



North Dakota Department of Transportation

Thomas K. Sorel
Director

Doug Burgum
Governor

November 6, 2017

ADDENDUM 1 – JOB 32

TO: All prospective bidders on Project SU-5-983(059)059, Job No. 32 scheduled for the November 17, 2017 bid opening.

The following plan and request for proposal revisions shall be made:

Plan Revisions:

See attached summary from Andrew Schrank, PE, Highlands Engineering dated October 23, 2017 for an explanation.

Request for Proposal Revisions:

Remove and replace pages 5, 8, 9 and 10 of 12 of the Proposal pages located at the beginning of the Request for Proposal, with the enclosed pages revised 11/6/2017.

The following changes were made to the Bid Items:

Spec No.	Code No.	Description	Description of Change
203	0113	COMMON EXCAVATION-WASTE	Increased from 4,420 to 5,110 CY
216	0100	WATER	Increased from 145 to 171 MGAL
302	0120	AGGREGATE BASE COURSE CL 5	Increased from 6,456 to 7,752 TON
754	0592	RESET SIGN PANEL	Increased from 2 to 3 EA
754	0593	RESET SIGN SUPPORT	Added Bid Item 1 EA

This addendum is to be incorporated into the bidder's proposal for this project. AASHTOWare Project Bids files should be updated by downloading the addendum file from the Bid Express on-line bidding exchange at <http://www.bidx.com/> and load it into the AASHTOWare Project Bids program.

PHILLIP MURDOFF – CONSTRUCTION SERVICES ENGINEER

80:jwj

Enclosure



October 23, 2017

ADDENDUM 1

To: All prospective bidders and suppliers on Project SU-5-983(059)059 scheduled for the November 17, 2017 bid opening.

Please incorporate the following revisions into the plans for the referenced project:

Plan Revisions:

Remove and Replace Sheets 1-1, 8-1, 10-1, 11-1, 30-2, 30-3, 30-4, 30-5, 30-6, 110-1, 110-2, 110-6, 110-8, 110-10, 110-11, 200-9 thru 39

Section 1 – Cover Sheet

- Sheet 1-1: Revised Traffic Data and Design ESAL's.

Section 8 - Quantities

- Sheet 8-1: Revised "Common Excavation-Waste", "Water", "Aggregate Base Course CL 5", and "Reset Sign Panel" quantities. Added "Reset Sign Support" item.

Section 10 – Basis of Estimate

- Sheet 10-1: Revised "Aggregate Base Course CL 5" quantity to reflect revised asphalt pavement section. Revised "Water" quantity to reflect revised "Aggregate Base Course CL 5" quantity.

Section 11 – Quantity Summary

- Sheet 11-1: Revised earthwork quantities to reflect revised asphalt pavement section.

Section 30 – Typical Sections

- Sheets 30-2 thru 30-6: Revised minimum existing aggregate base depth for concrete pavement section from 5.5-inches to 4-inches. Revised proposed "Aggregate Base Course CL 5" depth for asphalt pavement sections from 8-inches to 10-inches.

Section 110 - Signing

- Sheets 110-1 thru 110-2: Added "Reset Sign" and "Reset Sign Support" at Sta 74+75 RT.
- Sheets 110-6, 8, 10, 11: Added existing and proposed signs for east truck route.

Section 200 – Cross Sections

- Sheet 200-9 thru 200-39: Revised proposed "Aggregate Base Course CL 5" depth for asphalt pavement sections from 8-inches to 10-inches.

Andrew Schrank /s/

Andrew Schrank, PE

Enclosures

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web www.highlandseng.com

Highlands Engineering & Surveying, PLLC
319 24th Street East | Dickinson, ND 58601

BID ITEMS

Project: SU-5-983(059)059 (PCN-21723)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
001	103	0100	CONTRACT BOND	L SUM	1.				
002	201	0352	REMOVAL OF TREES & BRUSH	L SUM	1.				
003	201	0370	REMOVAL OF TREES 10IN	EA	2.				
004	202	0136	REMOVAL OF PAVEMENT	TON	5,266.				
005	202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	2,003.				
006	203	0101	COMMON EXCAVATION-TYPE A	CY	26.				
007	203	0113	COMMON EXCAVATION-WASTE	CY	5,110.				
008	216	0100	WATER	M GAL	171.				
009	230	0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	26.300				
010	251	0100	SEEDING CLASS I	ACRE	.300				
011	253	0201	HYDRAULIC MULCH	ACRE	.300				
012	261	0106	FIBER ROLLS 6IN	LF	1,332.				
013	261	0107	REMOVE FIBER ROLLS 6IN	LF	1,332.				
014	261	0200	WEIGHTED FIBER ROLLS	LF	144.				
015	261	0201	REMOVE WEIGHTED FIBER ROLLS	LF	144.				
016	302	0120	AGGREGATE BASE COURSE CL 5	TON	7,752.				

BID ITEMS

Project: SU-5-983(059)059 (PCN-21723)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
049	724	0975	WATER LINE CONNECTION 6IN	EA	3.				
050	724	0976	WATER LINE CONNECTION 6IN TO 8IN	EA	7.				
051	724	0980	WATER LINE CONNECTION 8IN	EA	3.				
052	724	1208	BORE & PUSH 8IN WATERMAIN	LF	100.				
053	748	0100	CURB & GUTTER	LF	1,171.				
054	748	1030	VALLEY GUTTER 72IN	SY	30.				
055	750	0100	SIDEWALK CONCRETE	SY	951.				
056	750	1000	DRIVEWAY CONCRETE	SY	16.				
057	750	2115	DETECTABLE WARNING PANELS	SF	216.				
058	754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	262.100				
059	754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	582.600				
060	754	0592	RESET SIGN PANEL	EA	3.				
061	754	0593	RESET SIGN SUPPORT	EA	1.				
062	754	8010	DYNAMIC SPEED DISPLAY SIGN	EA	2.				
063	762	0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	SF	208.				
064	762	0430	SHORT TERM 4IN LINE-TYPE NR	LF	380.				

BID ITEMS

Project: SU-5-983(059)059 (PCN-21723)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
065	762	0434	SHORT TERM 8IN LINE-TYPE NR	LF	363.				
066	762	0436	SHORT TERM 24IN LINE-TYPE NR	LF	13.				
067	762	0442	SHORT TERM MESSAGE-TYPE NR	SF	48.				
068	762	1305	PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED	LF	12,045.				
069	762	1307	PREFORMED PATTERNED PVMT MK 6IN LINE-GROOVED	LF	954.				
070	762	1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED	LF	885.				
071	762	1315	PREFORMED PATTERNED PVMT MK 12IN LINE-GROOVED	LF	85.				
072	762	1325	PREFORMED PATTERNED PVMT MK 24IN LINE-GROOVED	LF	627.				
073	770	0020	CONCRETE FOUNDATION-HIGHWAY LIGHTING	EA	20.				
074	770	0100	PULL BOX	EA	2.				
075	770	0330	2IN DIAMETER RIGID CONDUIT	LF	3,215.				
076	770	0504	UNDERGROUND CONDUCTOR NO4-TYPE RHW	LF	6,766.				
077	770	0505	UNDERGROUND CONDUCTOR NO6-TYPE RHW	LF	3,383.				
078	770	0735	FEED POINT-TYPE II-PAD MOUNTED	EA	1.				
079	770	1718	LT STD 8FT MA 32FT POLE BREAKAWAY	EA	20.				
080	770	4210	LED LUMINAIRE	EA	20.				

BID ITEMS

Project: SU-5-983(059)059 (PCN-21723)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
081	770	4560	REMOVE LIGHT STANDARD	EA	2.				
082	770	4582	REMOVE CONCRETE FOUNDATION	EA	2.				
083	970	0070	STONE MULCH	SF	332.				
084	990	0230	TEMPORARY ACCESS	L SUM	1.				
			TOTAL SUM BID						

REVISED	10/23/17	STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	21723	1	1

DESIGN DATA - WEST OF MAIN AVE				
Traffic	Average Daily			
Current	2018	Pass: 2576	Trucks: 194	Total: 2769
Forecast	2038	Pass: 3827	Trucks: 288	Total: 4115
Clear Zone Distance: 14'		Design Speed: 35 mph		
Minimum Sight Dist. for Stopping: 250'		Bridges: N/A		
Pavement Design Life 30 (years)				
Design Accumulated One-Way Rigid ESALs: 1,263,513				
DESIGN DATA - EAST OF MAIN AVE				
Traffic	Average Daily			
Current	2018	Pass: 3386	Trucks: 235	Total: 3621
Forecast	2038	Pass: 5032	Trucks: 349	Total: 5381
Clear Zone Distance: 14'		Design Speed: 35 mph		
Minimum Sight Dist. for Stopping: 250'		Bridges: N/A		
Pavement Design Life 20 (years)				
Design Accumulated One-Way Flexible ESALs: 599,120				

JOB #32 CITY OF DICKINSON, STARK COUNTY NORTH DAKOTA

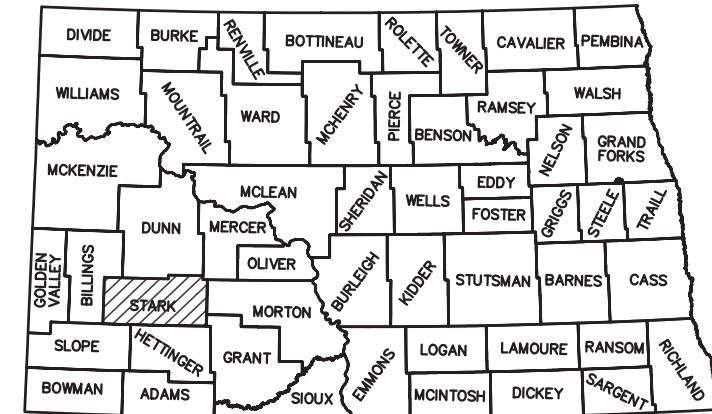
NDDOT PROJECT NO. SU-5-983(059)059 8TH STREET S RECONSTRUCTION 2ND AVE SW TO 6TH AVE SE

Grading, Aggregate Base Course, Hot Mix Asphalt, PCC Pavement,
Curb & Gutter, Sidewalks, Driveway, Valley Gutter, Signing,
Pavement Marking, Lighting, & Water Main

