



CUY-90-14.90

PID 77332/85531

APPENDIX GE-01

**West Bank Grading Plans
(Contract Document)**

State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

**Innerbelt Bridge
Construction Contract Group 1 (CCG1)**

Revision Date: November 14, 2011

Updated Page Numbers: 4-6, 10-15, 26, 31

CUY-90-14.92

WEST BANK SLOPE GRADING PLAN

INDEX OF SHEETS:


TITLE SHEET	1
SCHEMATIC PLAN	2
EXISTING SITE PLAN	3
GRADING PLAN	4-6
CROSS SECTIONS	7-22
PROFILES	23-30
INSTRUMENTATION PLAN	31-34

SEQUENCE OF CONSTRUCTION

PERFORM THE EXCAVATION AND SPECIFIED RELATED WORK LOCATED BETWEEN STATIONS 128+00 AND 134+50 FOR THE FULL WIDTH OF THE PROJECT LIMITS ACCORDING TO THE REQUIREMENTS STATED IN THE SEQUENCE OF CONSTRUCTION LIST PROVIDED BELOW.


1. INSTALL THE DEMONSTRATION DRILLED SHAFT AND EVALUATE THE STRUCTURAL INTEGRITY OF THE SHAFT USING THE GAMMA-GAMMA AND CROSSHOLE SONIC LOGGING TEST METHODS. LOAD TEST THE SHAFT, IF THE SHAFT IS TO BE LOAD TESTED, PRIOR TO EXCAVATING THE WEST END SLOPE SURFACE BELOW THE TOP ELEVATION OF THE DEMONSTRATION DRILLED SHAFT.
2. REMOVE THE COLD STORAGE BUILDING TO THE EXISTING GROUND SURFACE LINE.
3. PERFORM ALL STAGE 1 EXCAVATION WORK DOWN TO THE ELEVATION OF THE BENCH LOCATED NEAR ELEVATION 640. CONSTRUCT THE GATEWAY ANIMAL CLINIC PARKING LOT RETAINING WALL, AS THE EXCAVATION PROCEEDS. REMOVE UNDERGROUND PORTIONS OF THE COLD STORAGE BUILDING AND RETAINING WALLS AS THE EXCAVATION PROCEEDS.
4. PERFORM ALL STAGE 2 AND 3 EXCAVATION WORK: STAGE 2 EXCAVATION SHALL BEGIN NOT LESS THAN 20 DAYS AFTER COMPLETION OF STAGE 1. STAGE 3 EXCAVATION SHALL PROCEED TO FINISHED GRADE EXCEPT FOR THE AREA OF STAGE 4 EXCAVATION. (SEE SHEET 27 OF 34).
5. PERFORM THE STAGE 4 EXCAVATION NOT LESS THAN 20 DAYS AFTER COMPLETION OF STAGE 3.
6. COMMENCE CUY-90 WESTBOUND INNERBELT BRIDGE FOUNDATION WORK AFTER COMPLETION OF STAGE 4 EXCAVATION.
7. BEGIN INSTALLING THE HORIZONTAL DRAINS WITHIN 20 DAYS AFTER THE DATE WHEN ACCESS TO THE LOCATION WHERE HORIZONTAL DRAINS ARE TO BE INSTALLED HAS BECOME ACCESSIBLE.
8. BEGIN INSTALLING THE VERTICAL PRESSURE RELIEF DUCTS WITHIN 20 DAYS AFTER THE DATE WHEN COMPLETE ACCESS TO THE LOCATION WHERE VERTICAL PRESSURE RELIEF DUCTS ARE TO BE INSTALLED HAS BECOME AVAILABLE.

ENGINEERS SEAL:



SIGNED: *Richard Engel*
DATE: 12-10-09

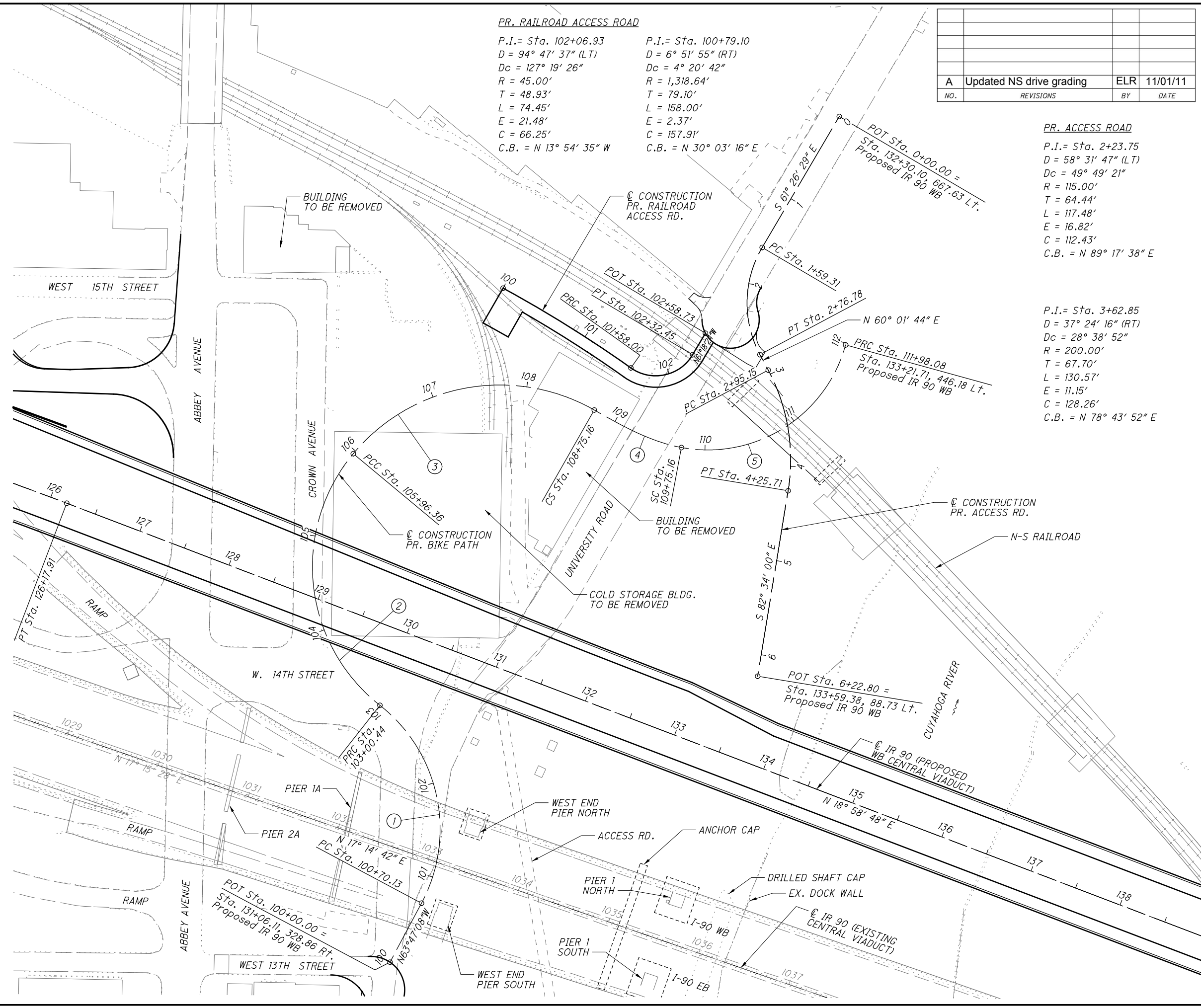
ENGINEERS SEAL:



SIGNED: *Jamal Nusuairat*
DATE: 12-10-09

NO.	REVISIONS	BY	DATE
A	Updated NS drive grading	ELR	11/01/11

SCHEMATIC PLAN



PR. RAILROAD ACCESS ROAD

P.I. = Sta. 102+06.93
 D = 94° 47' 37" (LT)
 Dc = 127' 19' 26"
 R = 45.00'
 T = 48.93'
 L = 74.45'
 E = 21.48'
 C = 66.25'
 C.B. = N 13° 54' 35" W

P.I. = Sta. 100+79.10
 D = 6° 51' 55" (RT)
 Dc = 4° 20' 42"
 R = 1,318.64'
 T = 79.10'
 L = 158.00'
 E = 2.37'
 C = 157.91'
 C.B. = N 30° 03' 16" E

PR. ACCESS ROAD

P.I. = Sta. 2+23.75
 D = 58° 31' 47" (LT)
 Dc = 49° 49' 21"
 R = 115.00'
 T = 64.44'
 L = 117.48'
 E = 16.82'
 C = 112.43'
 C.B. = N 89° 17' 38" E

P.I. = Sta. 3+62.85
 D = 37° 24' 16" (RT)
 Dc = 28° 38' 52"
 R = 200.00'
 T = 67.70'
 L = 130.57'
 E = 11.15'
 C = 128.26'
 C.B. = N 78° 43' 52" E

PR. BIKE PATH

① P.I. = Sta. 102+08.52
 Δ = 79° 58' 23" (LT)
 Dc = 34° 43' 29"
 R = 165.00'
 T = 138.39'
 L = 230.31'
 E = 50.35'
 C = 212.06'
 C.B. = S 76° 13' 40" W

② P.I. = Sta. 104+90.84
 Δ = 91° 38' 56" (RT)
 Dc = 30° 58' 14"
 R = 185.00'
 T = 190.40'
 L = 295.92'
 E = 80.48'
 C = 265.37'
 C.B. = S 82° 03' 57" W

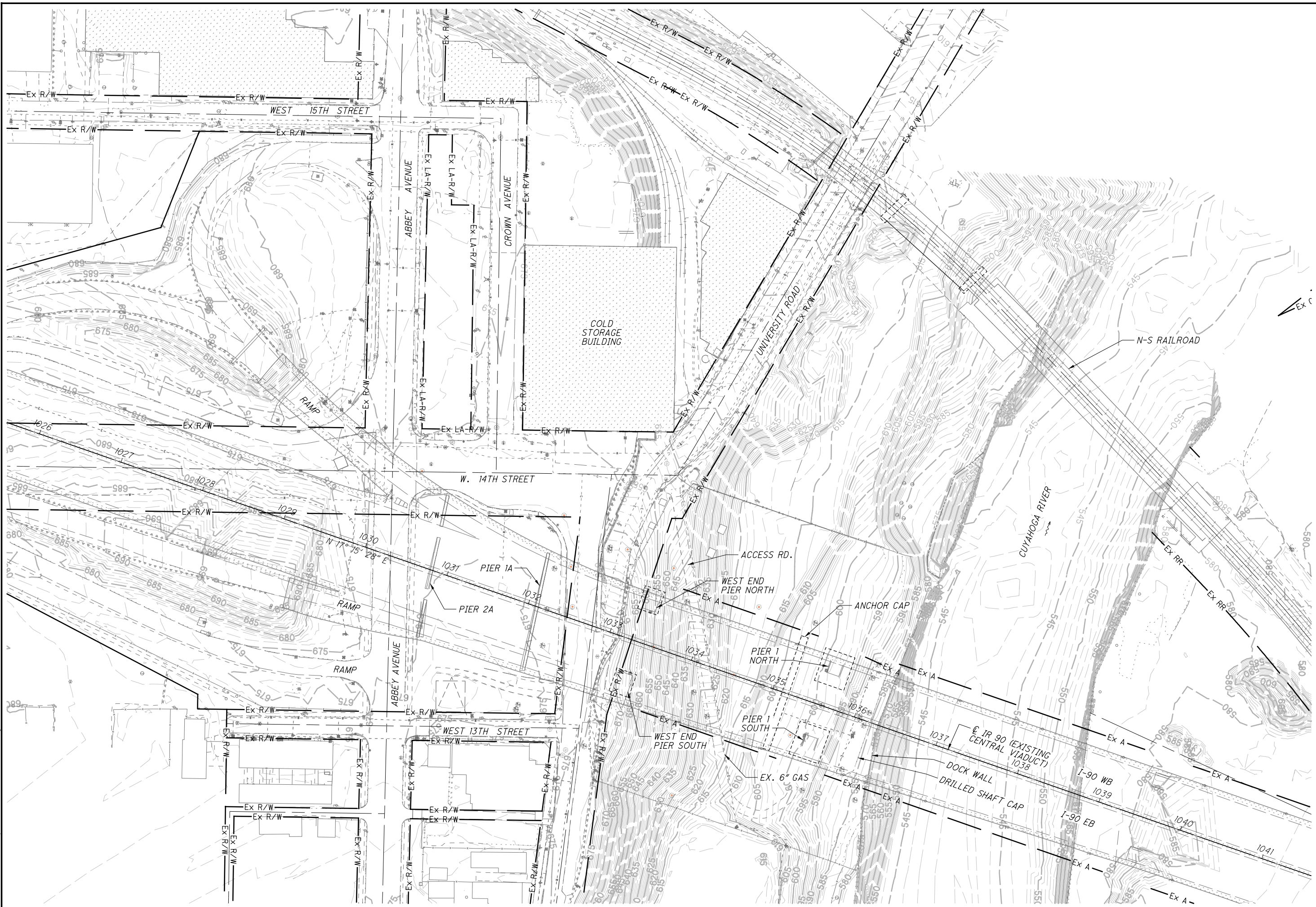
③ P.I. = Sta. 107+63.80
 Δ = 79° 52' 16" (RT)
 Dc = 28° 38' 52"
 R = 200.00'
 T = 167.44'
 L = 278.80'
 E = 60.84'
 C = 256.77'
 C.B. = N 12° 10' 27" W

④ P.I. = STA. 109+42.22
 Ls = 100.00'
 fs = 19° 05' 55"
 LT = 67.06'
 ST = 33.69'
 x = 98.89'
 y = 11.02'
 k = 49.82'
 p = 2.77'

⑤ P.I. = Sta. 111+12.97
 Δ = 85° 08' 55" (LT)
 Dc = 38° 11' 50"
 R = 150.00'
 T = 137.81'
 L = 222.92'
 E = 53.69'
 C = 202.96'
 C.B. = N 33° 54' 41" W

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CALCULATED
CDS
CHECKED
RLE

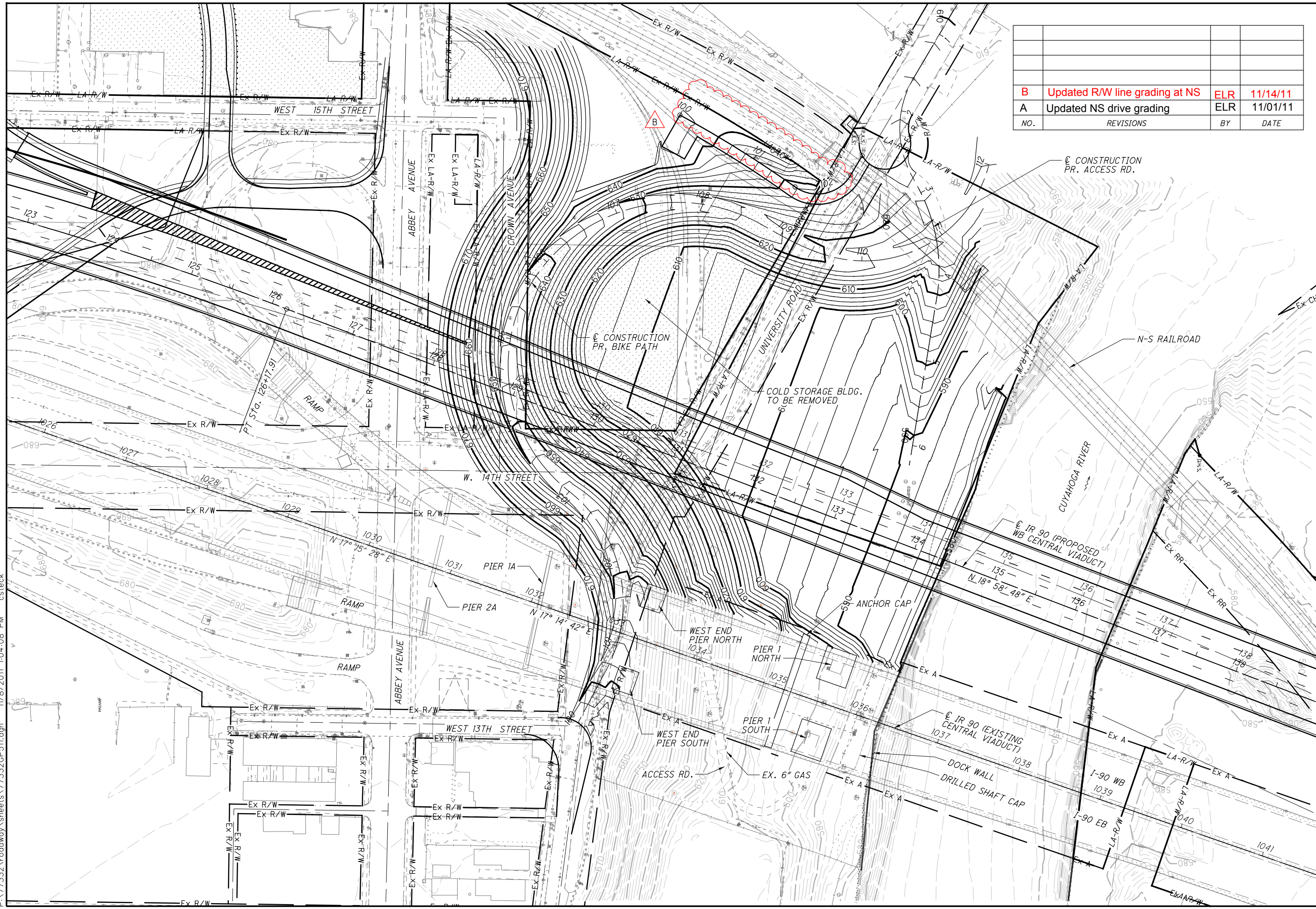
0 50 100
HORIZONTAL
SCALE IN FEET

**EXISTING SITE PLAN
CUYAHOGA RIVER WEST BANK**

CUY-90-14.92

3
34

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NO.	REVISIONS	BY	DATE
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A	Updated NS drive grading	ELR	11/01/11

CALCULATED
 DWB
 CHECKED
 R/L

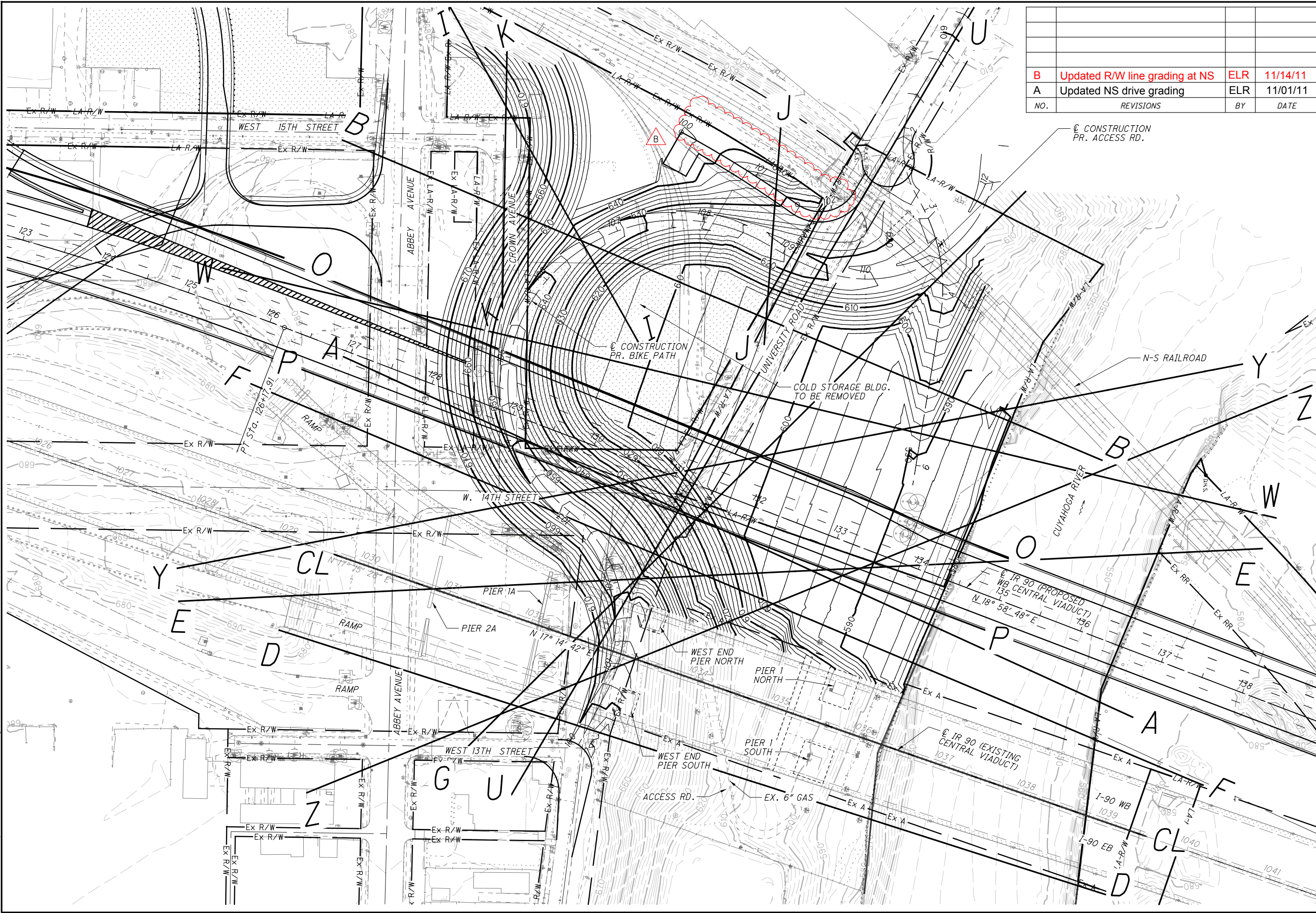
0 50 100
 HORIZONTAL
 SCALE IN FEET



SLOPE GRADING PLAN
 CUYAHOGA RIVER WEST BANK

CUY-90-14.92

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NO.	REVISIONS	BY	DATE
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A	Updated NS drive grading	ELR	11/01/11

⊕ CONSTRUCTION
PR. ACCESS RD.

