Bryan Parsell

From: Dearnell, Lori
Sent: Tuesday, June 25, 2013 8:56 AM
To: Dearnell, Lori
Subject: FW: SCI-823-0.00: AEP Transmission Line Crossings
Attachments: AEP 10-06-05.txt; AEP 12-08-11-John.txt; AEP 12-08-11-Dan.txt; Fourth Crossing.pdf; Fifth Crossing.pdf; AEP Crossings.pdf

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From: Dearnell, Lori
Sent: Friday, May 03, 2013 2:07 PM
To: jrheppner@aep.com; tlhairston@aep.com; Buskirk, Doug (Doug.Buskirk@dot.state.oh.us); Pack, Doug (Doug.Pack@dot.state.oh.us); Steven.Pennington@dot.state.oh.us
Cc: Hyre, Brad; Dearnell, Lori
Subject: SCI-823-0.00: AEP Transmission Line Crossings

John,
The SR 823 Portsmouth Bypass project has been ongoing for many years now and will soon be transitioning to alternative delivery. HDR is wrapping up involvement with the project and this email is to summarize previous correspondence and the current design regarding your facilities.

I have attached three email chains regarding the AEP transmission line crossings of the proposed SR 823 Portsmouth Bypass project. The first correspondence was with John Cookman in response to the PAVR submittal in 2005, while the second and third correspondence was with John Heppner and Dan Woeste in order to verify clearances with the Stage 1 design.

There are four crossings in Phase 3 of the project (US52 to south of TR234). These crossings are referred to as "the fourth crossing" through "the seventh crossing" in the email comments from John Cookman. John addresses the sixth and seventh crossing and explains how AEP will modify their utilities to resolve the conflicts. The fifth crossing was not impacted at the time of the PAVR; however, with the Stage 1 design structure 215 is now within the limits of excavation. Structure 215 will need to be relocated just outside of the proposed right of way. Structure 216 can remain at its current location. HDR would like to note its proximity to the proposed blasting operations for the rock excavation. Please let us know if you have any concerns during construction. I have attached a plan and profile PDF that HDR created of this crossing (Fifth Crossing.pdf).

The fourth crossing was a big concern for John Cookman regarding the electrostatic vertical clearance with the PAVR profile. I have since coordinated with John Heppner and Dan Woeste on the matter. They provided me with AEP plan and profile details. Dan took a quick look and thought that we would have enough clearance with the Stage 1 profile. Based on HDR's investigation, there is approximately 13' of additional clearance below the 66' envelope (for a 14' vehicle). With this being said, there may need to be restrictions during construction on the equipment in this area. Please let us know if you have any specific concerns or requests regarding the clearances during construction. I have attached a plan and profile PDF that HDR created of this crossing (Fourth Crossing.pdf).

Also attached for your reference are plan, profile and cross sections for the current reference plans used to develop proposed right-of-way in the vicinity of these four crossings (AEP Crossings.pdf). Please review and comment at your earliest convenience. HDR and ODOT would like to have your input to ensure that the proposed resolution of conflicts is acceptable to AEP. In the near future you will be sent a full set of plans, and ODOT will then set up a meeting regarding utility coordination on the project moving forward.

Thanks,

LORI DEARNELL
P.E.

HDR Engineering, Inc.
Transportation Project Engineer

9987 Carver Road | Suite 200 | Cincinnati, OH 45242-4715
513.984.7540
lori.dearnell@hdrinc.com | hdrinc.com

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From: jccookman@aep.com
Sent: Thursday, October 06, 2005 4:33 PM
To: Randy Wilson; CO-Michael Weeks
Cc: jemomme@aep.com
Subject: Re: Fw: Portsmouth Bypass

Attachments: Portsmouth relocation.pdf

Randy
I have received and reviewed the subject project plans.
It appears the proposed centerline crosses AEP transmission facilities at 7 different locations.
Attached you will find PDF file showing the proposed centerline superimposed on AEP's GIS system map.
(See attached file: Portsmouth relocation.pdf)

Starting at the north end:

The first crossing is the Lucasville Sargents 138kV line. This is a single circuit 138kV line on multipole wood structures. At the crossing point, the plans show in excess of 96' of fill at the crossing station. This impacts a total of 4 structures.

The second crossing of AEP facilities is the Baker Don Marquis 765kV line.
At the crossing location the road centerline is approximately 70' below the existing groundline. The crossing structures are located outside the limits of excavation.

The third crossing is the Oertels Corner Beaver 69kV line. Again at the crossing location the centerline is below the existing groundline. The crossing structures are located outside the limits of excavation.

The fourth crossing is the Baker Don Marquis 765kV line between structures 73 and 74. At the crossing location, plans indicate approximately 50' of fill. According to record information, the clearance for the existing line above the proposed roadway would be reduced to 65'. This is a definite concern. Per AEP TLES10 guidelines, Electrostatic Clearance required for 765kV above 2 and 3 land public roads is 66'. This clearance is based on a vehicle height of 14'.
This crossing will need a complete on site analysis. My concern is the large dump trucks used in this types of fill operation and the possibility of a truck passing under the line with the bed in the "dump position".

The fifth crossing is the Sporn Portsmouth 138kV double circuit. Again at the crossing location the centerline is below the existing groundline. The crossing structures are located outside the limits of excavation.

The sixth crossing is the South Point Portsmouth 138kV double circuit.
Structure 138 is a steel lattice angle structure and is located very near centerline station 152+25. At this point the elevation of the proposed centerline is approximately 90' below the base of the structure. The width of the cut according to the cross section is approximately 400'. Two double circuit angle structures will be required. These structures will be placed on the existing AEP centerline just outside of proposed Highway Right of Way.

The seventh and final crossing is the Ironton Portsmouth 69kV line. This is a single circuit line on single wood poles. Both ends of the crossing needs to be raised and LD (light duty) steel poles will be used.
Additional work will be required on adjoining structures to prevent uplift conditions.

In summary, AEP's major concern is the Baker Don Marquis 765kV line and the reduction of clearance at highway station 207+50. I do not have the electronic file so my measurements were based on scaled distances from the plans you

provided. This area needs detailed study to insure proper clearance above the entire width of the road. The cost and time constraints for even a minor adjustment to a 765kV structure are enormous. Please consider AEP's request for additional study and centerline adjustment at this station if required.

If you have questions, comments, or would like to set up a meeting to discuss this issue, please do not hesitate to contact Jeff Momme, TLPE Manager, (614.552.1180) or myself at the numbers shown below.

John C. Cookman
Transmission Line Project Engineering
Phone (614) 552-1812 Audit 910-1812
Fax (614) 552-1818 Audit 910-1818
700 Morrison Road
Gahanna, Ohio 43230-8250

From: Dearnell, Lori
Sent: Thursday, December 08, 2011 11:49 AM
To: Dearnell, Lori
Subject: FW: SCI-823-Ph3: Portsmouth Bypass Transmission Line Crossing
Attachments: AEP 10-06-05.txt

See below

LORI DEARNELL
P.E.
HDR Engineering, Inc.
Transportation Project Engineer

9987 Carver Road | Suite 200 | Cincinnati, OH 45242-4715
513.984.7540
lori.dearnell@hdrinc.com | hdrinc.com
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From: Dearnell, Lori
Sent: Tuesday, November 22, 2011 3:35 PM
To: 'jrheppner@aep.com'
Subject: SCI-823-Ph3: Portsmouth Bypass Transmission Line Crossing

John,
I am contacting you in regards to the Portsmouth Bypass Project in Scioto County, Ohio. My company is under contract with ODOT to take the project from Stage 1 level design to final design. I have been gathering information that was given to us by the previous consultant (TranSystems). I found some correspondence between a John Cookman (AEP Transmission) to Randy Wilson (ODOT) and Mike Weeks (PM at TranSystems). I have attached this correspondence. This was in response to the preferred alternative plan submittal (9/12/2005). The fourth crossing (Baker Don Marquis 765 kV) is the one that he seemed most concerned with because of electrostatic clearance issues. I need to get as much detailed information from you on this overhead transmission line at the location it crosses the proposed bypass so that we can determine what needs to be done in this area to avoid any problems/impacts to your utility. Please take a look at the attachments and give me a call to discuss. I can send you current plan, profile and cross section drawings if you would like to take a look in more detail. My number is 513-984-7540.

Thanks,

LORI DEARNELL
P.E.
HDR Engineering, Inc.
Transportation Project Engineer

9987 Carver Road | Suite 200 | Cincinnati, OH 45242-4715
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AEP 12-08-11-Dan

From: dwoeste@aep.com
Sent: Thursday, December 08, 2011 9:14 AM
To: Dearnell, Lori
Cc: jrheppner@aep.com; rossbkendall@gmail.com
Subject: SCI-823-Ph3: Portsmouth Bypass Transmission Line Crossing Part 1 of 2
Attachments: Span Crossing Maps.pdf; PnPs(part1).pdf

Lori,

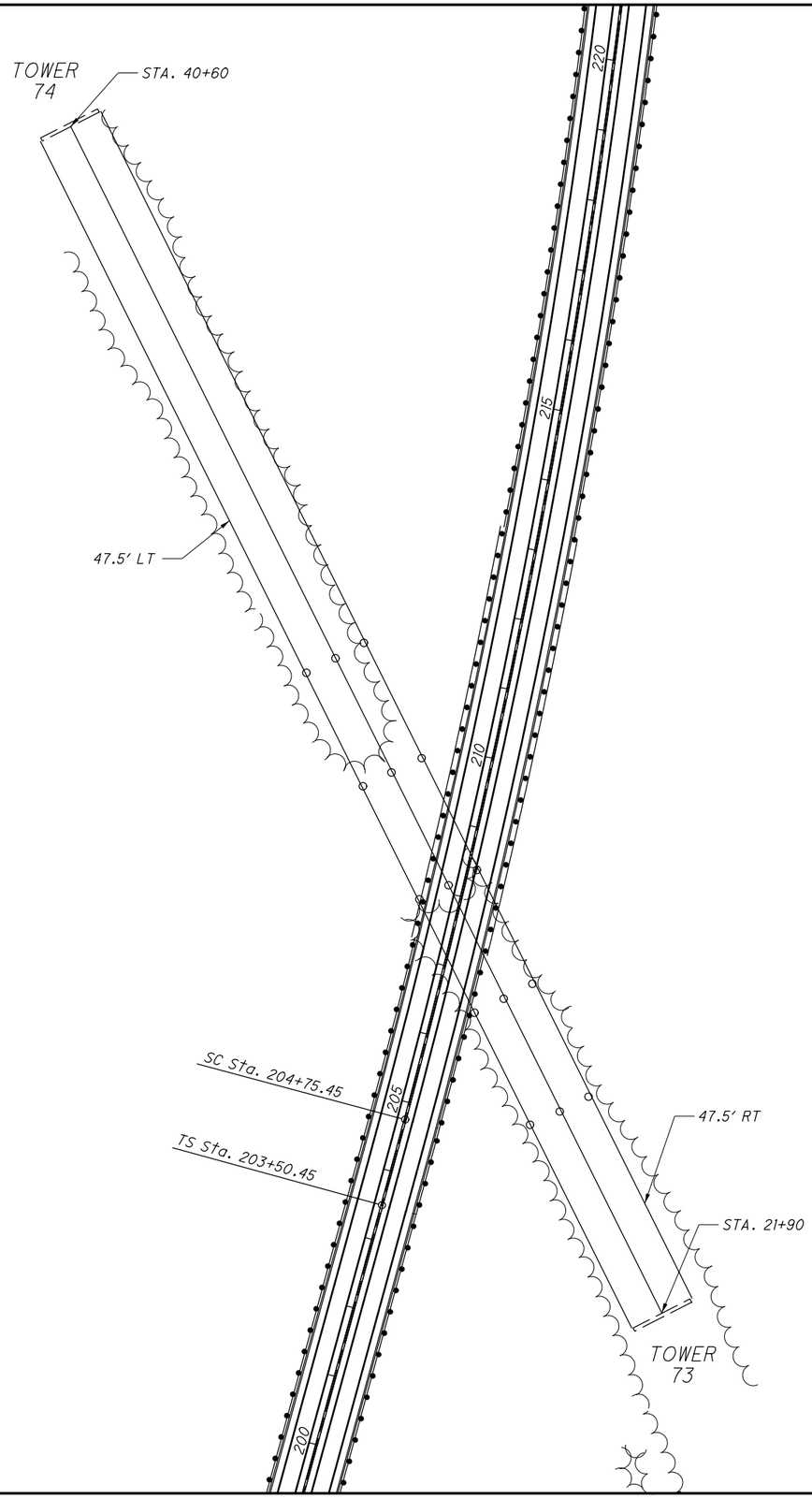
After briefly reviewing the elevations on the only profile drawing that we received (sta. 202+00 to sta. 214+50) and cross checking it to the clearance that is required, it appears that this particular span will most likely meet clearance. I would like for you to confirm this as I was only able to interpret the location of the proposed roadway based on the topography of the span.

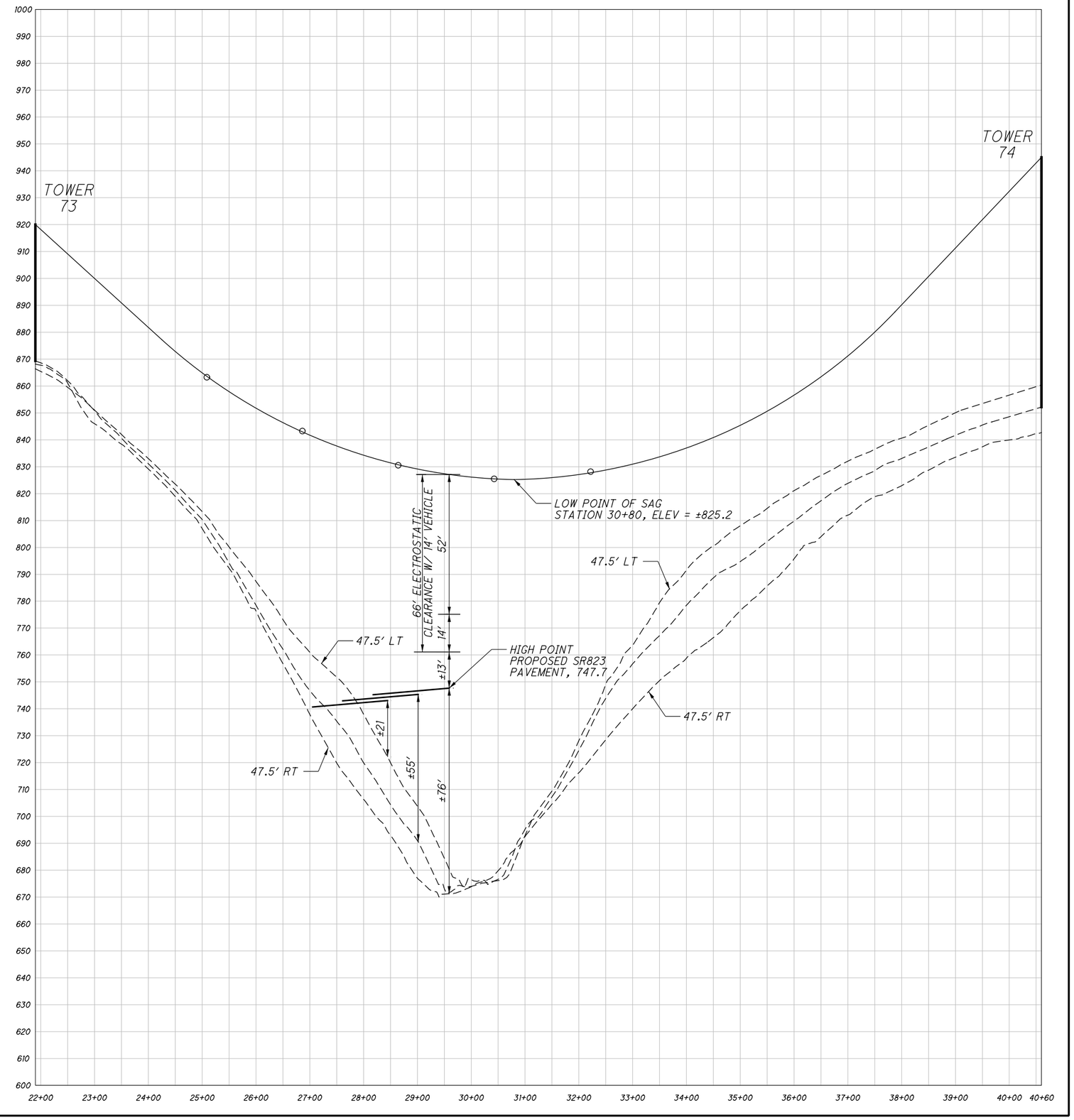
I have attached plan and profile drawings for each of the spans that cross your planned route for the bypass. These drawings each have their respective clearance line drawn on them as required by the NESC code (as well as necessary electrostatic clearances in the case of the 765 kV line). Additionally, more detail is needed regarding the last leg of the bypass by Sciotodale. As you can see from the attached drawing there is a lot of potential congestion/conflict with numerous poles on the Ironton - Portsmouth 69kV Line.

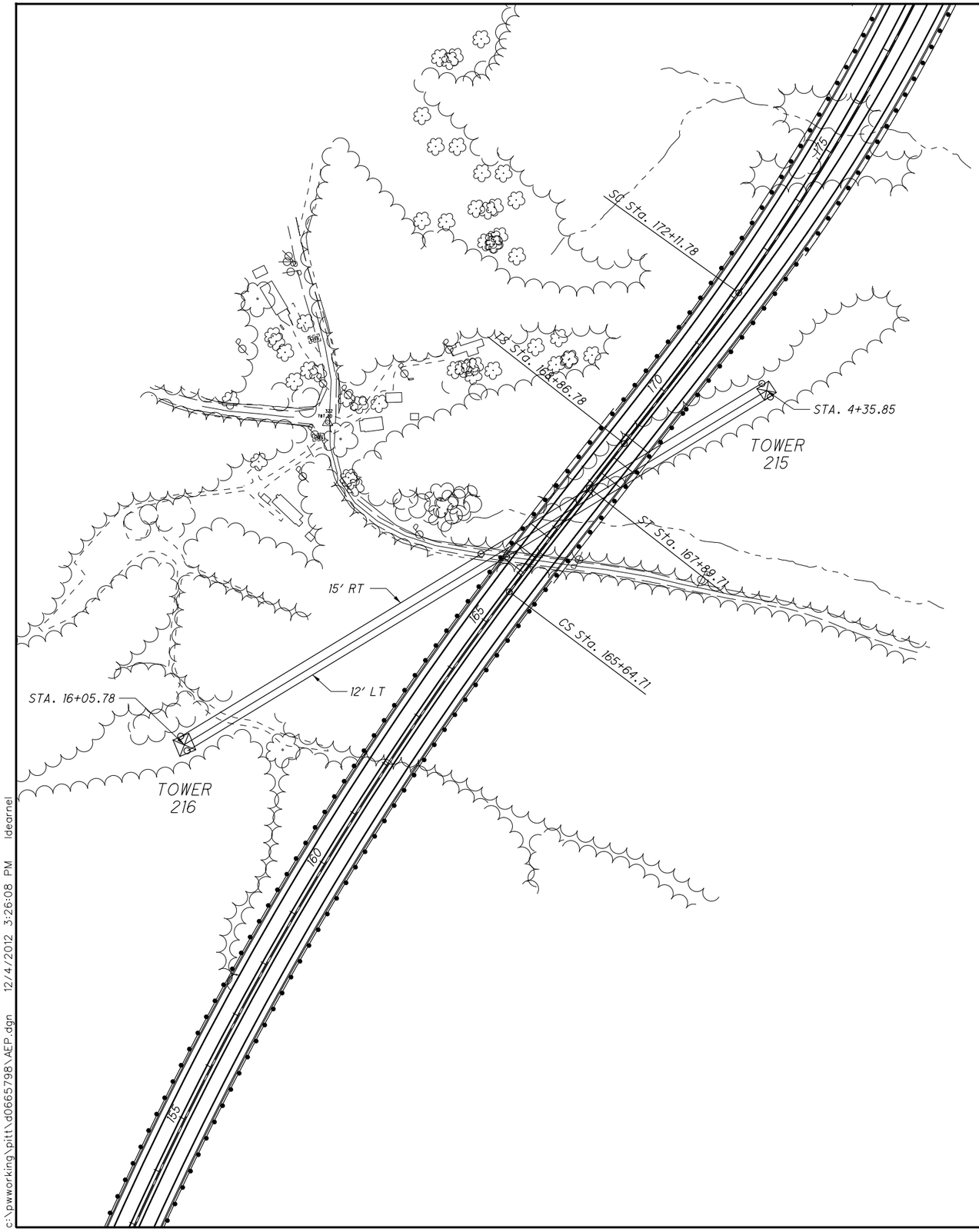
Please review all of the crossings in question and check them to your proposed profiles. I would be more than happy to look at these in further detail with you and discuss ways to mitigate any issues that arise. If you are unable to read any elevations on these drawings or need anything else from me do not hesitate to contact myself or John Heppner.

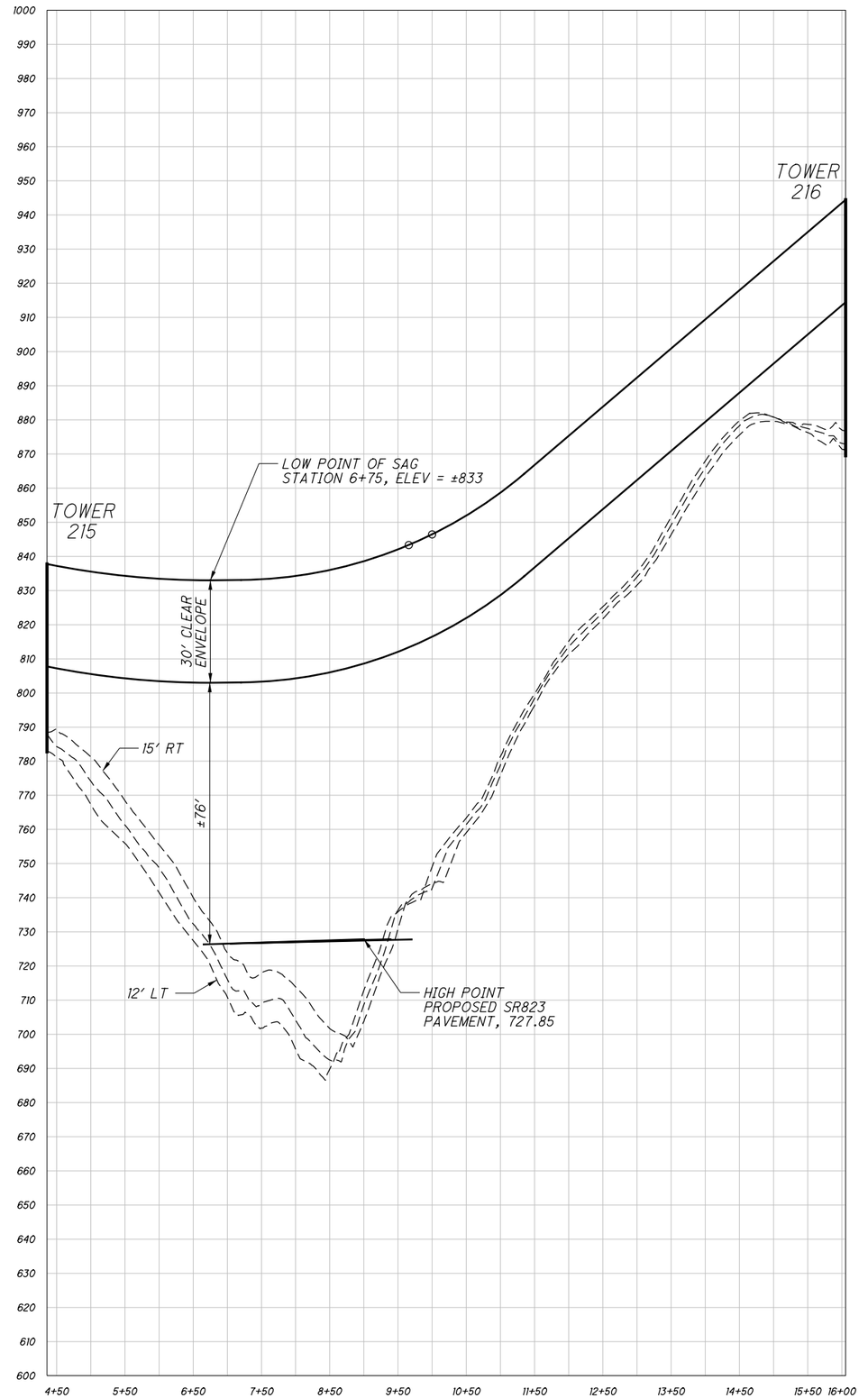
Thank you,

Dan Woeste
AEP Transmission Line Engineering
700 Morrison Road
Gahanna, Ohio 43230
910-1391
(614)-552-1391
dwoeste@aep.com









LA-R/W
CONST. LIMITS
STA. 140+27.52, END C.I.P WALL
STA. 141+15.00 4' EXT TYPE B, LT & RT
STA. 141+65.00 4' EXT TYPE B, LT & RT
STA. 142+15.00 20' EXT TYPE B, LT 4' EXT TYPE B, RT
SINGLE SLOPE CONC. BARRIER, TYPE C1
CURVE #1
STA. 146+15.00 20' EXT TYPE B, LT 4' EXT TYPE B, RT
STA. 150+15.00 24' EXT TYPE B, LT 4' EXT TYPE B, RT
SOUTH POINT PORTSMOUTH 138 KV DOUBLE CIRCUIT
SEC. 32
SEC. 33
SR823 SB
SR823 NB
CB-8
18"
10'
24'
30"
15"
15'
140
141
142
143
144
145
146
147
148
149
150
151
I-3C1
I-3C1 APP
℄ CONSTRUCTION SR823
MATCH LINE STA. 139+50 SR823
MATCH LINE STA. 152+00 SR823
STA. 140+27.52 BEGIN APPR. SLAB
STA. 140+57.52 END APPR. SLAB
STA. 140+61.40 END NOISE WALL
STA. 140+66.33, BRIDGE TERMINAL ASSEMBLY, TYPE 2
EX R/W

CURVE #1

P.I. STA. = 148+19.77
DELTA = 38° 41′ 31″ (RT)
Dc = 1° 00′ 00″
R = 5,729.58′
Ls = 225.00′
Theta = 1° 07′ 30″ (RT)
LT = 150.00′
ST = 75.00′
x = 224.99′
y = 1.47′
k = 112.50′
p = 0.37′
DELTA c = 36° 26′ 31″ (RT)
Lc = 3,644.19′
Tc = 1,886.11
Ts = 2,124.26′
Es = 343.27′
Emax. = 0.036
DESIGN SPEED = 70 MPH

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LBD
CHECKED JBH

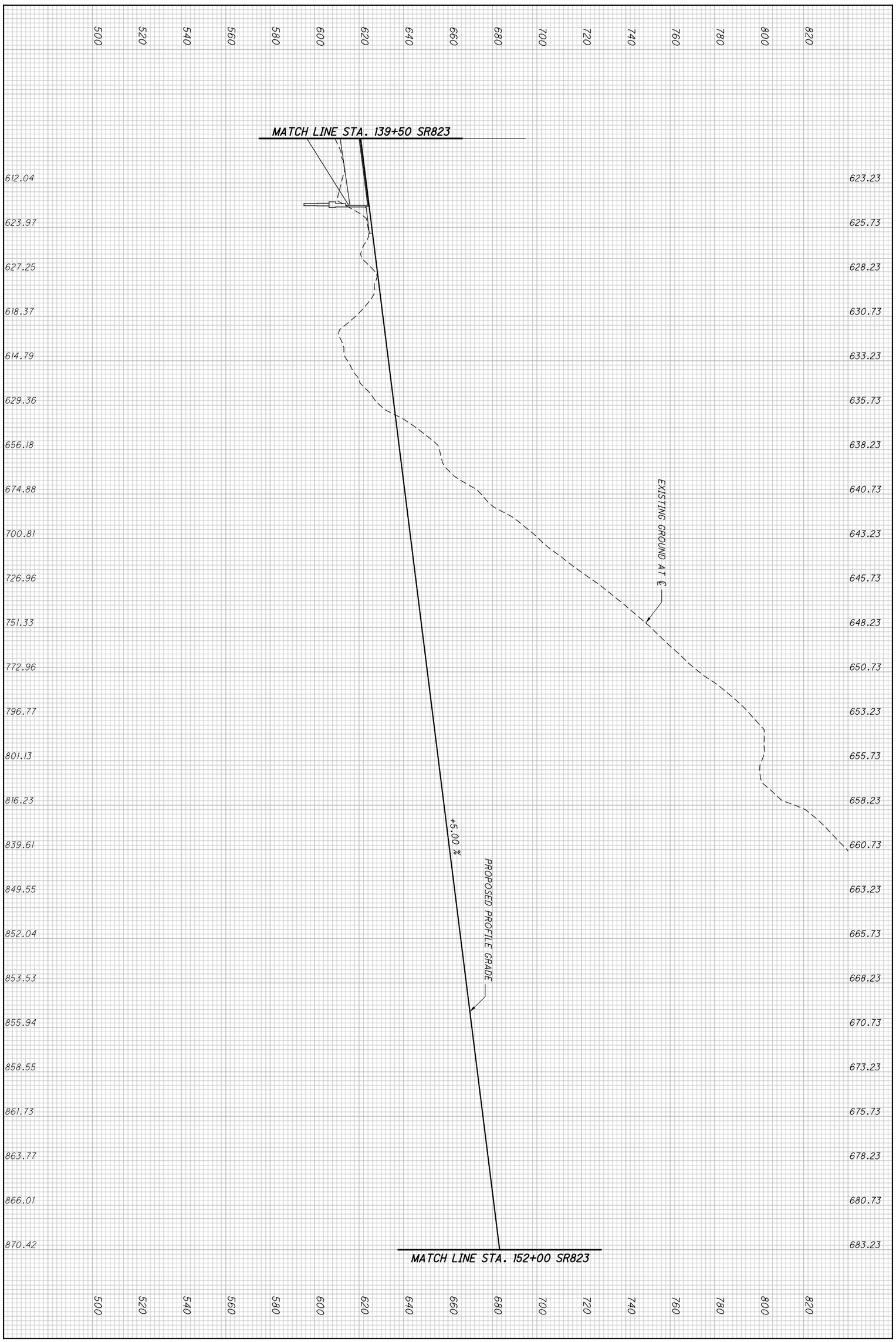
PLAN - SR823
STA. 139+50.00 TO STA. 152+00.00

SCI-823-0.00

52
623

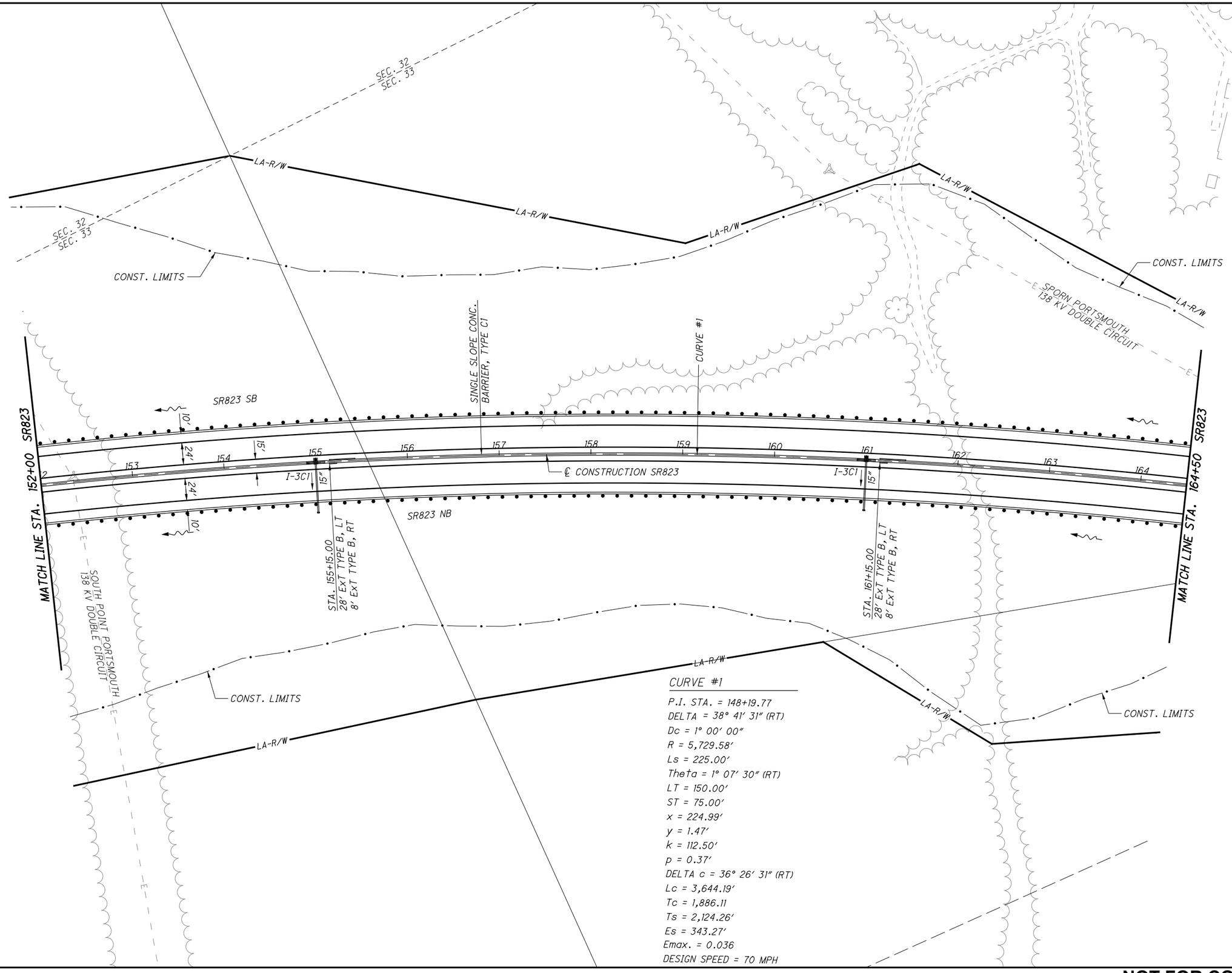
c:\pwworking\pitt\d0247069\77366CP008.dgn 2/21/2013 5:30:24 PM CWahlbri

NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION

53 / 623	SCI-823-0.00	PROFILE - SR823 STA. 139+50 TO STA. 152+00	CALCULATED LBD CHECKED JBH



CURVE #1

P.I. STA. = 148+19.77
DELTA = 38° 41′ 31″ (RT)
Dc = 1° 00′ 00″
R = 5,729.58′
Ls = 225.00′
Theta = 1° 07′ 30″ (RT)
LT = 150.00′
ST = 75.00′
x = 224.99′
y = 1.47′
k = 112.50′
p = 0.37′
DELTA c = 36° 26′ 31″ (RT)
Lc = 3,644.19′
Tc = 1,886.11
Ts = 2,124.26′
Es = 343.27′
Emax. = 0.036
DESIGN SPEED = 70 MPH