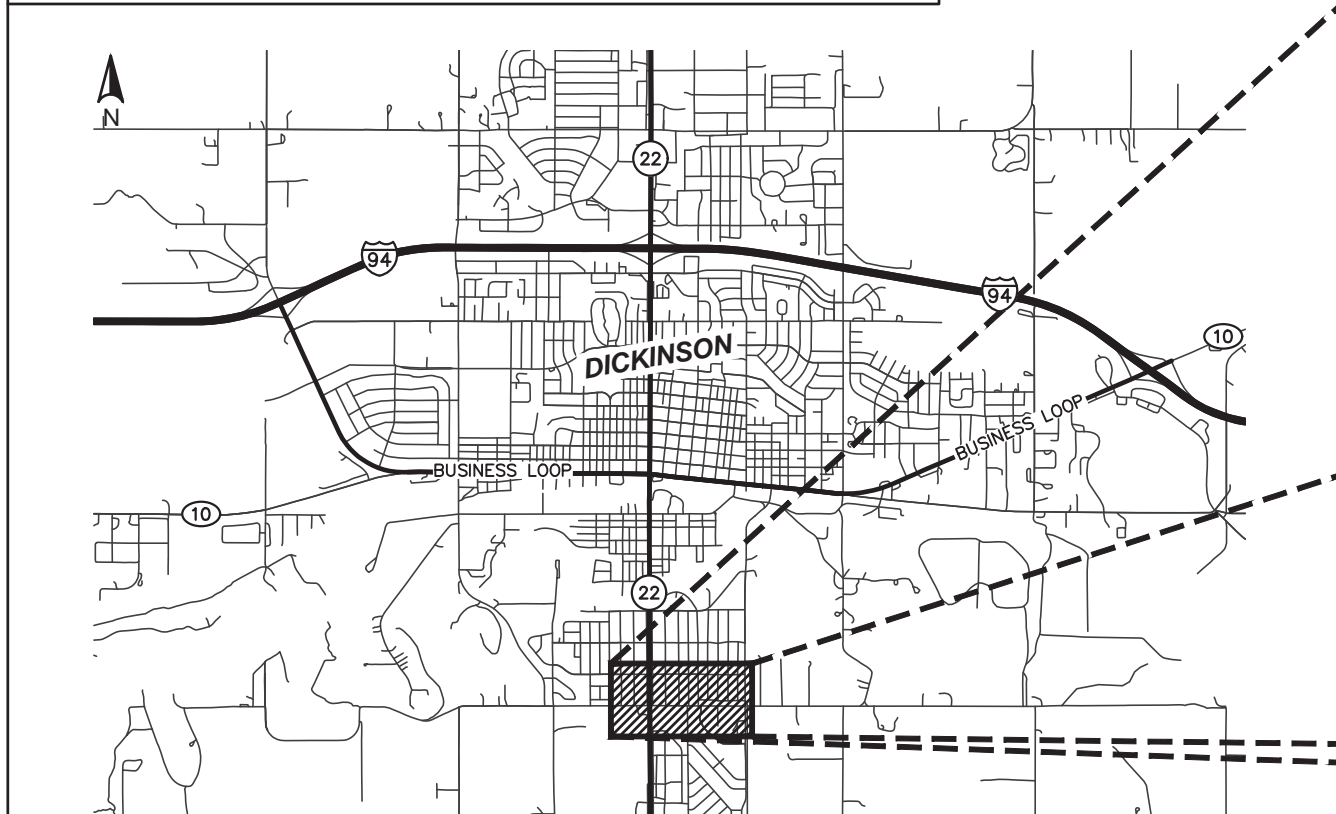
PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES
SU-5-983(059)059	0.632	0.648

GOVERNING SPECIFICATIONS

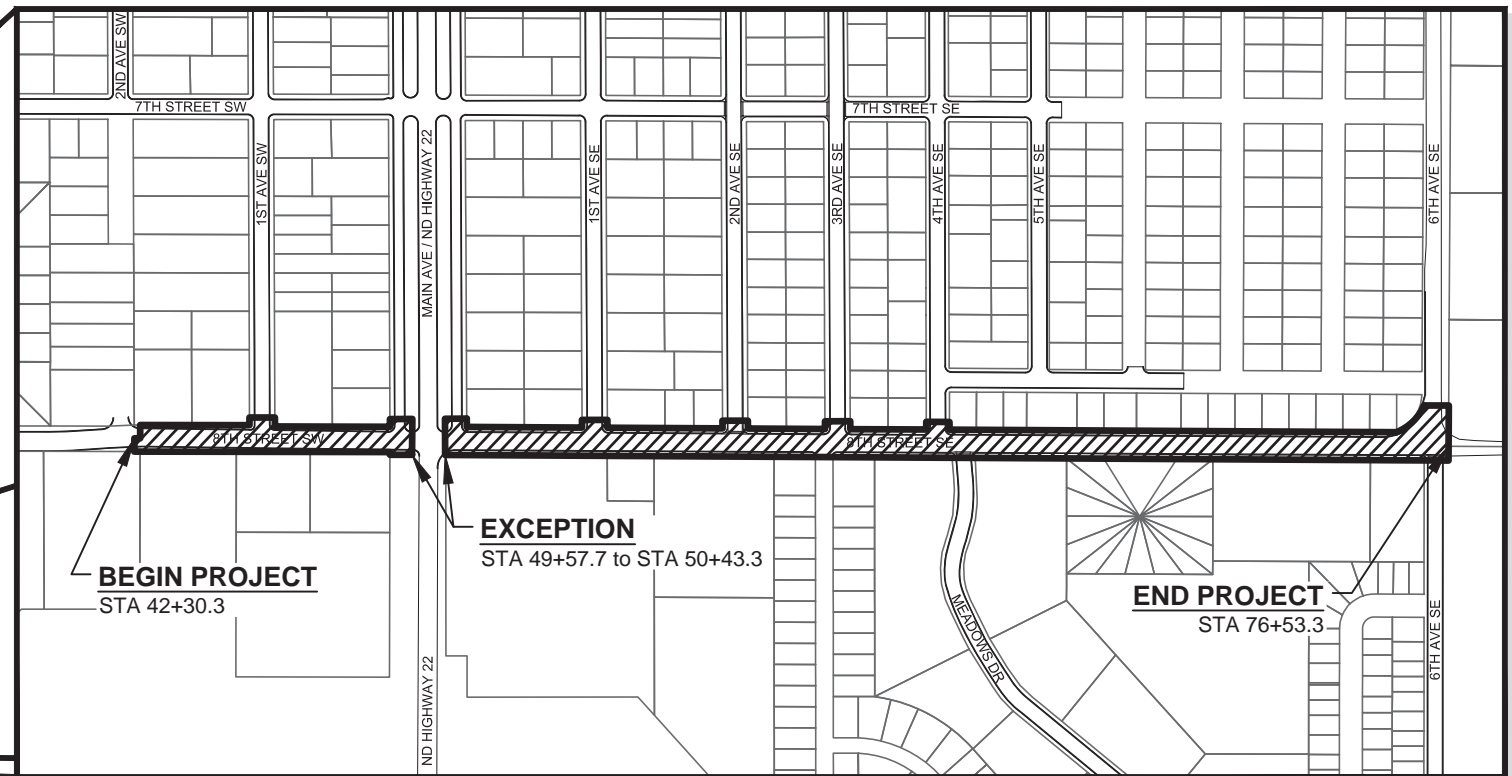
2014 Standard Specifications for Road and Bridge Construction adopted by the North Dakota Department of Transportation and the Supplemental Specifications effective on the date the project is advertised.



STATE COUNTY MAP



CITY MAP
1"=1 mile



DESIGNERS: HIGHLANDS ENGINEERING
Andrew Schrank, PE
KC Homiston, PE/LS
Andrew Albrecht, EIT
DESIGNERS: PRAIRIE ENGINEERING
Jeremy Butman, PE

CITY OF DICKINSON REVIEW

Craig Kubas /S/ Date: 10-23-17
 Craig Kubas, City Engineer
 City of Dickinson, ND

I hereby certify that the attached plans were prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of ND.

APPROVED DATE 10-23-17

Andrew Schrank /S/
 Andrew Schrank, PE-9814
 Highlands Engineering & Surveying, PLLC

This document was originally issued and sealed by Andrew Schrank Registration Number PE-9814, on 10-23-17 and the original document is stored at the City of Dickinson, ND City Hall

SPEC. CODE	ITEM DESCRIPTION	UNITS	FED. AID QTY.	CITY QTY.	TOTAL QTY.
103 0100	CONTRACT BOND	LSUM	0.83	0.17	1
201 0352	REMOVAL OF TREES & BRUSH	LSUM	1		1
201 0370	REMOVAL OF TREES 10IN	EA	2		2
202 0136	REMOVAL OF PAVEMENT	TON	5,266		5,266
202 0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF		2,003	2,003
203 0101	COMMON EXCAVATION-TYPE A	CY	26		26
203 0113	COMMON EXCAVATION-WASTE	CY	5,110		5,110
216 0100	WATER	MGAL	171		171
230 0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	26.3		26.3
251 0100	SEEDING CLASS I	ACRE	0.30		0.30
253 0201	HYDRAULIC MULCH	ACRE	0.30		0.30
261 0106	FIBER ROLLS 6IN	LF	1,332		1,332
261 0107	REMOVE FIBER ROLLS 6IN	LF	1,332		1,332
261 0200	WEIGHTED FIBER ROLLS	LF	144		144
261 0201	REMOVAL WEIGHTED FIBER ROLL	LF	144		144
302 0120	AGGREGATE BASE COURSE CL 5	TON	7,752		7,752
302 0407	RESHAPE AGGREGATE BASE COURSE	STA	7.2		7.2
401 0050	TACK COAT	GAL	714		714
401 0060	PRIME COAT	GAL	5,000		5,000
430 0040	SUPERPAVE FAA 40	TON	3,174		3,174
430 1000	CORED SAMPLE	EA	17		17
430 5828	PG 58-28 ASPHALT CEMENT	TON	190		190
550 0300	8IN NON-REINF CONCRETE PVMT CL AE-DOWELED	SY	3,884		3,884
702 0100	MOBILIZATION	LSUM	0.83	0.17	1
704 0100	FLAGGING	MHR	800		800
704 1000	TRAFFIC CONTROL SIGNS	UNIT	3,181		3,181
704 1052	TYPE III BARRICADE	EA	69		69
704 1054	SIDEWALK BARRICADE	EA	28		28
704 1060	DELINEATOR DRUMS	EA	161		161
704 1067	TUBULAR MARKERS	EA	166		166
704 1080	STACKABLE VERTICAL PANELS	EA	158		158
704 1500	OBLITERATION OF PAVEMENT MARKING	SF	595		595
706 0550	BITUMINOUS LABORATORY	EA	1		1
706 0600	CONTRACTOR'S LABORATORY	EA	1		1
708 1540	INLET PROTECTION-SPECIAL	EA	7		7
708 1541	REMOVE INLET PROTECTION-SPECIAL	EA	7		7
722 6140	ADJUST GATE VALVE BOX	EA	27		27
722 6200	ADJUST MANHOLE	EA	8		8
724 0210	FITTINGS-DUCTILE IRON	LBS		1,440	1,440
724 0270	REMOVE GATE VALVE & BOX	EA		14	14
724 0300	GATE VALVE & BOX 6IN	EA		8	8
724 0310	GATE VALVE & BOX 8IN	EA		15	15
724 0411	6IN HYDRANT	EA		5	5
724 0430	REMOVE HYDRANT	EA		5	5
724 0805	PLUG 6IN WATERMAIN	EA		2	2