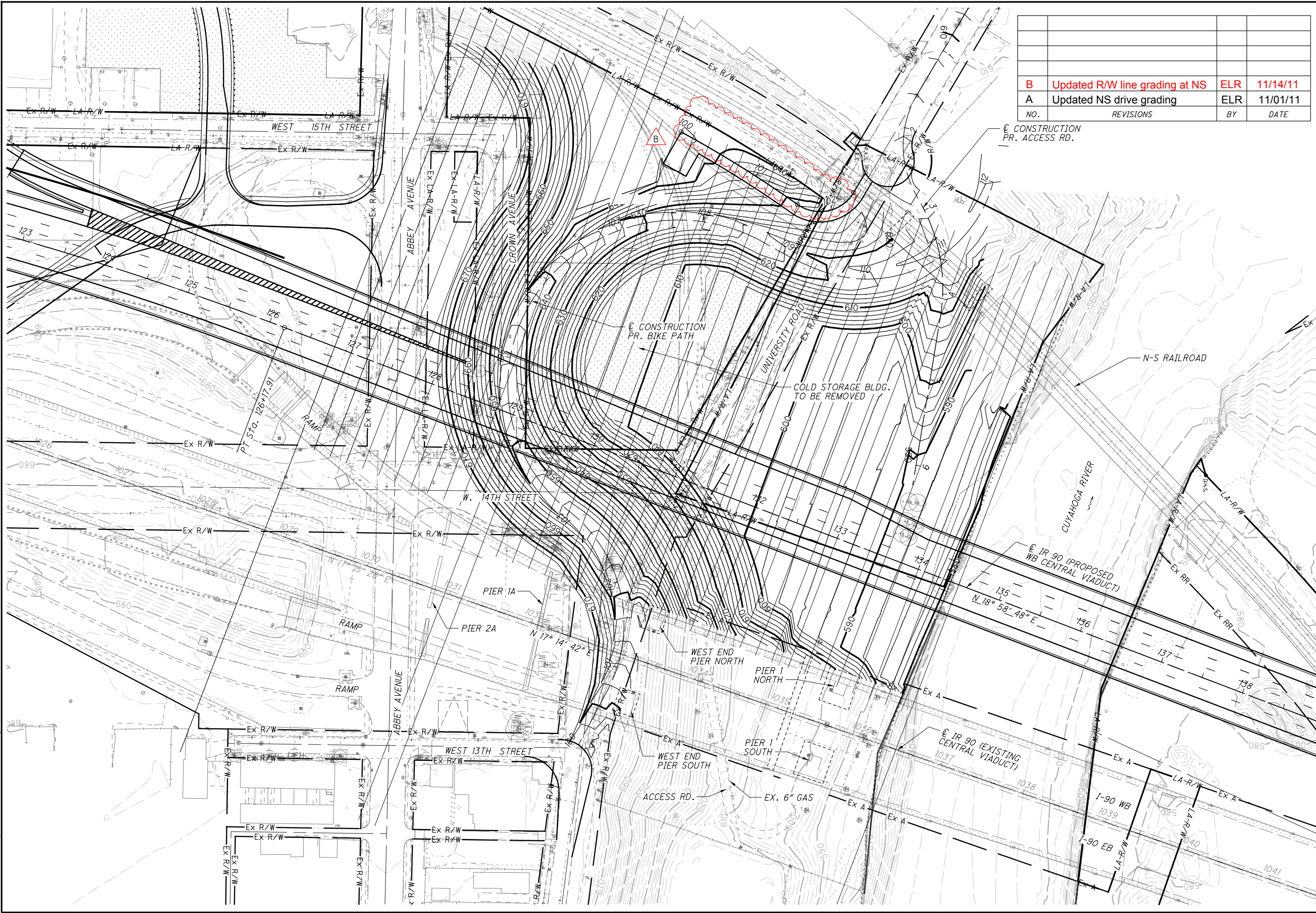
⊕ CONSTRUCTION
PR. BIKE PATH

COLD STORAGE BLDG.
TO BE REMOVED

⊕ IR 90 (PROPOSED
WB CENTRAL VIADUCT)
135
N 18° 58' 48" E
136

⊕ IR 90 (EXISTING
CENTRAL VIADUCT)
1037

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B	Updated R/W line grading at NS	ELR	11/14/11
A	Updated NS drive grading	ELR	11/01/11
NO.	REVISIONS	BY	DATE

CONSTRUCTION PR. ACCESS RD.

CONSTRUCTION PR. BIKE PATH

COLD STORAGE BLDG. TO BE REMOVED



0 50 100
HORIZONTAL SCALE IN FEET

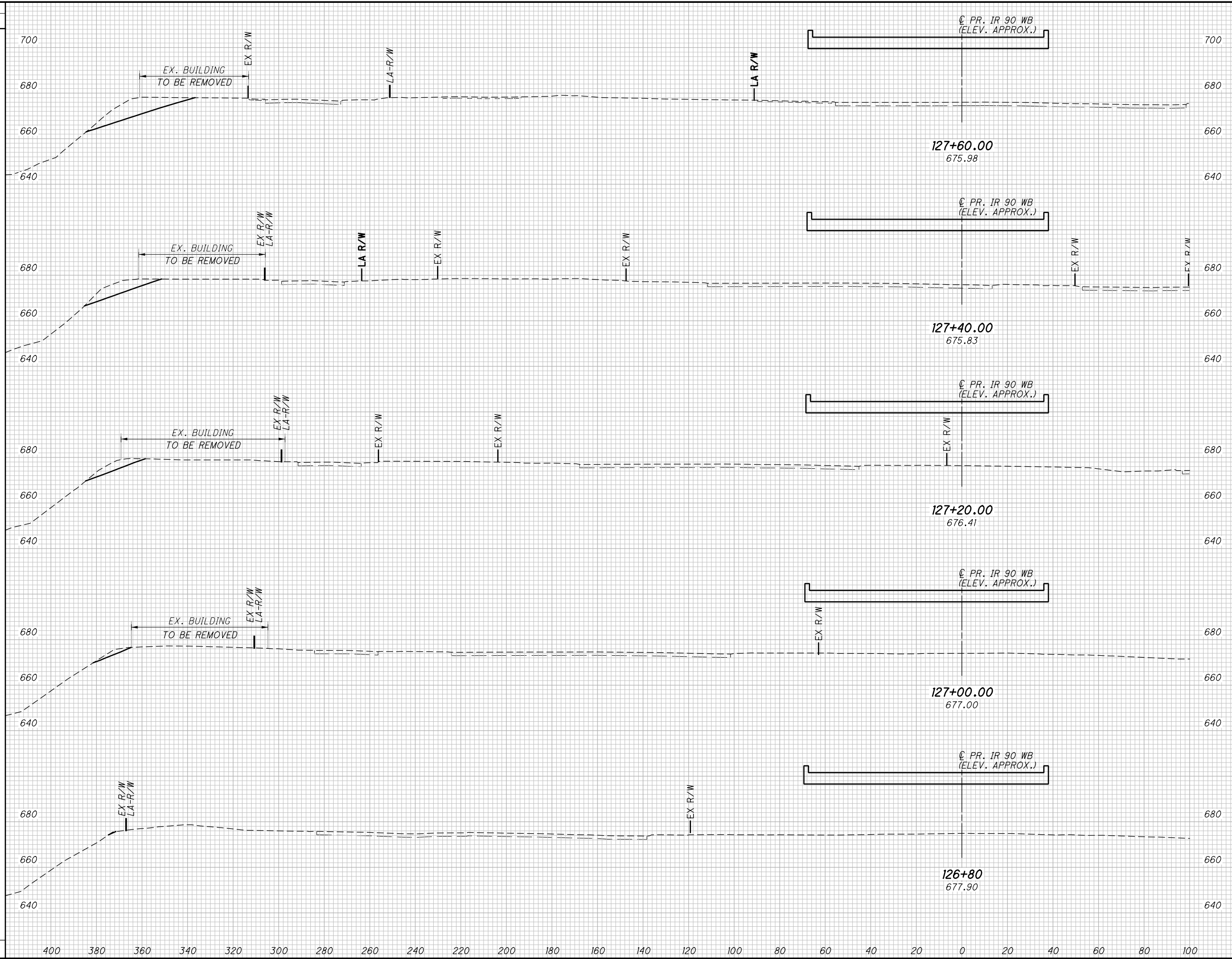
CALCULATED
DWB
CHECKED
RLE

**SLOPE GRADING PLAN & SECTION LOCATIONS
CUYAHOGA RIVER WEST BANK**

CUY-90-14.92

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SEEDING	
END WIDTH	SO. YDS.

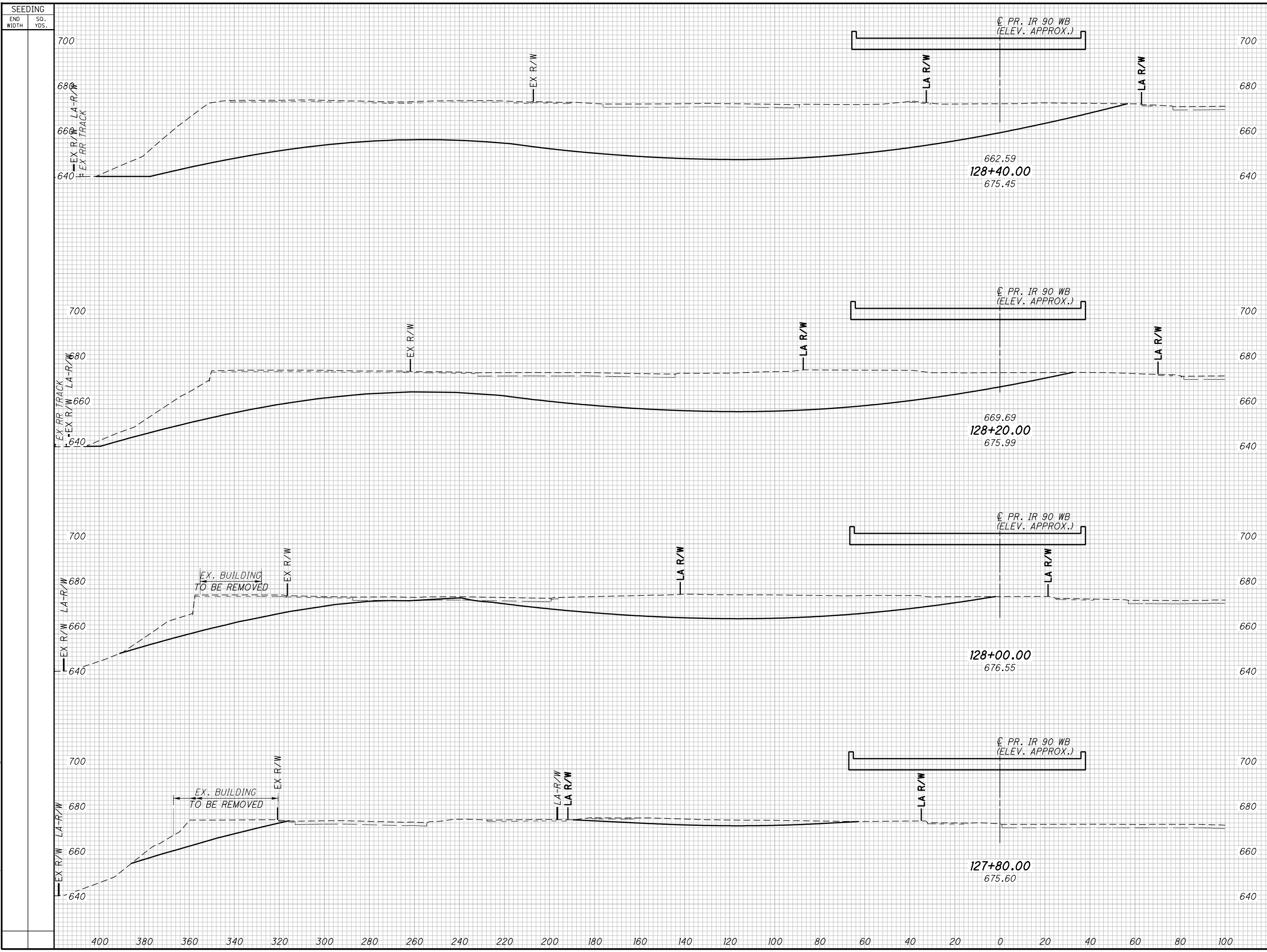


END AREA		VOLUME		CALCULATED	DWB	CHECKED	RLE
CUT	FILL	CUT	FILL				

CROSS SECTIONS - I.R. 90 GRADING PLAN
STA. 126+80.00 TO STA. 127+60.00

CUY-90-14.92

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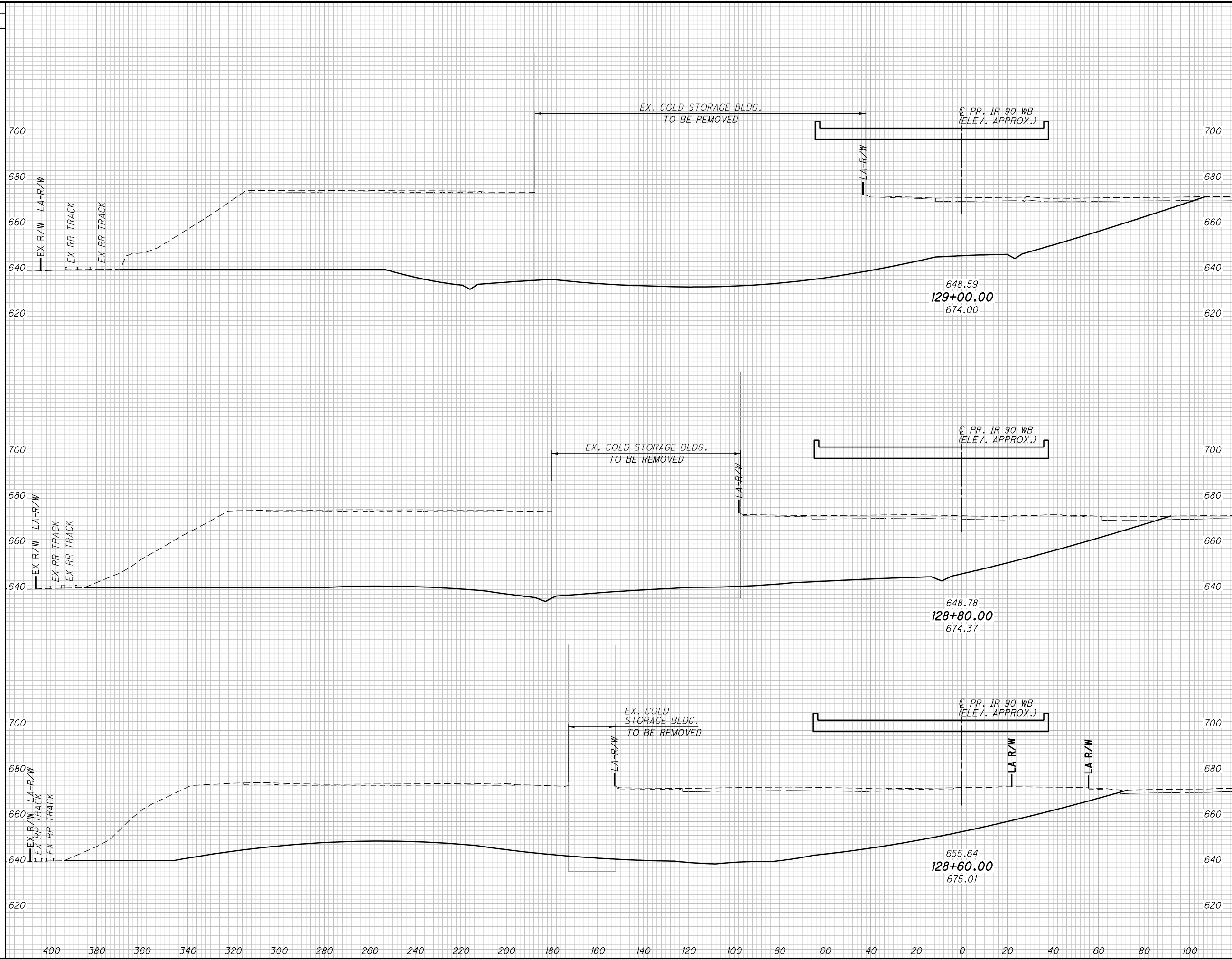
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END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	DWB	RLE

CROSS SECTIONS - I.R. 90 GRADING PLAN
STA. 127+80.00 TO STA. 128+40.00

CUY-90-14.92

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SEEDING	
END WIDTH	SO. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