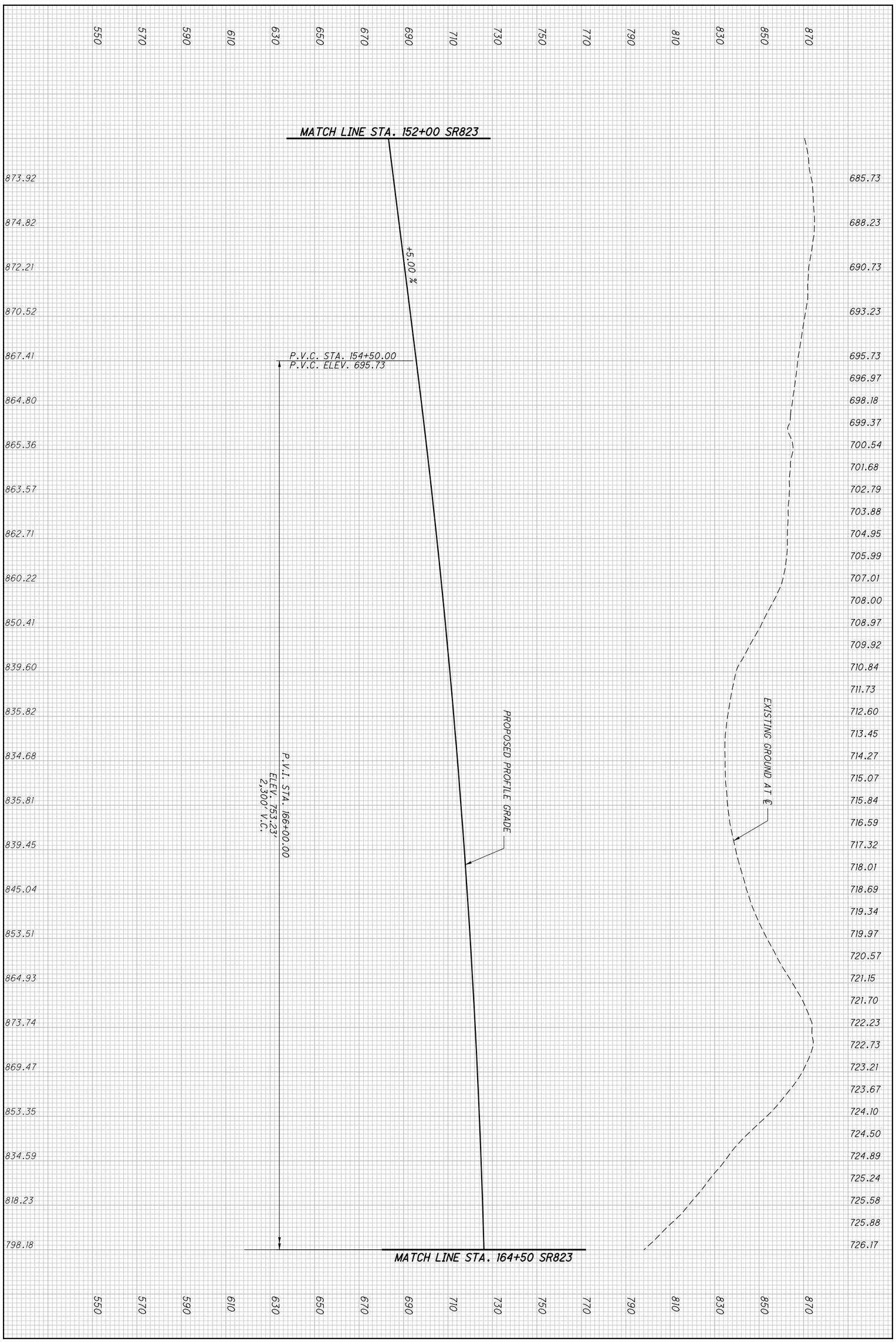
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LBD
CHECKED $CHEK$

PLAN - SR823
STA. 152+00.00 TO STA. 164+50.00

SCI-823-0.00

NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION

55 / 623	SCI-823-0.00	**PROFILE - SR823** **STA. 152+00 TO STA. 164+50**

CALCULATED LBD
CHECKED JBH

CURVE #2 (℄ SR 823)

P.I. STA. = 178+18.21
DELTA = 22° 45′ 26″ (LT)
Dc = 1° 30′ 00″
R = 3,819.72′
Ls = 325.00′
Theta = 2° 26′ 15″ (LT)
LT = 216.69′
ST = 108.35′
x = 324.94′
y = 4.61′
k = 162.49′
p = 1.15′
DELTA c = 17° 52′ 56″ (LT)
Lc = 1,192.14′
Tc = 600.96′
Ts = 931.43′
Es = 77.76′
DESIGN SPEED = 70 MPH

CURVE # SBEOP

P.I. STA. = 178+07.65
DELTA= 22° 45′ 26″ (LT)
Dc = 1° 25′ 54″
R = 4,001.76′
Ls = 225.00′
Theta = 1° 36′ 39″ (LT)
LT = 150.01′
ST = 75.01′
x = 224.98′
y = 2.11′
k = 112.50′
p = 0.53′
DELTA c = 19° 32′ 08″ (LT)
Lc = 1,364.45′
Tc = 688.91′
Ts = 917.94′
Es = 80.77′
Emax = 0.052
DESIGN SPEED = 70 MPH

CURVE # NBEOP

P.I. STA. = 178+28.77
DELTA= 22° 45′ 26″ (LT)
Dc = 1° 46′ 14″
R = 3,235.90′
Ls = 375.00′
Theta = 3° 19′ 12″ (LT)
LT = 250.04′
ST = 125.04′
x = 374.87′
y = 7.24′
k = 187.48′
p = 1.81′
DELTA c = 16° 07′ 02″ (LT)
Lc = 910.26′
Tc = 458.15′
Ts = 839.06′
Es = 66.72′
Emax. = 0.060
DESIGN SPEED = 70 MPH

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LBD
CHECKED JBH

PLAN - SR823
STA. 164+50.00 TO STA. 177+00.00

SCI-823-0.00

56
623

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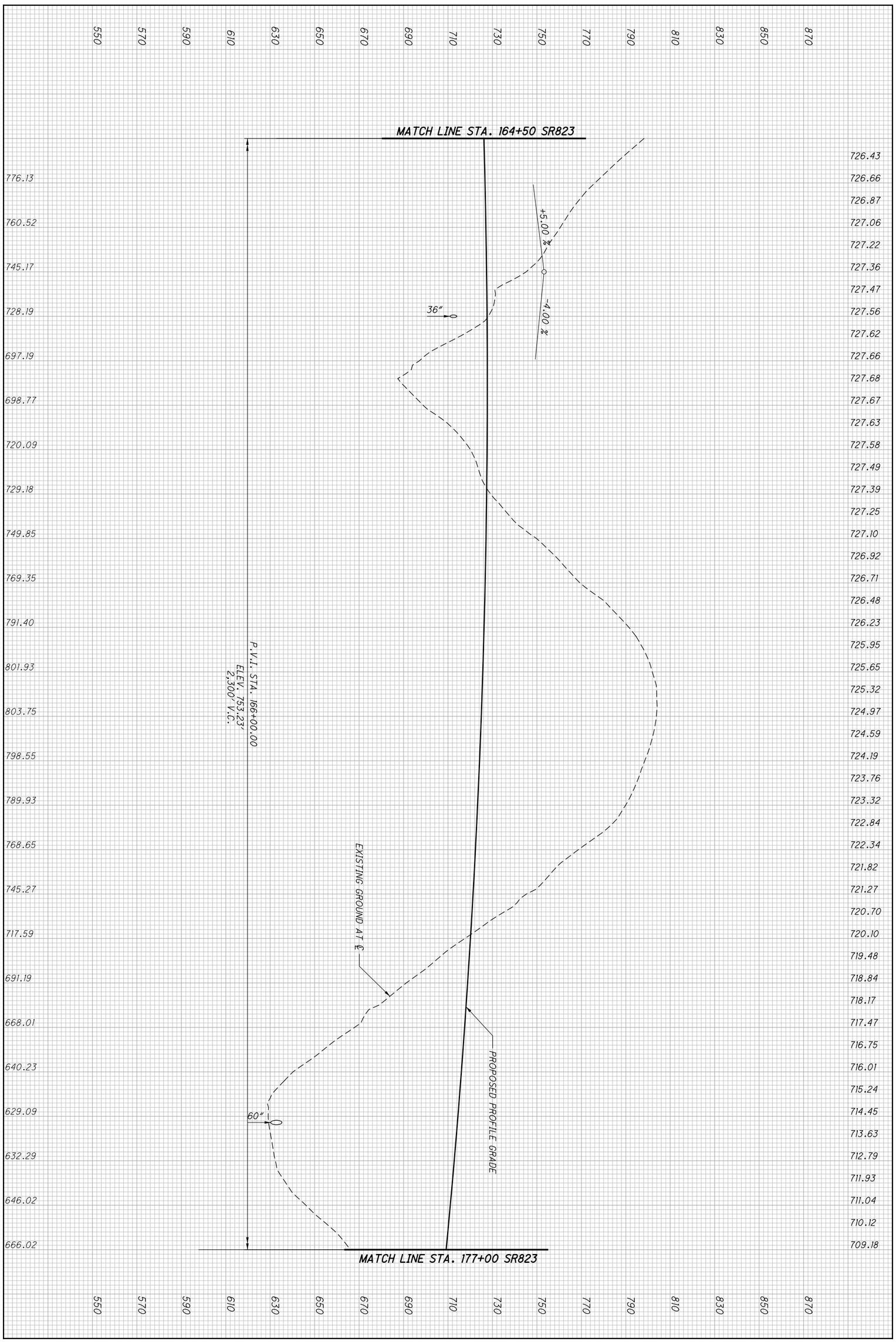

NOT FOR CONSTRUCTION

57 / 623	SCI-823-0.00	**PROFILE - SR823** **STA. 164+50 TO STA. 177+00**

CALCULATED LBD
CHECKED JBH

CURVE # 3

P.I. STA. = 223+99.04
DELTA = 19° 39′ 55″ (LT)
Dc = 0° 30′ 00″
R = 11,459.16′
Ls = 125.00′
Theta = 0° 18′ 45″
LT = 83.33′
ST = 41.67′
x = 125.00′
y = 0.23′
k = 62.50′
p = 0.06′
DELTA c = 19° 02′ 25″ (LT)
Lc = 3,808.07′
Tc = 1,921.75′
Ts = 2,048.58′
Es = 170.89′
Emax. = 0.019
DESIGN SPEED = 70 MPH

MATCH LINE STA. 202+00 SR823

MATCH LINE STA. 214+50 SR823

CONST. LIMITS

TS Sta. 203+50.45

STA. 204+15.00
8′ EXT TYPE B, LT
24′ EXT TYPE B, RT

SC Sta. 204+75.45

SINGLE SLOPE CONC. BARRIER, TYPE B1

CURVE #3

LA-R/W

BAKER DON MARQUIS
765 KV LINE

SR823 SB

SR823 NB

I-3B1

℄ CONSTRUCTION SR823

STA. 209+15.00
8′ EXT TYPE B, LT
24′ EXT TYPE B, RT

STA. 214+15.00
8′ EXT TYPE B, LT
24′ EXT TYPE B, RT

12″

15″

10′

24′

22′

15′

202 N 15° 17′ 24″ E 203 204 205 206 207 208 I-3B1 209 210 211 212 213 I-3B1 214

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LBD
CHECKED JBH

PLAN - SR823
STA. 202+00.00 TO 214+50.00

SCI-823-0.00

62
623

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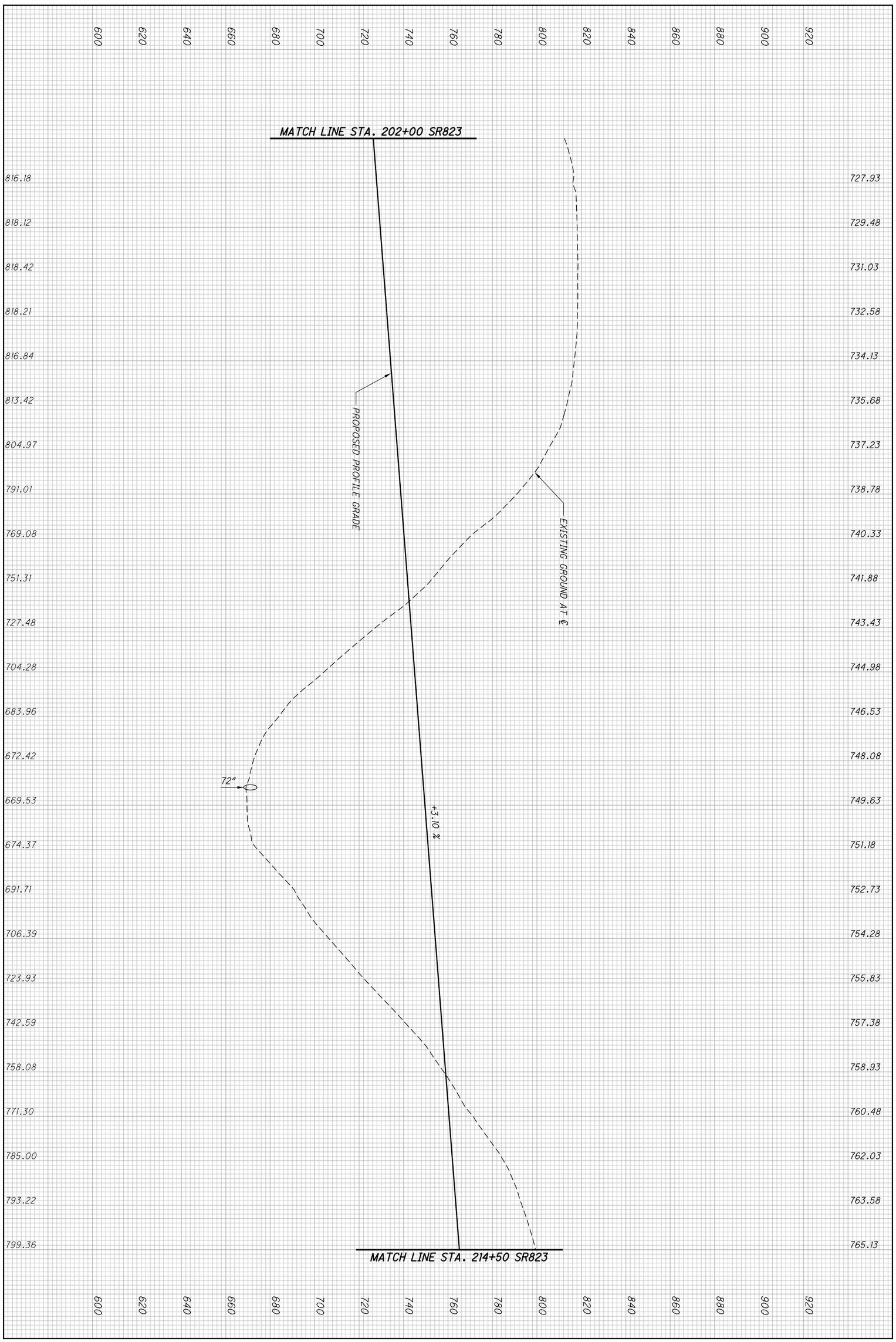
NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION

63 / 623	SCI-823-0.00	PROFILE - SR823 STA. 202+00 TO STA. 214+50

CALCULATED LBD
CHECKED JBH

CURVE # US52
RAMP A-2

P.I. STA. = 44+55.69
DELTA = 38° 05′ 19″ (RT)
Dc = 2° 15′ 00″
R = 2,546.48′
Ls1 = 150.00′
Ls2 = 175.00′
Theta1 = 1° 41′ 15″
Theta2 = 1° 58′ 08″
LT1 = 100.00′
LT2 = 116.67′
ST1 = 50.00′
ST2 = 58.34′
x1 = 149.99′
x2 = 174.98′
y1 = 1.47′
y2 = 2.00′
k1 = 75.00′
k2 = 87.50′
p1 = 0.37′
p2 = 0.50′
DELTAc = 34° 25′ 56″ (RT)
Lc = 1,530.32′
Tc = 789.05′
Ts1 = 954.36′
Ts2 = 966.48′
Es = 147.91′
Emax. = 0.056
DESIGN SPEED = 60 MPH

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HORIZONTAL SCALE IN FEET
0 25 50 100

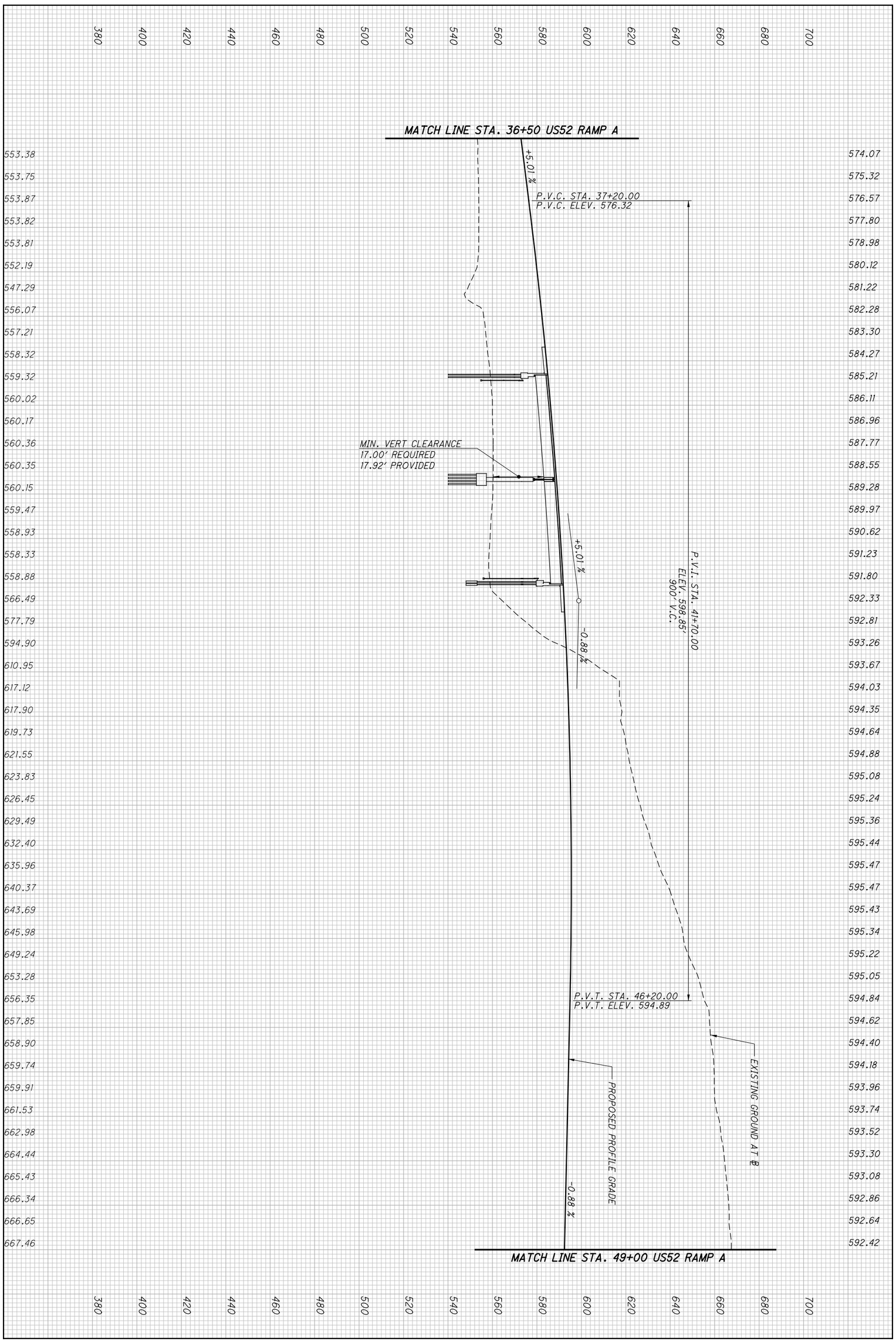
CALCULATED LBD
CHECKED JBH

PLAN - US52 RAMP A
STA. 36+50.00 TO STA. 49+00.00

SCI-823-0.00

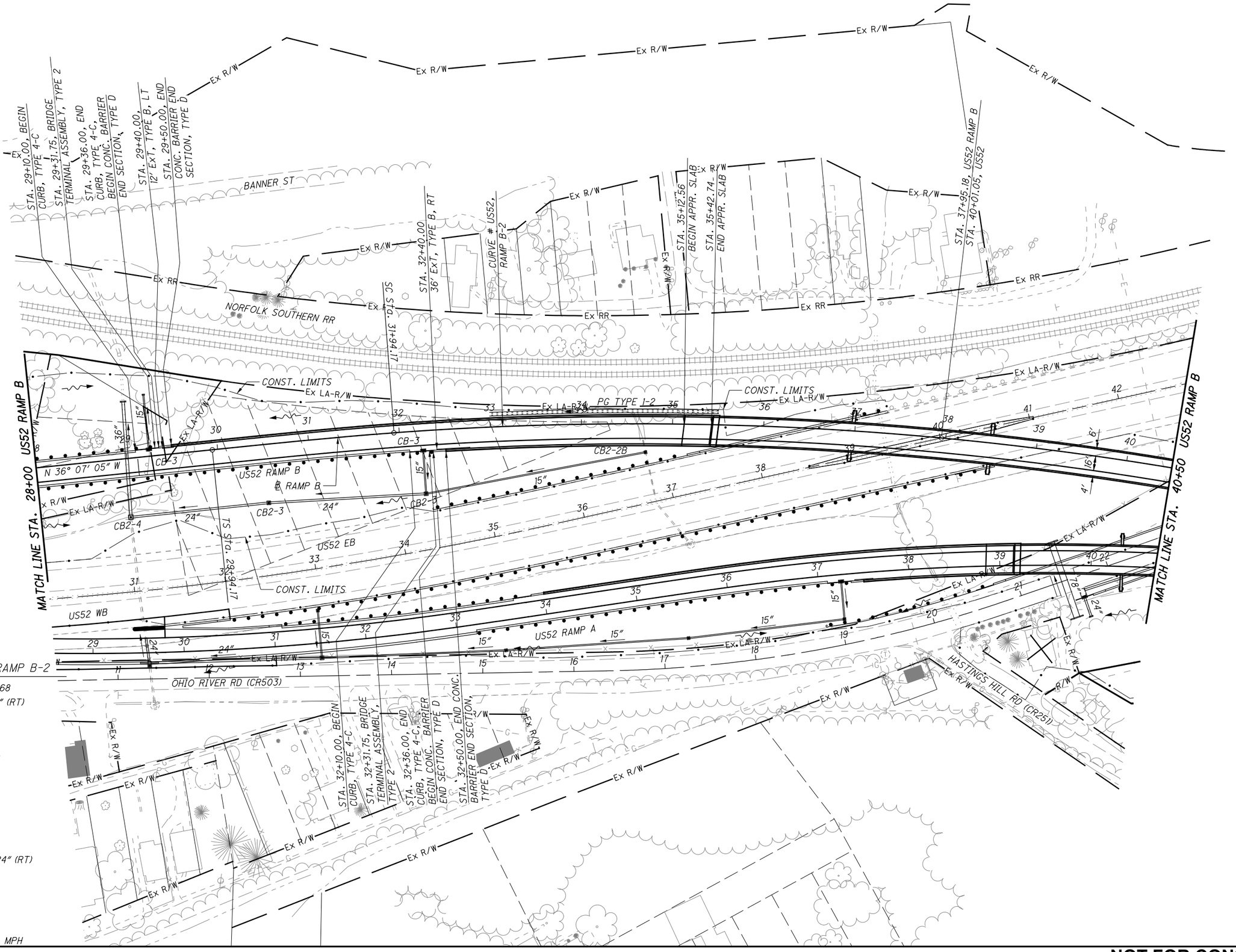
88
623

NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION

89 / 623	SCI-823-0.00	PROFILE - US52 RAMP A STA. 36+50.00 TO STA. 49+00.00	CALCULATED LBD CHECKED JBH



CURVE # US52 RAMP B-2

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Dc = 1° 36' 00"
R = 3,580.99'
Ls = 200.00'
Theta = 1° 36' 00"
LT = 133.34'
ST = 66.67'
x = 199.98'
y = 1.86'
k = 100.00'
p = 0.47'
DELTA c = 32° 16' 24" (RT)
Tc = 1,036.08'
Lc = 2,017.08'
Ts = 1,245.51'
Es = 179.20'
Emax. = 0.043
DESIGN SPEED = 60 MPH

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED LBD
CHECKED JBH

PLAN - US52 RAMP B
STA. 28+00.00 TO STA. 40+50.00

SCI-823-0.00

94
623

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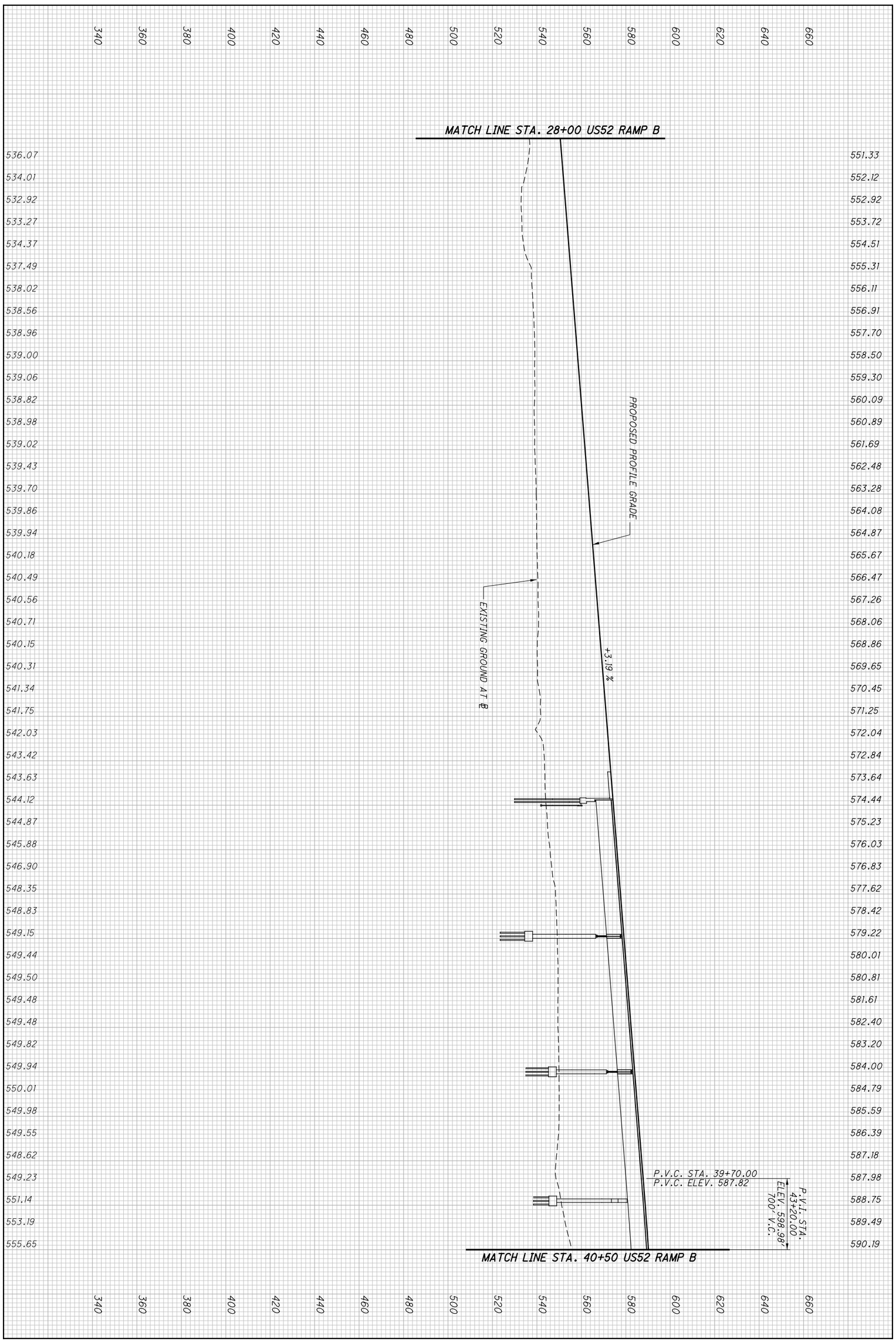
NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION

95 / 623	SCI-823-0.00	PROFILE - US52 RAMP B STA. 28+00.00 TO STA. 40+50.00	CALCULATED LBD CHECKED JBH

PLAN
STA. 40+50.00 TO STA. 53+00.00
US52 RAMP B - US52 RAMP B

SCI-823-0.00

96
623

CALCULATED LBD
CHECKED JBH

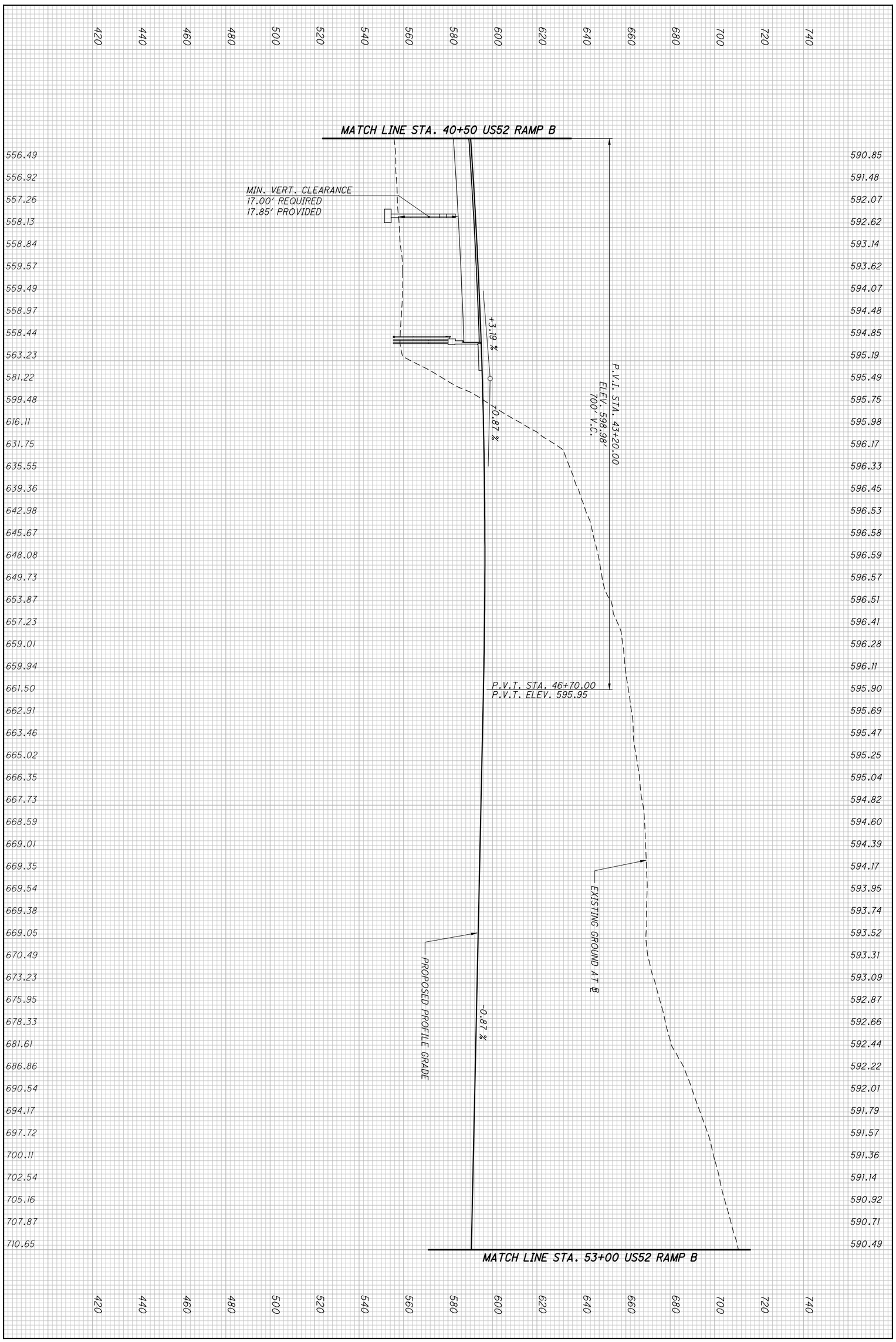
HORIZONTAL SCALE IN FEET
0 25 50 100

c:\pwworking\pitt\d0247069\77366P034.dgn 2/21/2013 5:35:01 PM CWahlbri

CURVE # US52 RAMP B-2

P.I. STA. = 42+39.68
DELTA = 35° 28′ 24″ (RT)
Dc = 1° 36′ 00″
R = 3,580.99′
Ls = 200.00′
Theta = 1° 36′ 00″
LT = 133.34′
ST = 66.67′
x = 199.98′
y = 1.86′
k = 100.00′
p = 0.47′
DELTA c = 32° 16′ 24″ (RT)
Tc = 1,036.08′
Lc = 2,017.08′
Ts = 1,245.51′
Es = 179.20′
Emax. = 0.043
DESIGN SPEED = 60 MPH

NOT FOR CONSTRUCTION



NOT FOR CONSTRUCTION

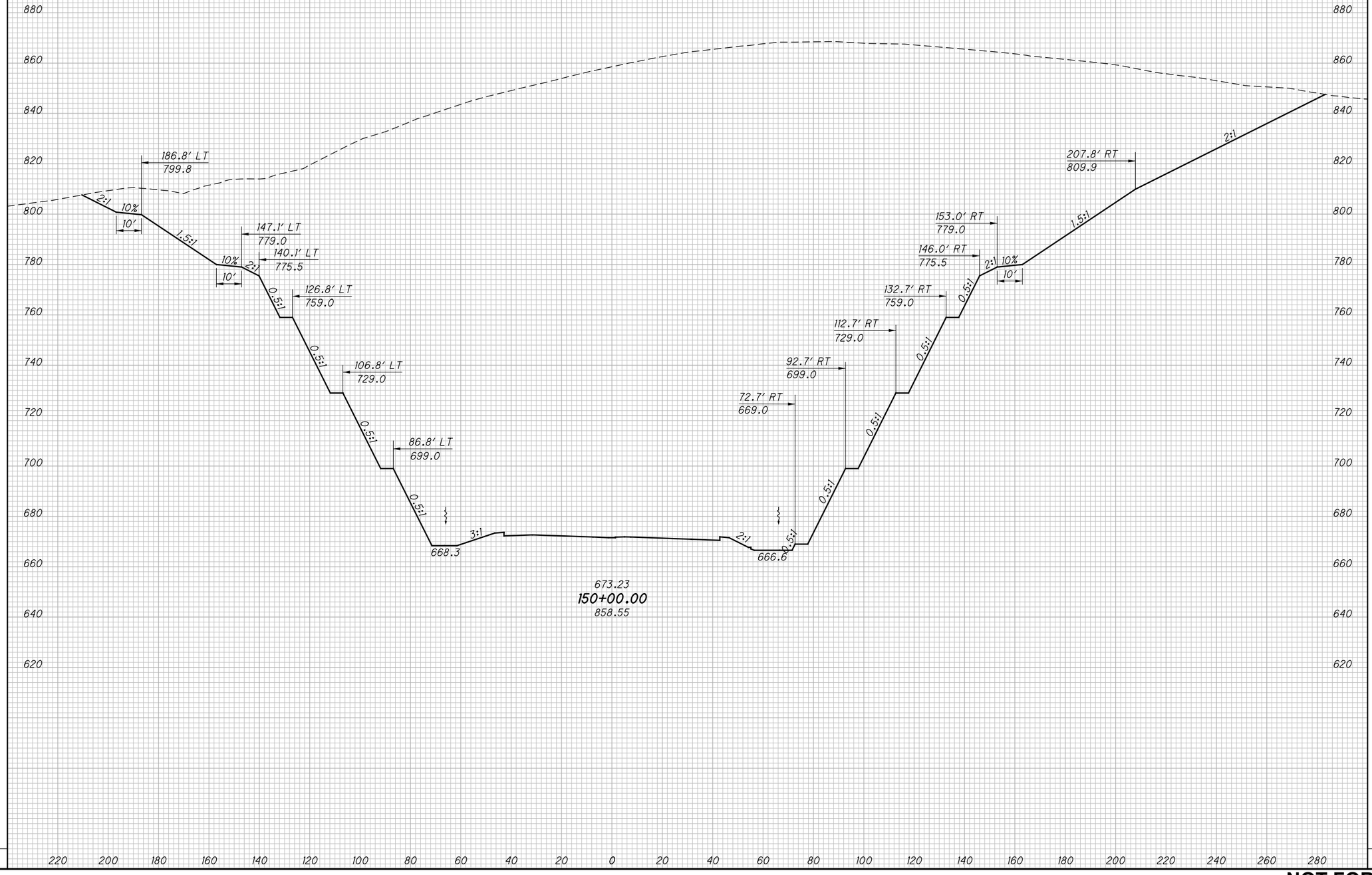
97 / 623	SCI-823-0.00	**PROFILE - US52 RAMP B** **STA. 40+50.00 TO STA. 53+00.00**