SPEC. CODE	ITEM DESCRIPTION	UNITS	FED. AID QTY.	CITY QTY.	TOTAL QTY.
724 0810	WATERMAIN 6IN PVC	LF		110	110
724 0830	WATERMAIN 8IN PVC	LF		1,899	1,899
724 0955	WATER SERVICE CONNECTION 1IN	EA		3	3
724 0975	WATER LINE CONNECTION 6IN	EA		3	3
724 0976	WATER LINE CONNECTION 6IN TO 8IN	EA		7	7
724 0980	WATER LINE CONNECTION 8IN	EA		3	3
724 1208	BORE & PUSH 8IN WATERMAIN	LF		100	100
748 0100	CURB & GUTTER	LF	1,171		1,171
748 1030	VALLEY GUTTER 72IN	SY	30		30
750 0100	SIDEWALK CONCRETE	SY	951		951
750 1000	DRIVEWAY CONCRETE	SY	16		16
750 2115	DETECTABLE WARNING PANELS	SF	216		216
754 0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	262.1		262.1
754 0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	582.6		582.6
754 0592	RESET SIGN PANEL	EA	3		3
754 0593	RESET SIGN SUPPORT	EA	1		1
754 8010	DYNAMIC SPEED DISPLAY SIGN	EA	2		2
762 0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	SF	208		208
762 0430	SHORT TERM 4IN LINE-TYPE NR	LF	380		380
762 0434	SHORT TERM 8IN LINE-TYPE NR	LF	363		363
762 0436	SHORT TERM 24IN LINE-TYPE NR	LF	13		13
762 0442	SHORT TERM MESSAGE-TYPE NR	SF	48		48
762 1305	PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED	LF	12,045		12,045
762 1307	PREFORMED PATTERNED PVMT MK 6IN LINE-GROOVED	LF	954		954
762 1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED	LF	885		885
762 1315	PREFORMED PATTERNED PVMT MK 12IN LINE-GROOVED	LF	85		85
762 1325	PREFORMED PATTERNED PVMT MK 24IN LINE-GROOVED	LF	627		627
770 0020	CONCRETE FOUNDATION-HIGHWAY LIGHTING	EA	20		20
770 0100	PULL BOX	EA	2		2
770 0330	2IN DIAMETER RIGID CONDUIT	LF	3,215		3,215
770 0504	UNDERGROUND CONDUCTOR N04-TYPE RHW	LF	6,766		6,766
770 0505	UNDERGROUND CONDUCTOR N06-TYPE RHW	LF	3,383		3,383
770 0735	FEED POINT-TYPE II-PAD MOUNTED	EA	1		1
770 1718	LT STD 8FT MA 32 FT POLE BREAKAWAY	EA	20		20
770 4210	LED LUMINAIRE	EA	20		20
770 4560	REMOVE LIGHT STANDARD	EA	2		2
770 4582	REMOVE CONCRETE FOUNDATION	EA	2		2
970 0070	STONE MULCH	SF	332		332
990 0230	TEMPORARY ACCESS	LSUM	1		1

QUANTITIES

8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

BASIS OF ESTIMATE

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	10	1

REMOVAL OF PAVEMENT

Material to be Removed	Unit	A		B		2 x (A x B / 27)
		Depth (FT)	End Area (SF)	Area (SF)	Linear Feet (LF)	Subtotal
Mainline Bituminous & Concrete Surfacing @ 2 Ton/CY	Ton	0.42	---	164,300	---	5,112
Other Bituminous Surfacing @ 2 Ton/CY	Ton	0.42	---	824	---	26
Sidewalk Concrete @ 2 Ton/CY	Ton	0.33	---	1574	---	38
Driveway Concrete @ 2 Ton/CY	Ton	0.50	---	145	---	5
Curb and Gutter @ 2 Ton/CY	Ton	---	1.3	---	887	85
					Total	5,266

AGGREGATE BASE COURSE CL 5 @ 1.875 TON/CY FOR CURB & GUTTER, VALLEY GUTTER, SIDEWALK CONCRETE, AND DRIVEWAY CONCRETE

Item Aggregate Base will be Beneath	Unit	A		B		C = A x B / 3	D = 1.875 * C
		Depth (FT)	End Area (SY)	Surface Area (SY)	Linear Feet (LF)	Volume (CY)	Subtotal
Curb & Gutter - When Abutting New Sidewalk or Unpaved Areas *	Ton	---	0.17	---	622	35	65
Curb & Gutter - When Abutting Existing Sidewalk	Ton	---	0.11	---	549	20	38
Valley Gutter	Ton	0.50	---	30	---	5	9
Sidewalk & Driveway Concrete	Ton	0.33	---	967	---	106	199
					Total	166	311

* Includes aggregate base beneath and 1-foot behind curb & gutter.

HOT MIX ASPHALT RECONSTRUCTION AREA QUANTITIES EAST OF MAIN AVENUE

Spec	Code	Material	Unit	Sta 50+43 to 76+53			Total
				A	B	C = A x B / 36	
				Surface Area (SY)	Depth (IN)	Volume (CY)	
302	0120	Aggregate Base Course CL 5 @ 1.875 Ton/CY	Ton	14,287	10	3,969	7,441
401	0050	Tack Coat @ 0.05 Gal/SY (1 application)	Gal	14,287	---	---	714
401	0060	Prime Coat @ 0.25 Gal/SY	Gal	14,287	---	---	5,000
430	0040	Superpave FAA 40 @ 2 Ton/CY	Ton	14,287	4	1,587	3,174
430	5828	PG 58-28 Asphalt Cemet @ 6.0%	Ton	---	---	---	190

HBP CORED SAMPLES

Specification Section	A	B	C	D	Quantity (D x 2)	Quantity (1 per mile)	Unit
	Distance (ft) ÷ 2000	Lanes	Lifts	Sublots (A x B x C)			
430.04 I.2.b(1), "General"	1	4	2	8	16	---	EA
430.04 I.2.b(2), "Pavement Thickness Determination Cores"	---	---	---	---	---	1	EA
				Total	16	1	EA

WATER:

25 MGal/Mile of Dust Paliative = (0.63 Miles) x (25 MGal/Mile) = 16 MGal
 20 Gal/Ton for Aggregates = (7,752 Ton) x (20 Gal/Ton) ÷ (1000 MGal/Gal) = 155 MGal

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BASIS OF ESTIMATE

8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

EARTHWORK SUMMARY									
	Top of Existing Pavement to Proposed Subgrade Volume within Roadway (CY)	Pavement Removal Area within Roadway (SF)	Pavement Removal Volume within Roadway @ 5" Depth (CY)	Common Excavation within Roadway (CY)	Common Excavation for Sidewalk, Driveway, and Curb & Gutter Reconstruction Areas (CY)	Common Excavation for Sidewalk in New Locations (CY)	Embankment Required for Sidewalk in New Locations (CY)	PAY ITEM Common Excavation - Type A (CY)	PAY ITEM Common Excavation - Waste (CY)
	A	B	C = 5 * B / 324	D = A - C	E (See Table Below)	F	G	H = G	I = D + E + F - H
2nd Ave SW to Main Avenue	1,173	34,947	539	634	---	0	0	0	---
Main Avenue to 6th Ave SE	6,306	129,353	1,996	4,310	---	116	26	26	---
Total Project	7,479	164,300	2,535	4,944	76	116	26	26	5,110

NOTE: Quantity shown for embankment has been increased by 30% to account for shrinkage.

COMMON EXCAVATION FOR SIDEWALK, DRIVEWAYS, AND CURB & GUTTER RECONSTRUCTION AREAS

Item Earthwork is to be Performed Under	Unit	A		B		A x B / 3
		Depth (FT)	End Area (SY)	Area (SY)	Linear Feet (LF)	Subtotal
Curb & Gutter - When Abutting New Sidewalk or Unpaved Areas *	CY	---	0.17	---	622	35
Curb & Gutter - When Abutting Existing Sidewalk	CY	---	0.11	---	549	20
Sidewalk Reconstruction	CY	0.33	---	174	---	19
Driveway Reconstruction	CY	0.33	---	16	---	2
					Total = E	76

* Includes aggregate base beneath and 1-foot behind curb & gutter.

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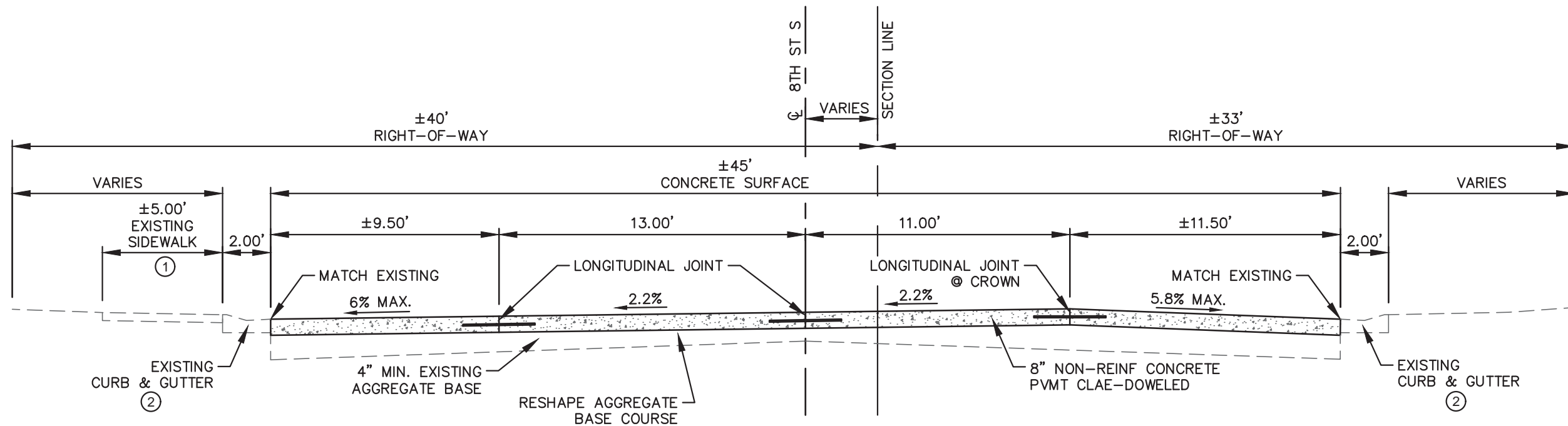
DATA TABLES
Earthwork Summary

8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	30	2

TRANSITION AREAS: THE FOLLOWING AREAS ARE TRANSITION AREAS BETWEEN THE TYPICAL SECTIONS SHOWN.
SEE CROSS-SECTION SHEETS FOR DETAILS AT THE FOLLOWING TRANSITION AREAS.