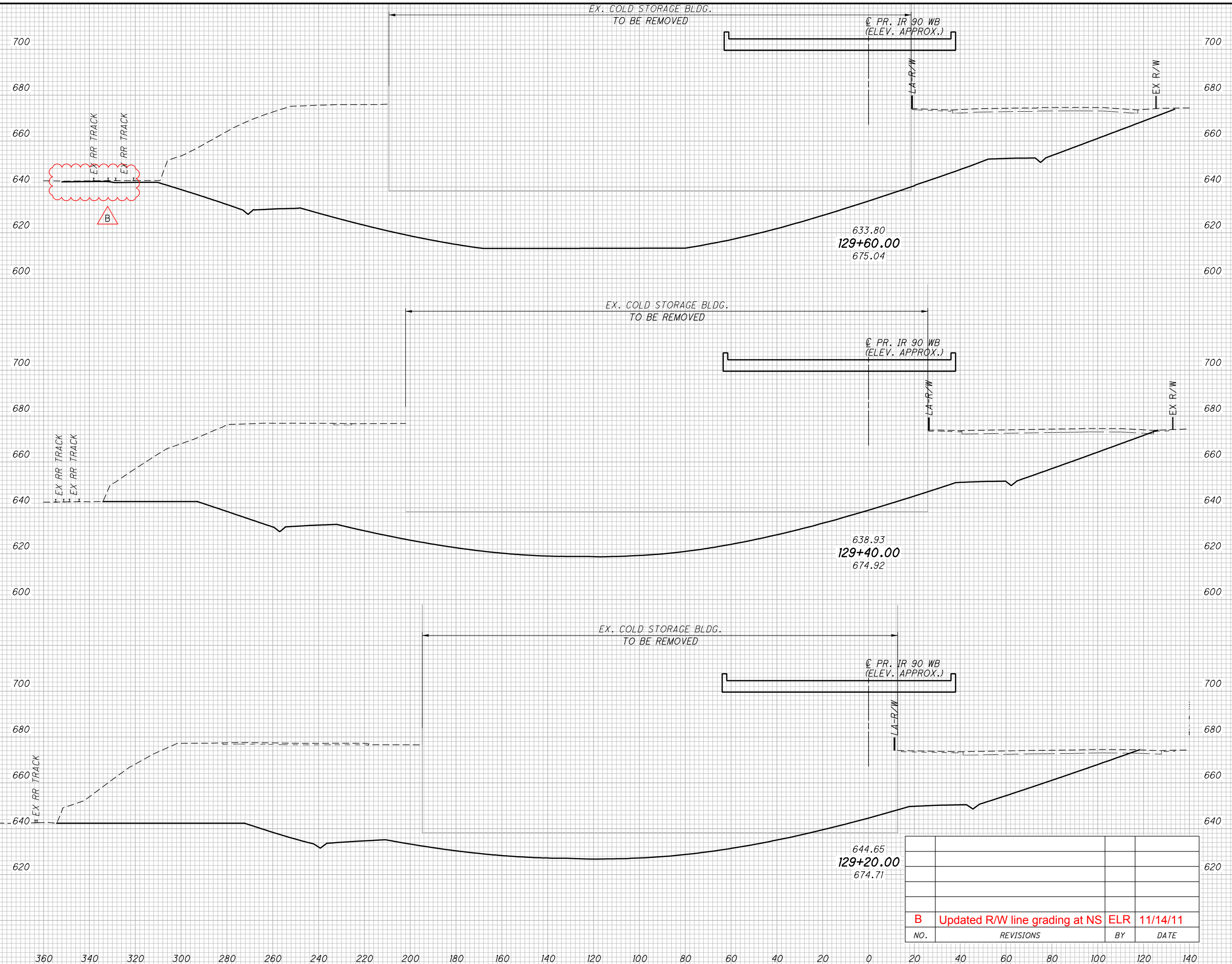
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CUY-90-14.92

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SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CROSS SECTIONS - I.R. 90 GRADING PLAN
STA. 129+20.00 TO STA. 129+60.00

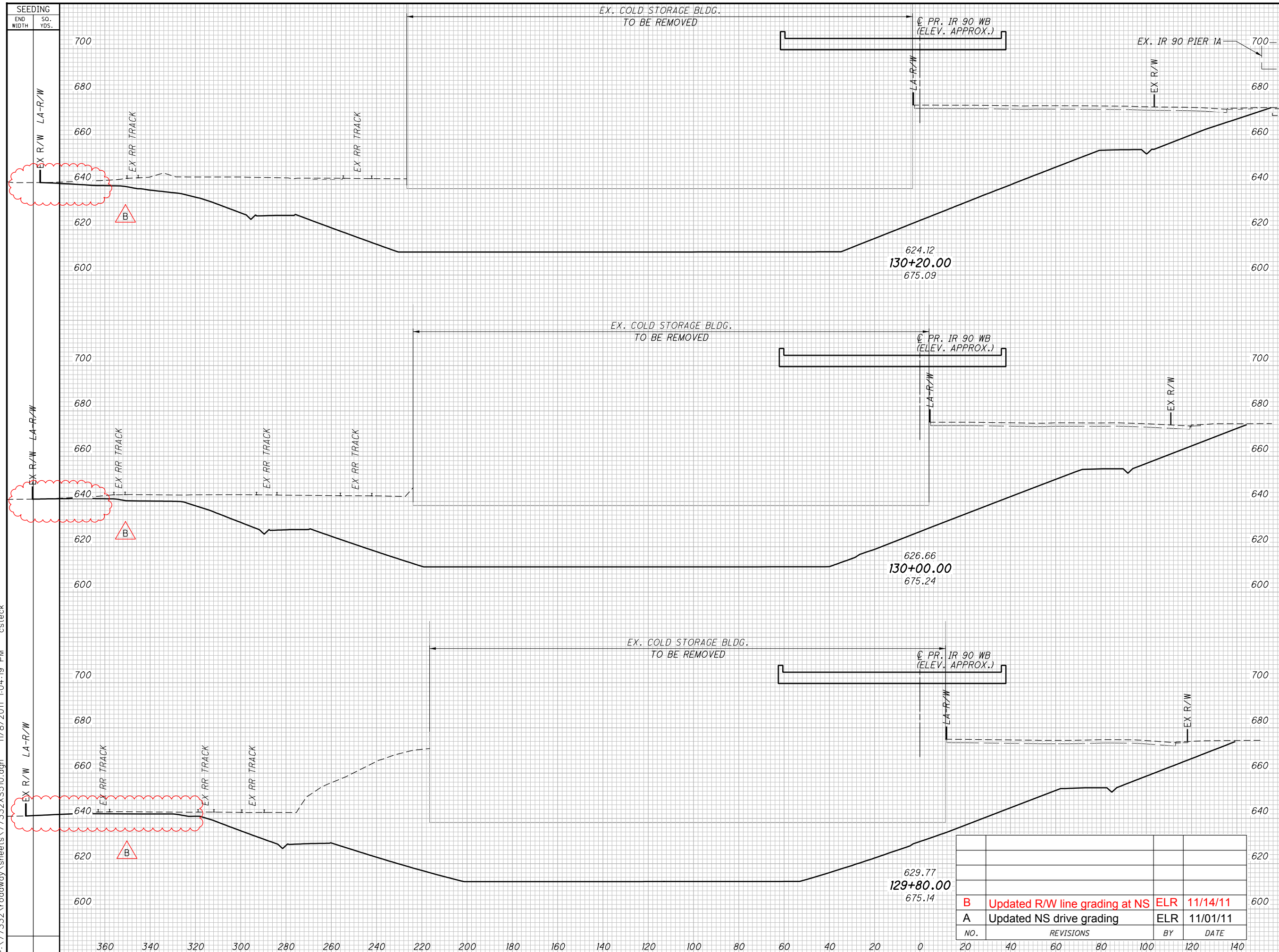
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CUY-90-14.92

10
34

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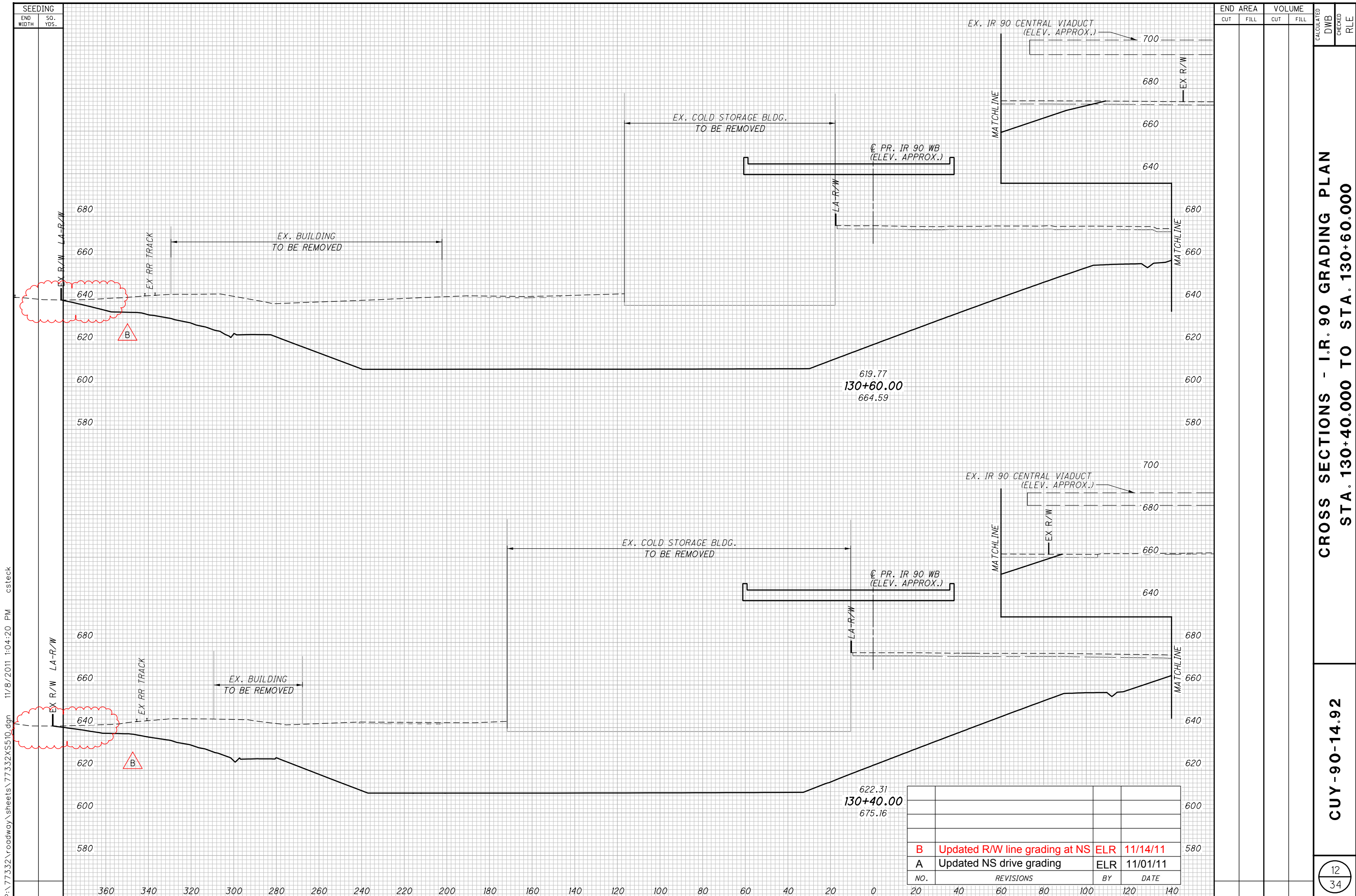
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END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL				

CROSS SECTIONS - I.R. 90 GRADING PLAN			
STA. 129+80.00 TO STA. 130+20.00			
CUY-90-14.92			
11			
34			

NO.	REVISIONS	BY	DATE
B	Updated R/W line grading at NS	ELR	11/14/11
A	Updated NS drive grading	ELR	11/01/11



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SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	DWB	CHECKED	RLE
CUT	FILL	CUT	FILL				

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STA. 130+40.00 TO STA. 130+60.00

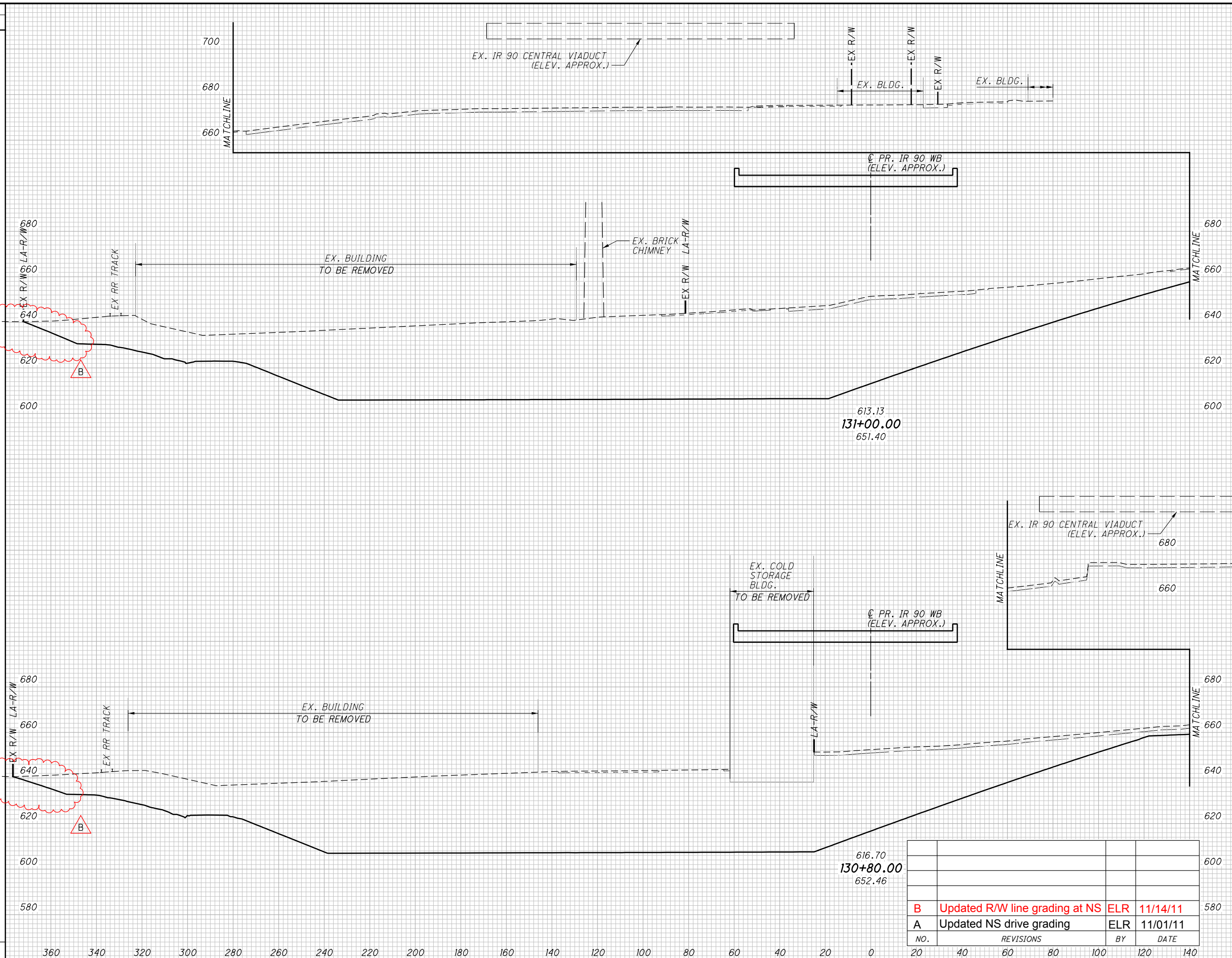
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NO.	REVISIONS	BY	DATE

B Updated R/W line grading at NS ELR 11/14/11
A Updated NS drive grading ELR 11/01/11

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END WIDTH	SO. YDS.

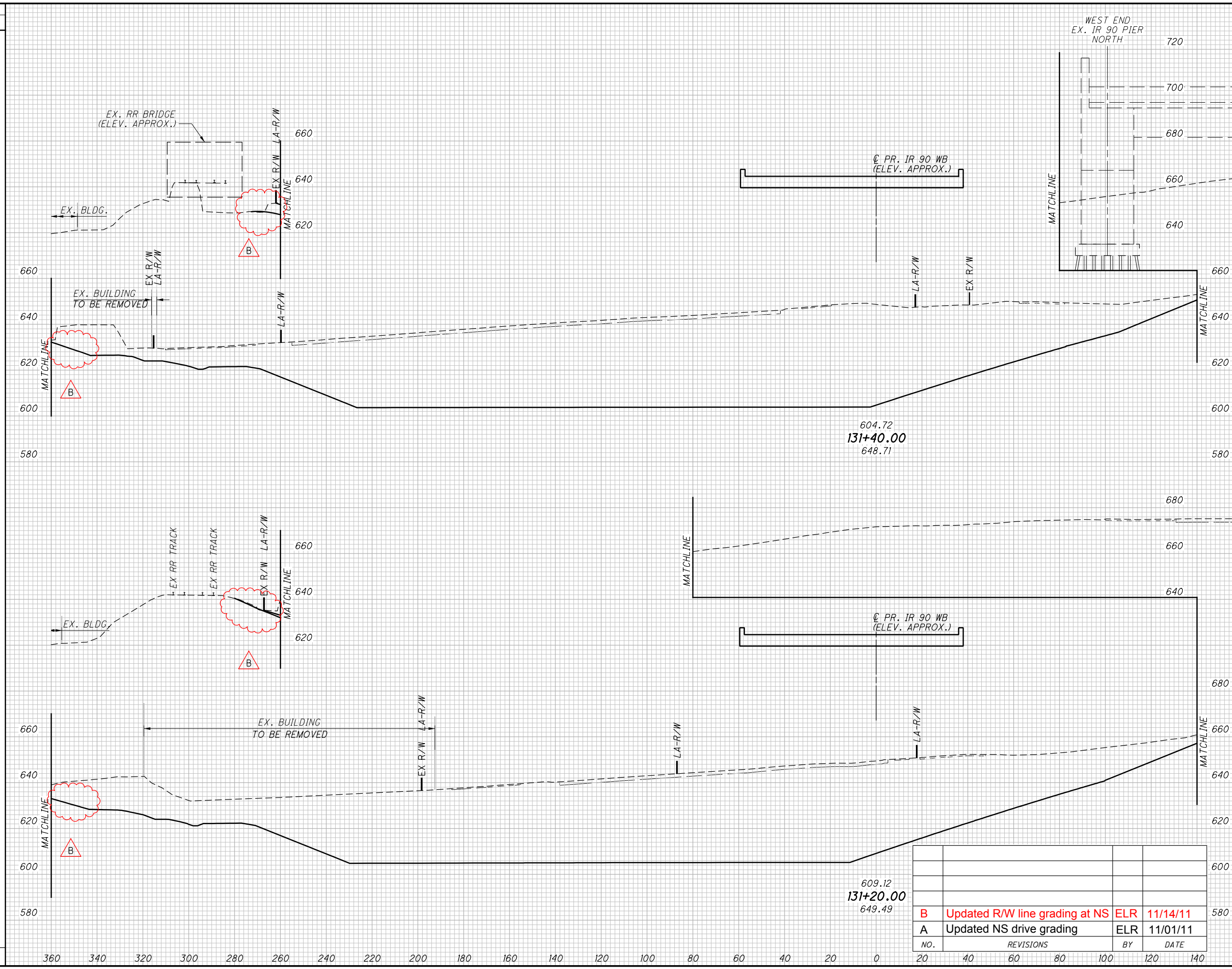


END AREA		VOLUME	
CUT	FILL	CUT	FILL

CROSS SECTIONS - I.R. 90 GRADING PLAN
STA. 130+80.00 TO STA. 131+00.00
CUY-90-14.92

NO.	REVISIONS	BY	DATE
B	Updated R/W line grading at NS	ELR	11/14/11
A	Updated NS drive grading	ELR	11/01/11