CALCULATED LBD
CHECKED JBH

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 150+00.00

SCI-823-0.00

212
623

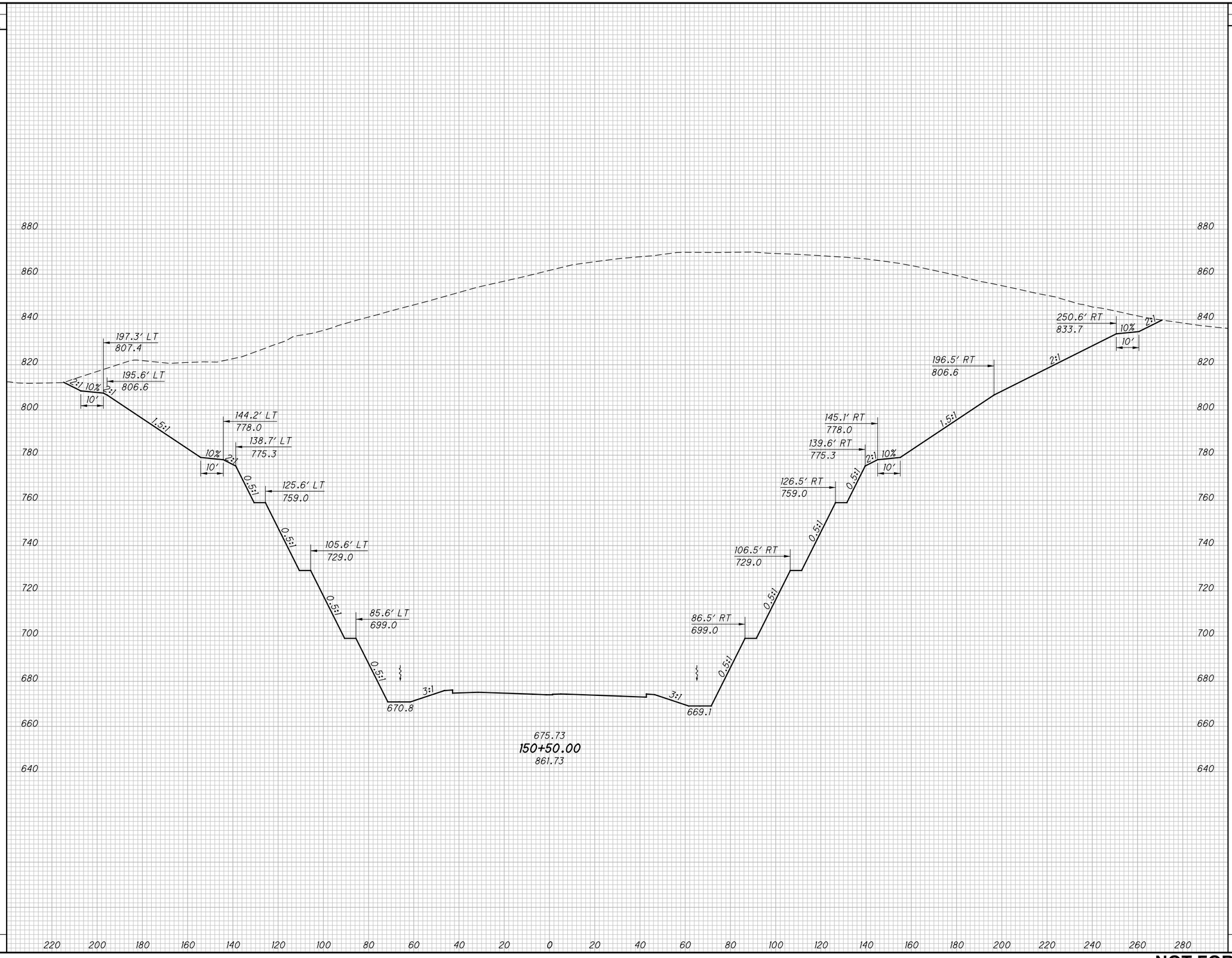
c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:38:43 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 150+50.00

SCI-823-0.00

213
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:38:44 PM CWahlbri

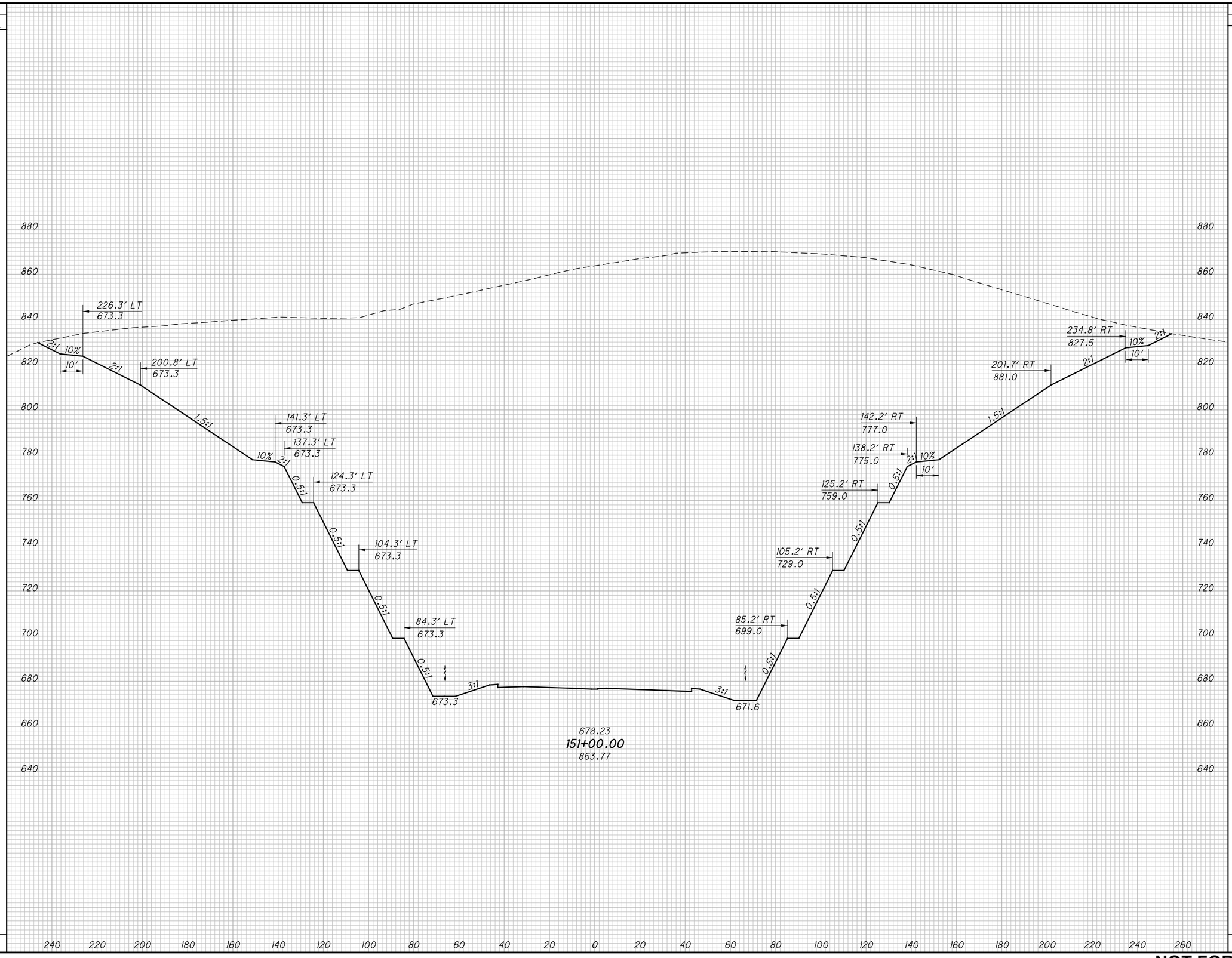
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 151+00.00

SCI-823-0.00

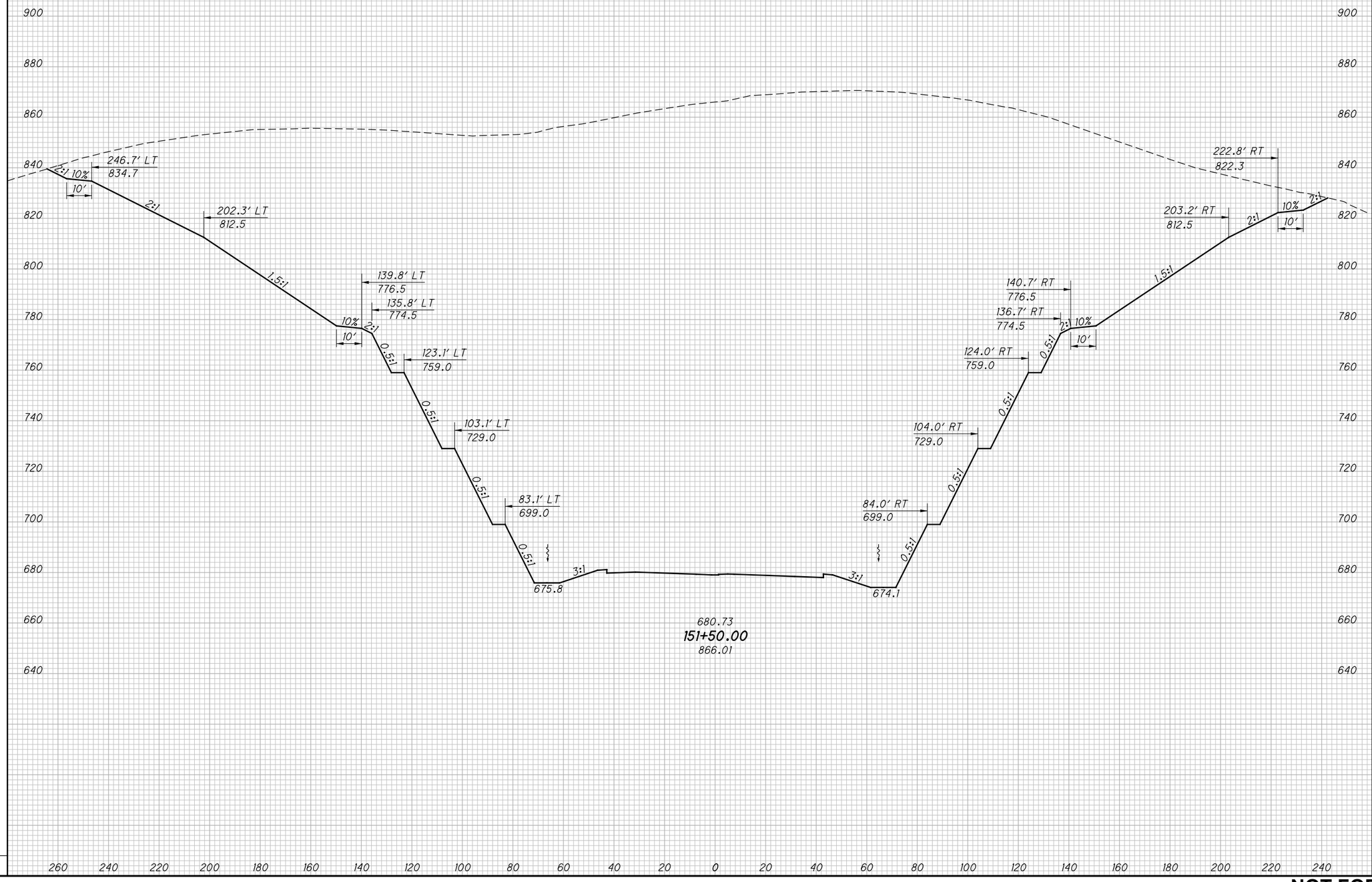
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 151+50.00

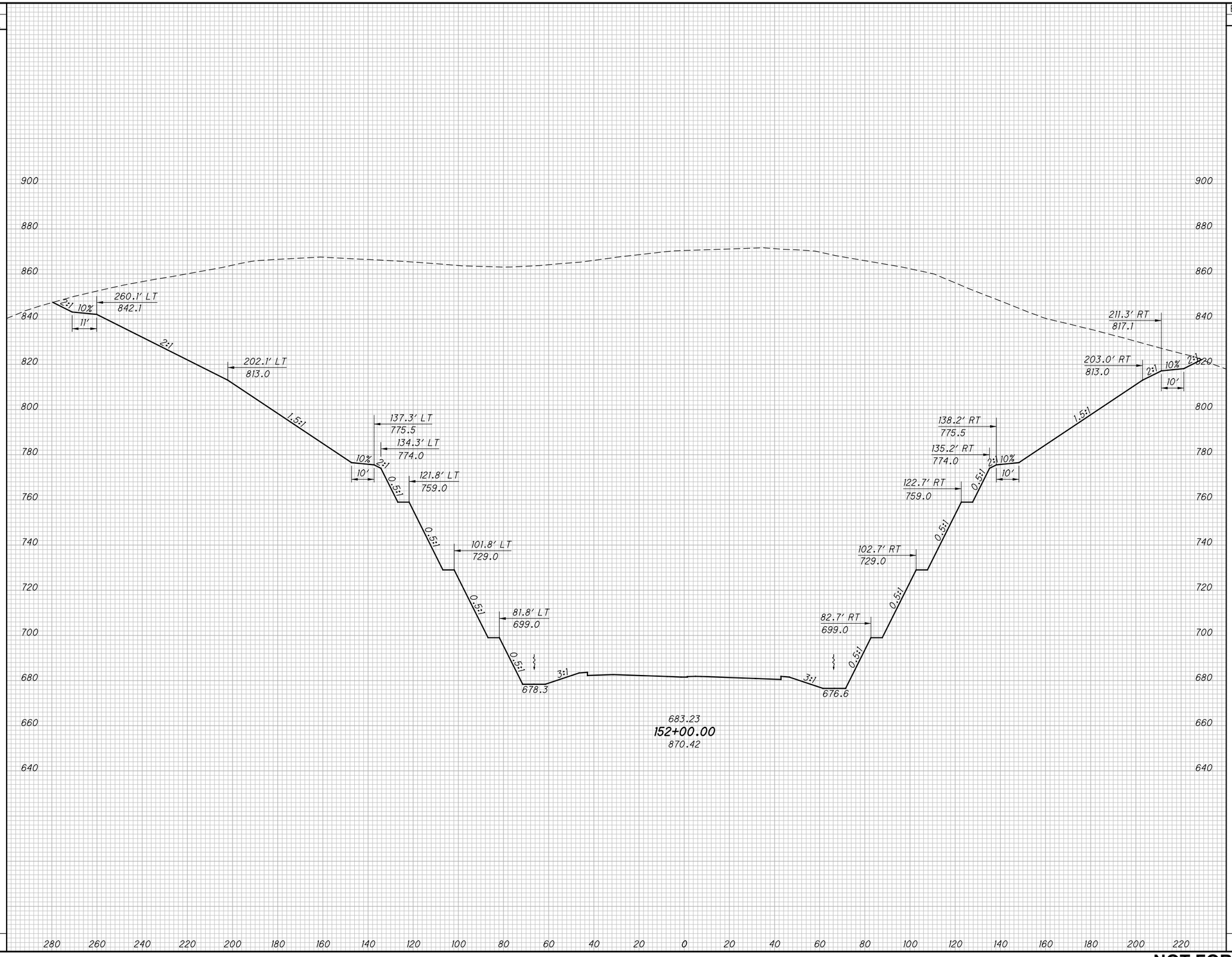
SCI-823-0.00

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 152+00.00

SCI-823-0.00

NOT FOR CONSTRUCTION

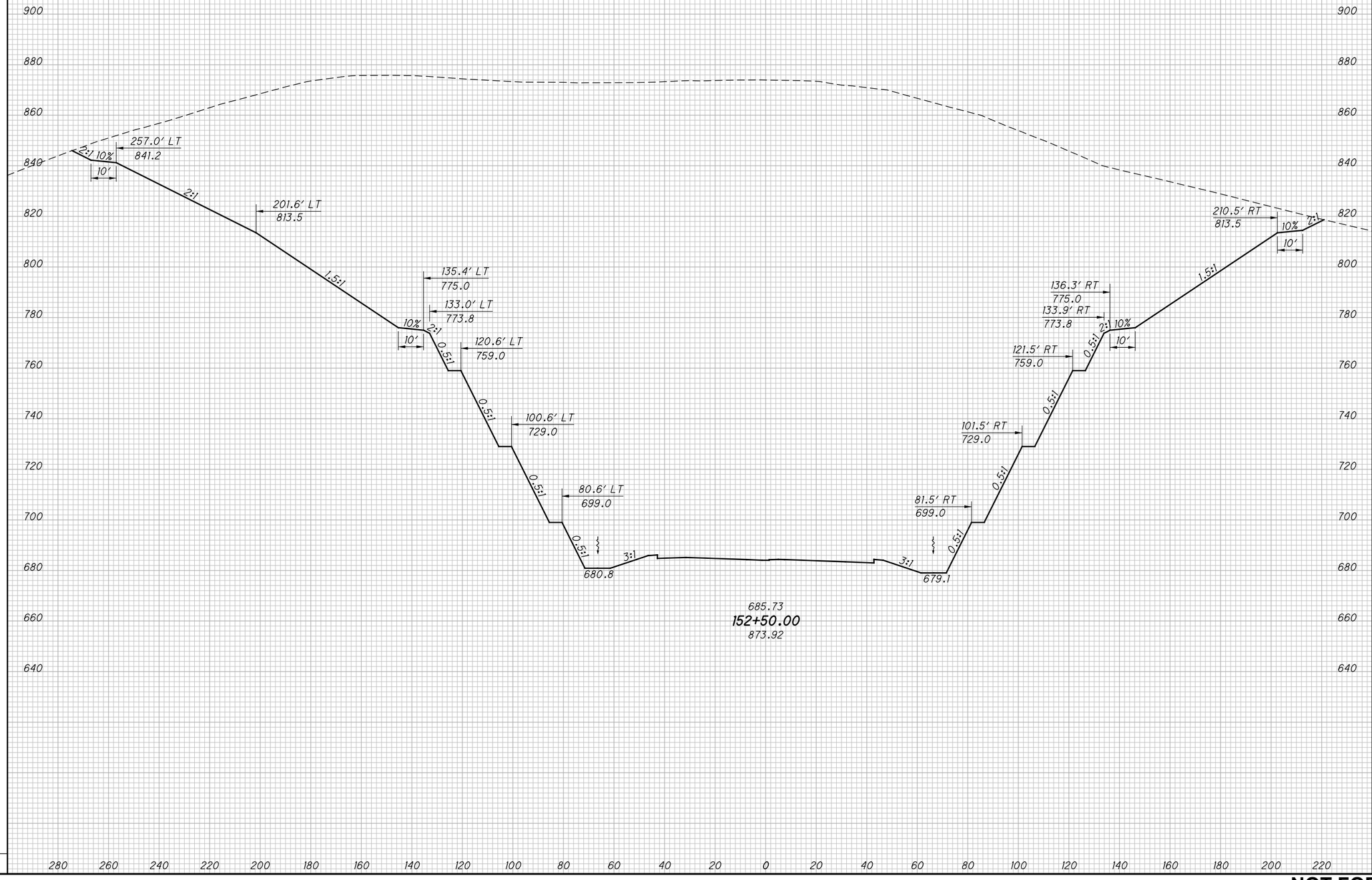
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD

CHECKED JBH



CROSS SECTIONS SR823
STA. 152+50.00

SCI-823-0.00

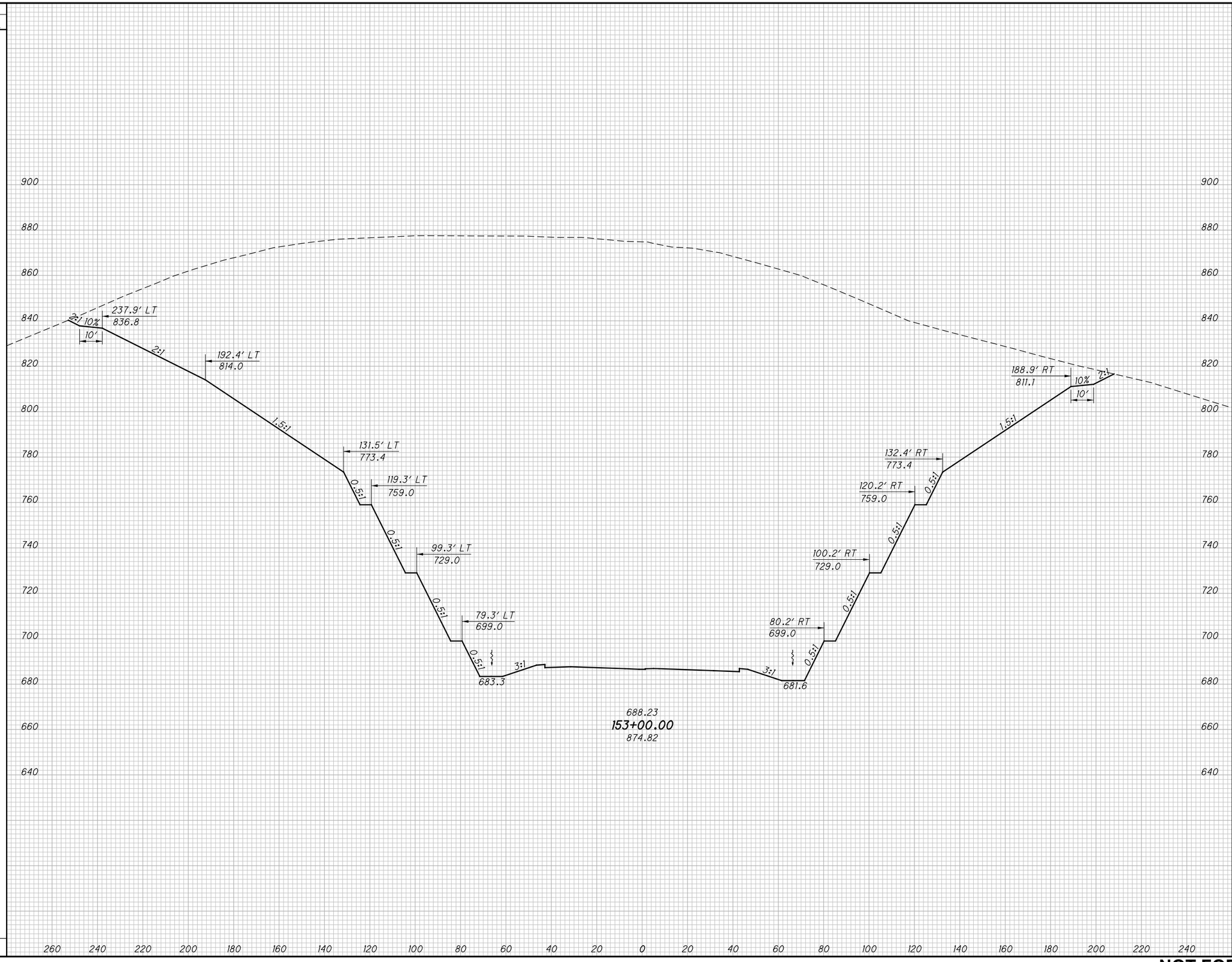
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 153+00.00

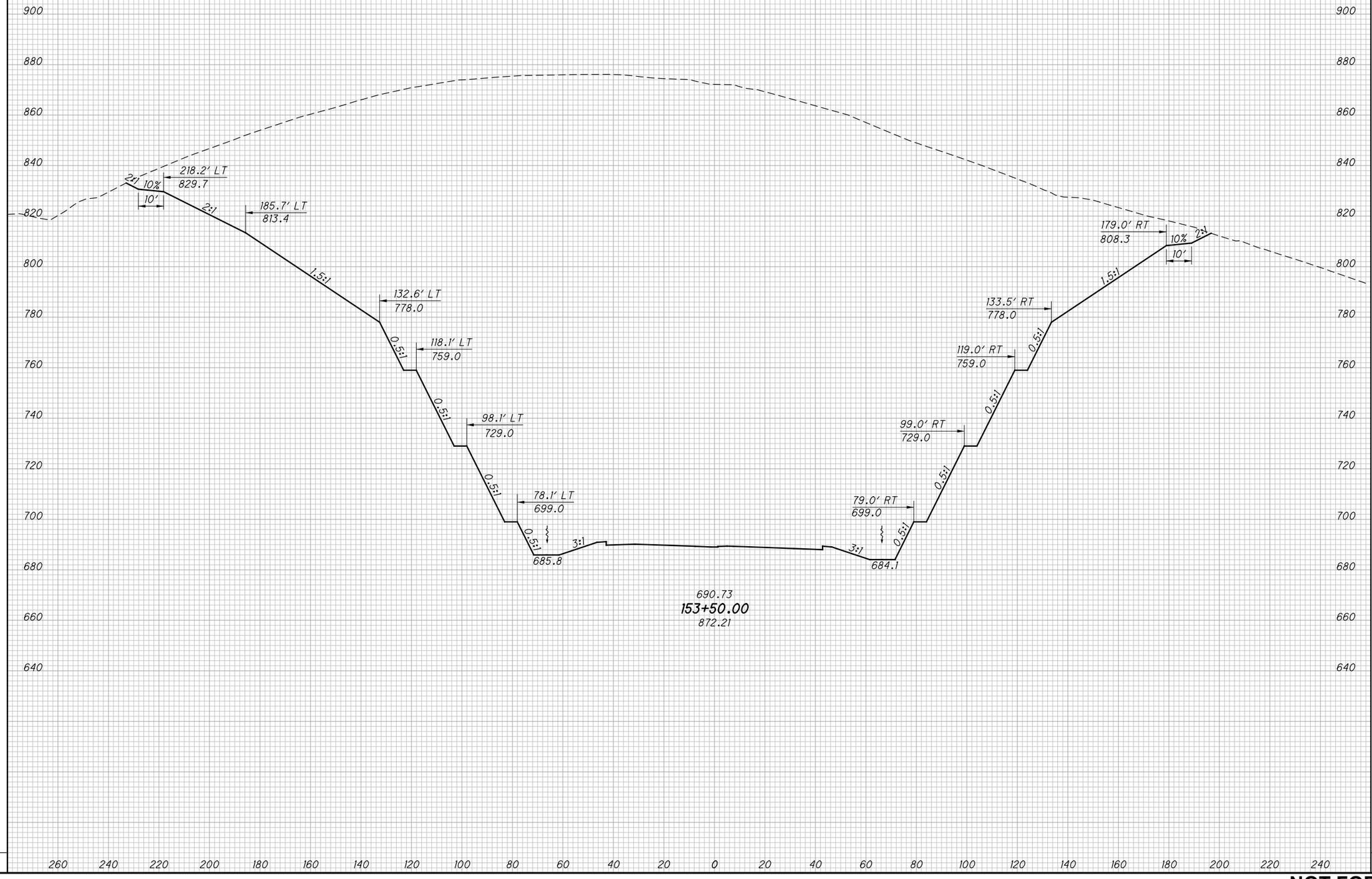
SCI-823-0.00

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH

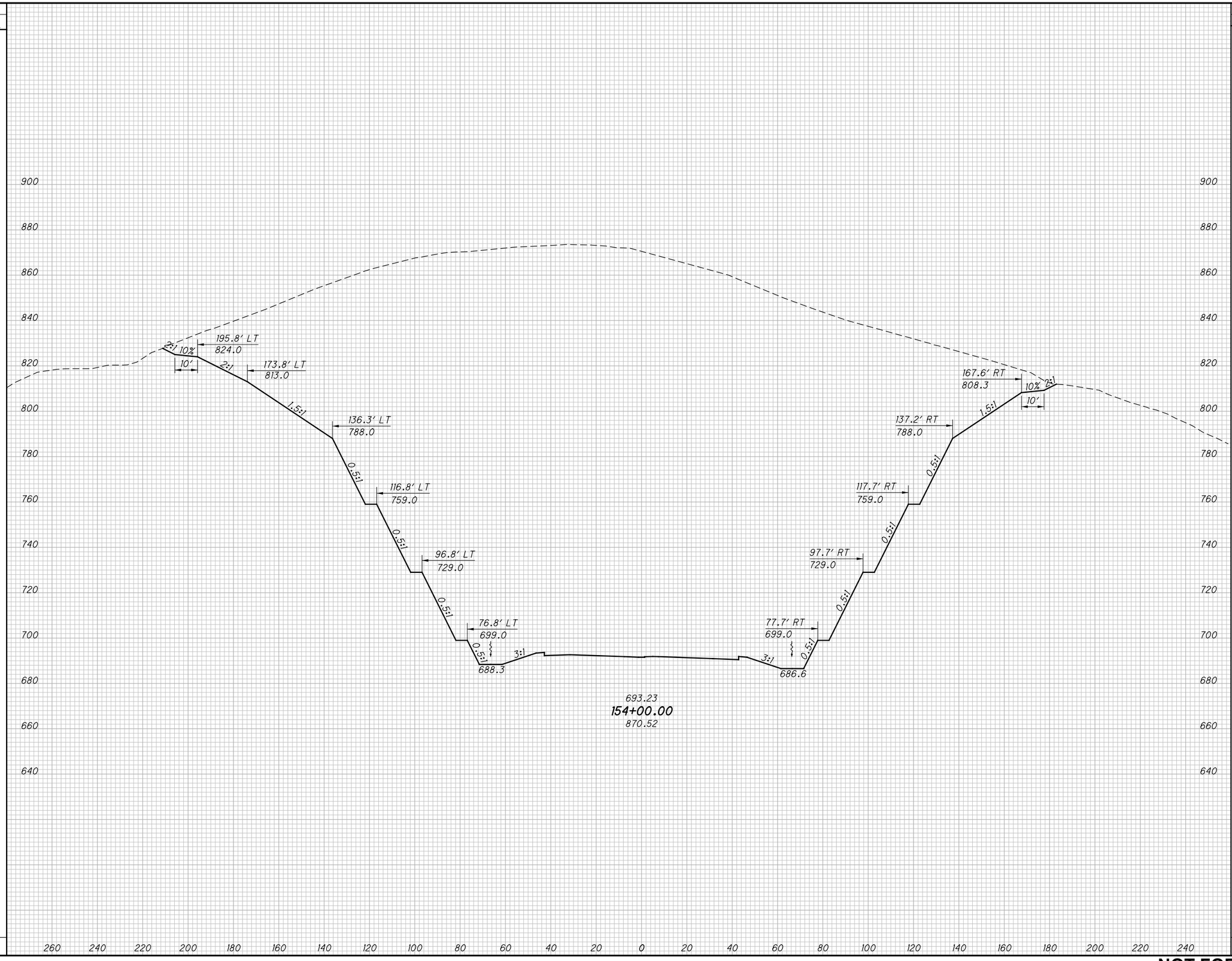


CROSS SECTIONS SR823
STA. 153+50.00

SCI-823-0.00

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED	CHECKED
LBD	JBH

CROSS SECTIONS SR823
STA. 154+00.00

SCI-823-0.00

220
623

NOT FOR CONSTRUCTION

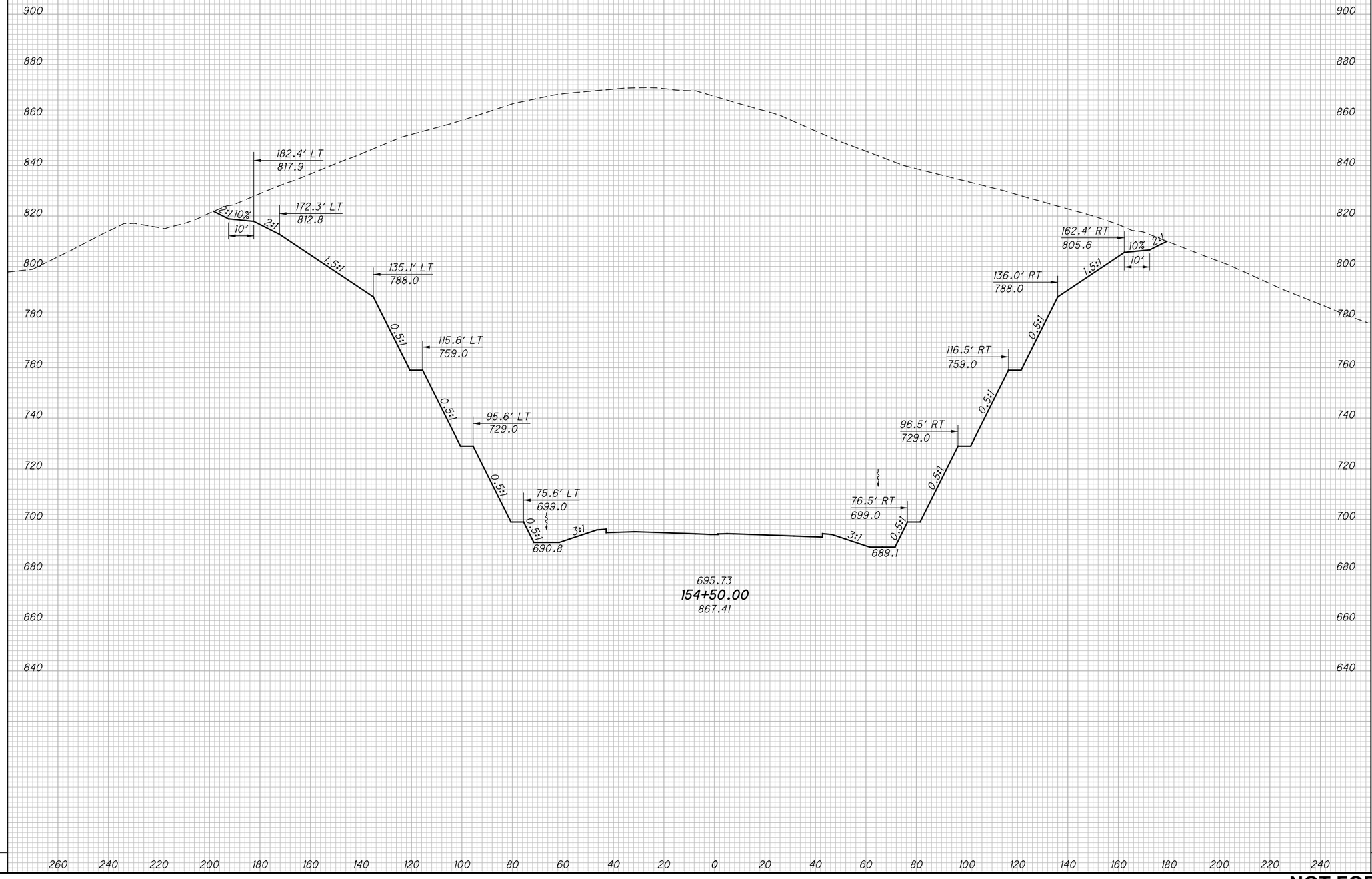
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD

