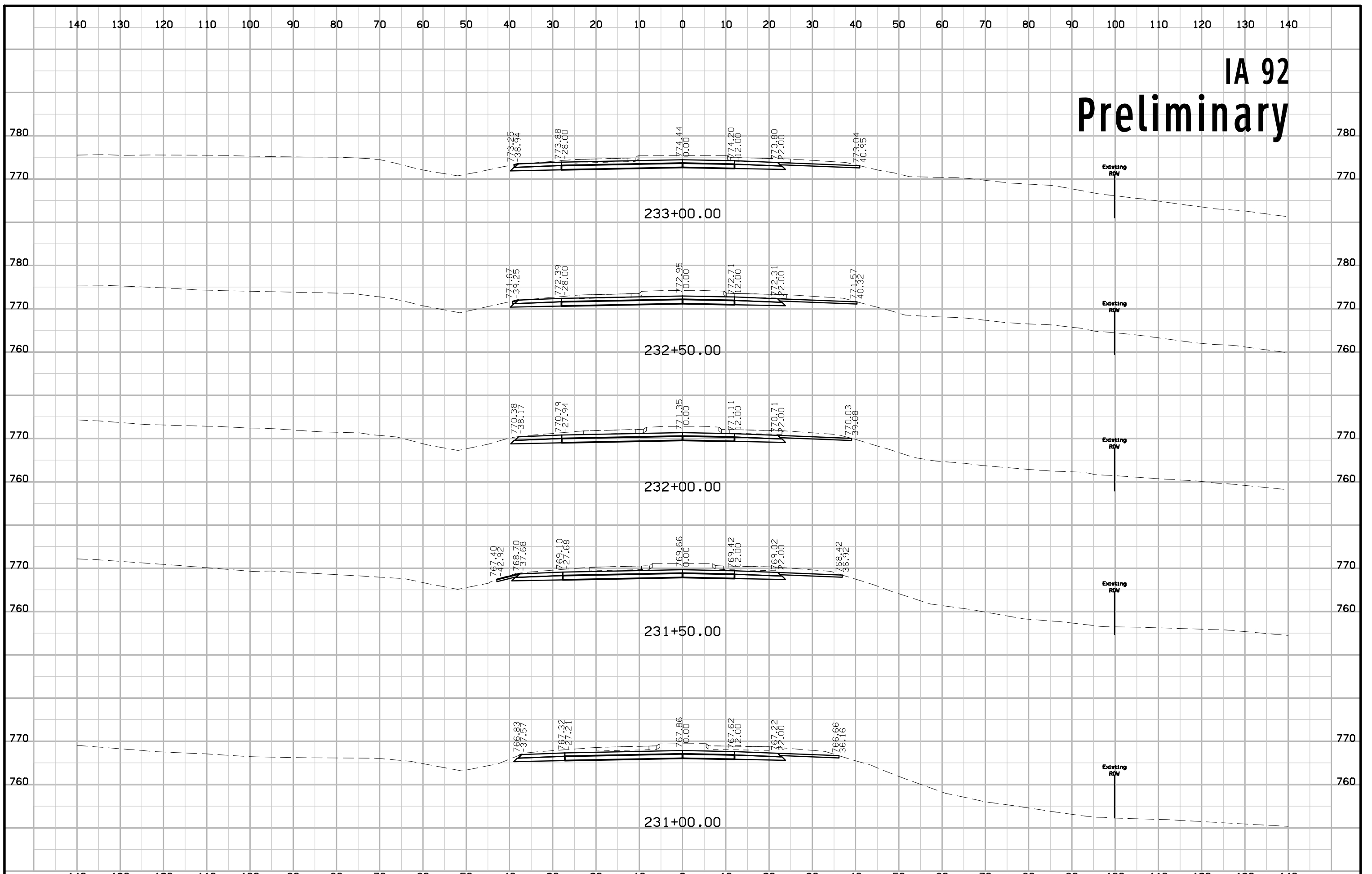
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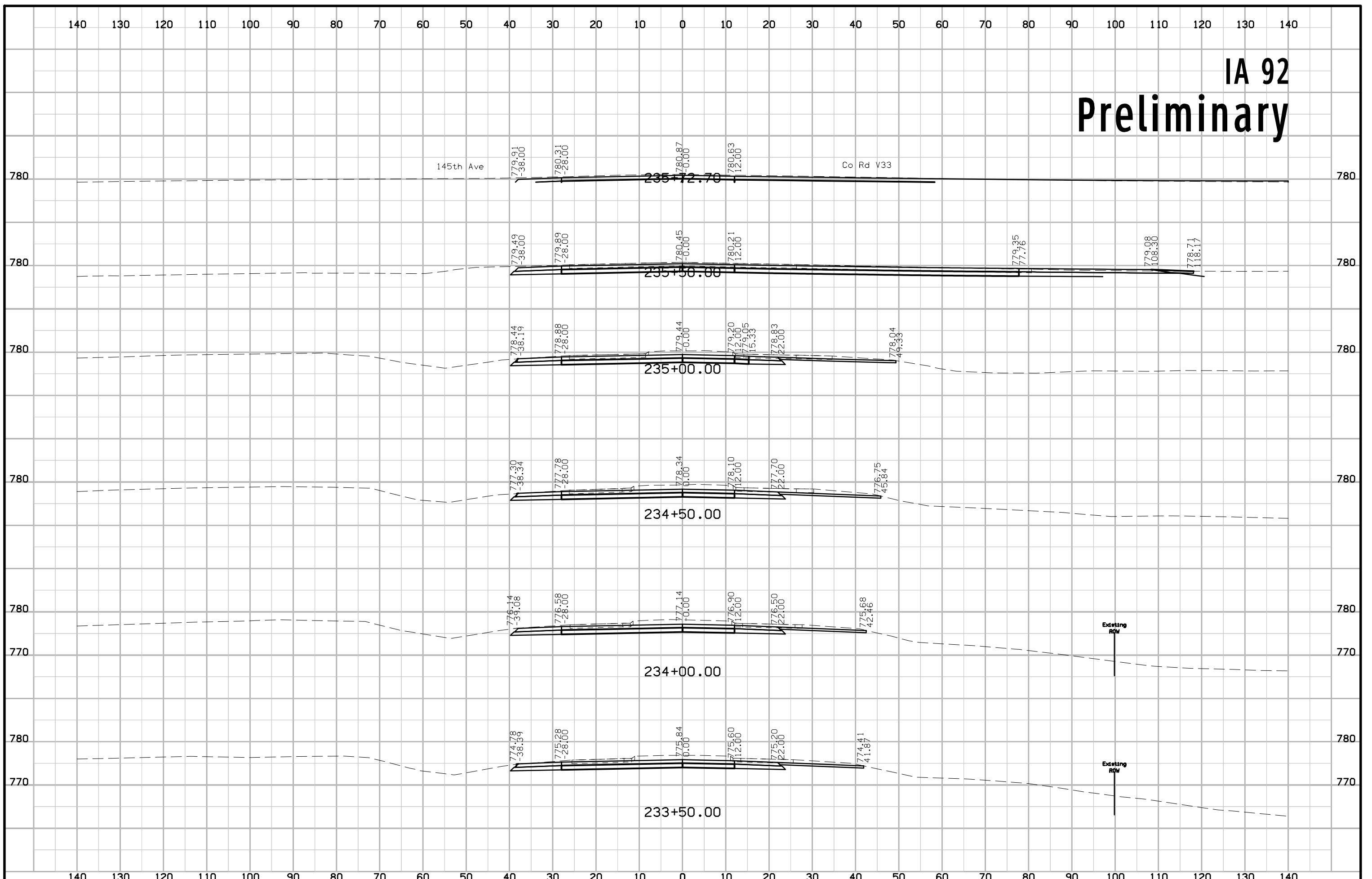
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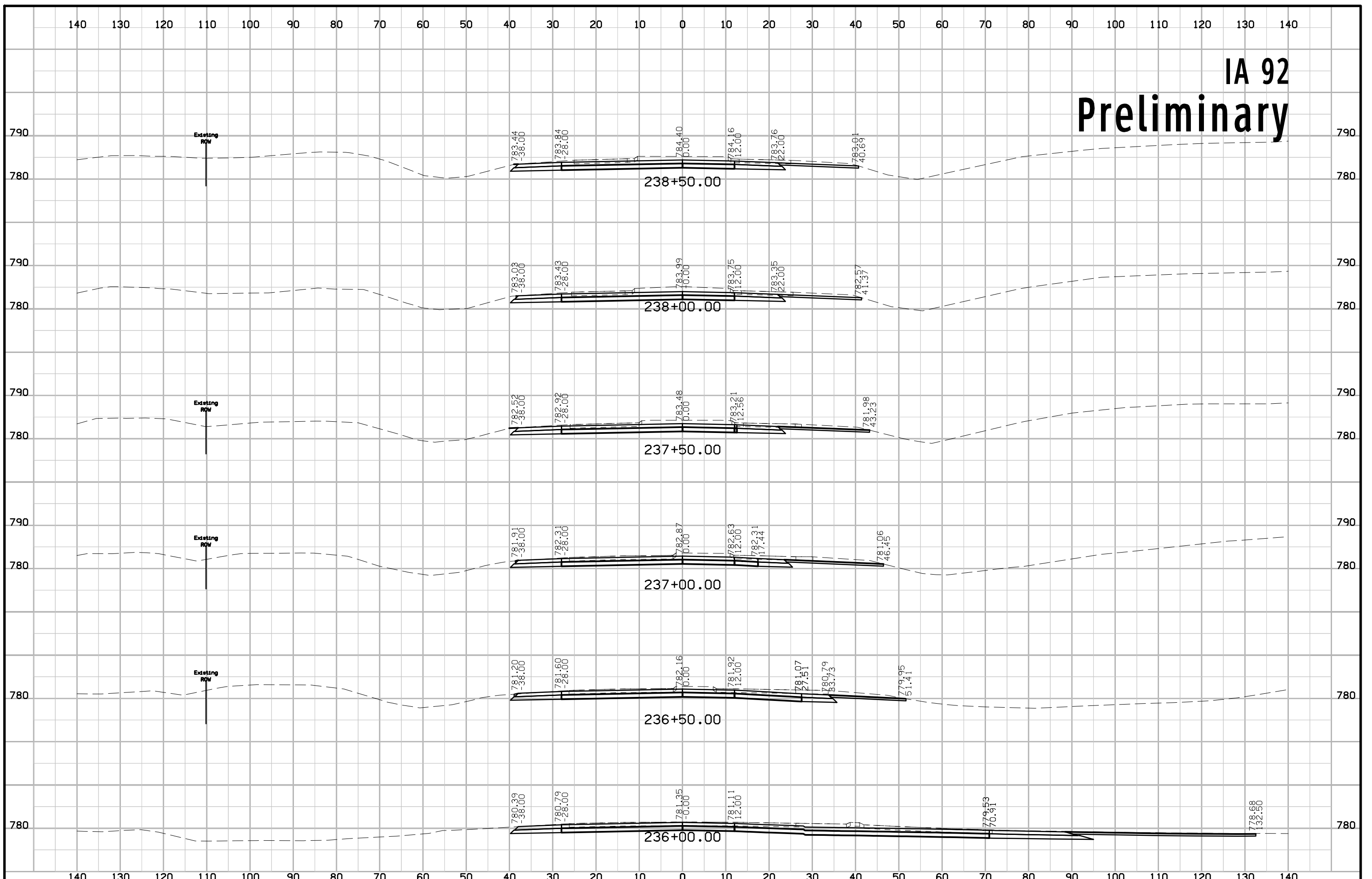
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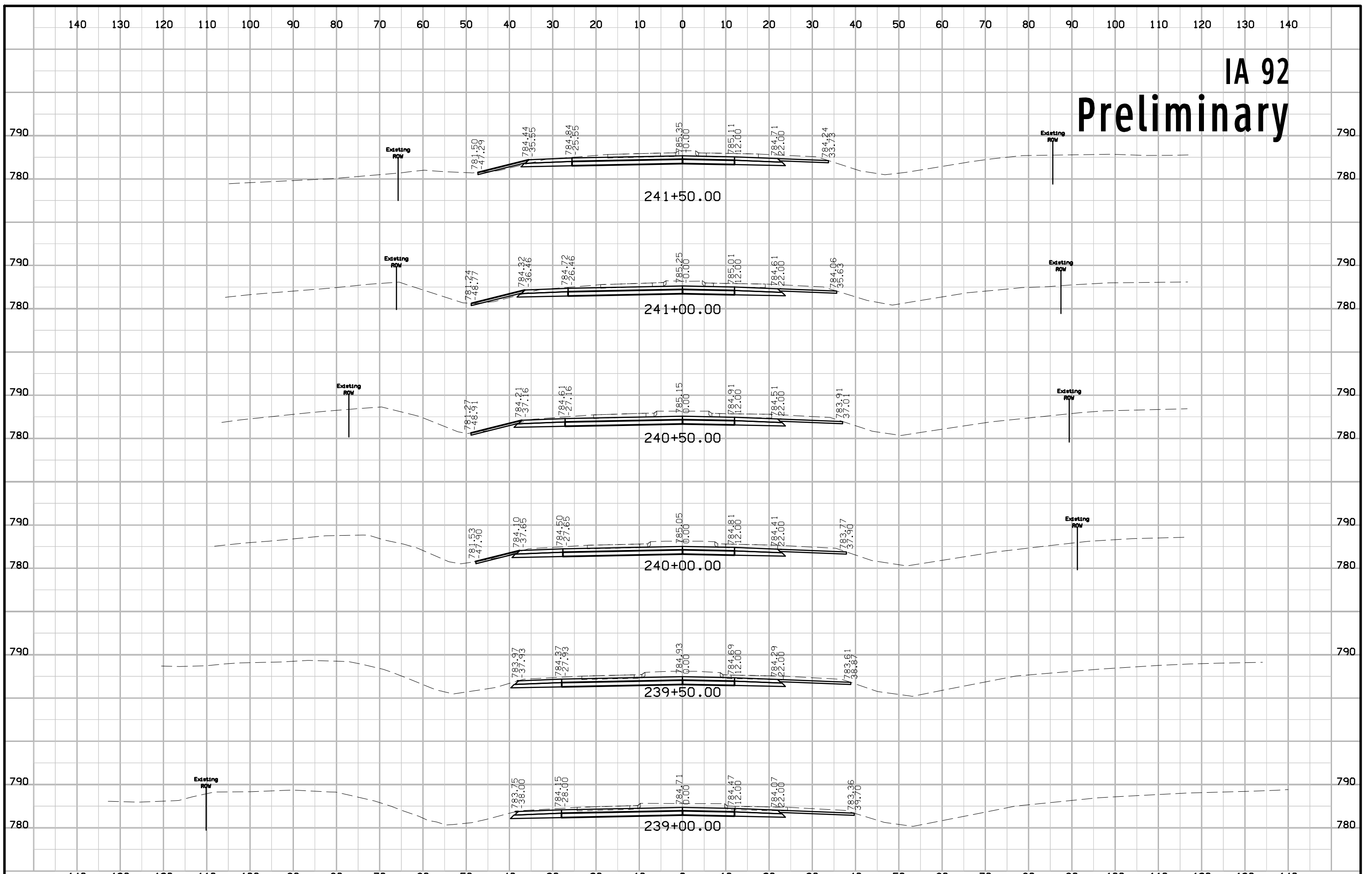
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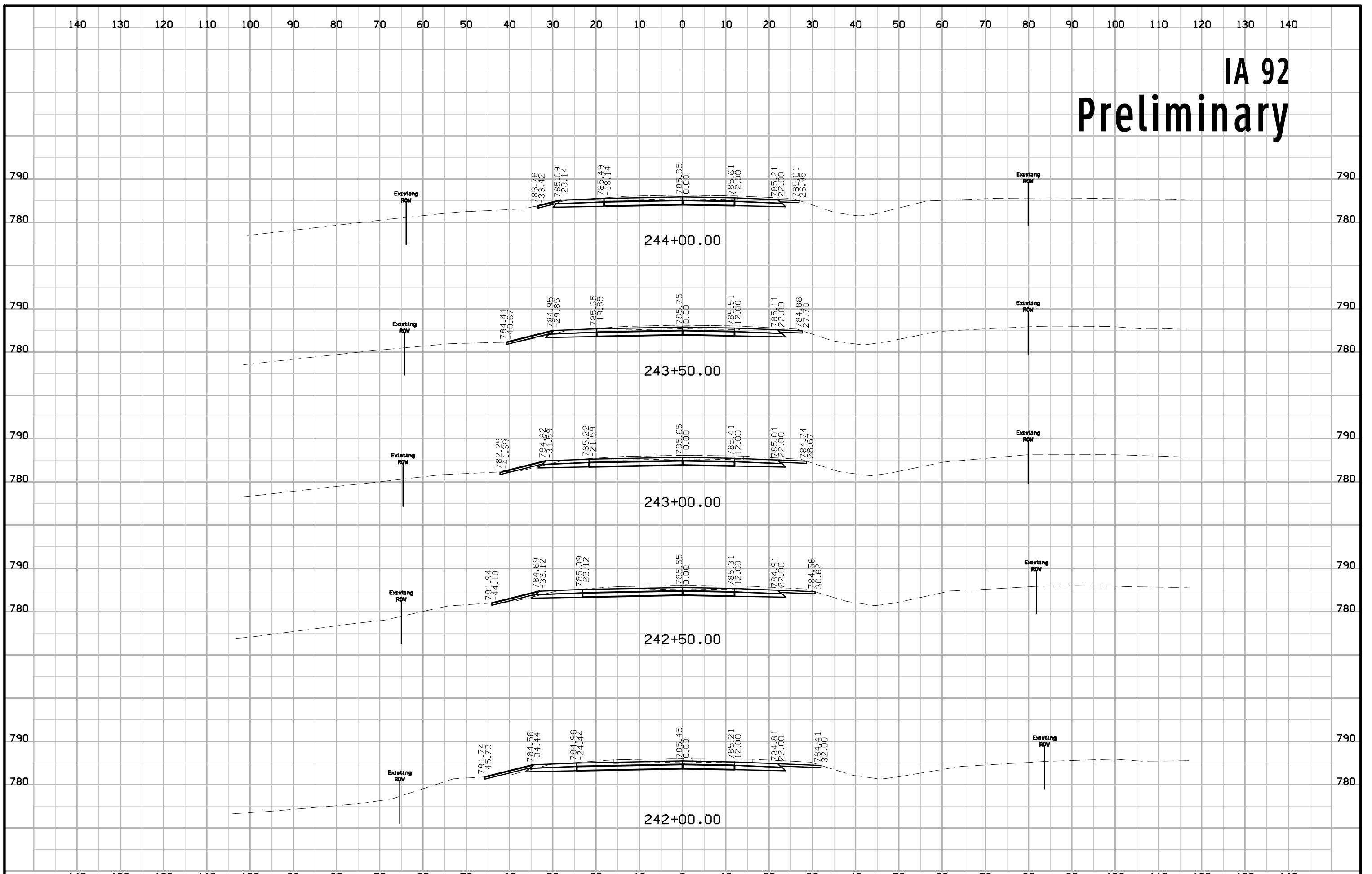
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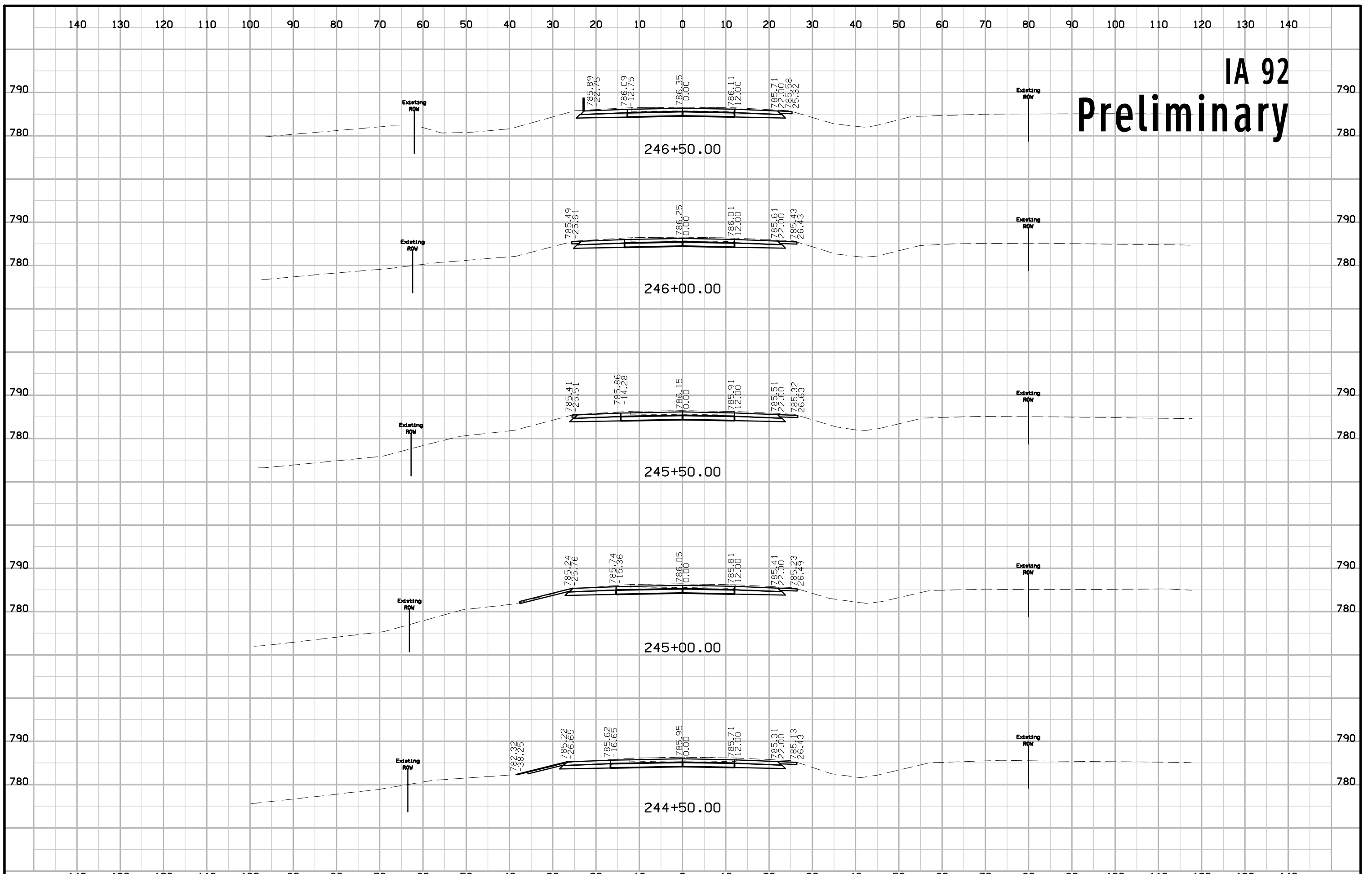
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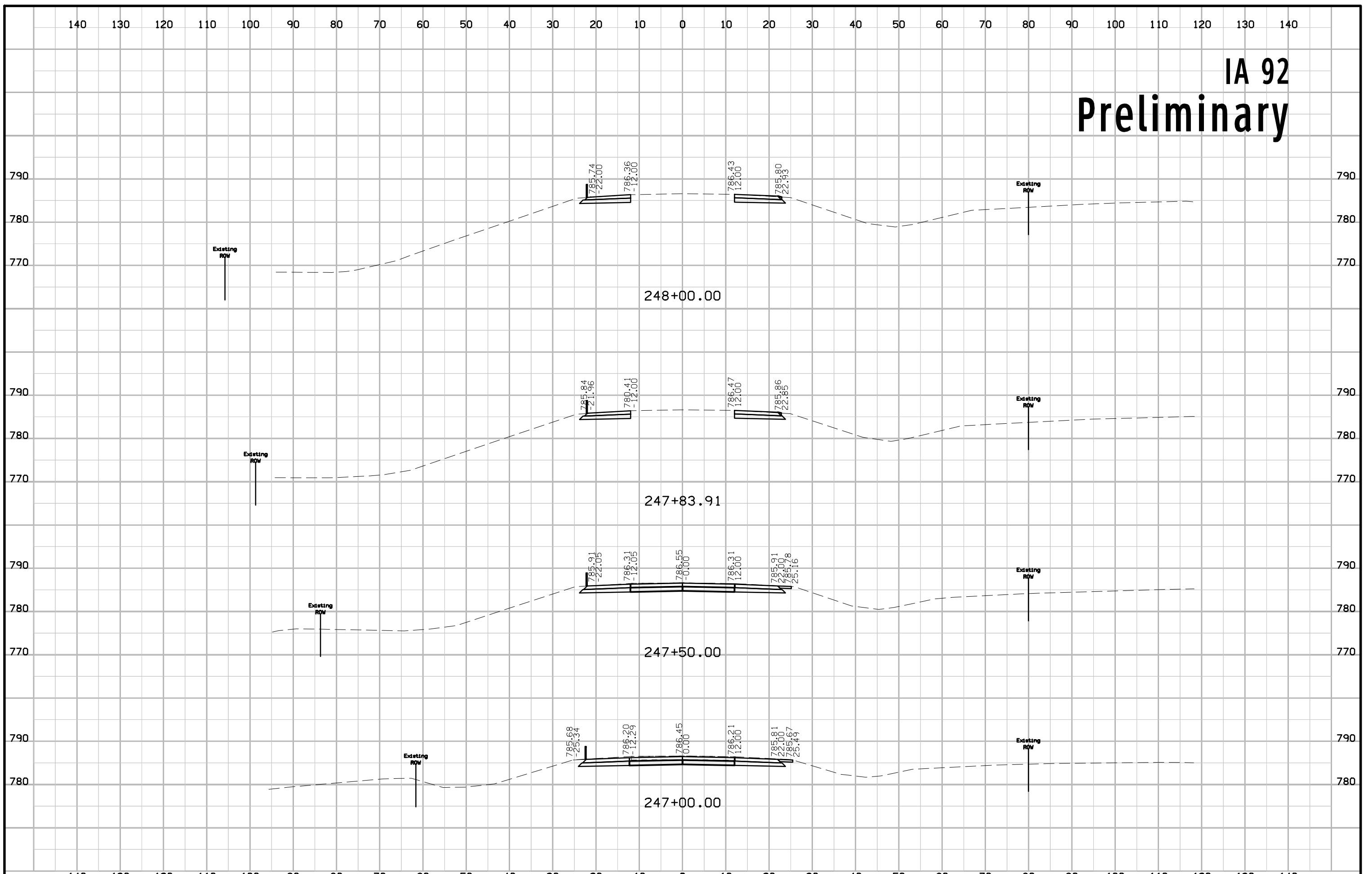
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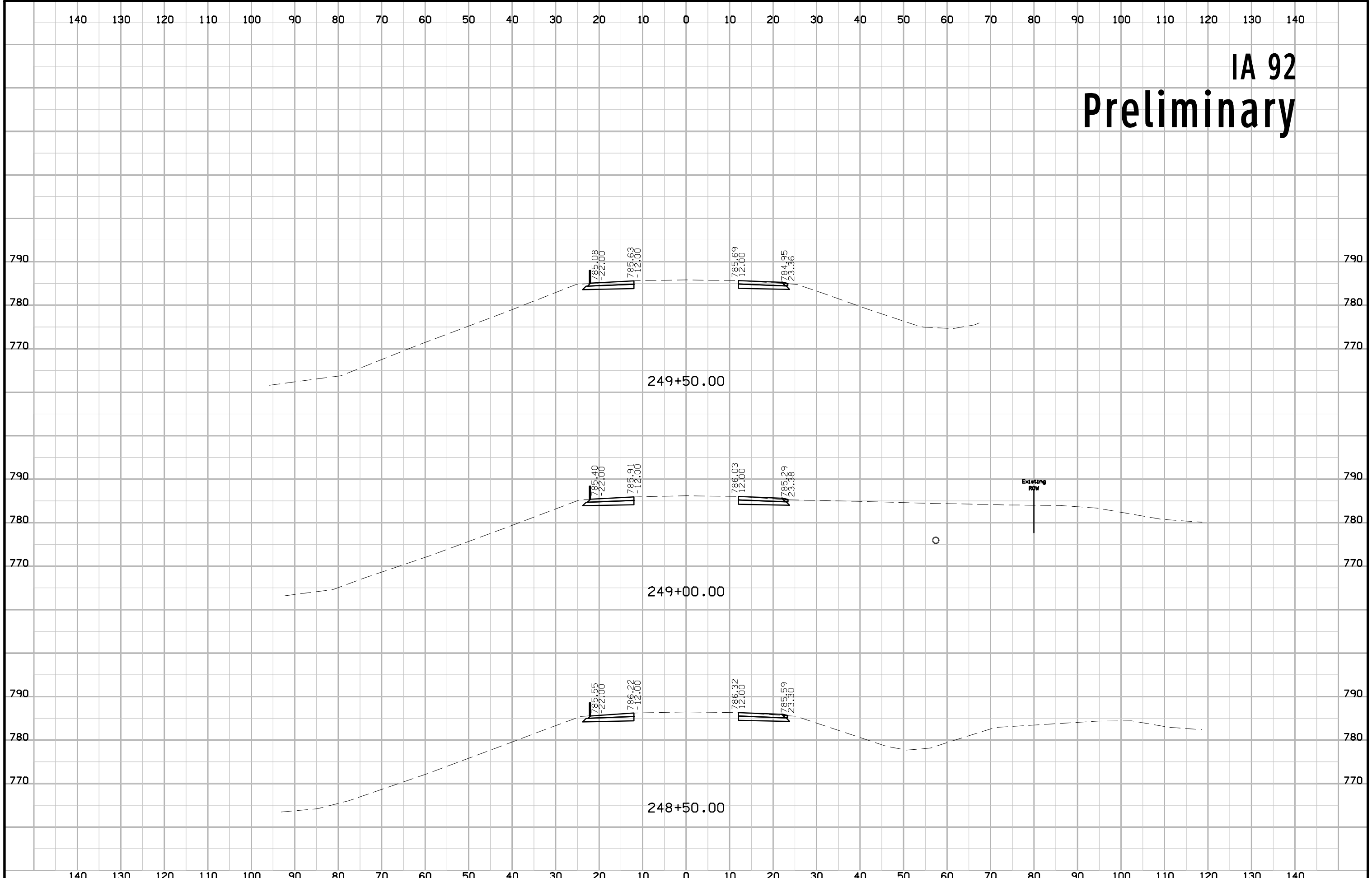
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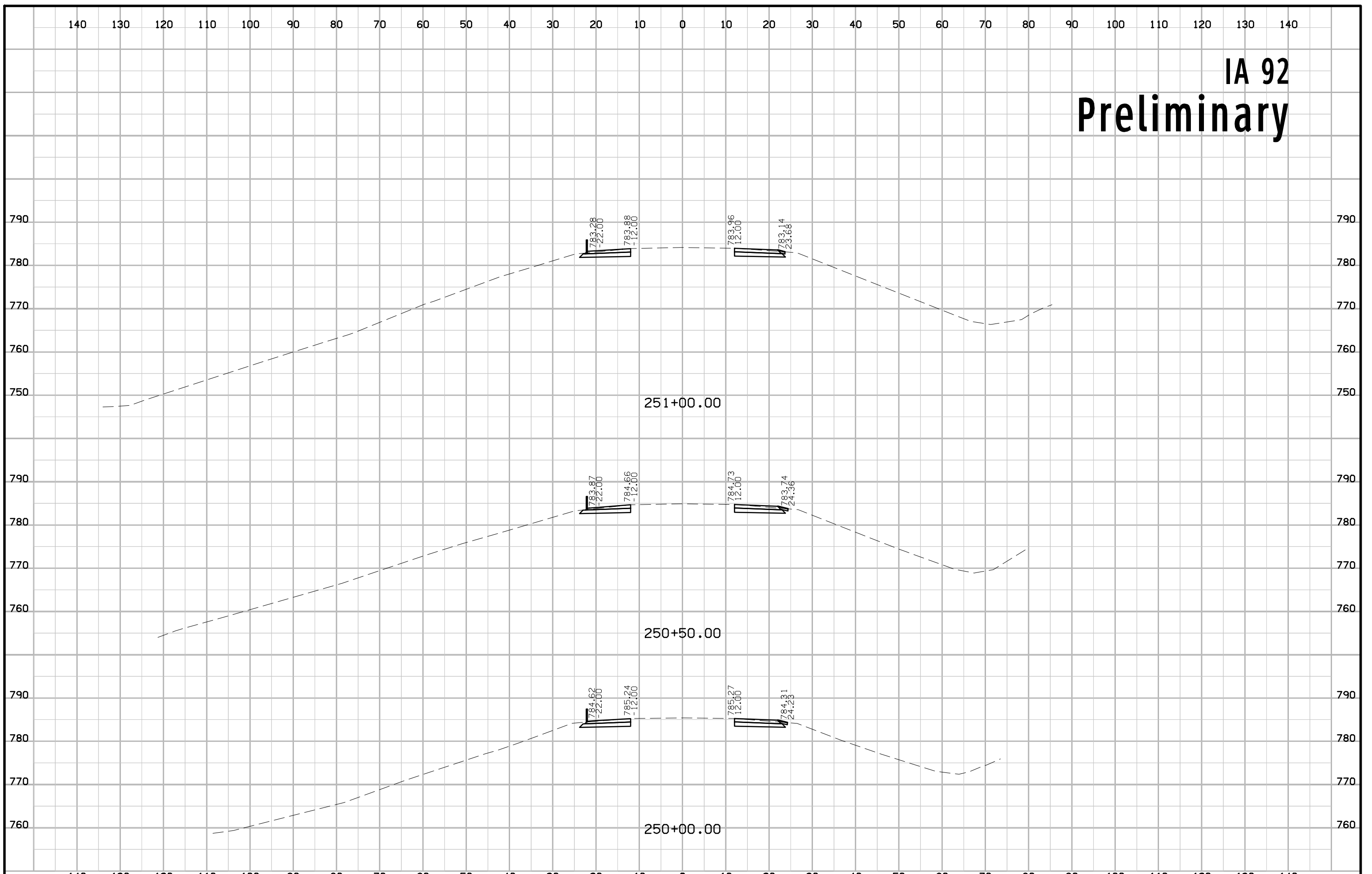
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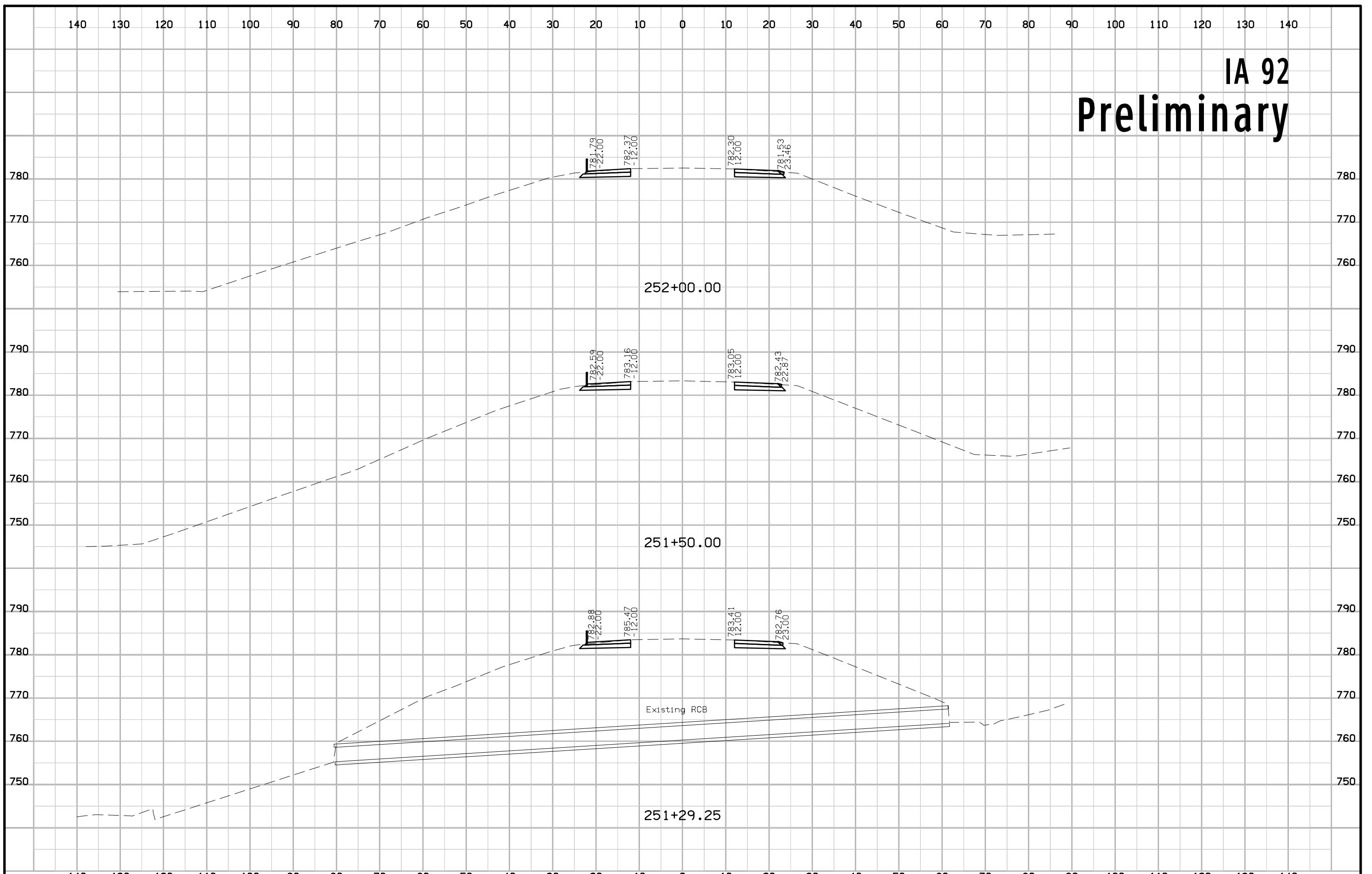
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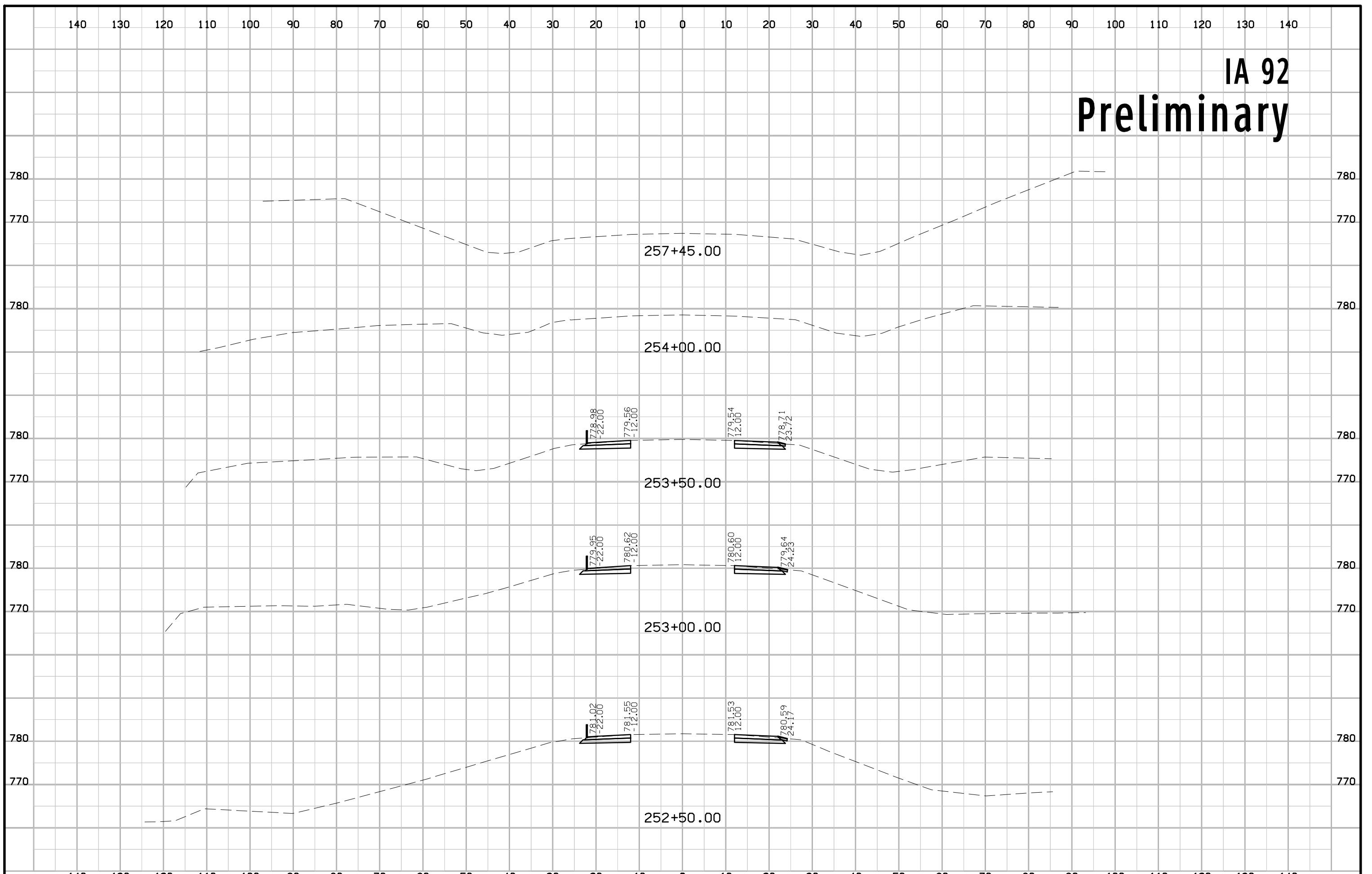