SEEDING
END WIDTH SQ. YDS.
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END AREA		VOLUME		CALCULATED DWB	CHECKED RLE
CUT	FILL	CUT	FILL		

NO.	REVISIONS	BY	DATE
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A	Updated NS drive grading	ELR	11/01/11

14
34

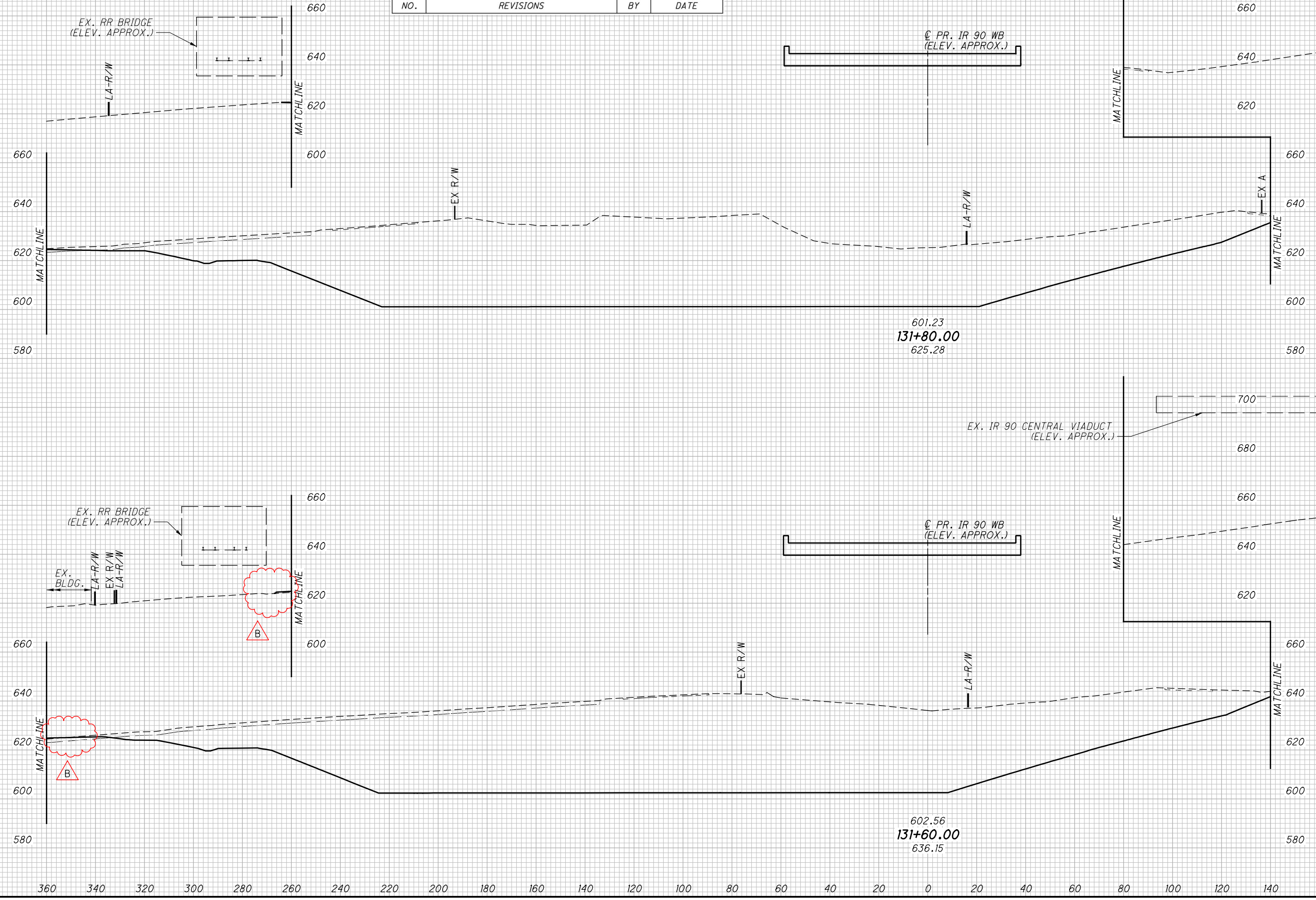
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STA. 131+20.00 TO STA. 131+40.00

CUY-90-14.92

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SEEDING	
END WIDTH	SO. YDS.

NO.	REVISIONS	BY	DATE
B	Updated R/W line grading at NS	ELR	11/14/11
A	Updated NS drive grading	ELR	11/01/11



END AREA	VOLUME	CALCULATED	CHECKED	RLE

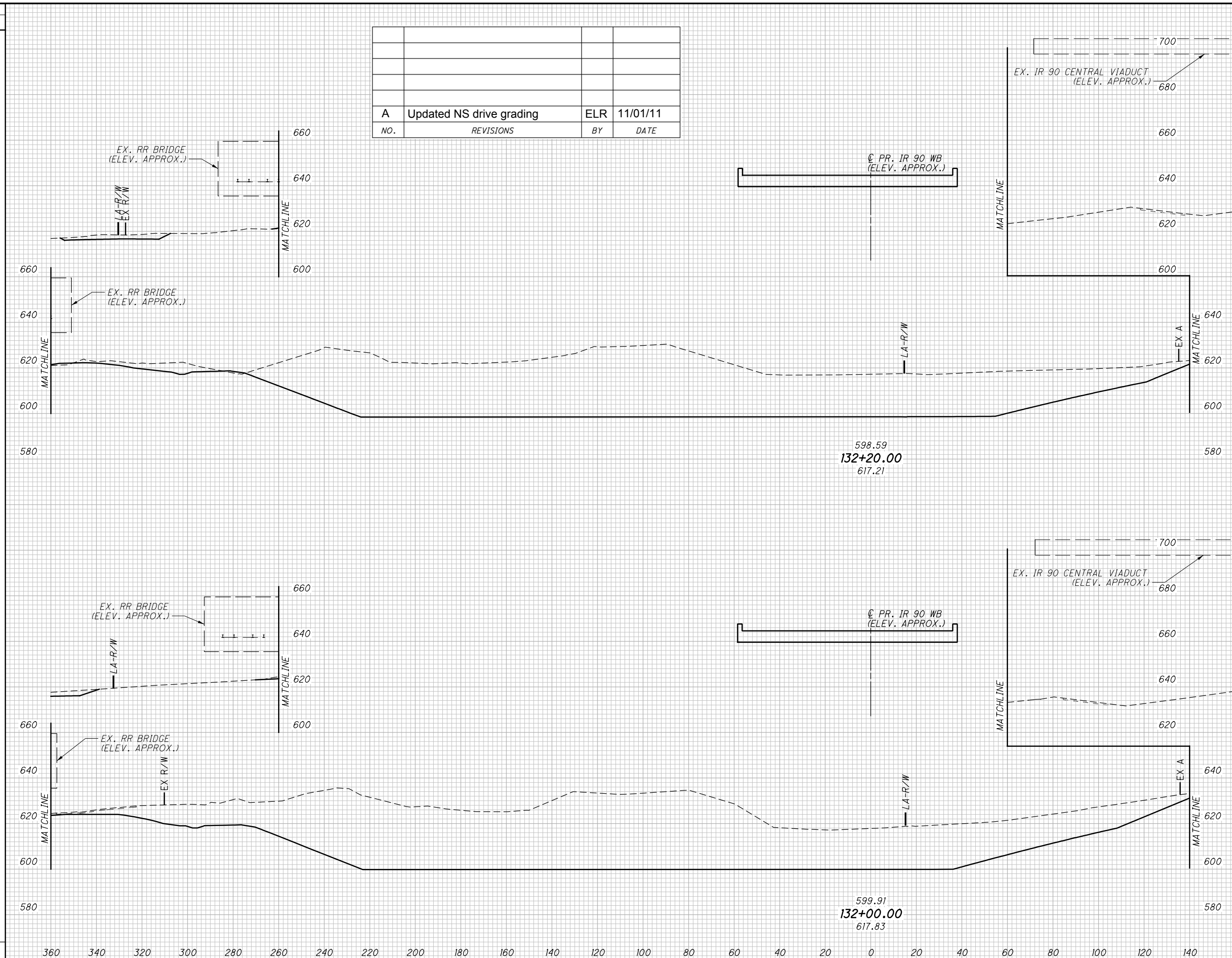
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STA. 131+60.00 TO STA. 131+80.00

CUY-90-14.92

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SEEDING	
END WIDTH	SQ. YDS.

NO.	REVISIONS	BY	DATE
A	Updated NS drive grading	ELR	11/01/11



END AREA	VOLUME	CALCULATED	DWB	CHECKED	RLE

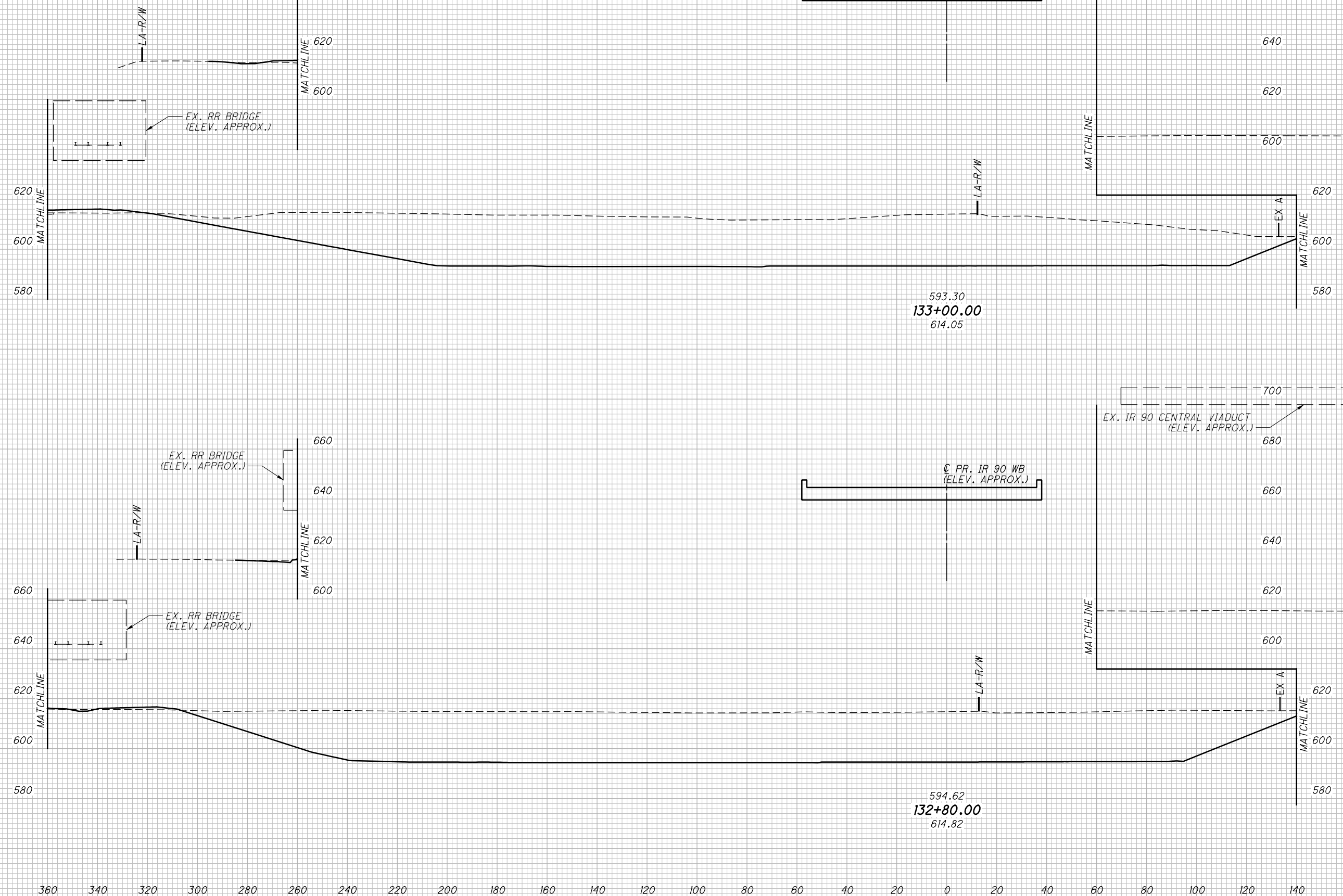
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STA. 132+00.00 TO STA. 132+20.00

CUY-90-14.92

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SEEDING	
END WIDTH	SQ. YDS.

NO.	REVISIONS	BY	DATE
A	Updated NS drive grading	ELR	11/01/11



END AREA		VOLUME	
CUT	FILL	CUT	FILL

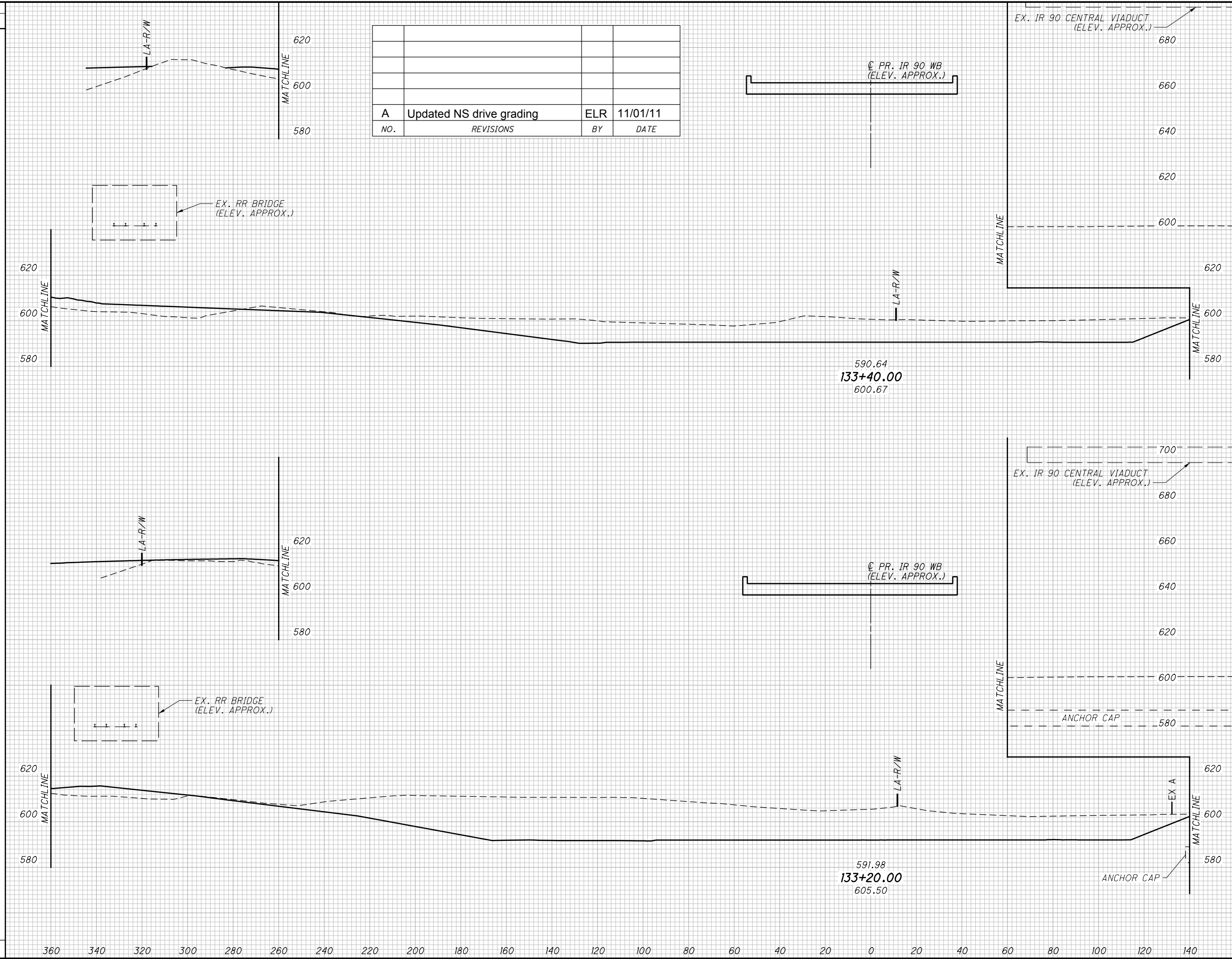
CROSS SECTIONS - I.R. 90 GRADING PLAN
STA. 132+80.00 TO STA. 133+00.00

CUY-90-14.92

18
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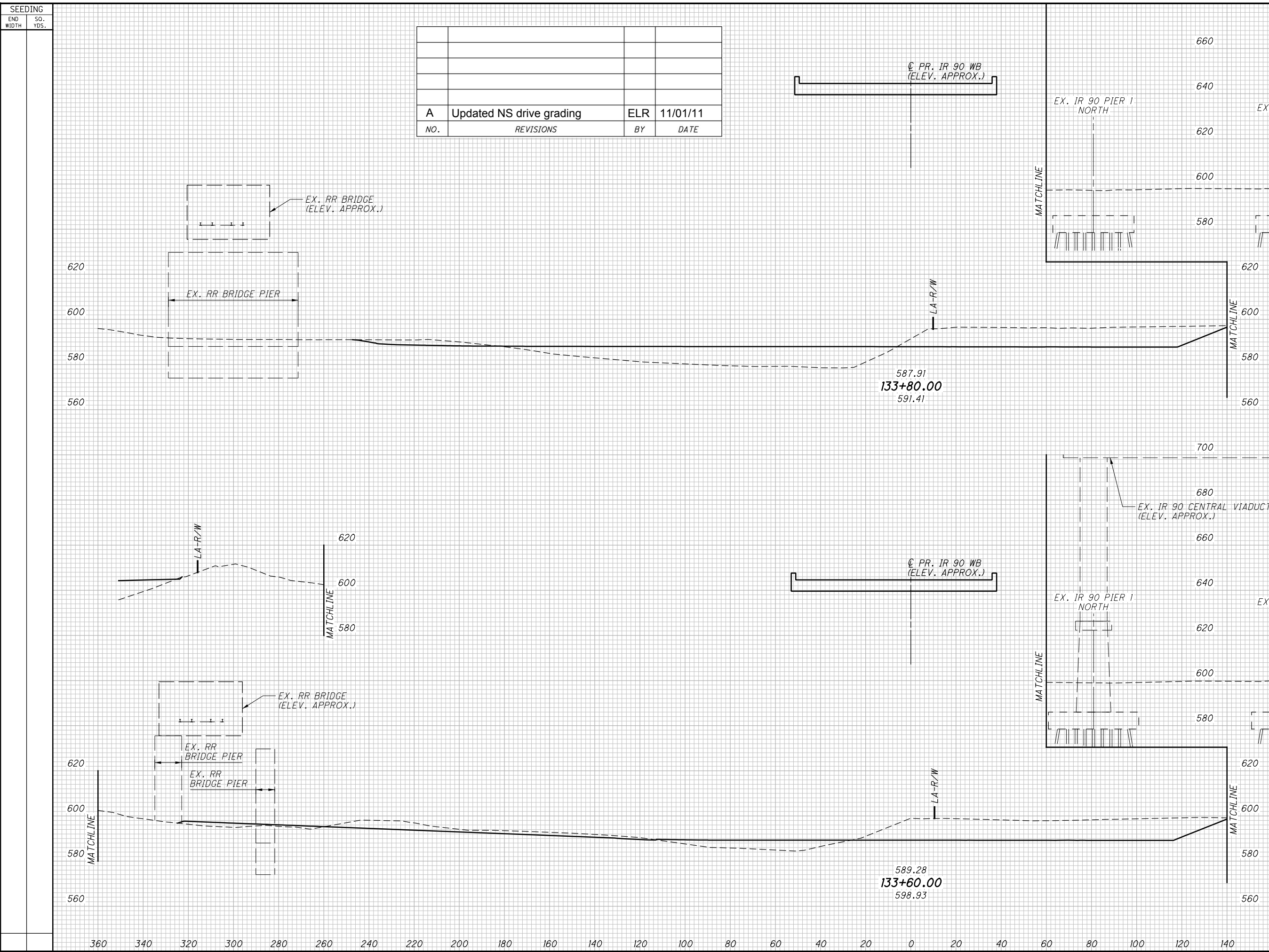