CHECKED JBH



CROSS SECTIONS SR823
STA. 154+50.00

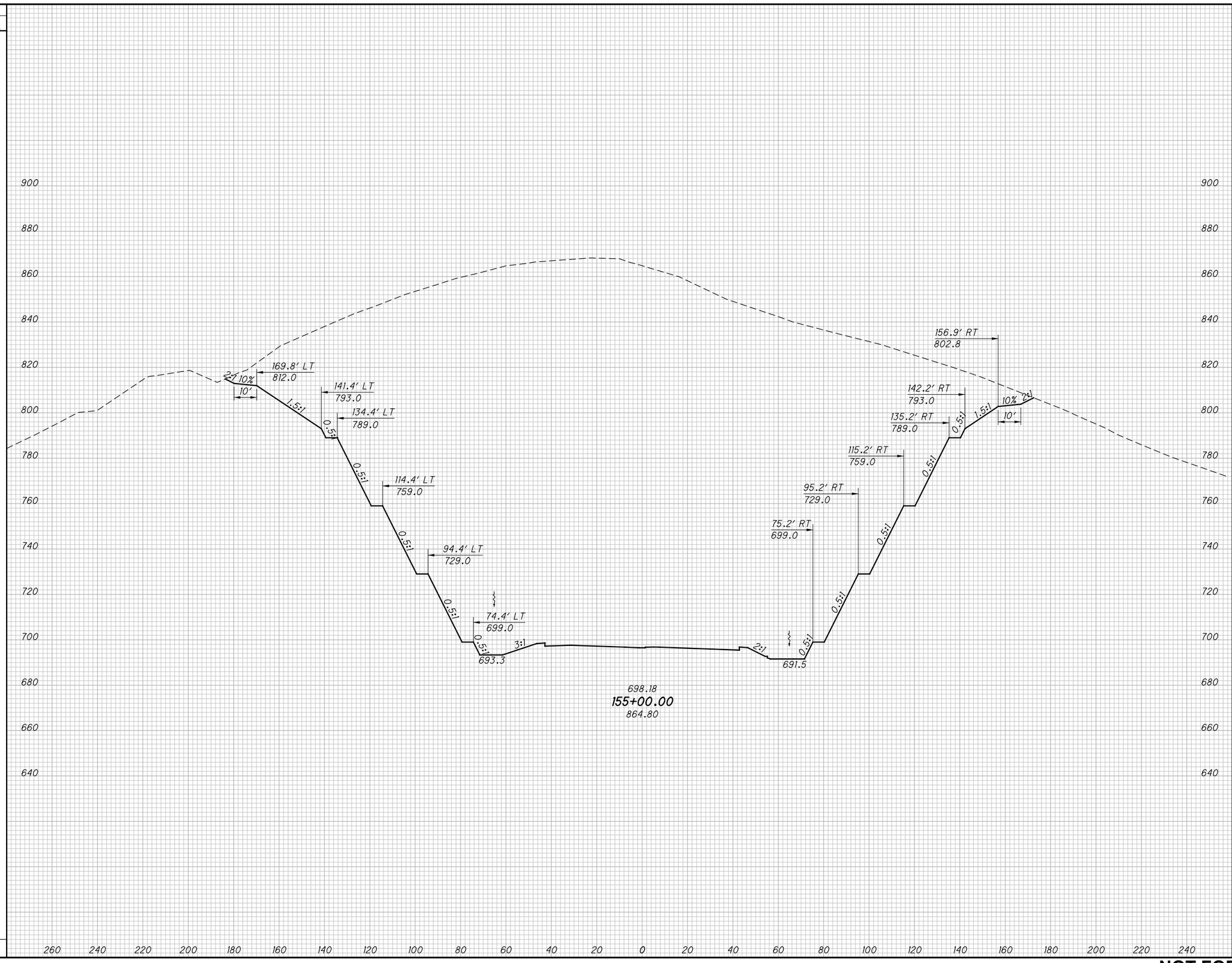
SCI-823-0.00

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 155+00.00

SCI-823-0.00

222
623

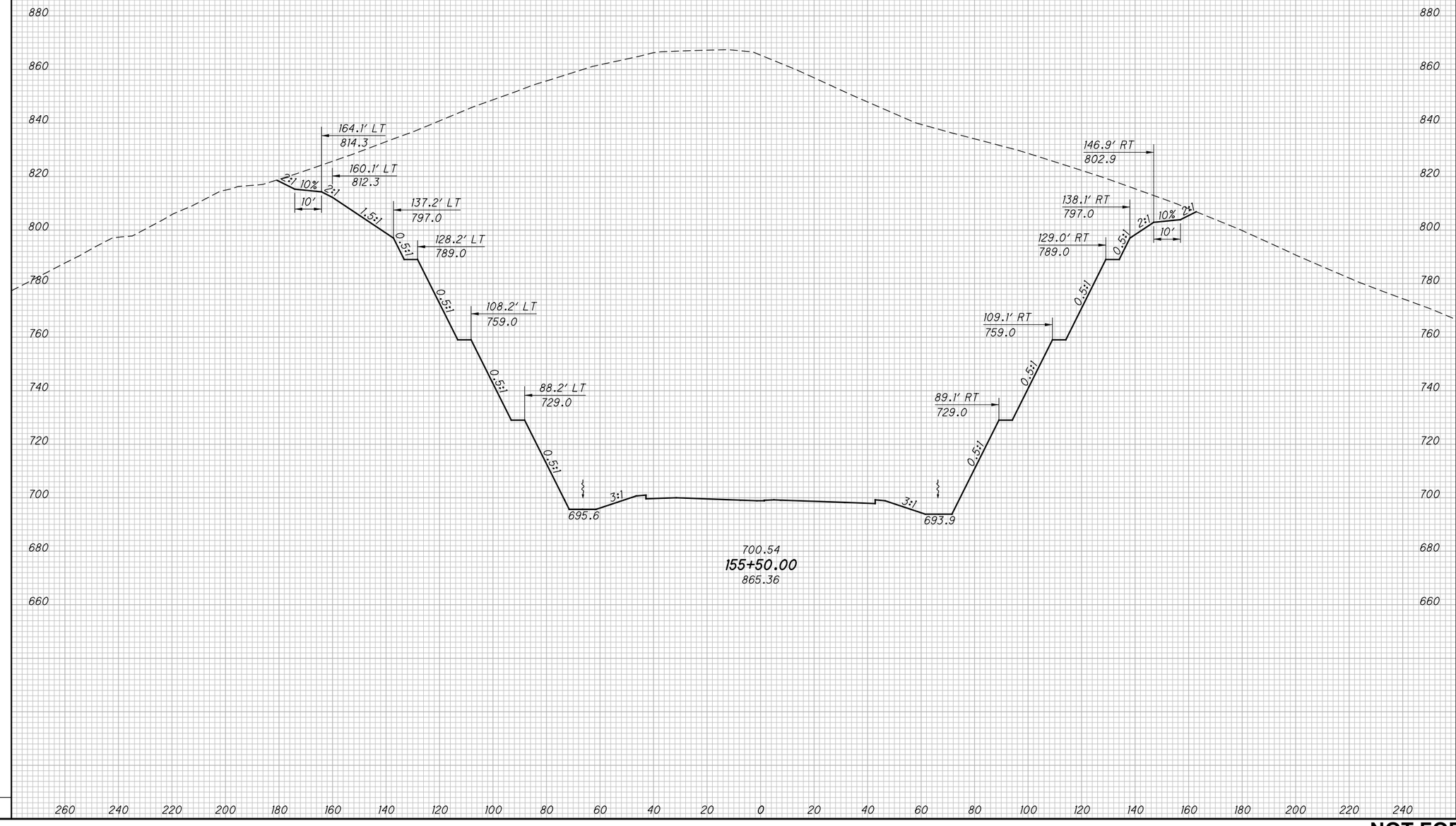
NOT FOR CONSTRUCTION

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:38:51 PM CWahlbri

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 155+50.00

SCI-823-0.00

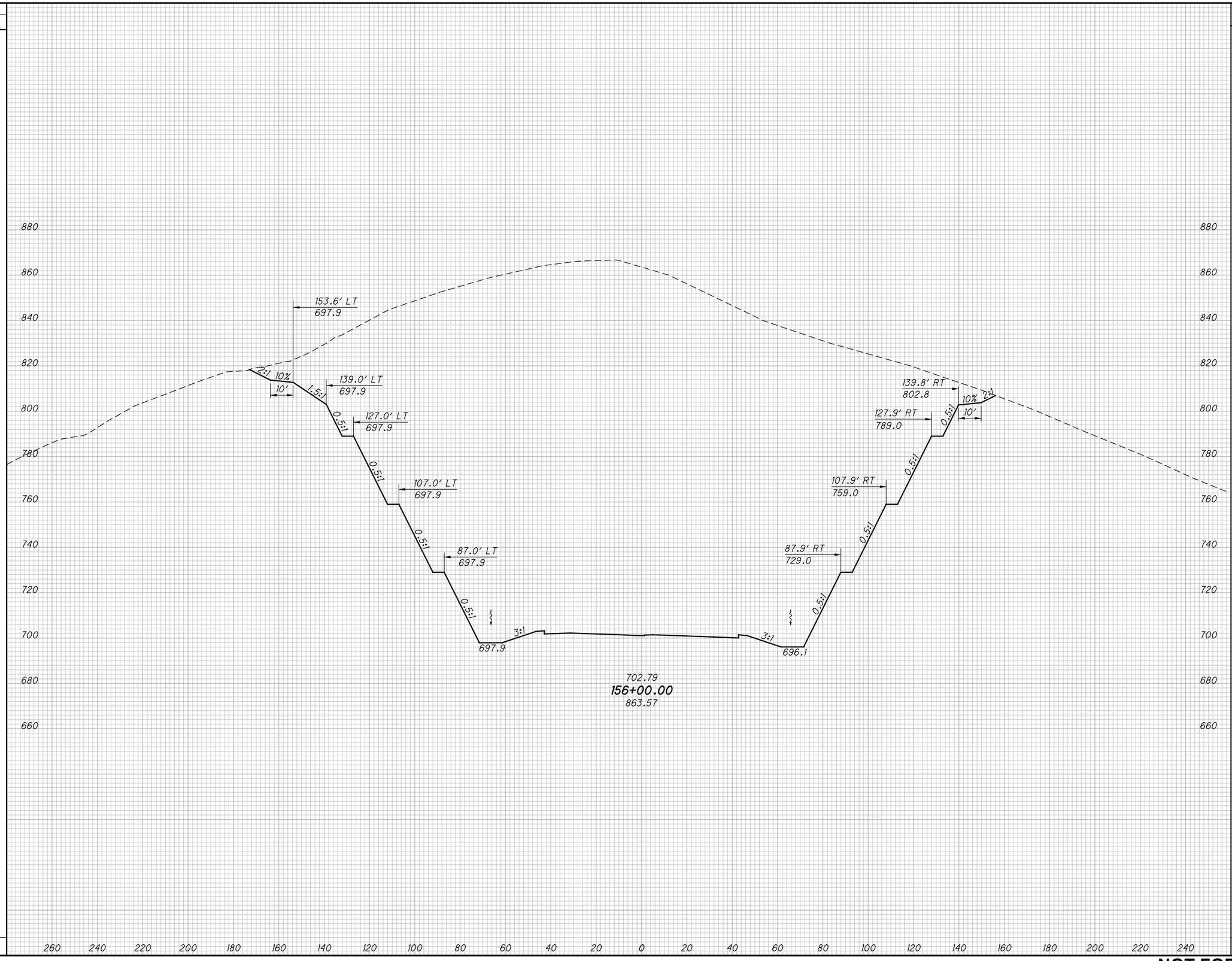
223
623

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 156+00.00

SCI-823-0.00

224
623

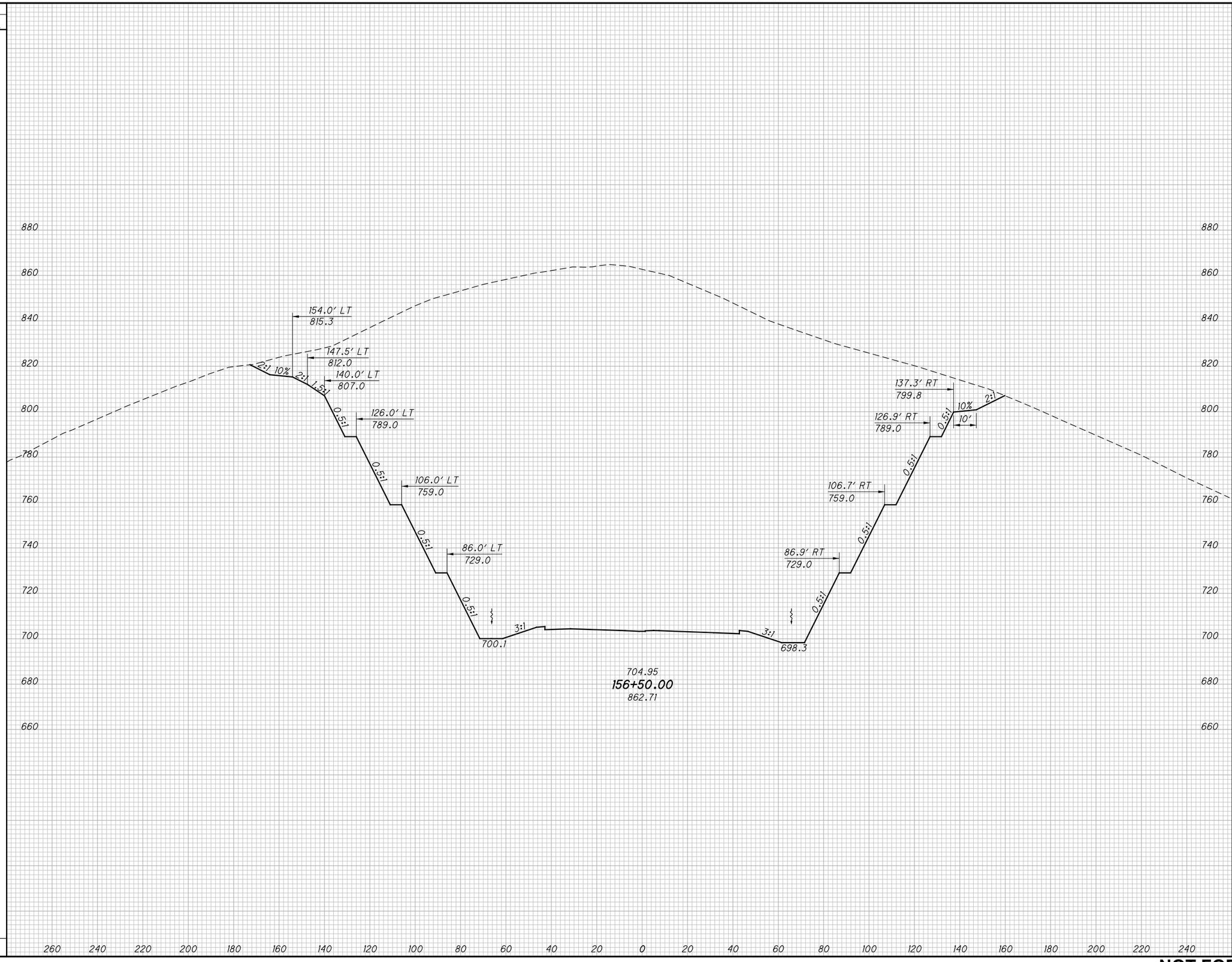
c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:38:53 PM CWohlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 156+50.00

SCI-823-0.00

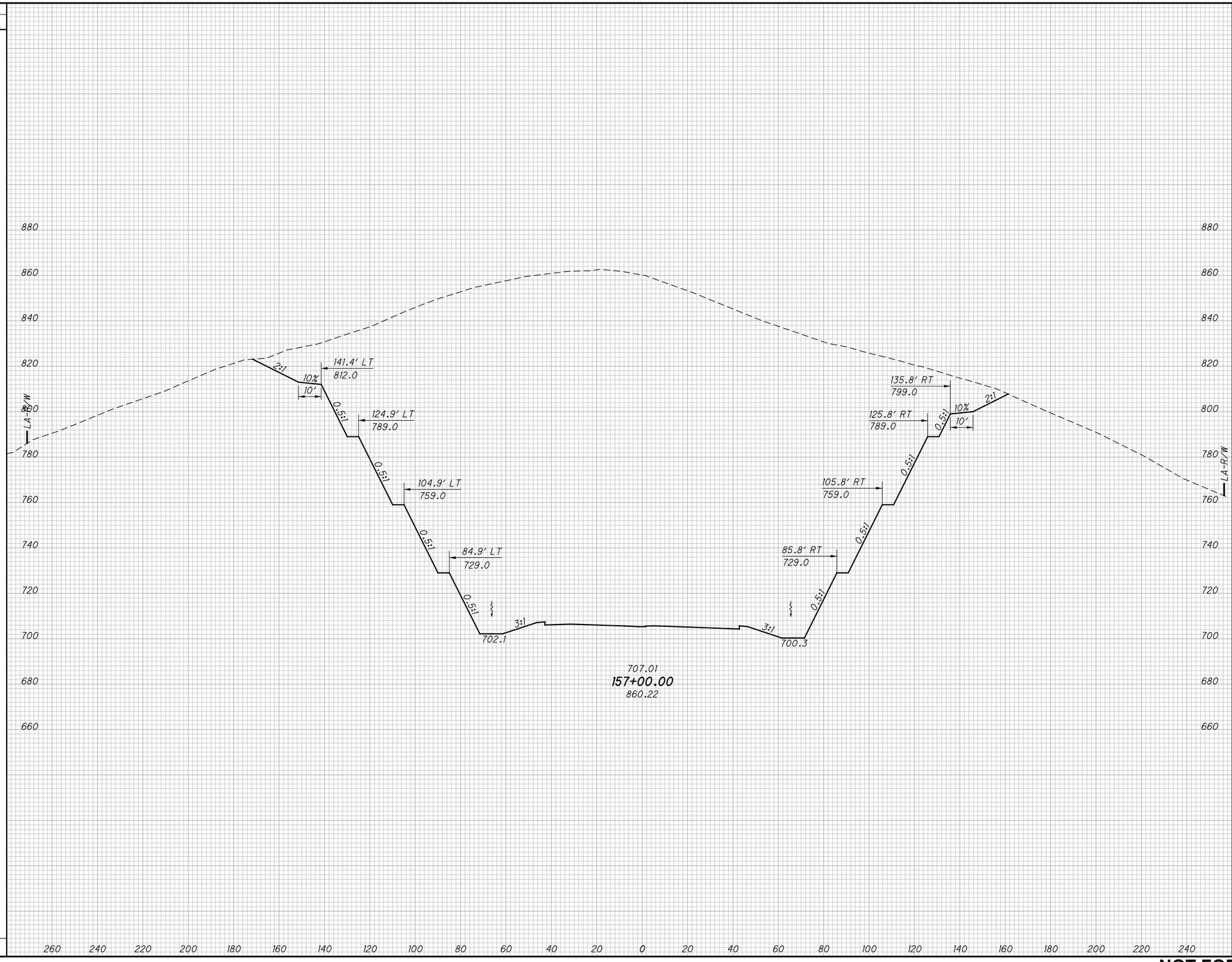
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED	CHECKED
LBD	JBH



CROSS SECTIONS SR823
STA. 157+00.00

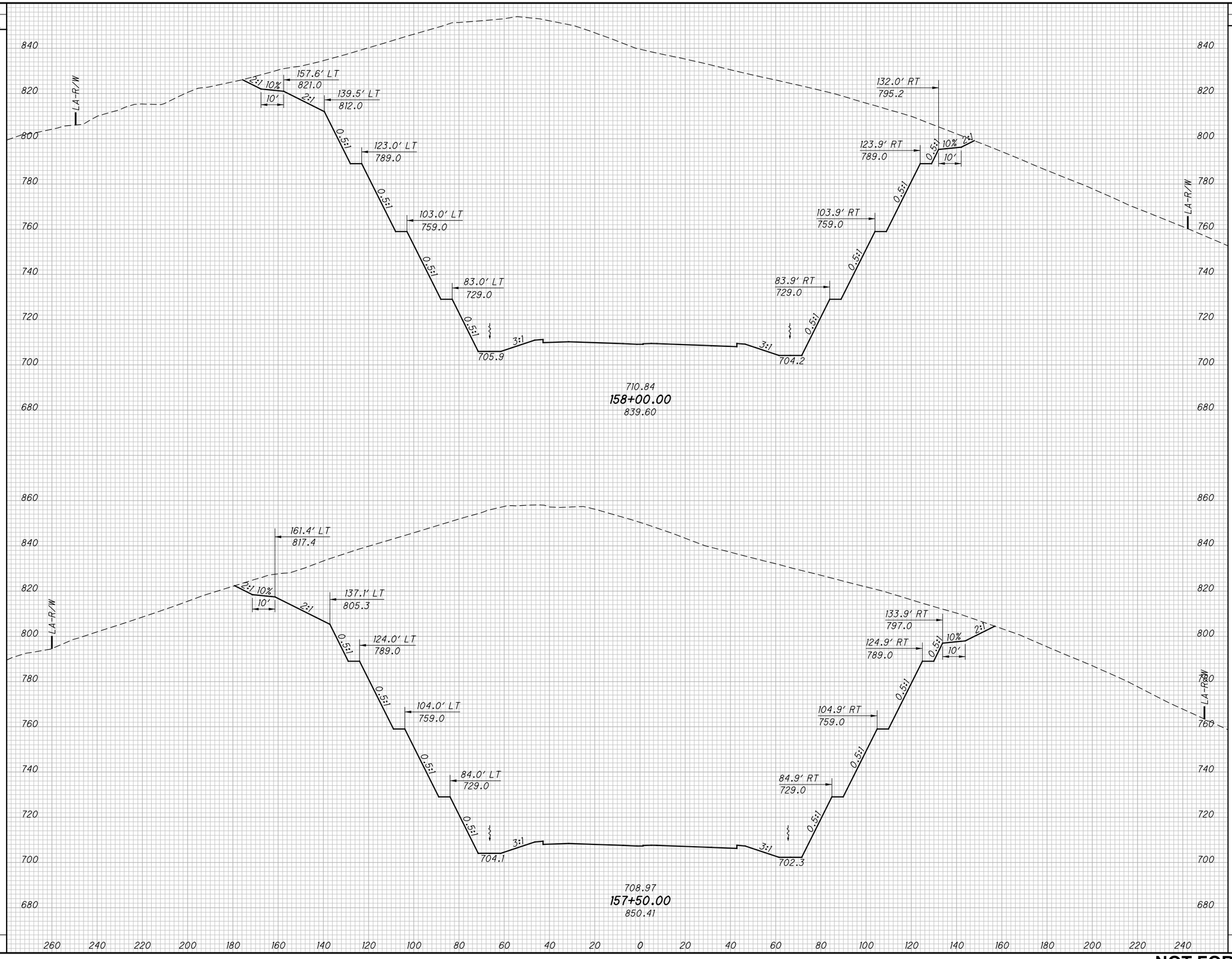
SCI-823-0.00

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 157+50.00 TO STA. 158+00.00

SCI-823-0.00

227
623

NOT FOR CONSTRUCTION

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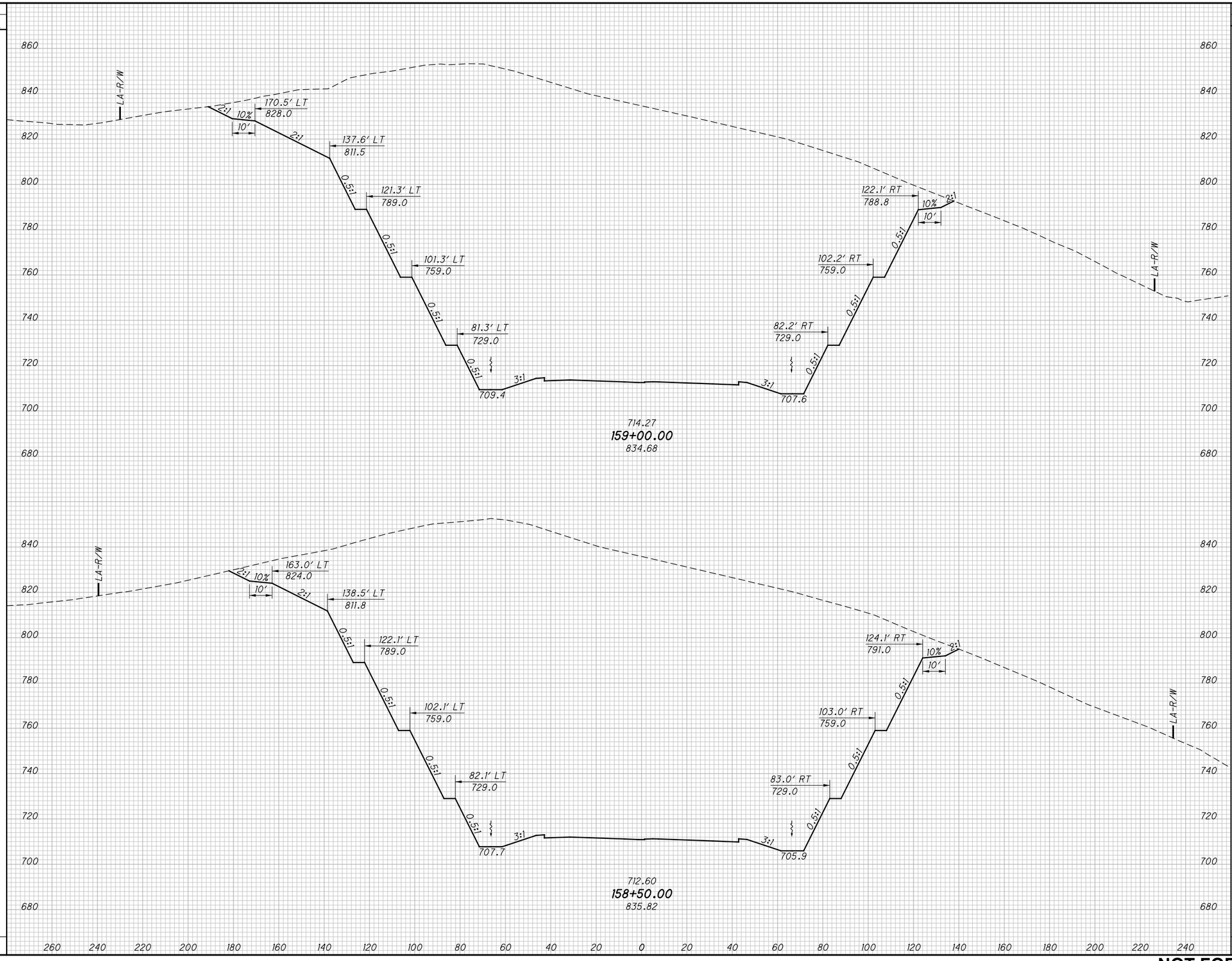
SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 158+50.00 TO STA. 159+00.00

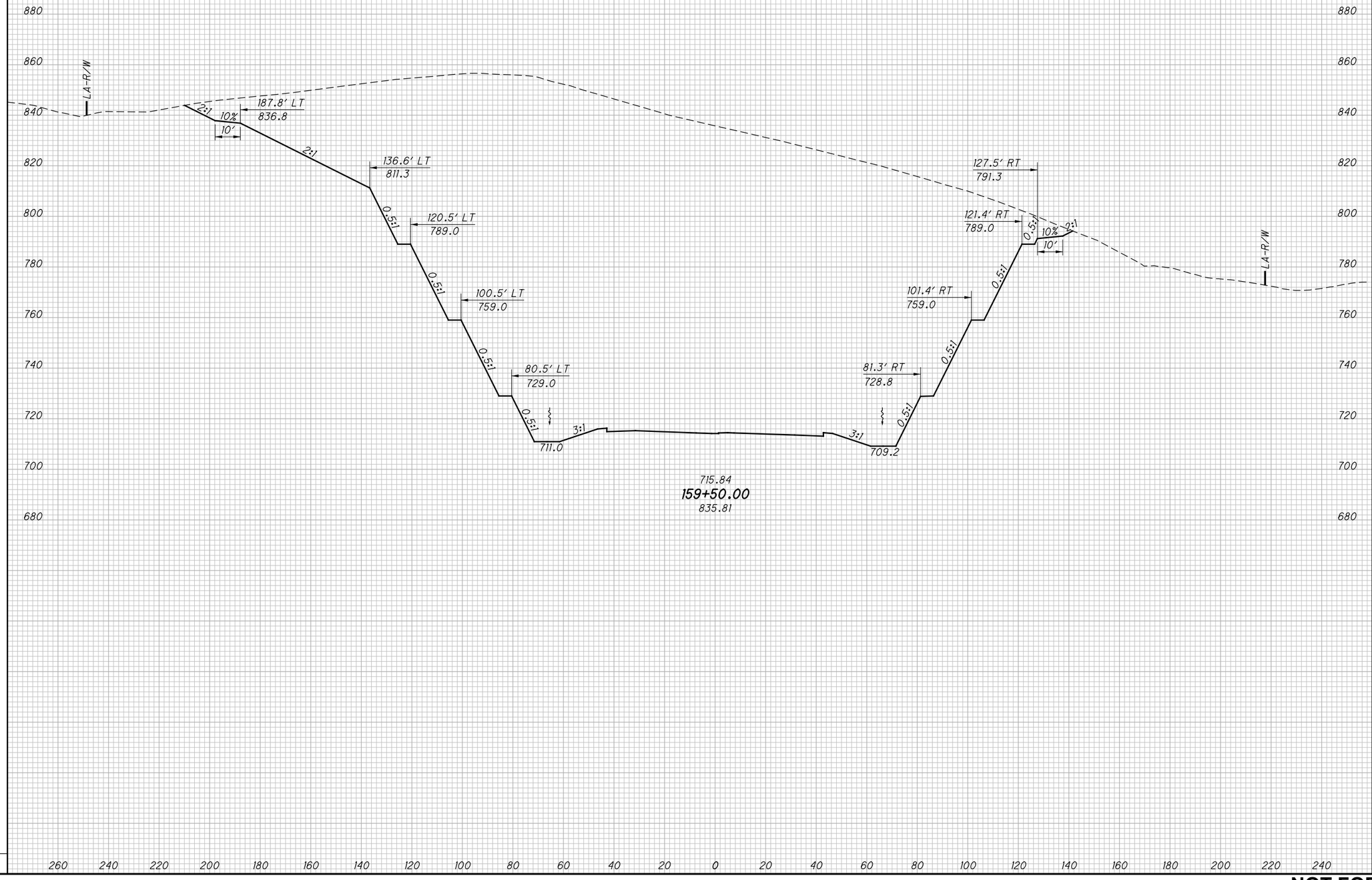
SCI-823-0.00

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 159+50.00

SCI-823-0.00

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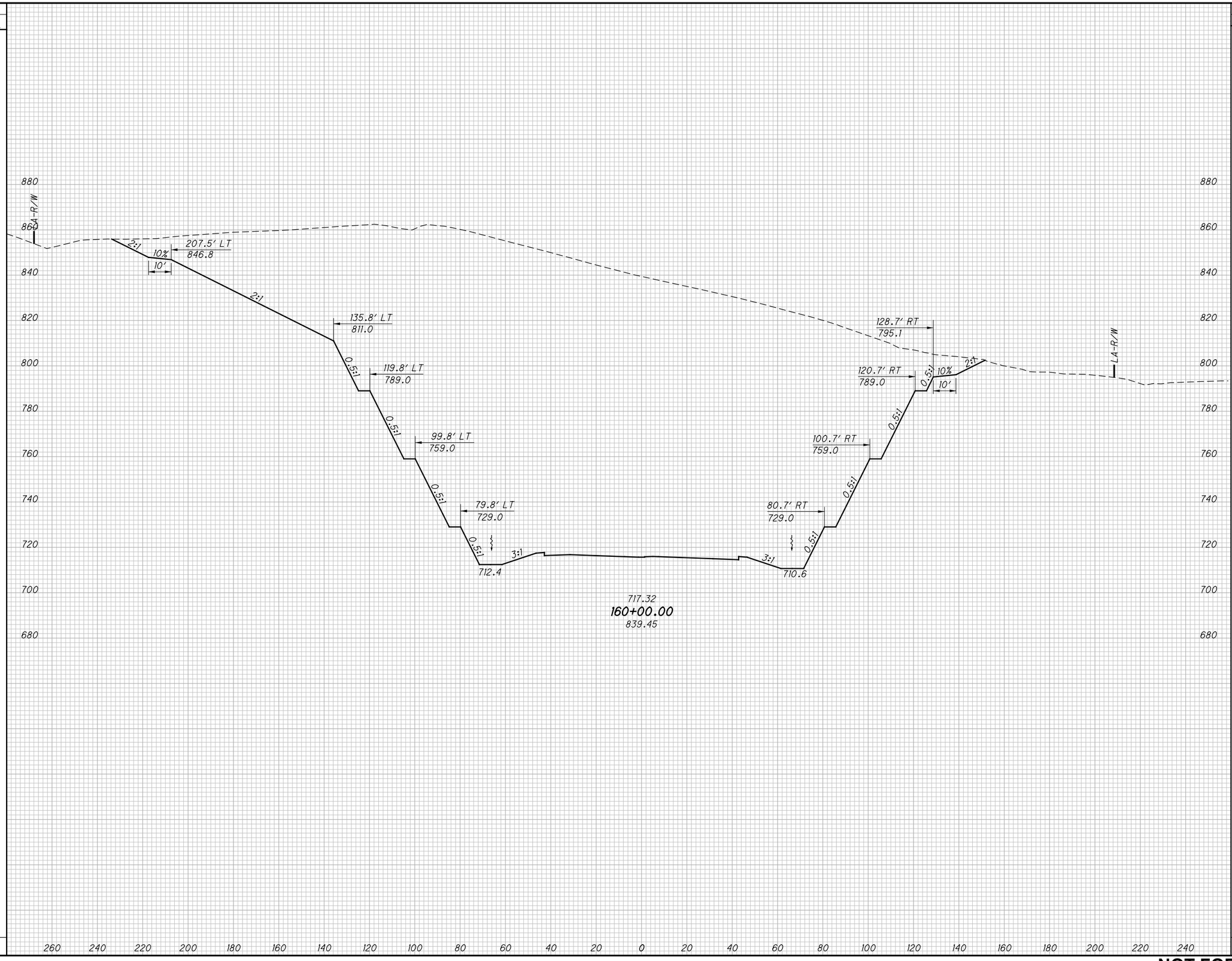
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED	CHECKED
LBD	JBH