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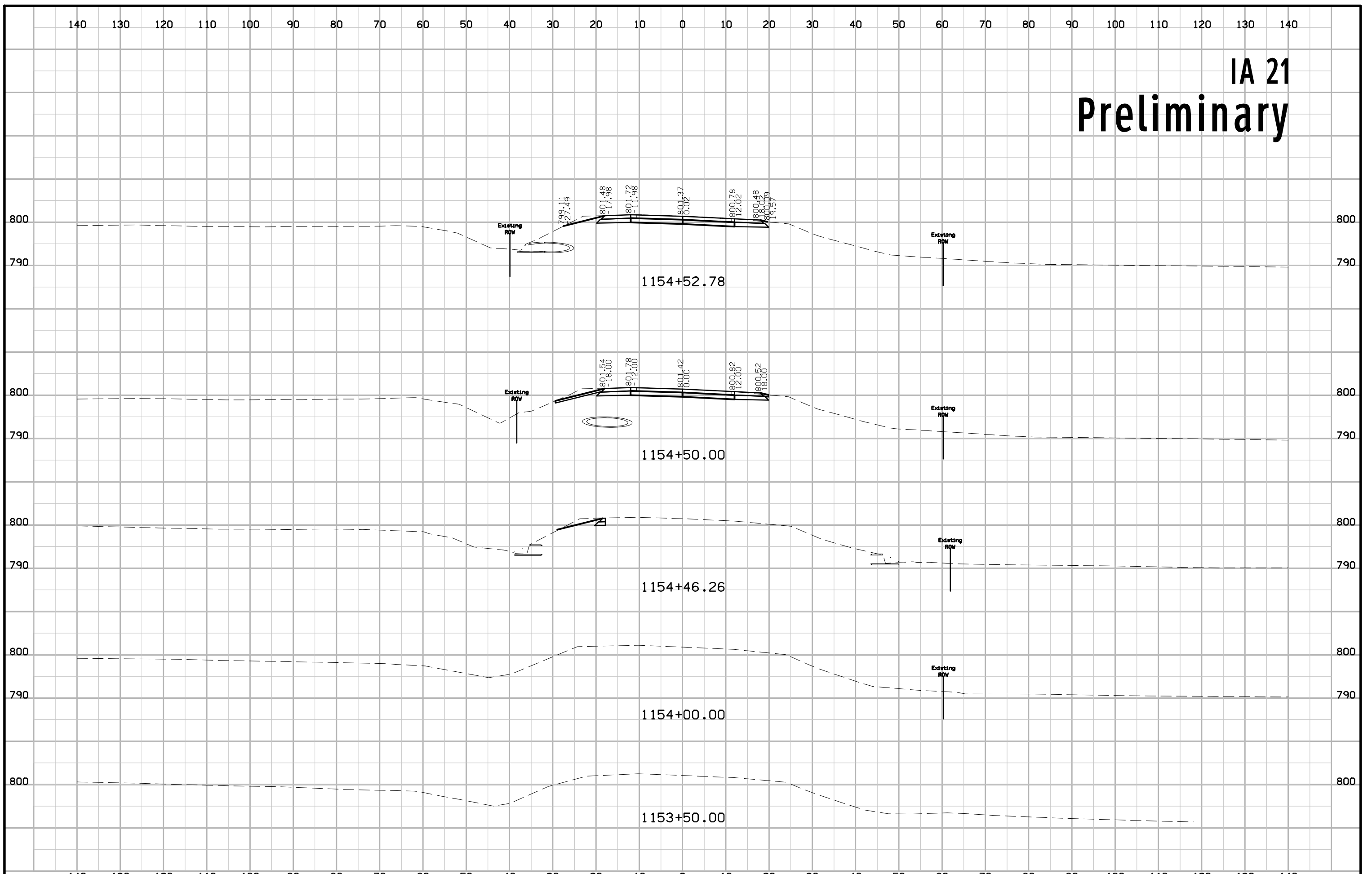
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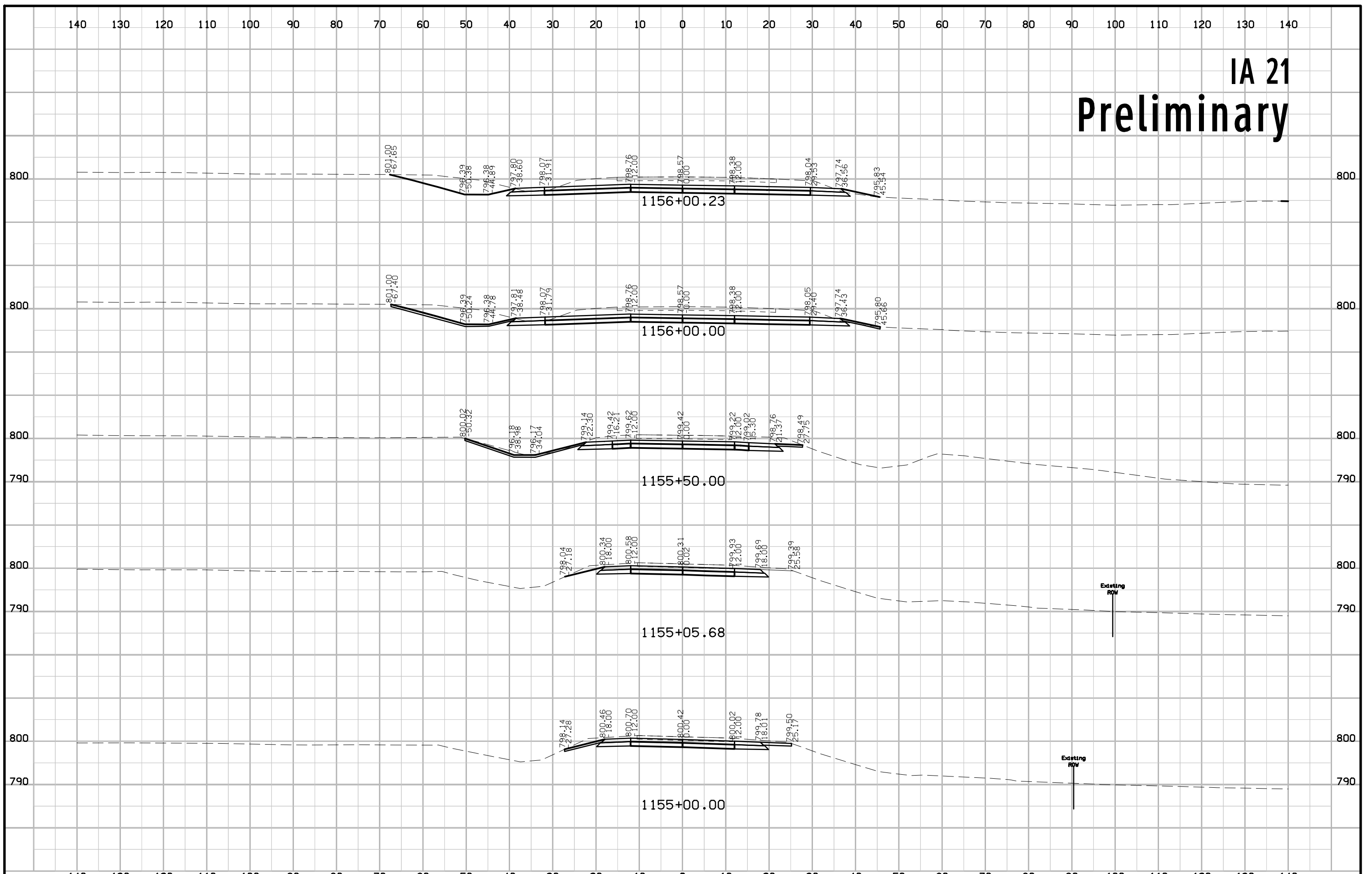
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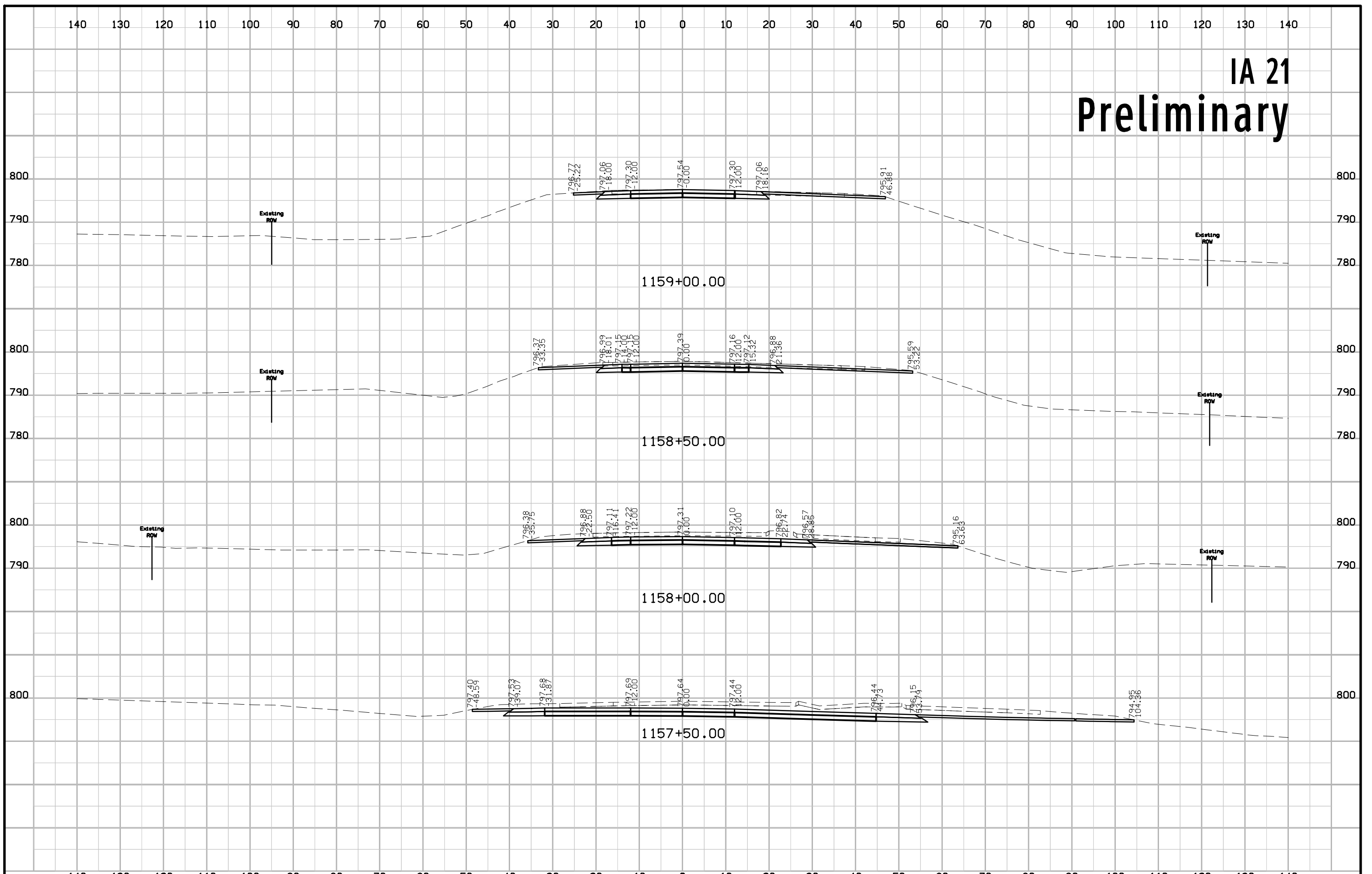
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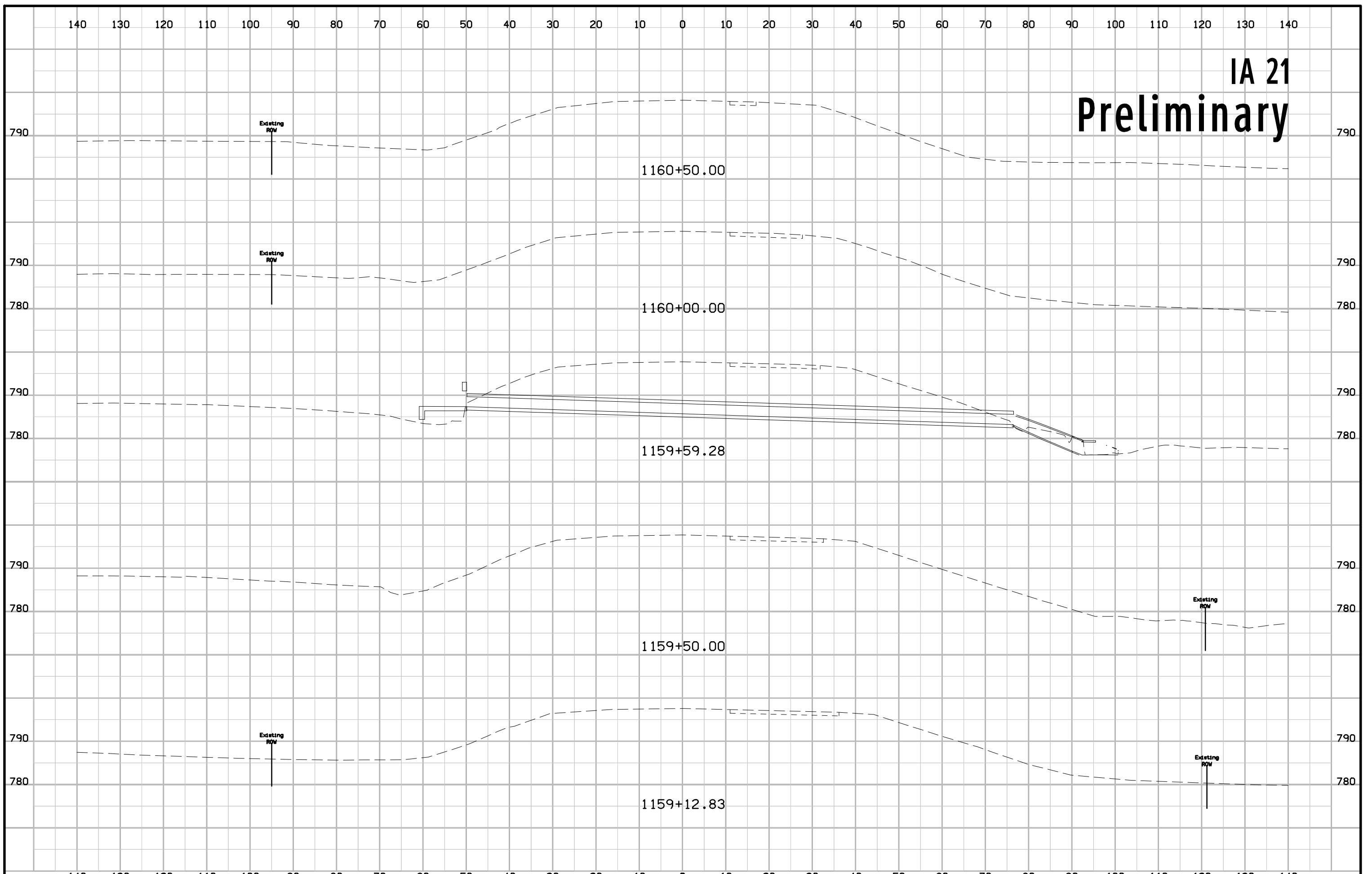
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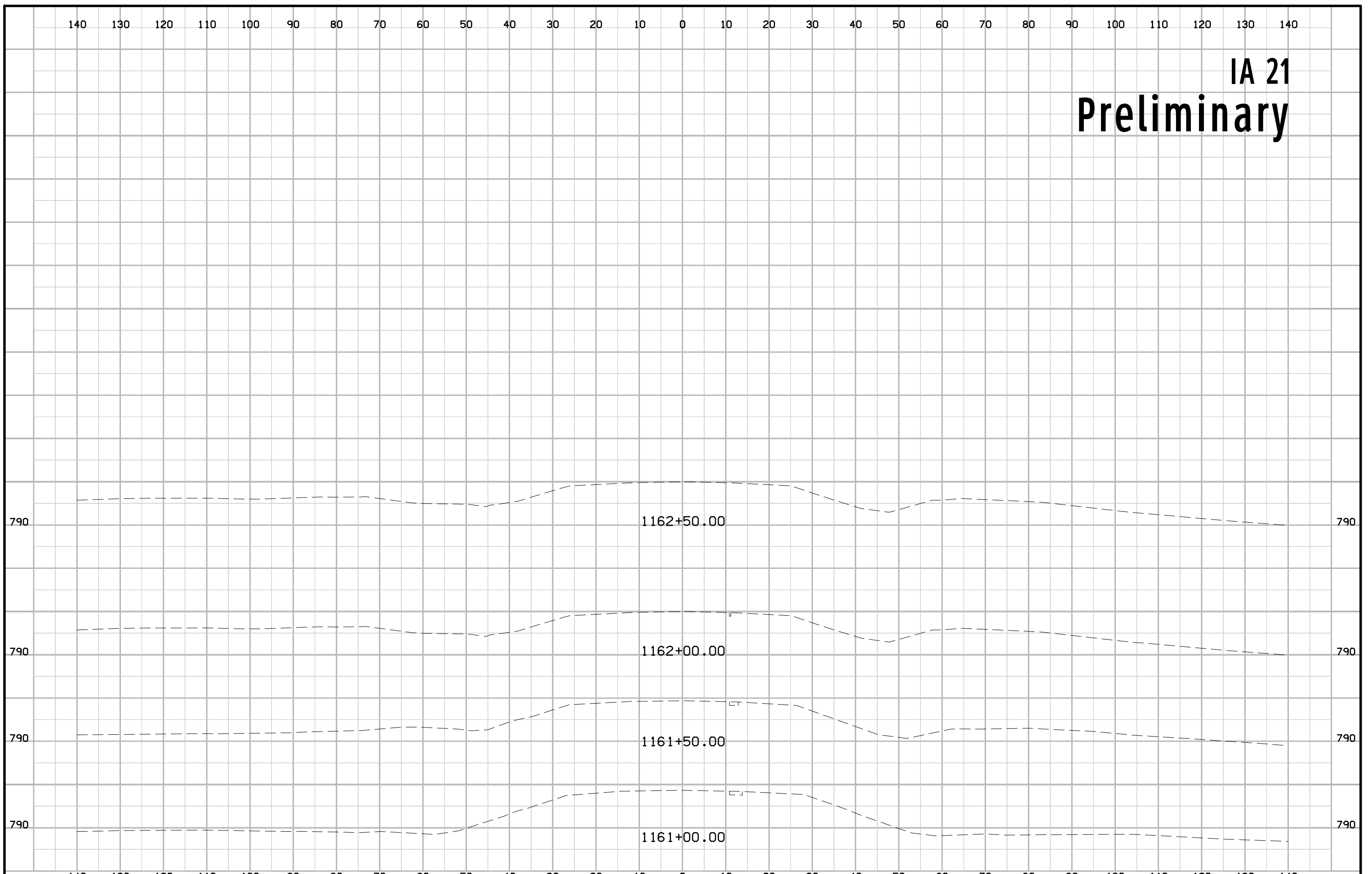
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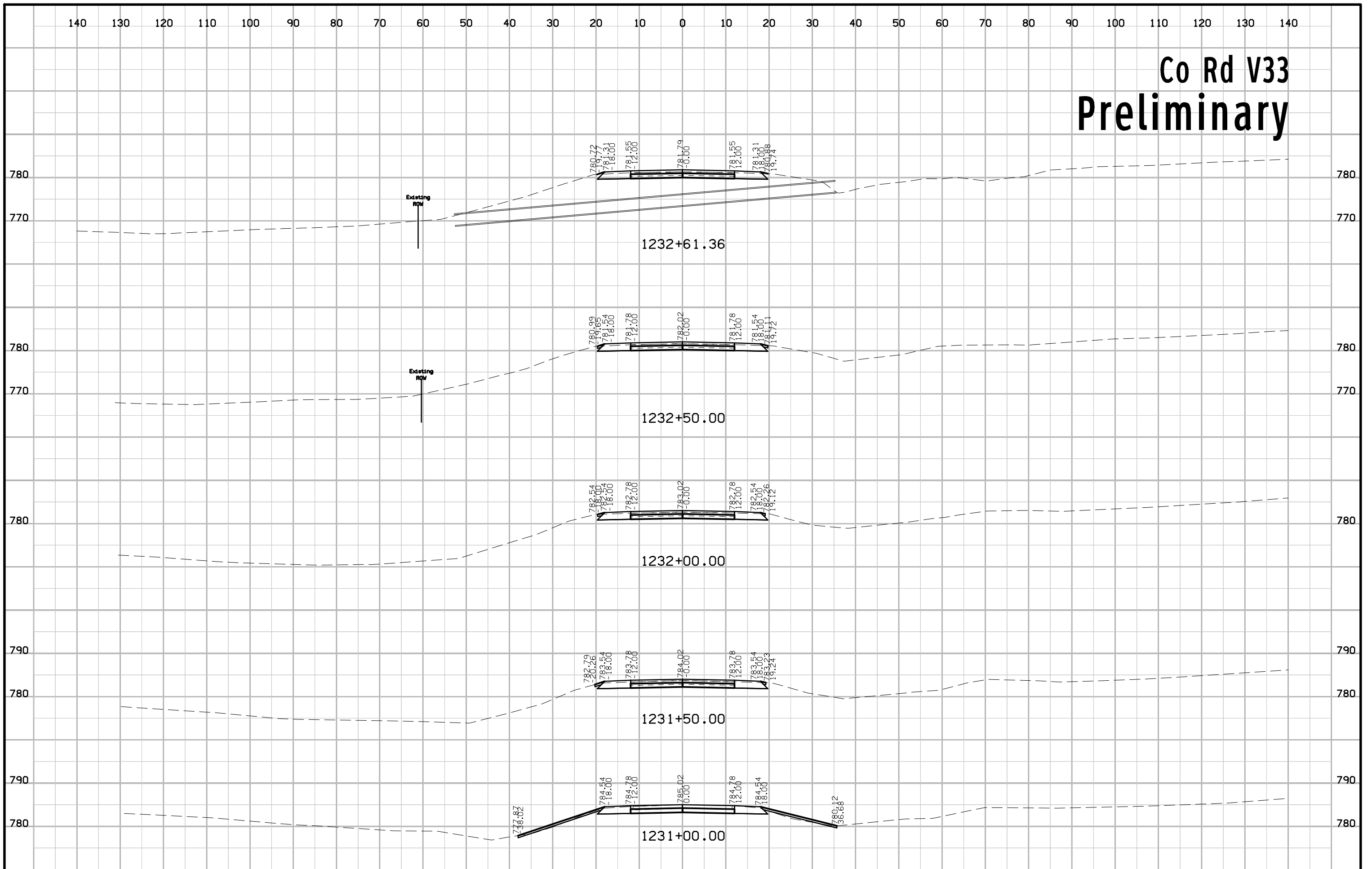
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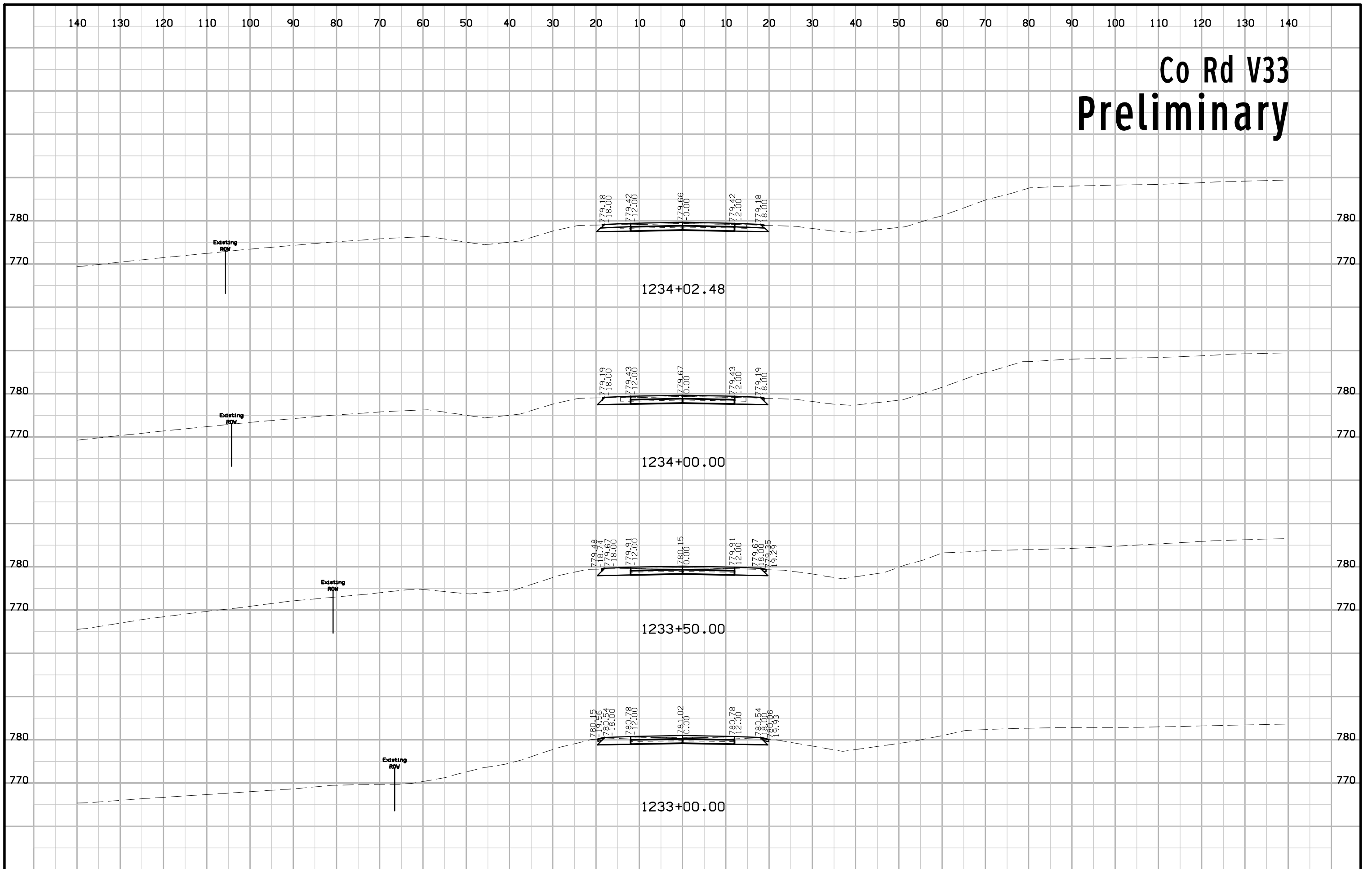
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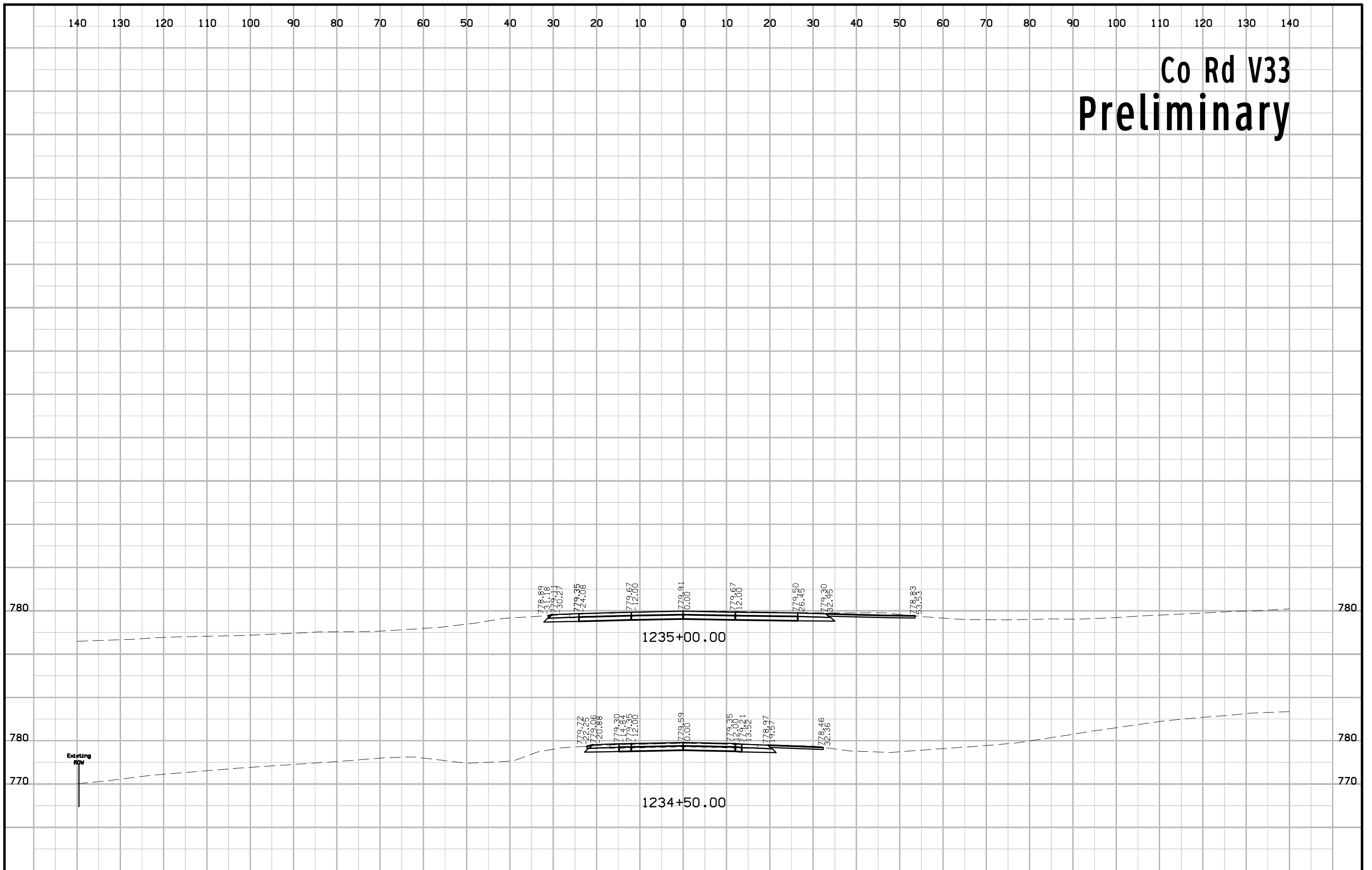
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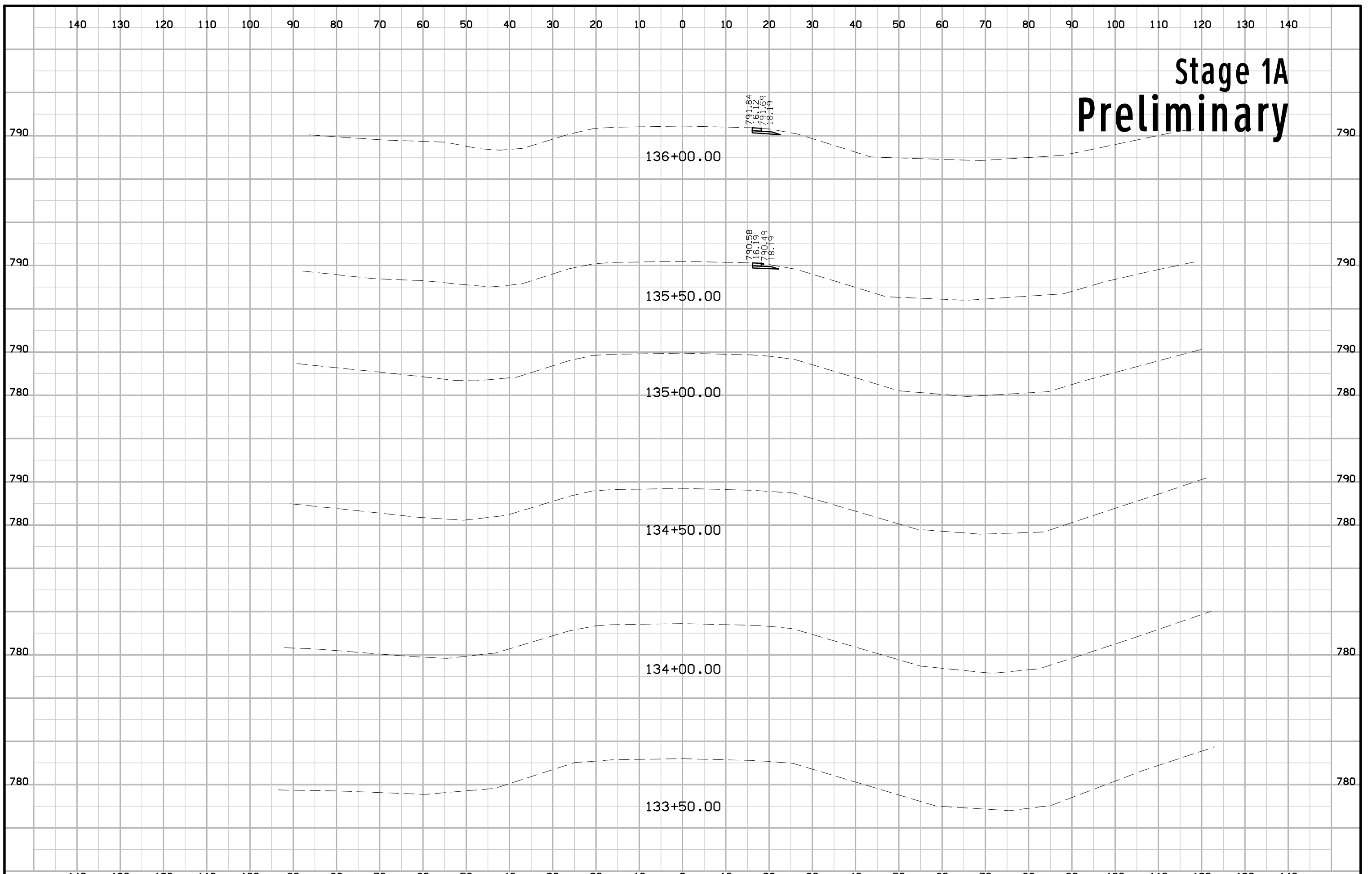
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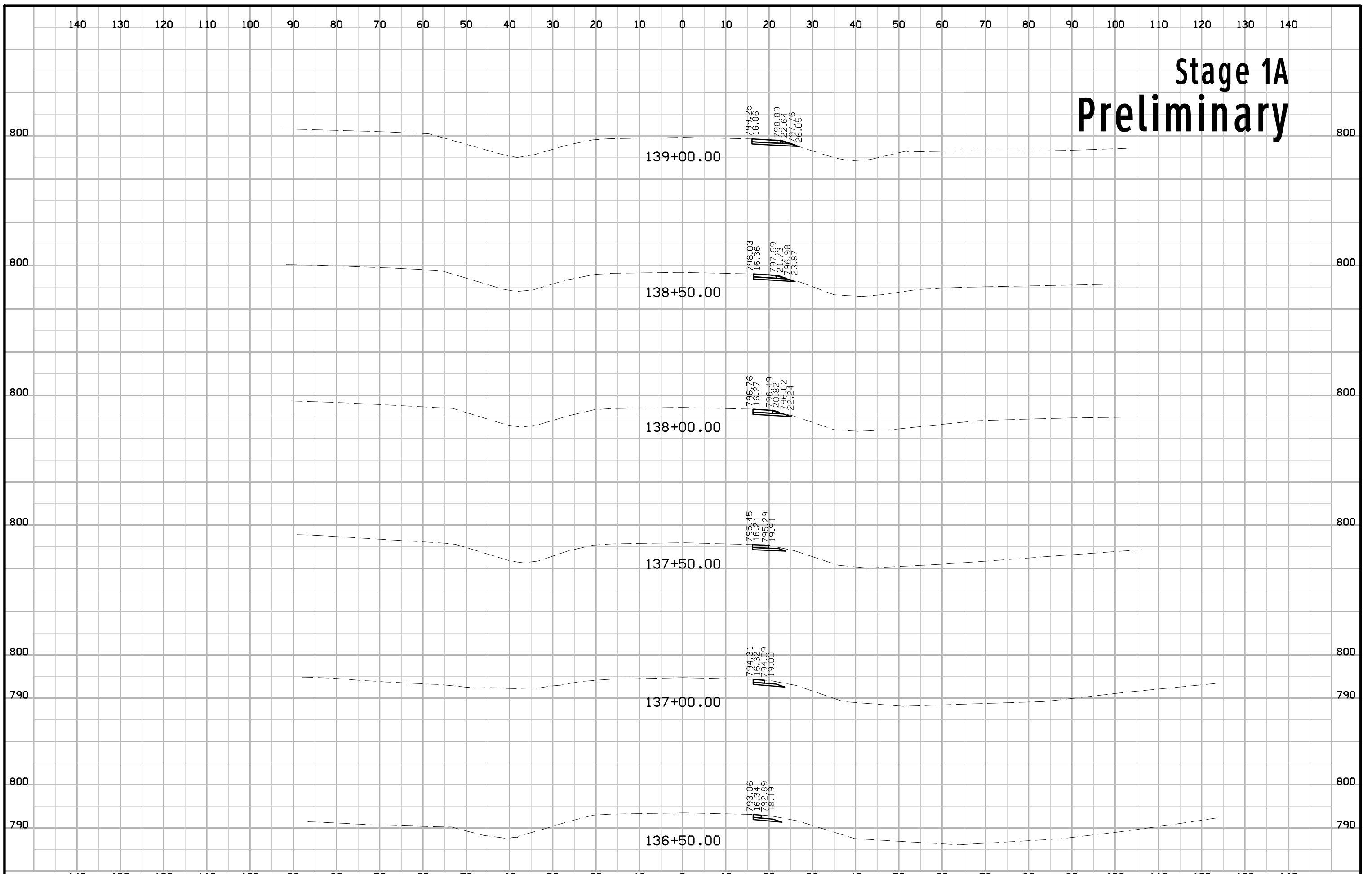
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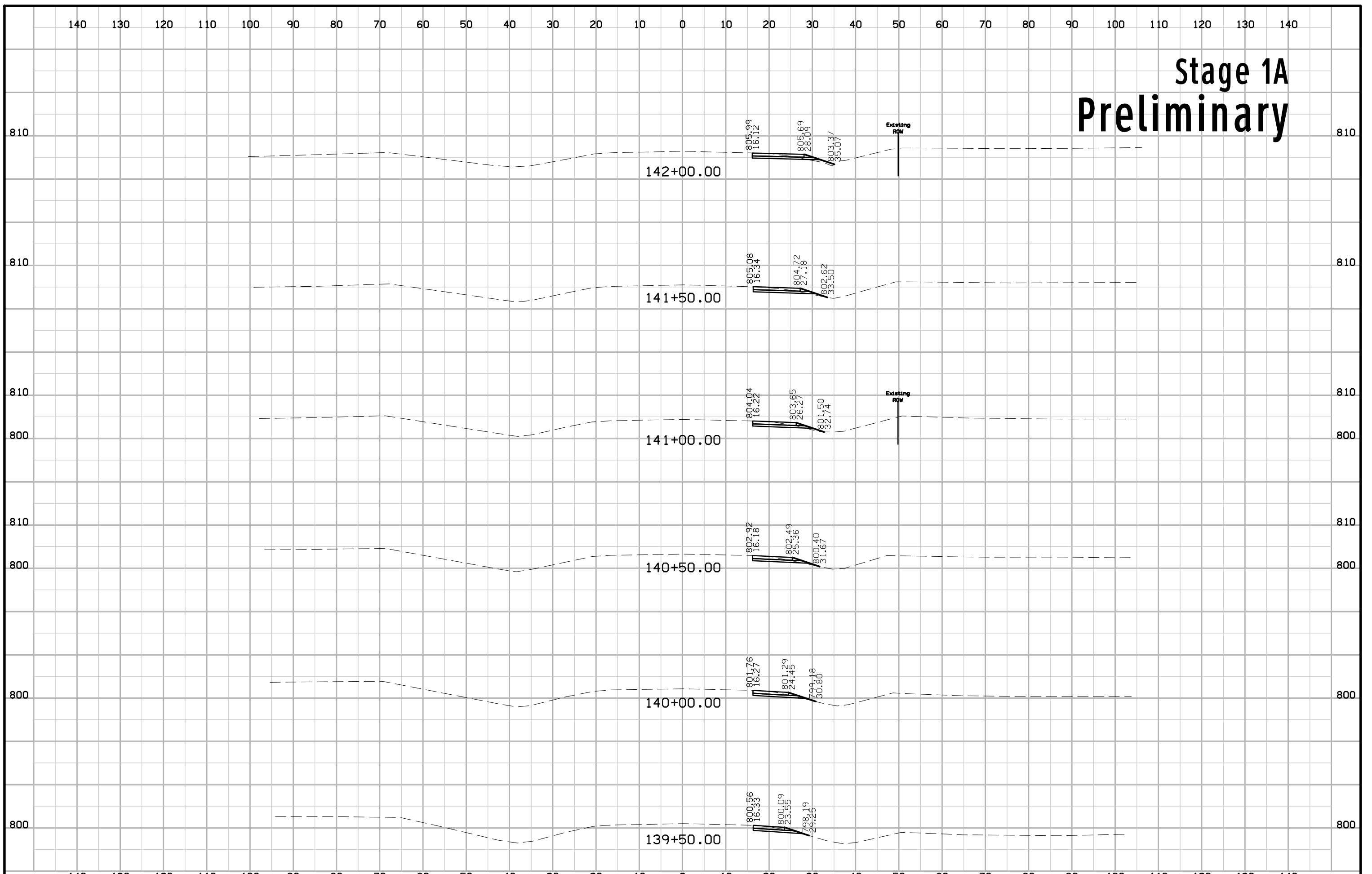
Stage 1A Preliminary