- STA. B.O.P. TO 43+50
- STA. 44+75 TO 45+50
- STA. 50+43 TO 51+50
- STA. 52+25 TO 52+50
- STA. 54+00 TO 54+75
- STA. 59+00 TO 62+25
- STA. 63+00 TO 65+00
- STA. 66+75 TO 67+50
- STA. 75+25 TO E.O.P.



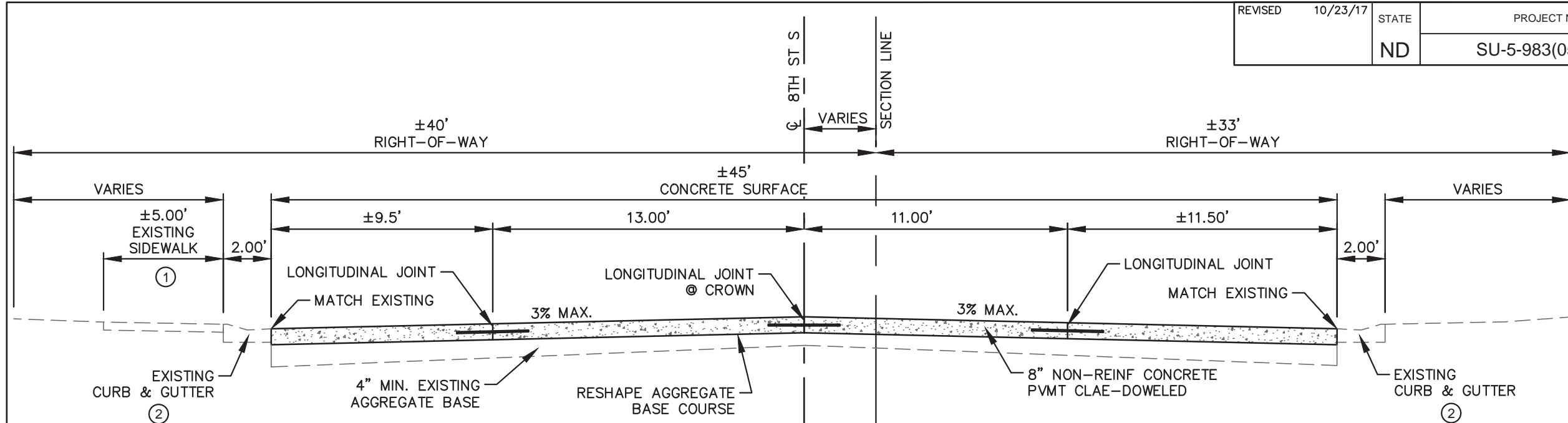
TYPICAL PROPOSED ROADWAY SECTION
(NOT TO SCALE)
STA. 43+50 TO 44+75

- ① EXISTING SIDEWALK IS PRESENT ONLY AT THE FOLLOWING LOCATIONS:
 - 43+50 TO STA 43+99 LT
- ② CURB AND GUTTER IS MOUNTABLE TYPE CURB AND GUTTER.

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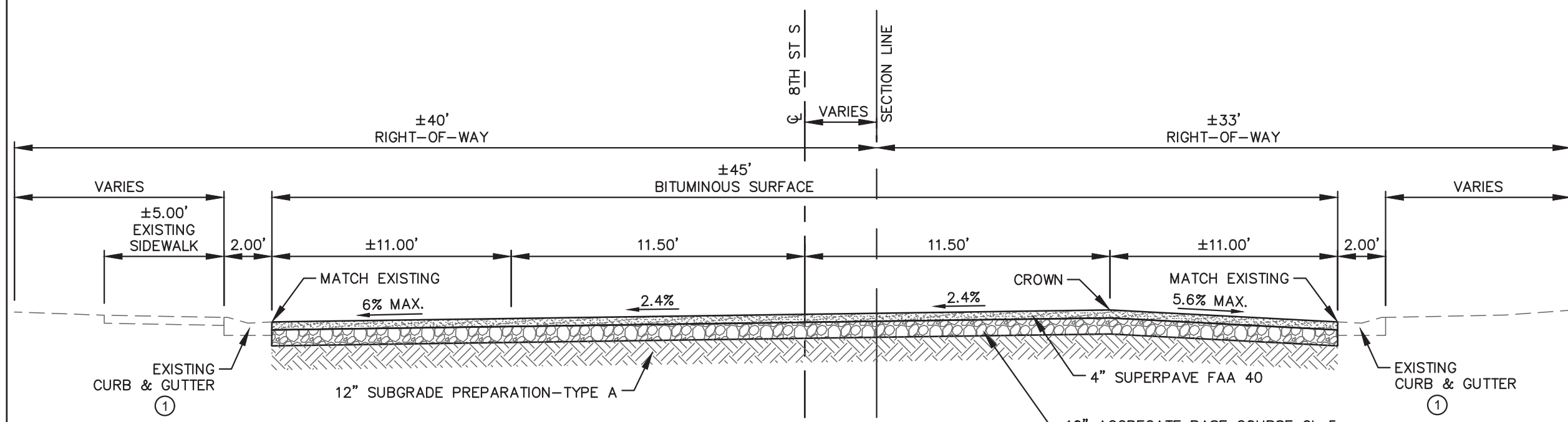
TYPICAL SECTIONS
Proposed

8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE



TYPICAL PROPOSED ROADWAY SECTION
(NOT TO SCALE)
STA. 45+50 TO 49+58

- ① EXISTING SIDEWALK IS PRESENT ONLY AT THE FOLLOWING LOCATIONS:
 - STA 48+90 TO STA 49+58 LT
- ② CURB AND GUTTER IS MOUNTABLE TYPE CURB AND GUTTER EXCEPT AT THE FOLLOWING LOCATIONS THAT CONSIST OF STANDARD CURB AND GUTTER:
 - STA 49+28 TO STA 49+58 LT
 - STA 48+95 TO STA 49+58 RT



TYPICAL PROPOSED ROADWAY SECTION
(NOT TO SCALE)
STA. 51+50 TO 52+25

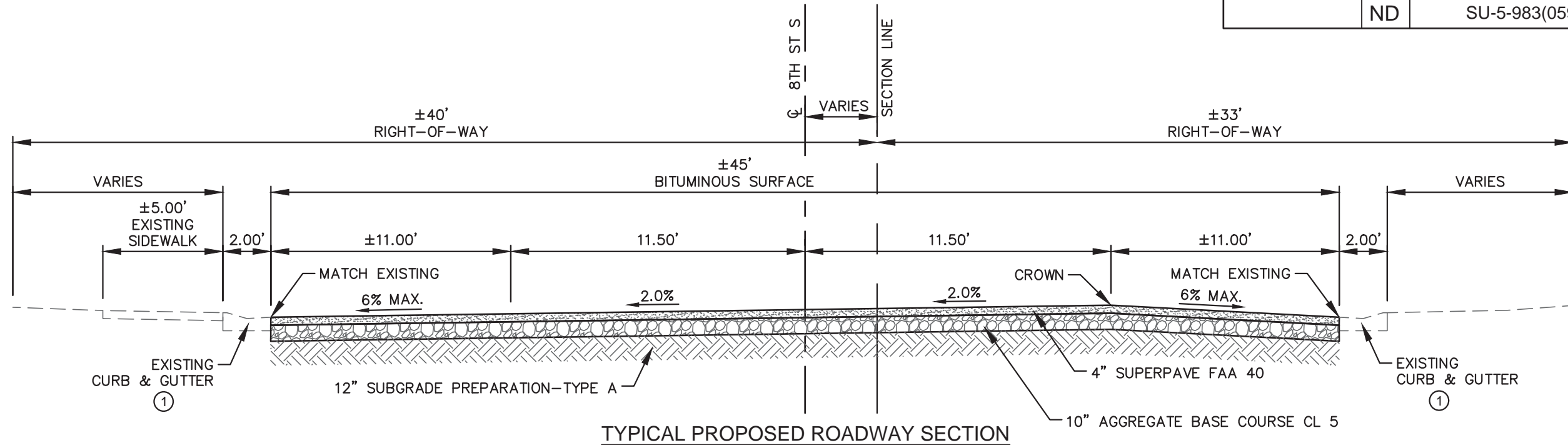
- ① CURB AND GUTTER IS MOUNTABLE TYPE CURB AND GUTTER.

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TYPICAL SECTIONS Proposed

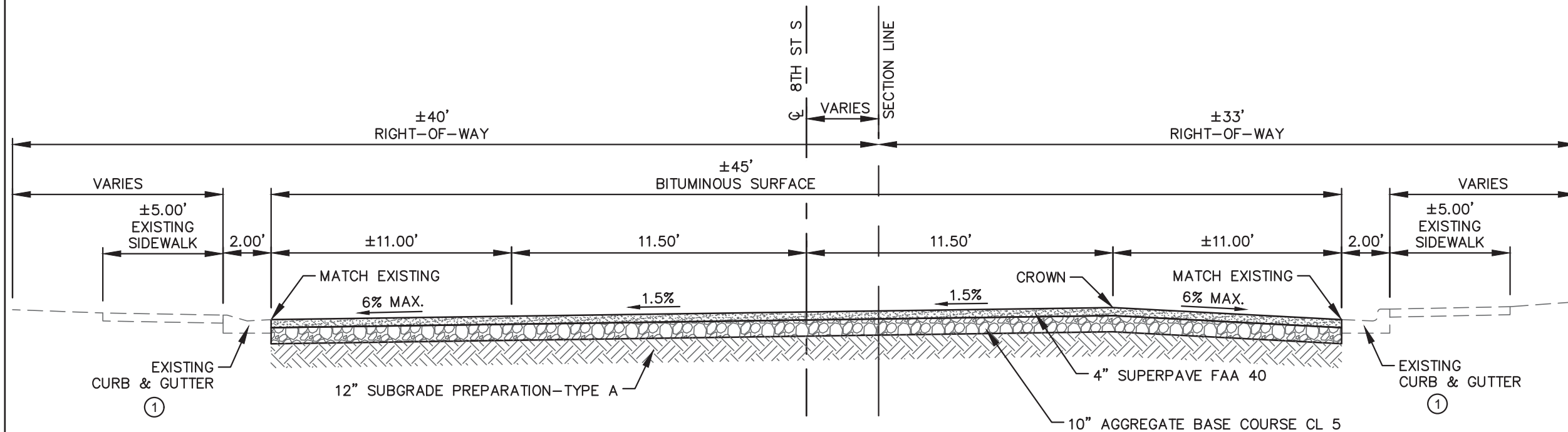
8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	30	4



TYPICAL PROPOSED ROADWAY SECTION
(NOT TO SCALE)
STA. 52+50 TO 54+00

① CURB AND GUTTER IS MOUNTABLE TYPE CURB AND GUTTER.