CROSS SECTIONS SR823
STA. 160+00.00

SCI-823-0.00

230
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:38:57 PM CWahlbri

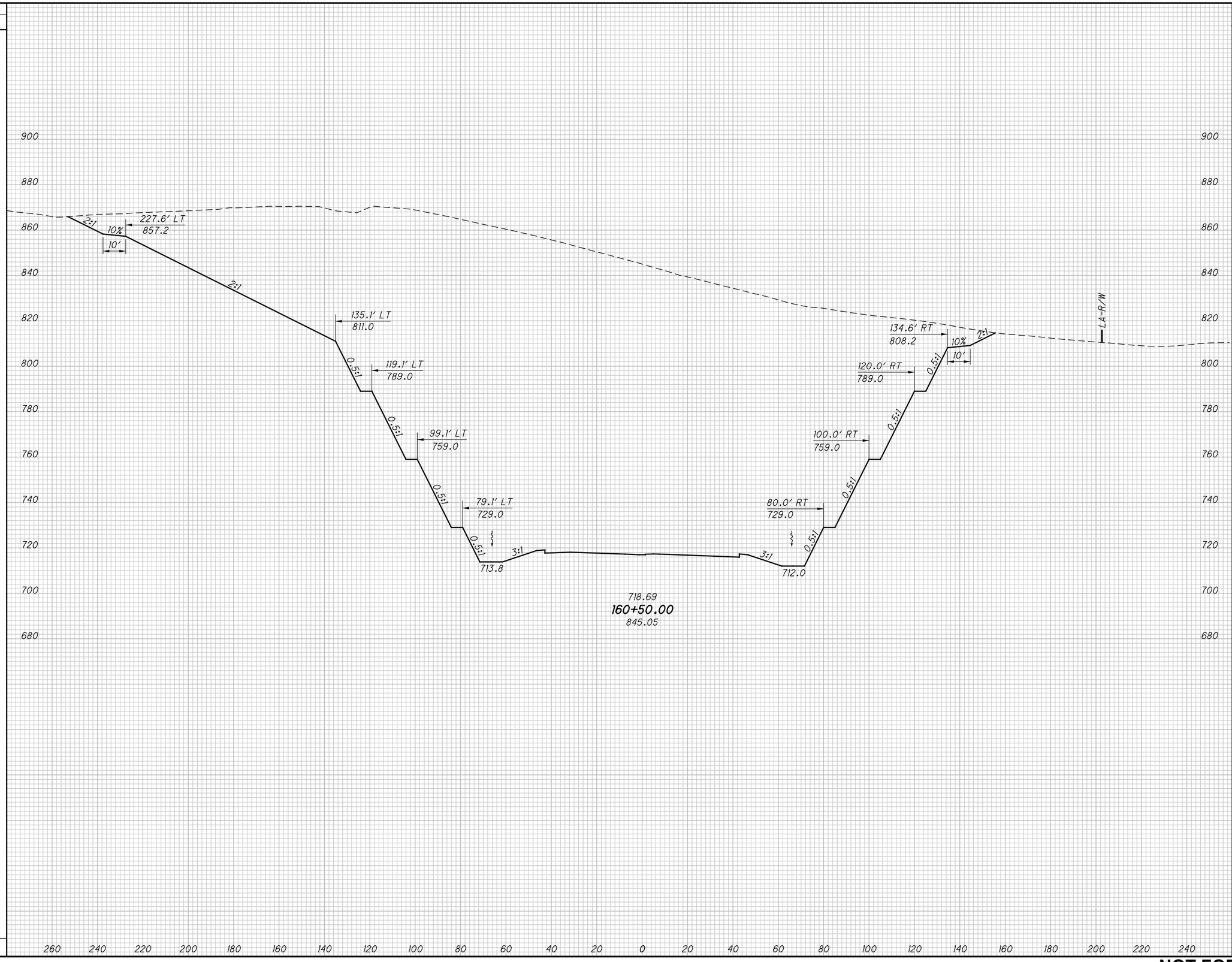
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 160+50.00

SCI-823-0.00

231
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:38:58 PM CWahlbri

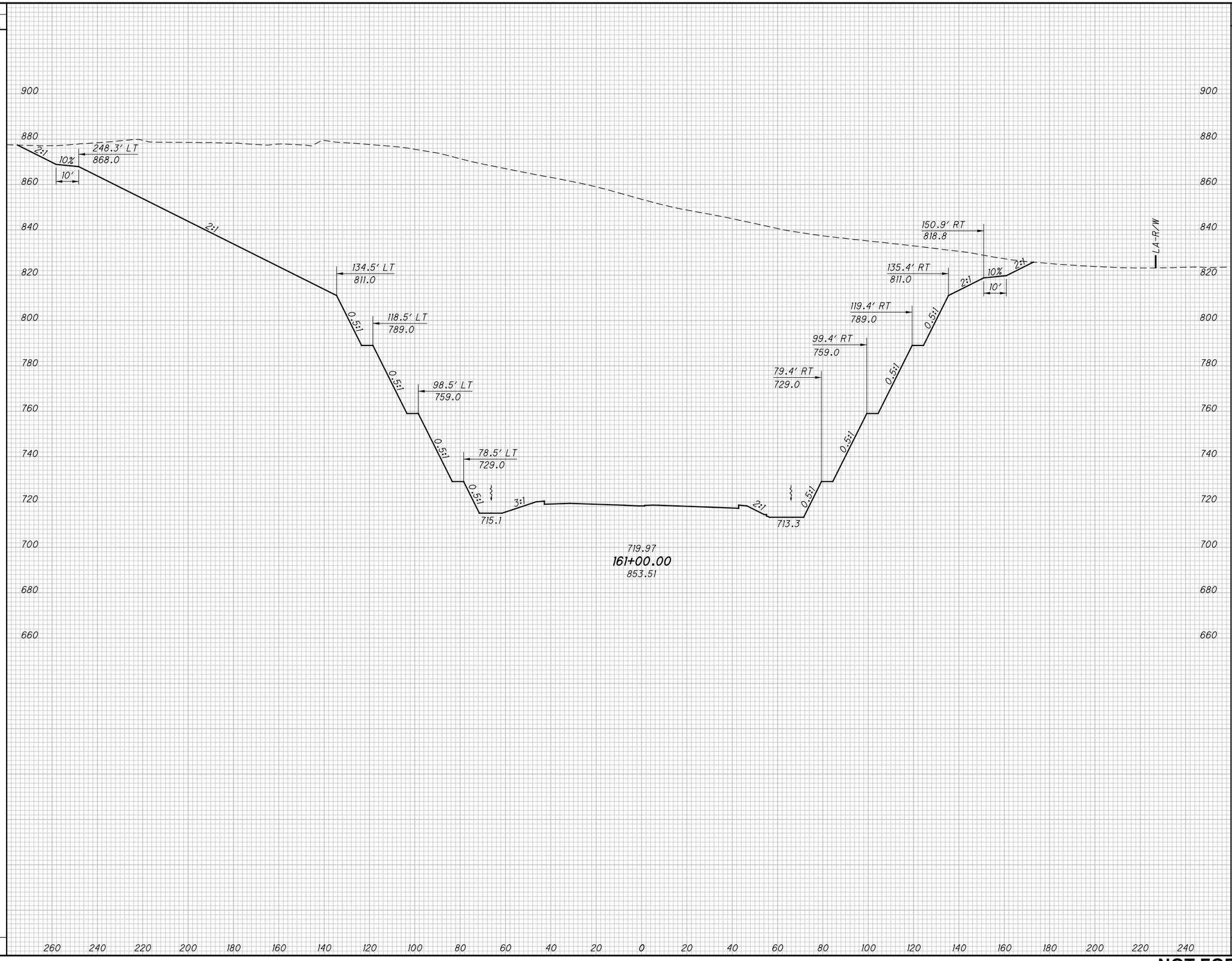
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 161+00.00

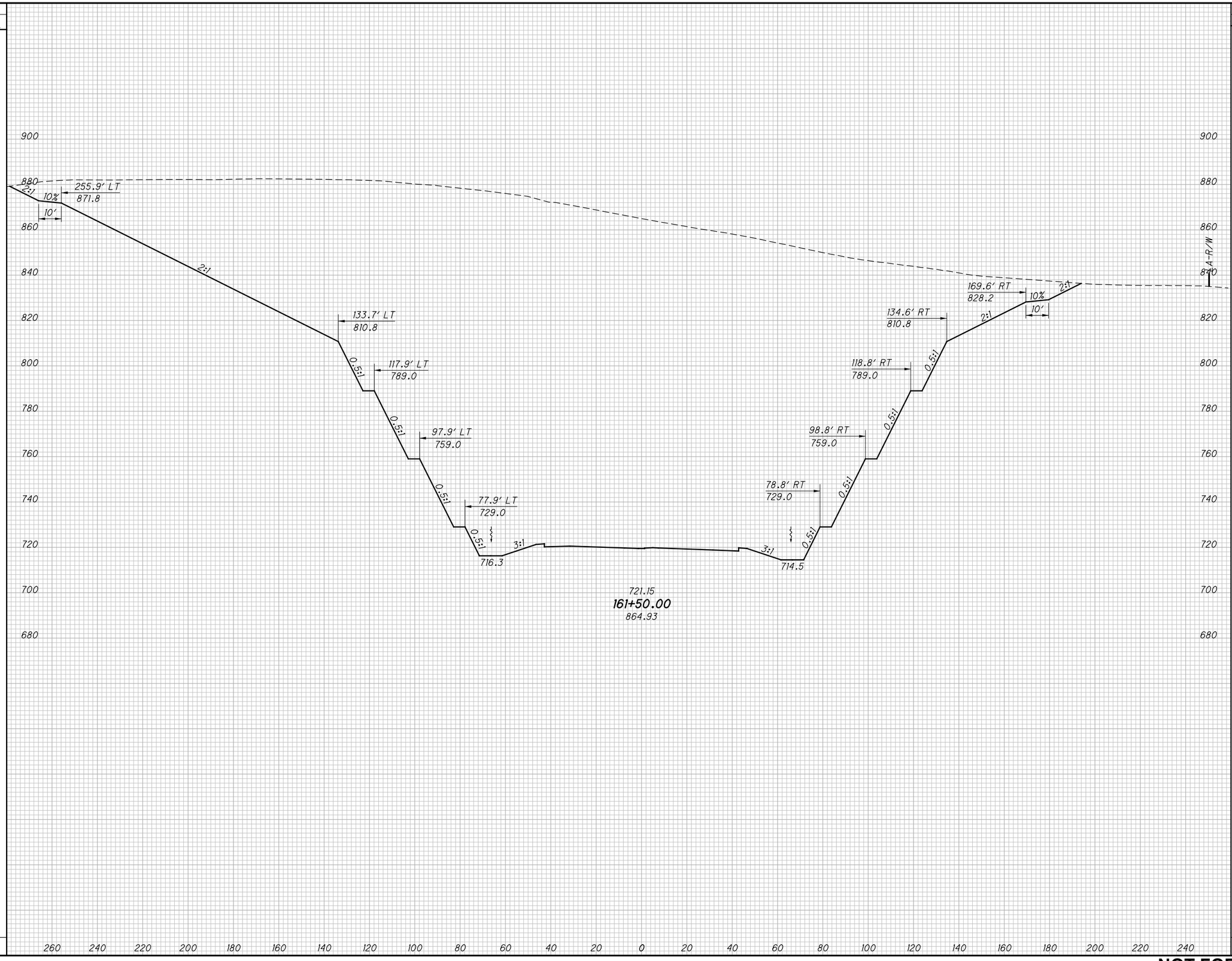
SCI-823-0.00

232
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:38:59 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH

CROSS SECTIONS SR823
STA. 161+50.00

SCI-823-0.00

233
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:00 PM CWahlbri

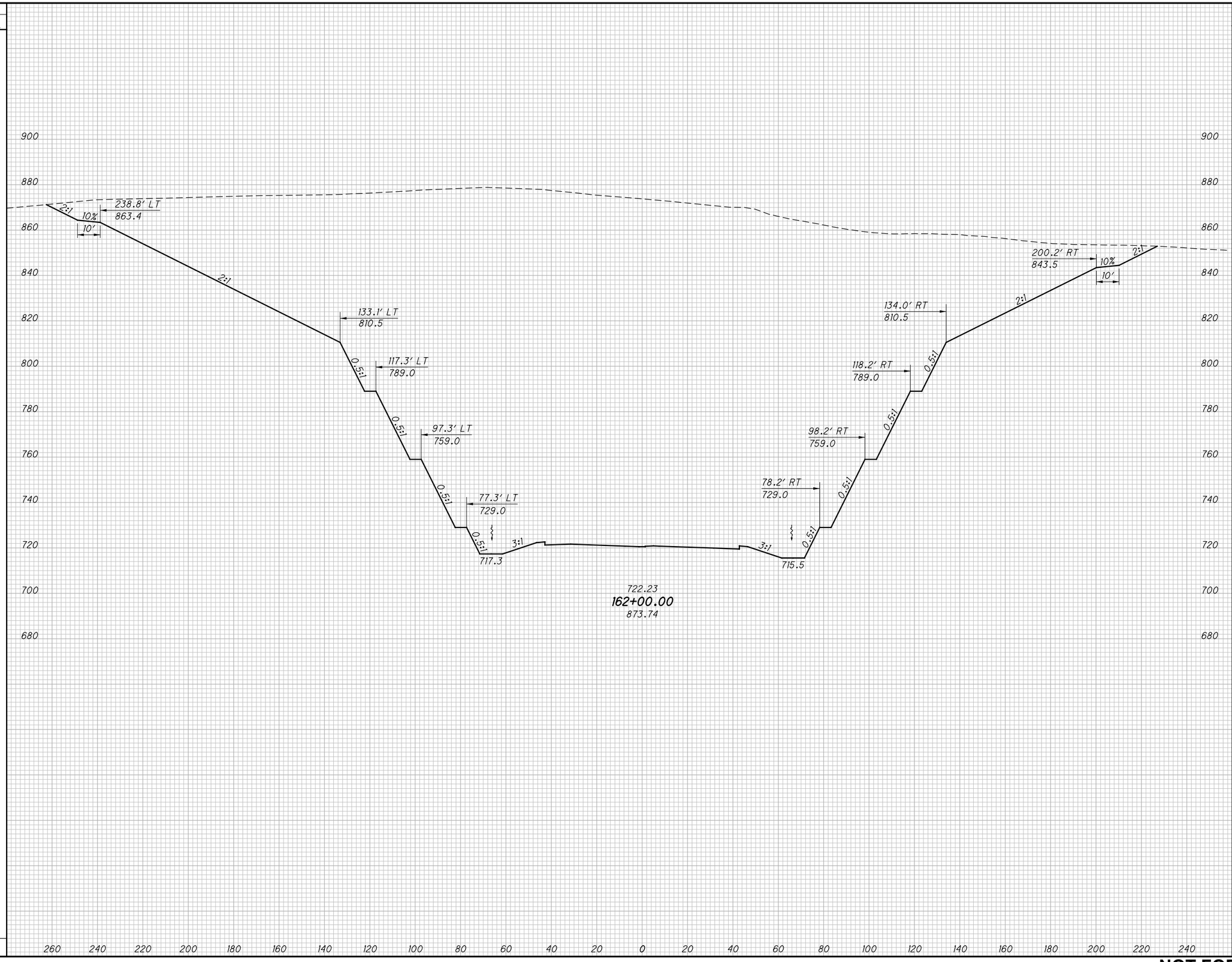
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 162+00.00

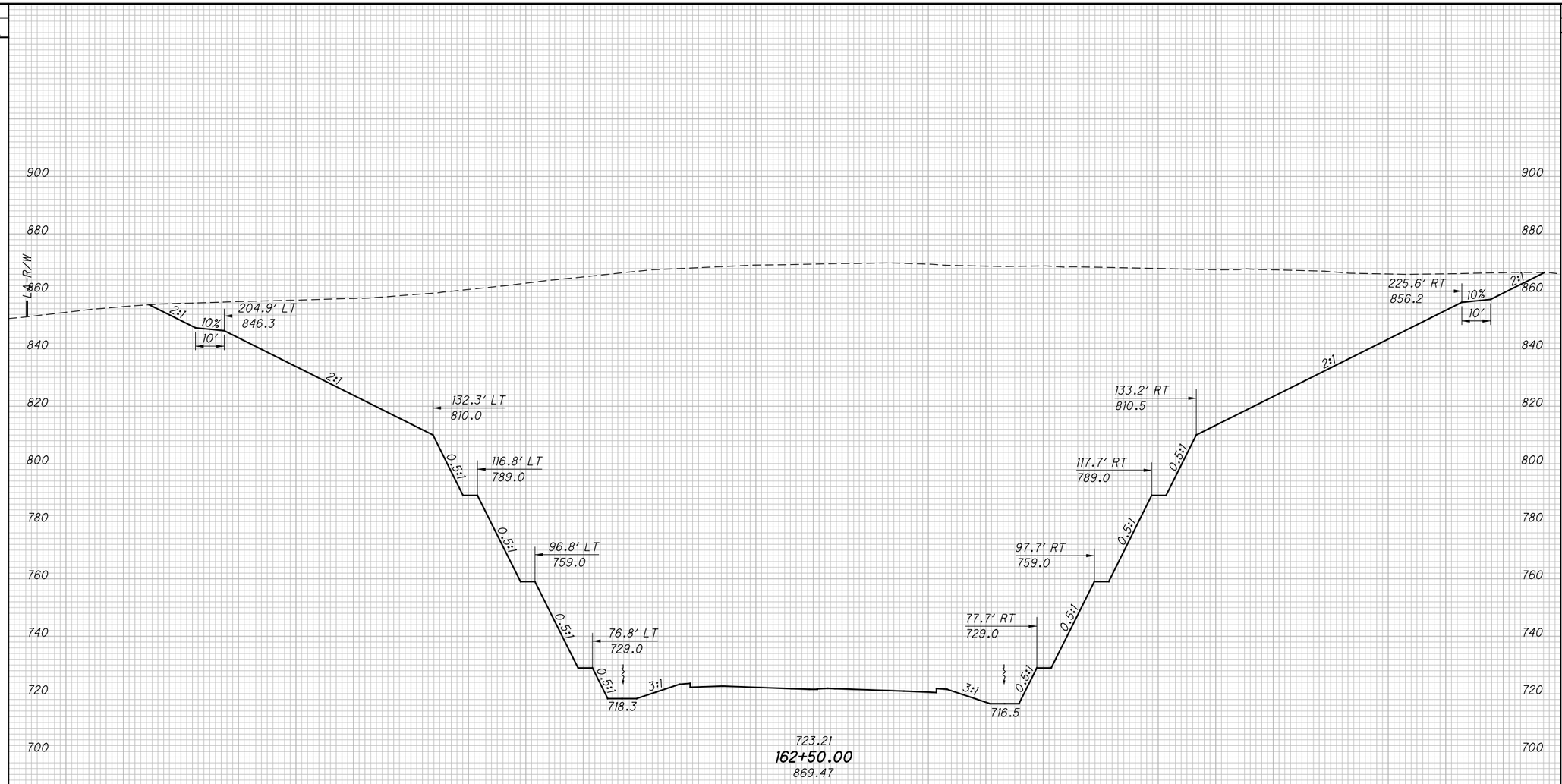
SCI-823-0.00

234
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:00 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED	CHECKED
LBD	JBH

CROSS SECTIONS SR823
STA. 162+50.00

SCI-823-0.00

235
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:01 PM CWahlbri

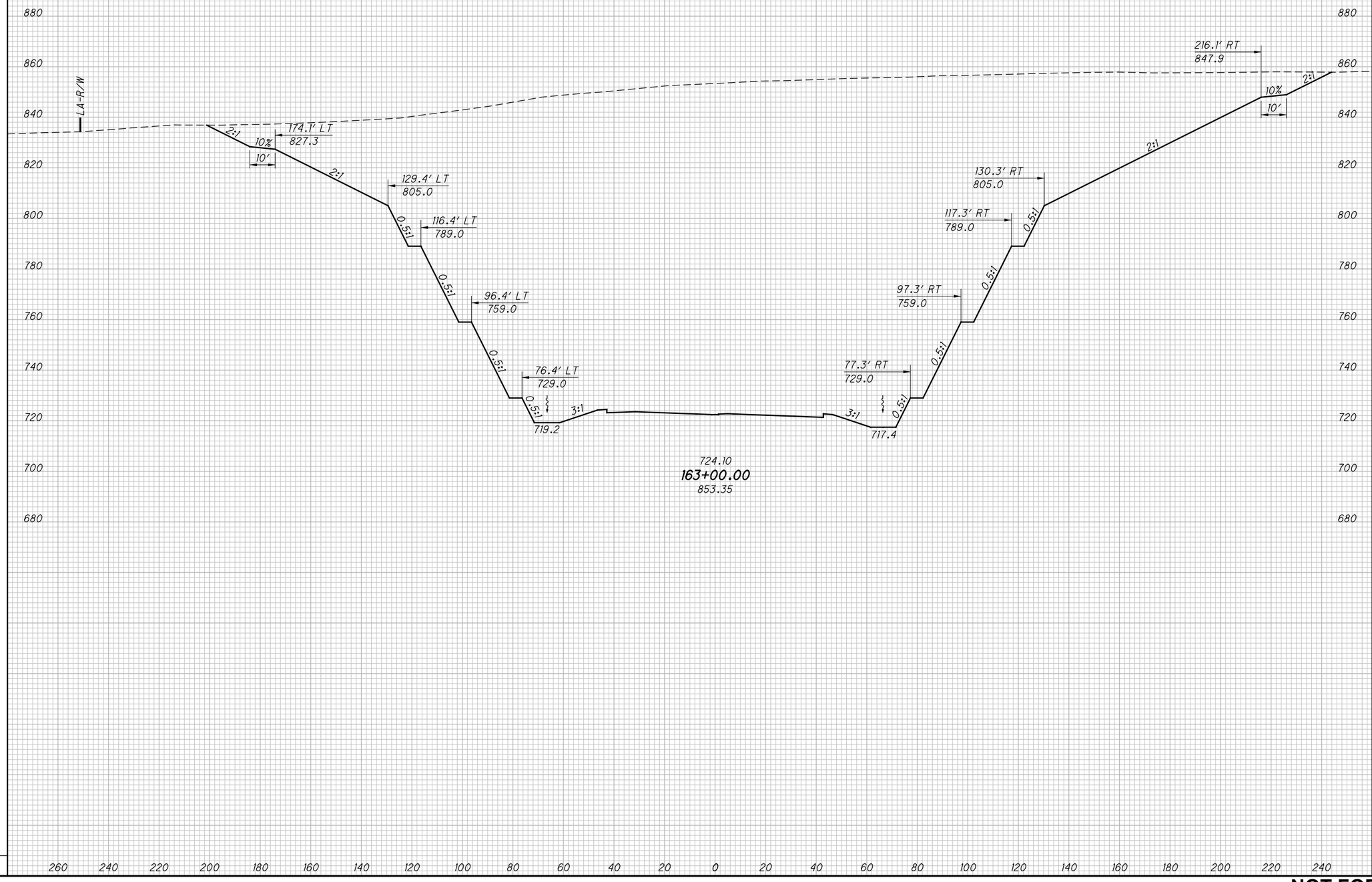
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 163+00.00

SCI-823-0.00

236
623

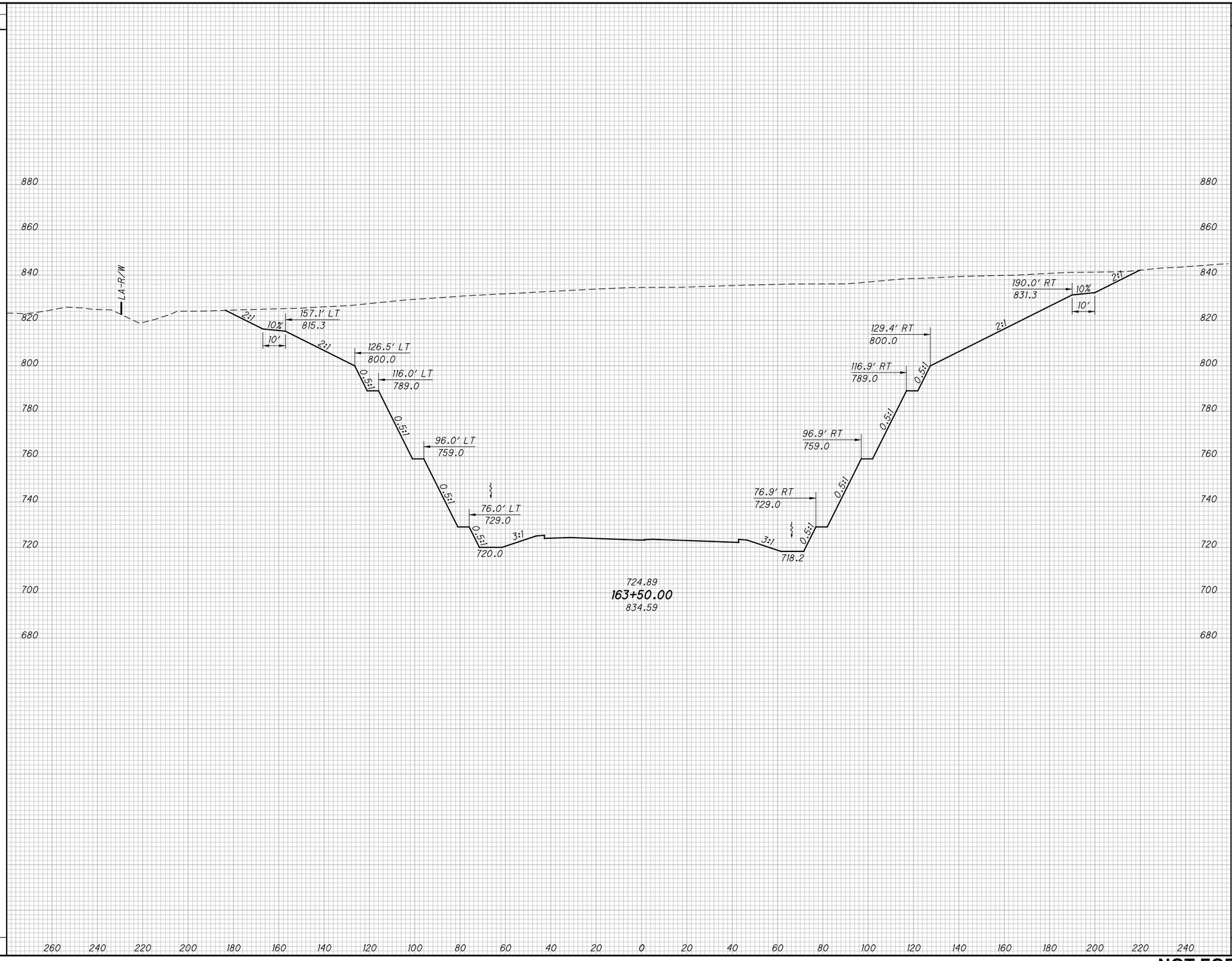
c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:02 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 163+50.00

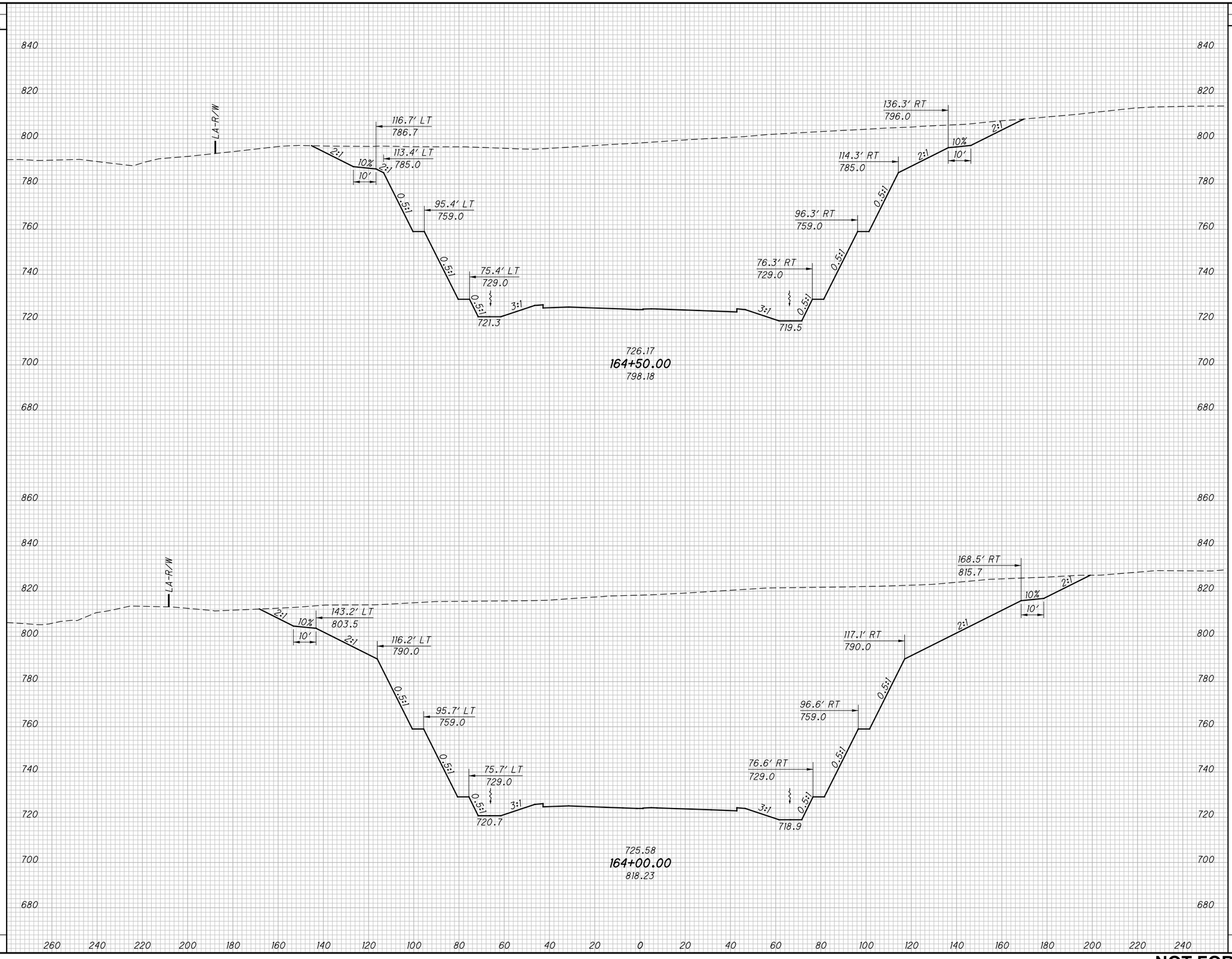
SCI-823-0.00

237
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:03 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED	CHECKED
LBD	JBH

CROSS SECTIONS SR823

STA. 164+00.00 TO STA. 164+50.00

SCI-823-0.00

238
623

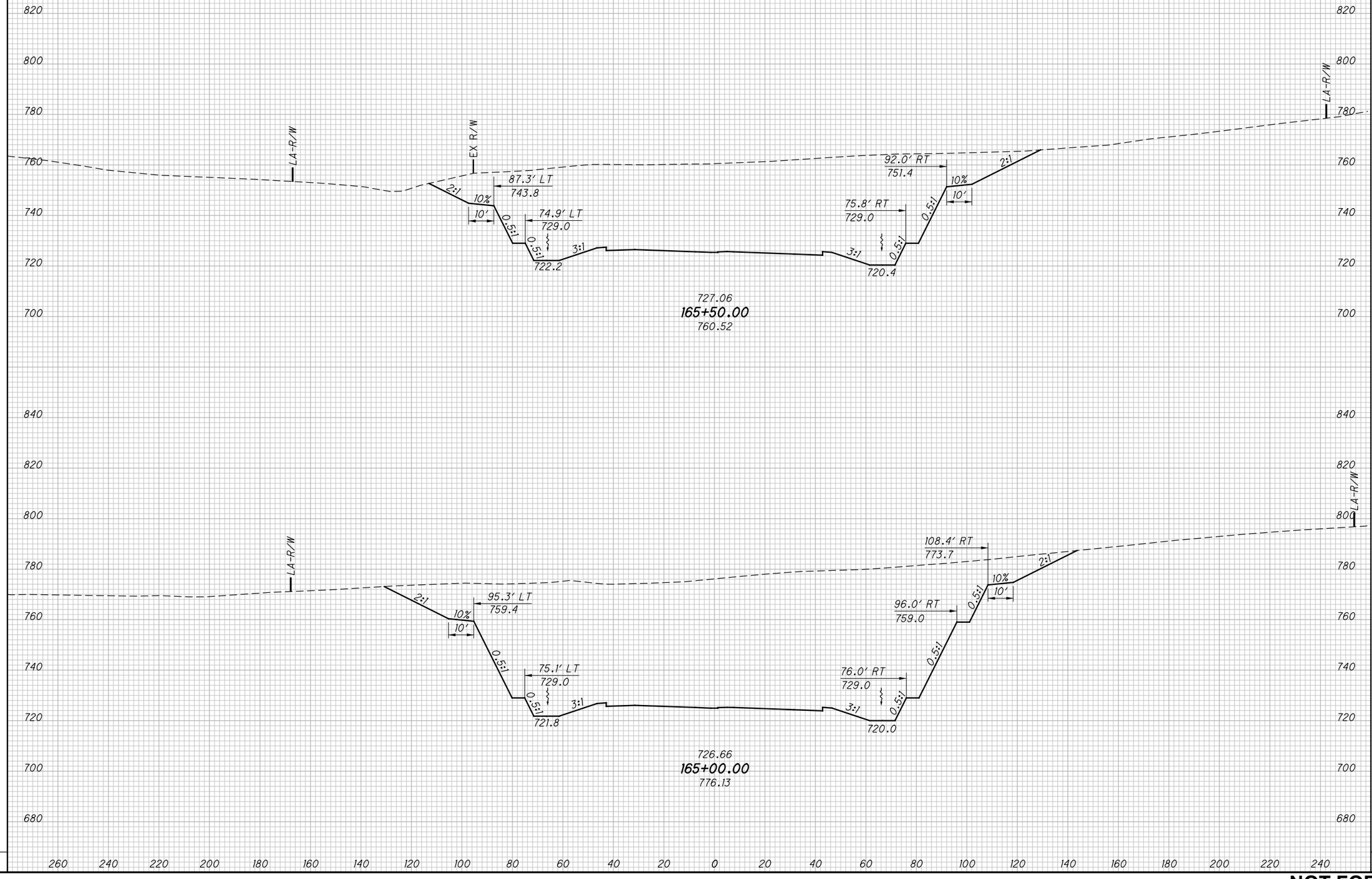
c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:03 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 165+00.00 TO STA. 165+50.00

SCI-823-0.00

239
623

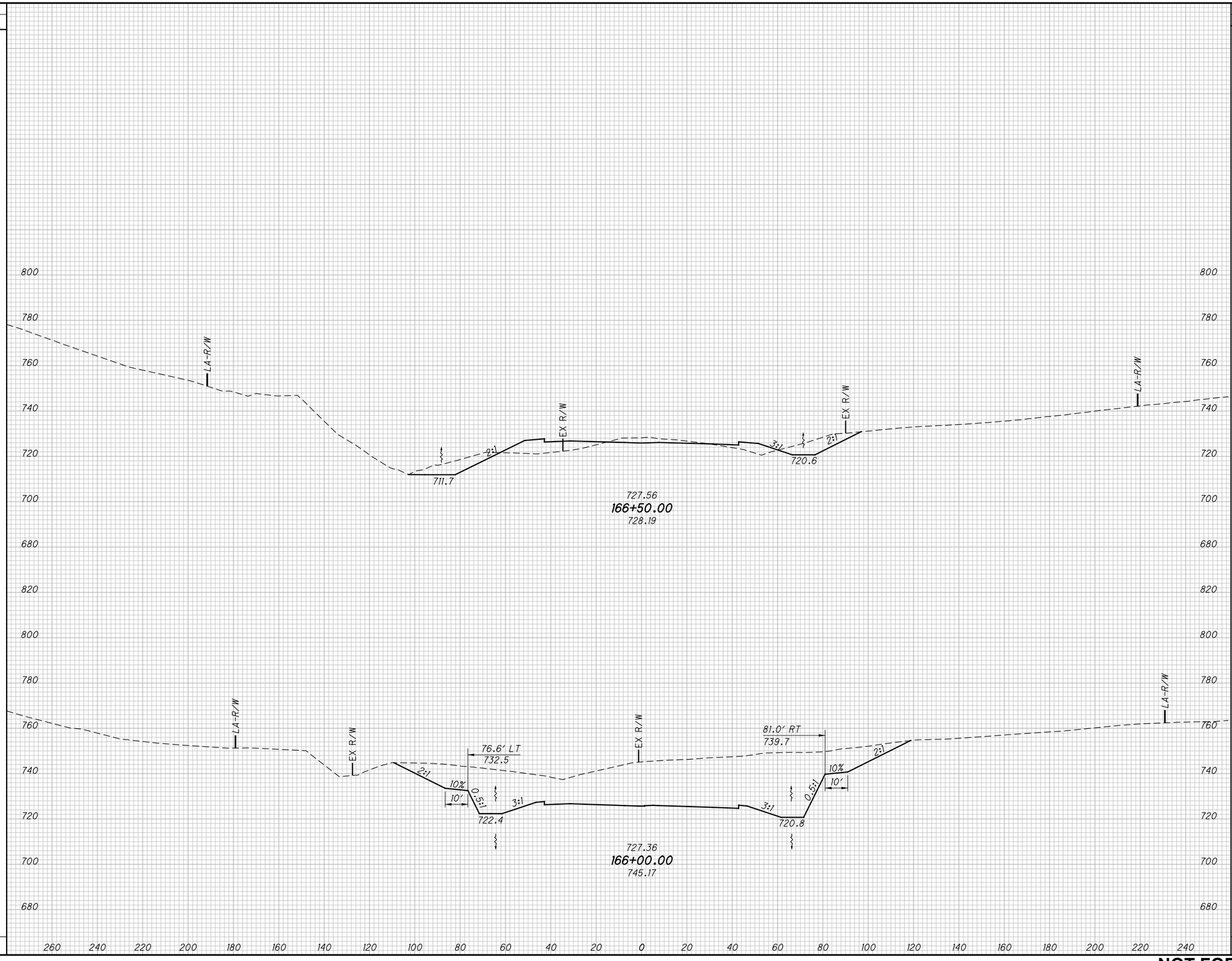
c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:04 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 166+00.00 TO STA. 166+50.00