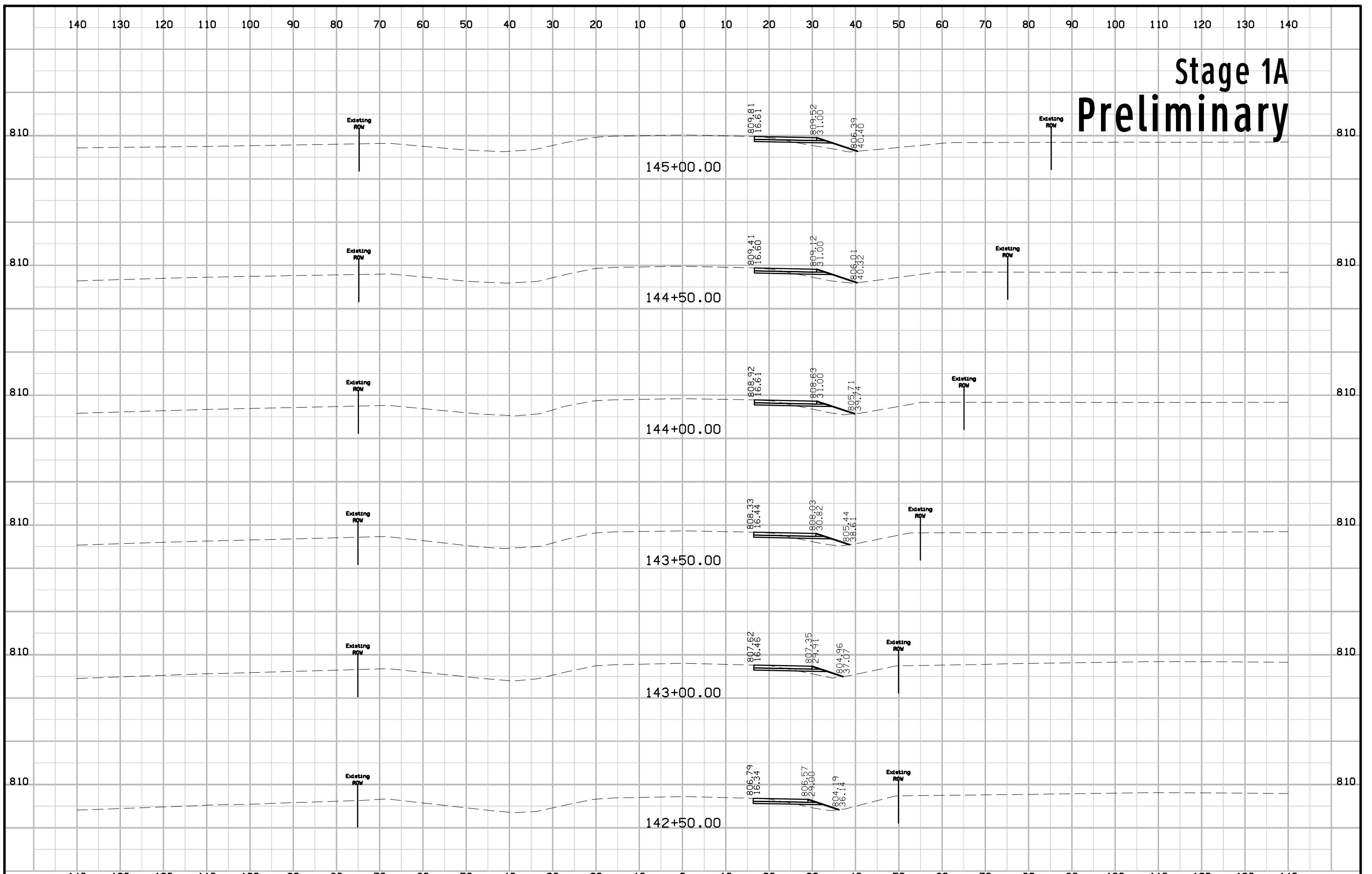
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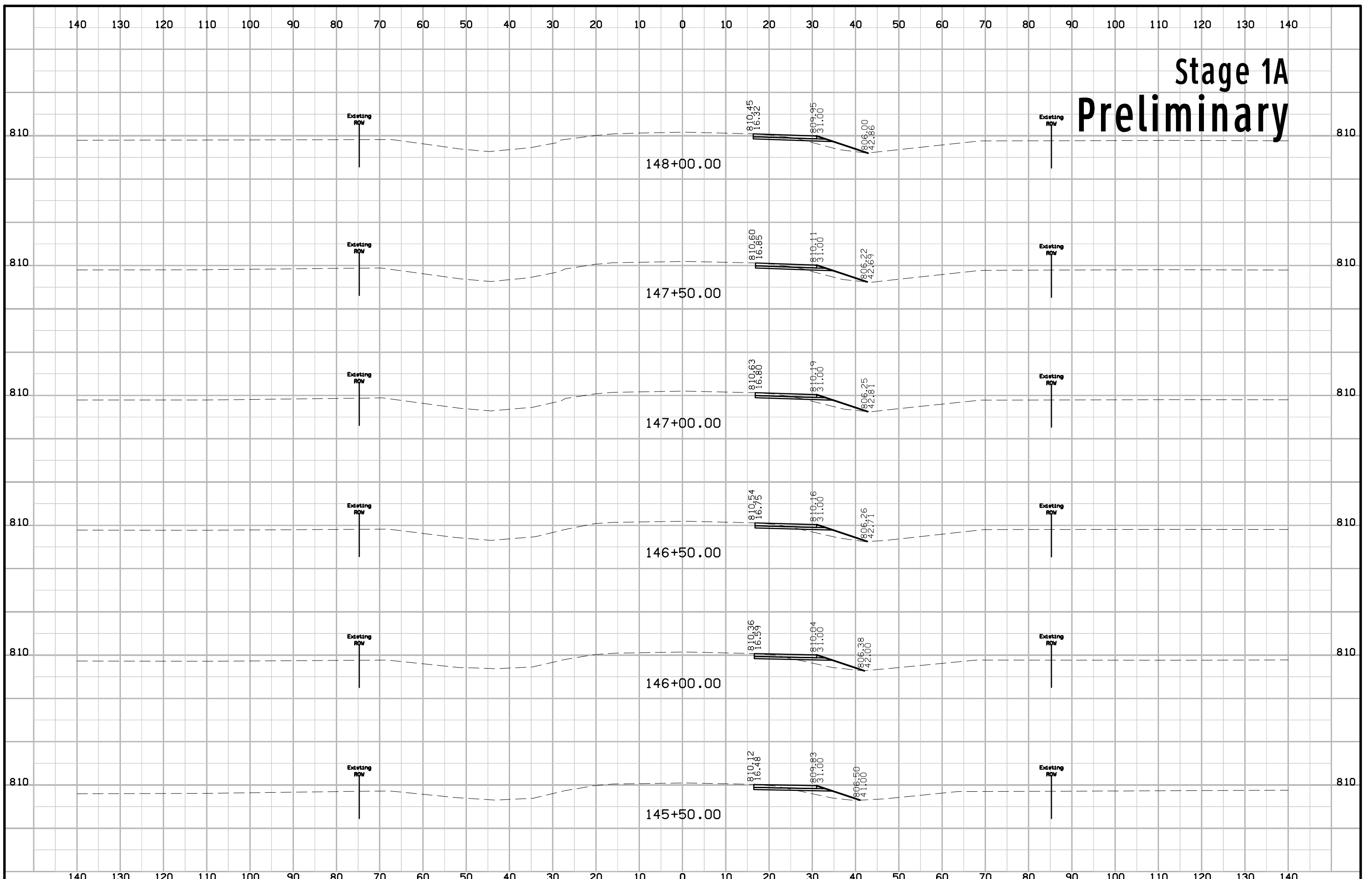
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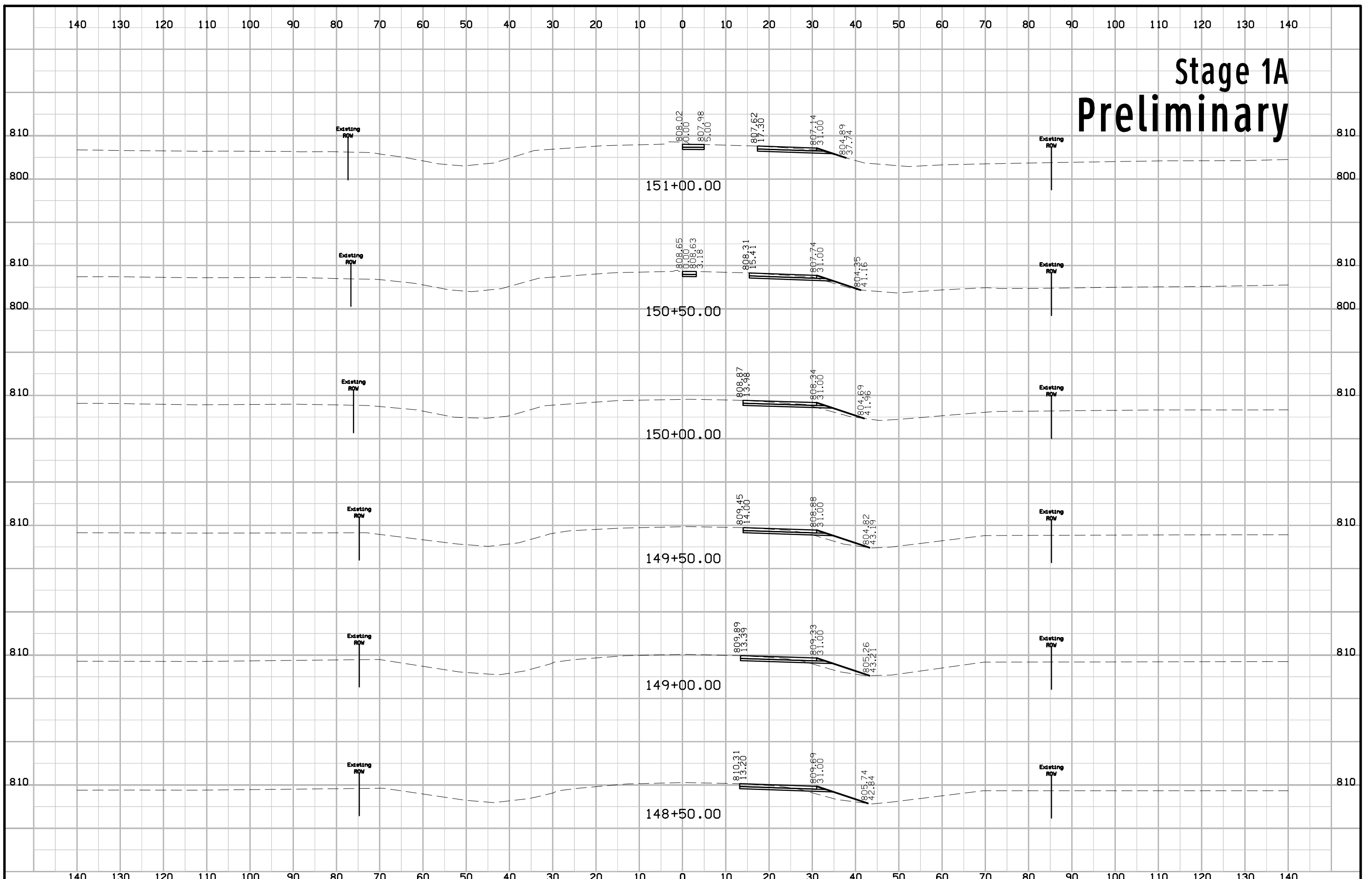
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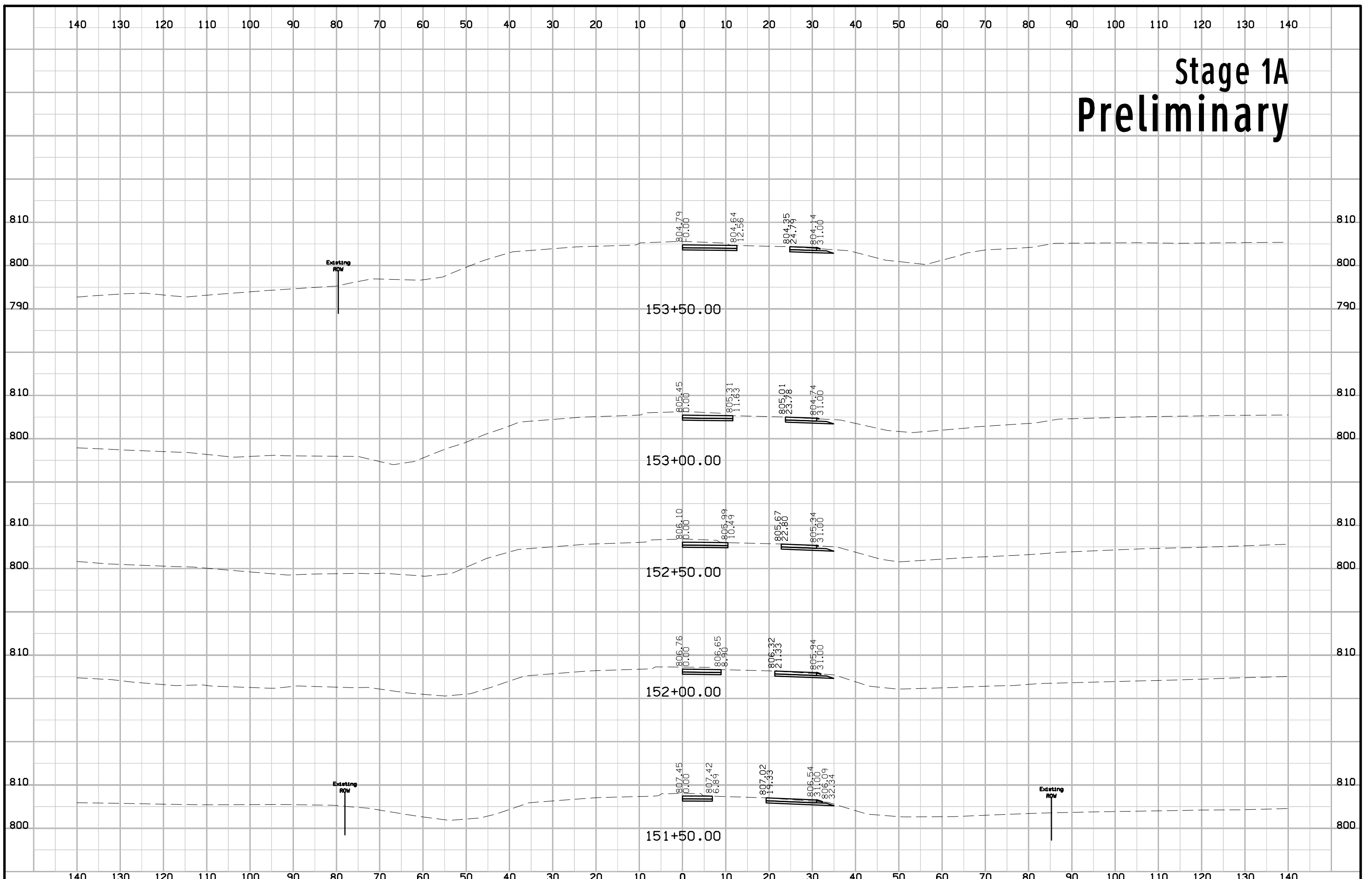
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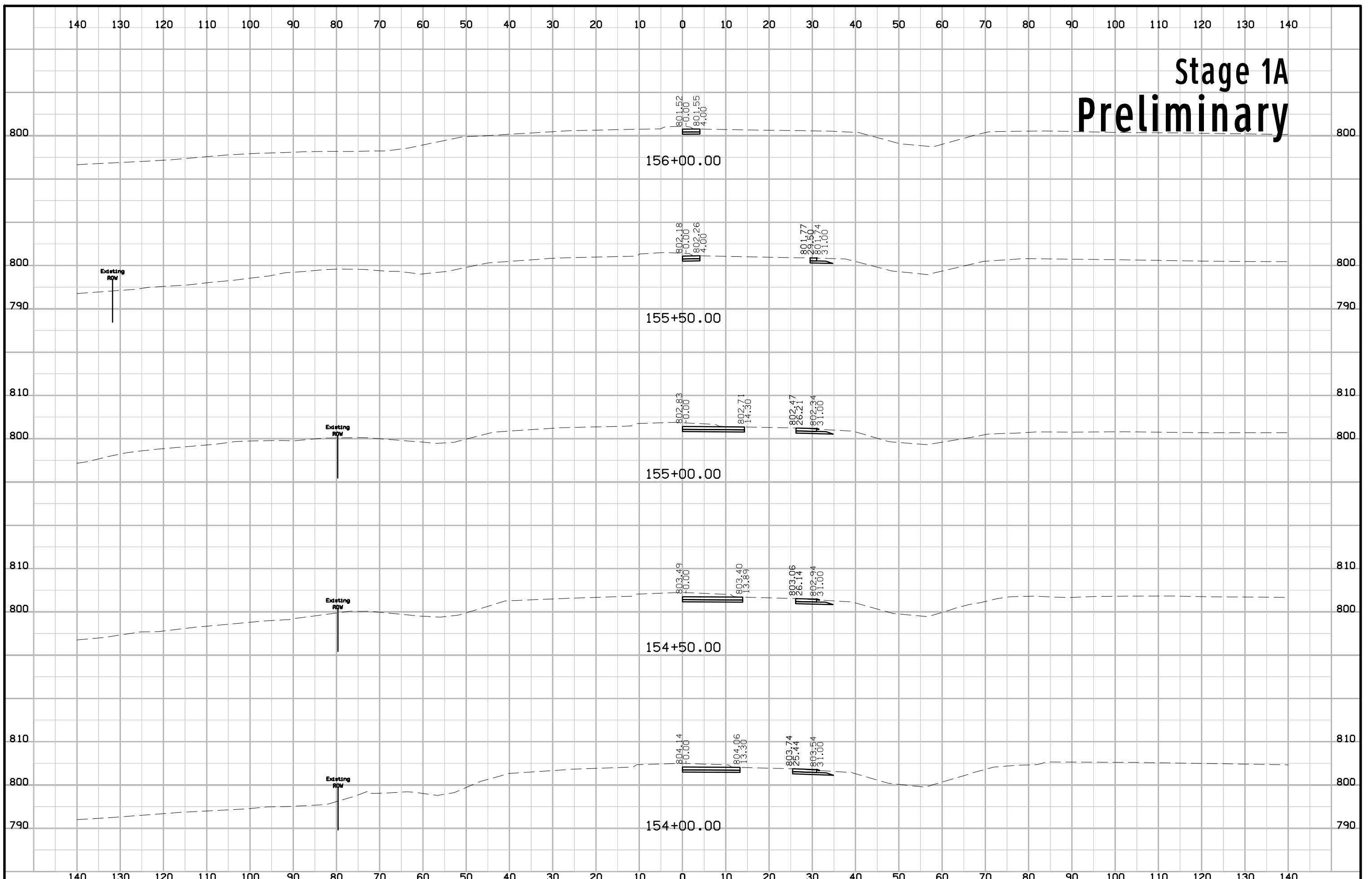
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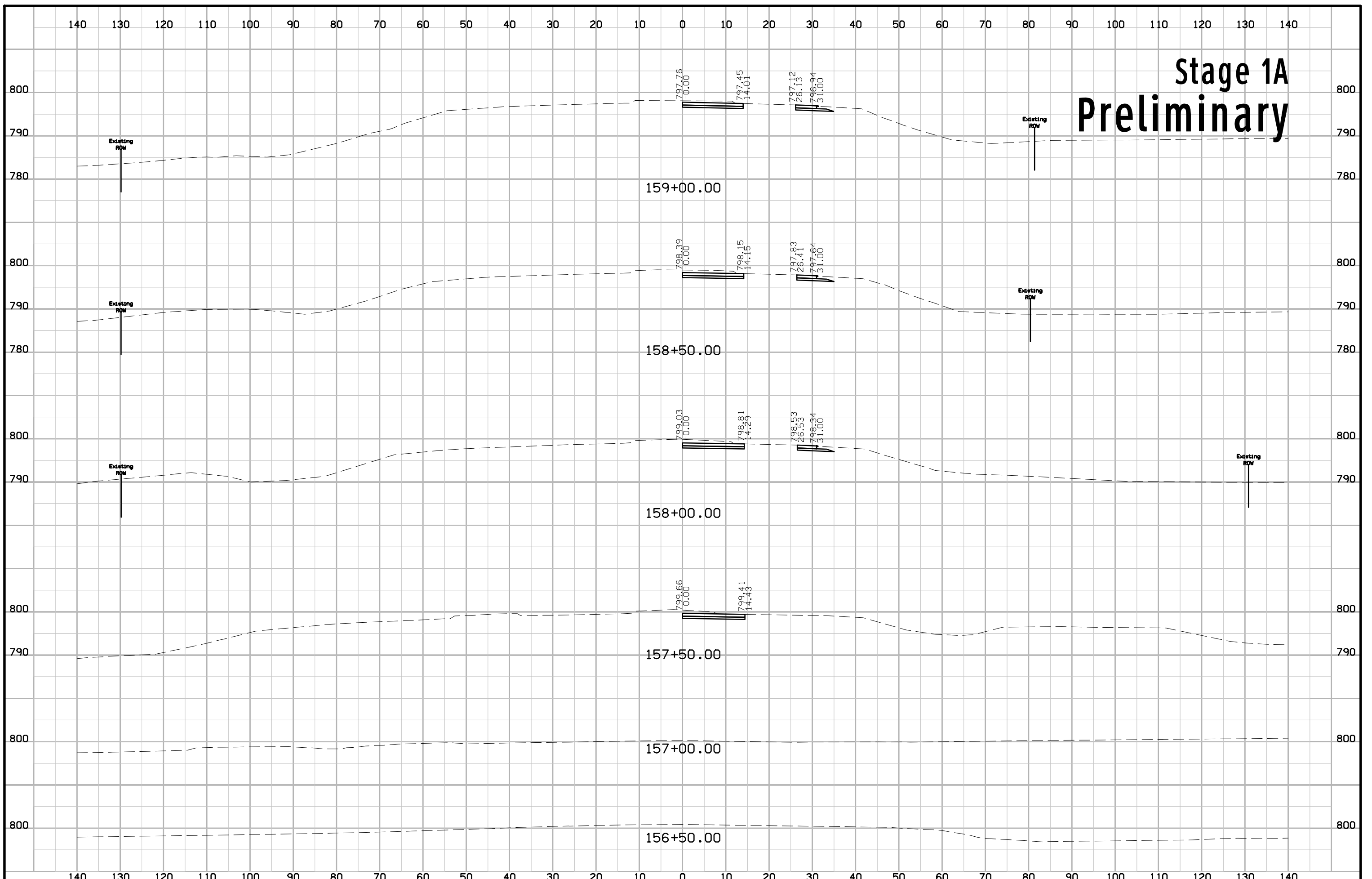
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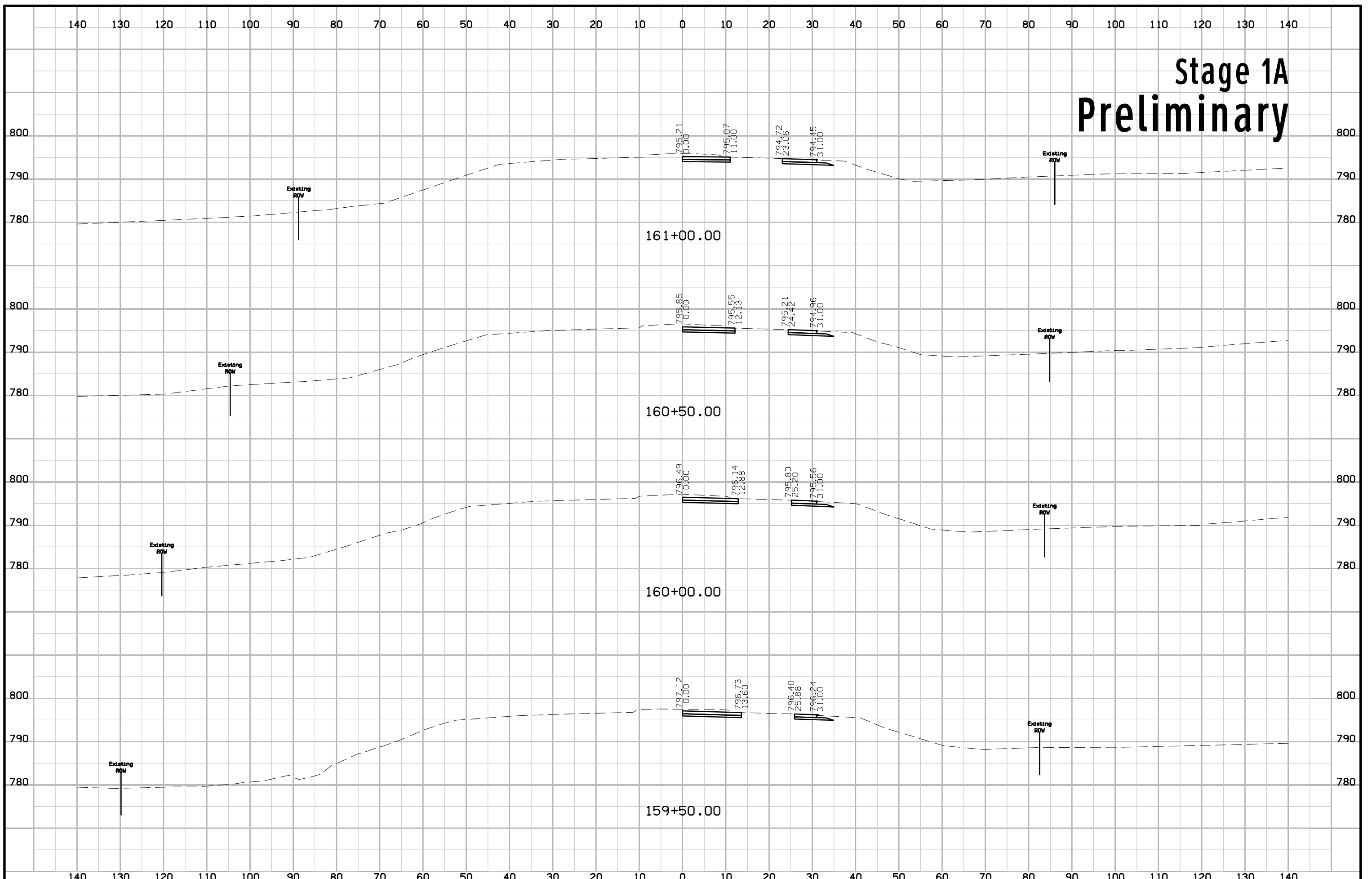
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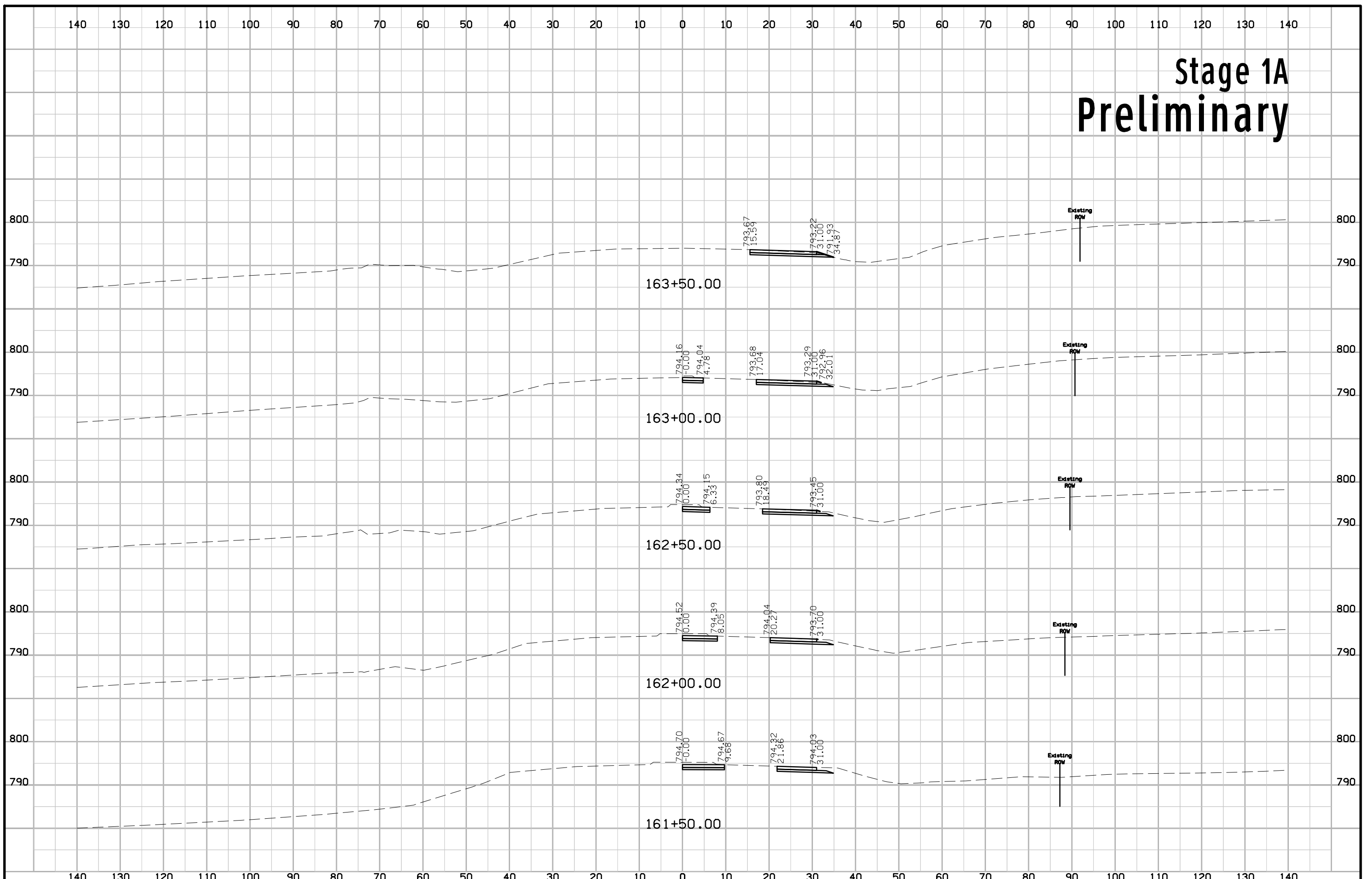
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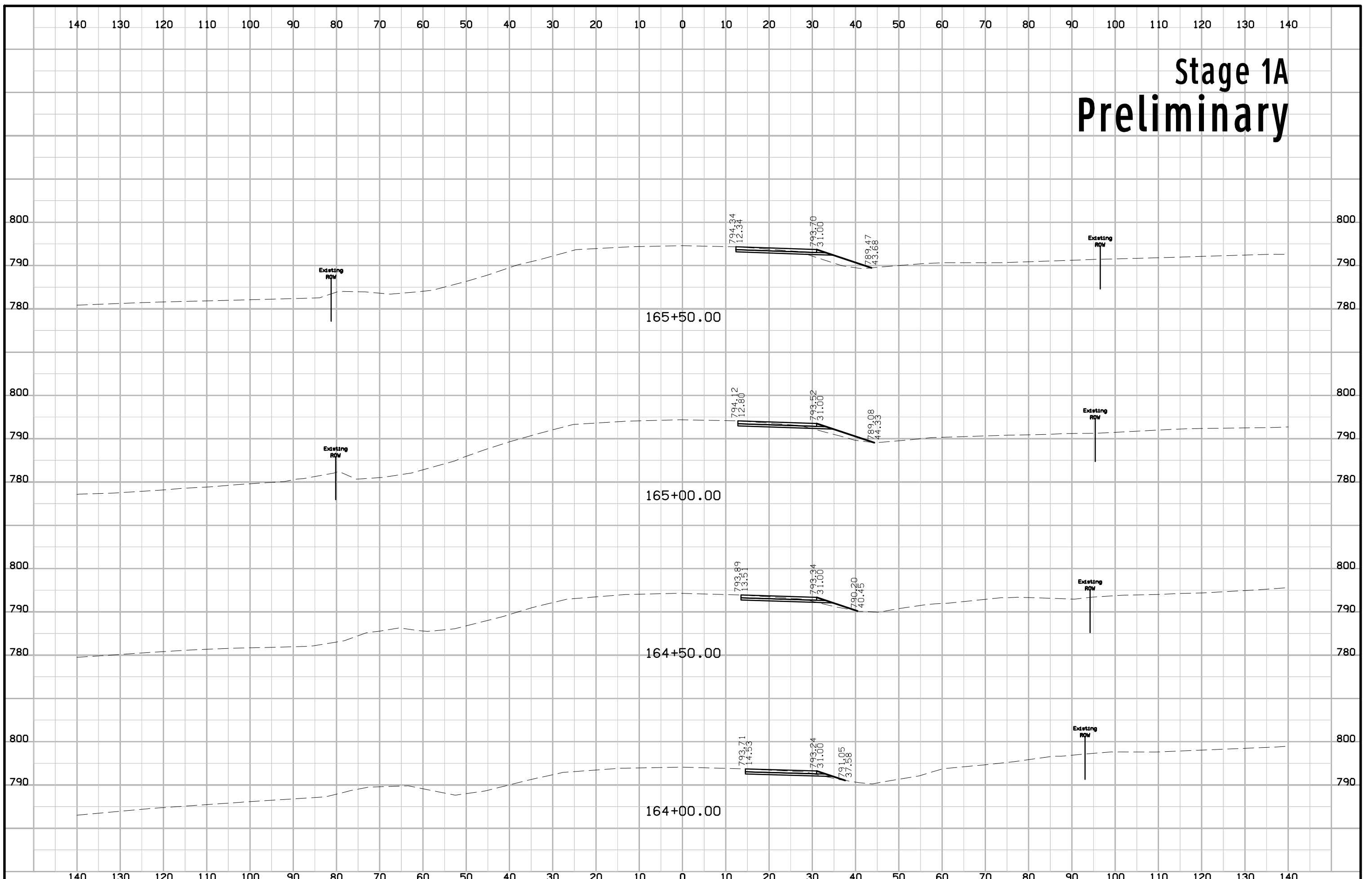
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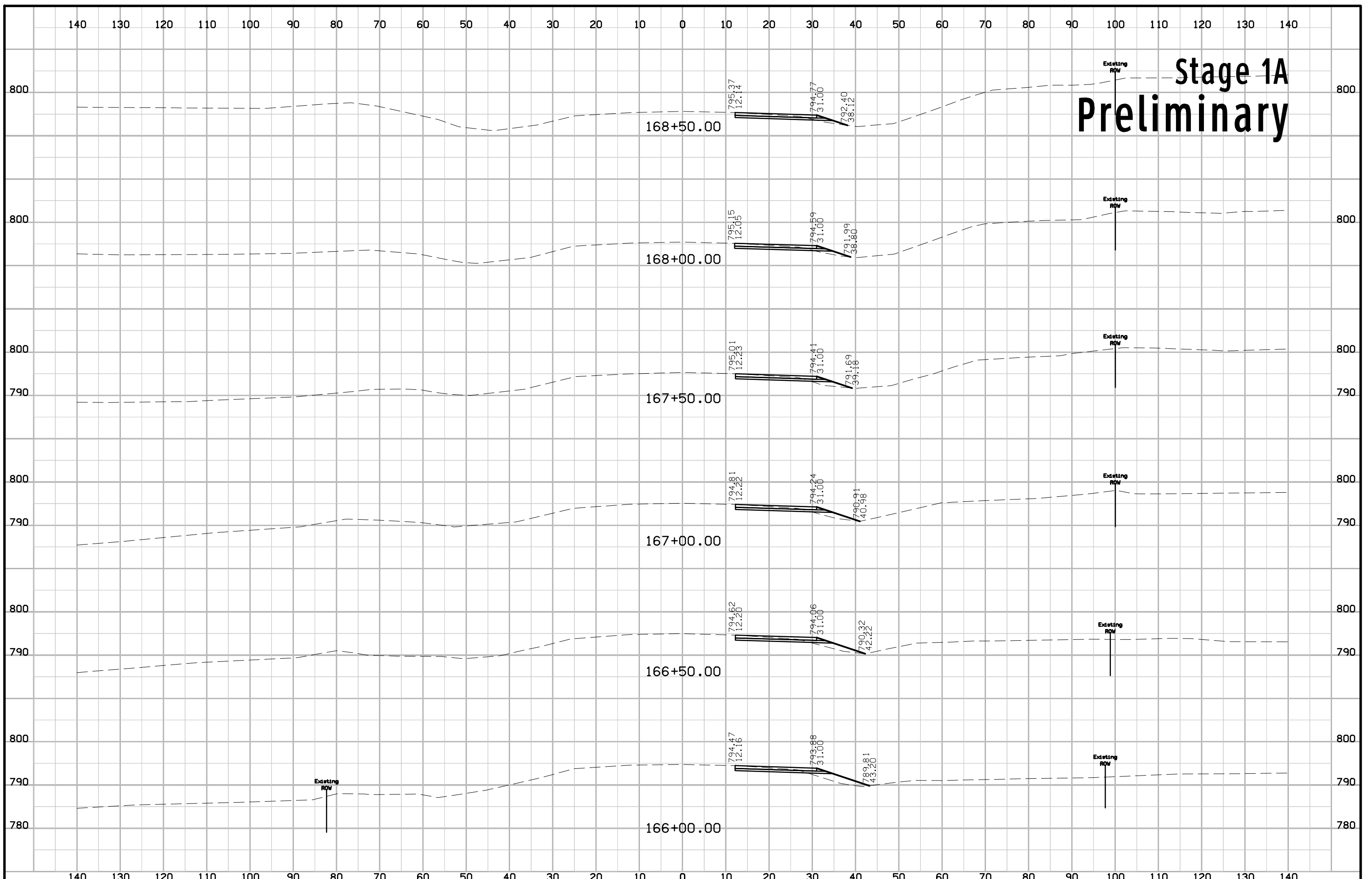
Stage 1A Preliminary