NO.	REVISIONS	BY	DATE
A	Updated NS drive grading	ELR	11/01/11

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CUT	FILL	CUT	FILL				

CROSS SECTIONS - I.R. 90 GRADING PLAN
STA. 133+20.00 TO STA. 133+40.00

CUY-90-14.92

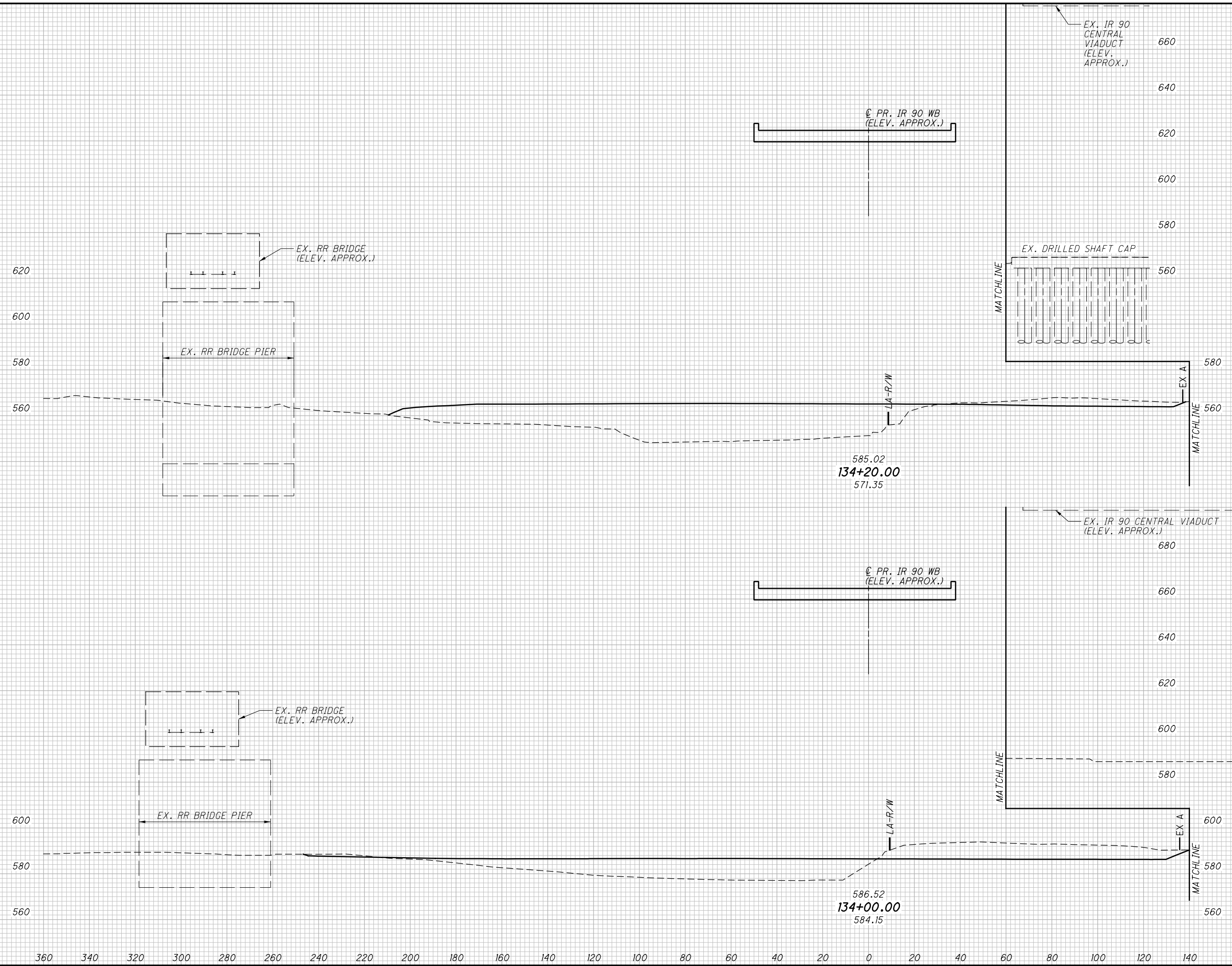


A	Updated NS drive grading	ELR	11/01/11
NO.	REVISIONS	BY	DATE

END AREA	VOLUME		CALCULATED	DWB	CHECKED	RLE
	CUT	FILL				
CROSS SECTIONS - I.R. 90 GRADING PLAN STA. 133+60.00 TO STA. 133+80.00						
CUY-90-14.92						
20 34						

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SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME		CALCULATED	DWB	CHECKED	RLE
CUT	FILL	CUT	FILL				

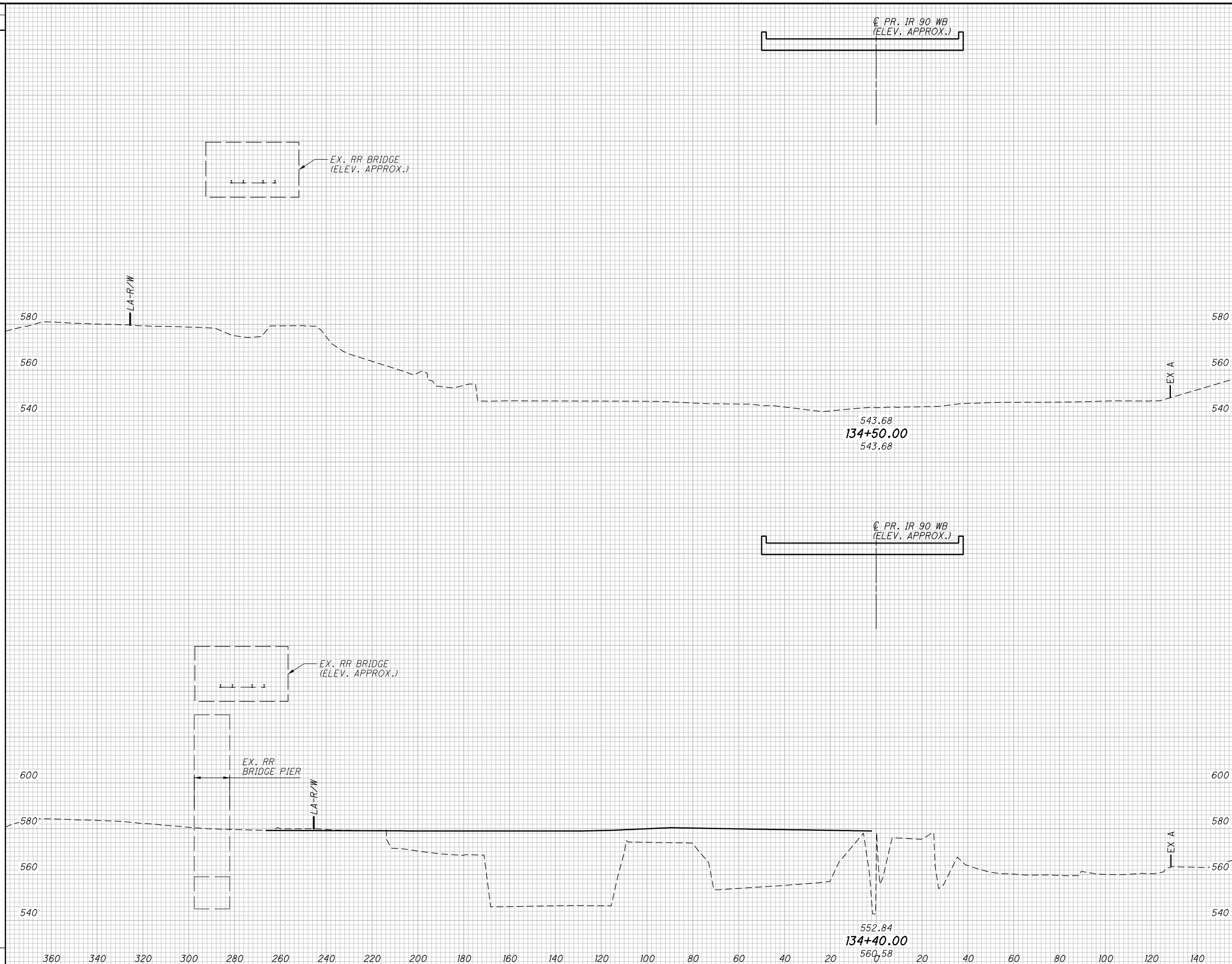
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CUY-90-14.92

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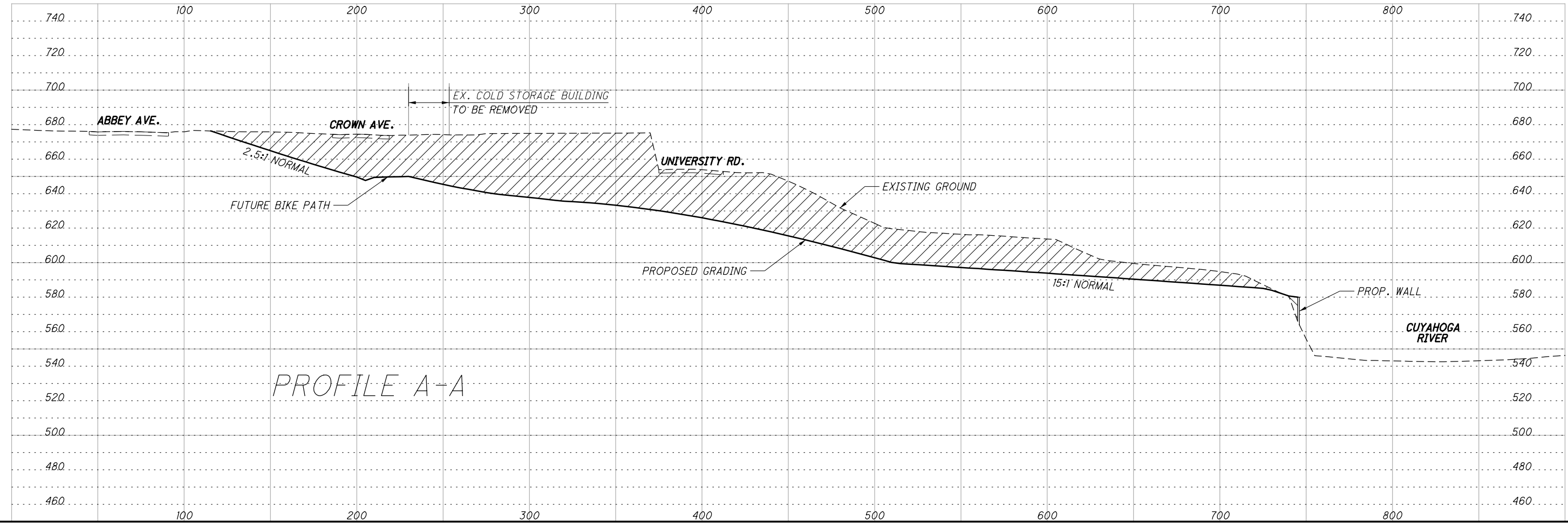
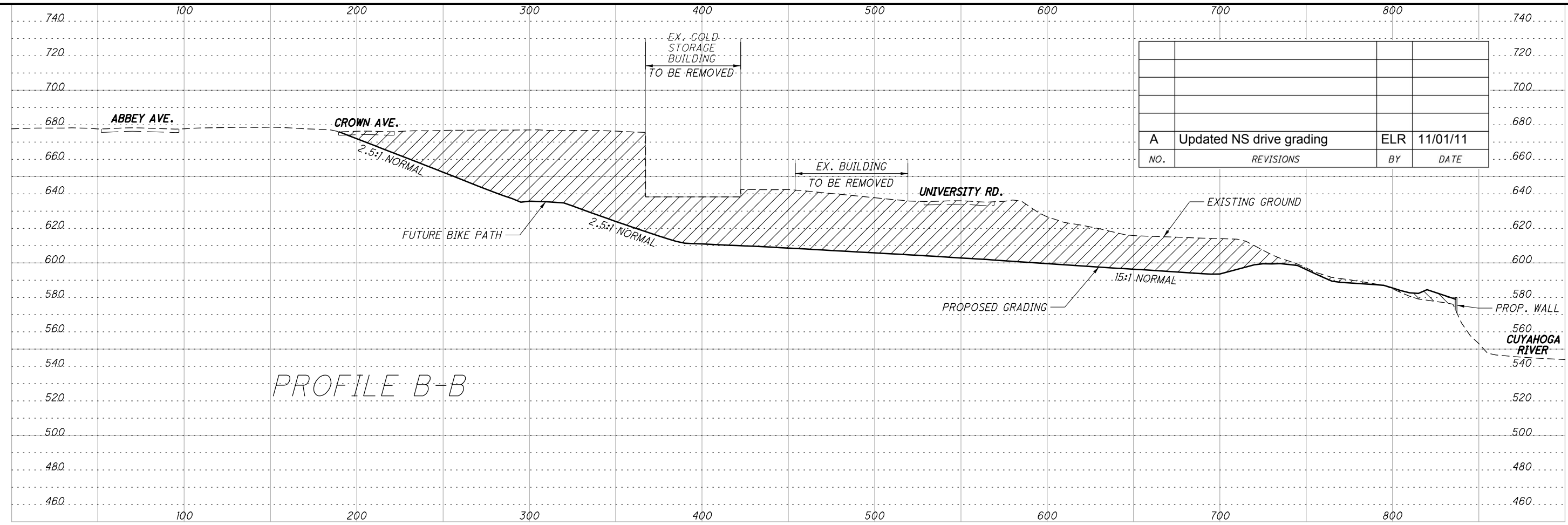
END AREA		VOLUME		CALCULATED DWB	CHECKED RLE
CUT	FILL	CUT	FILL		



CROSS SECTIONS - I.R. 90 GRADING PLAN
STA. 134+40.00 TO STA. 134+50.00

CUY-90-14.92

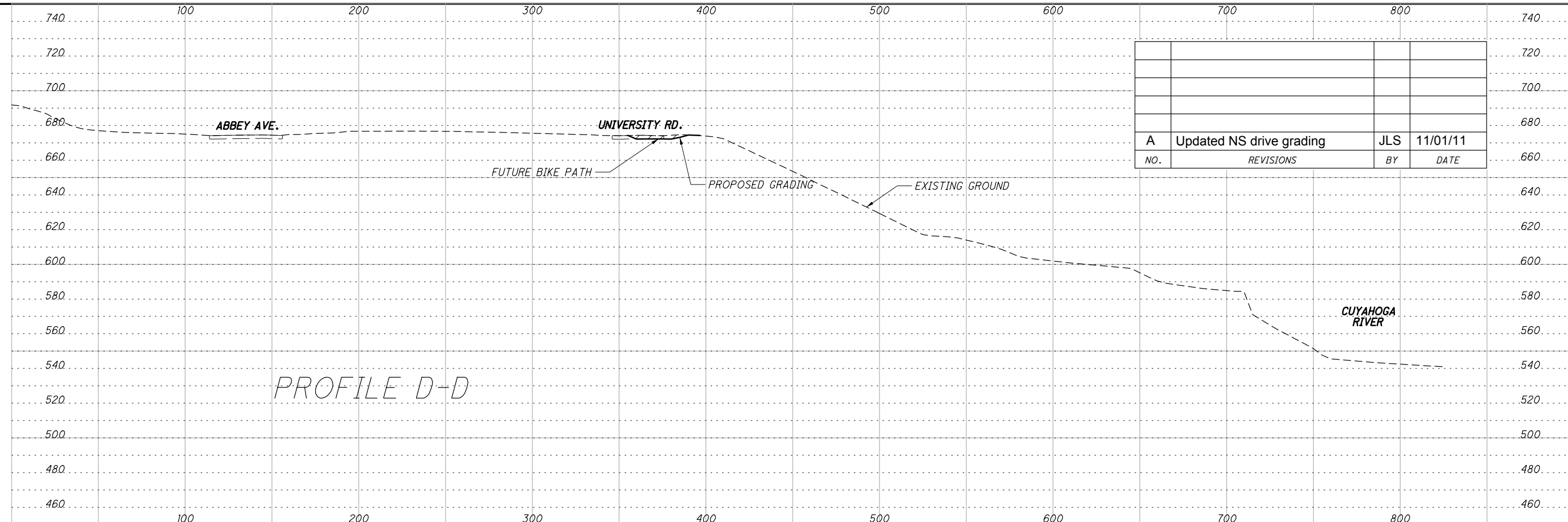
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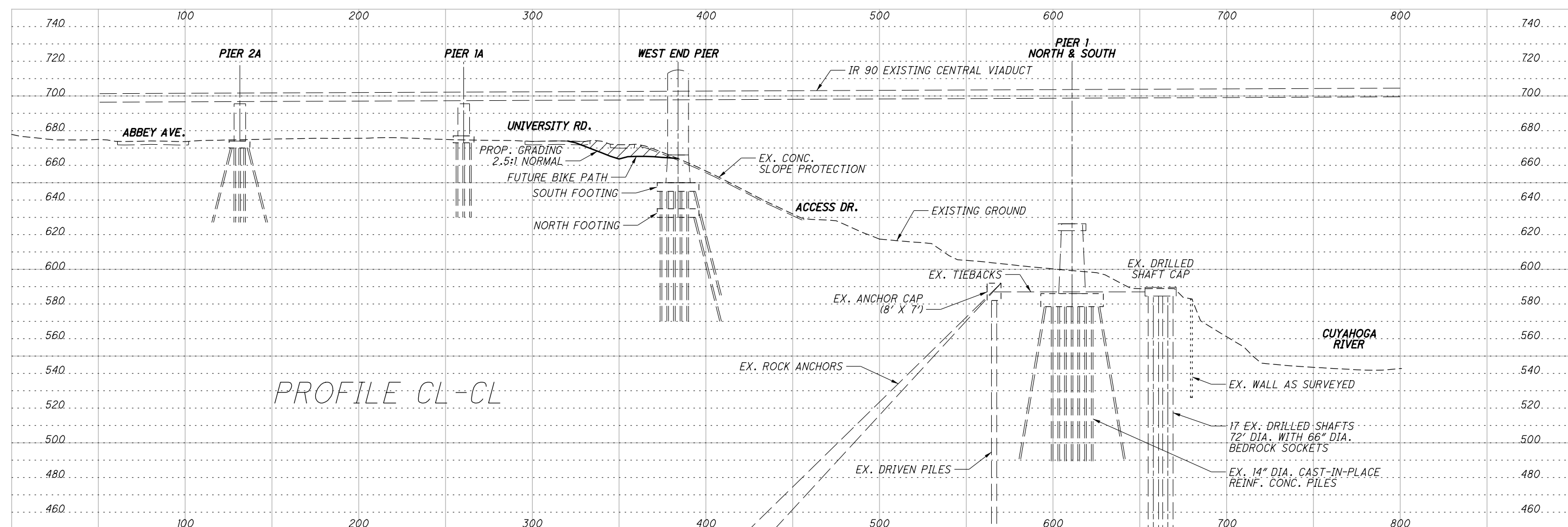
A	Updated NS drive grading	ELR	11/01/11
NO.	REVISIONS	BY	DATE