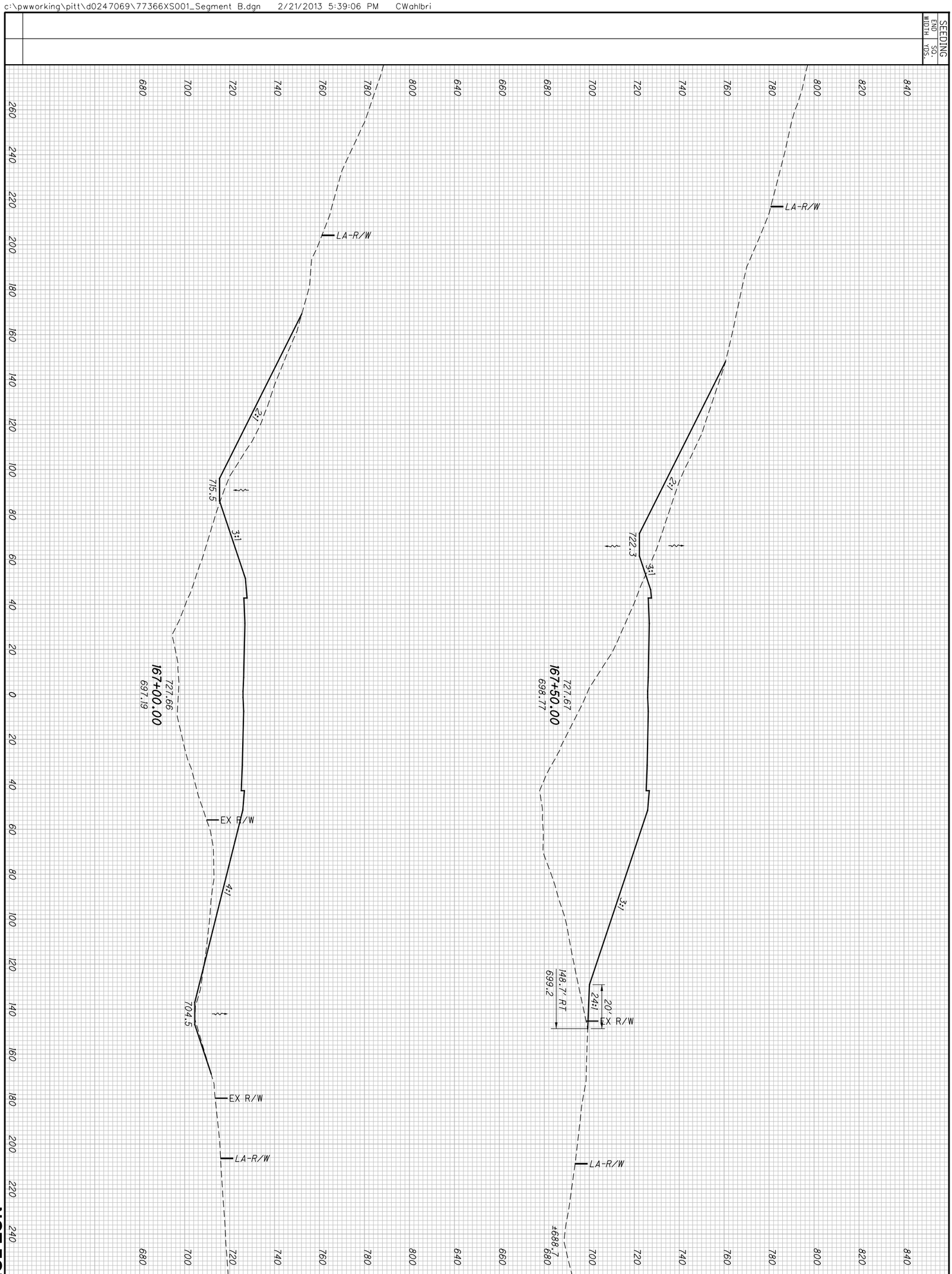
SCI-823-0.00

240
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:05 PM CWahlbri

NOT FOR CONSTRUCTION

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:06 PM CWahlbri



NOT FOR CONSTRUCTION

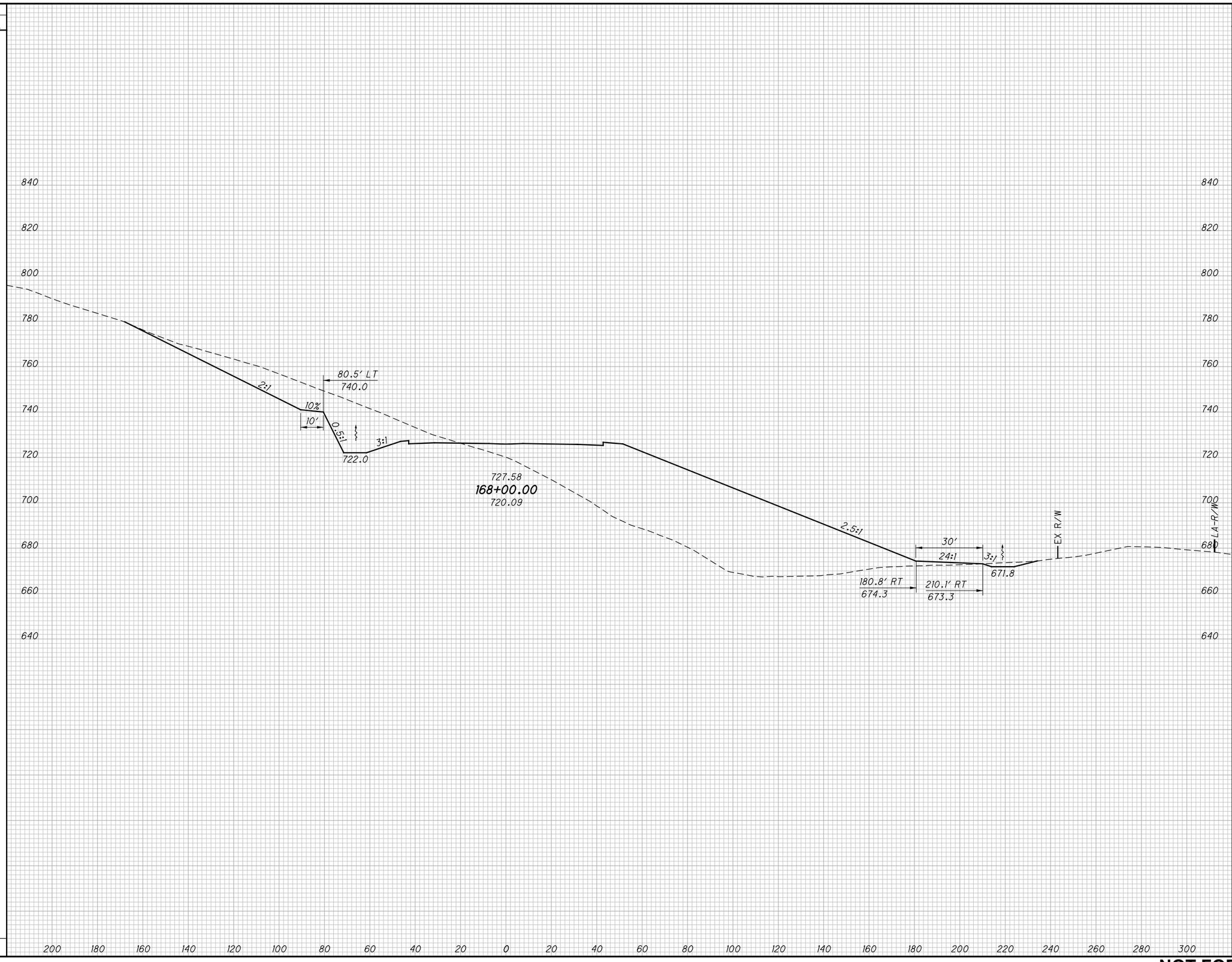
241 / 623	SCI-823-0.00	CROSS SECTIONS SR823 STA. 167+00.00 TO STA. 167+50.00

CALCULATED LBD
CHECKED JBH

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 168+00.00

SCI-823-0.00

242
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:07 PM CWahlbri

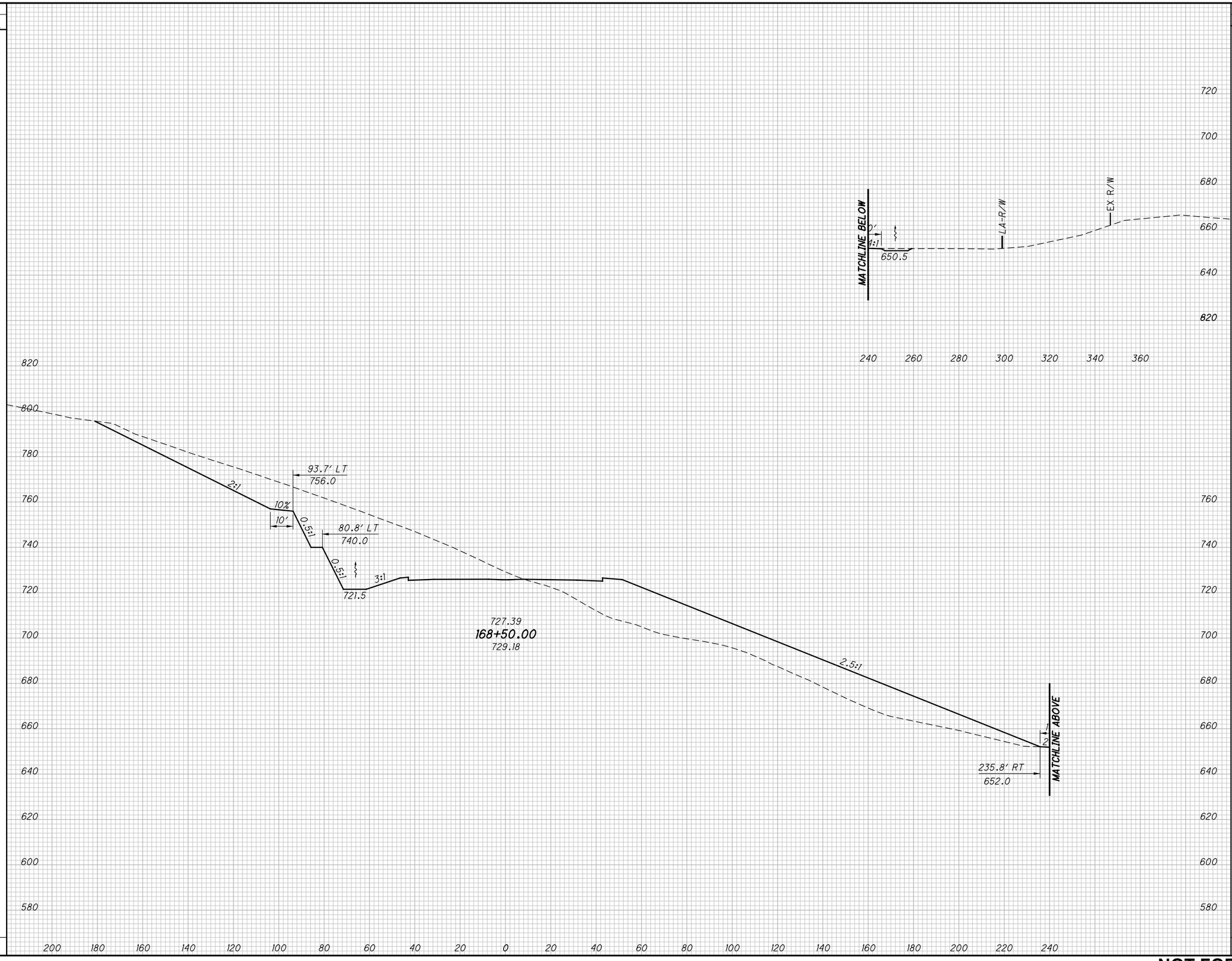
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED	CHECKED
LBD	JBH



CROSS SECTIONS SR823
STA. 168+50.00

SCI-823-0.00

243
623

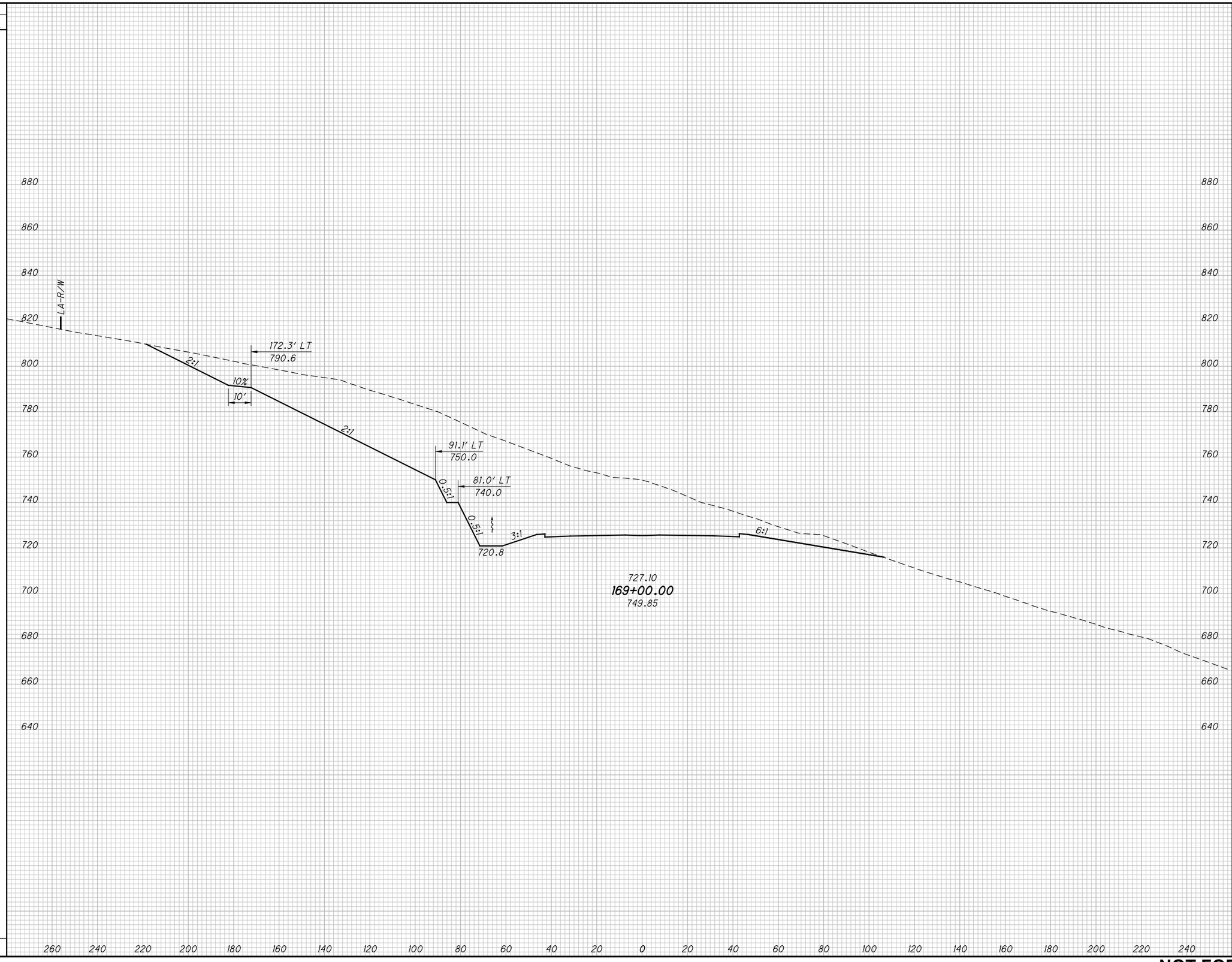
c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:07 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 169+00.00

SCI-823-0.00

244
623

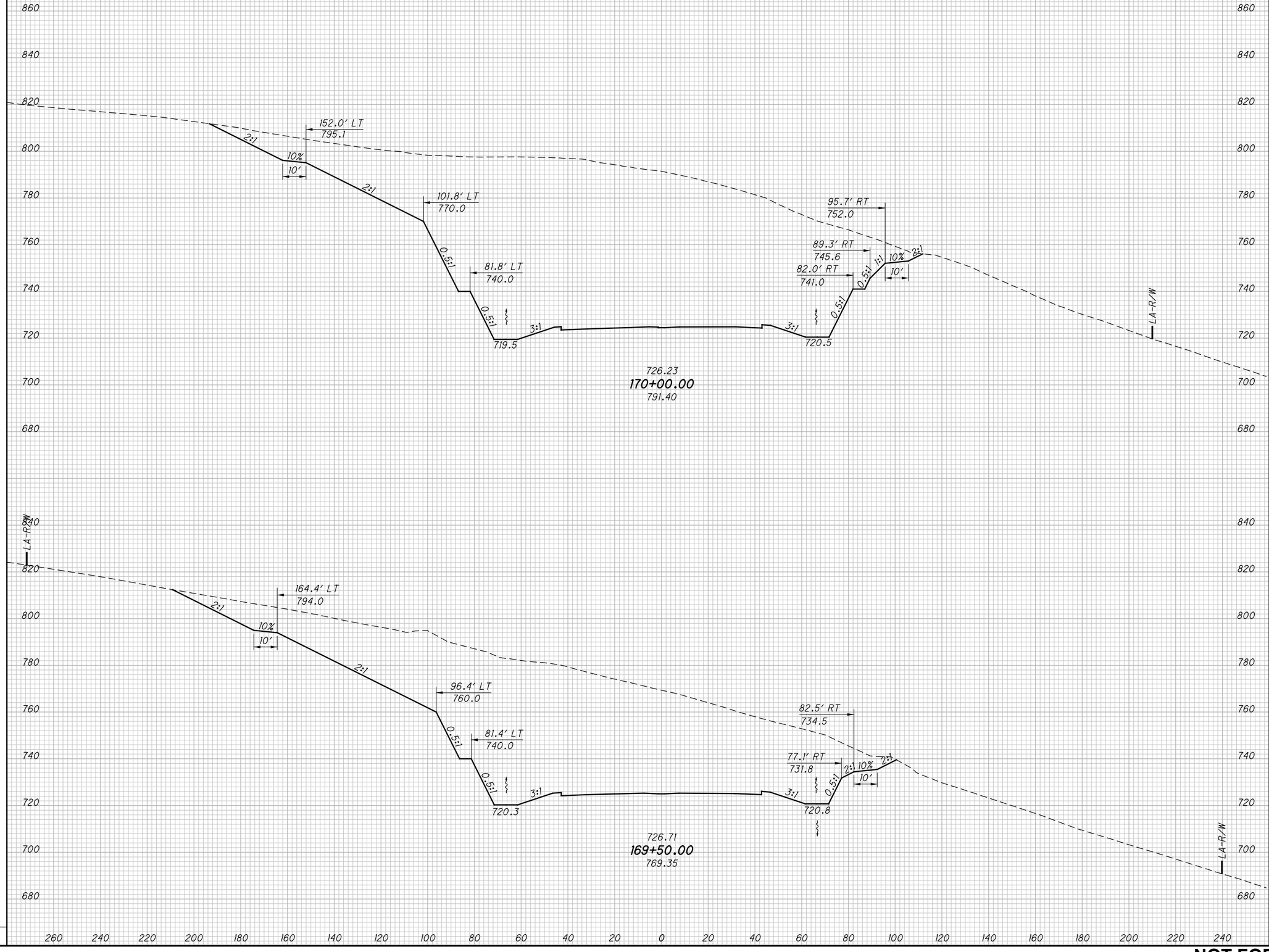
c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:08 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH

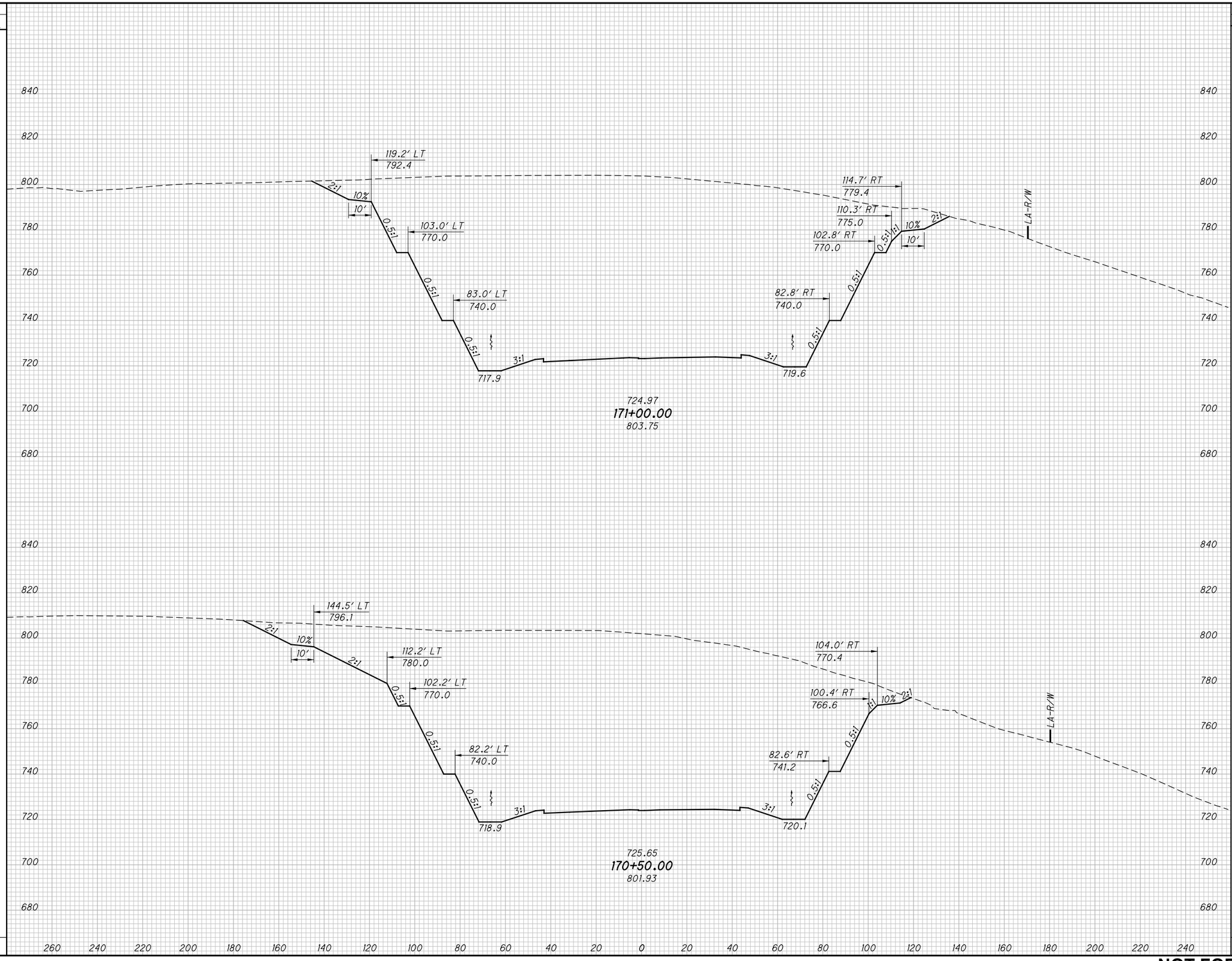


CROSS SECTIONS SR823
STA. 169+50.00 TO STA. 170+00.00

SCI-823-0.00

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED	CHECKED
LBD	JBH

CROSS SECTIONS SR823

STA. 170+50.00 TO STA. 171+00.00

SCI-823-0.00

246
623

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:10 PM CWahlbri

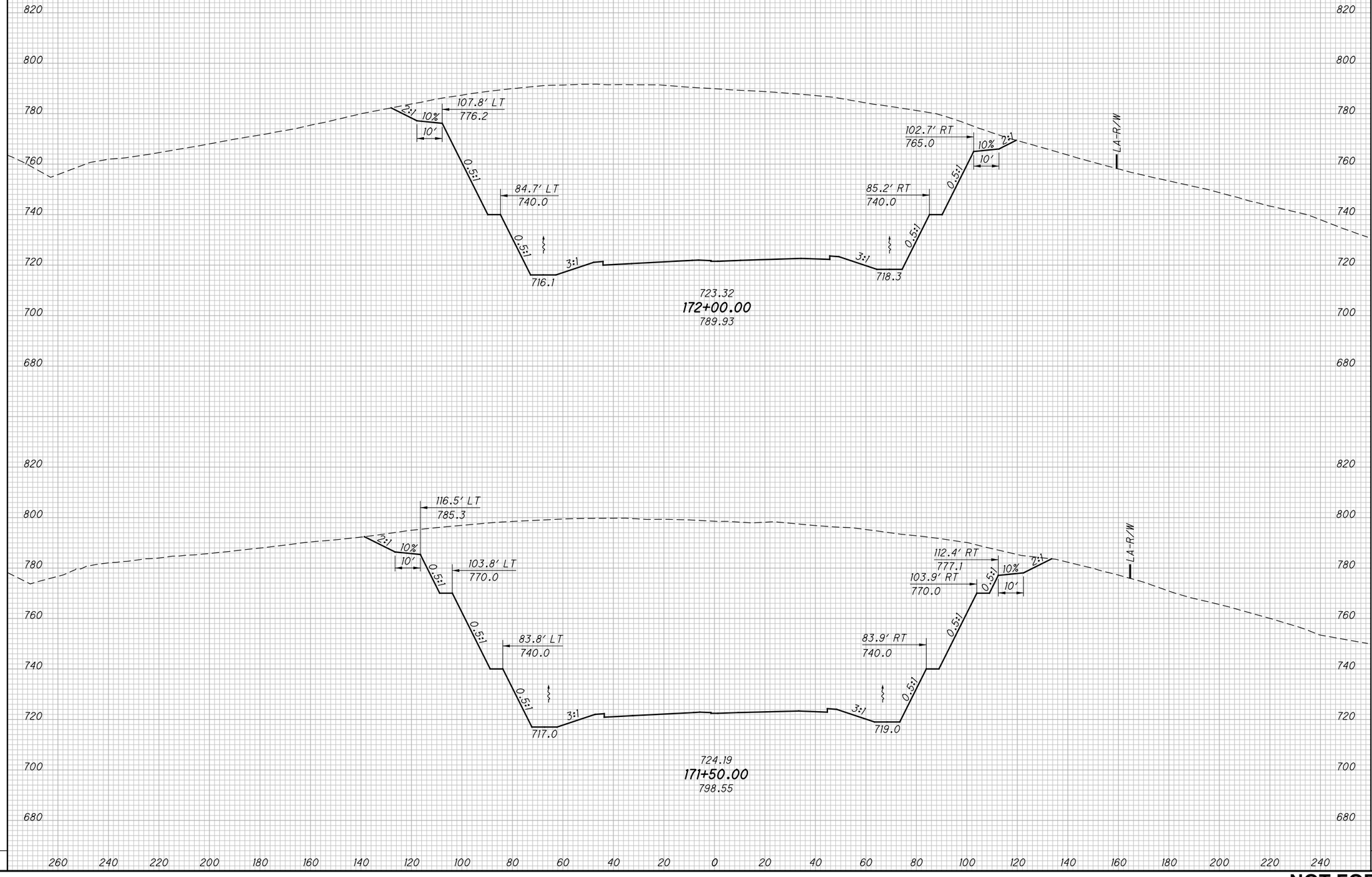
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 171+50.00 TO STA. 172+00.00

SCI-823-0.00

247
623

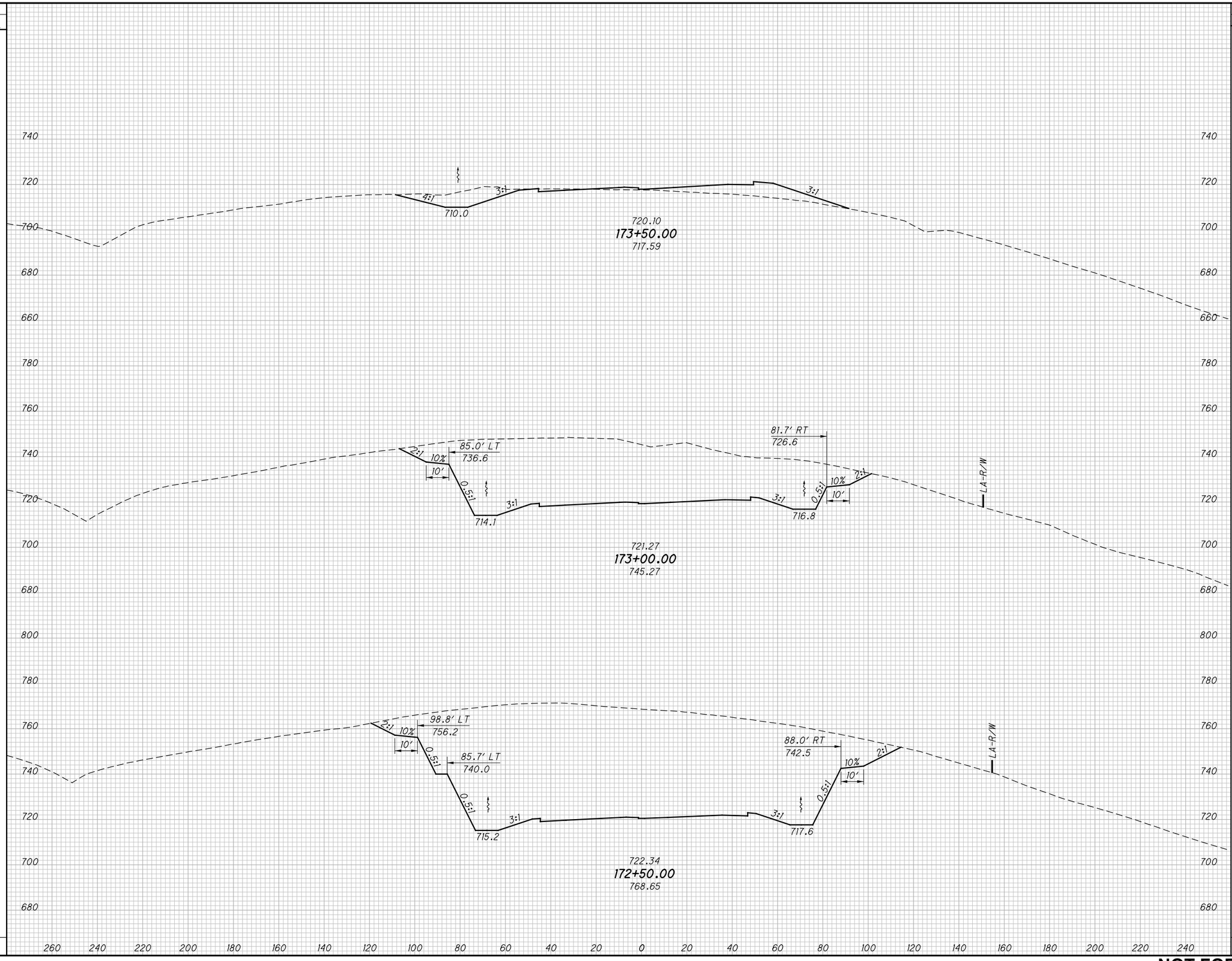
NOT FOR CONSTRUCTION

c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:10 PM CWahlbri

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 172+50.00 TO STA. 173+50.00

SCI-823-0.00

248
623

NOT FOR CONSTRUCTION

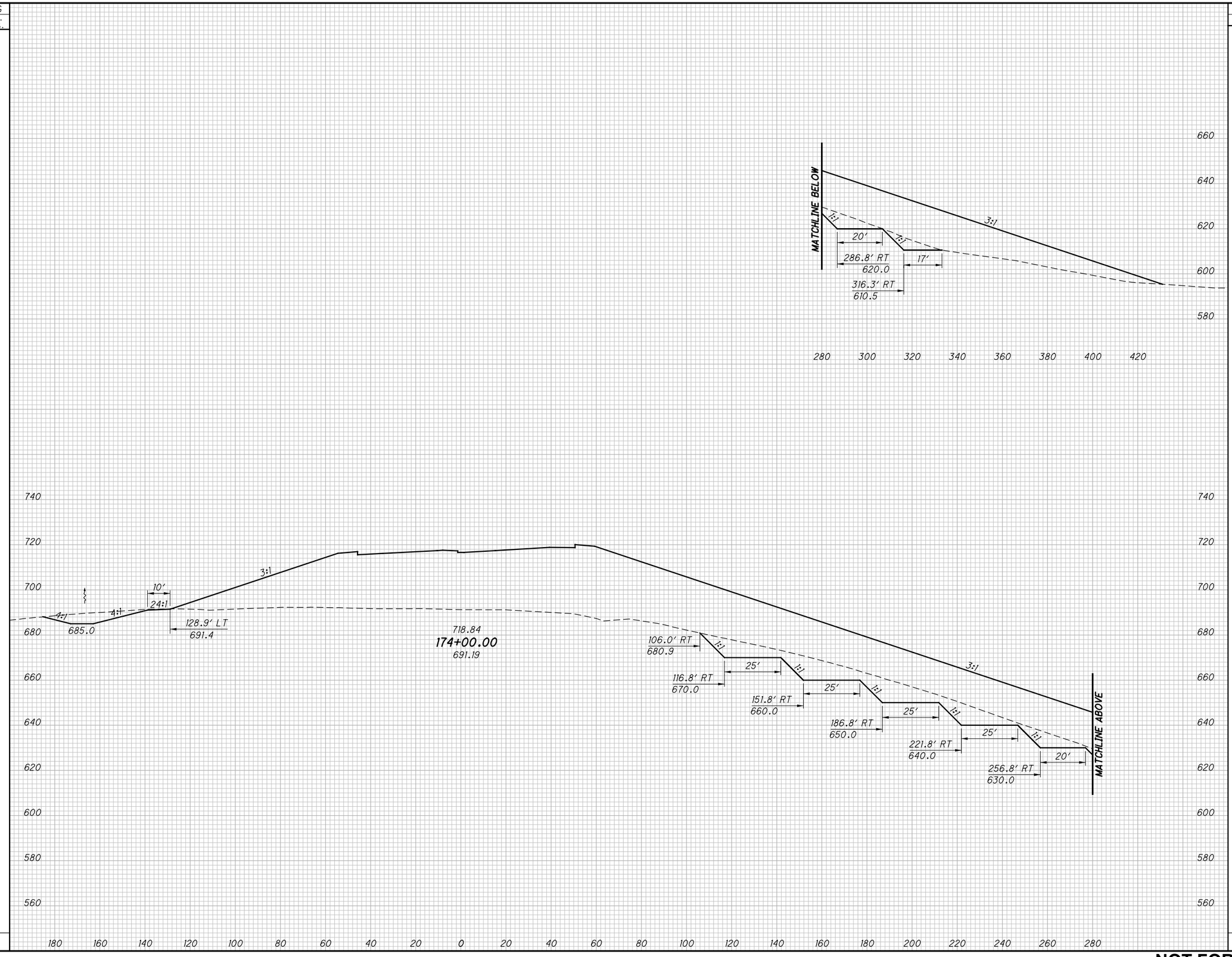
c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:11 PM CWahlbri