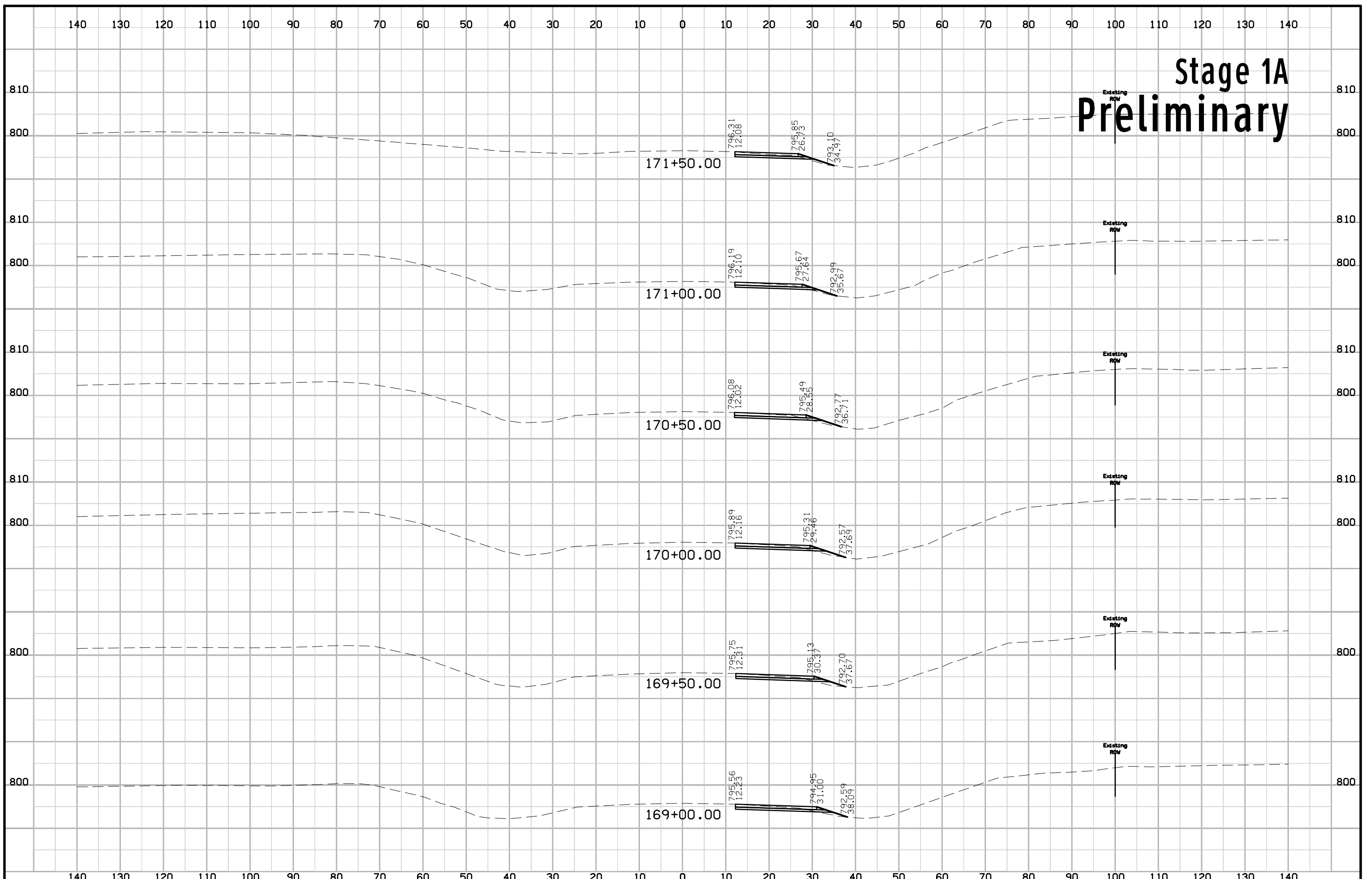
Stage 1A Preliminary



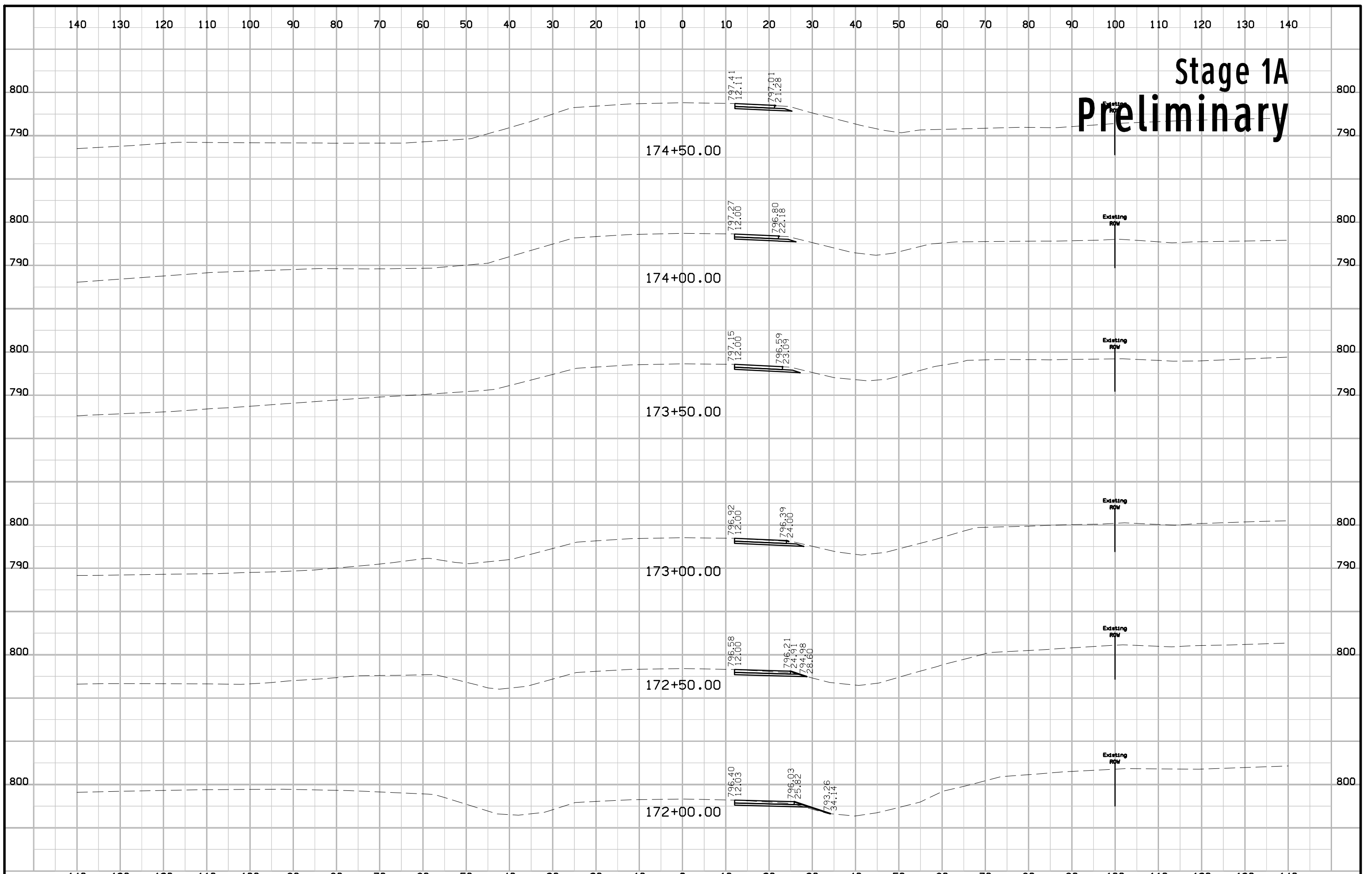
Stage 1A Preliminary



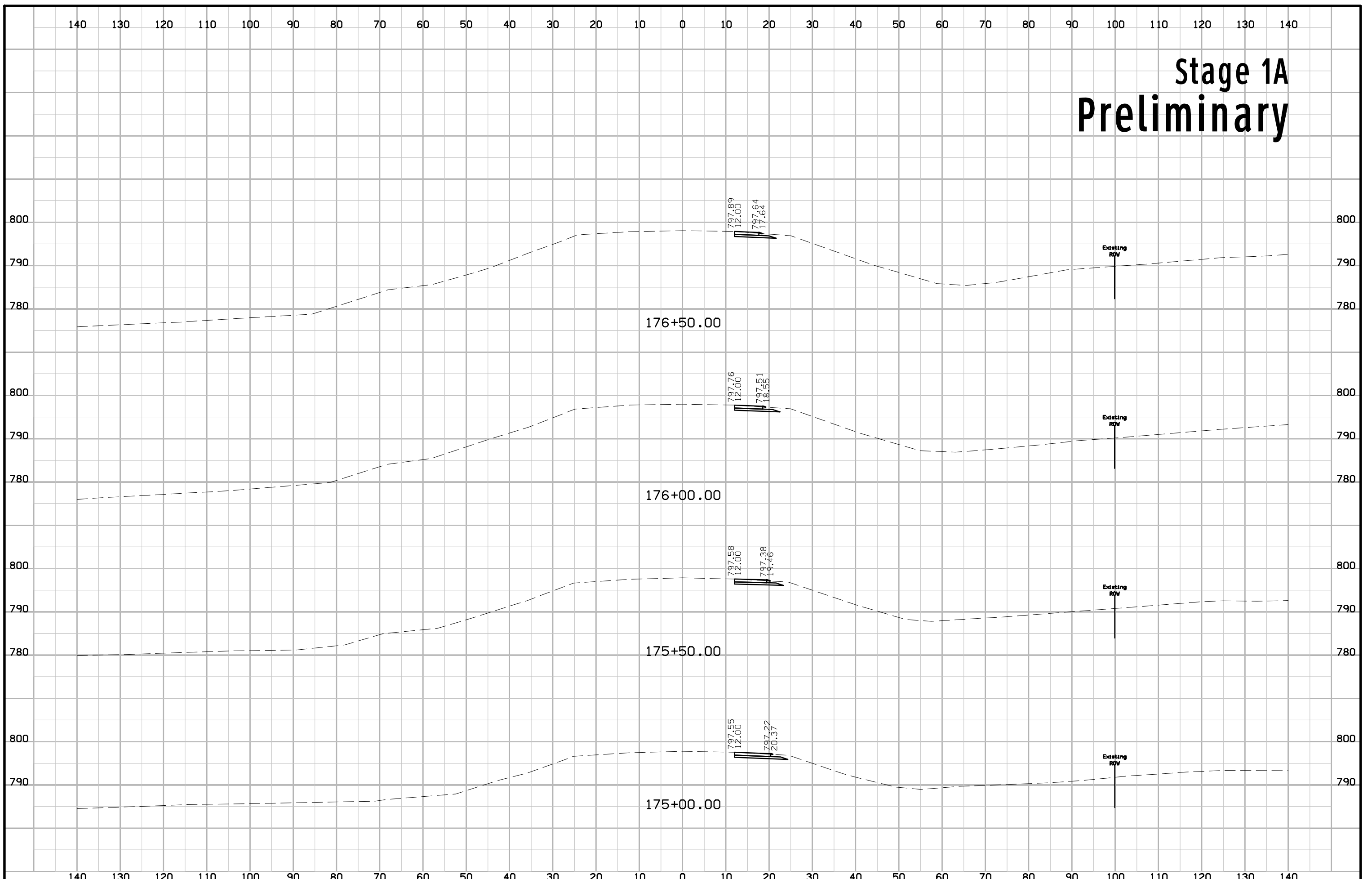
Stage 1A Preliminary



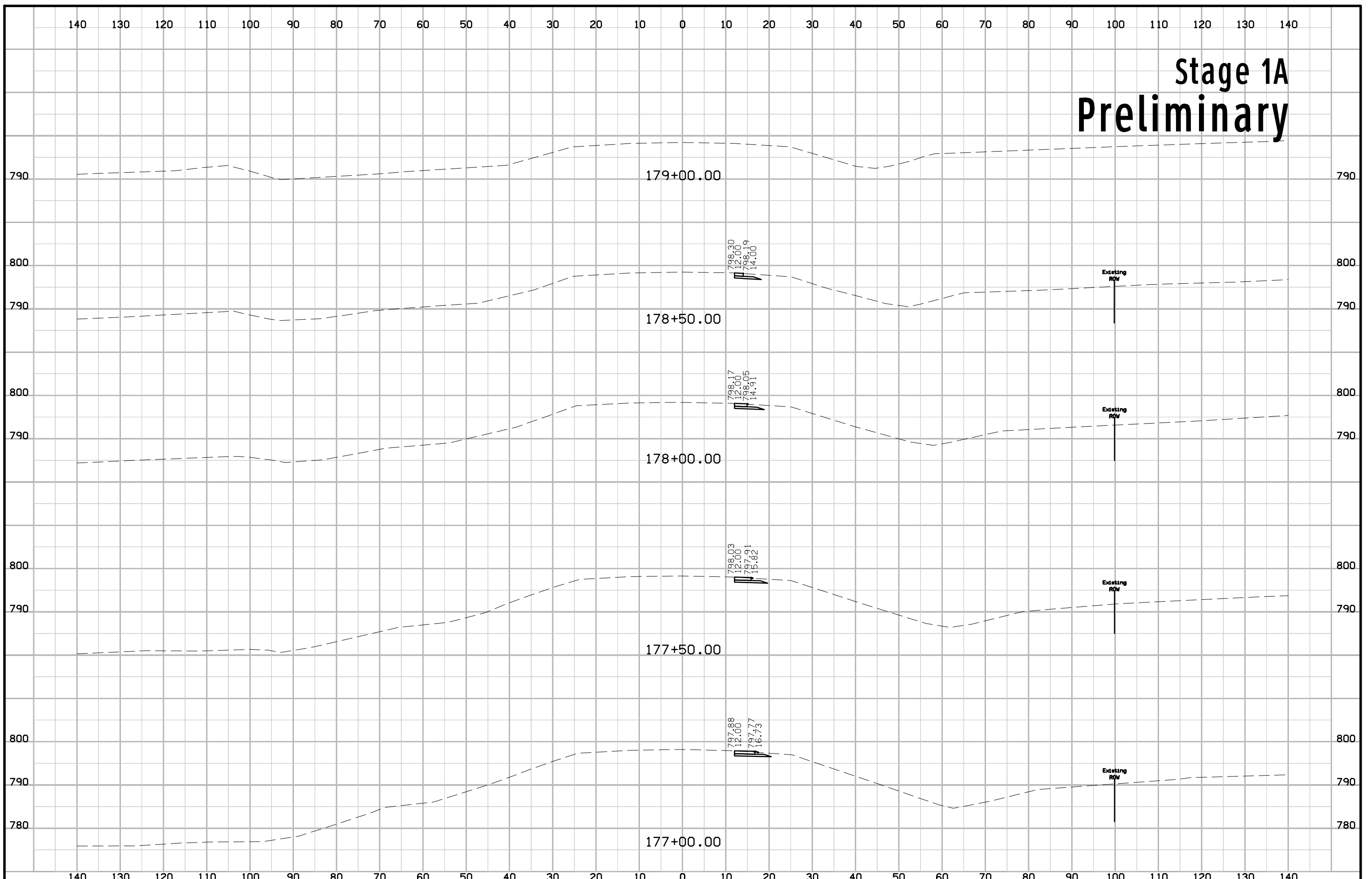
Stage 1A Preliminary



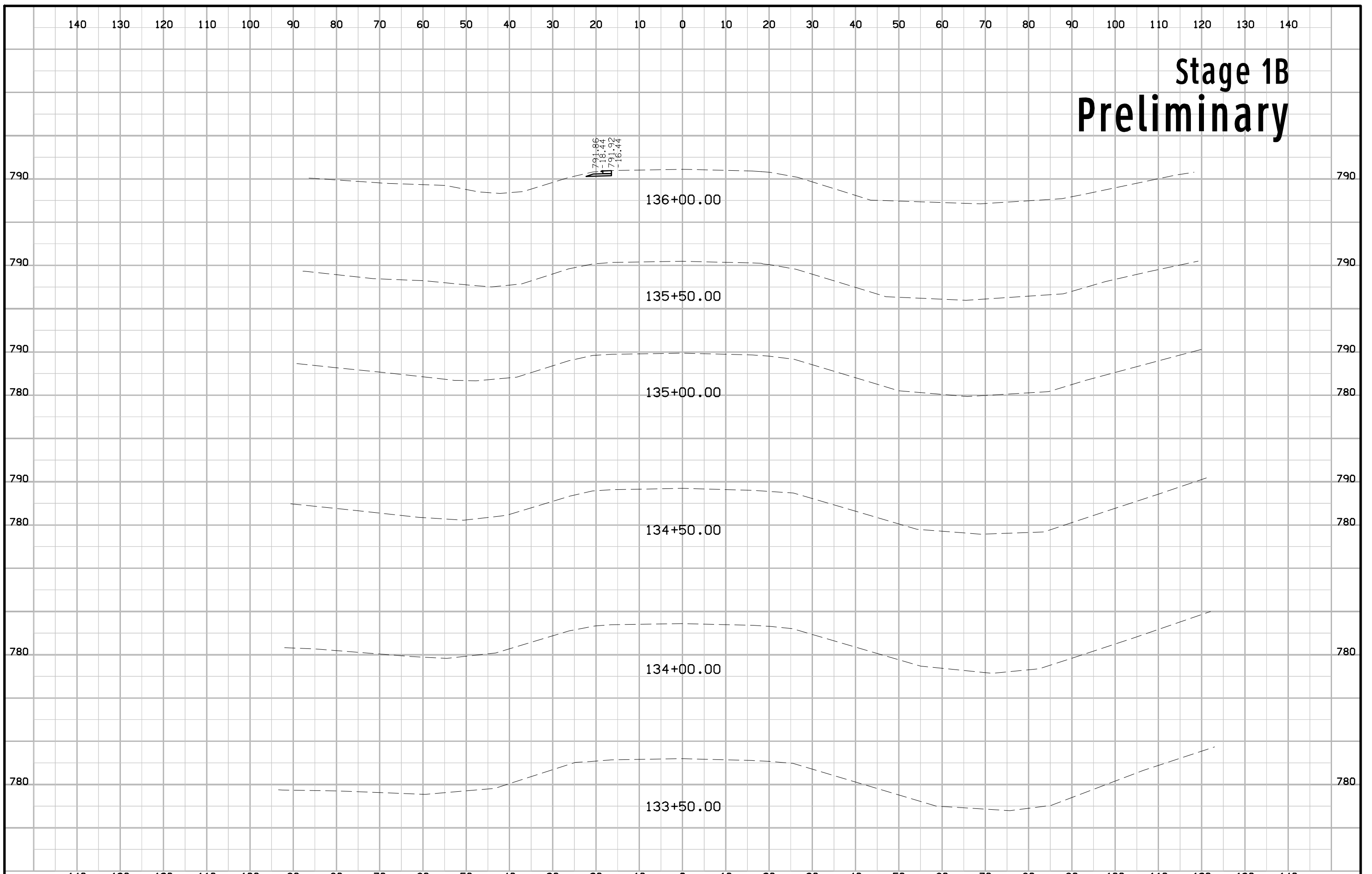
Stage 1A Preliminary



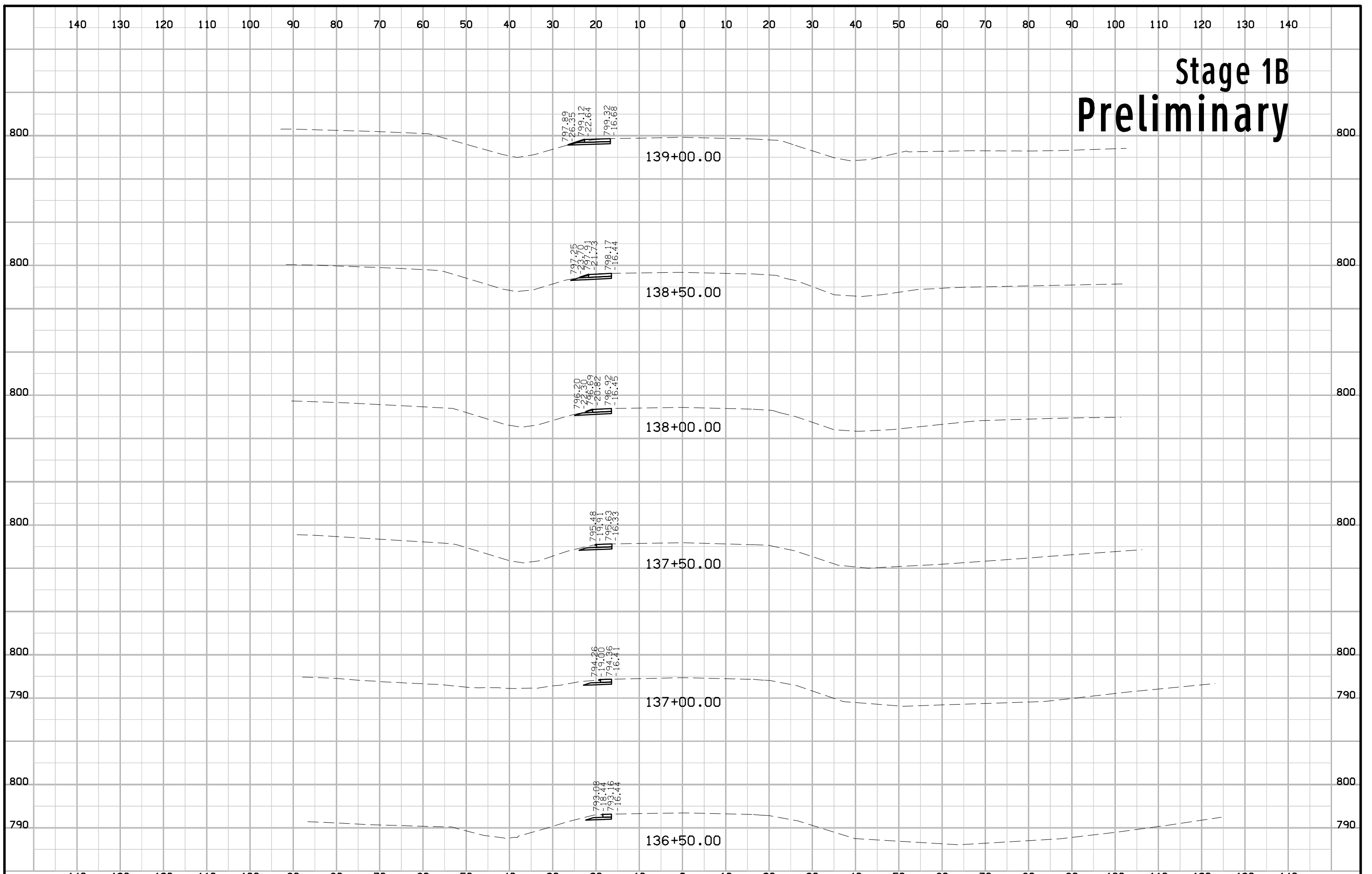
Stage 1A Preliminary



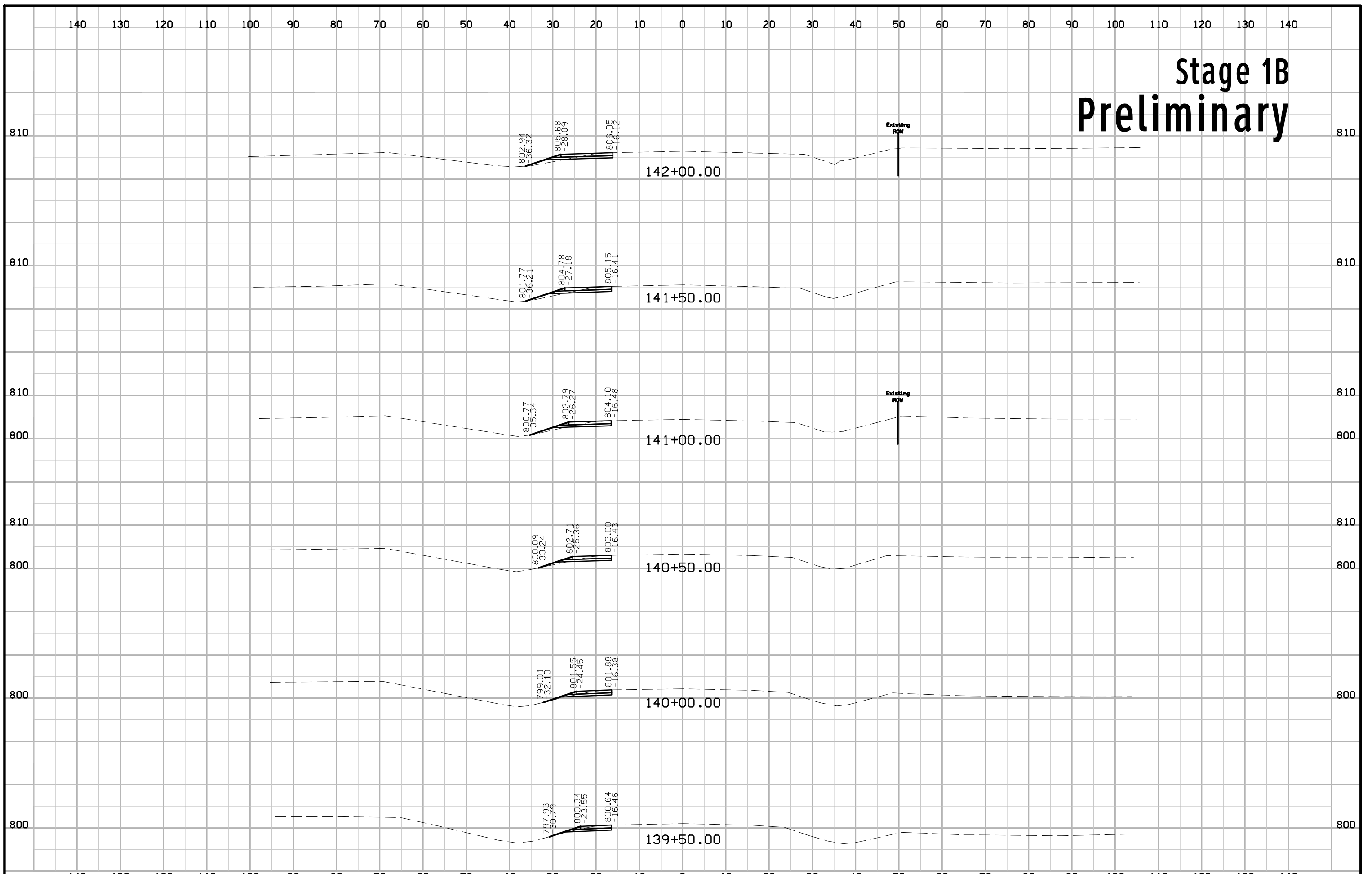
Stage 1B Preliminary



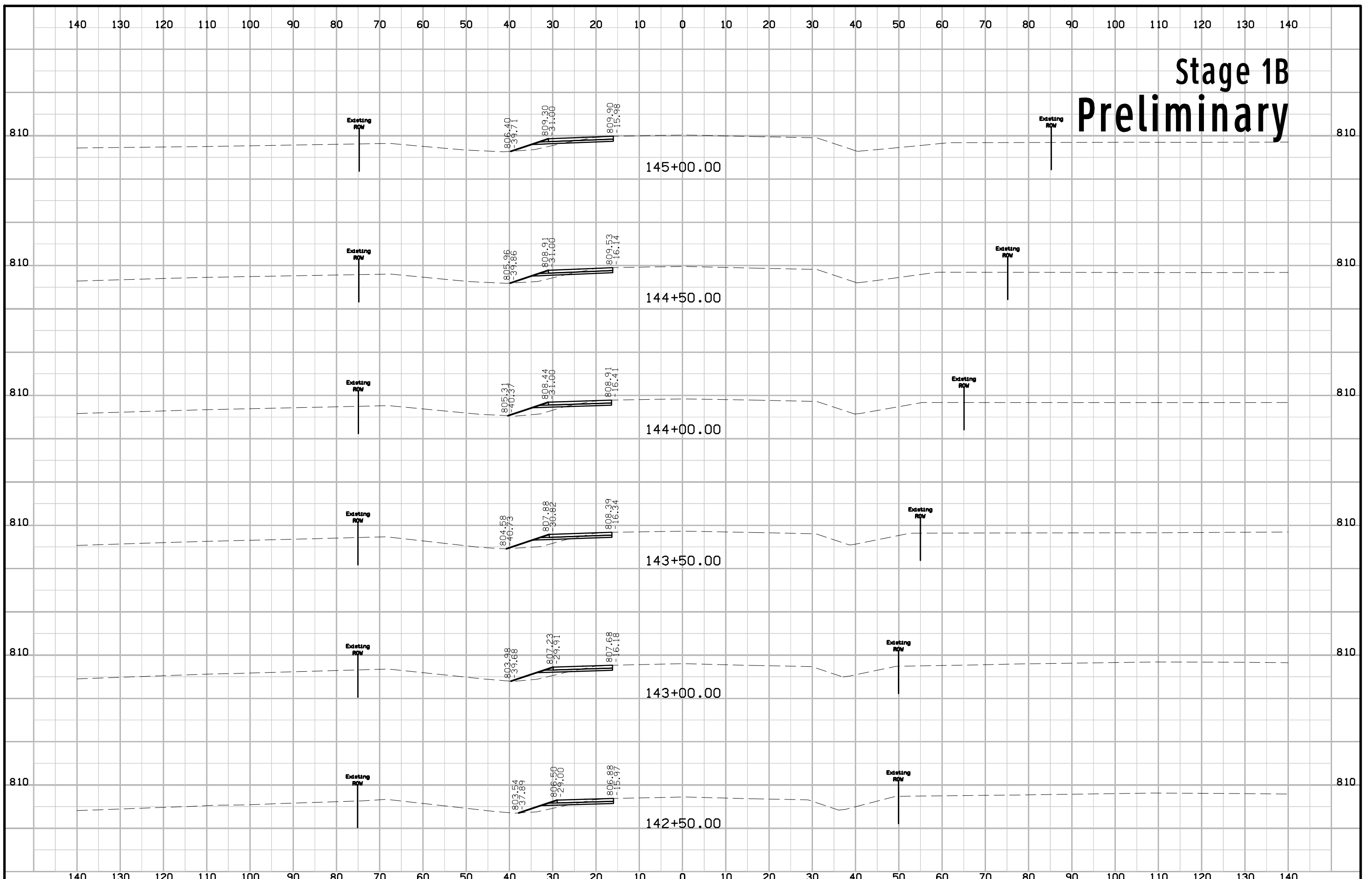
Stage 1B Preliminary



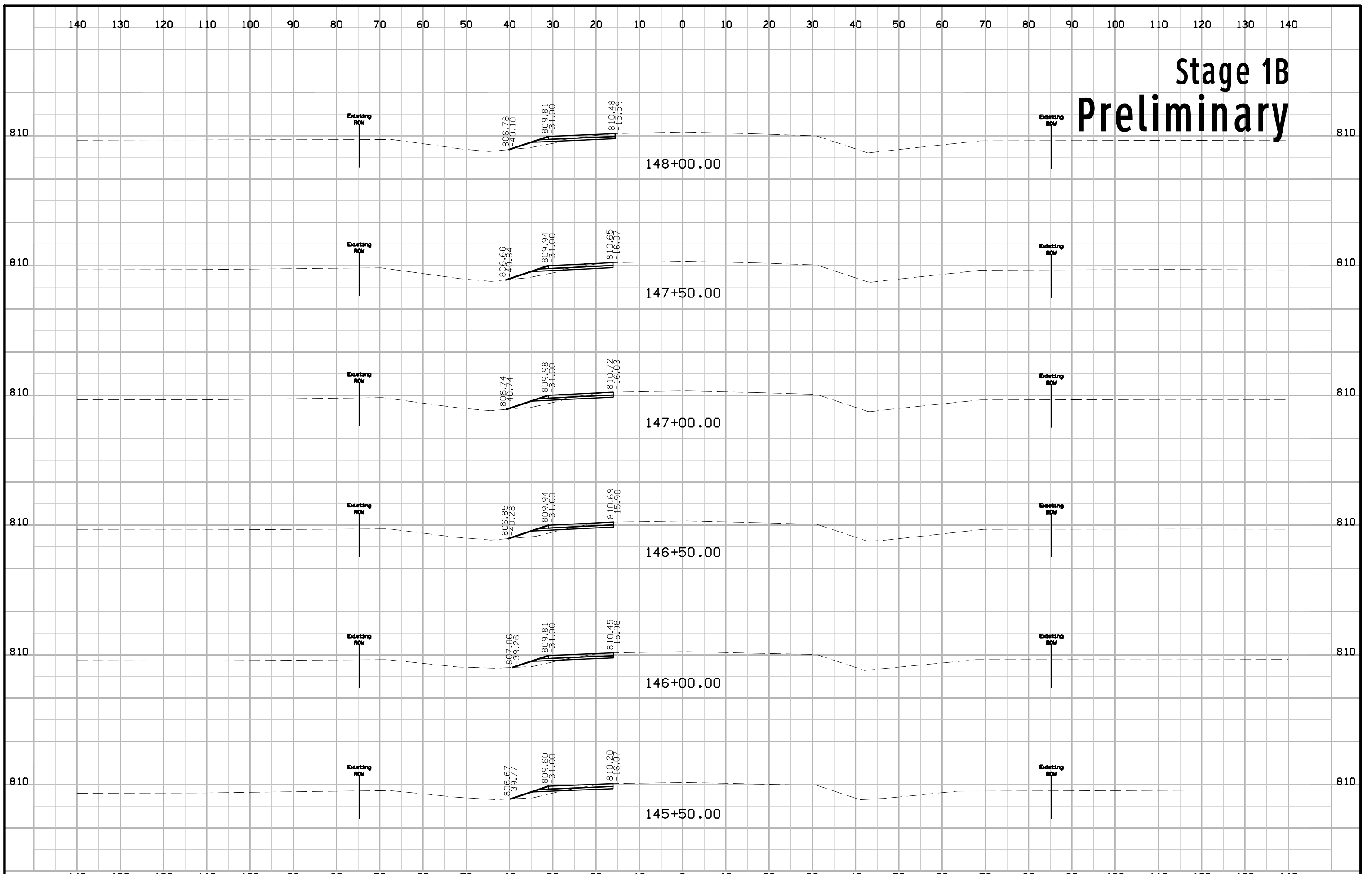
Stage 1B Preliminary



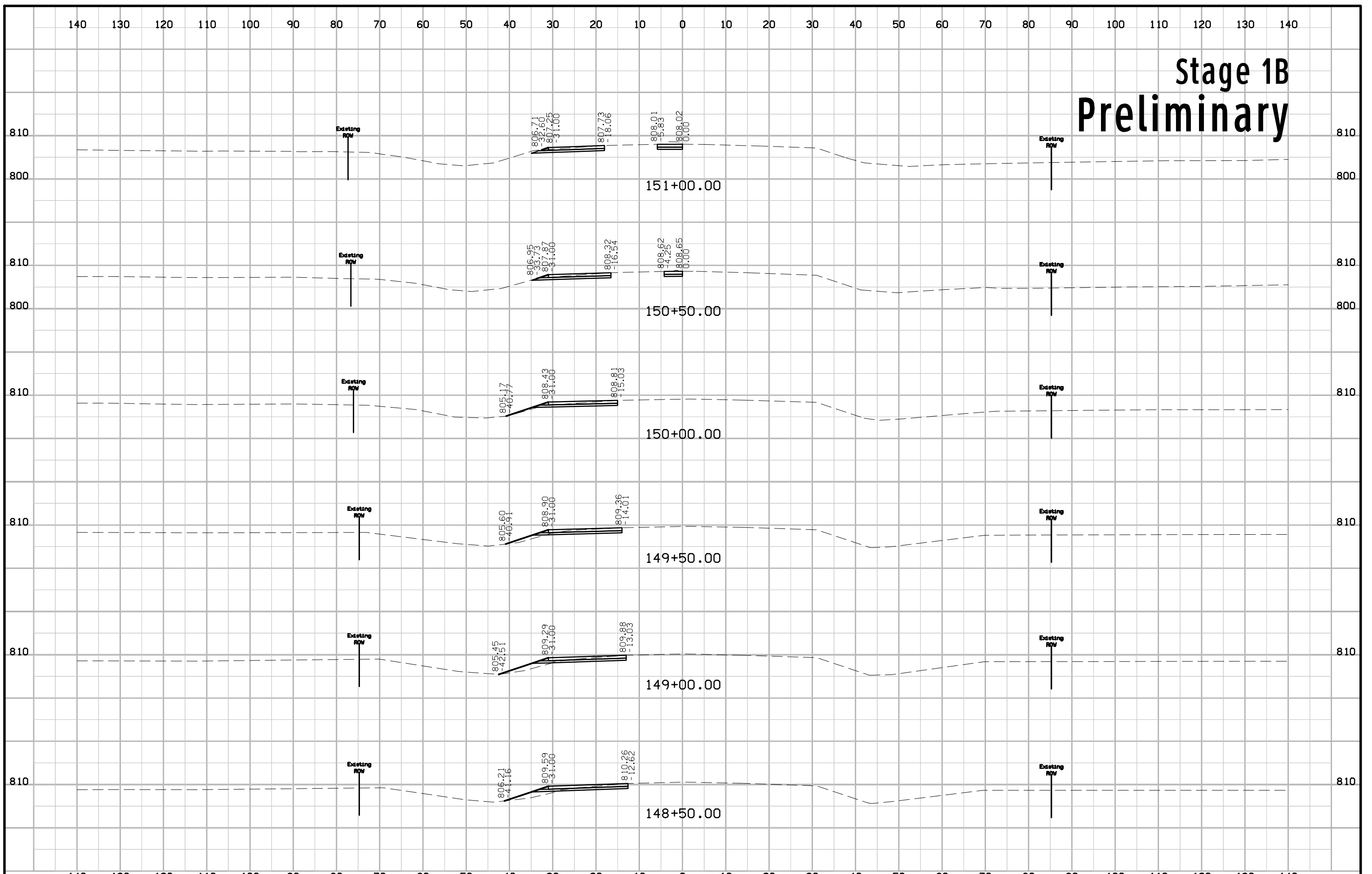
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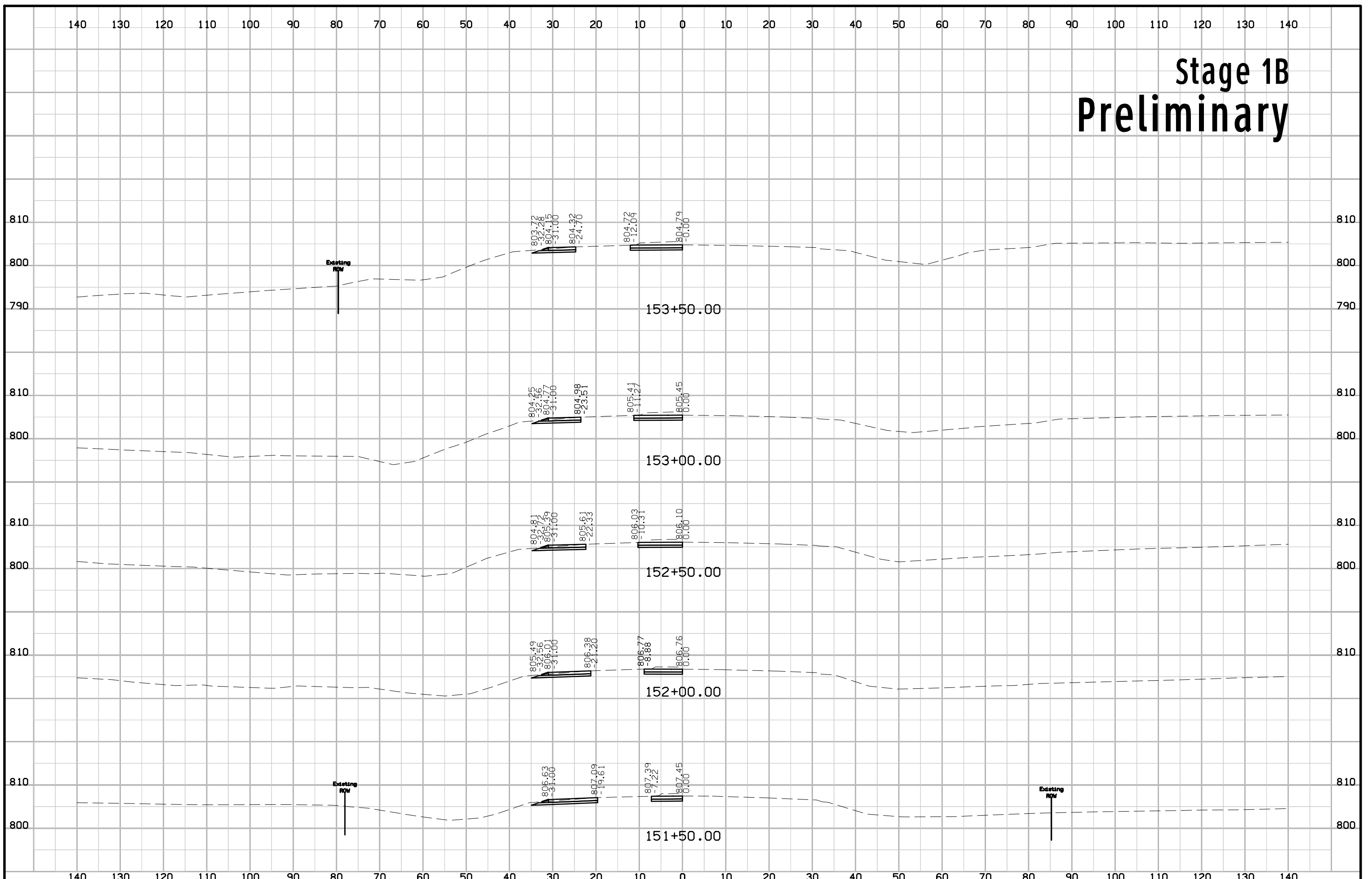
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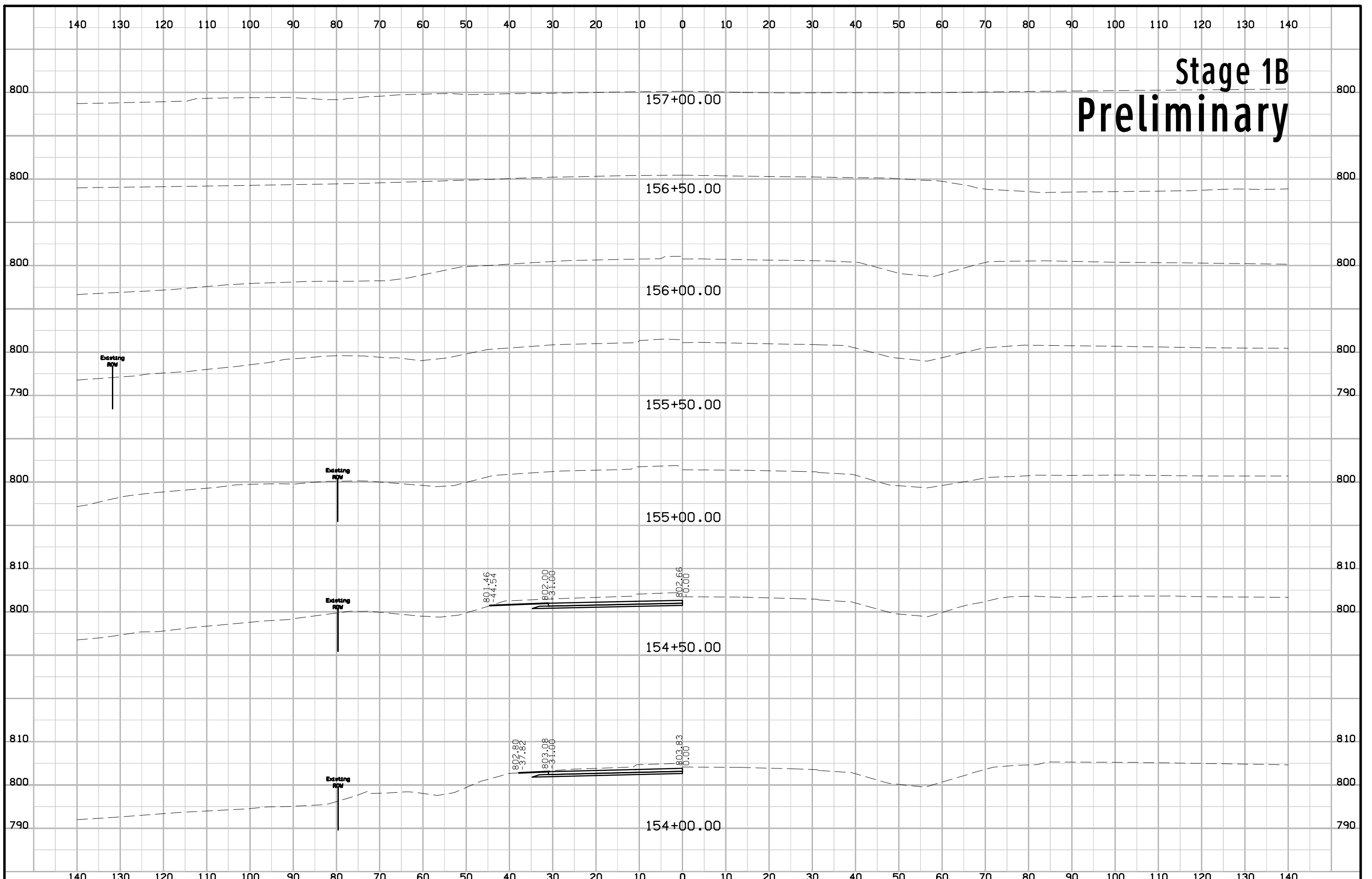
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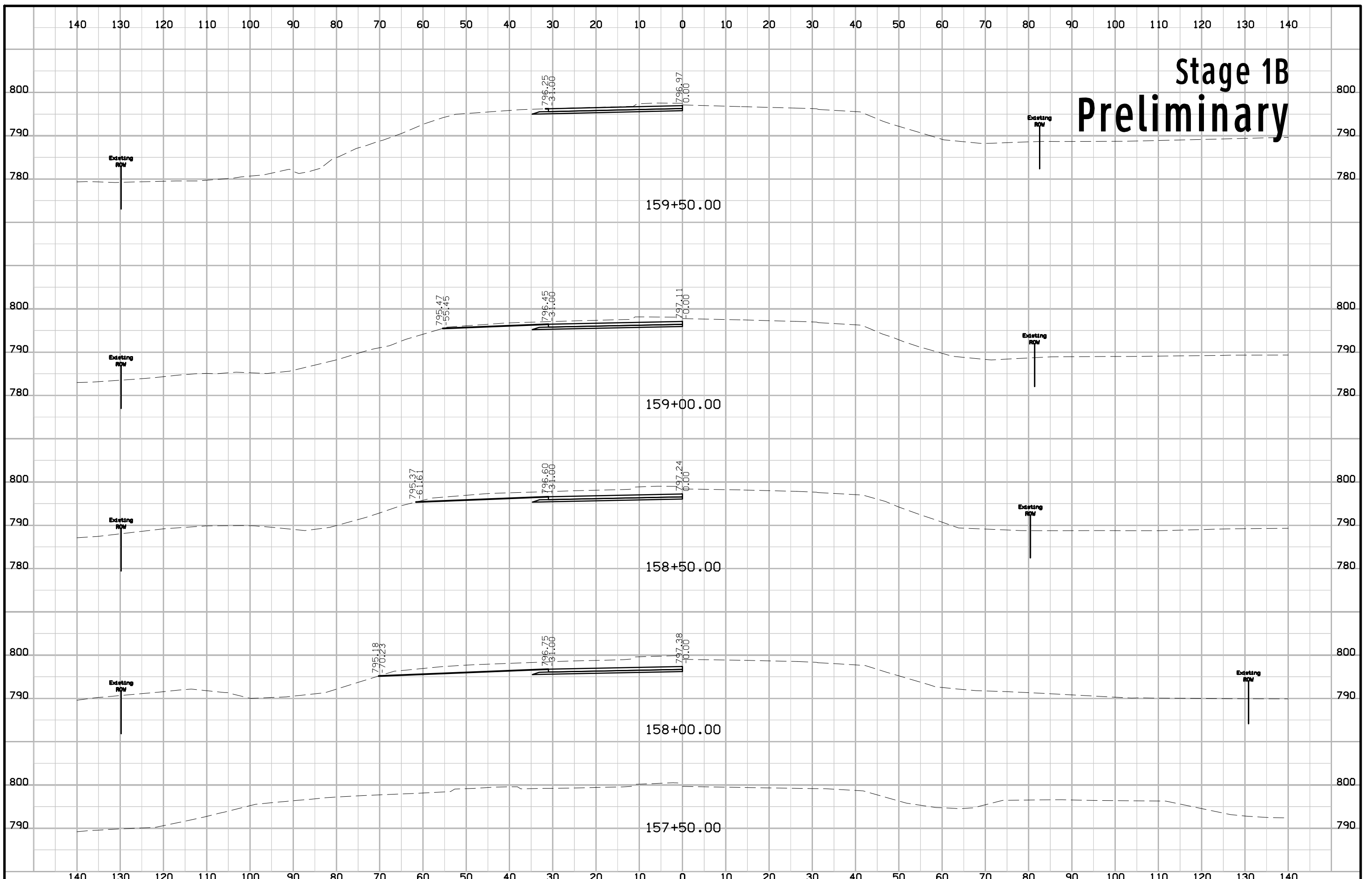