TYPICAL PROPOSED ROADWAY SECTION
(NOT TO SCALE)
STA. 54+75 TO 59+00

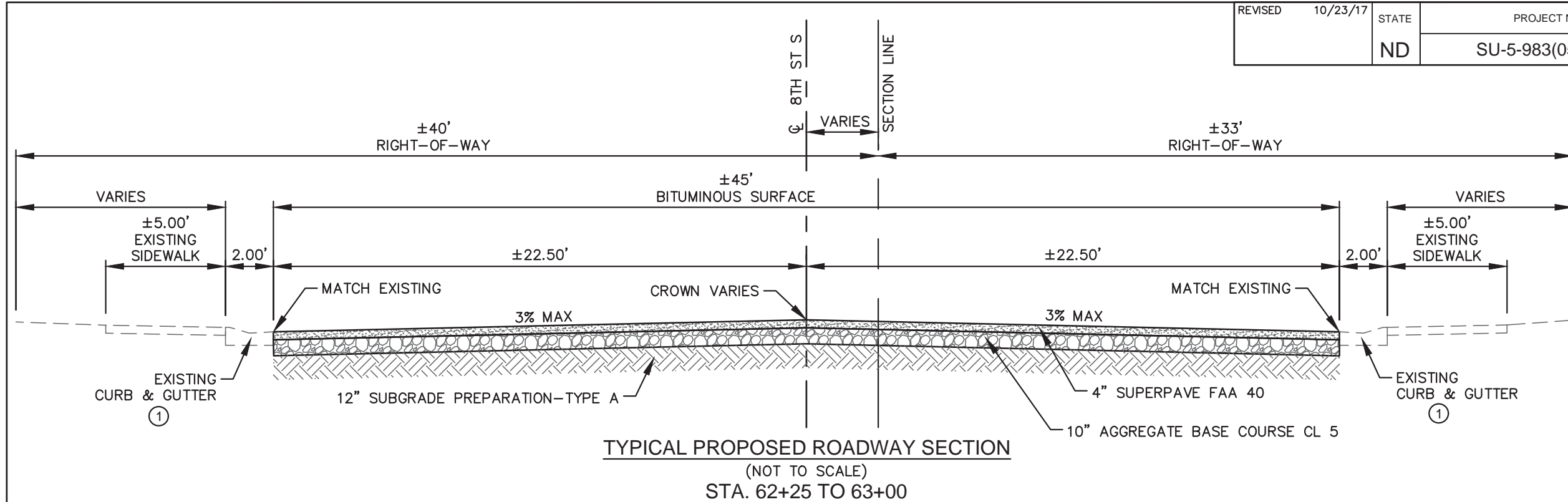
① CURB AND GUTTER IS MOUNTABLE TYPE CURB AND GUTTER EXCEPT AT THE FOLLOWING LOCATIONS THAT CONSIST OF STANDARD CURB AND GUTTER:
• STA 54+75 TO STA 57+68 RT

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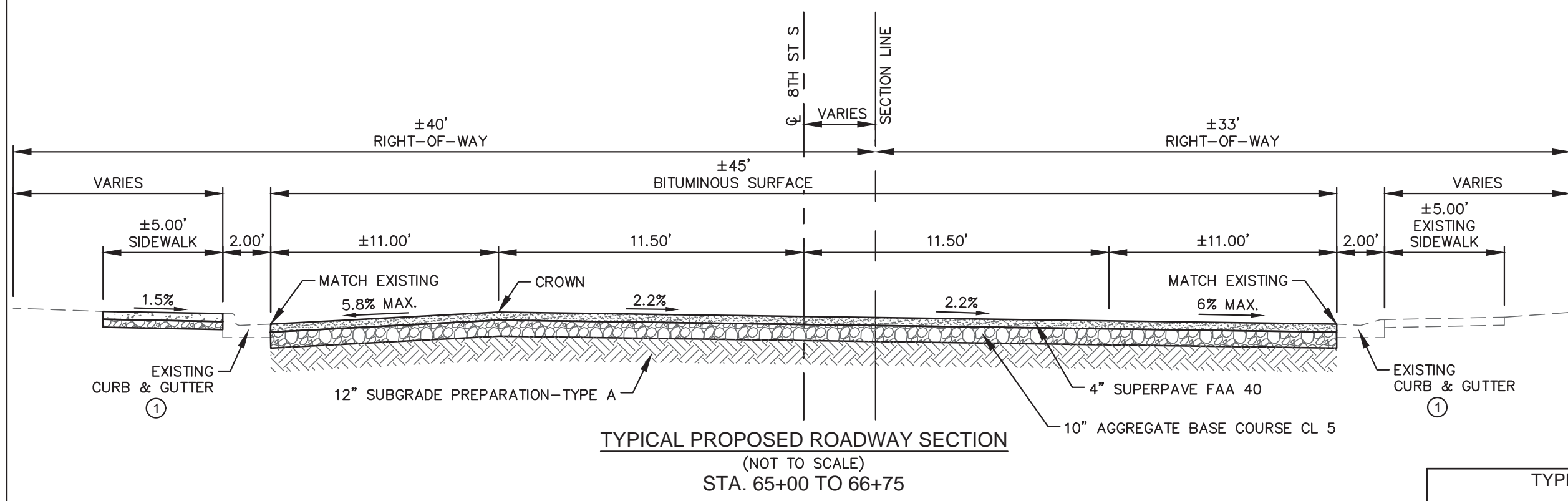
TYPICAL SECTIONS Proposed

8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

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① CURB AND GUTTER IS MOUNTABLE TYPE CURB AND GUTTER.



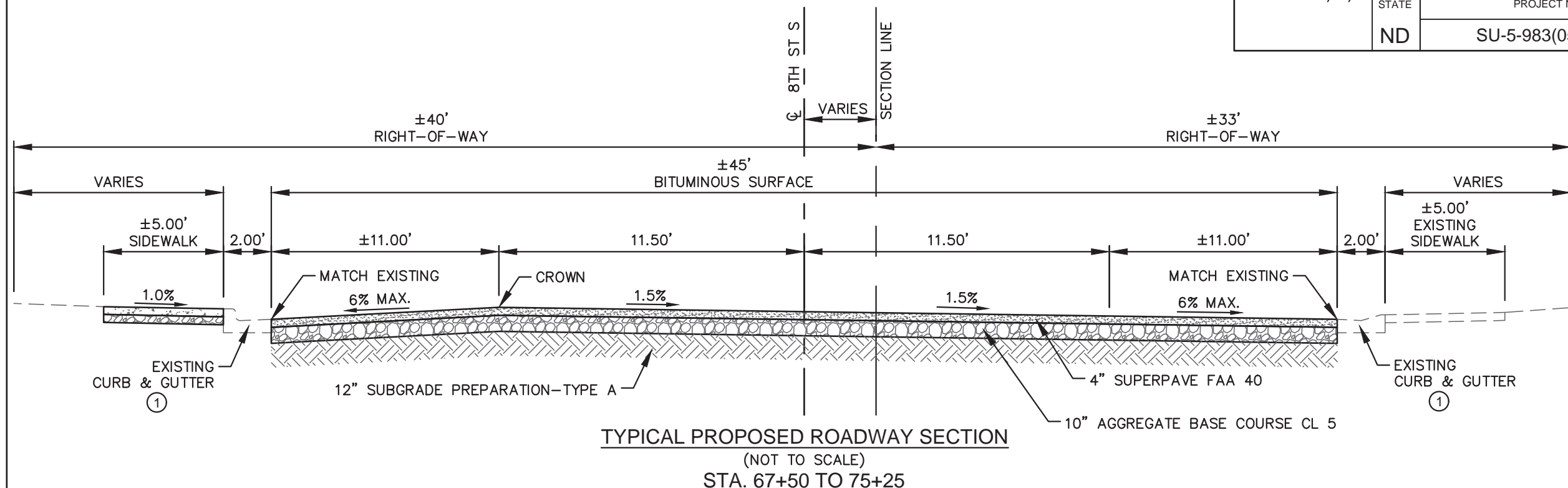
① CURB AND GUTTER IS STANDARD CURB AND GUTTER ON THE LEFT SIDE AND MOUNTABLE TYPE CURB AND GUTTER ON THE RIGHT SIDE.

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TYPICAL SECTIONS
Proposed

8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	30	6



① CURB AND GUTTER IS STANDARD CURB AND GUTTER ON THE LEFT SIDE AND MOUNTABLE TYPE CURB AND GUTTER ON THE RIGHT SIDE.

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TYPICAL SECTIONS
Proposed

8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
N.D.	SU-5-983(059)059	110	1