CALCULATED DWB CHECKED RLE
SLOPE GRADING PROFILES A-A AND B-B
CUY-90-14.92
 23
 34

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NO.	REVISIONS	BY	DATE



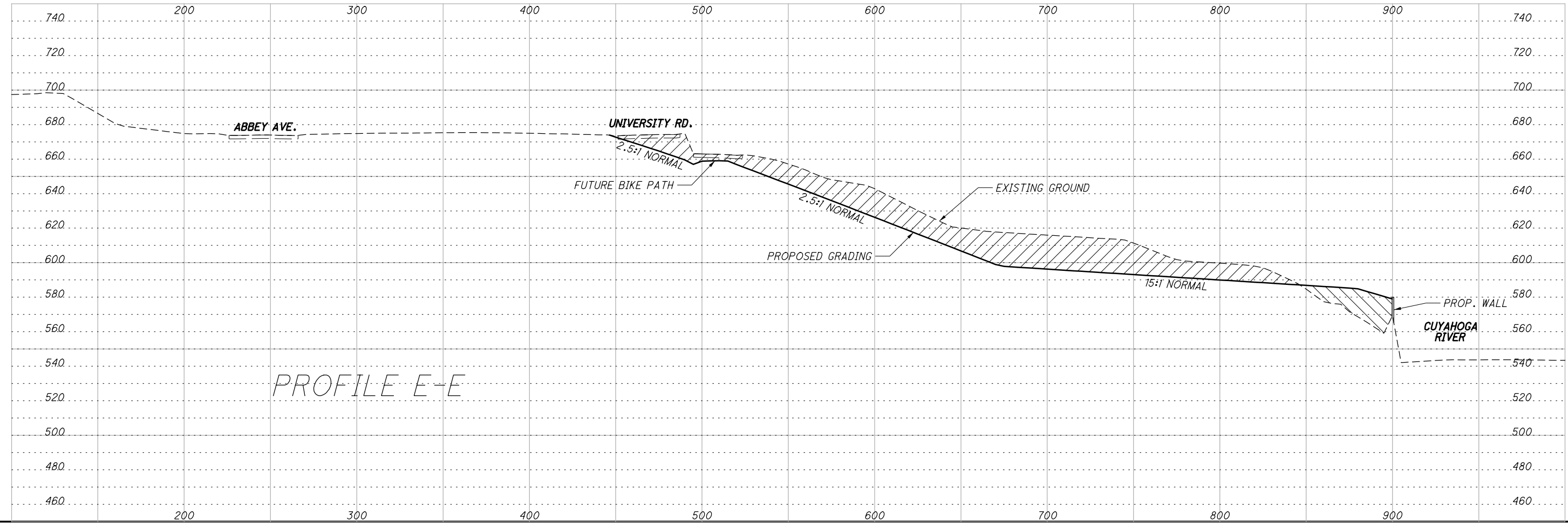
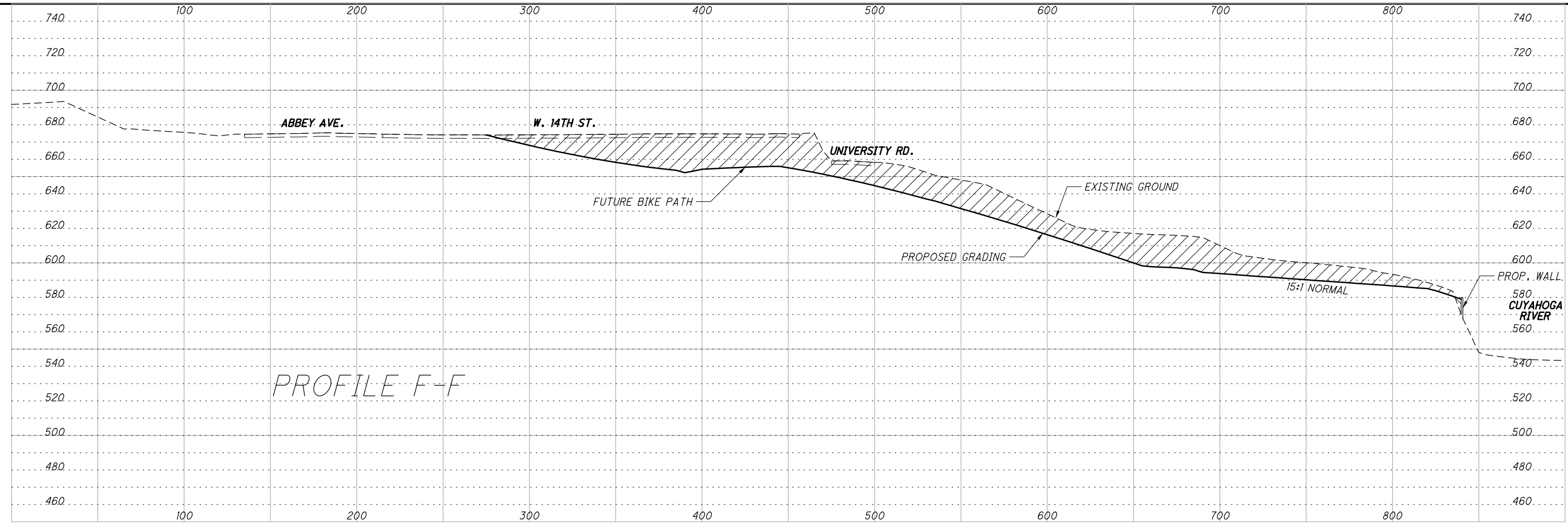
CALCULATED
DWB
CHECKED
RLE

SLOPE GRADING PROFILES CL-CL AND D-D

CUY-90-14.92

24
34

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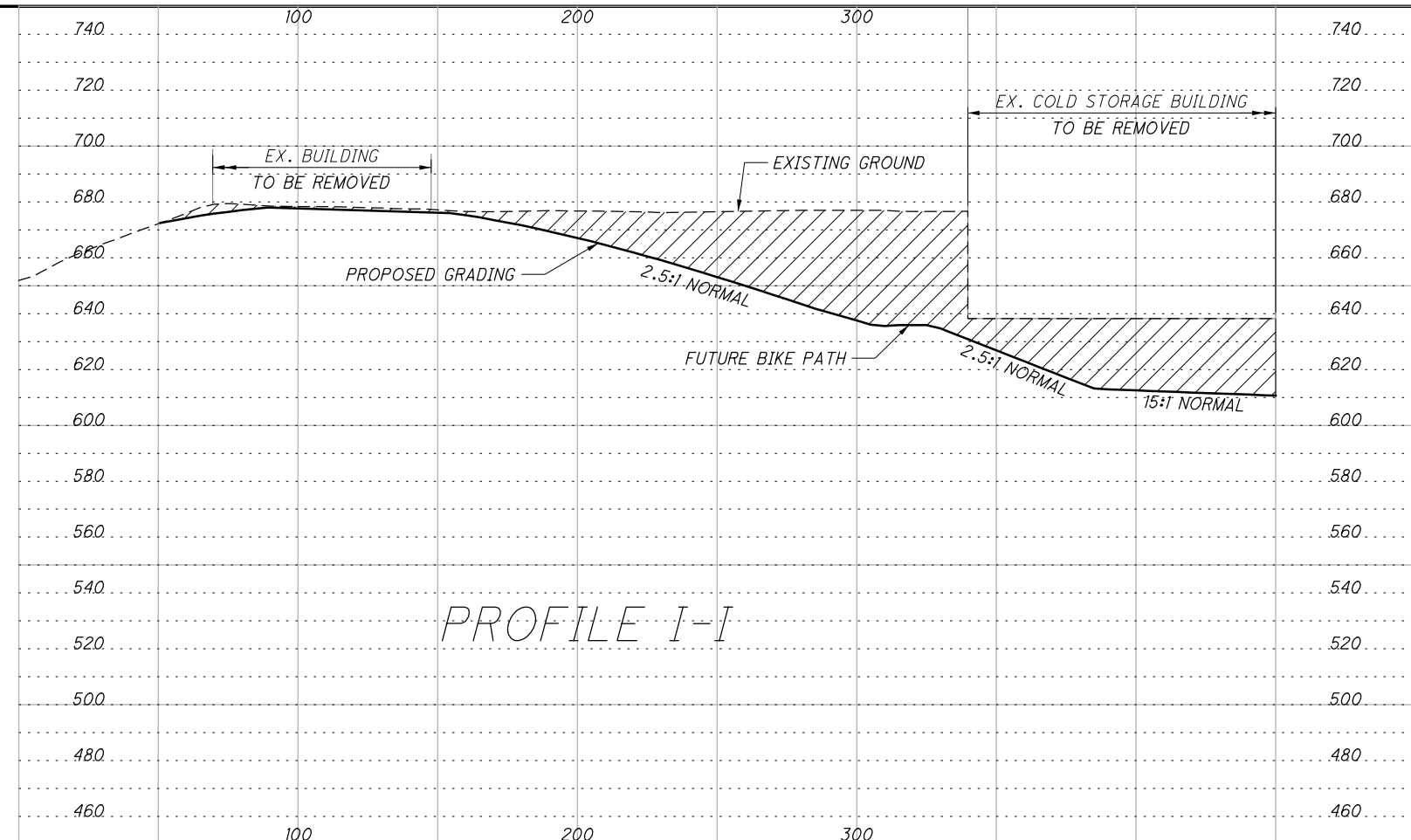


CALCULATED
DWB
CHECKED
RLE

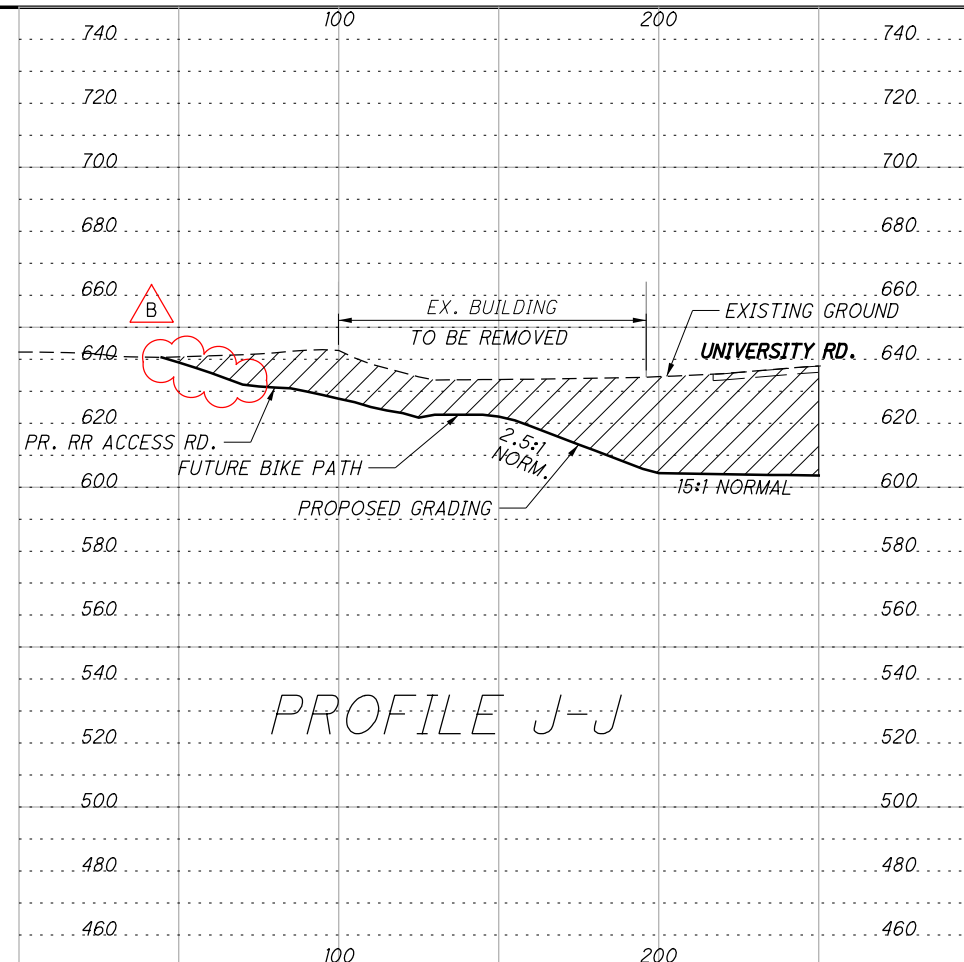
SLOPE GRADING PROFILES E-E AND F-F

CUY-90-14.92

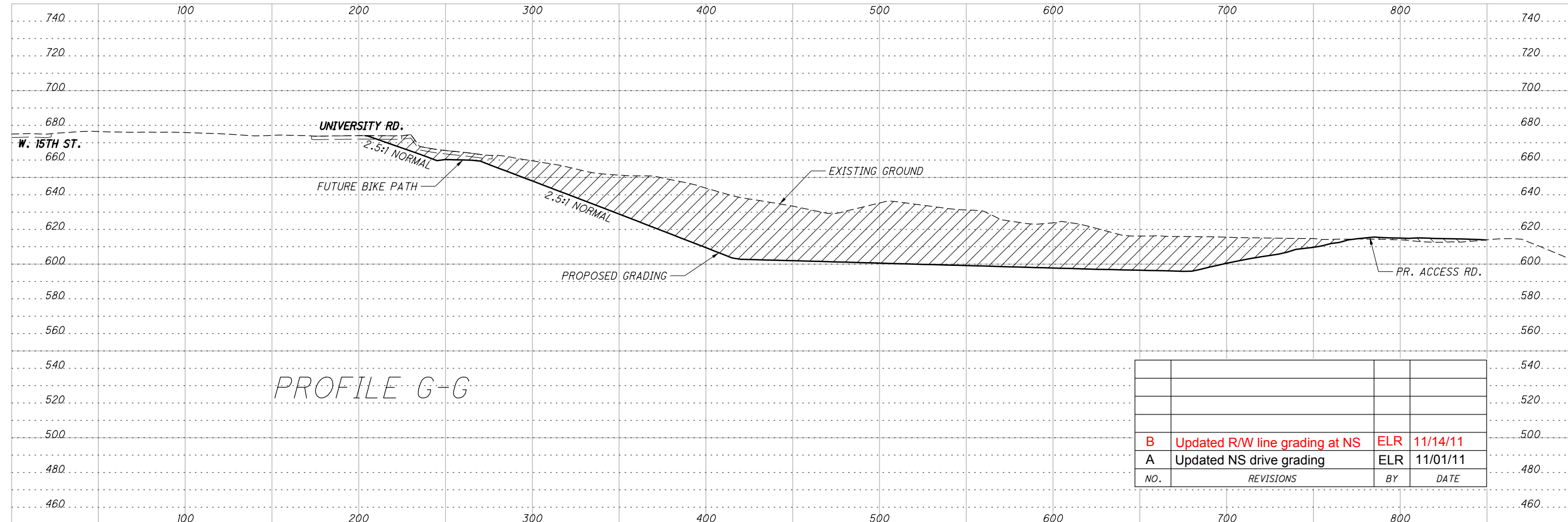
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PROFILE I-I

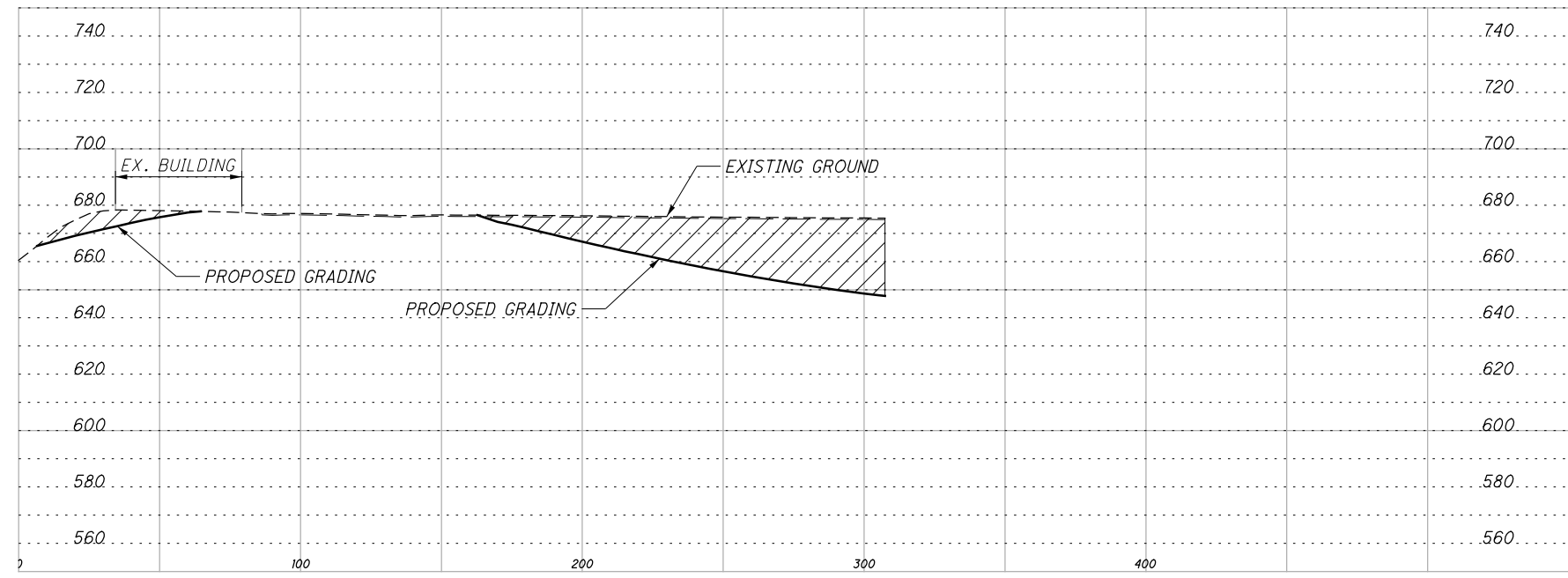


PROFILE J-J

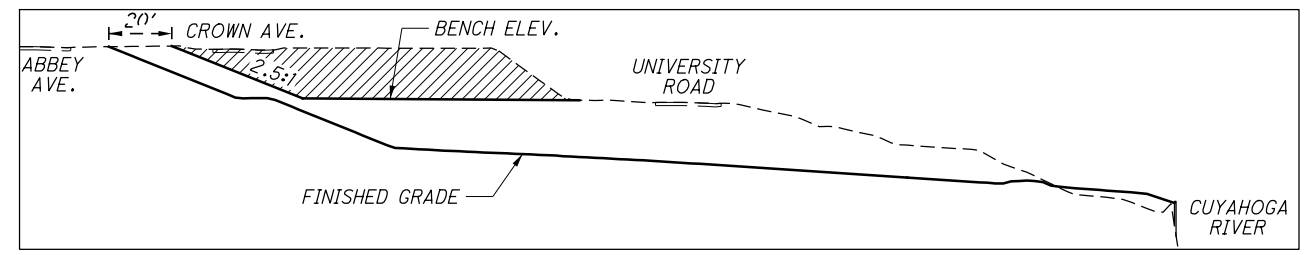


PROFILE G-G

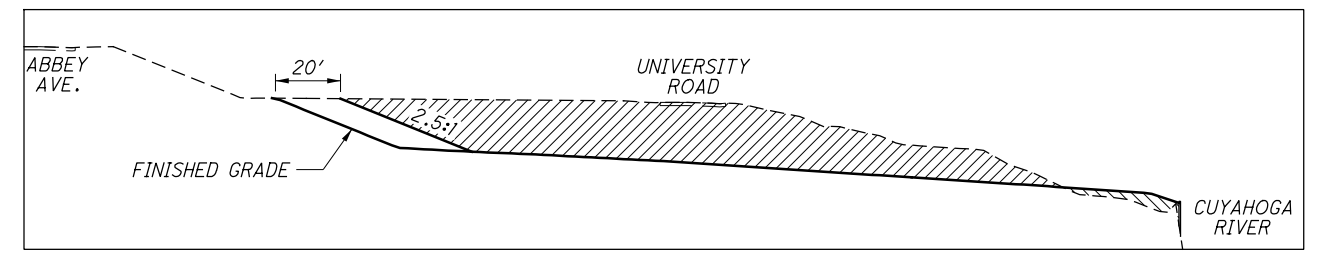
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A	Updated NS drive grading	ELR	11/01/11