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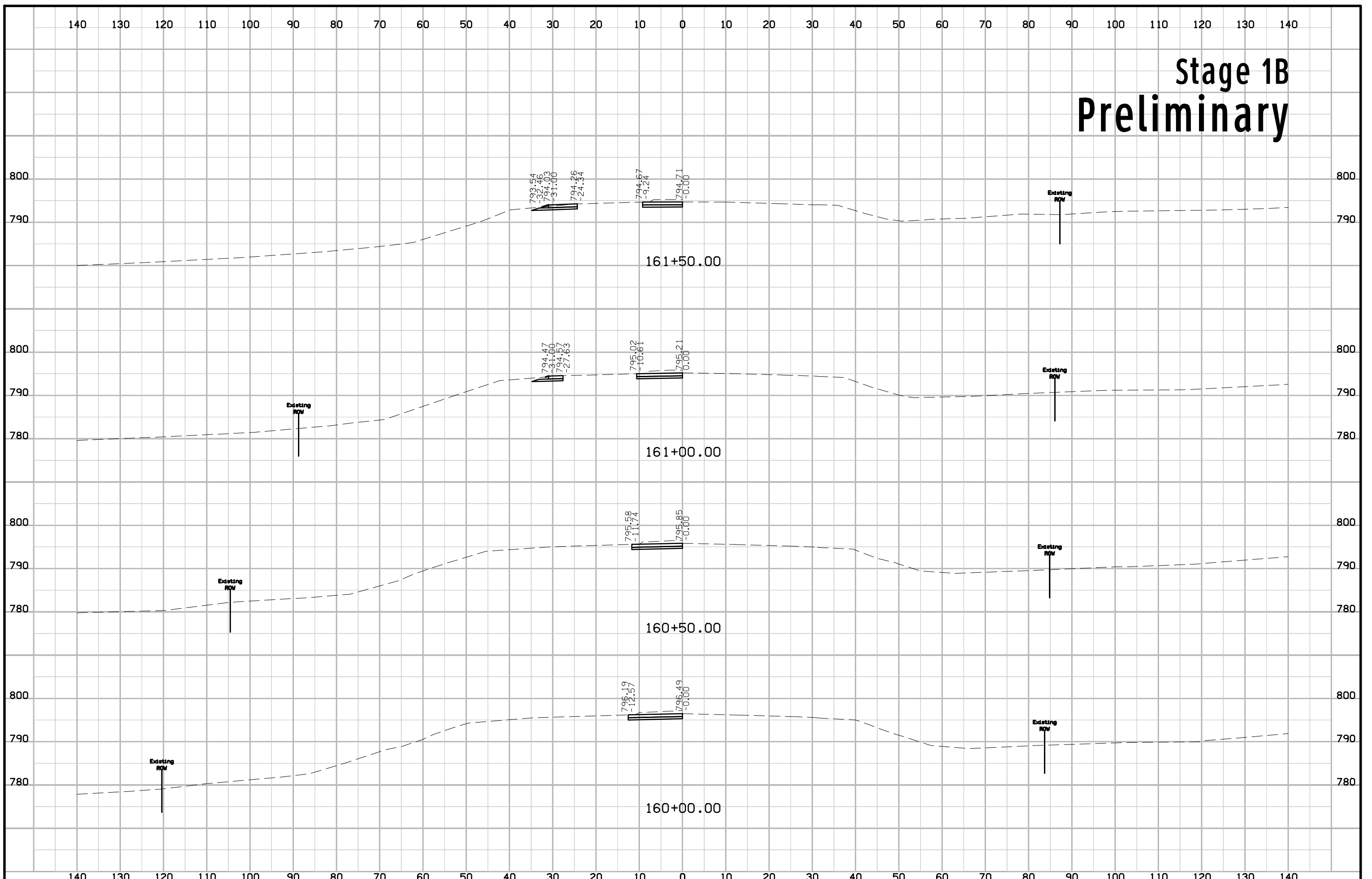
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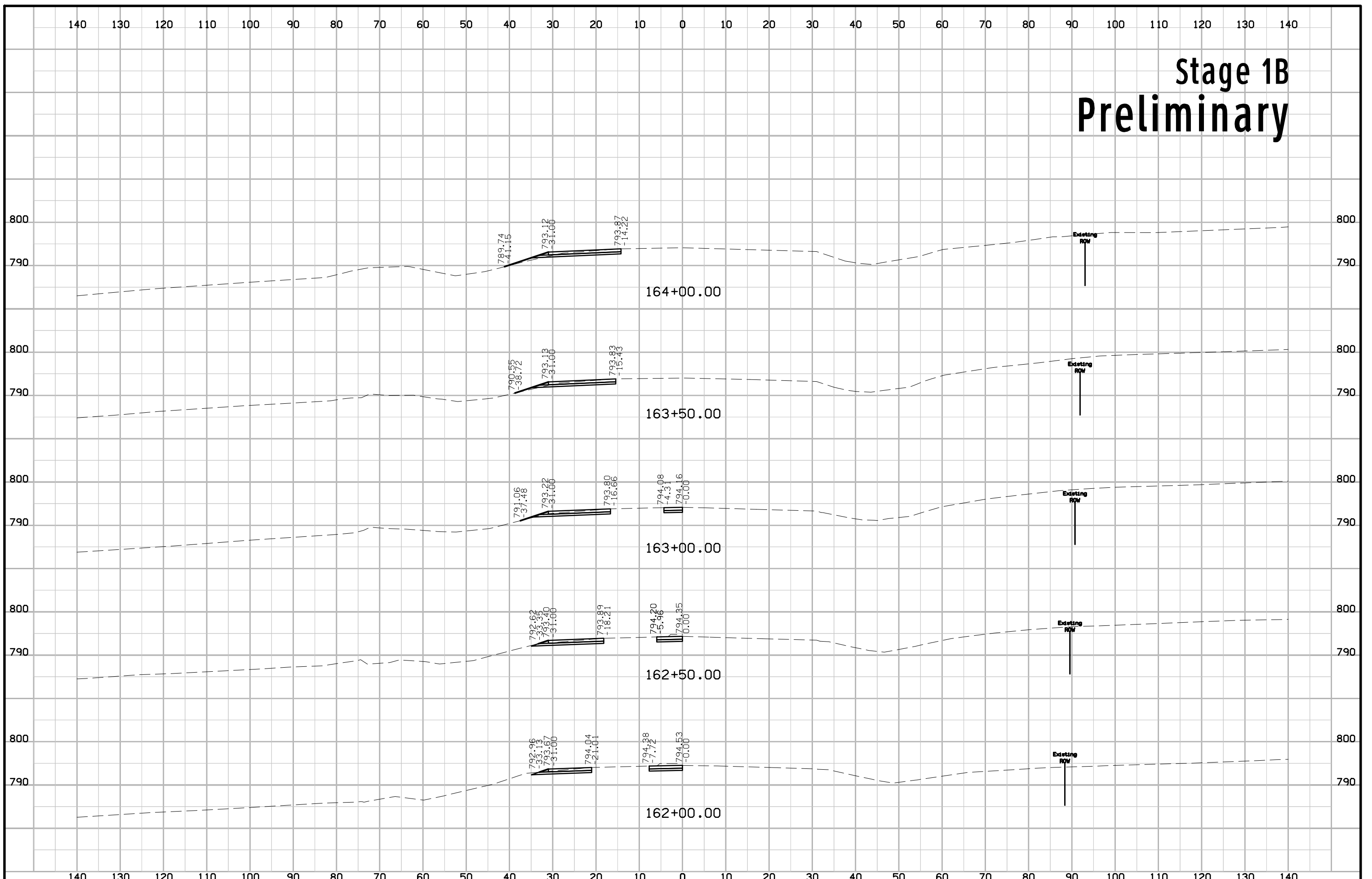
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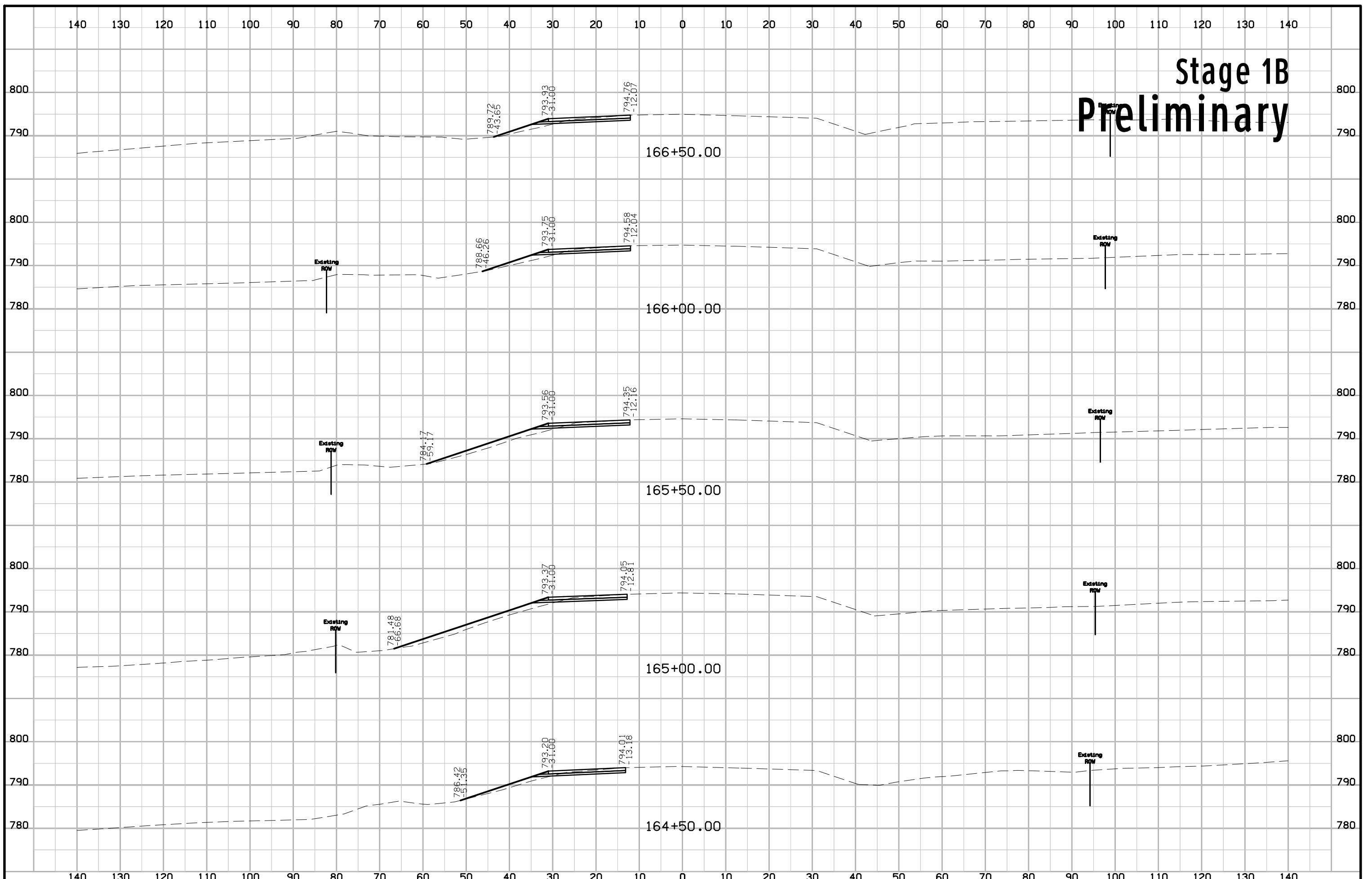
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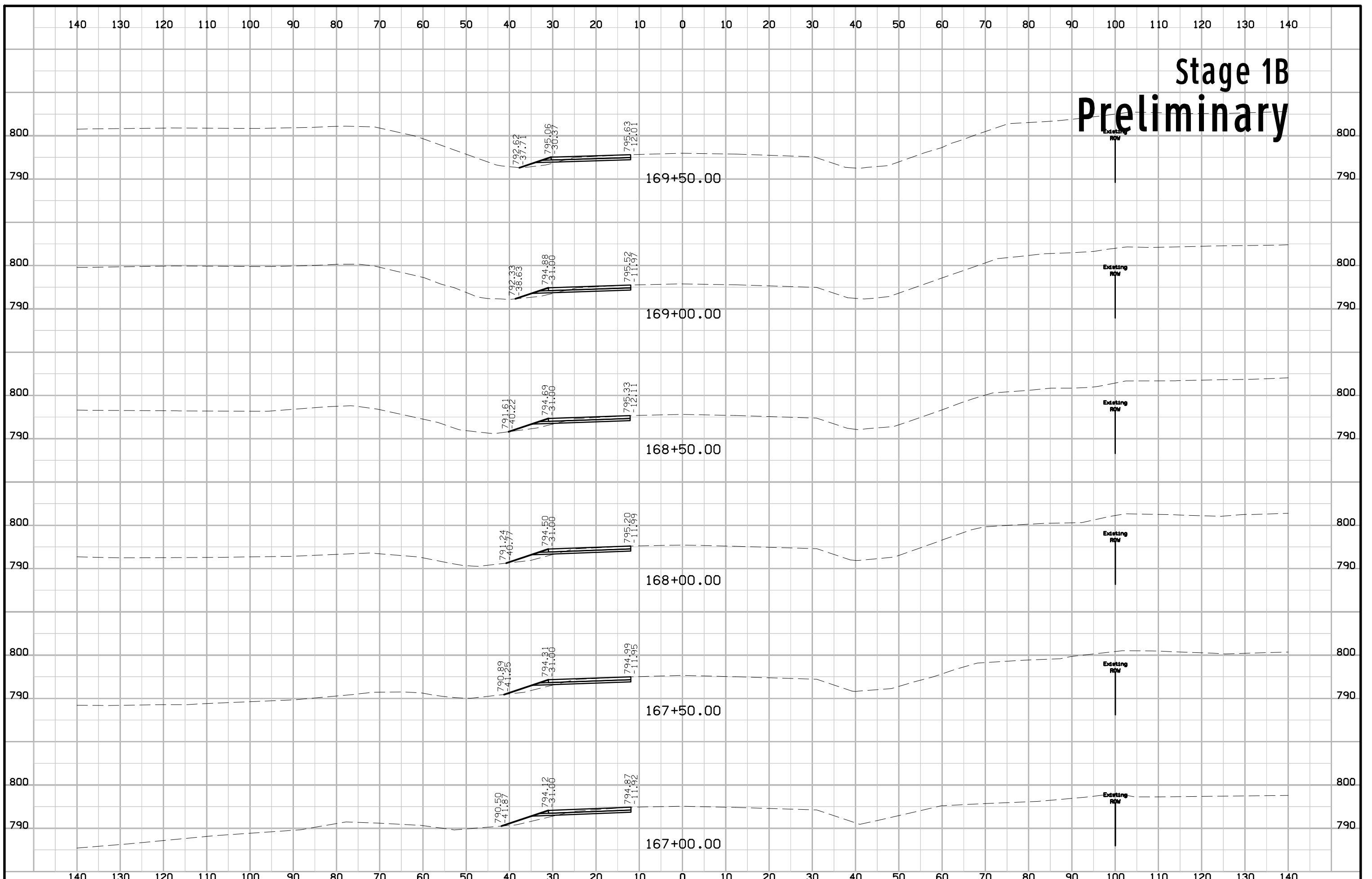
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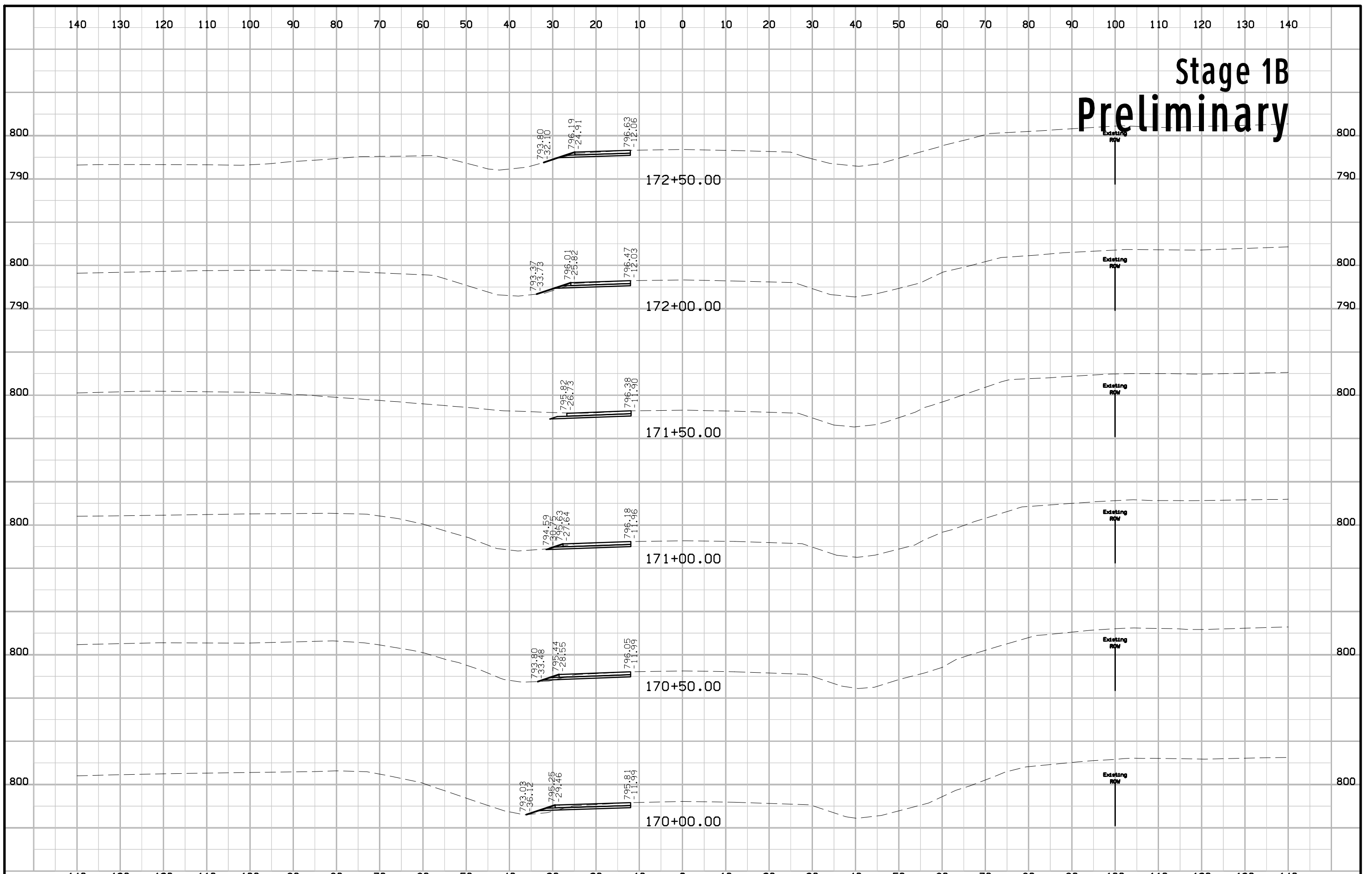
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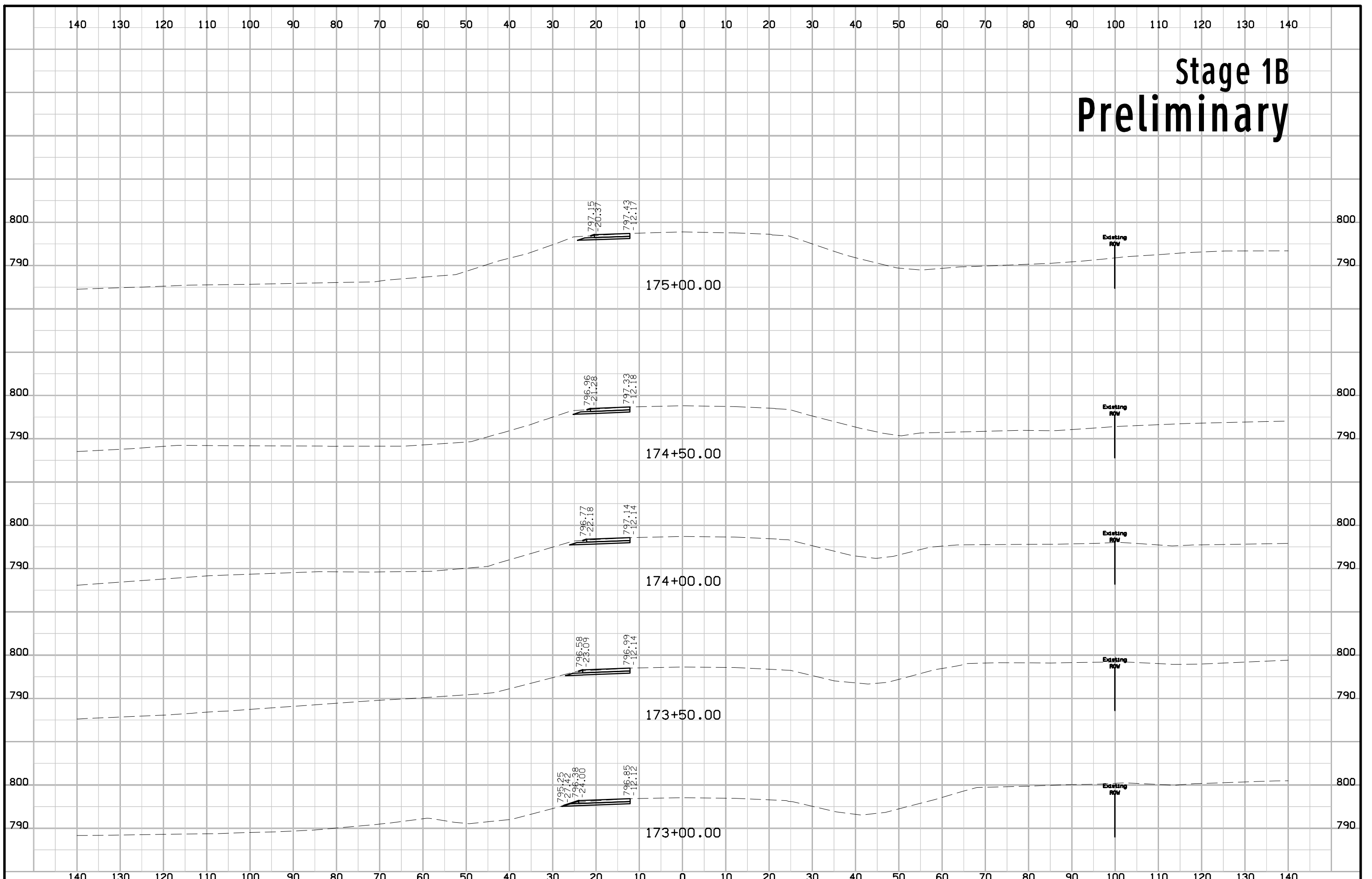
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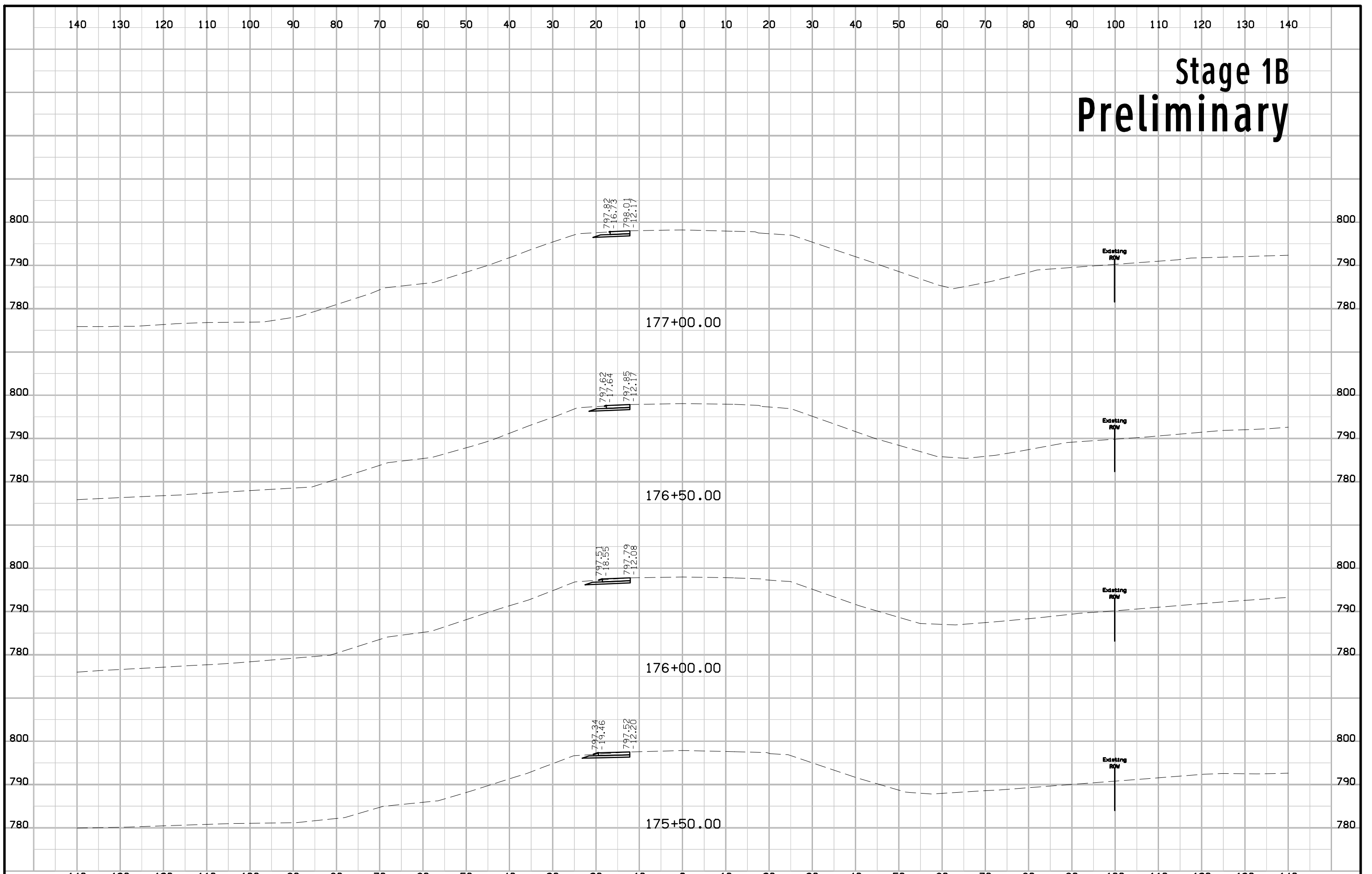
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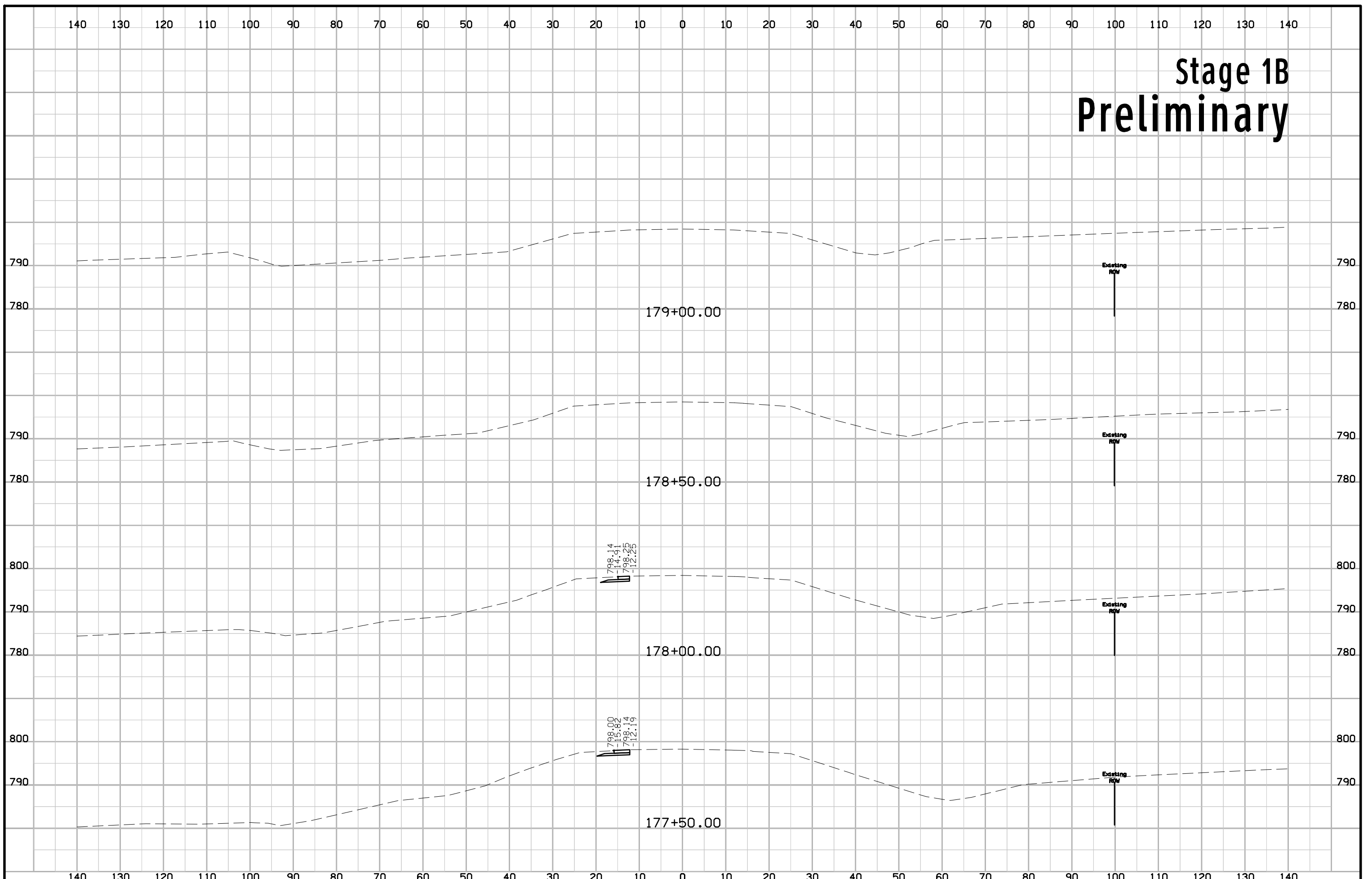
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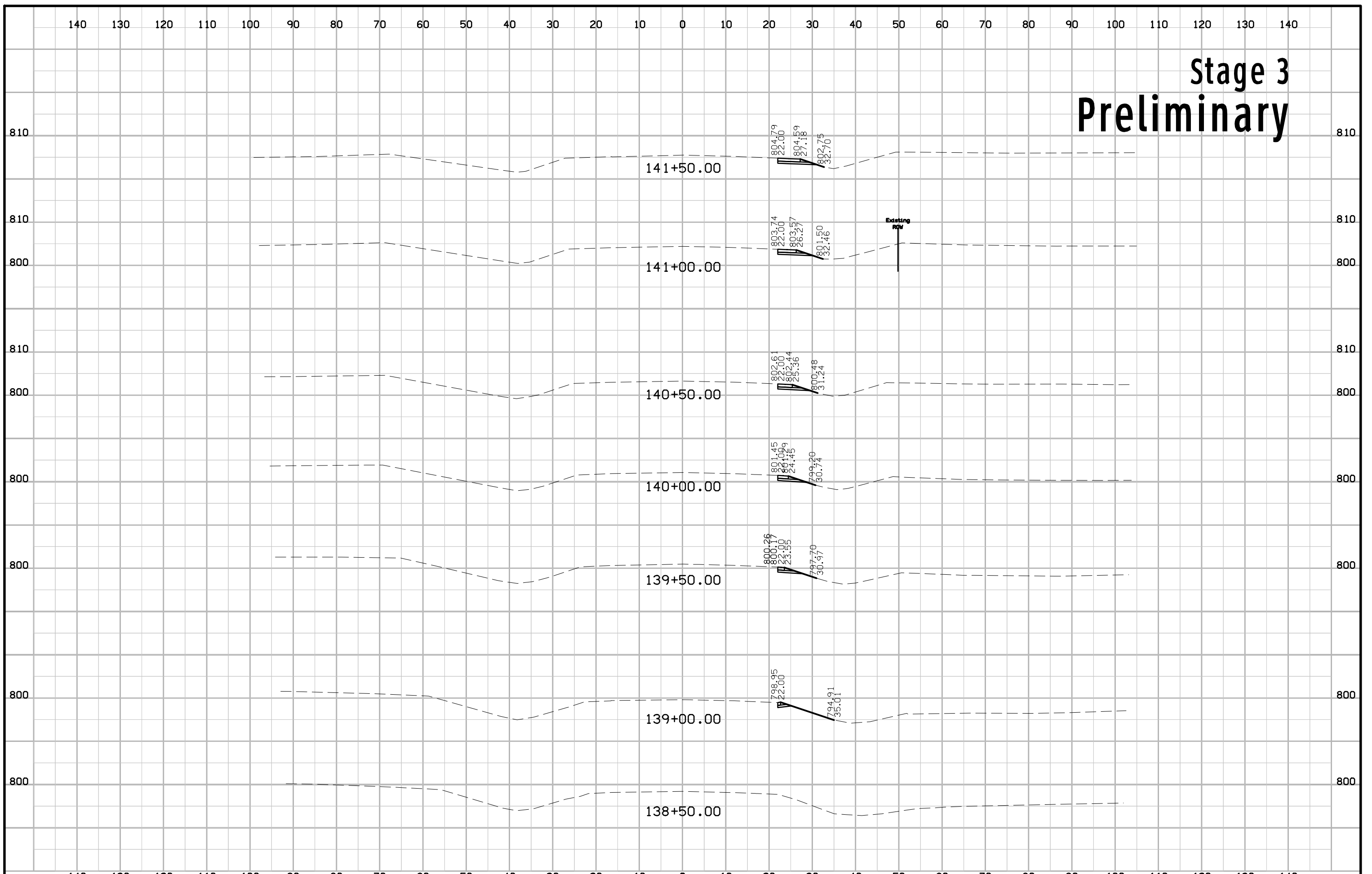
Stage 1B Preliminary