Sta/RP	Sign No.	Assembly No.	Flat Sheet For Signs		Sign Support Length				Support Size	Max Post Len LF	Sleeve Length				Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Reset Sign Panel EA	Reset Sign Support EA	Break-Away EA	Comments
			IV SF	XI SF	1st LF	2nd LF	3rd LF	4th LF			1st LF	2nd LF	3rd LF	4th LF								
34+25 Rt		20		9.0		10.4			2.5 x 2.5 10 ga	12.9					1	4	3 x 3 7 ga				1	
36+00 Rt		10		7.5		10.2			2.25 x 2.25 12 ga	10.6					1	4	2.5 x 2.5 12 ga					
37+80 Lt		10		7.5		10.2			2.25 x 2.25 12 ga	10.6					1	4	2.5 x 2.5 12 ga					
43+84 Lt		8		3.0																		Mount on Light Standard
46+25 Rt		8		3.0		9.2			2 x 2 12 ga	14.6					1	4	2.25 x 2.25 12 ga					
46+40 Lt		7		1.5		8.7			2 x 2 12 ga	25.5					1	4	2.25 x 2.25 12 ga					
47+30 Lt		10		7.5		10.2			2.25 x 2.25 12 ga	10.6					1	4	2.5 x 2.5 12 ga					
48+97 Lt		7		1.5																		Mount on Light Standard
49+01 Lt		1				9.7			2 x 2 12 ga	10.5					1	4	2.25 x 2.25 12 ga	1				
49+26 Rt		34		8.0		9.2			2.5 x 2.5 12 ga	11.3					1	4	3 x 3 7 ga					
49+52 Rt		2		7.5		9.7			2.5 x 2.5 12 ga	12.1					1	4	3 x 3 7 ga					
49+70 Lt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga					Use fluorescent yellow-green signs.
50+30 Lt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga					Use fluorescent yellow-green signs.
50+43 Lt		2		7.5		9.7			2.5 x 2.5 12 ga	12.1					1	4	3 x 3 7 ga					
50+65 Rt		7		1.5		8.7			2 x 2 12 ga	25.5					1	4	2.25 x 2.25 12 ga					
50+74 Rt		34		8.0		9.2			2.5 x 2.5 12 ga	11.3					1	4	3 x 3 7 ga					
51+09 Lt		371																1				Mount on Light Standard
52+25 Rt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga					Use fluorescent yellow-green signs.
53+25 Rt		7		1.5		8.7			2 x 2 12 ga	25.5					1	4	2.25 x 2.25 12 ga					
53+40 Lt		7		1.5		8.7			2 x 2 12 ga	25.5					1	4	2.25 x 2.25 12 ga					
54+00 Rt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga					Use fluorescent yellow-green signs.
54+66 Lt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga					Use fluorescent yellow-green signs.
55+80 Rt		8		3.0		9.2			2 x 2 12 ga	14.6					1	4	2.25 x 2.25 12 ga					
56+14 Lt		8		3.0																		Mount on Light Standard
57+00 Lt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga					Use fluorescent yellow-green signs.
57+00 Rt	SA B			7.5		12.3			2.5 x 2.5 12 ga	15.3	2.4			2.25 x 2.25 12 ga	1	4	3 x 3 7 ga					1
59+35 Lt		8		3.0		9.2			2 x 2 12 ga	14.6					1	4	2.25 x 2.25 12 ga					
61+64 Rt		8		3.0																		Mount on Light Standard
62+00 Lt		8		3.0		9.2			2 x 2 12 ga	14.6					1	4	2.25 x 2.25 12 ga					
63+55 Rt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga					Use fluorescent yellow-green signs.
63+68 Lt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga					Use fluorescent yellow-green signs.
64+75 Rt		10		7.5		10.2			2.25 x 2.25 12 ga	10.6					1	4	2.5 x 2.5 12 ga					
66+07 Lt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga					Use fluorescent yellow-green signs.
66+18 Rt		8		3.0																		Mount on Light Standard

Basis of Estimate
Sign Support Lengths

The sign support lengths have been calculated using the following vertical clearances:

Areas where parking and/or pedestrian movement will occur - 84"

<p>This document was originally issued and sealed by Andrew Schrank Registration Number PE- 9814 , on 10-23-17 and the original document is stored at the City of Dickinson, ND City Hall</p>	<p>Sign Summary Perforated Tube 8th Street S Reconstruction</p>
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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
N.D.	SU-5-983(059)059	110	2

Sta/RP	Sign No.	Assembly No.	Flat Sheet For Signs		Sign Support Length				Support Size	Max Post Len LF	Sleeve Length				Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Reset Sign Panel EA	Reset Sign Support EA	Break-Away EA	Comments
			IV SF	XI SF	1st LF	2nd LF	3rd LF	4th LF			1st LF	2nd LF	3rd LF	4th LF								
67+00 Lt		8		3.0		9.2			2 x 2 12 ga	14.6					1	4	2.25 x 2.25 12 ga					
69+55 Lt	SA B			7.5		12.3			2.5 x 2.5 12 ga	15.3	2.4			2.25 x 2.25 12 ga	1	4	3 x 3 7 ga			1		
70+25 Rt		8		3.0																	Mount on Light Standard	
71+00 Lt		8		3.0		9.2			2 x 2 12 ga	14.6					1	4	2.25 x 2.25 12 ga					
73+20 Rt		7		1.5		8.7			2 x 2 12 ga	25.5					1	4	2.25 x 2.25 12 ga					
73+50 Lt		7		1.5		8.7			2 x 2 12 ga	25.5					1	4	2.25 x 2.25 12 ga					
74+00 Rt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga				Use fluorescent yellow-green signs.	
74+75 Rt		373							2 x 2 12 ga									1	1			
75+32 Lt		4		3.9		9.8			2 x 2 12 ga	13.6					1	4	2.25 x 2.25 12 ga					
75+55 Lt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga				Use fluorescent yellow-green signs.	
75+88 Rt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga				Use fluorescent yellow-green signs.	
75+89 Lt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga				Use fluorescent yellow-green signs.	
75+90 Lt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga				Use fluorescent yellow-green signs.	
75+97 Lt		1		5.2		9.7			2 x 2 12 ga	10.5					1	4	2.25 x 2.25 12 ga					
78+00 Lt	SA A			8.3		11.3			2.5 x 2.5 12 ga	12.5					1	4	3 x 3 7 ga				Use fluorescent yellow-green signs.	
Sub Total			0.0	262.1		Total	418.6							Total	164			3	1	3		
Grand Total			0.0	262.1		Total	418.6							Total	164			3	1	3		

Basis of Estimate
Sign Support Lengths

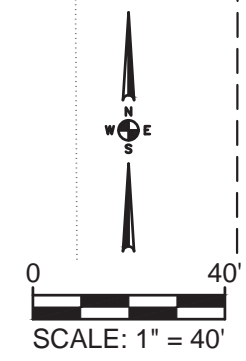
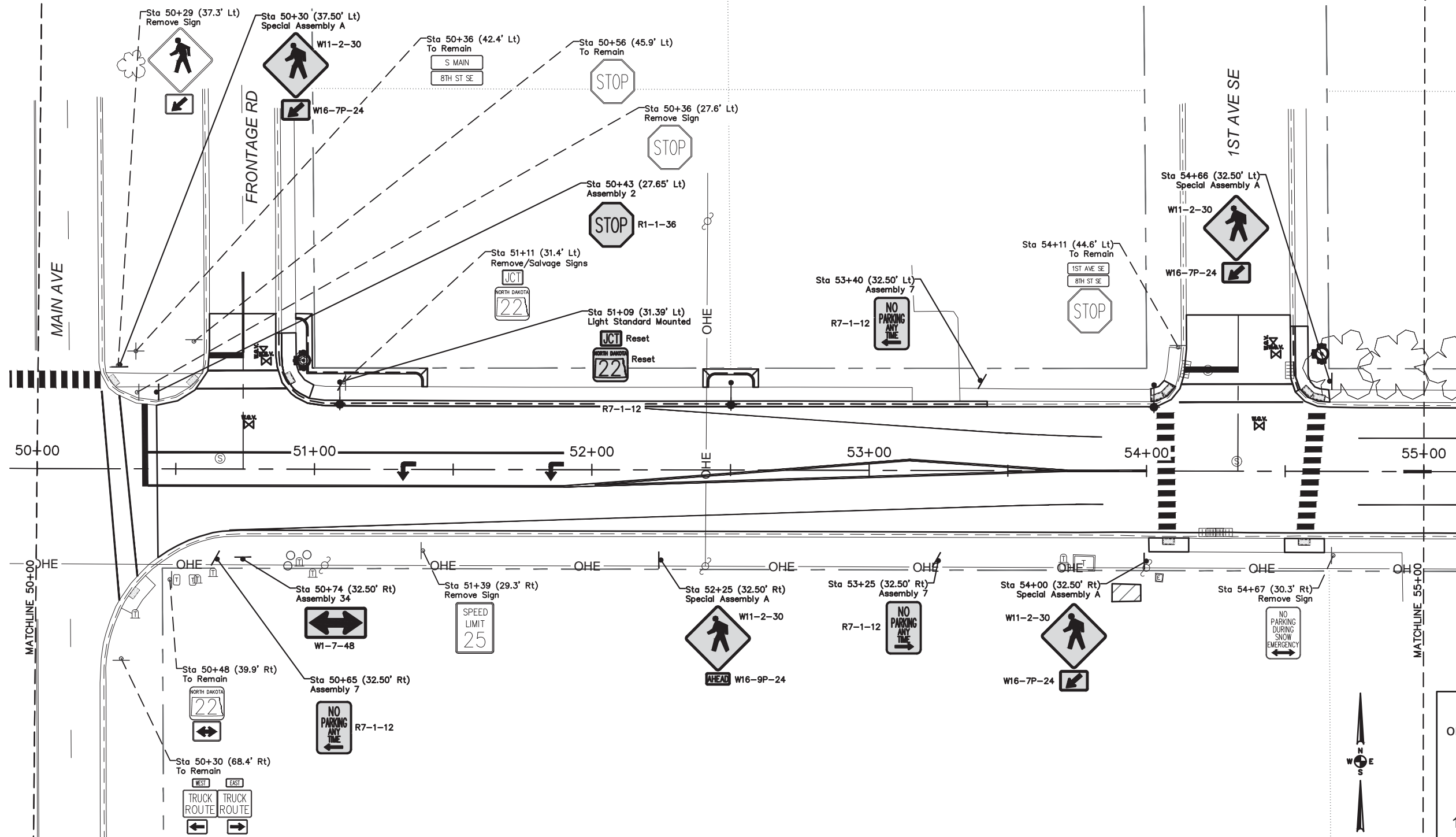
The sign support lengths have been calculated using the following vertical clearances:

Areas where parking and/or pedestrian movement will occur - 84"

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Sign Summary
Perforated Tube
8th Street S Reconstruction