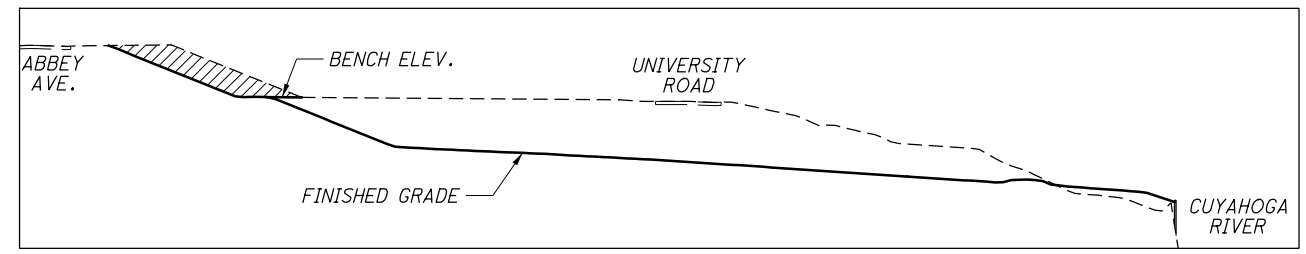
PROFILE K-K



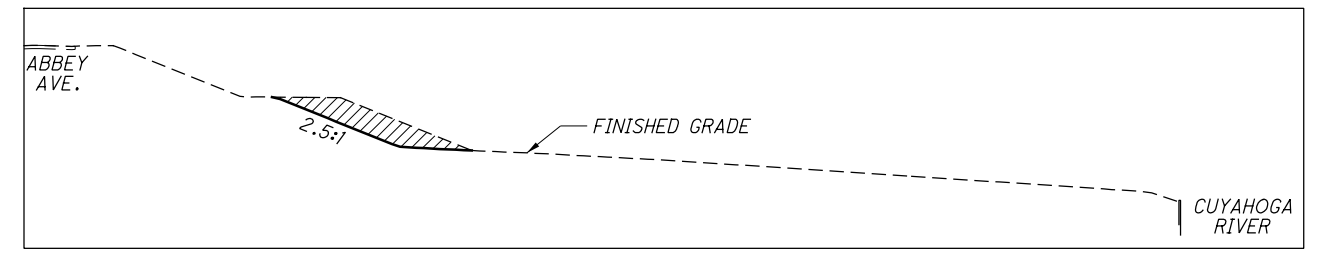
STAGE 1 EXCAVATION



STAGE 3 EXCAVATION



STAGE 2 EXCAVATION

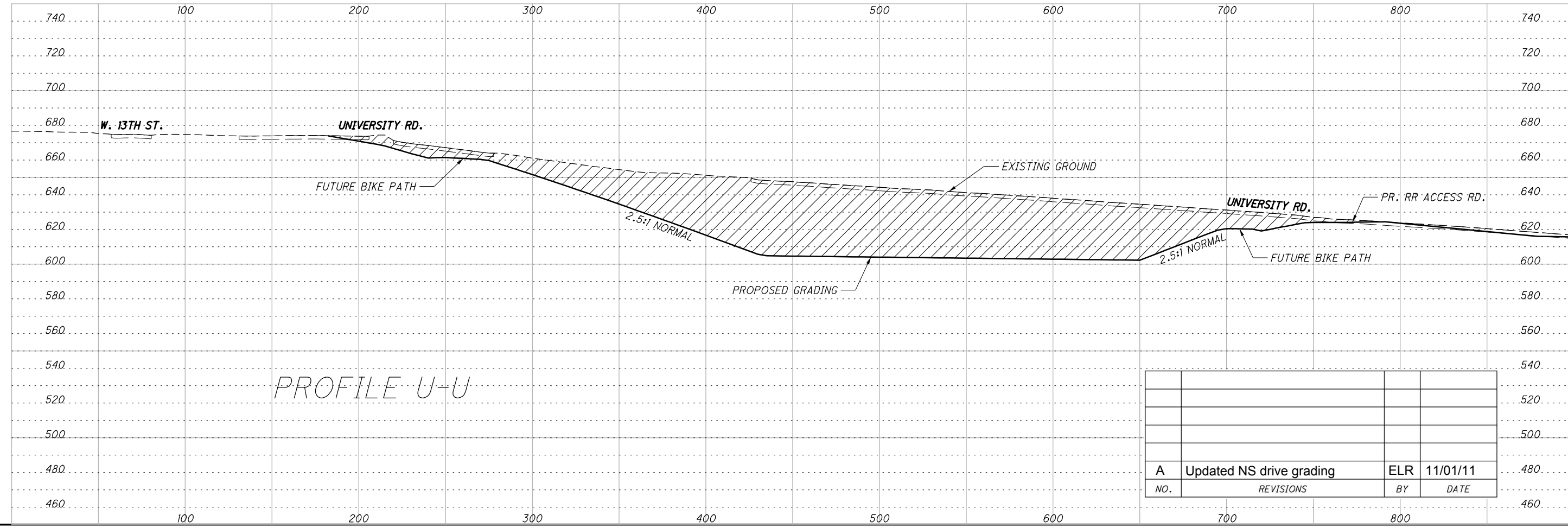
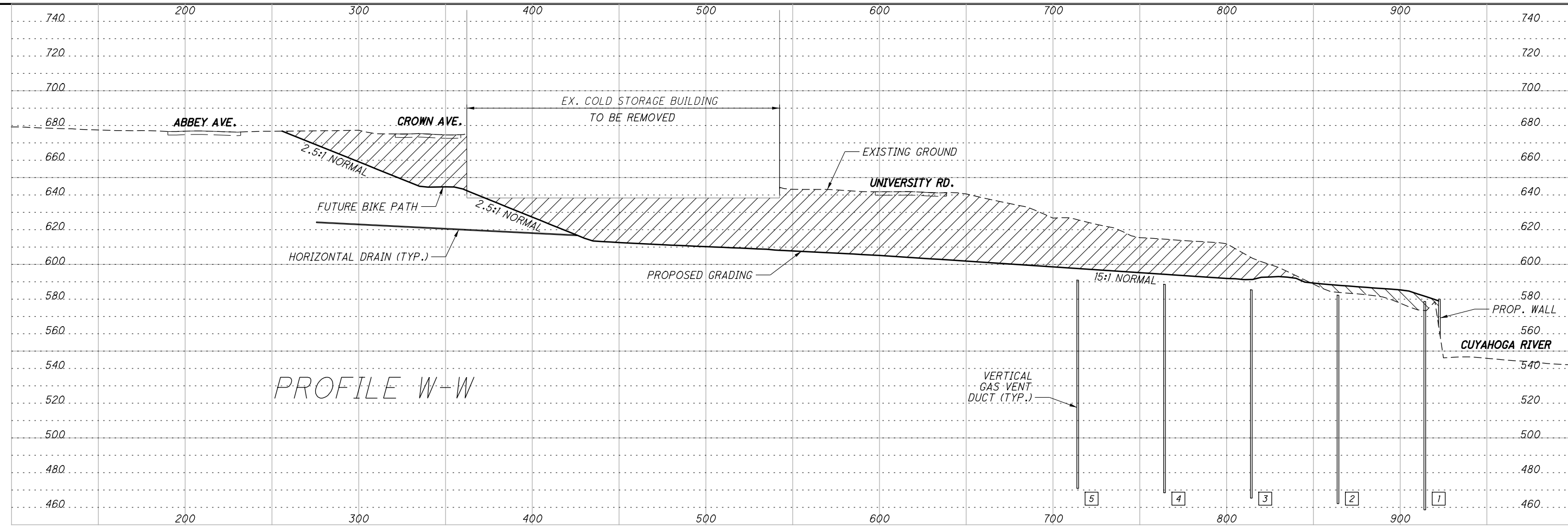


STAGE 4 EXCAVATION

TYPICAL WEST BANK EXCAVATION SEQUENCE

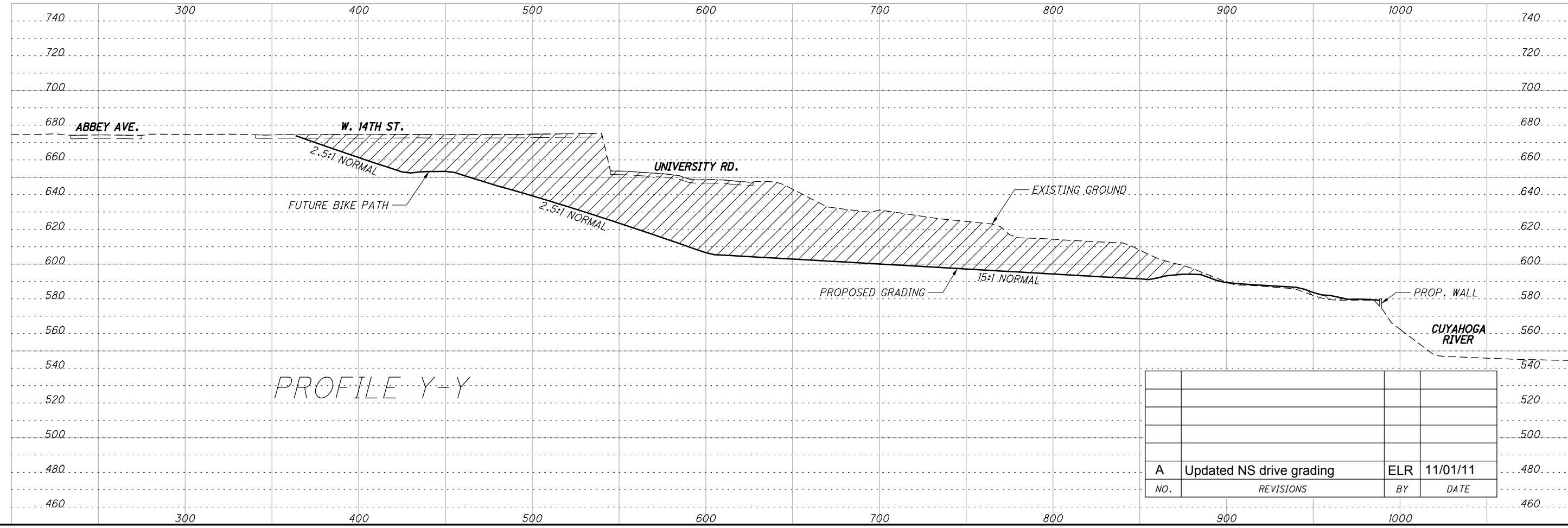
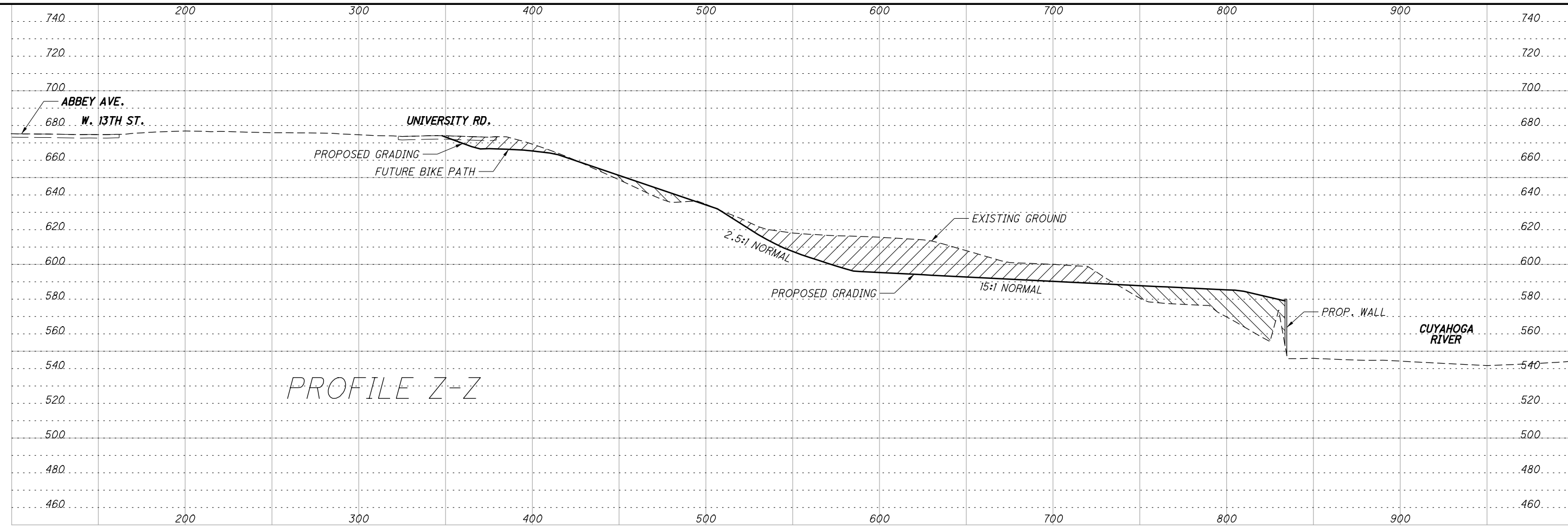
 WORK PERFORMED IN EACH STAGE

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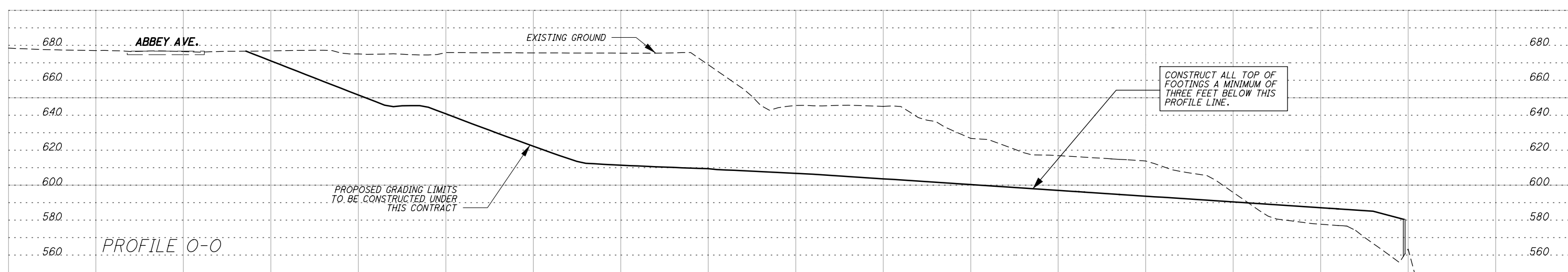
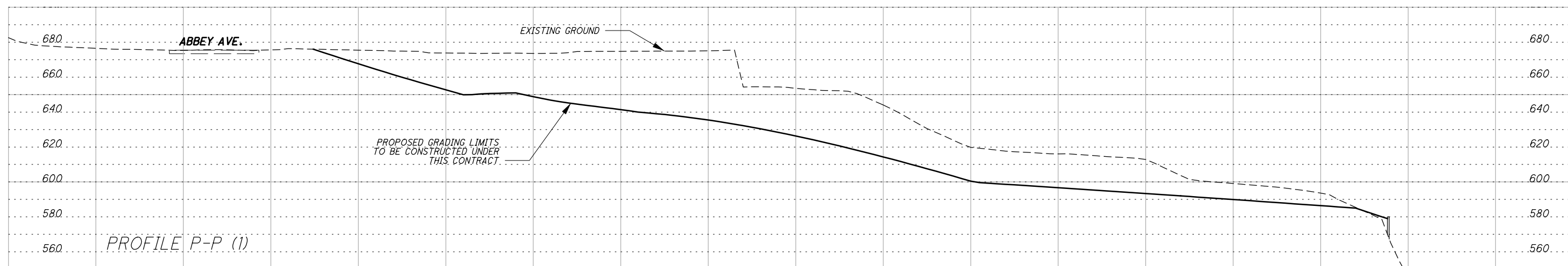
NO.	REVISIONS	BY	DATE
A	Updated NS drive grading	ELR	11/01/11

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A	Updated NS drive grading	ELR	11/01/11
NO.	REVISIONS	BY	DATE

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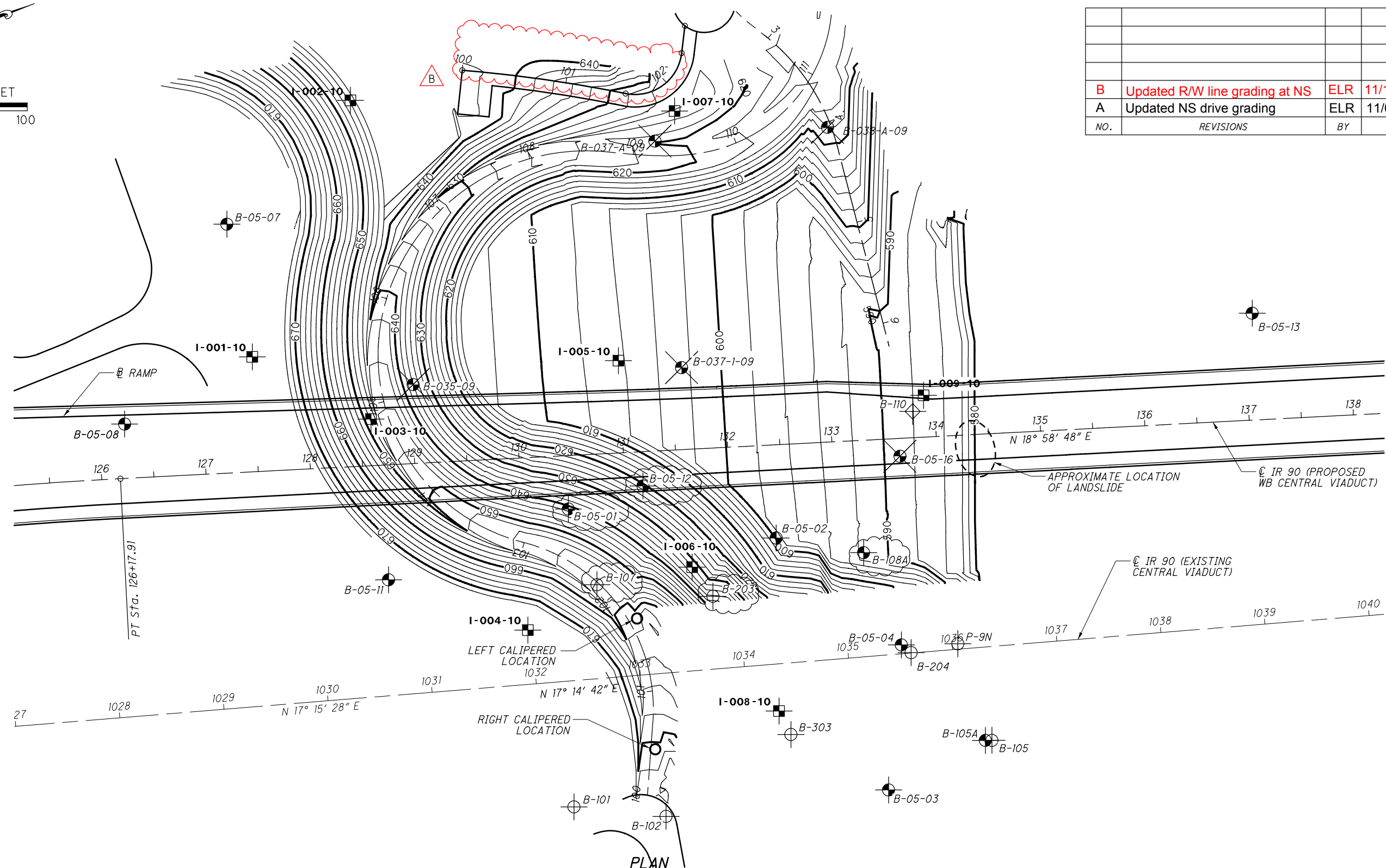
NOTE:
 IF THE CONTRACTOR ELECTS TO CONSTRUCT A BRIDGE PIER FOUNDATION THAT HAS A FOOTING LOCATED WITHIN THE LIMITS OF AN EXCAVATED SLOPE SURFACE AREA BOUND BY ABBEEY ROAD, PROFILE P-P (2), PROFILE O-O, AND A LINE LOCATED 10 FEET SOUTH OF THE PROPOSED SOUTH SIDE OF THE CUYAHOGA RIVER BULKHEAD WALL, THE TOP OF THE FOOTING SHALL BE DESIGNED TO HAVE A MINIMUM OF THREE FEET OF SOIL COVER AS SHOWN IN PROFILE P-P (2) AND PROFILE O-O. ALL EXCAVATIONS MADE FOR THE PURPOSE OF CONSTRUCTING THE PIER FOUNDATIONS SHALL BE BACKFILLED IN ACCORDANCE WITH CMS 203.06, 203.07, AND 503.08. PIER FOUNDATIONS PLACED WITHIN THE LIMITS DESCRIBED ABOVE SHALL BE SUPPORTED ON BEDROCK.