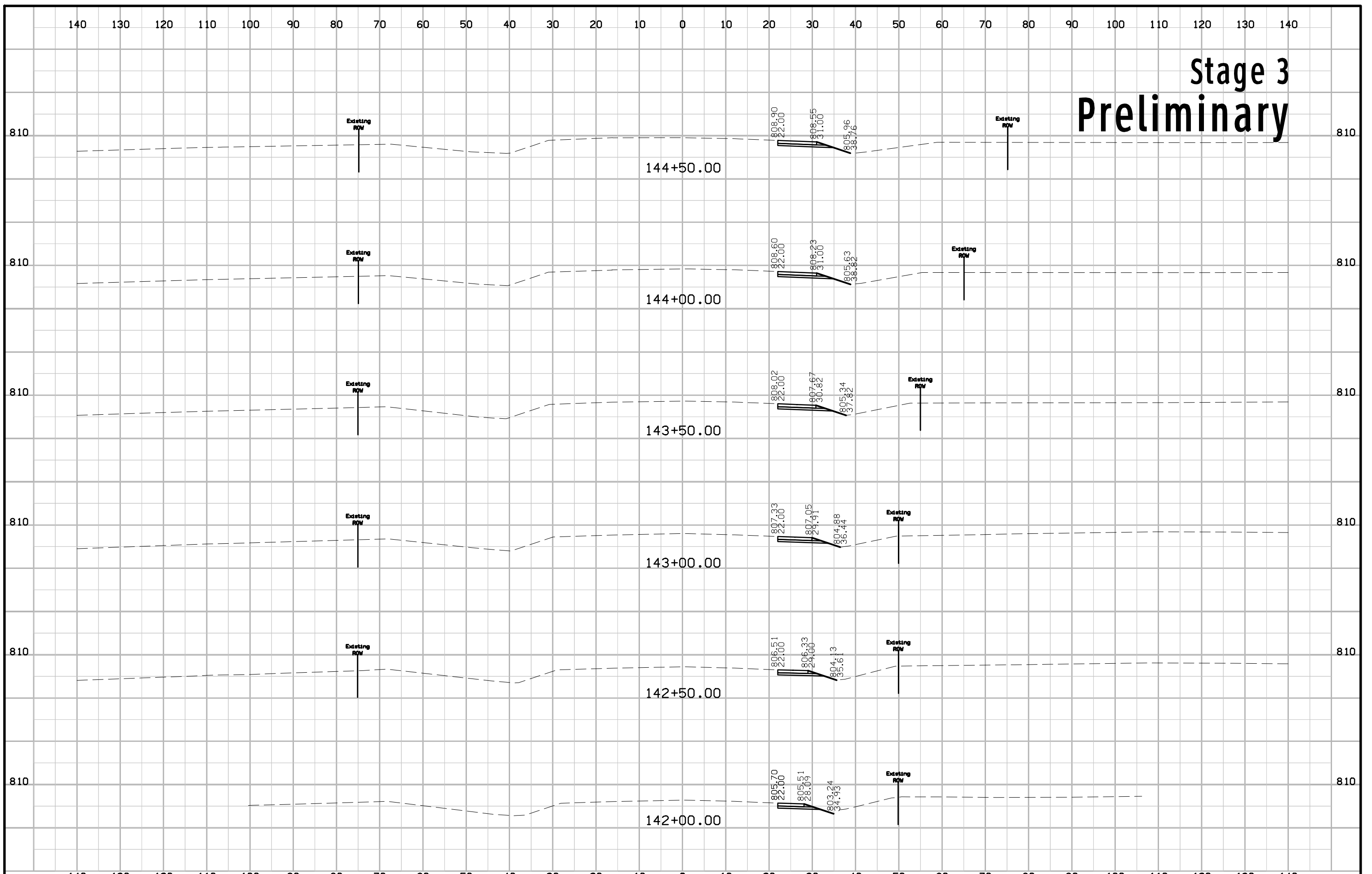
Stage 1B Preliminary



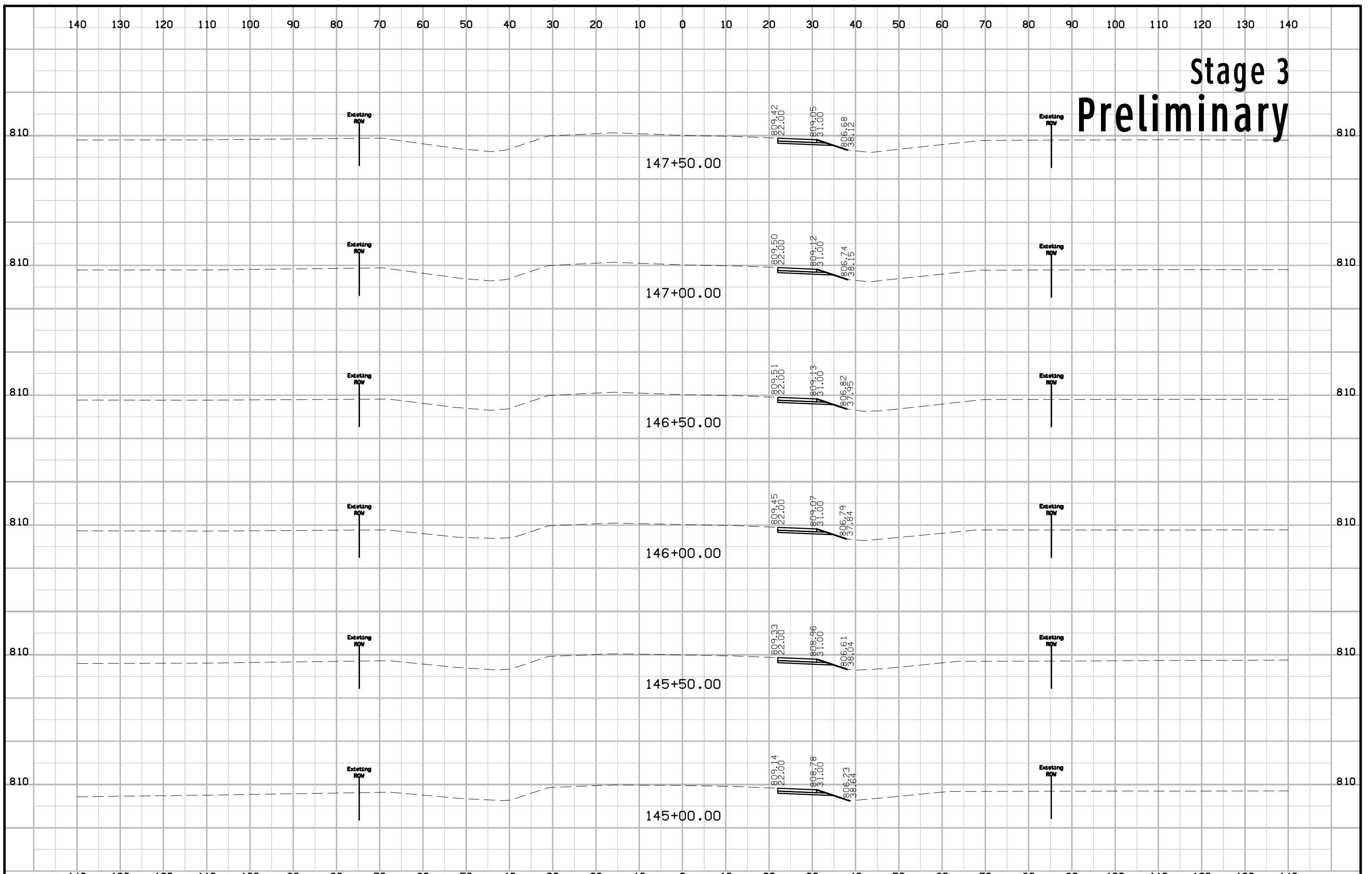
Stage 3 Preliminary



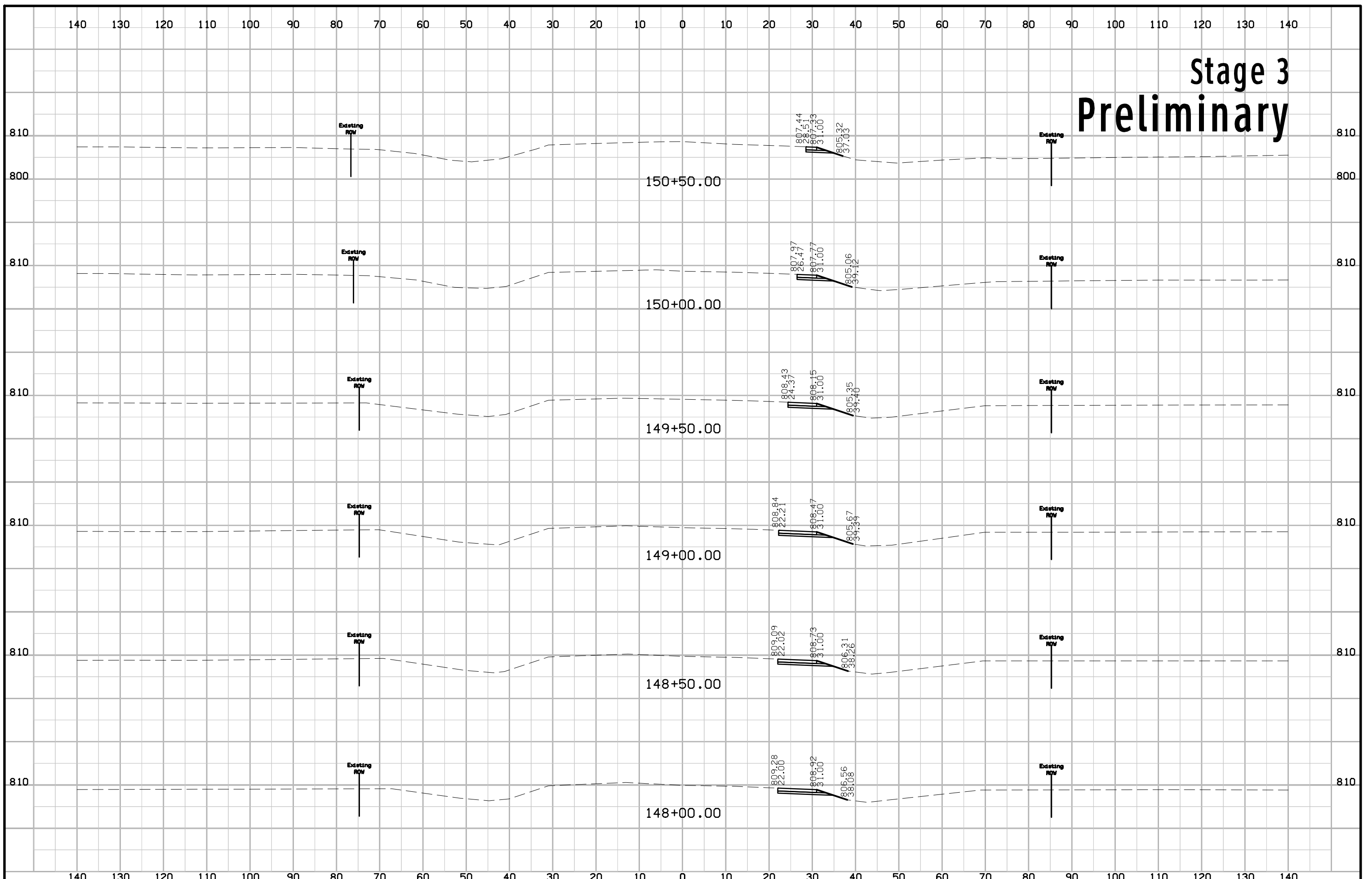
Stage 3 Preliminary

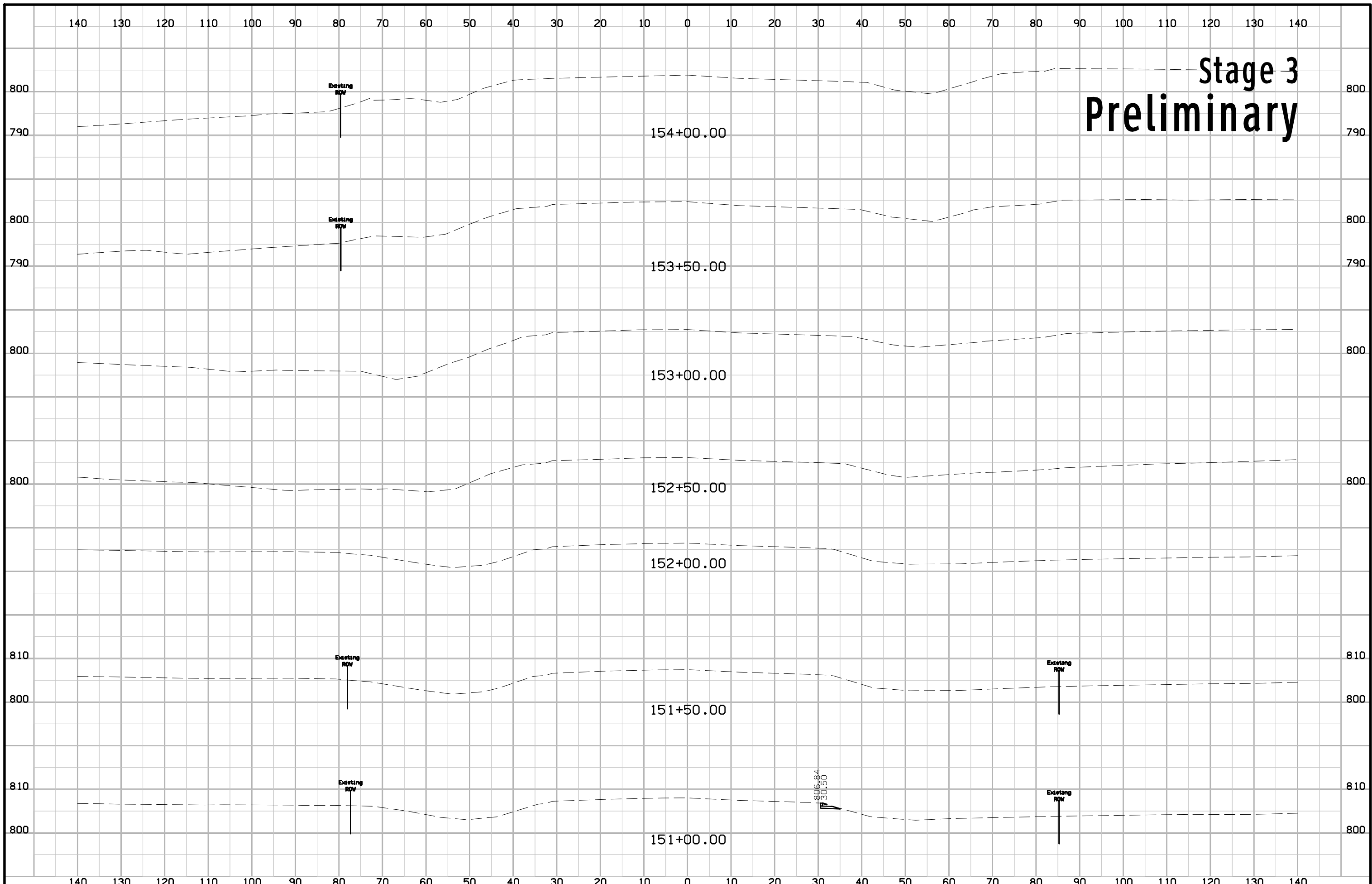


Stage 3 Preliminary

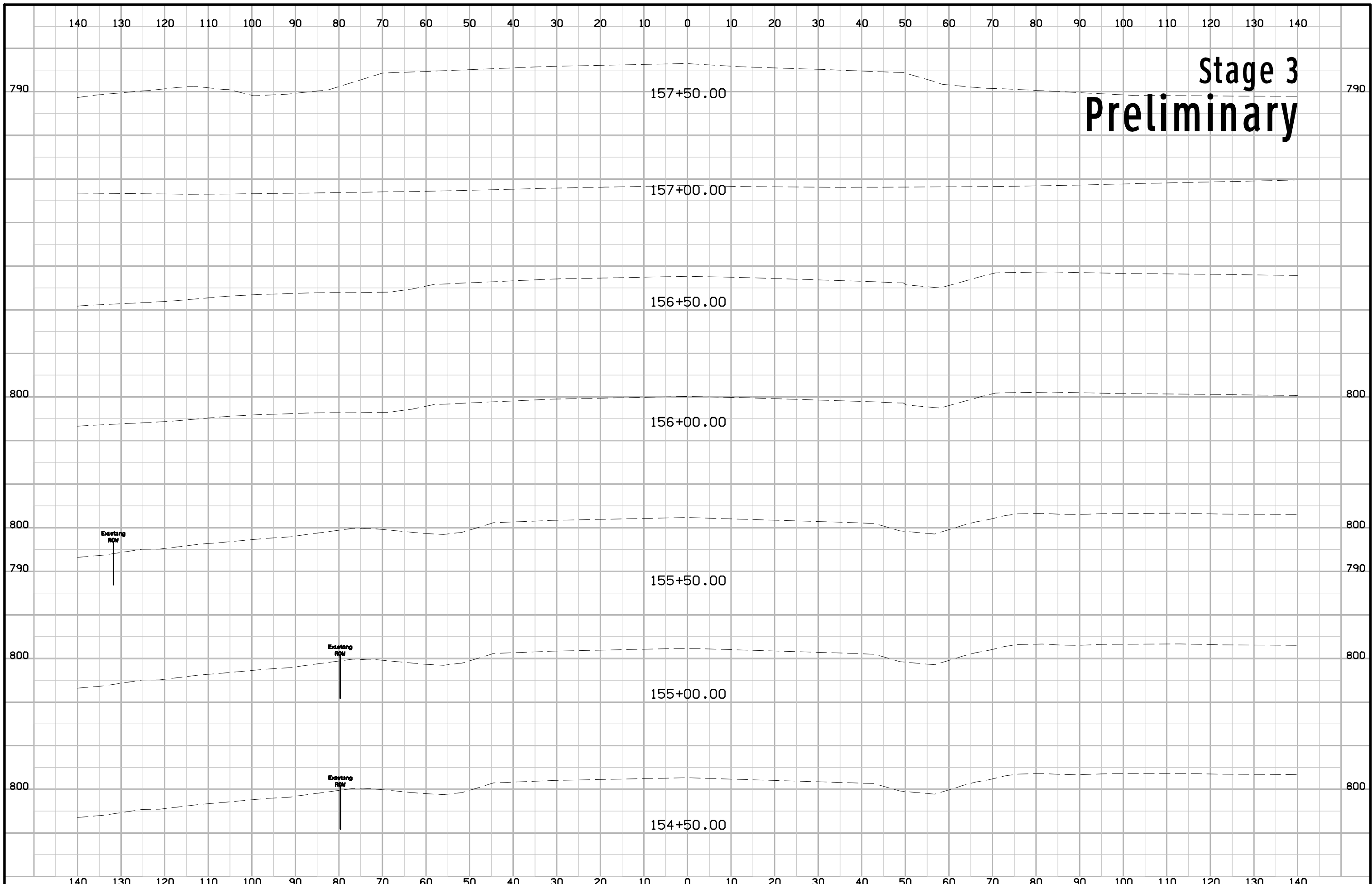


Stage 3 Preliminary

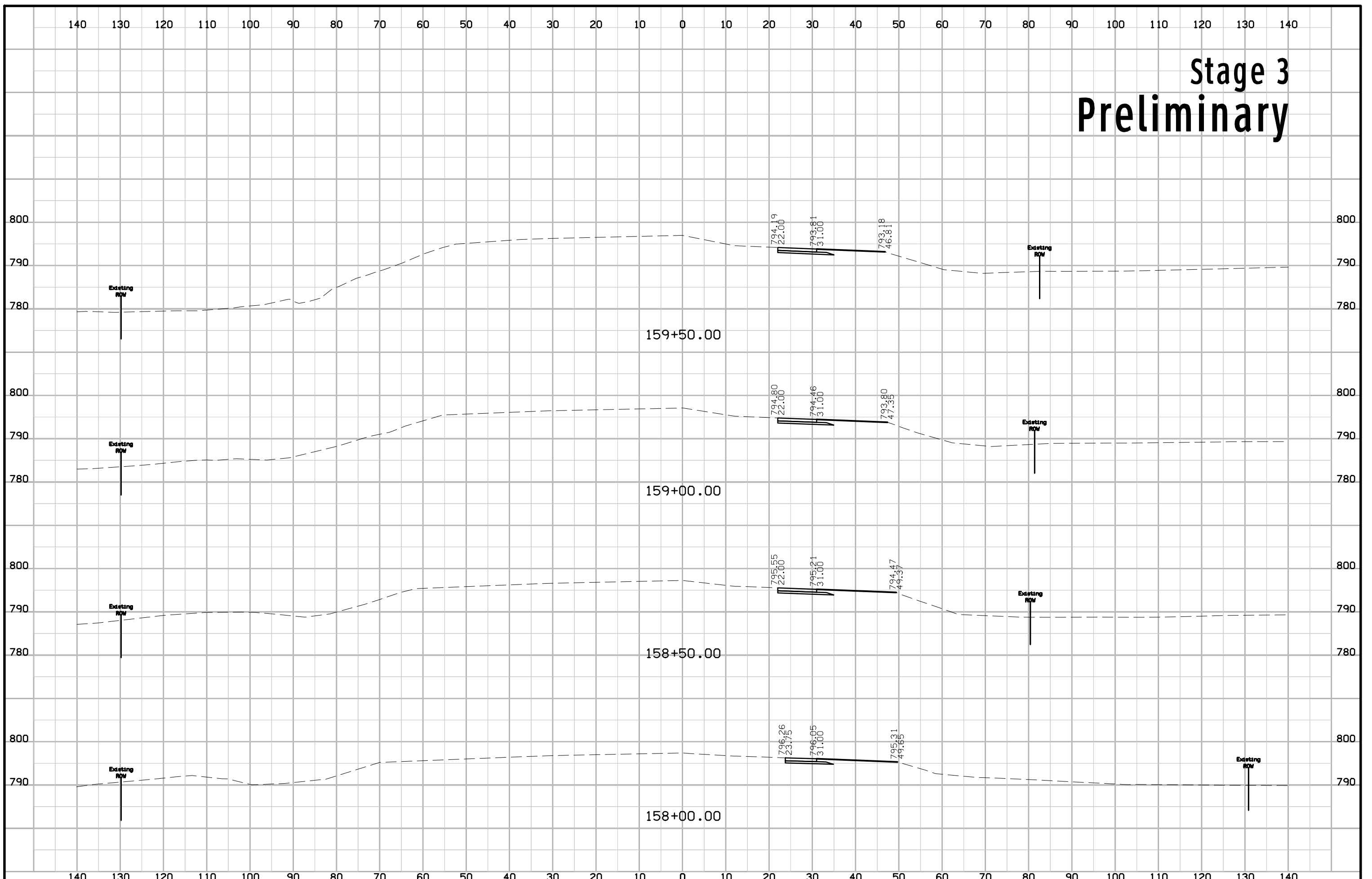




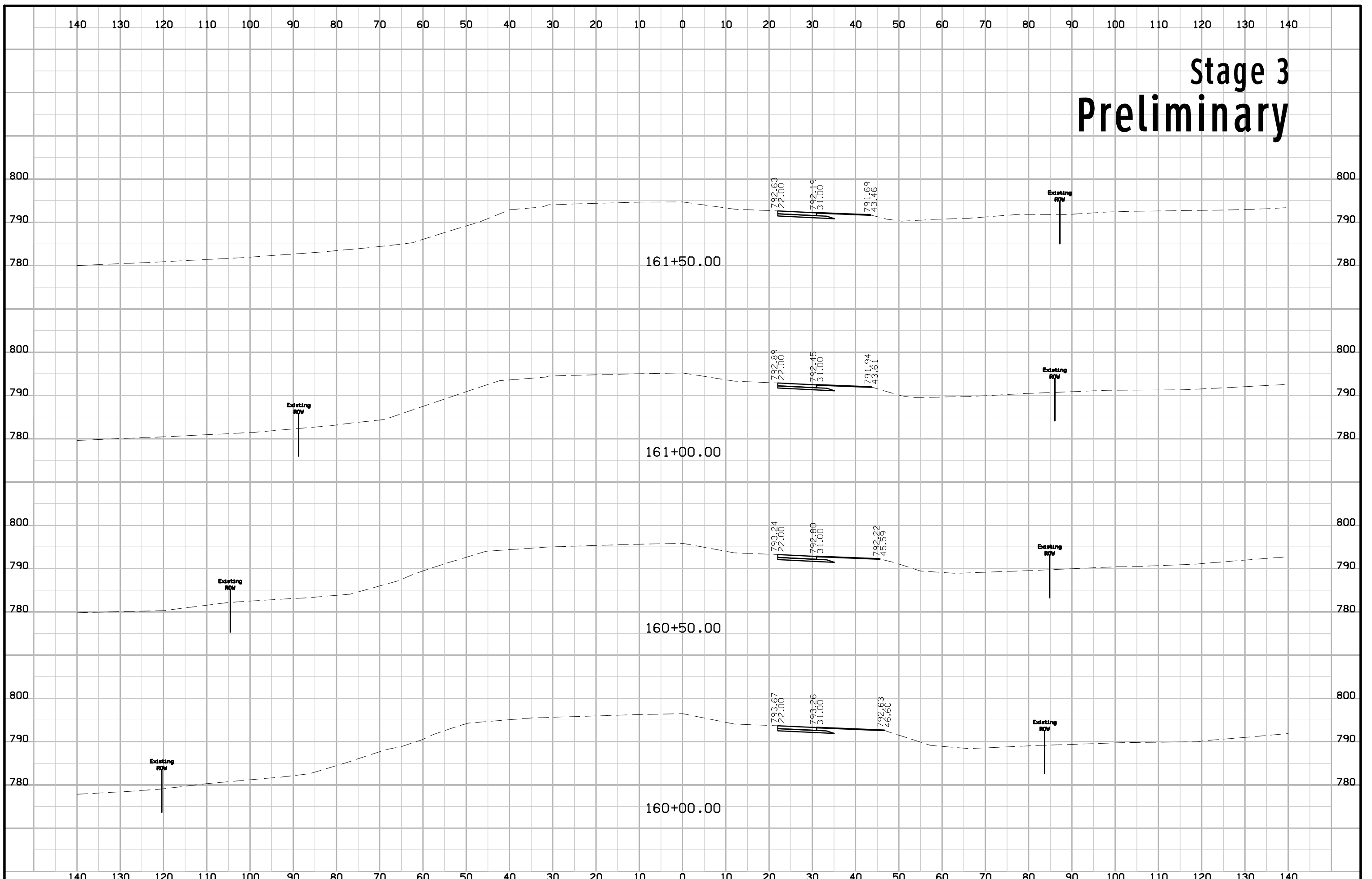
Stage 3 Preliminary



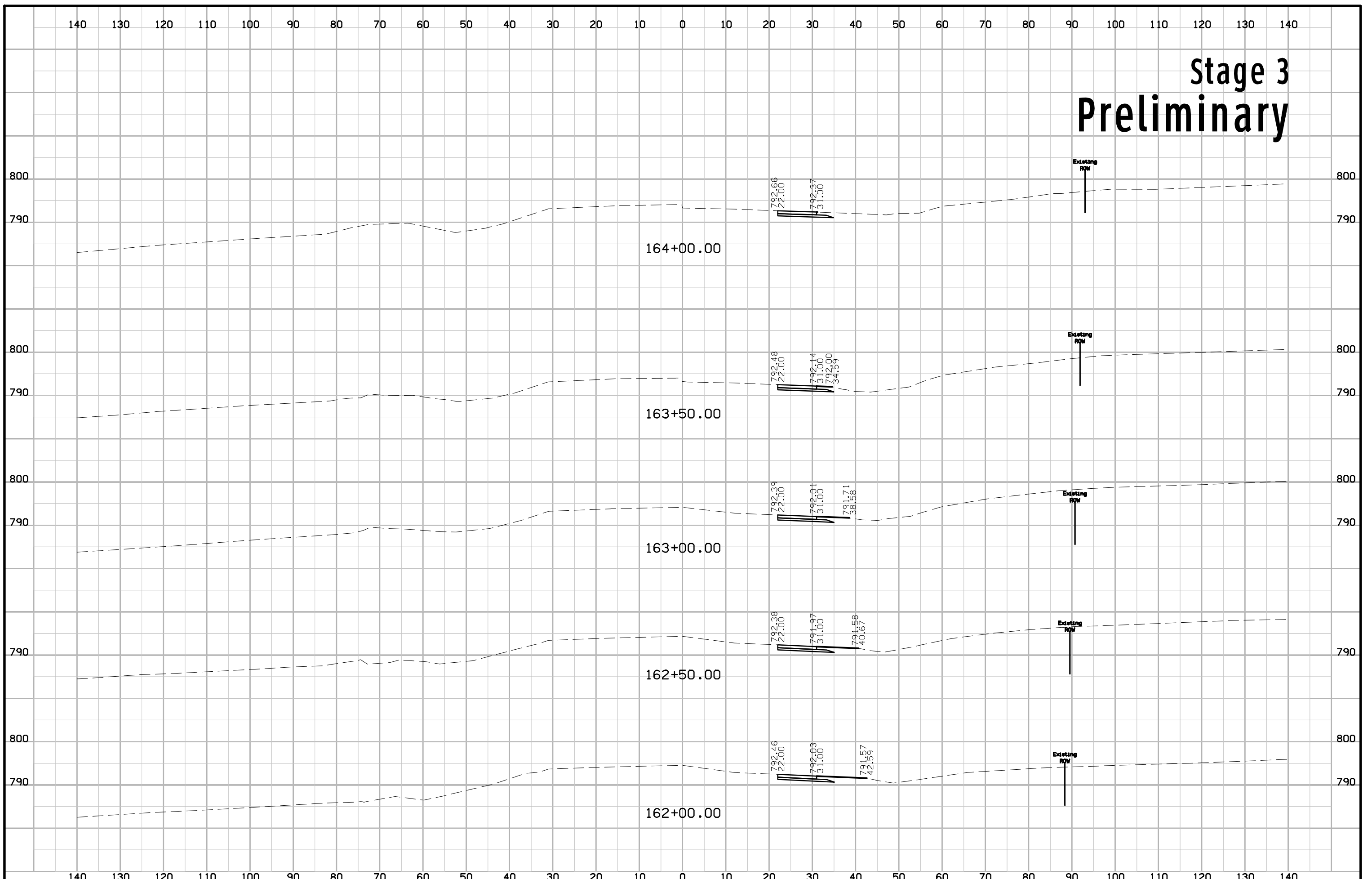
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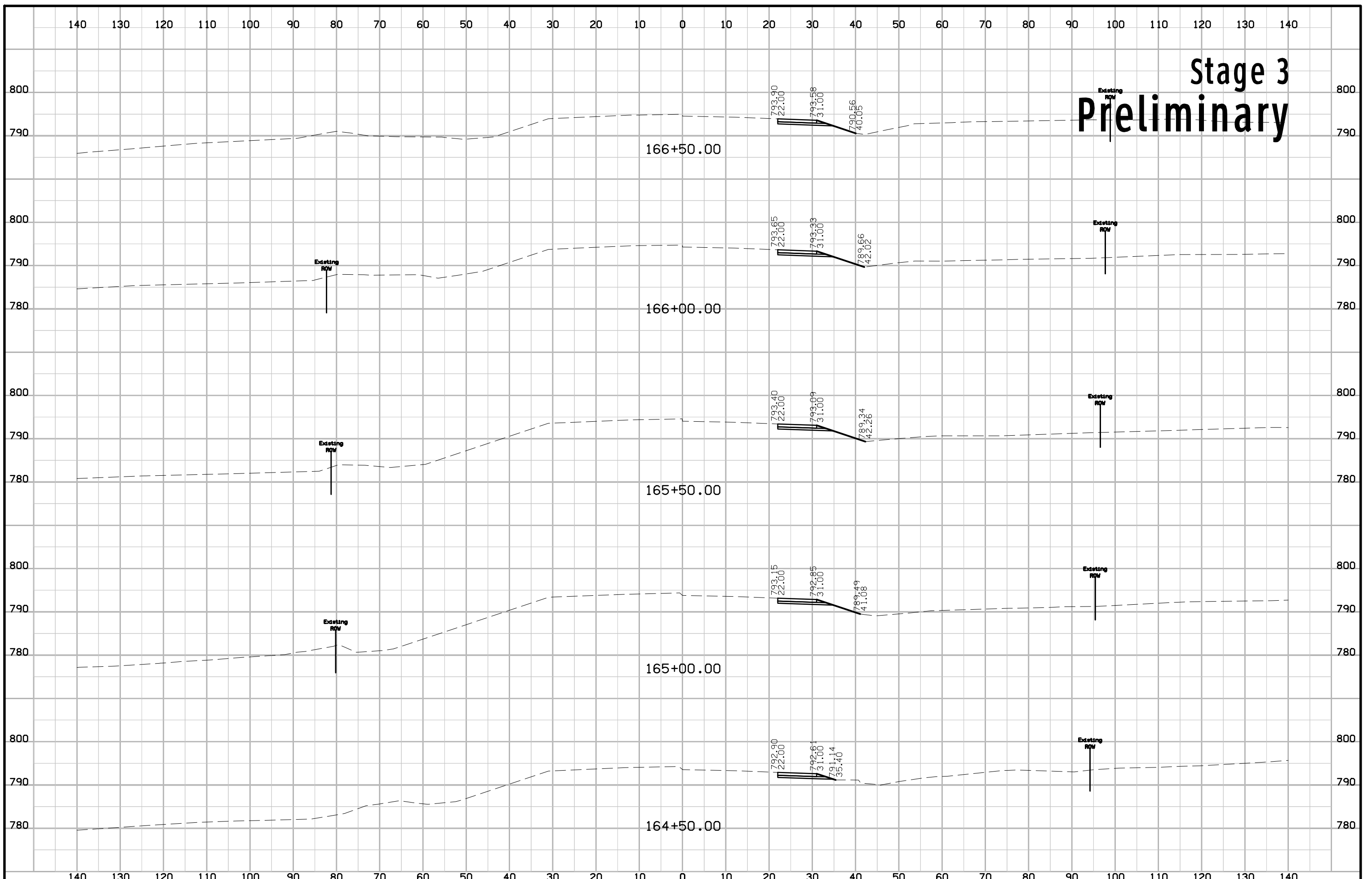
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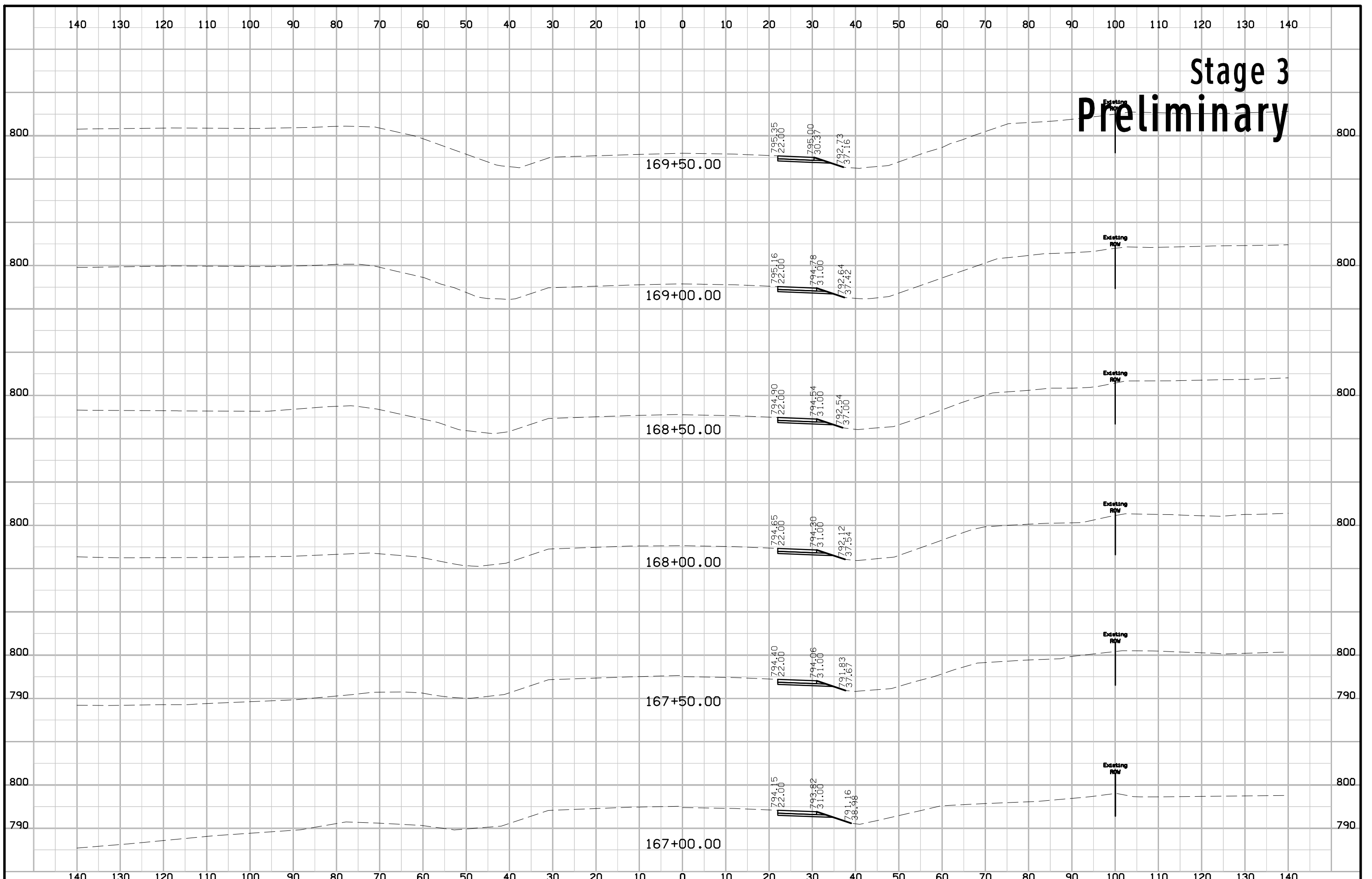
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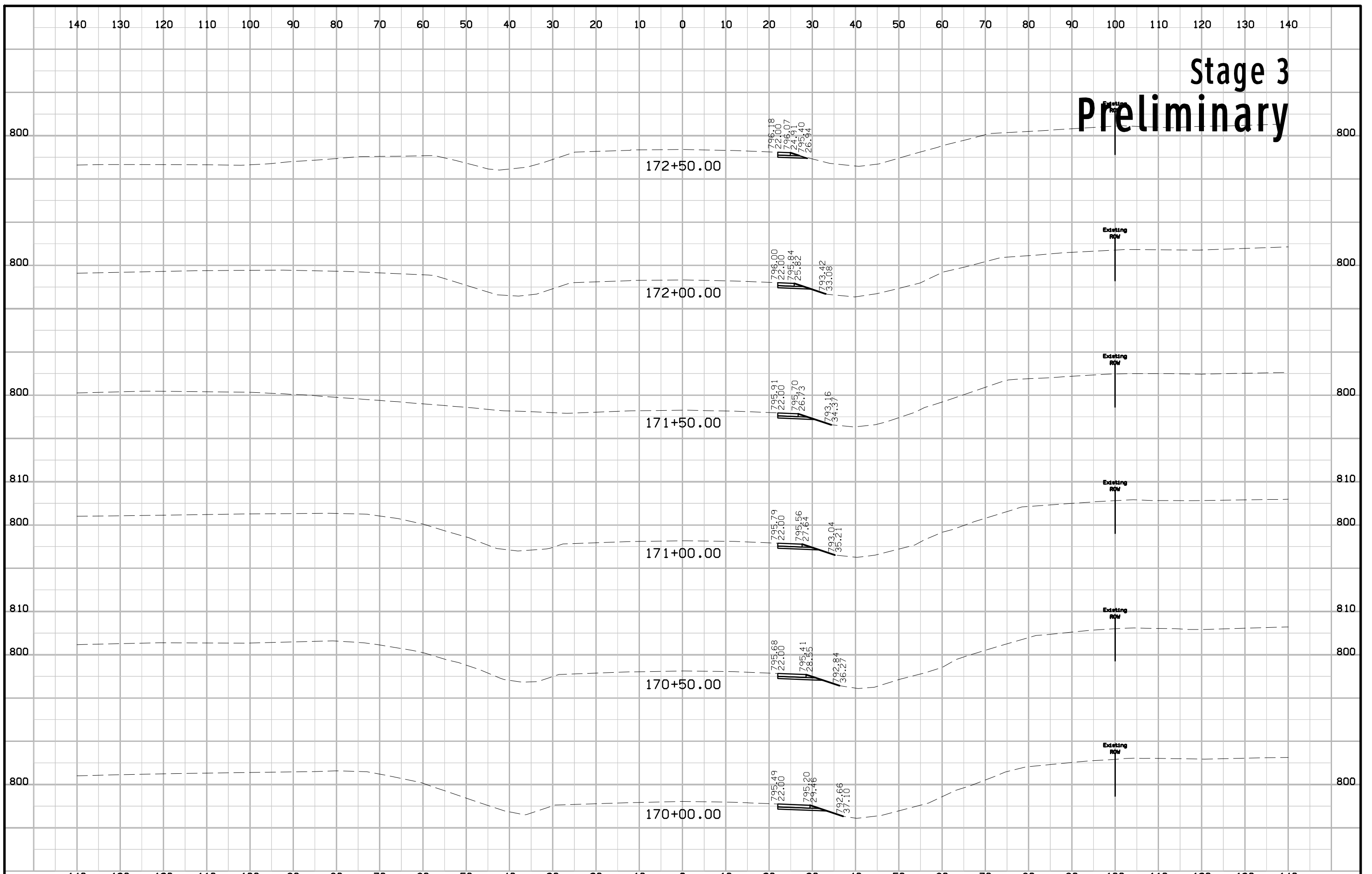
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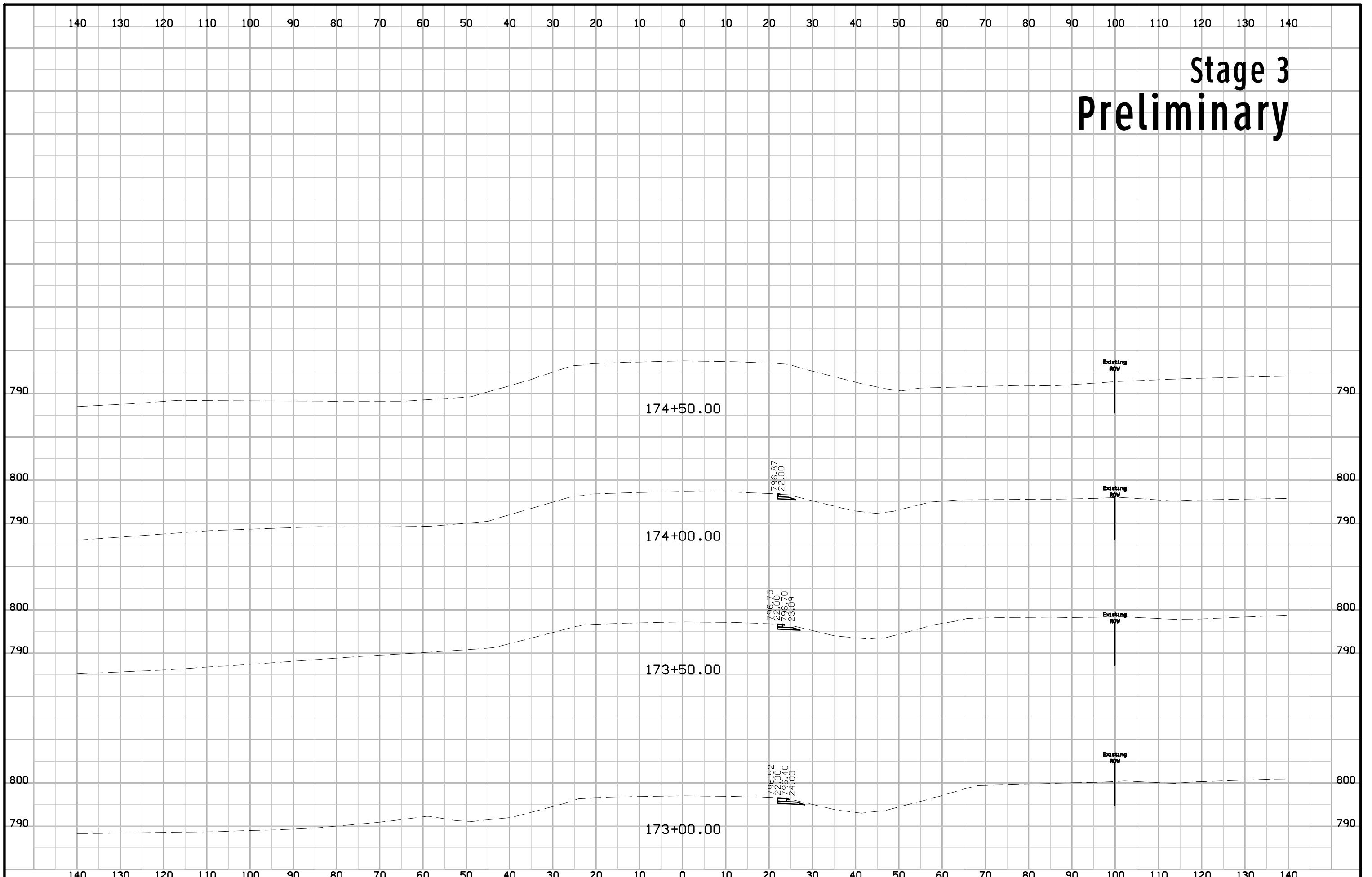
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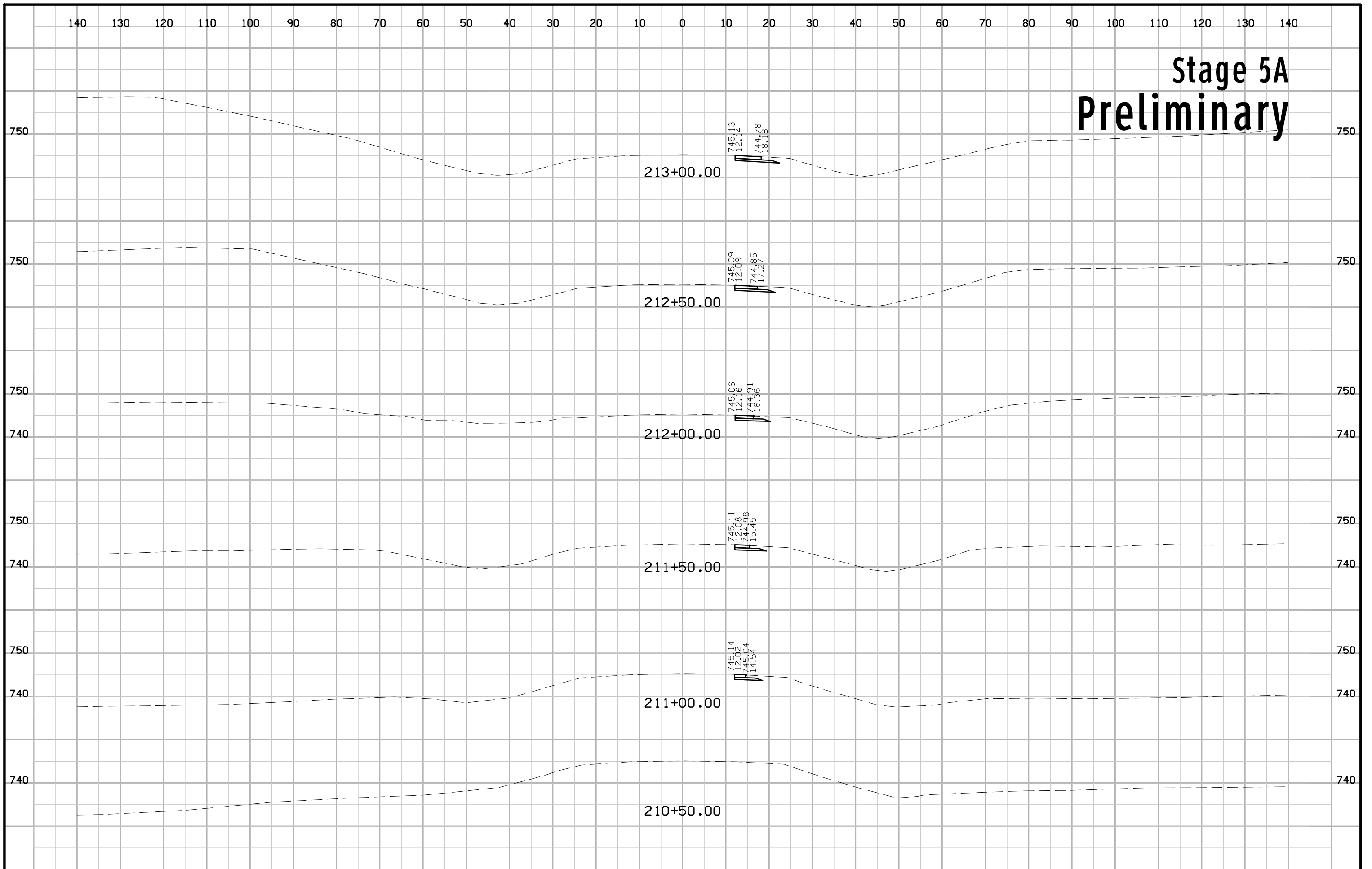
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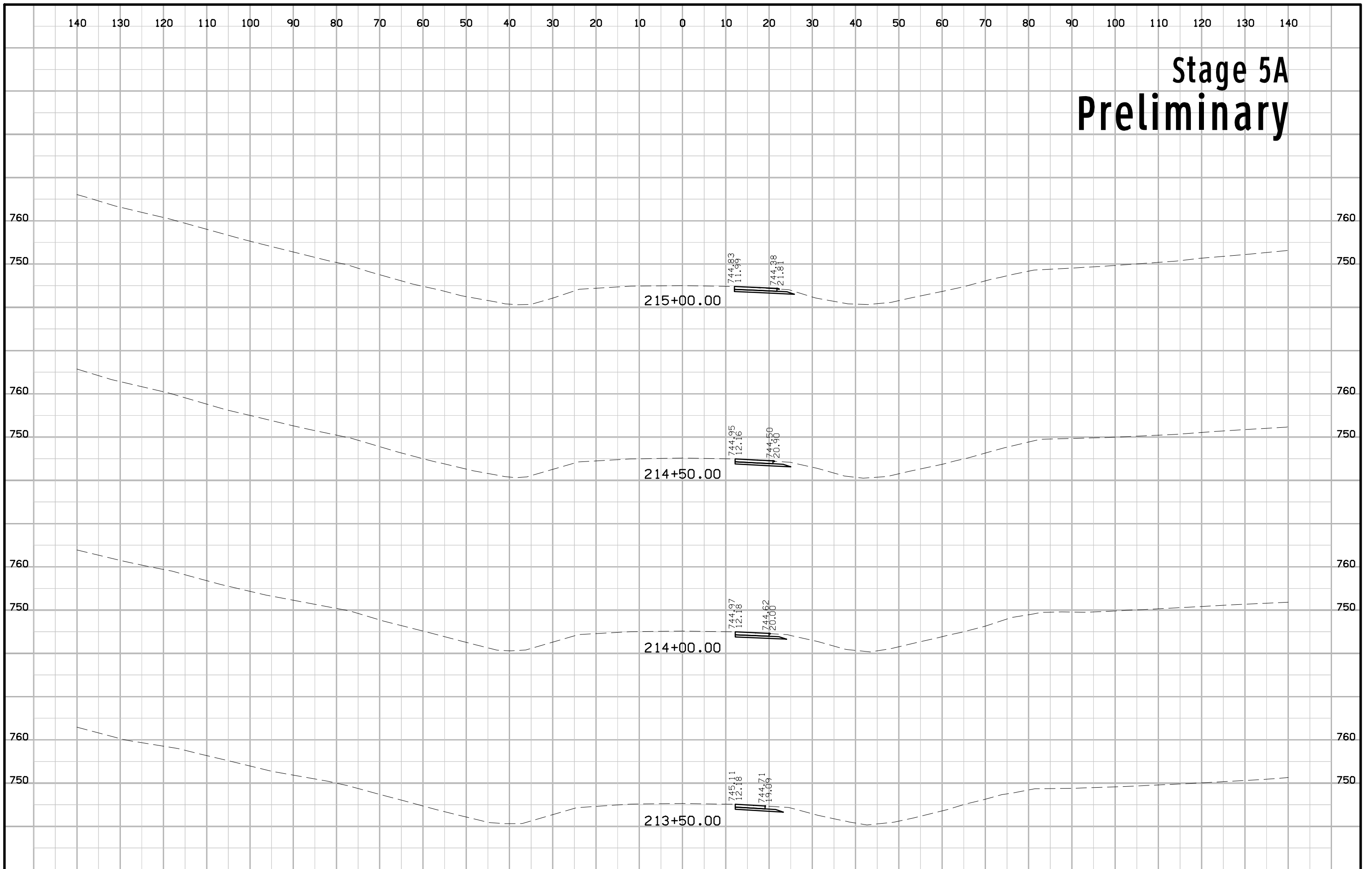
Stage 3 Preliminary