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	110	6

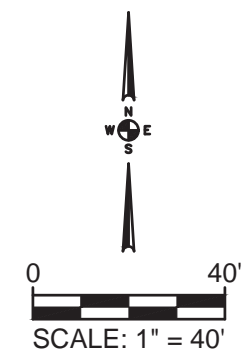
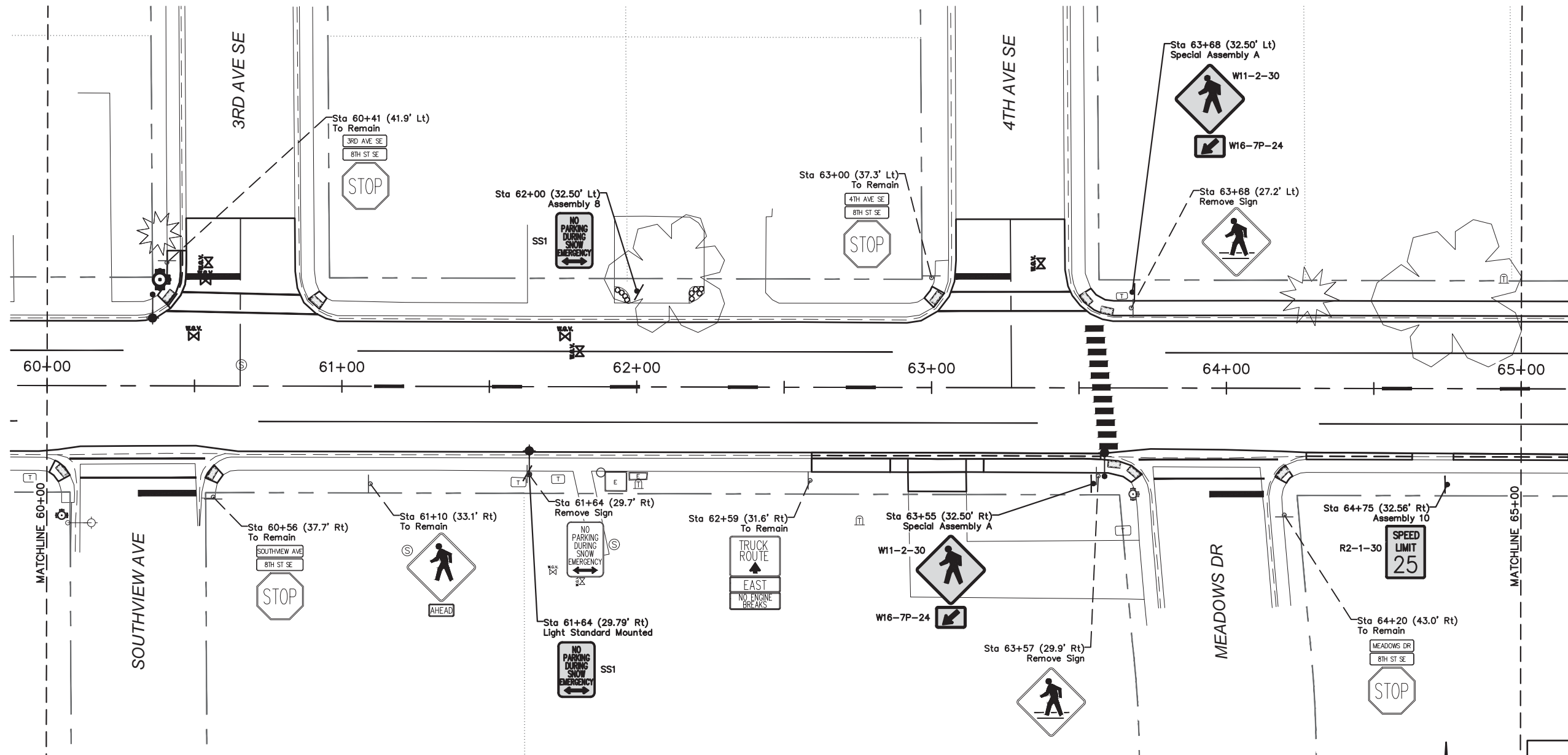


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SIGNING

8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	110	8

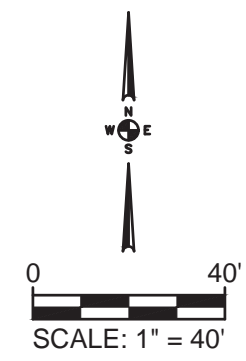
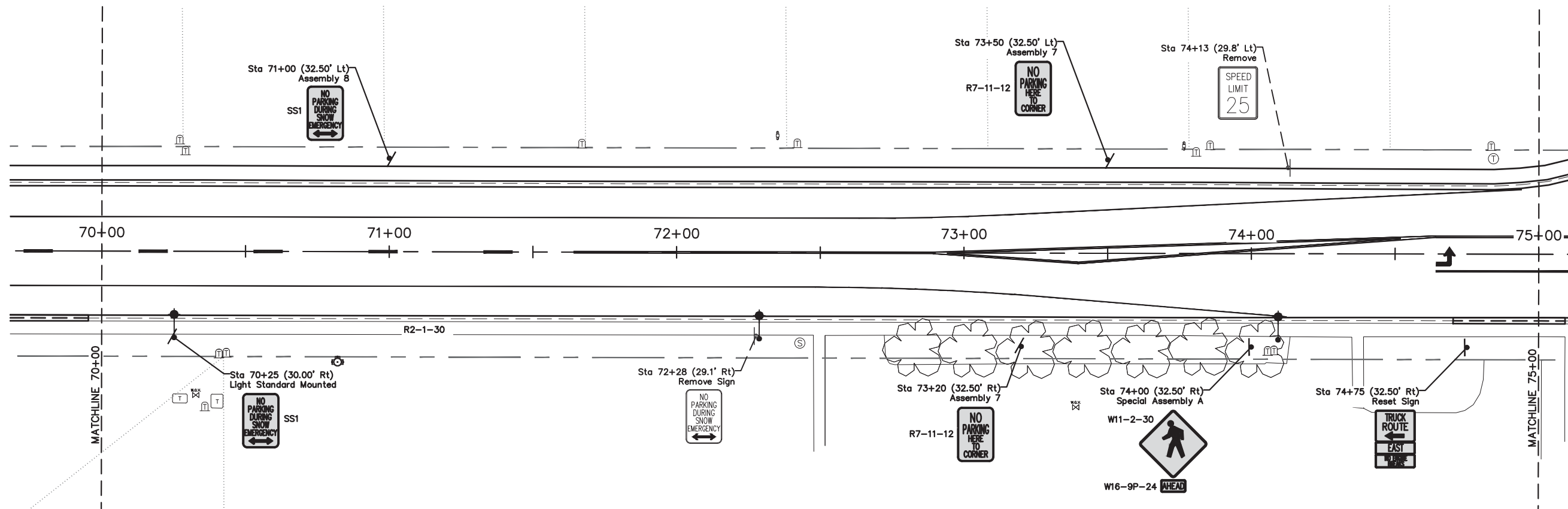


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SIGNING

8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	110	10

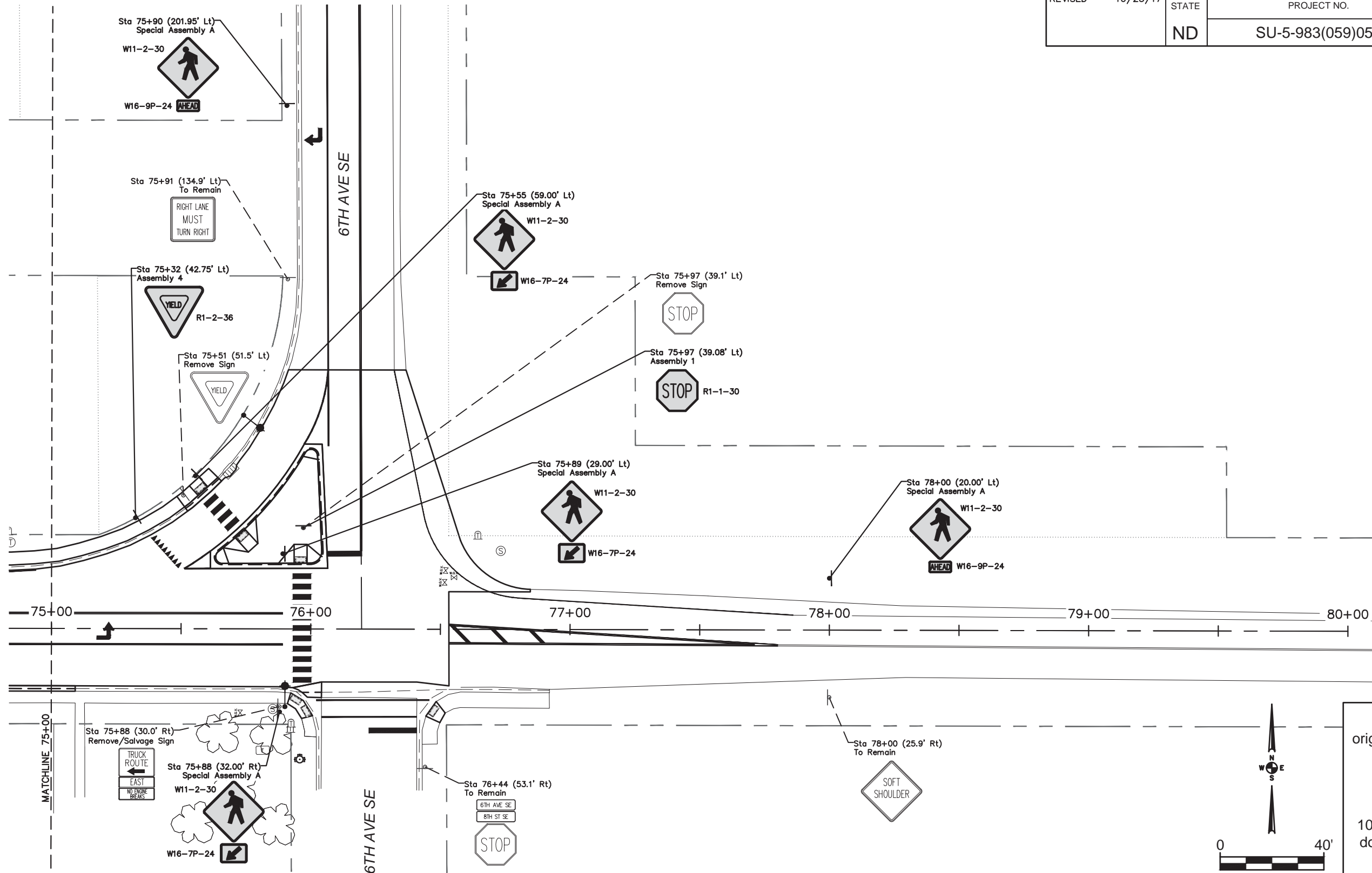


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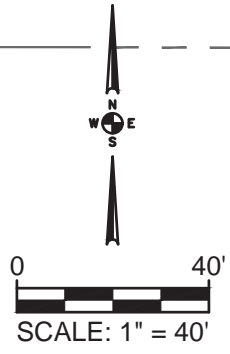
SIGNING

8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

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		ND	SU-5-983(059)059	110	11