SLOPE GRADING PROFILES O-O, P-P(1), & P-P(2)

CUY-90-14.92

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NO.	REVISIONS	BY	DATE
B	Updated R/W line grading at NS	ELR	11/14/11
A	Updated NS drive grading	ELR	11/01/11

LEGEND

- B-05-01 LOCATION OF INCLINOMETER/PIEZOMETER INSTALLED BY BBCM IN 2006 (B-05-01 THROUGH B-05-04, B-05-07, B-05-08, B-05-11 THROUGH B-05-13, AND B-05-16). THESE INSTRUMENTS ARE NOT AFFECTED BY THE GRADING AND REMAIN IN SERVICE.
- B-105A LOCATION OF REPLACEMENT INCLINOMETER INSTALLED BY BBCM IN 2006 (B-105A AND B-108A).
- B-101 LOCATION OF INCLINOMETER AND/OR PIEZOMETER INSTALLED BY BBCM BETWEEN 1994 AND 1999 (B-101, B-102, B-105, B-107, B-203, B-204, B-303, AND P-9N).
- B-110 LOCATION OF INCLINOMETER AT B-110, WHICH WAS DESTROYED BY EXCAVATION ACTIVITIES IN MARCH, 2006
- LOCATION OF PROPOSED INCLINOMETER AND/OR PIEZOMETER (I-001-10 THROUGH I-009-10 AND P-001-10 THROUGH P-009-10). THE LOCATION OF EACH PIEZOMETER IS WITHIN 5 FEET FROM THE LOCATIONS OF THE INCLINOMETER. ODOT IS RESPONSIBLE FOR THE PLACEMENT AND REPLACEMENT INSTRUMENTATION.
- LOCATION OF ABANDONED INCLINOMETER AND/OR PIEZOMETER (B-035-09, B-037-A-09 B-037-1-09 AND B-05-16)
- INCLINOMETER AND/OR PIEZOMETER TO BE REPLACED. THE FUTURE INSTALLATION WILL HAVE THE SAME DESIGNATION PRECEDED BY LETTER A (B-05-01, B-107, B-05-112, B-203 B-108A)

NOTE: THE DESIGN BUILD TEAM NEEDS TO PROTECT ALL THE INSTRUMENTS AND REPLACE ANY IF DAMAGED, PER SECTION 9.3.3.1 OF THE SCOPE.

DESIGNED	CHECKED	DRAWN	REVIEWED	DATE

INSTRUMENTATION PLAN
 CUYAHOGA RIVER WEST BANK

CUY-90-14.92
 PID No. 77332

SUMMARY OF ACTIVE INSTRUMENTATION

ACTIVE INSTRUMENTATION	ACTIVE INCLINOMETER ?	INCLINOMETER DEPTH (FT)	ACTIVE PIEZOMETER?	VW OR PNEUMATIC?	# OF ACTIVE PIEZOMETERS	PIEZOMETER DEPTH(S) BELOW EXISTING G.S. (FT)	INSTRUMENTATION INSTALLATION DATE	G.S. ELEVATION (FT)
B-101	Y	190		PNEUMATIC ¹	2 ¹	50.3, 124.3	AUG-SEP 1994	676.6 (676.6 ³)
B-102	Y	224	N	----	----	----	SEP-94	675.7
B-105	N	----		PNEUMATIC ¹	2 ¹	88, 105.7	AUG-94	585.4 (585.6 ³)
B-105A	Y	156	N	----	----	----	MAY-06	585.7
B-107 ⁴	Y	210		PNEUMATIC ¹	1 ²	100	SEP-94	662.7 (662.3 ³)
B-108A ⁴	Y	168	N	----	----	----	APR-MAY 2006	603
B-203 ⁴	Y	190	N	----	----	----	AUG-96	638
B-204	Y	134	N	----	----	----	JUL-98	599
B-303 ⁵	Y	178		PNEUMATIC ¹	1 ²	40.8	AUG 1994, JUL 1998	622.0 (627.0 ³)
P-9N	Y	148	N	----	----	----	FEB-99	588
B-05-01 ⁴	Y	228	Y	VW	2	65, 95	APR-MAY 2006	675.4
B-05-02	Y	176	Y	VW	2	46, 122		617.9
B-05-03	Y	168	Y	VW	2	32, 112	APR-MAY 2006	605.1
B-05-04	Y	172	Y	VW	2	59, 119	MAR-MAY 2006	600.8
B-05-07	Y	224	Y	VW	2	102, 220	APR-JUN 2006	678.9
B-05-08	Y	224	Y	VW	2	65.5, 110.5	APR-MAY 2006	679.9
B-05-11	Y	226	Y	VW	2	95, 130	APR-JUN 2006	675.1
B-05-12 ⁴	Y	210	Y	VW	2	75, 120	APR-MAY 2006	652.7
B-05-13	Y	134	Y	VW	2	60, 135	MAY-JUN 2006	580
B-05-16 ⁴	Y	162	N	----	----	----	JUN-06	598.5
B-035-0-09 ⁴	----	----	Y	VW	2	100, 230	JUL-09	674.6
B-037-1-09 ⁴	----	----	Y	VW	2	70, 185	AUG-09	645.5
B-037-A-09 ⁴	----	----	Y	VW	1	19	SEP-09	631.5
B-038-A-09 ⁴	----	----	Y	VW	1	25	OCT-09	614

¹ BBCM INSTALLED PNEUMATIC PIEZOMETERS AT THE LOCATIONS OF THE P BORINGS IN 1994. HOWEVER, THESE PIEZOMETERS WERE EVENTUALLY RENAMED TO THE NEAREST INCLINOMETERS (I.E. P-1 TO B-101, P-3 TO B-105, AND P-5 TO B-107).

² THE PNEUMATIC WAS ACTUALLY INSTALLED IN AUGUST 1994 AT BORING P-2 IN THE VICINITY OF THE B-103 INCLINOMETER (NOW INACTIVE). HOWEVER, THE PIEZOMETER HAS SINCE BEEN RENAMED TO B-303 DUE TO ITS CLOSE PROXIMITY TO THE ACTIVE INCLINOMETER AT B-303, WHICH WAS INSTALLED IN JULY 1998.

³ ELEVATION IN PARENTHESIS REFERS TO THE GROUND SURFACE (G.S.) ELEVATION OF THE P BORING LOCATION WHERE THE PNEUMATIC PIEZOMETER WAS INSTALLED.

⁴ MAY BECOME DAMAGED DURING FUTURE GRADING.

⁵ VERY HIGH MOVEMENT AT THE SHEAR PLANE (CLOSE TO SHEARING OFF), RECOMMEND REPLACEMENT.

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CHECKED	STRUCTURE FILE NUMBER
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ACTIVE INSTRUMENTATION TABLE
CUYAHOGA RIVER WEST BANK

CUY-90-14.92
PID No. 77332

A	Updated NS drive grading	ELR	11/01/11
NO.	REVISIONS	BY	DATE

SUMMARY OF ACTIVE INSTRUMENTATION TO REMAIN IN SERVICE

ACTIVE INSTRUMENTATION	ACTIVE INCLINOMETER ?	INCLINOMETER DEPTH (FT)	ACTIVE PIEZOMETER?	VW OR PNEUMATIC? ¹	# OF ACTIVE PIEZOMETERS ¹	PIEZOMETER DEPTH(S) BELOW EXISTING G.S. (FT)	INSTRUMENTATION INSTALLATION DATE	G.S. ³ ELEVATION (FT)
B-101	Y	190		PNEUMATIC	2	50.3, 124.3	AUG-SEP 1994	676.6 (676.6)
B-102	Y	224	N	----	1	----	SEP-94	675.7 ³
B-105	N	----		PNEUMATIC	2	88, 105.7	AUG-94	585.4 (585.6)
B-105A	Y	156	N	----	----	----	MAY-06	585.7
B-204 ⁴	Y	134	N	----	2	----	JUL-98	599 ³
B-303	Y	178		PNEUMATIC	1	40.8	AUG 1994, JUL 1998	622.0 (627.0)
P-9N	Y	148	N	----	----	----	FEB-99	588
B-05-02	Y	176	Y	VW	2	46, 122		617.9
B-05-03	Y	168	Y	VW	2	32, 112	APR-MAY 2006	605.1
B-05-04	Y	172	Y	VW	2	59, 119	MAR-MAY 2006	600.8
B-05-07	Y	224	Y	VW	2	102, 220	APR-JUN 2006	678.9
B-05-08	Y	224	Y	VW	2	65.5, 110.5	APR-MAY 2006	679.9
B-05-11	Y	226	Y	VW	2	95, 130	APR-JUN 2006	675.1
B-05-13	Y	134	Y	VW	2	60, 135	MAY-JUN 2006	580

¹ BBCM INSTALLED PNEUMATIC PIEZOMETERS AT THE LOCATIONS OF THE P BORINGS IN 1994. HOWEVER, THESE PIEZOMETERS WERE EVENTUALLY RENAMED TO THE NEAREST INCLINOMETERS (I.E. P-1 TO B-101, P-3 TO B-105, AND P-5 TO B-107).

² THE PNEUMATIC WAS ACTUALLY INSTALLED IN AUGUST 1994 AT BORING P-2 IN THE VICINITY OF THE B-103 INCLINOMETER (NOW INACTIVE). HOWEVER, THE PIEZOMETER HAS SINCE BEEN RENAMED TO B-303 DUE TO ITS CLOSE PROXIMITY TO THE ACTIVE INCLINOMETER AT B-303, WHICH WAS INSTALLED IN JULY 1998.

³ ELEVATION IN PARENTHESIS REFERS TO THE GROUND SURFACE (G.S.) ELEVATION OF THE P BORING LOCATION WHERE THE PNEUMATIC PIEZOMETER WAS INSTALLED.

⁴ VERY HIGH MOVEMENT AT THE SHEAR PLANE (CLOSE TO SHEARING OFF), RECOMMEND REPLACEMENT.

SUMMARY OF PROPOSED ADDITIONAL INSTRUMENTATION (INSTALLED BY OTHERS)

PROPOSED INSTRUMENTATION	PROPOSED INCLINOMETER ?	INCLINOMETER DEPTH (FT)	PROPOSED PIEZOMETER?	VW OR PNEUMATIC?	# OF PROPOSED PIEZOMETERS	PIEZOMETER DEPTH(S) BELOW PROPOSED G.S. (FT)	SCHEDULED INSTRUMENTATION INSTALLATION (SEE NOTES BELOW)	STATION	OFFSET (FT)	PROPOSED G.S. ELEVATION (FT)
I-001-10	Y	224					A	127+50.00	110 LT	677.05
P-001-10			Y	VW	2	60, 120	A	127+50.00	105 LT	677.05
I-002-10	Y	200					A	128+56.50	350 LT	644.00
P-002-10			Y	VW	2	100, 220	A	128+56.50	345 LT	672.00
I-003-10	Y	194					B	128+60.44	45 RT	647.73
P-003-10			Y	VW	2	40, 190	B	128+60.44	40 RT	647.73
I-004-10	Y	228					A	130+00.00	165 RT	674.56
P-004-10			Y	VW	2	90, 135	A	130+00.00	160 RT	674.56
I-005-10	Y	154					C	130+99.89	88 LT	606.30
P-005-10			Y	VW	2	40, 144	C	130+99.89	83 LT	606.30
I-006-10	Y	176					B	131+60.19	113 RT	632.29
P-006-10			Y	VW	2	30, 140	B	131+60.19	108 RT	632.29
I-007-10	Y	164					B	131+65.96	324 LT	624.00
P-007-10			Y	VW	2	40, 160	B	131+65.96	319 LT	624.00
I-008-10	Y	180					A	132+36.09	255 RT	632.30
P-008-10			Y	VW	2	45, 170	A	132+36.09	250 RT	632.30
I-009-10	Y	150					C	133+90.00	40 LT	588.11
P-009-10			Y	VW	2	80, 145	C	133+90.00	35 LT	588.11

A. INSTRUMENTATION DESIGNATED "A" WILL BE INSTALLED PRIOR TO START OF EXCAVATION.

B. INSTRUMENTATION DESIGNATED "B" WILL BE INSTALLED WHEN THE 3 INCLINOMETER AND 3 PIEZOMETER LOCATIONS BECOME ACCESSIBLE. NOTIFICATION SHALL BE MADE TO THE DISTRICT GEOTECHNICAL ENGINEER AT 216-584-2144 WHEN EXCAVATION HAS PROCEEDED TO ALLOW ACCESS TO THE INSTRUMENTATION SITES.

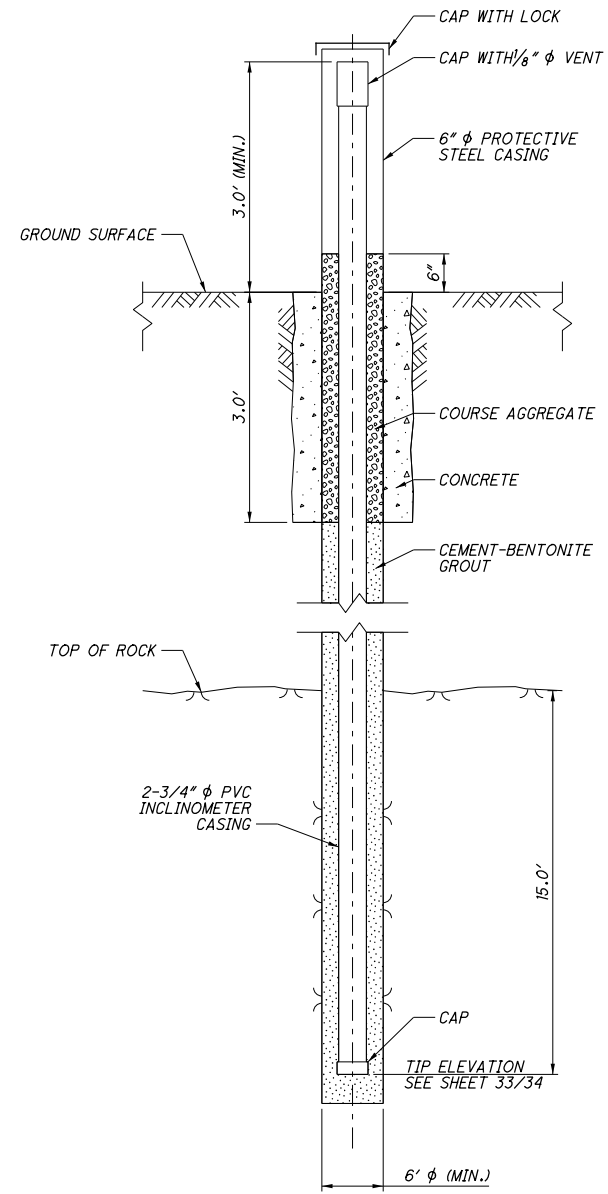
C. INSTRUMENTATION DESIGNATED "C" WILL BE INSTALLED WHEN THE 2 INCLINOMETER AND 2 PIEZOMETER LOCATIONS ARE ACCESSIBLE UPON COMPLETION OF STAGE 3 EXCAVATION. NOTIFICATION SHALL BE MADE TO THE DISTRICT GEOTECHNICAL ENGINEER AT 216-584-2144 WHEN EXCAVATION HAS PROCEEDED TO ALLOW ACCESS TO THE INSTRUMENTATION SITES.



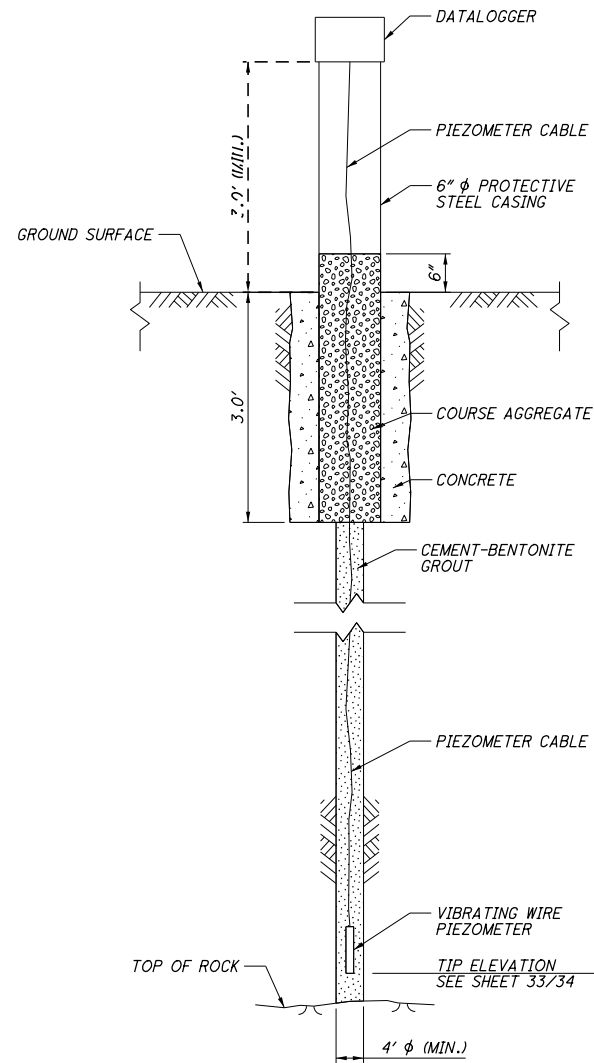
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PROPOSED INSTRUMENTATION TABLE
CUYAHOGA RIVER WEST BANK

CUY-90-14.92
PID No. 77332



INCLINOMETER DETAIL
NTS



PIEZOMETER DETAIL
NTS

INSTRUMENTATION DETAIL
CUYAHOGA RIVER WEST BANK

CUY-90-14.92
PID No. 77332

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DESIGNED	DRAWN	REVIEWED	DATE
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