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 174+00.00

SCI-823-0.00

249
623

NOT FOR CONSTRUCTION

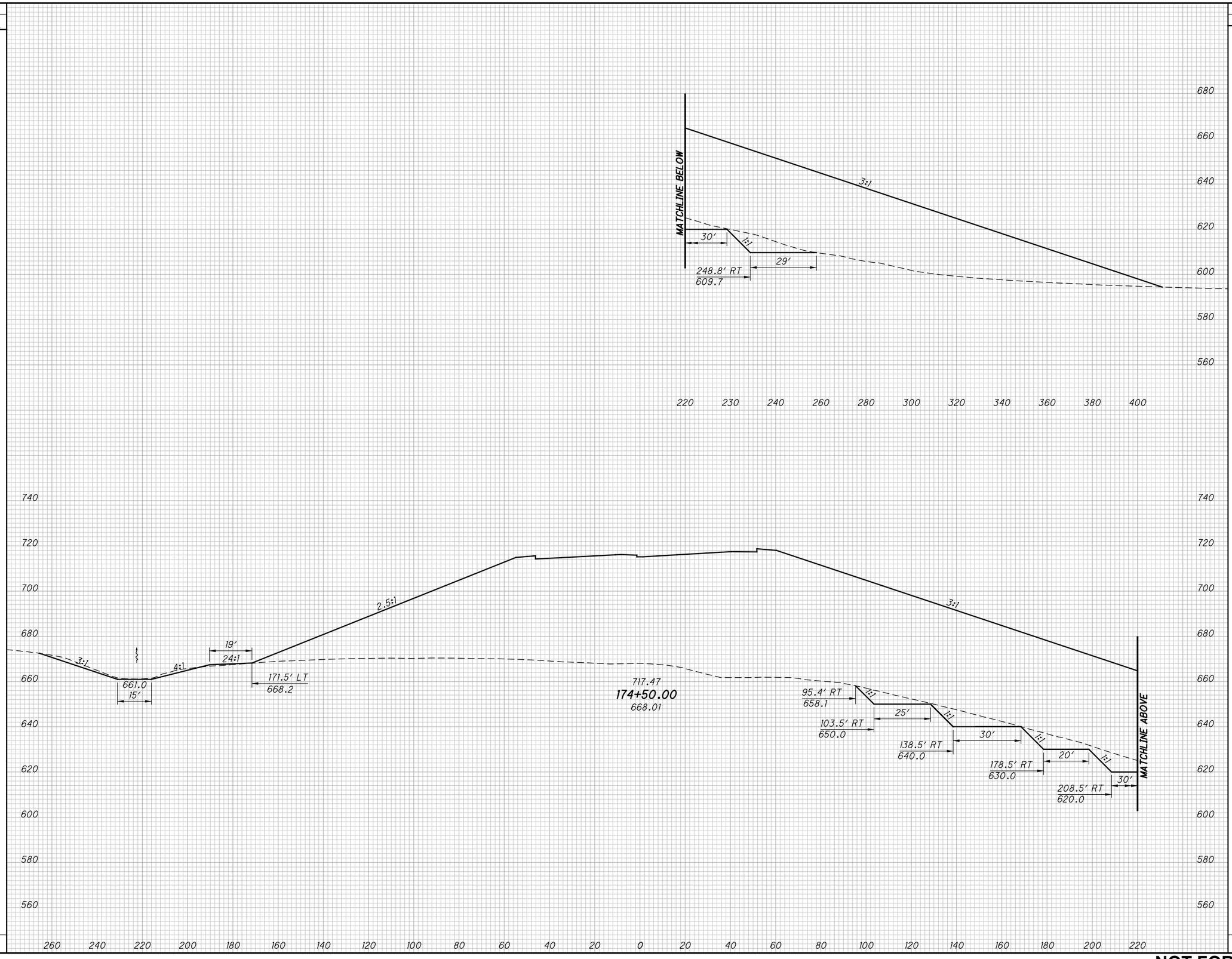
c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:12 PM CWahlbri

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



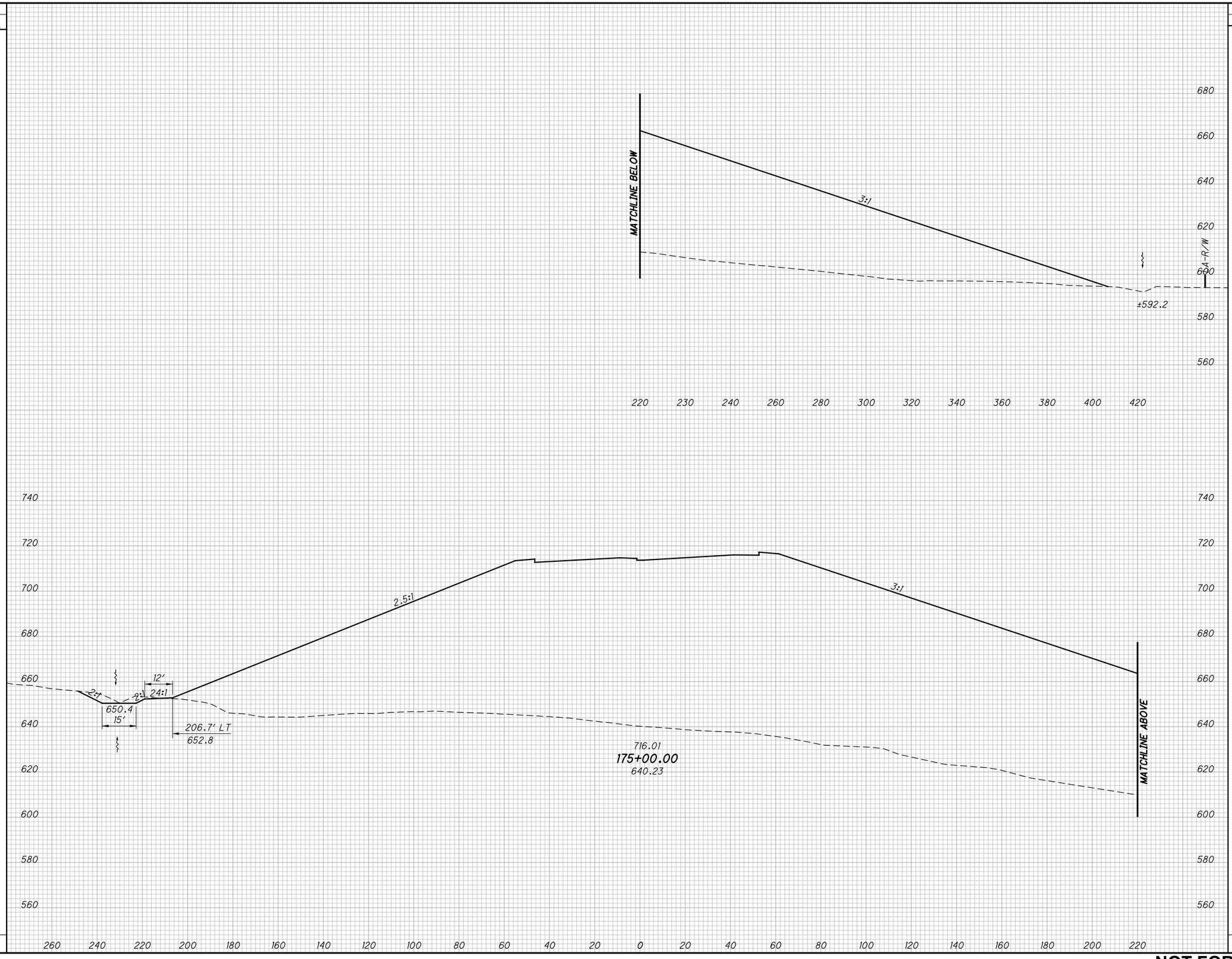
CROSS SECTIONS SR823
STA. 174+50.00

SCI-823-0.00

250
623

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED	CHECKED
LBD	JBH

CROSS SECTIONS SR823
STA. 175+00.00

SCI-823-0.00

251
623

NOT FOR CONSTRUCTION

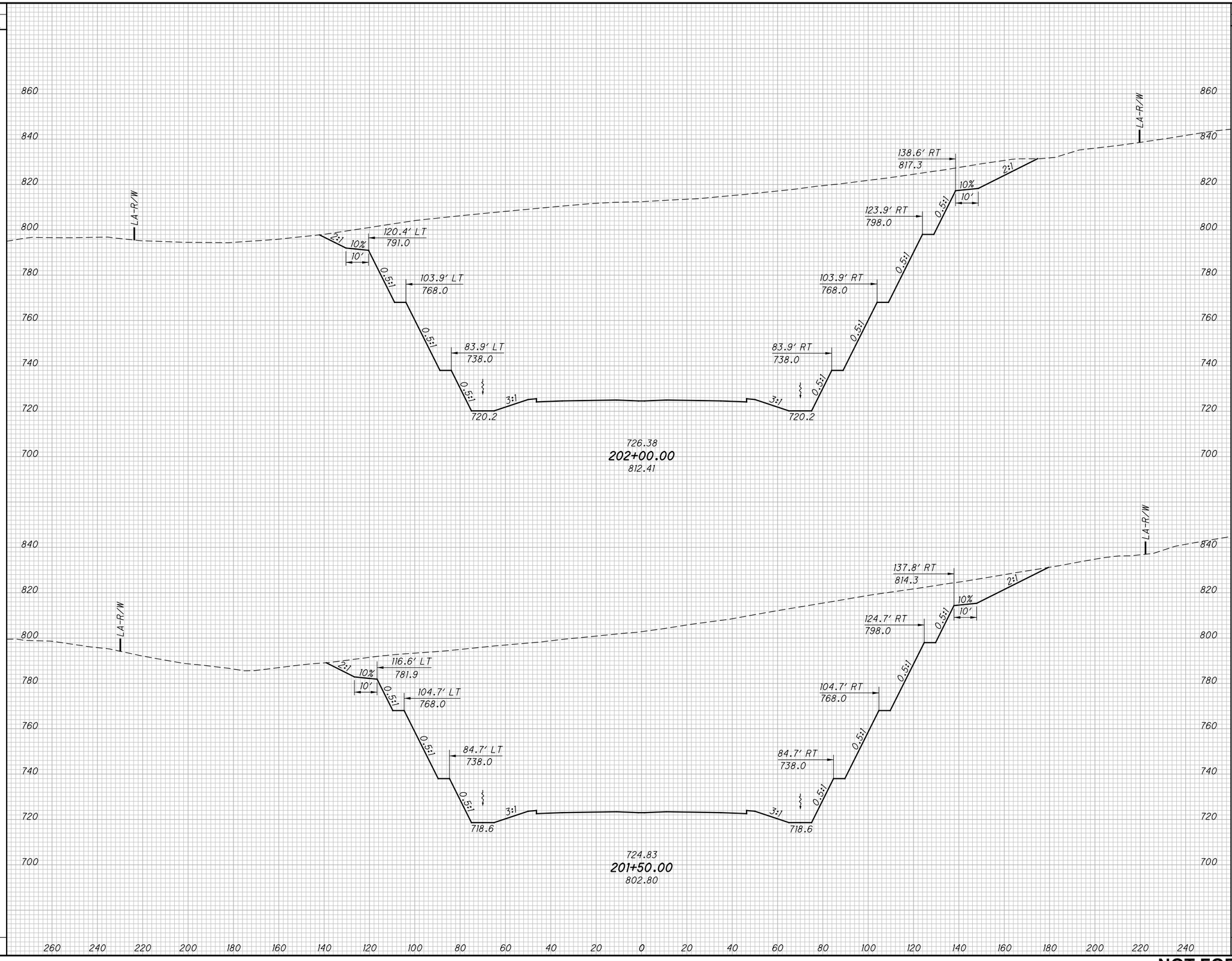
c:\pwworking\pitt\d0247069\77366XS001_Segment B.dgn 2/21/2013 5:39:14 PM CWahlbri

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 201+50.00 TO STA. 202+00.00

SCI-823-0.00

286
623

c:\pwworking\pitt\d0247069\77366XS001_Segment C.dgn 2/21/2013 5:40:14 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD

CHECKED JBH

CROSS SECTIONS SR823

STA. 202+50.00 TO STA. 203+00.00

SCI-823-0.00

287
623

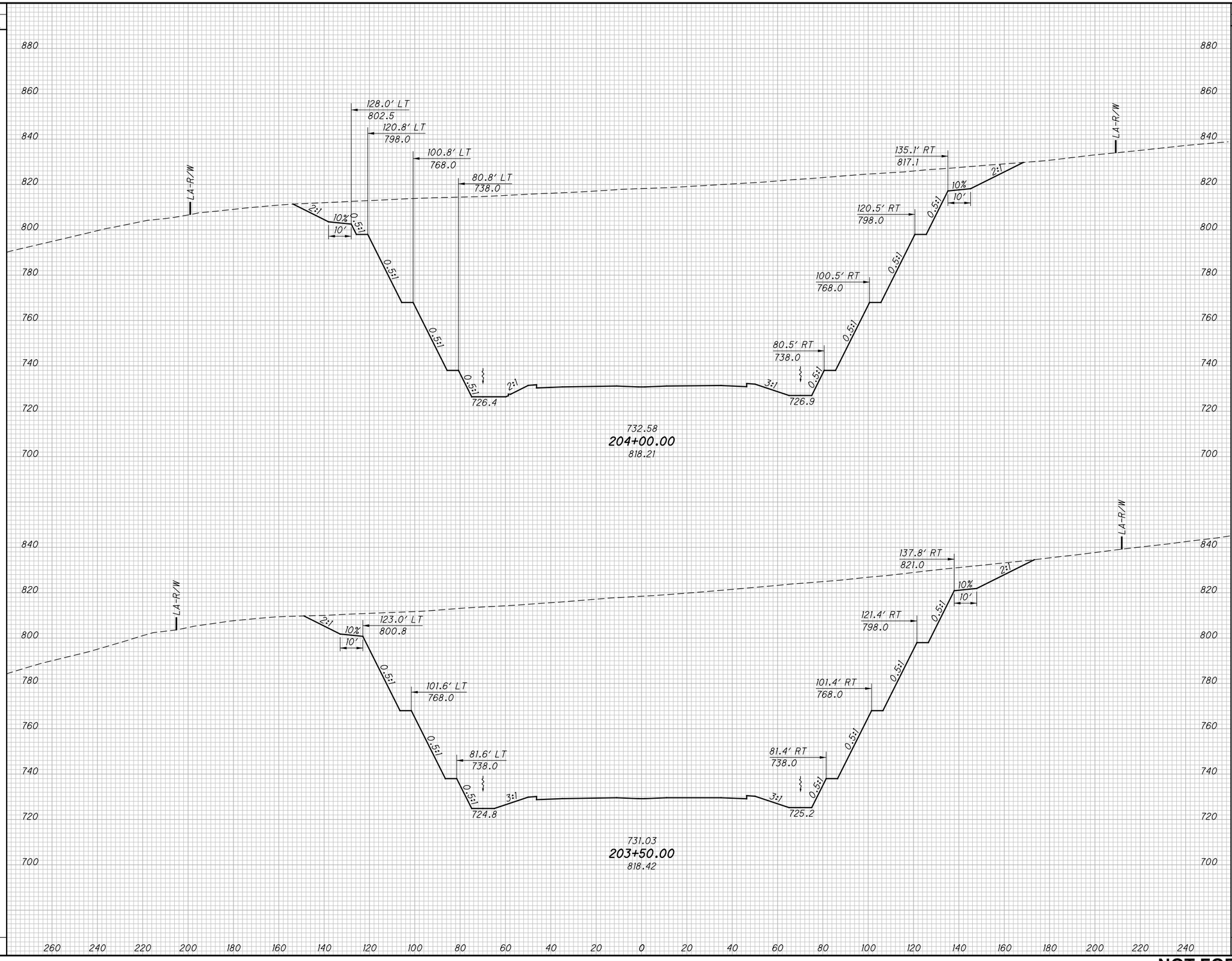
c:\pwworking\pitt\d0247069\77366XS001_Segment C.dgn 2/21/2013 5:40:16 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 203+50.00 TO STA. 204+00.00

SCI-823-0.00

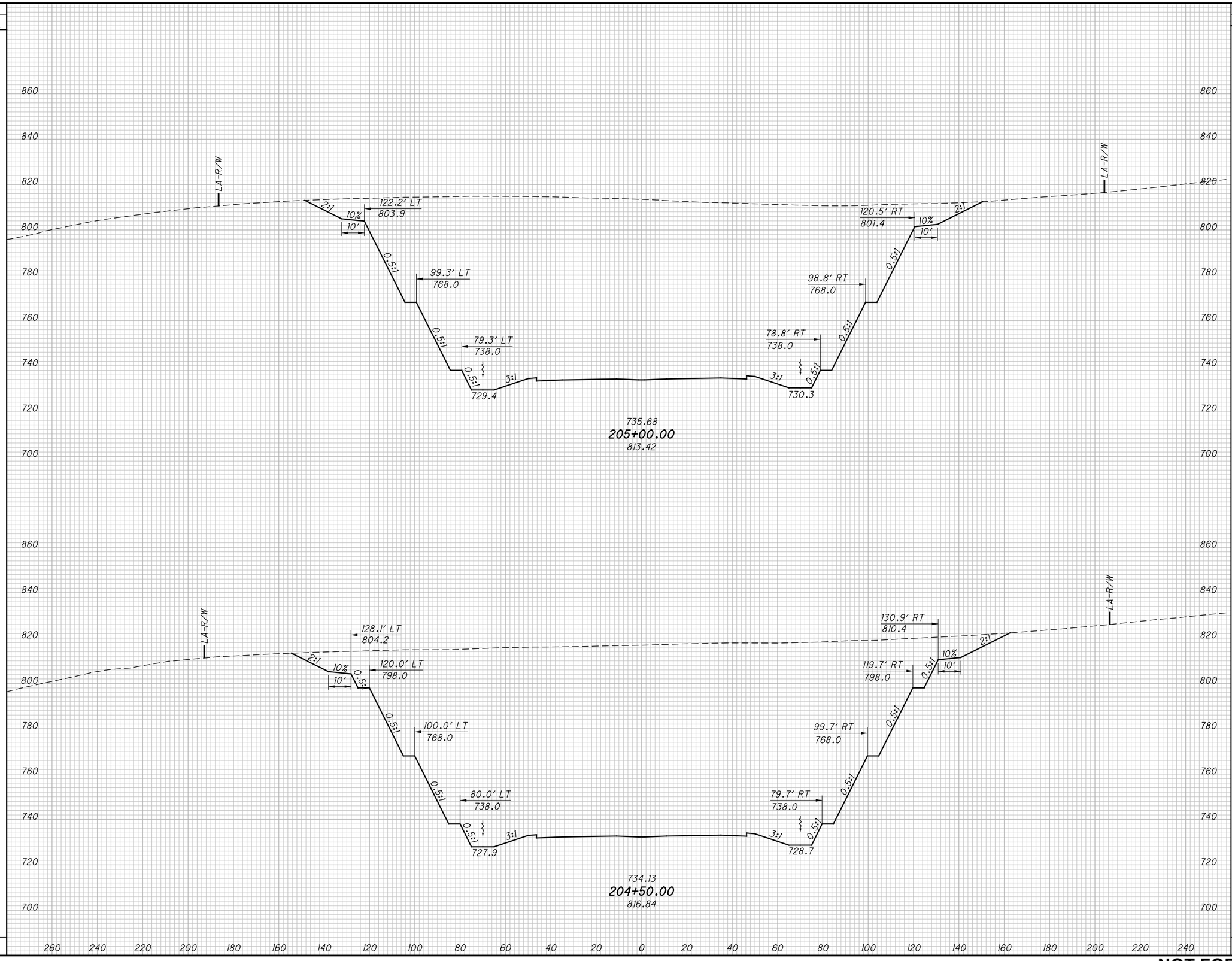
288
623

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 204+50.00 TO STA. 205+00.00

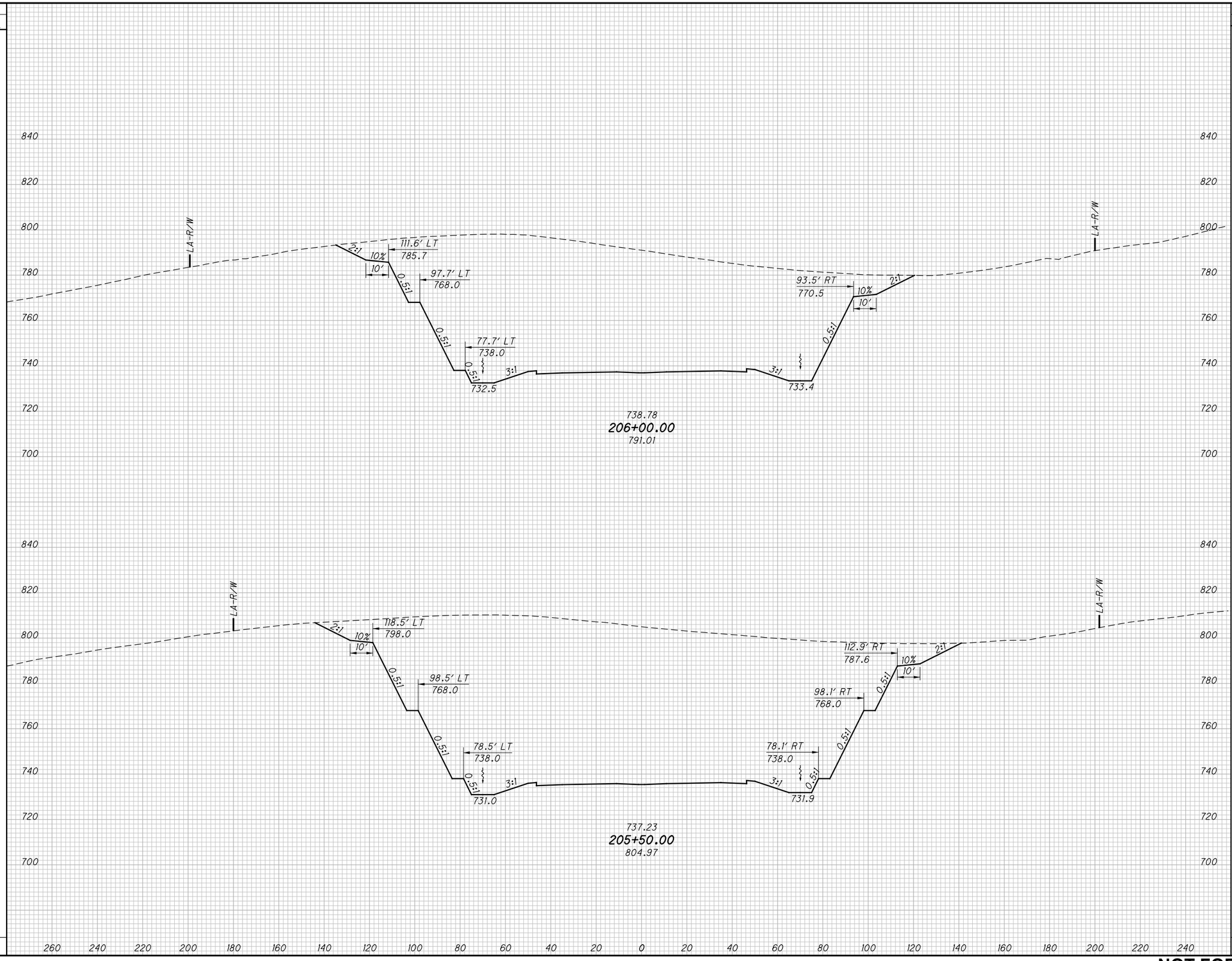
SCI-823-0.00

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 205+50.00 TO STA. 206+00.00

SCI-823-0.00

290
623

c:\pwworking\pitt\d0247069\77366XS001_Segment C.dgn 2/21/2013 5:40:20 PM CWahlbri

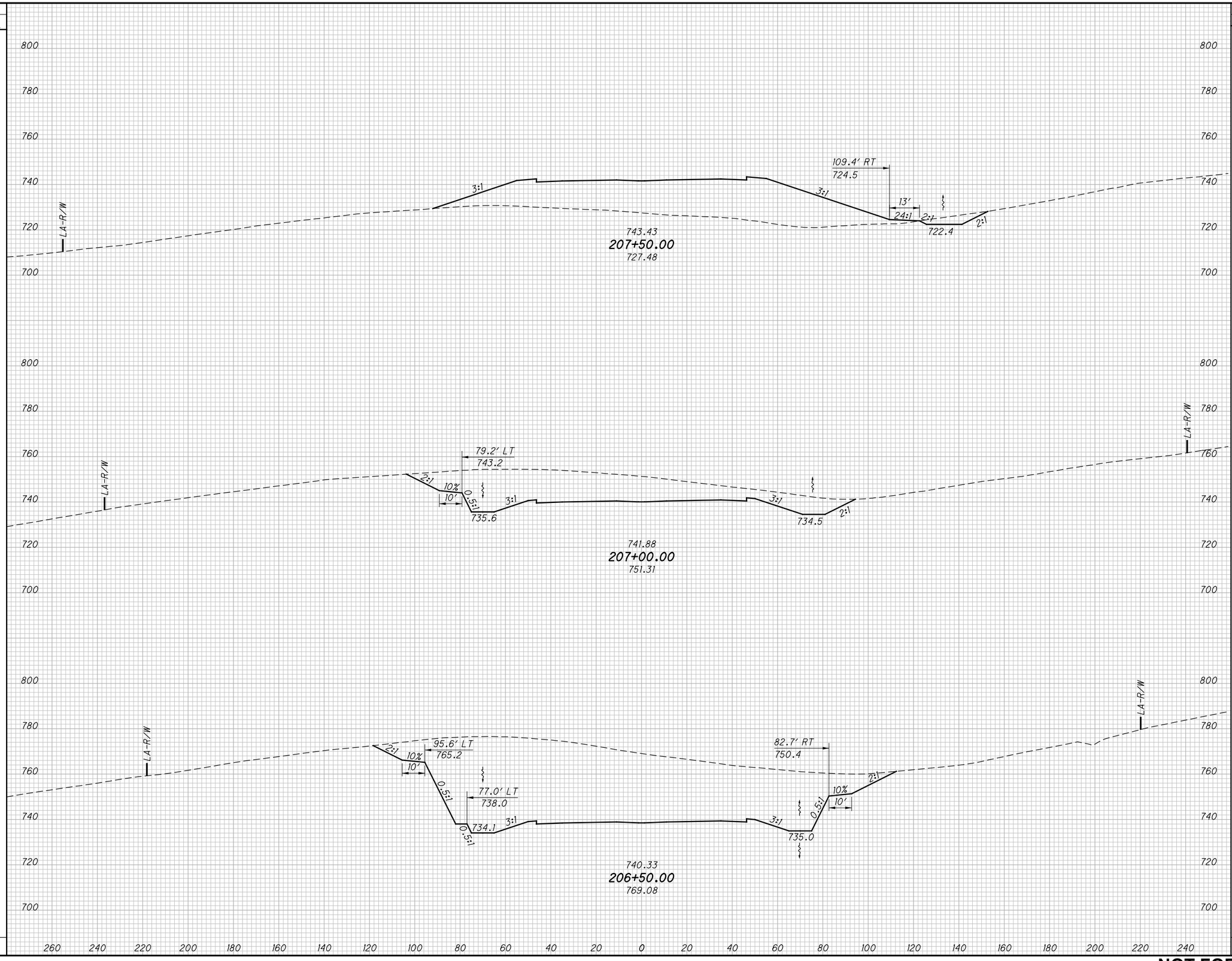
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 206+50.00 TO STA. 207+50.00

SCI-823-0.00

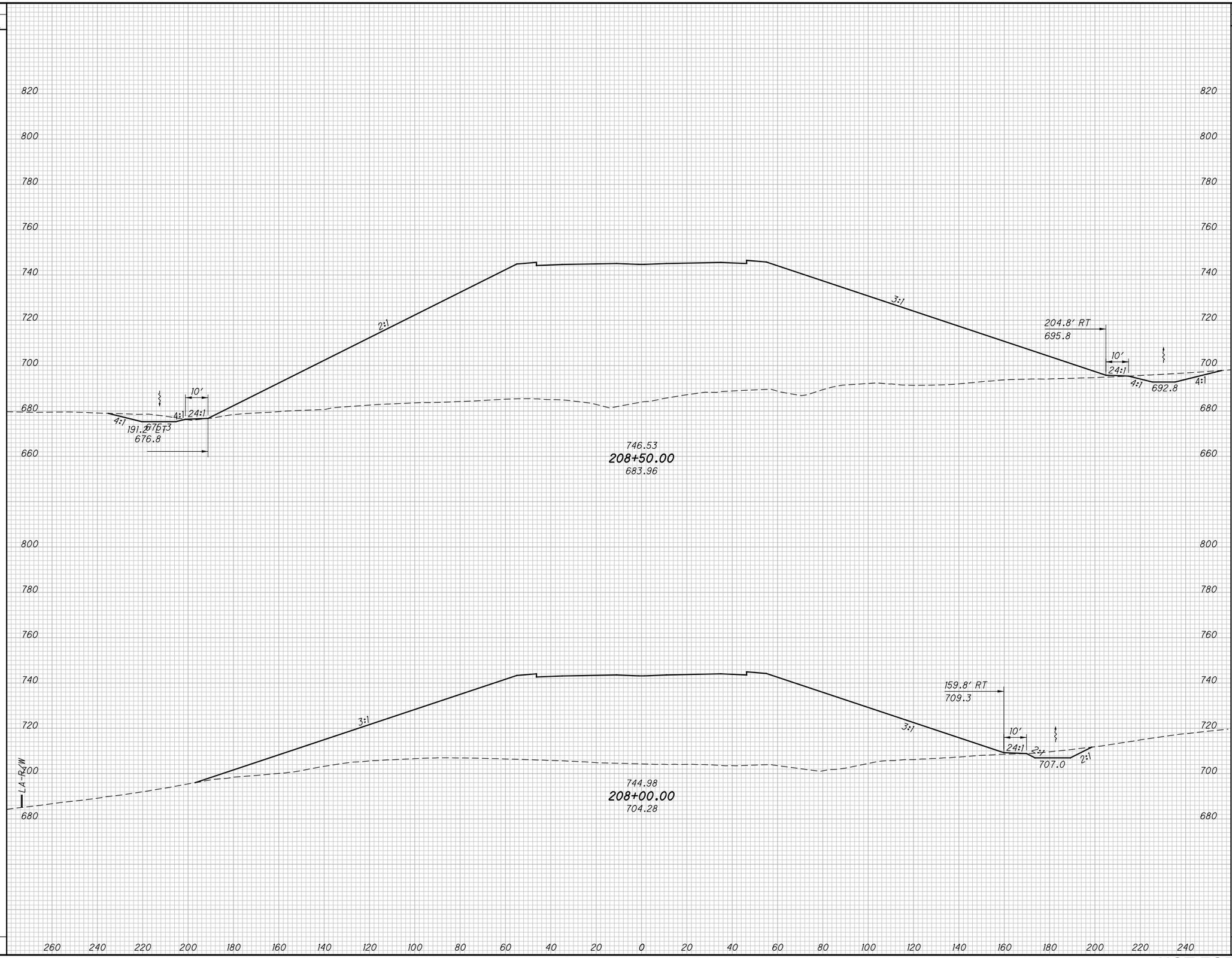
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 208+00.00 TO STA. 208+50.00

SCI-823-0.00

NOT FOR CONSTRUCTION

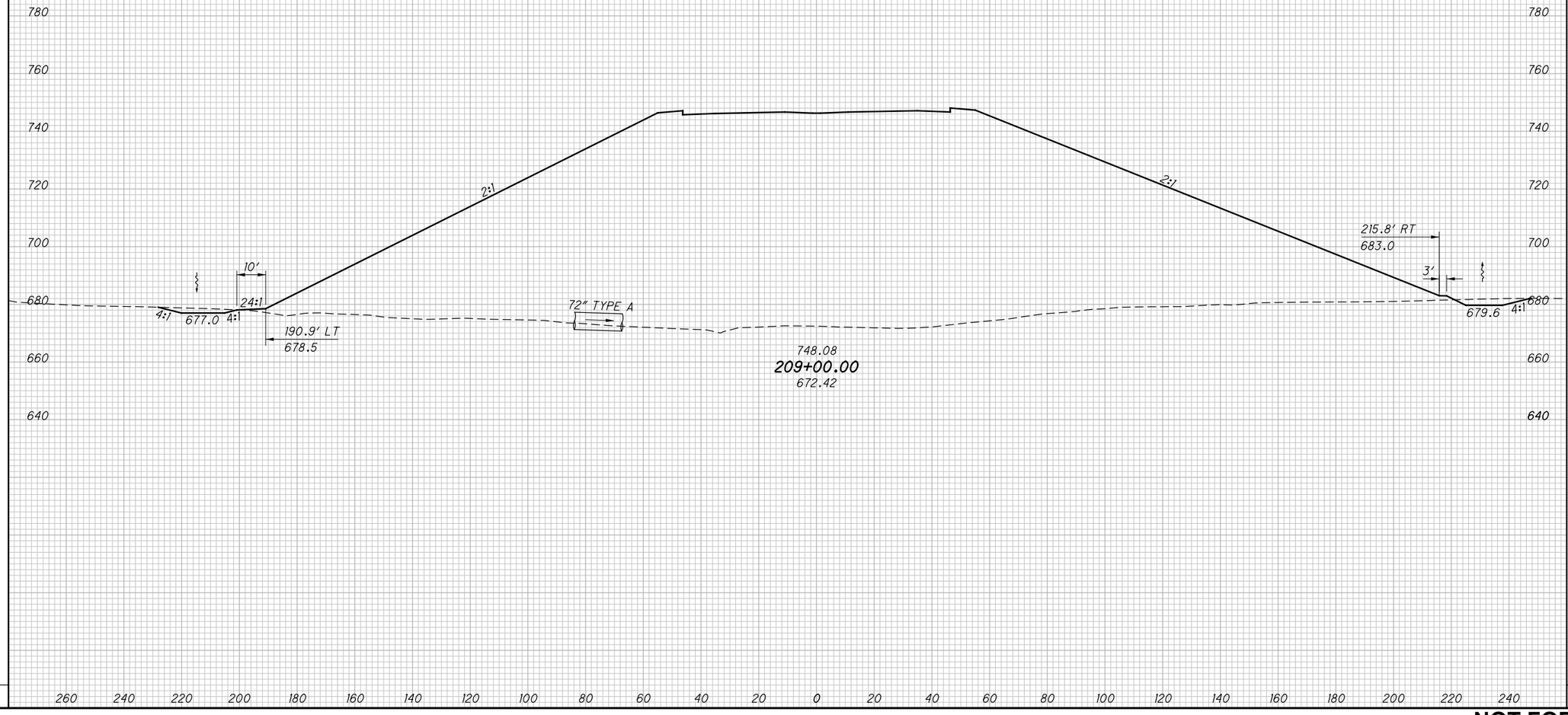
SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD

CHECKED JBH



CROSS SECTIONS SR823
STA. 209+00.00

SCI-823-0.00

293
623

c:\pwworking\pitt\d0247069\77366XS001_Segment C.dgn 2/21/2013 5:40:25 PM CWahlbri

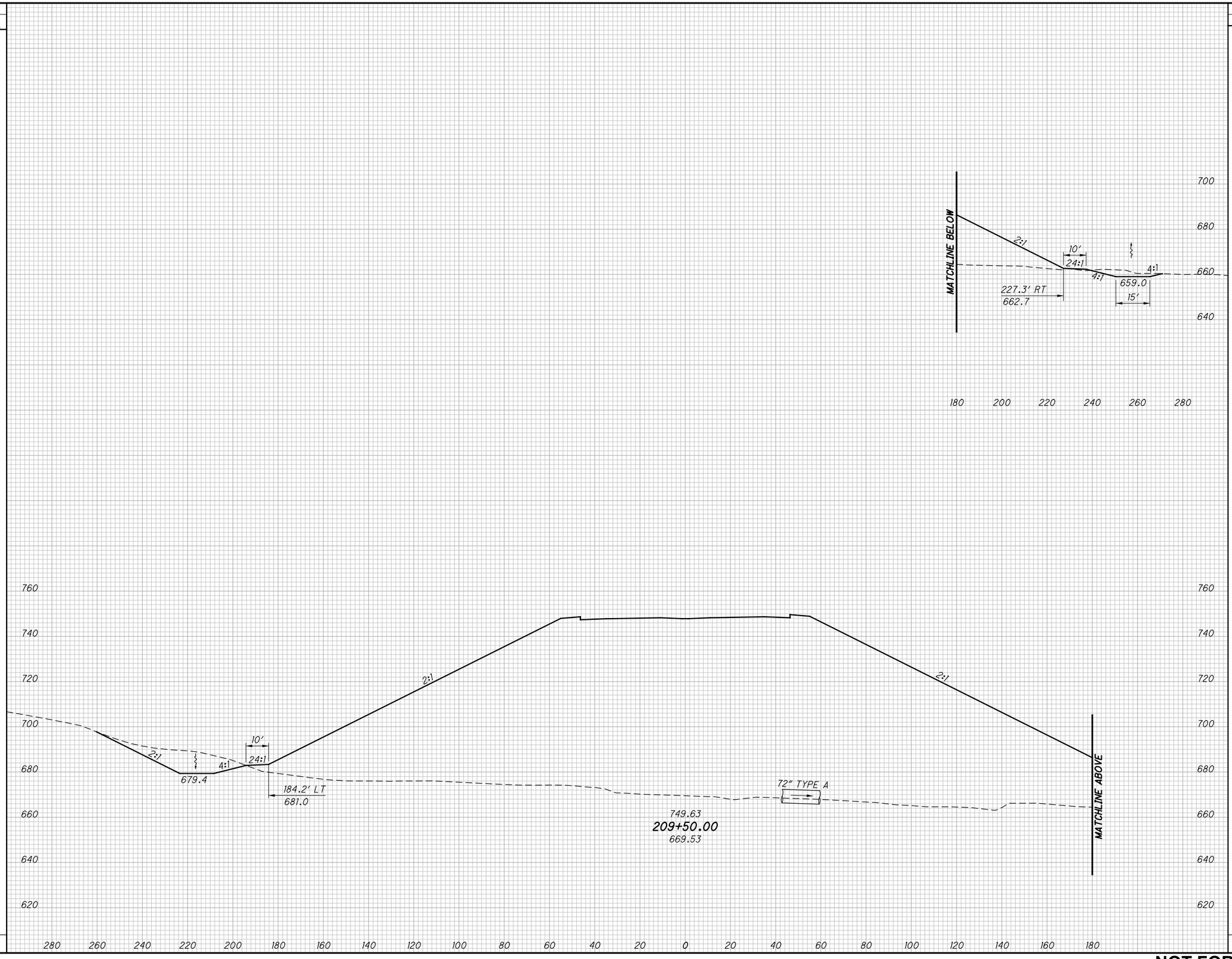
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 209+50.00

SCI-823-0.00

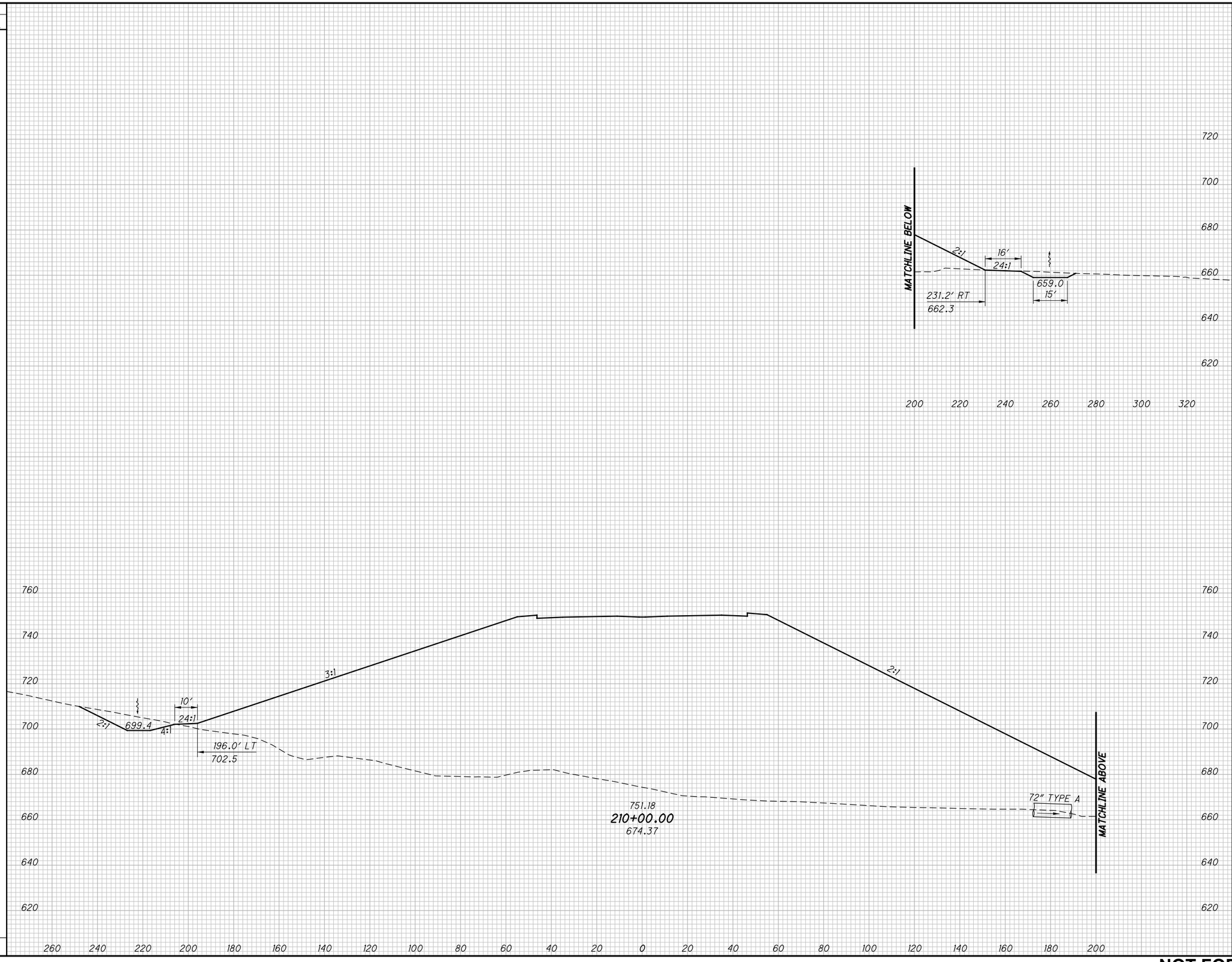
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH

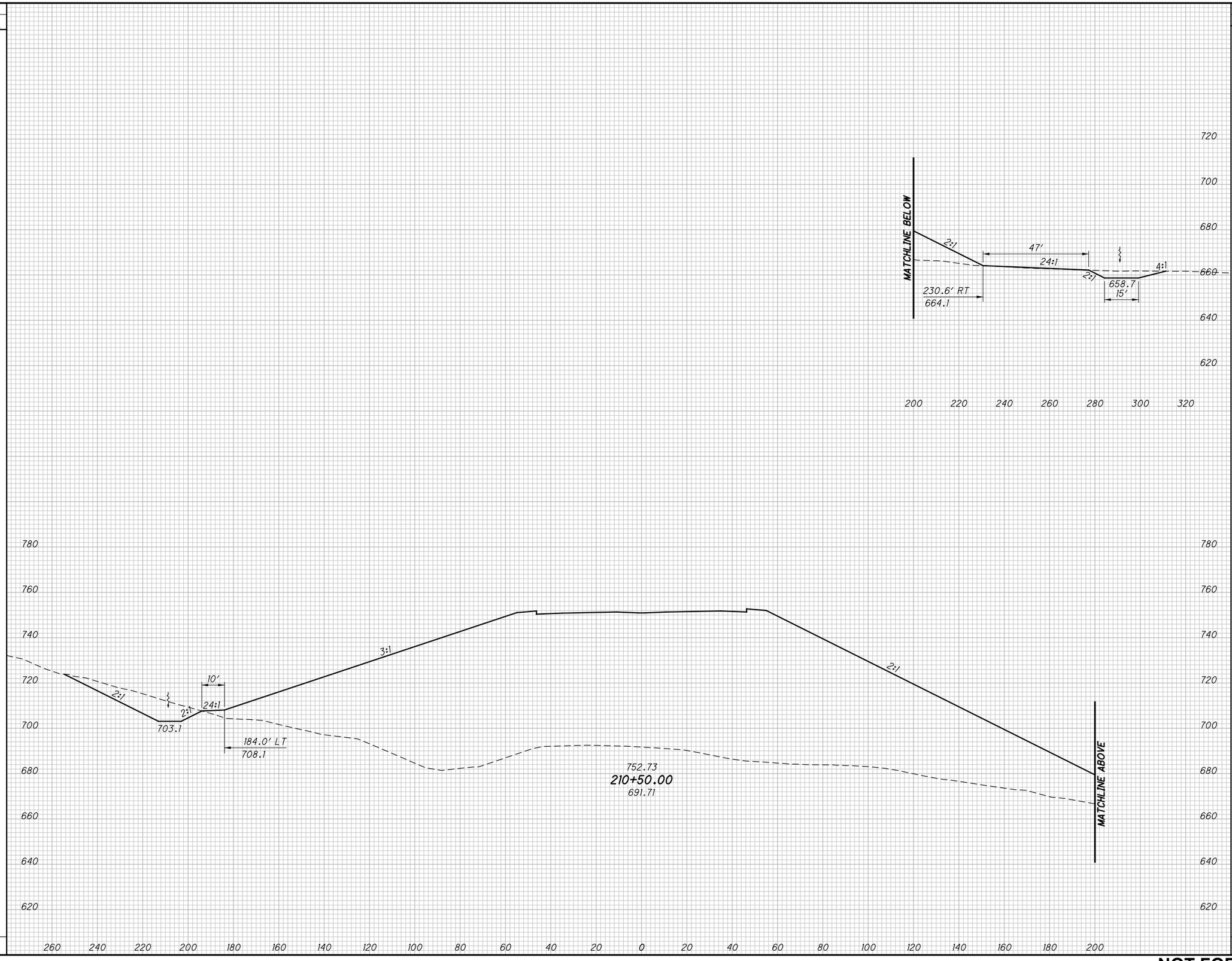


CROSS SECTIONS SR823
STA. 210+00.00

SCI-823-0.00

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED	CHECKED
LBD	JBH

CROSS SECTIONS SR823
STA. 210+50.00

SCI-823-0.00

296
623

c:\pwworking\pitt\d0247069\77366XS001_Segment C.dgn 2/21/2013 5:40:29 PM CWahlbri

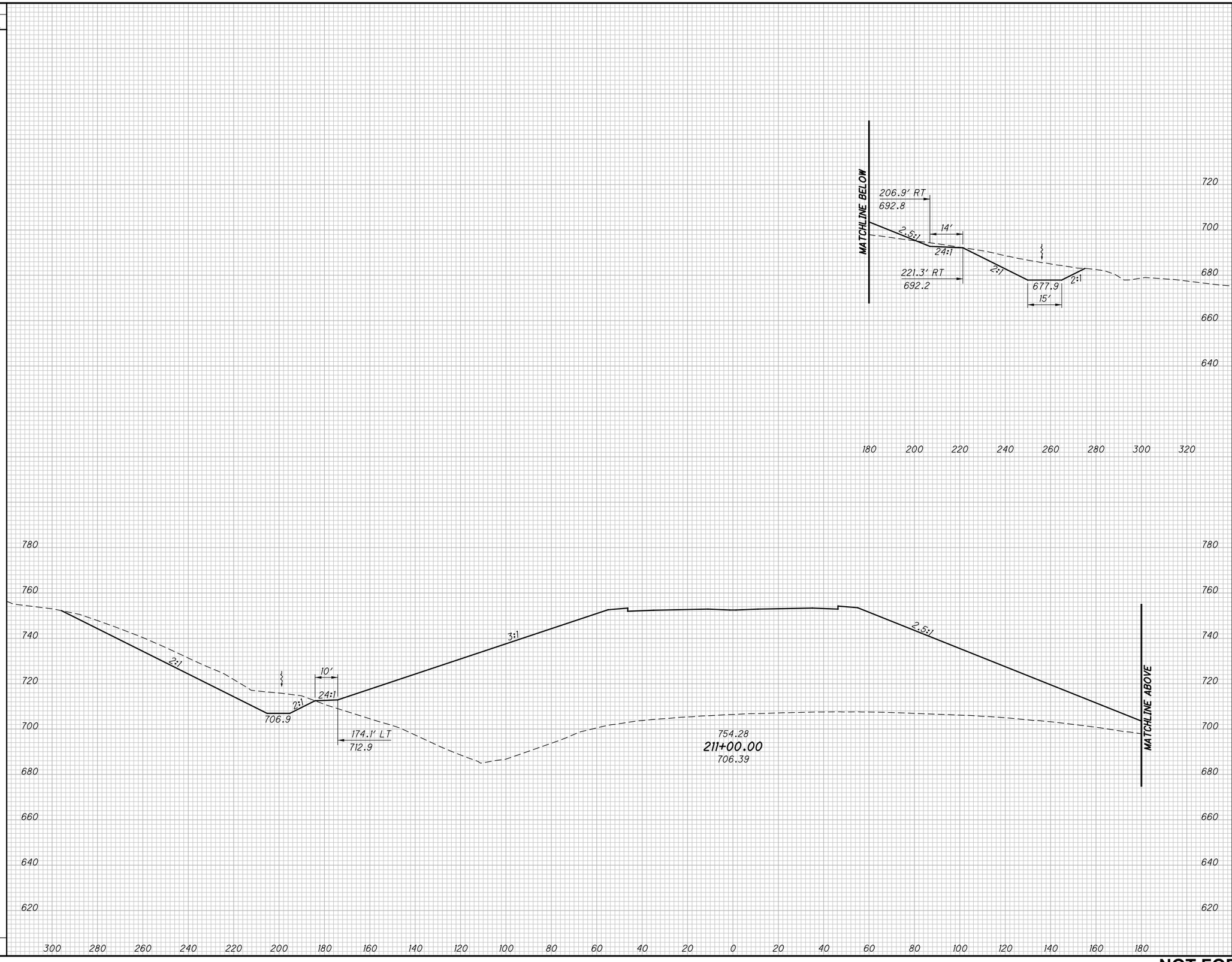
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED	CHECKED
LBD	JBH



CROSS SECTIONS SR823
STA. 211+00.00

SCI-823-0.00

297
623

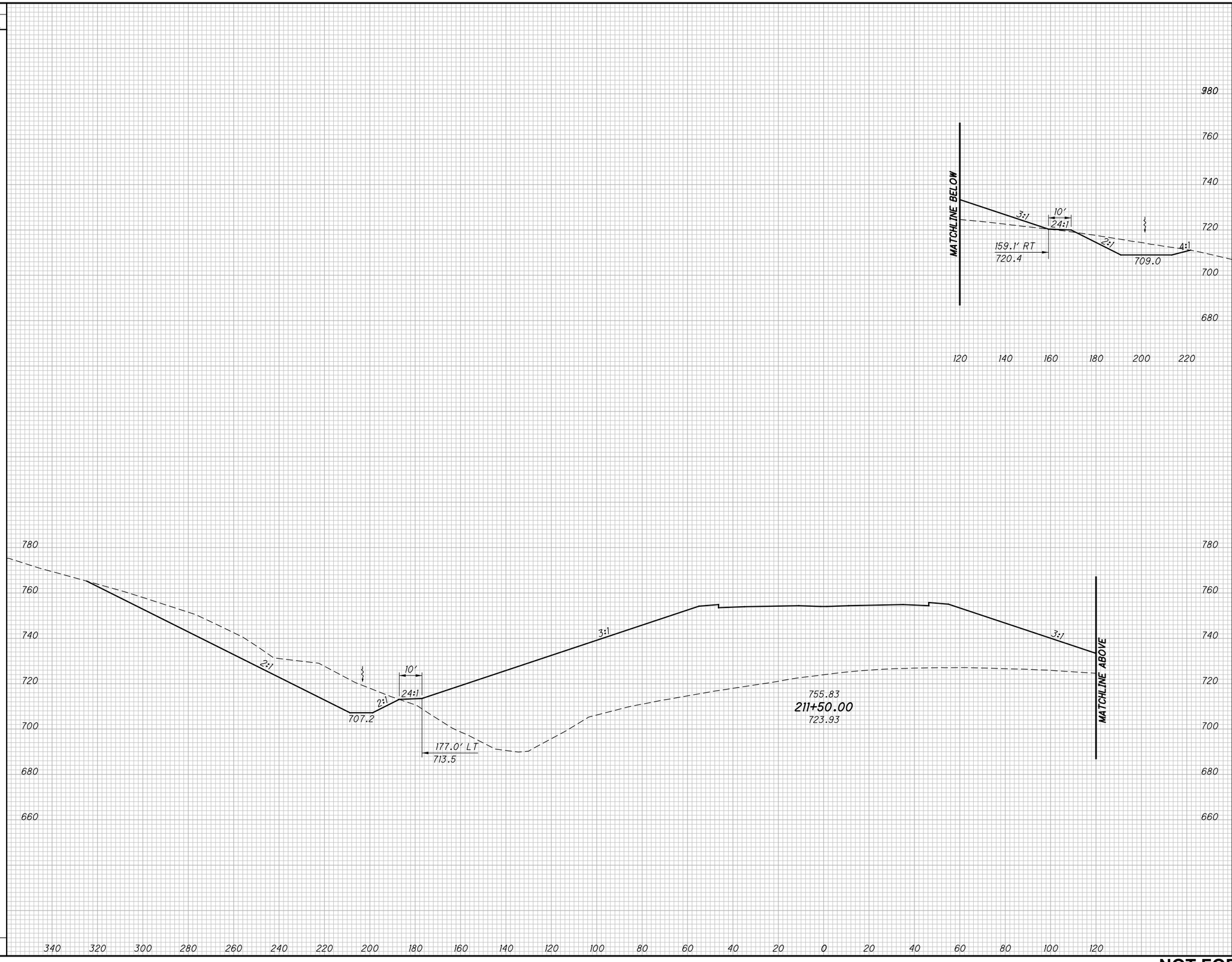
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED	CHECKED
LBD	JBH



CROSS SECTIONS SR823

STA. 211+50.00

SCI-823-0.00

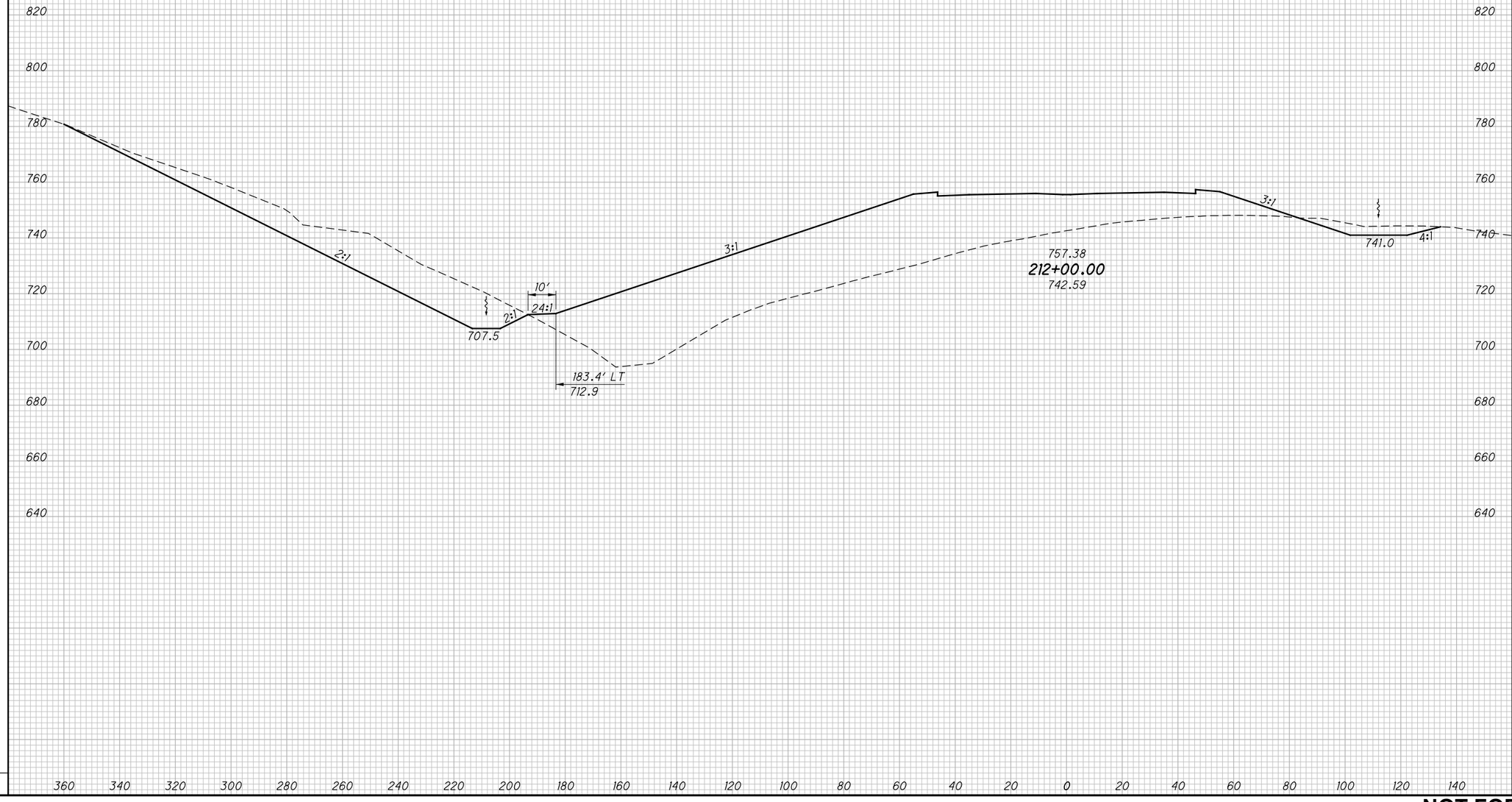
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 212+00.00

SCI-823-0.00

299
623

c:\pwworking\pitt\d0247069\77366XS001_Segment C.dgn 2/21/2013 5:40:34 PM CWahlbri

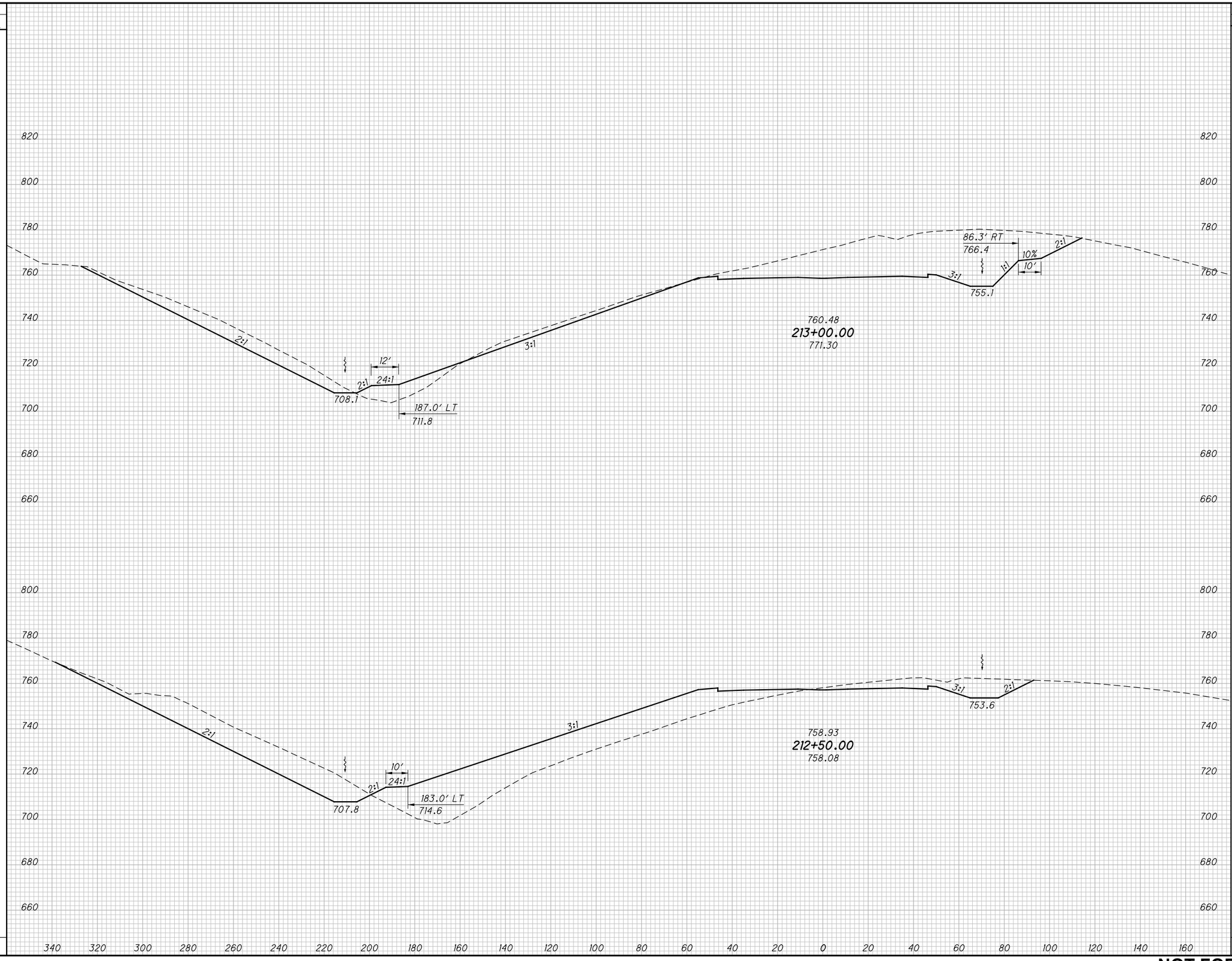
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED	CHECKED
LBD	JBH



CROSS SECTIONS SR823
STA. 212+50.00 TO STA. 213+00.00

SCI-823-0.00

300
623

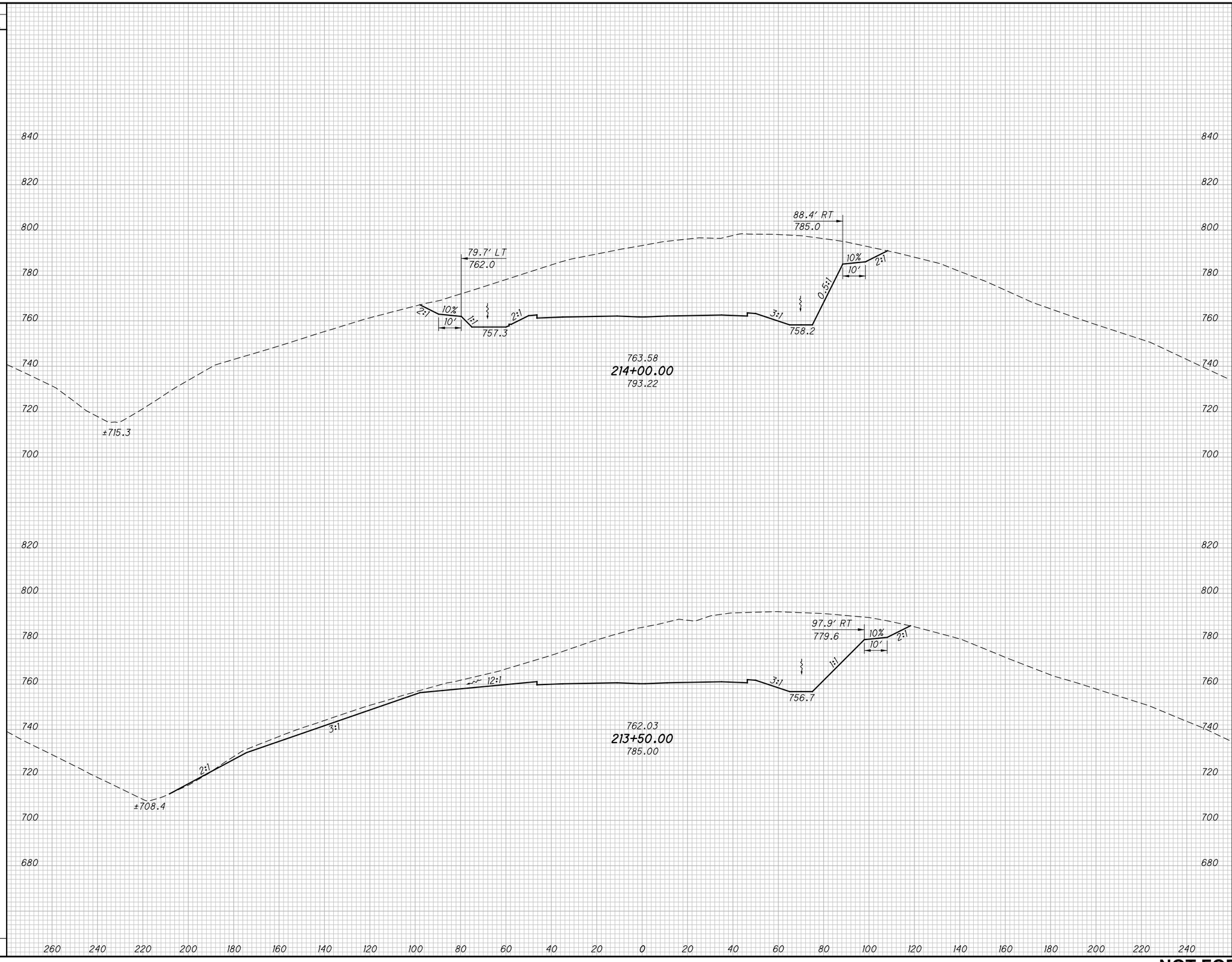
c:\pwworking\pitt\d0247069\77366XS001_Segment C.dgn 2/21/2013 5:40:35 PM CWahlbri

NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 213+50.00 TO STA. 214+00.00

SCI-823-0.00

301
623

c:\pwworking\pitt\d0247069\77366XS001_Segment C.dgn 2/21/2013 5:40:36 PM CWahlbri

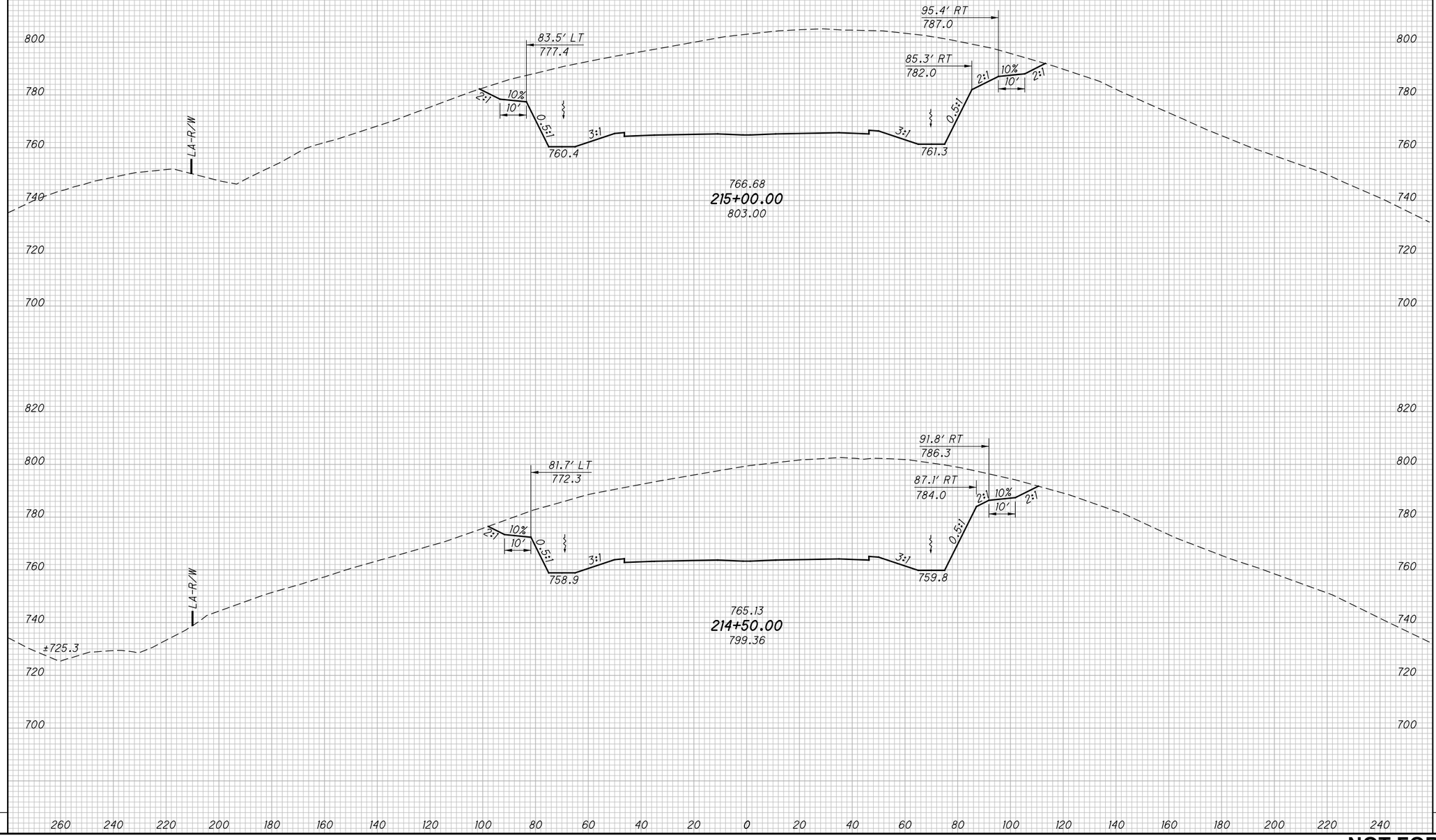
NOT FOR CONSTRUCTION

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED LBD
CHECKED JBH



CROSS SECTIONS SR823
STA. 214+50.00 TO STA. 215+00.00

SCI-823-0.00

302
623

c:\pwworking\pitt\d0247069\77366XS001_Segment C.dgn 2/21/2013 5:40:38 PM CWahlbri

NOT FOR CONSTRUCTION