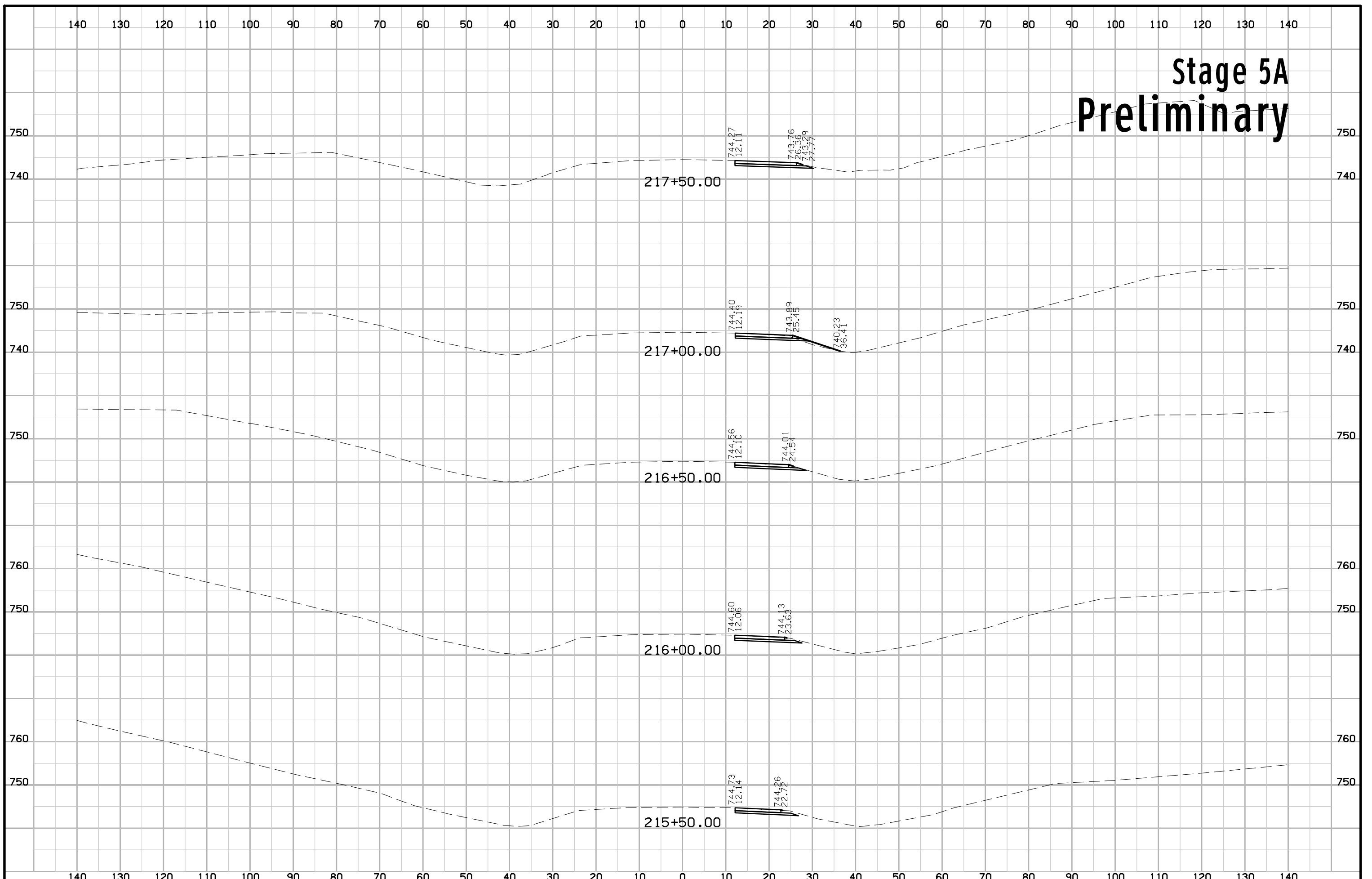
Stage 5A Preliminary



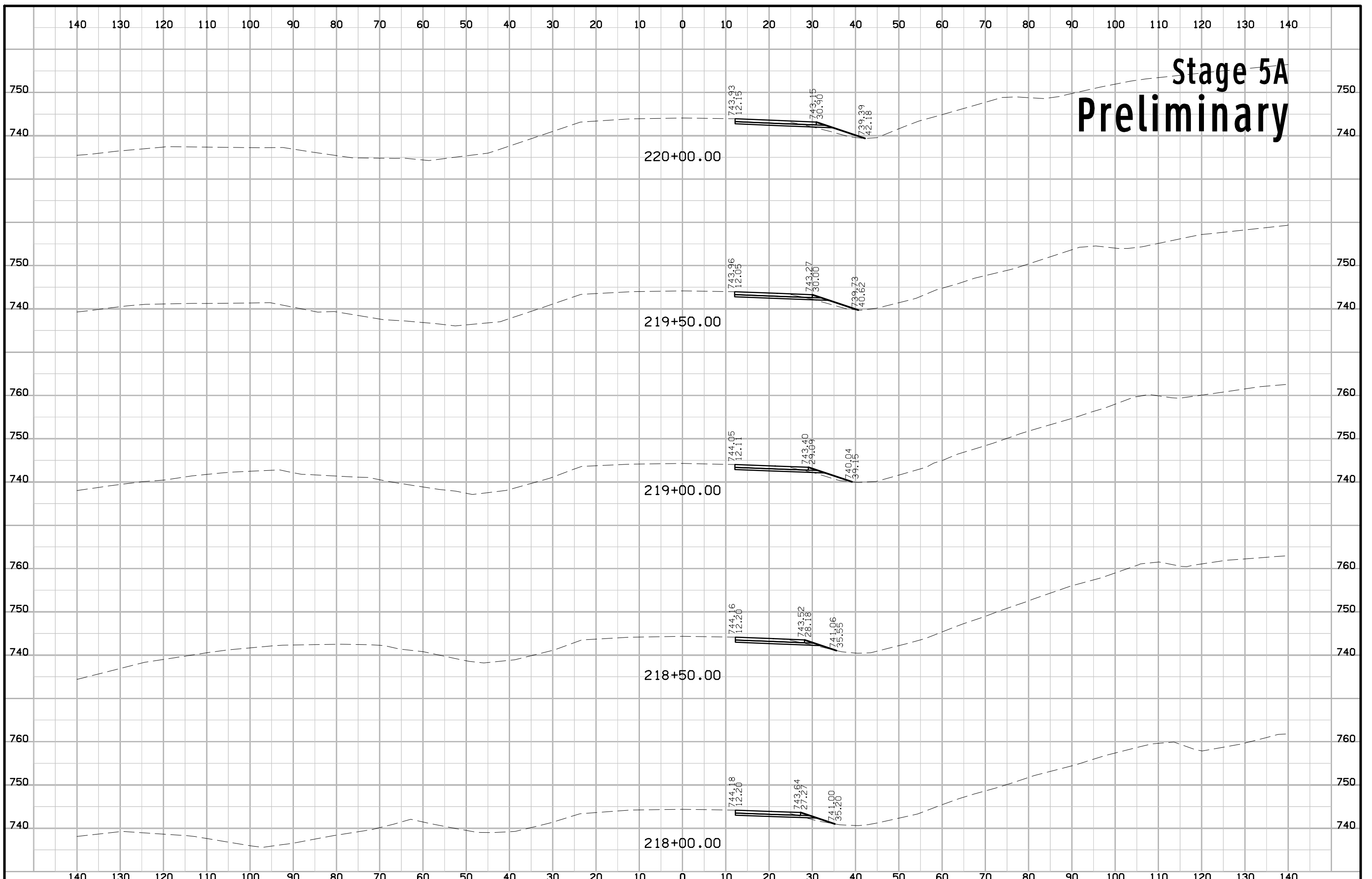
Stage 5A Preliminary



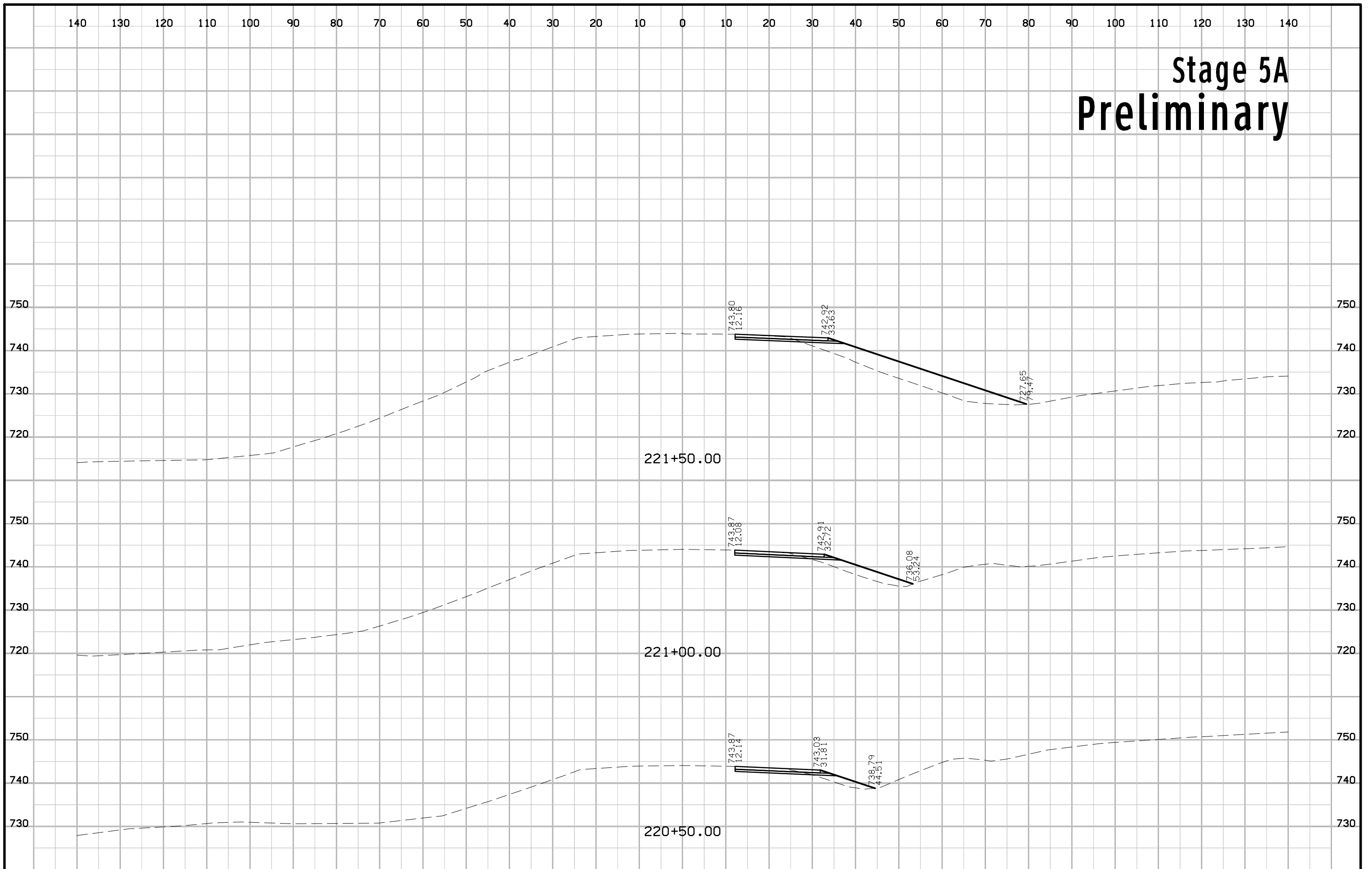
Stage 5A Preliminary



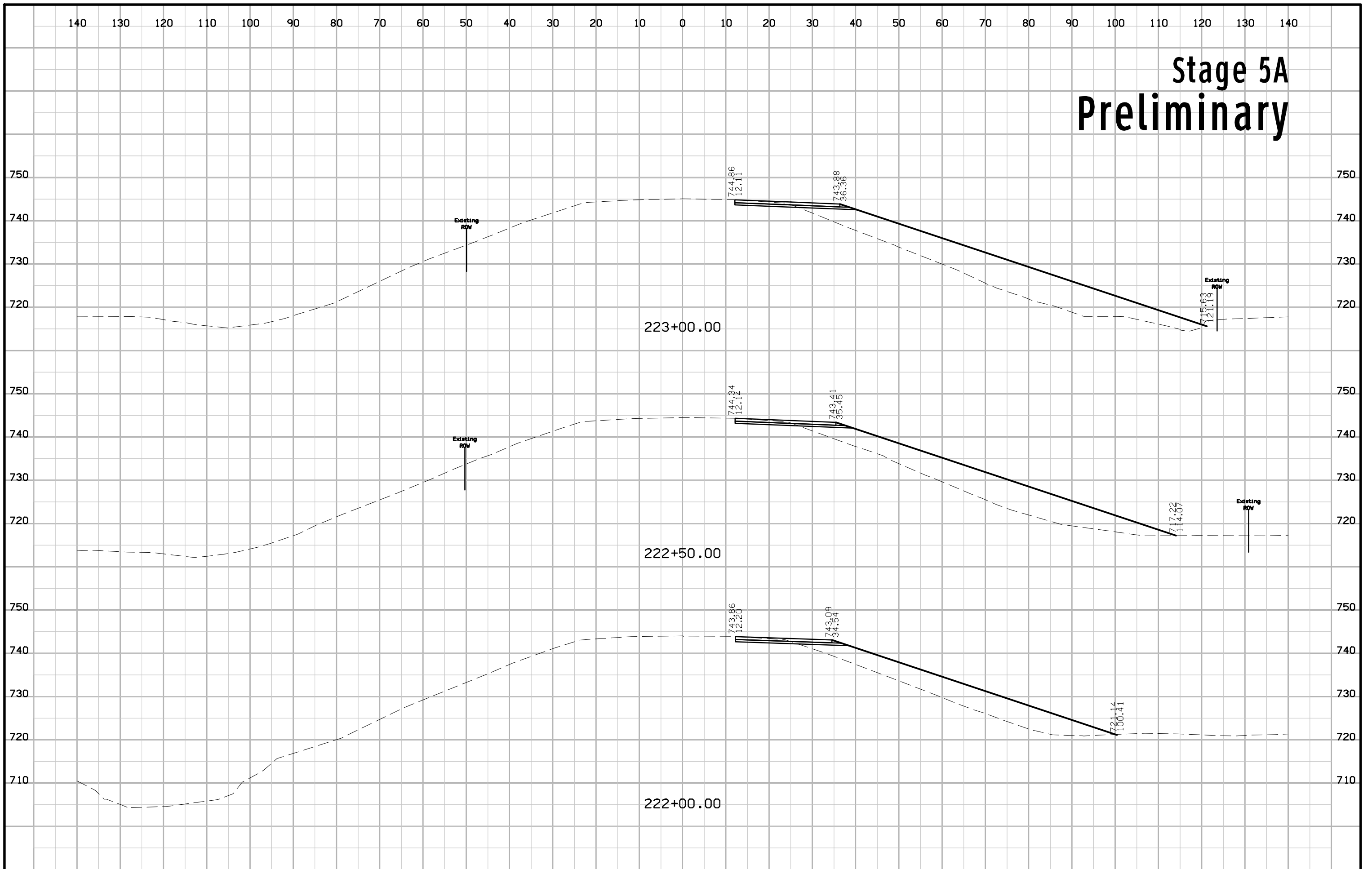
Stage 5A Preliminary



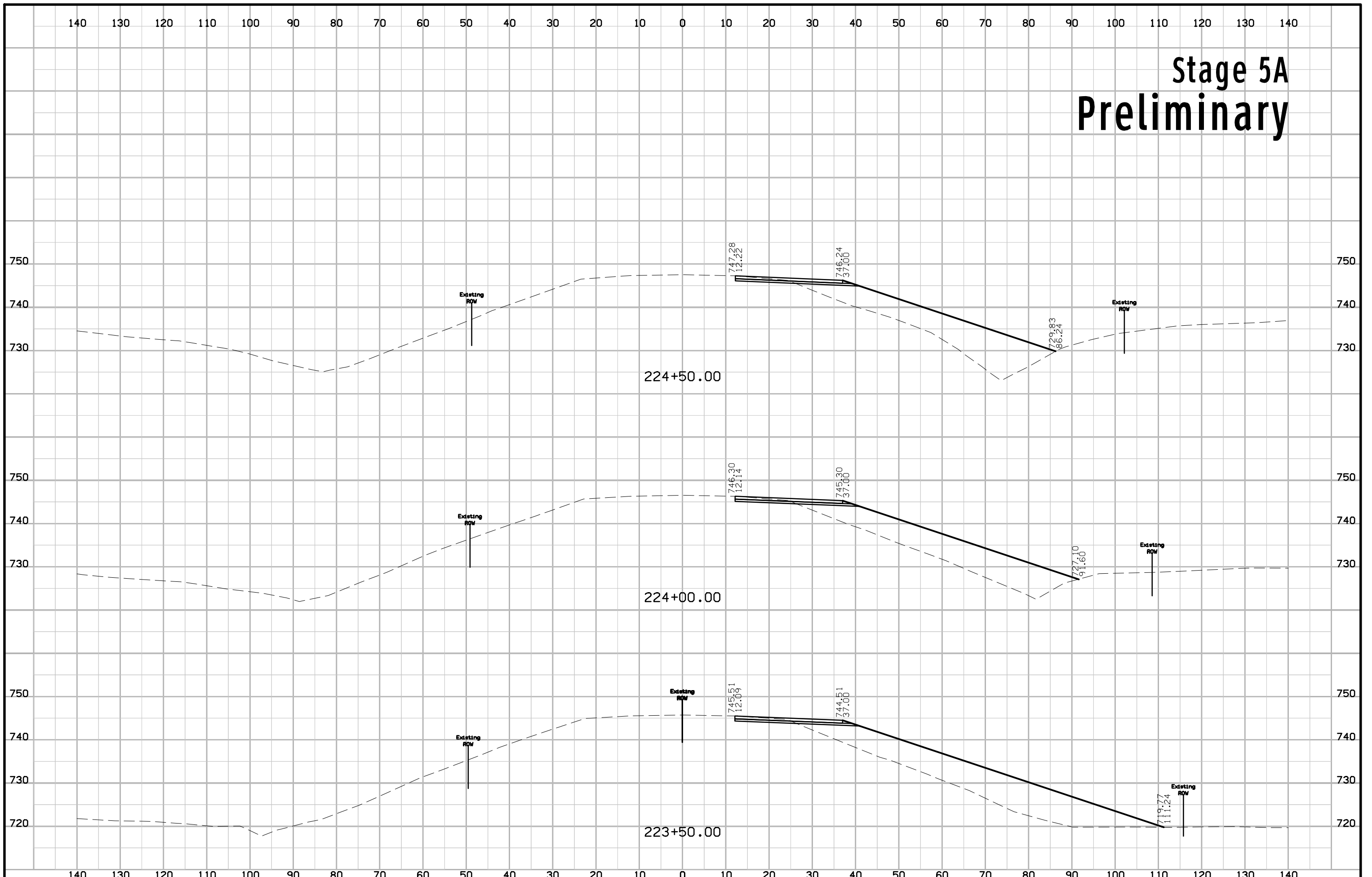
Stage 5A Preliminary



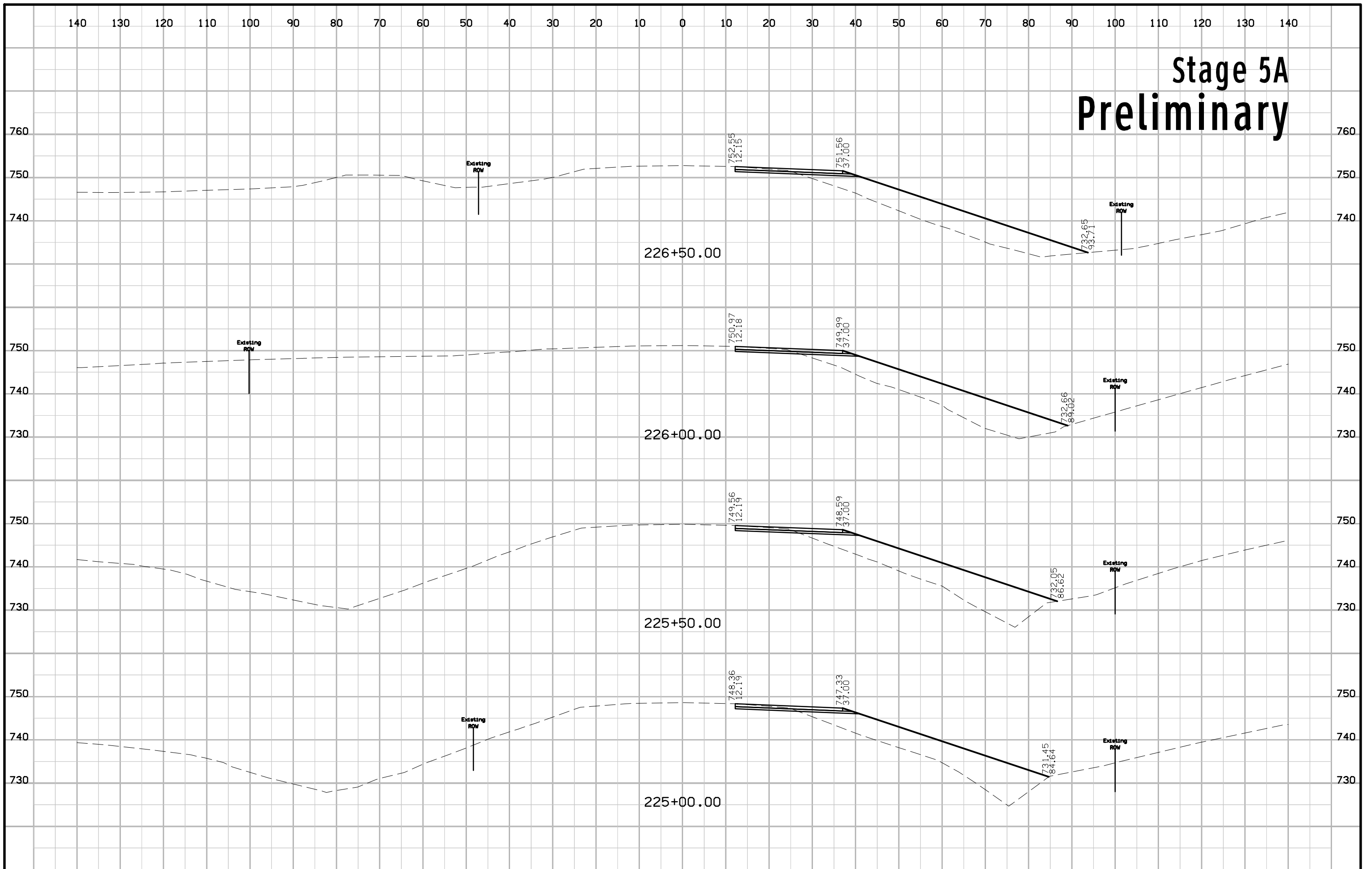
Stage 5A Preliminary



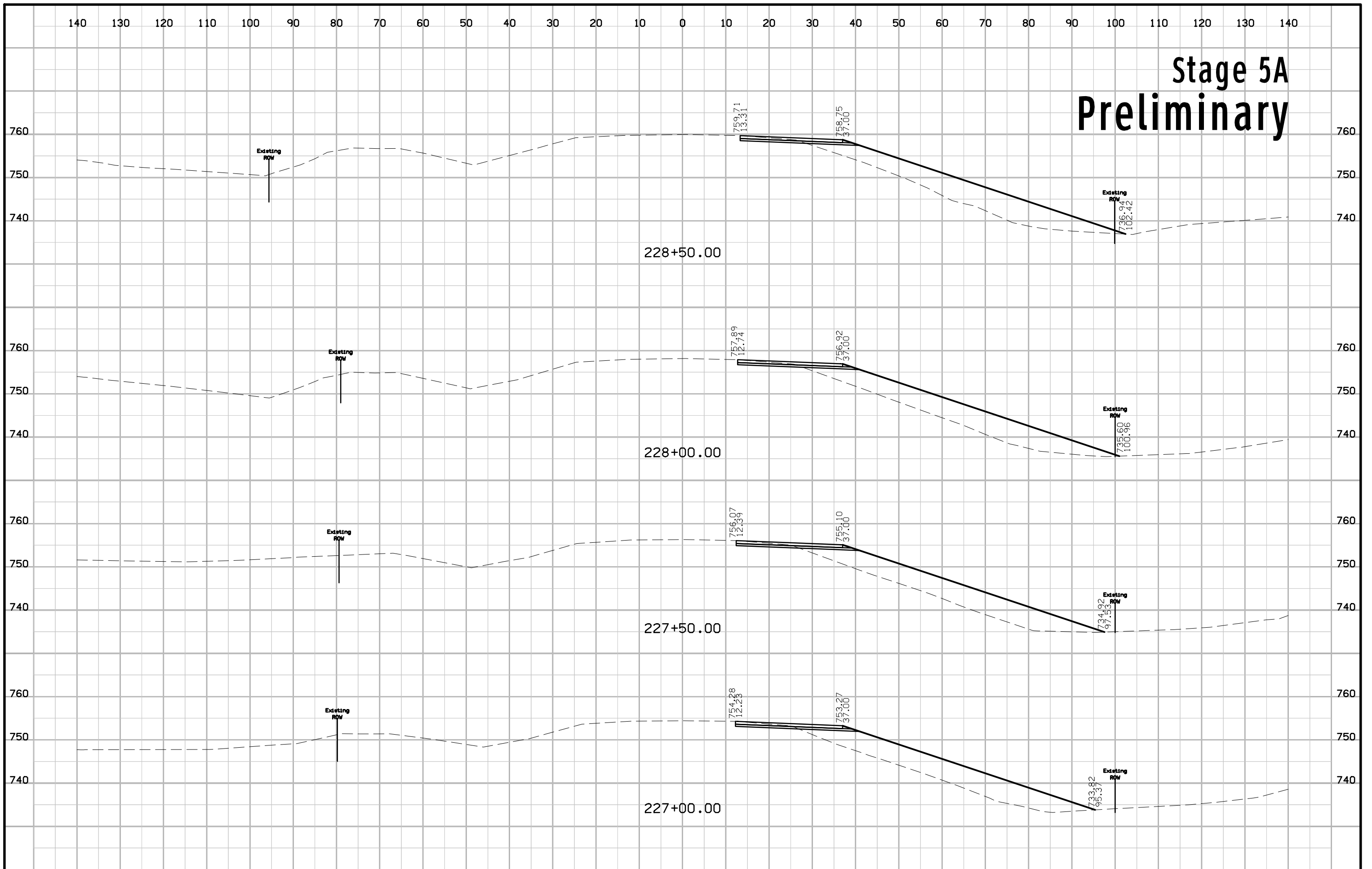
Stage 5A Preliminary



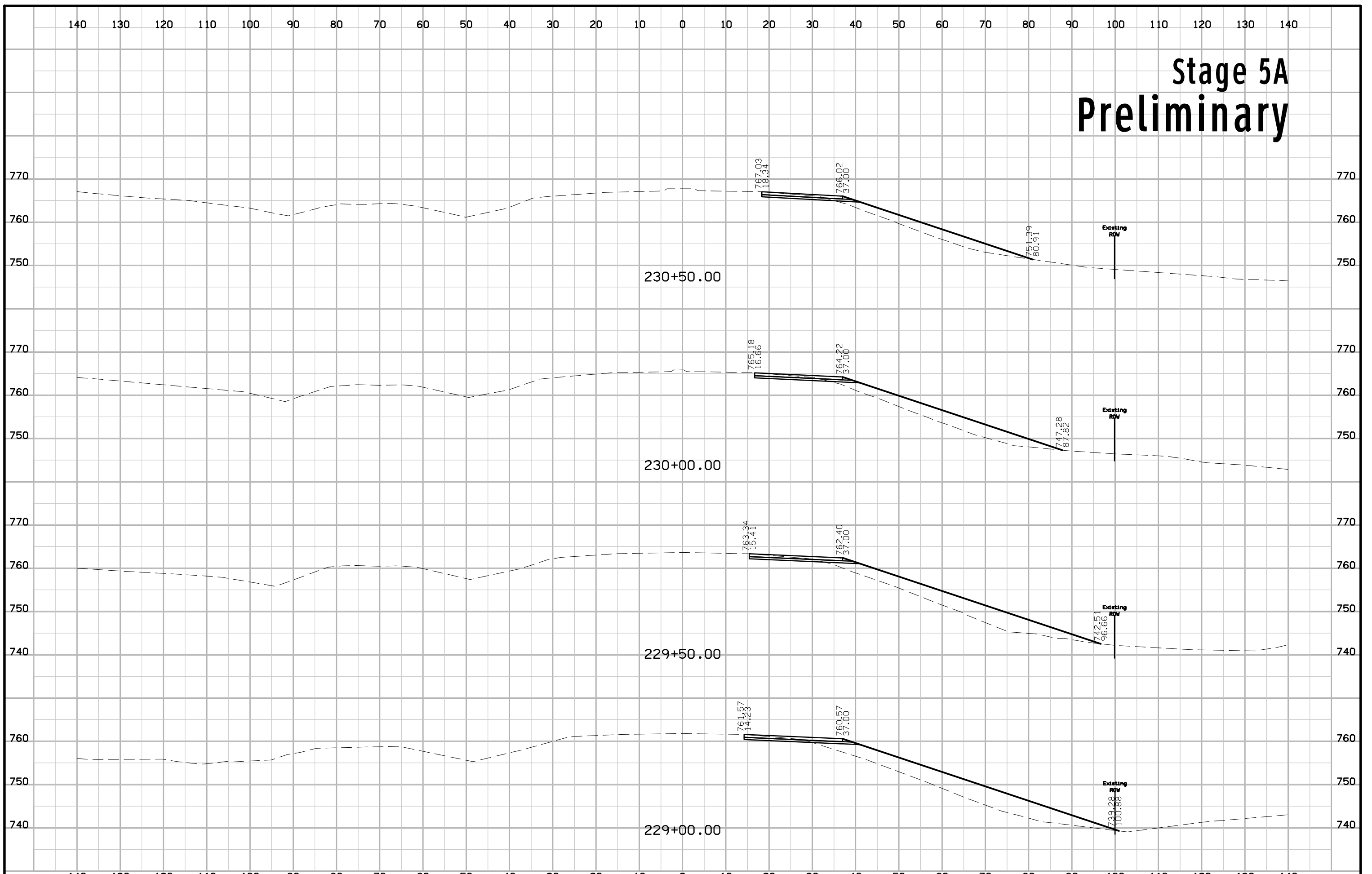
Stage 5A Preliminary



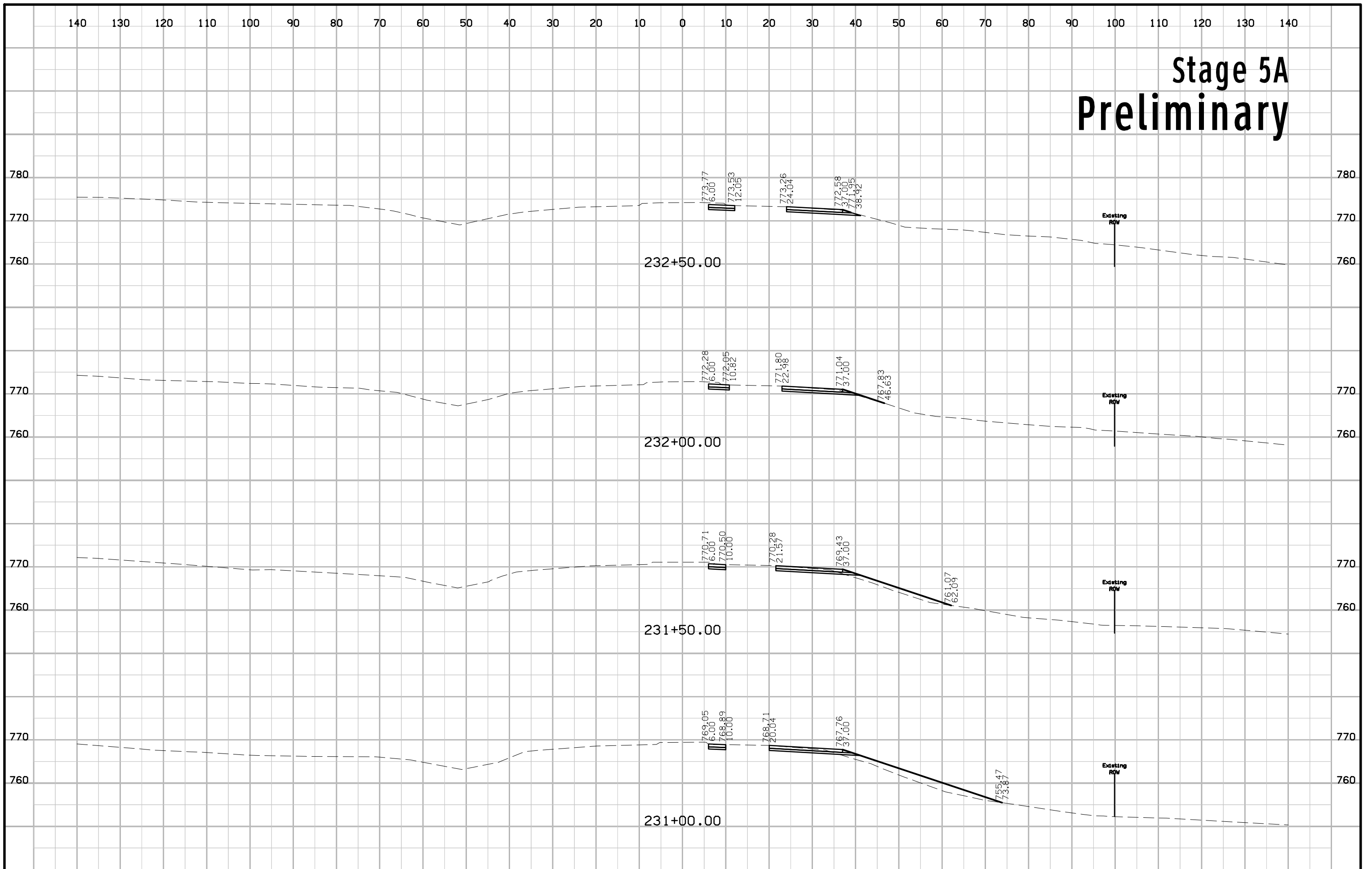
Stage 5A Preliminary



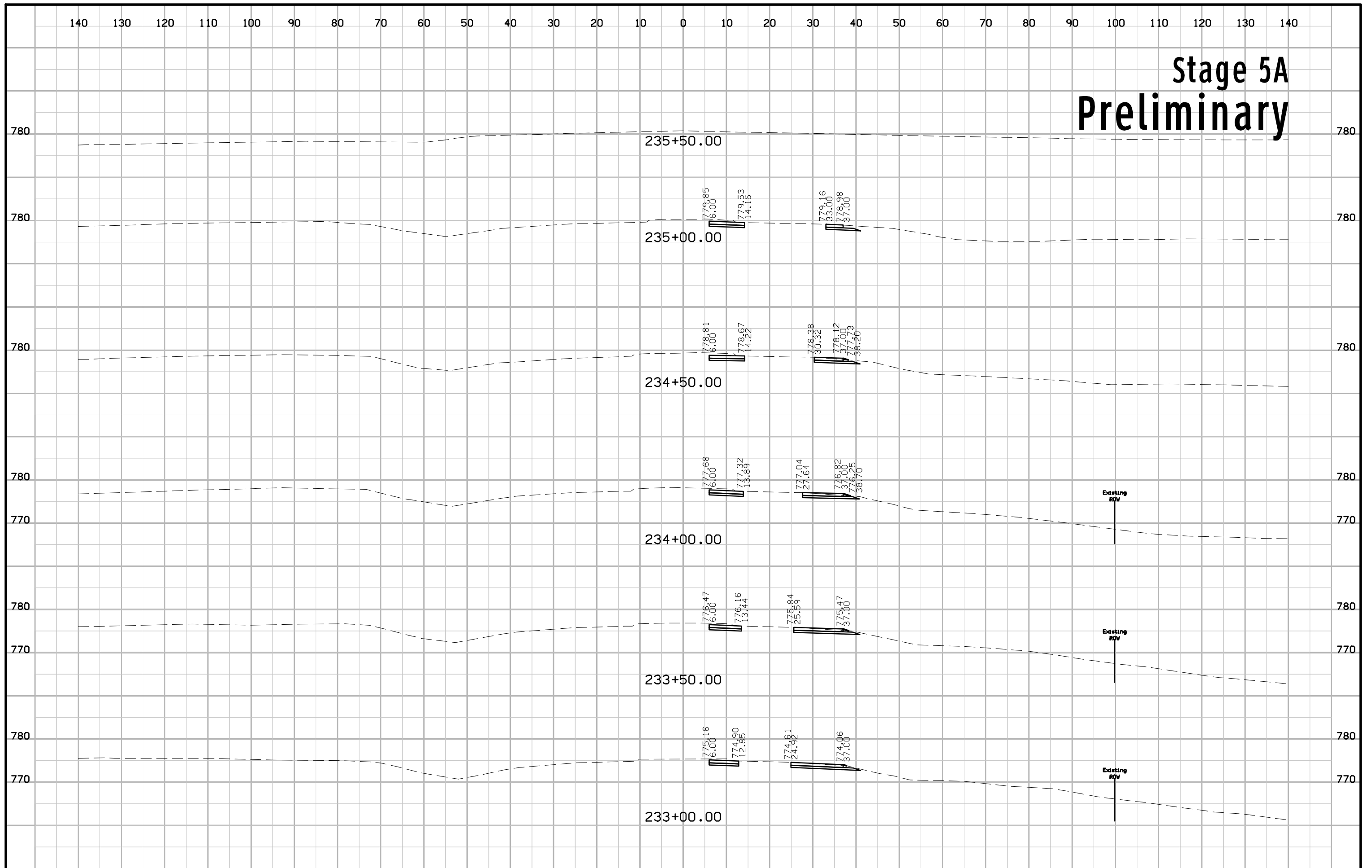
Stage 5A Preliminary



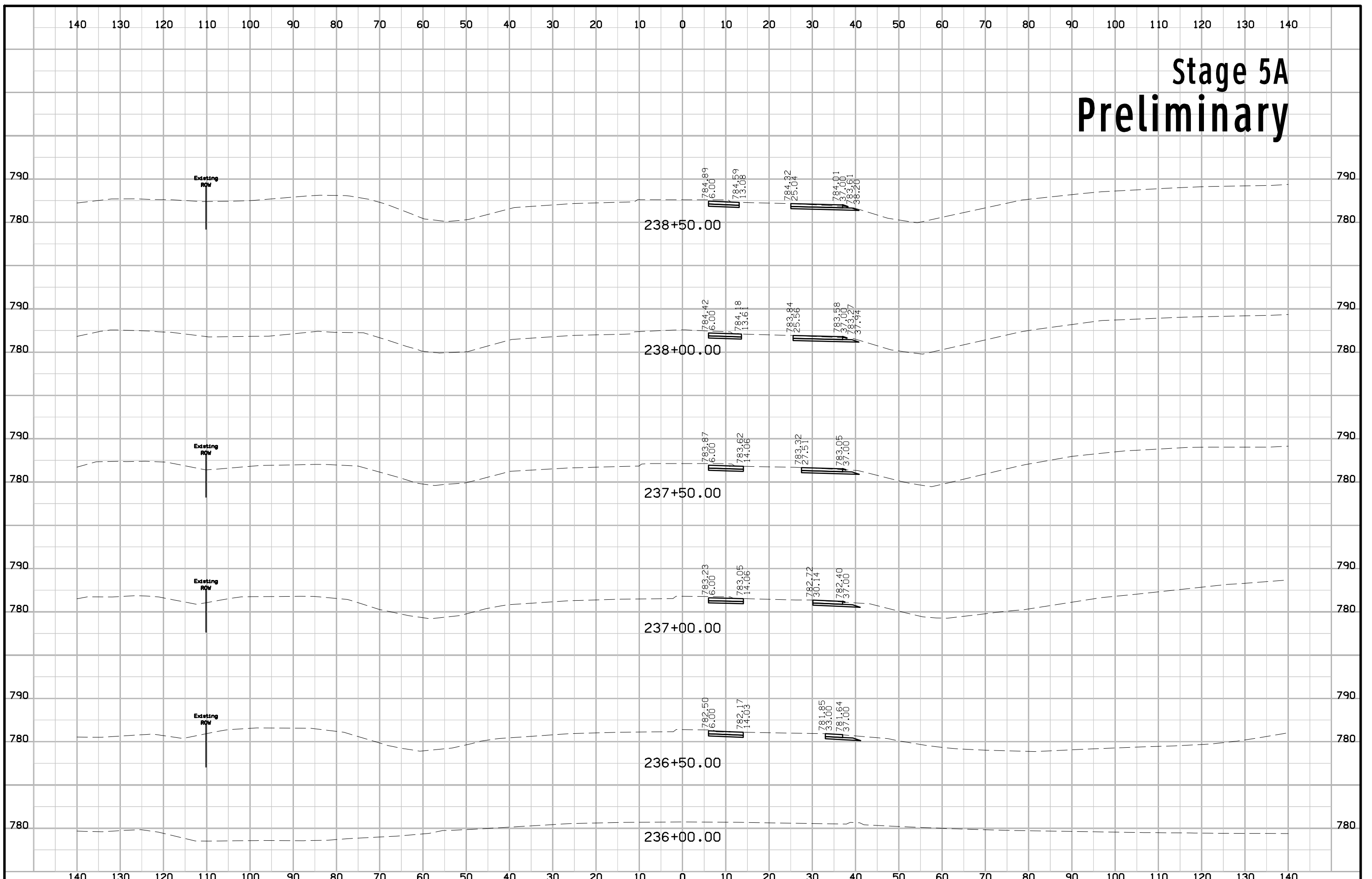
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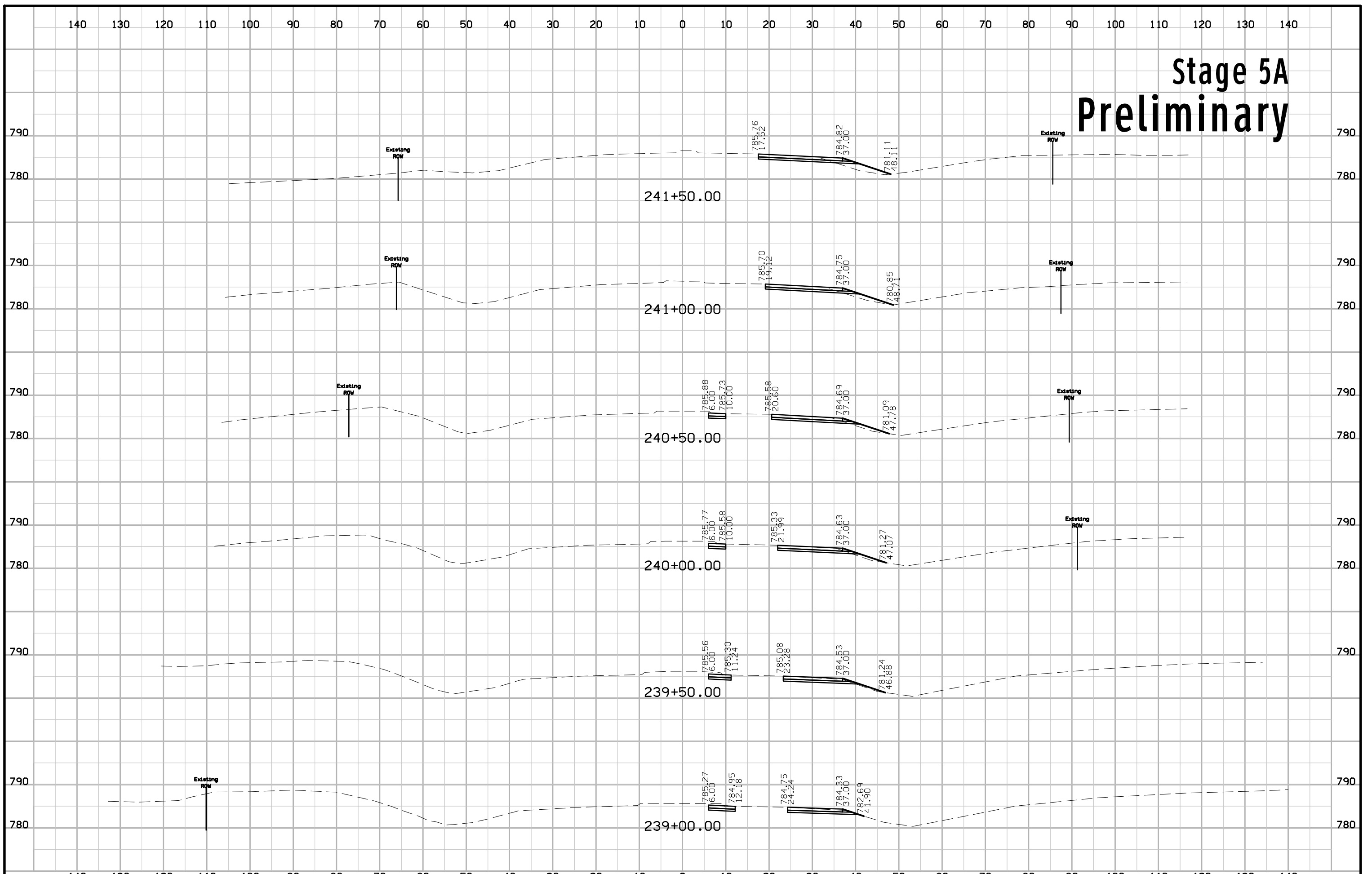
Stage 5A Preliminary



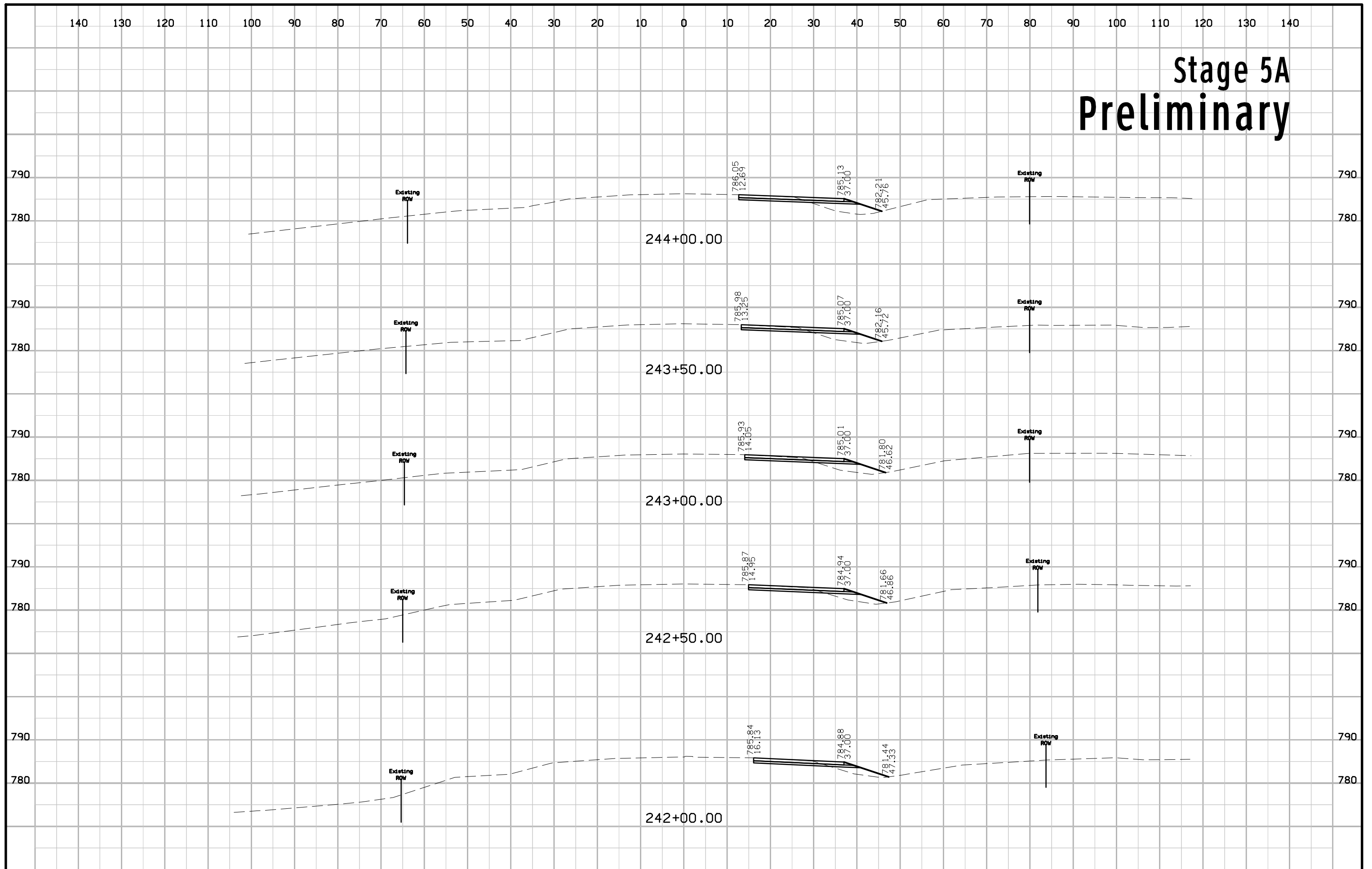
Stage 5A Preliminary



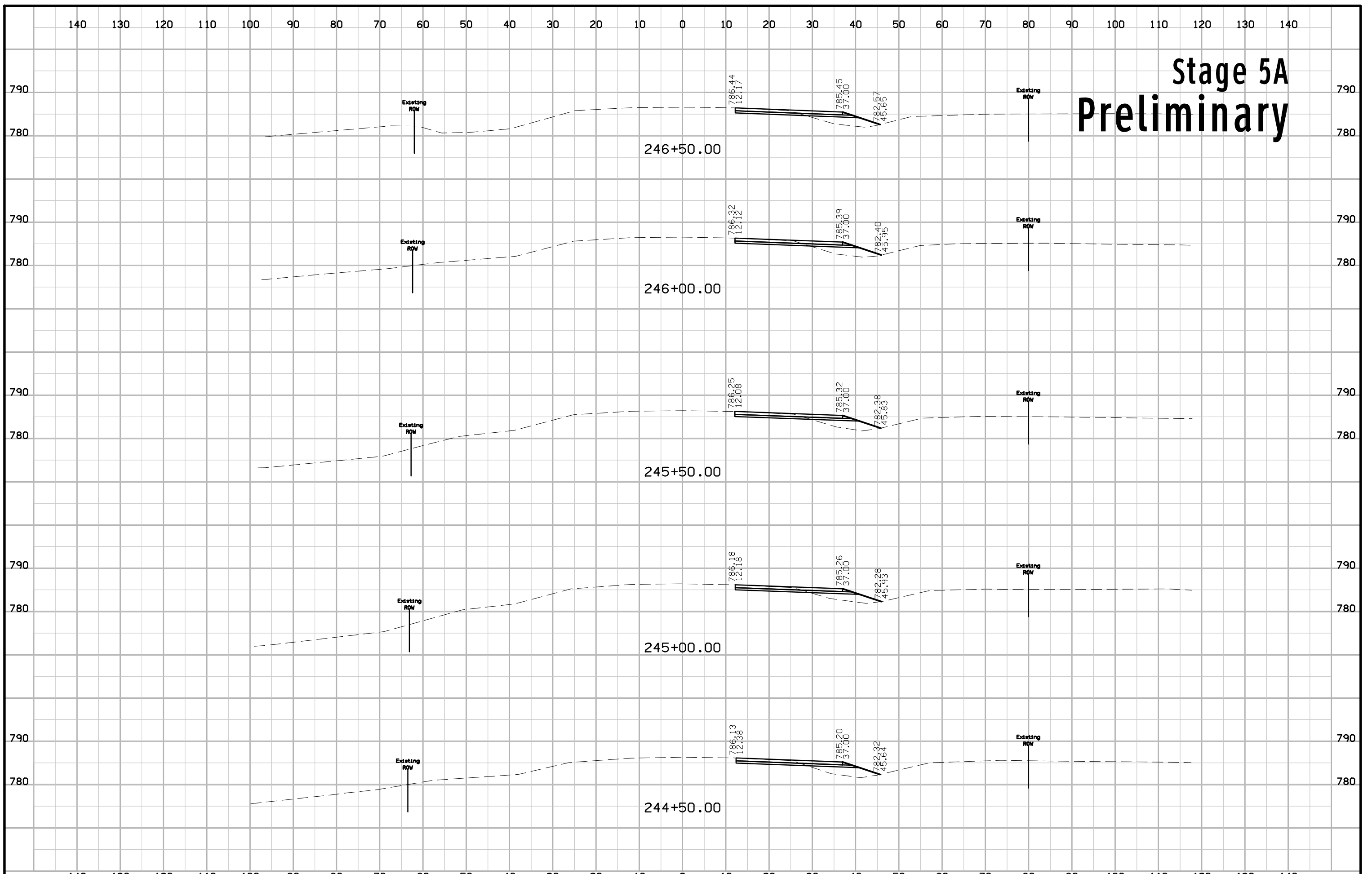
Stage 5A Preliminary



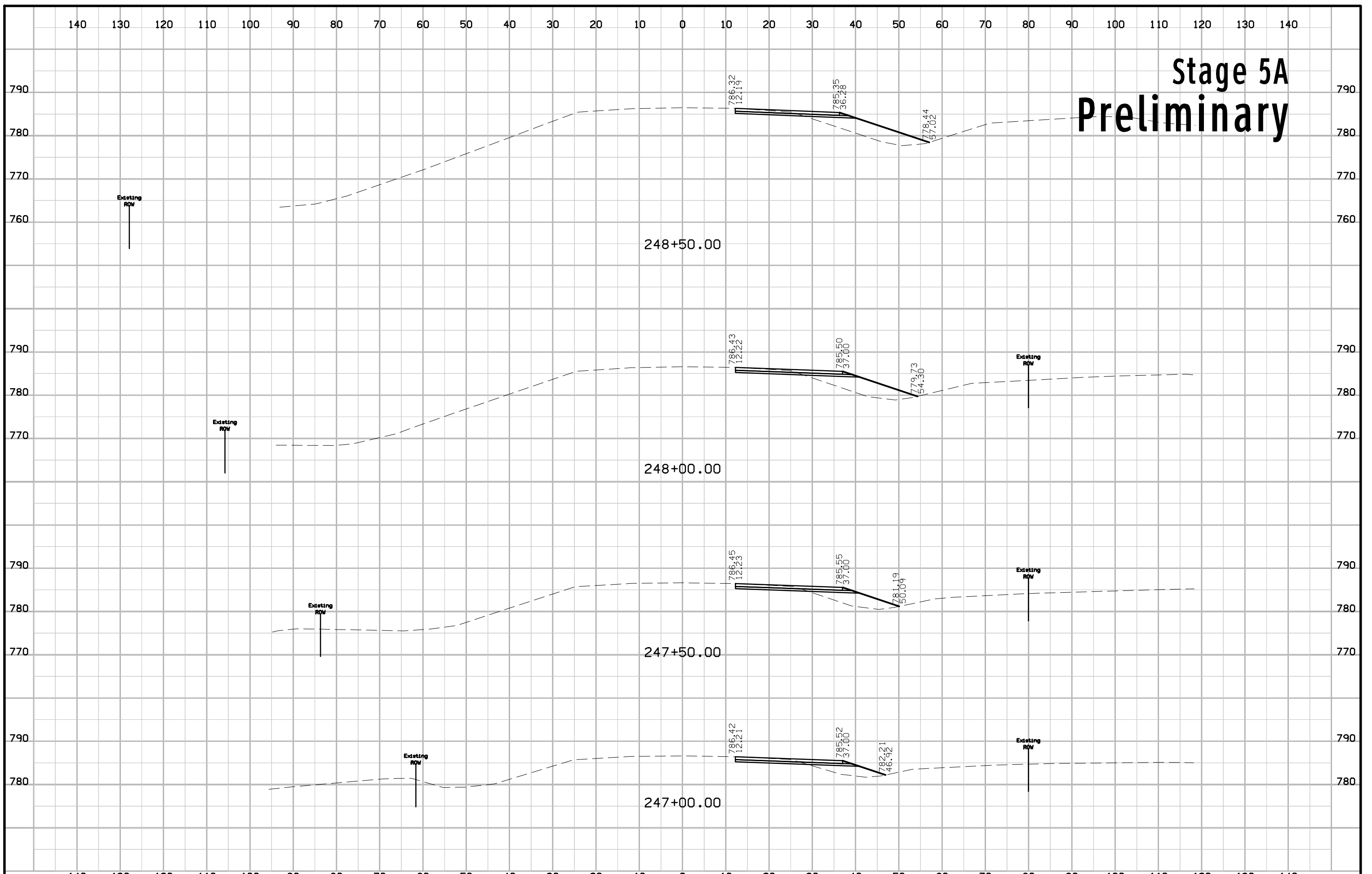
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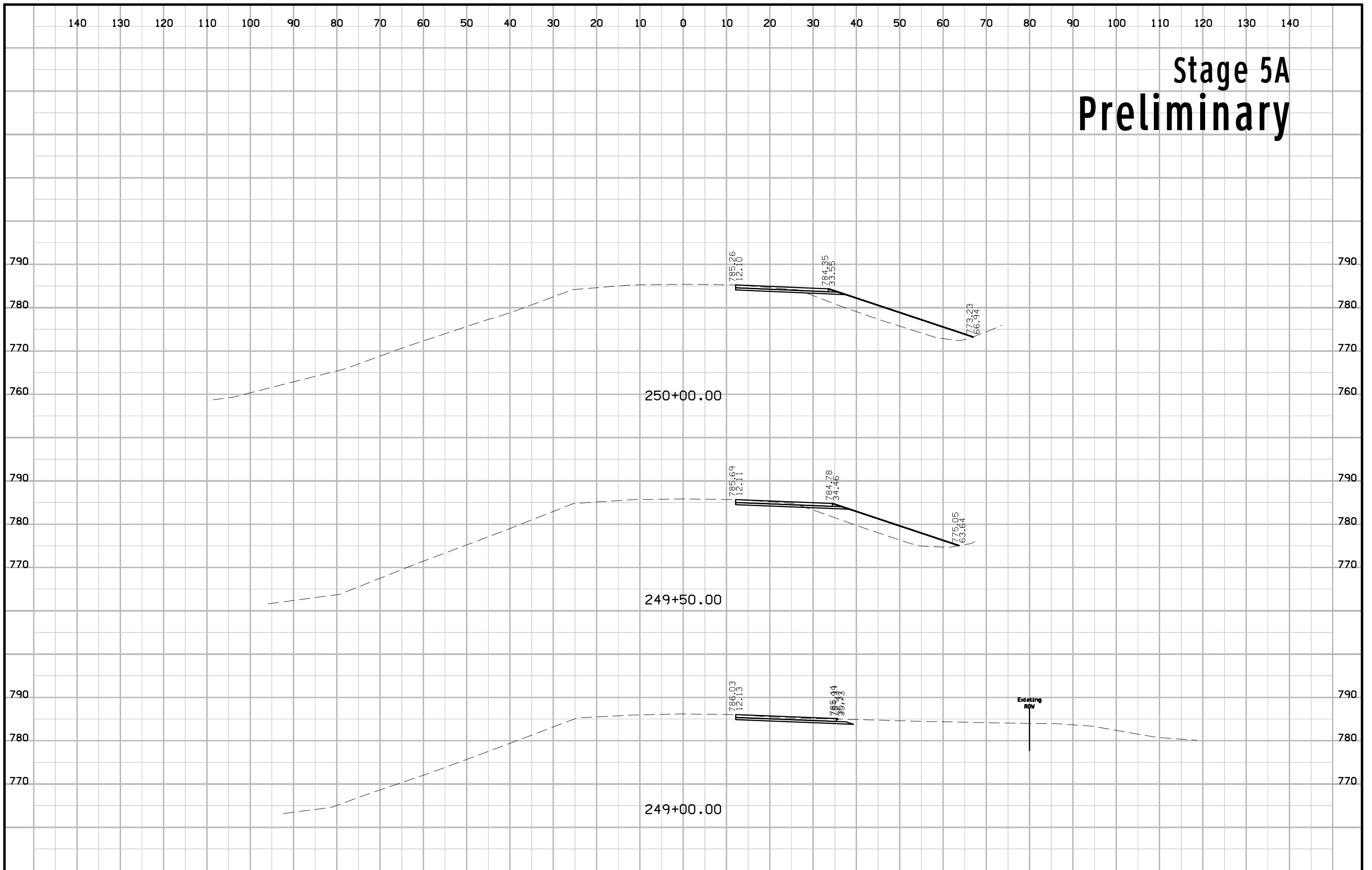
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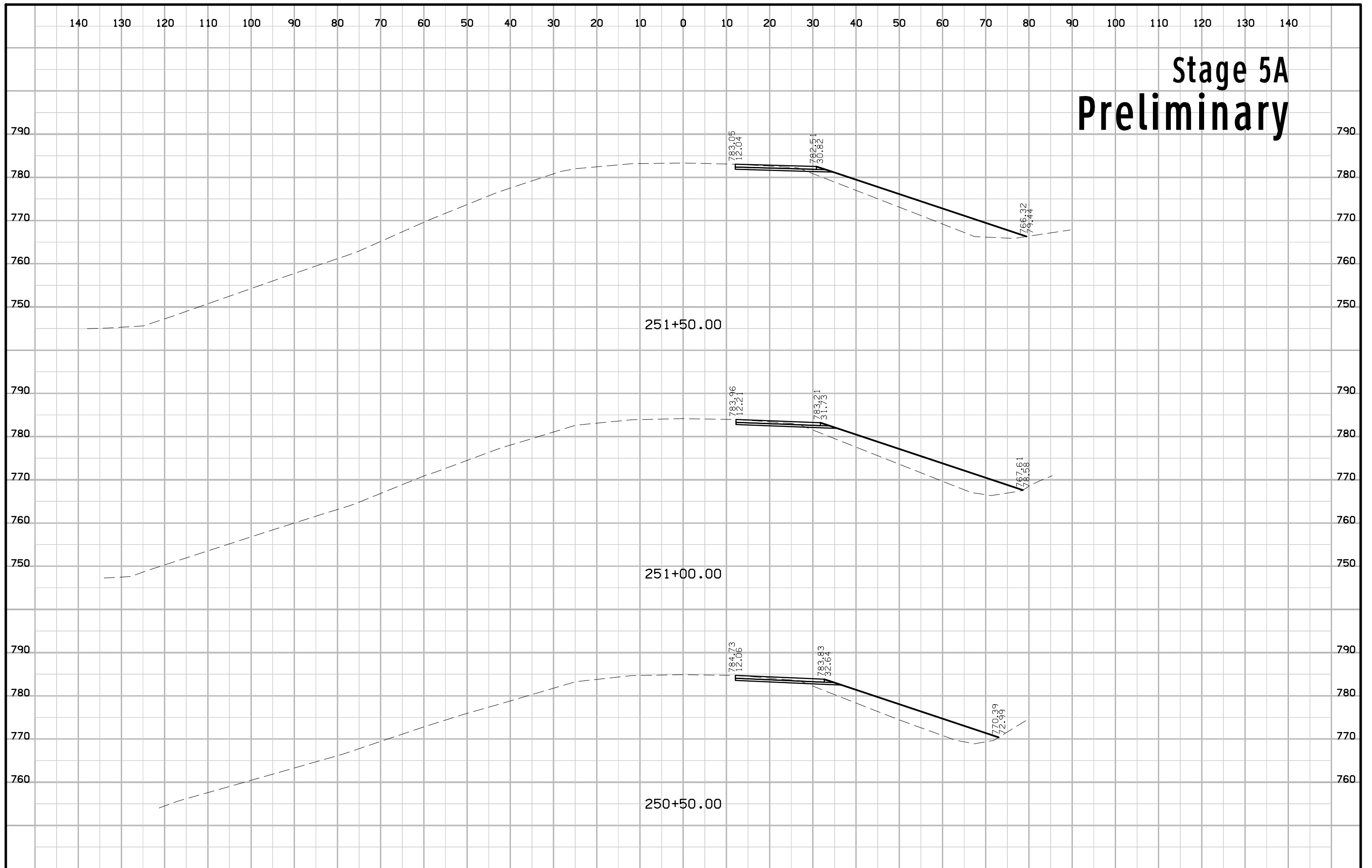
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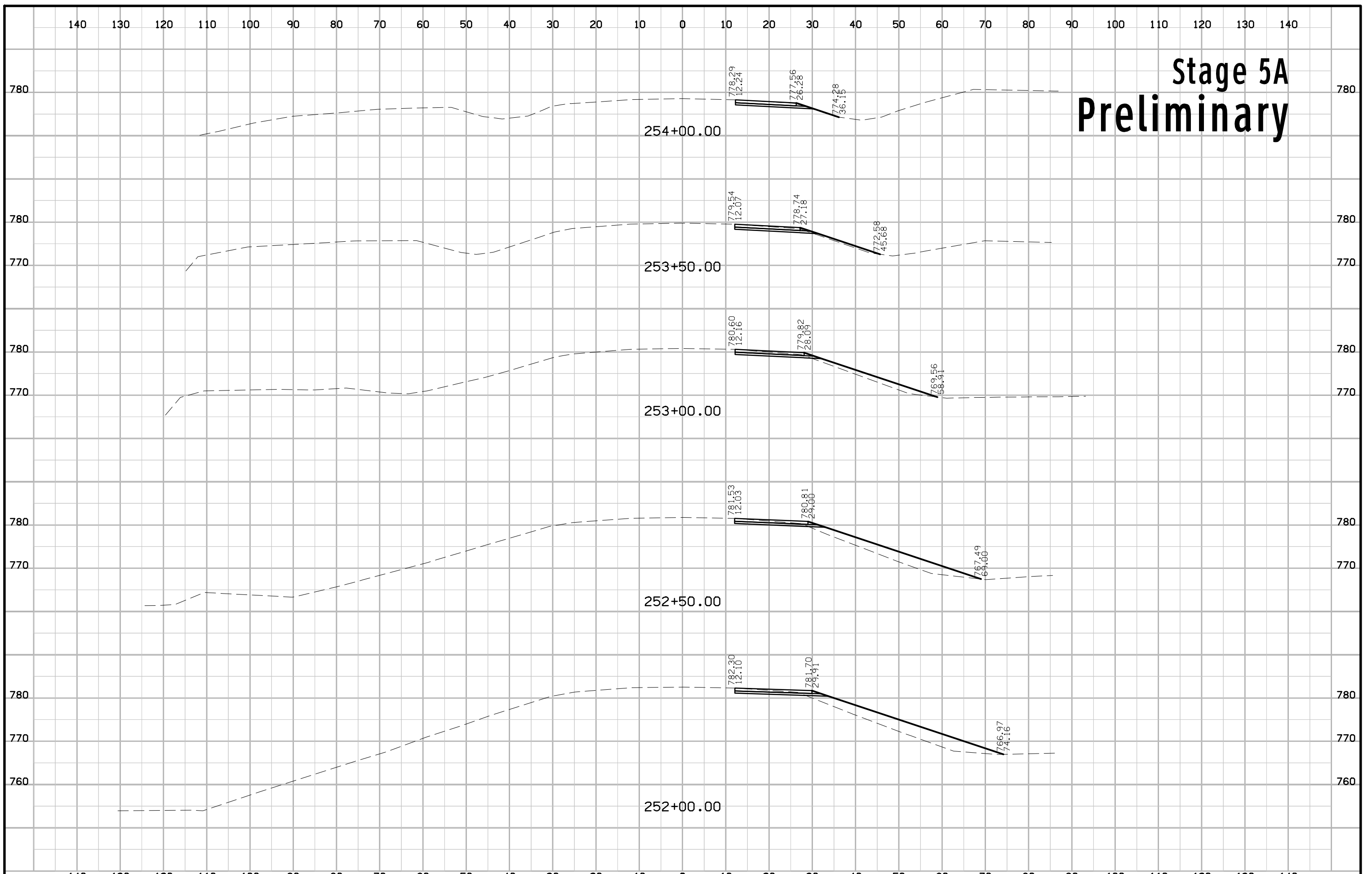
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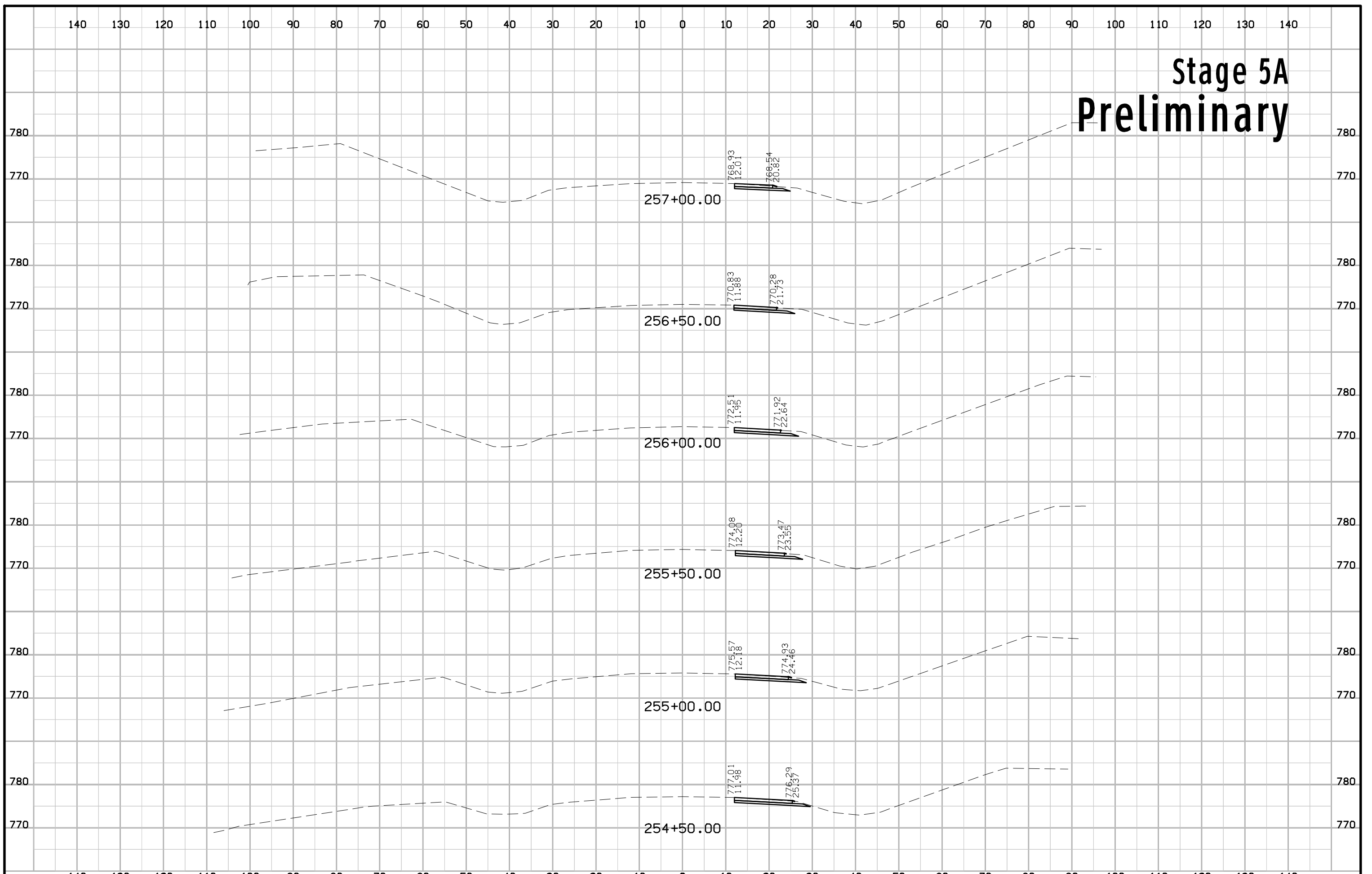
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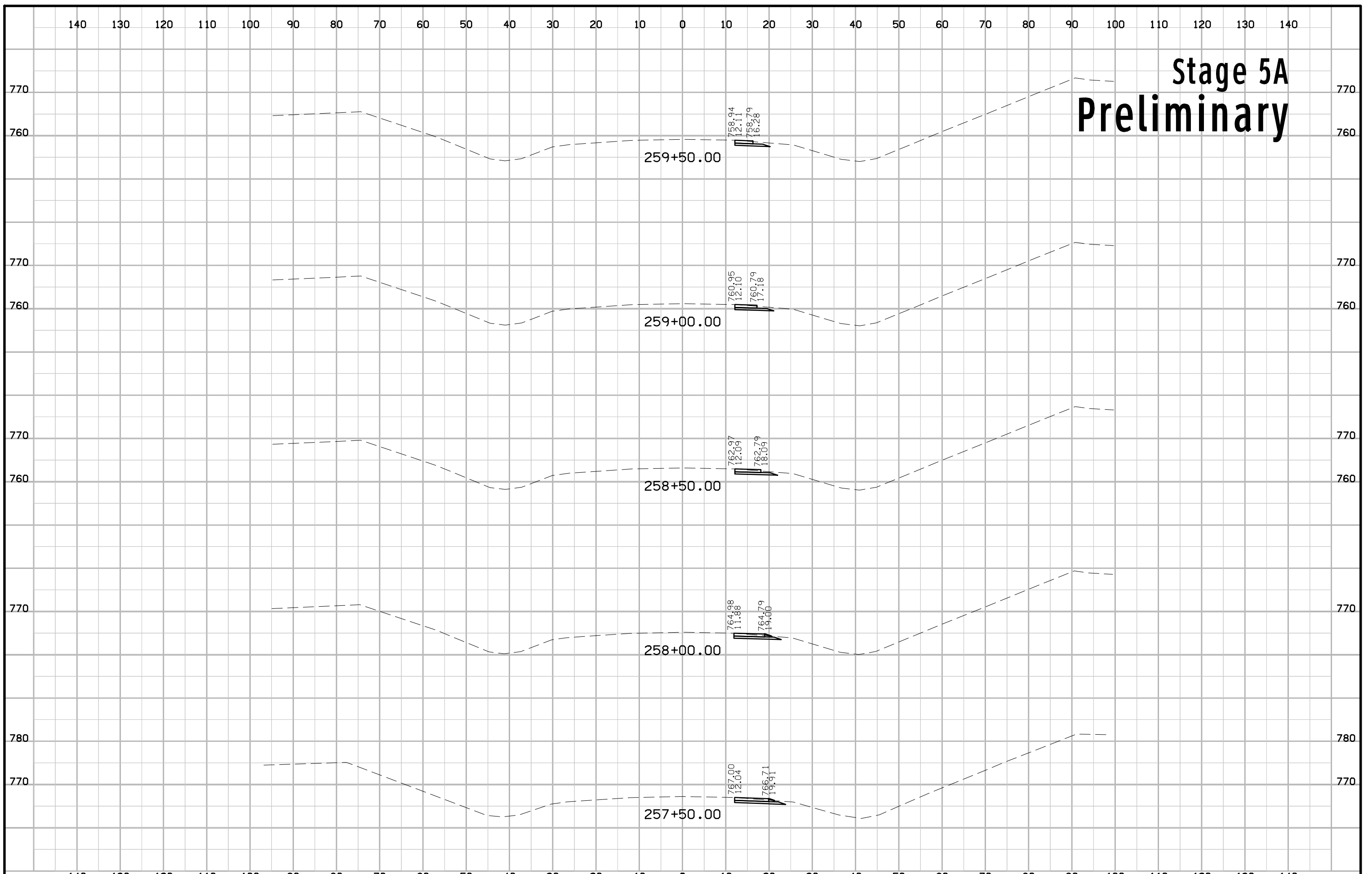
Stage 5A Preliminary



Stage 5A Preliminary



Stage 5A Preliminary



Stage 5A Preliminary