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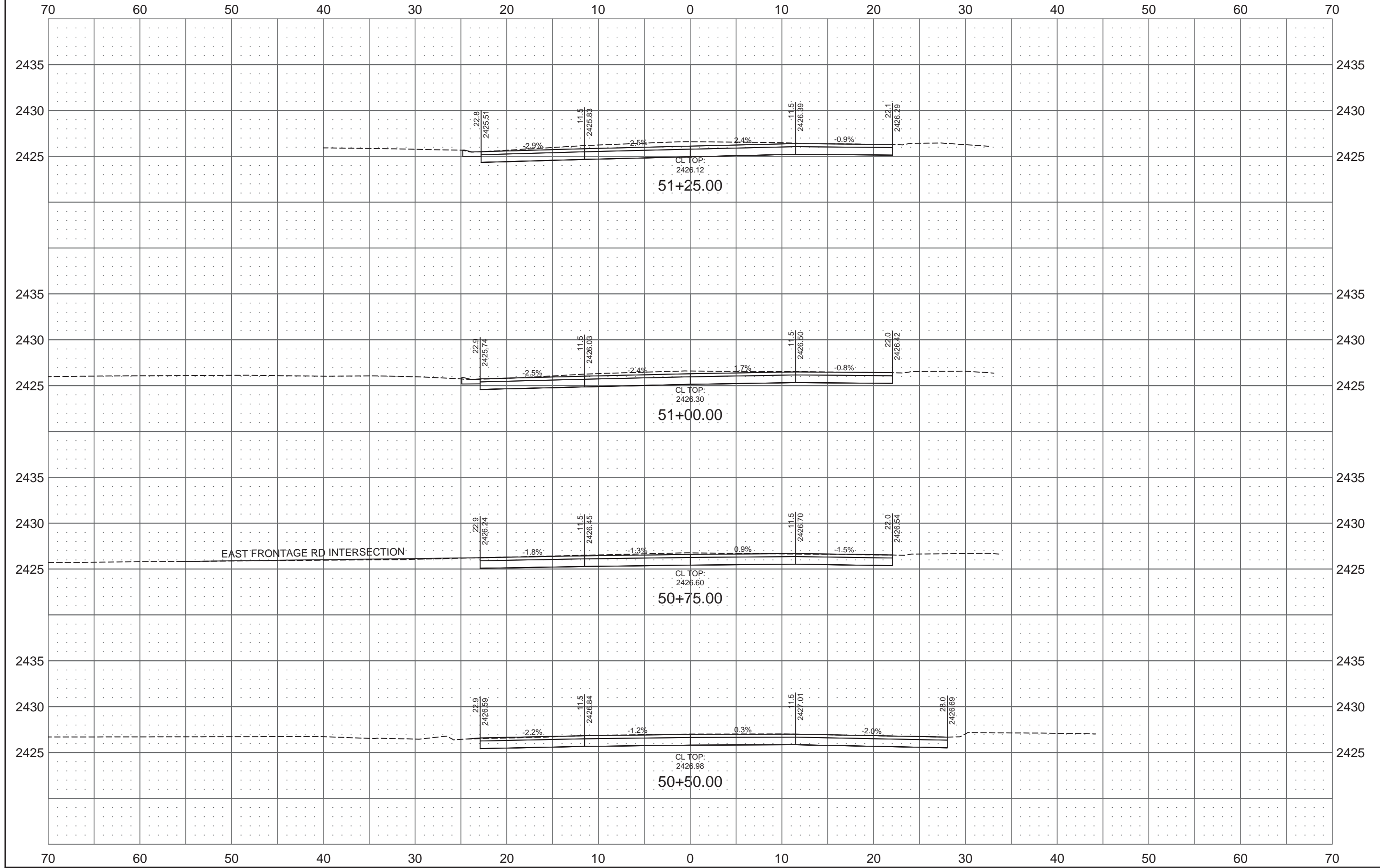


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8TH STREET S RECONSTRUCTION
2ND AVE SW TO 6TH AVE SE

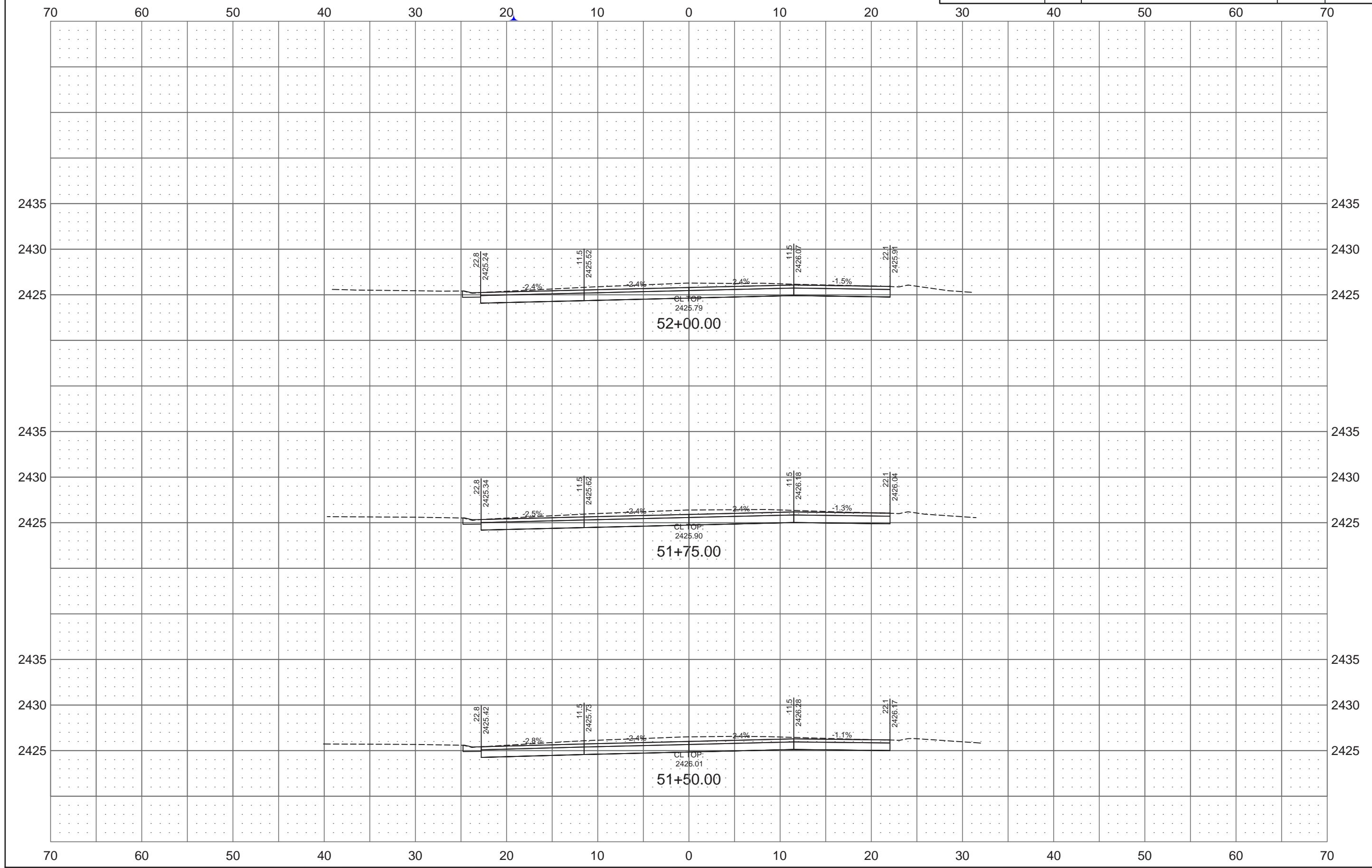
8TH STREET SE

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		ND	SU-5-983(059)059	200	9



8TH STREET SE

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8TH STREET SE

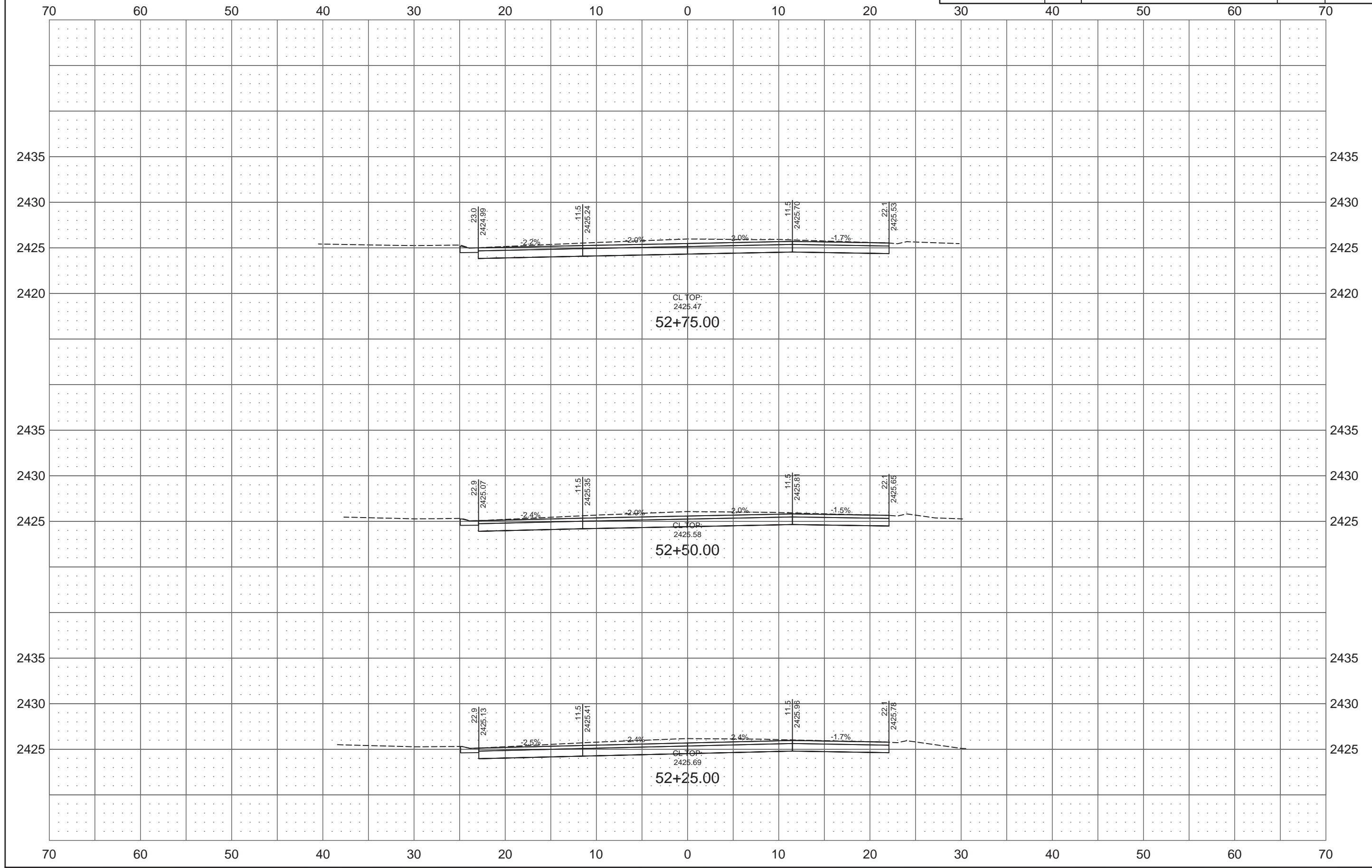
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SU-5-983(059)059

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200

SHEET NO.
11



8TH STREET SE

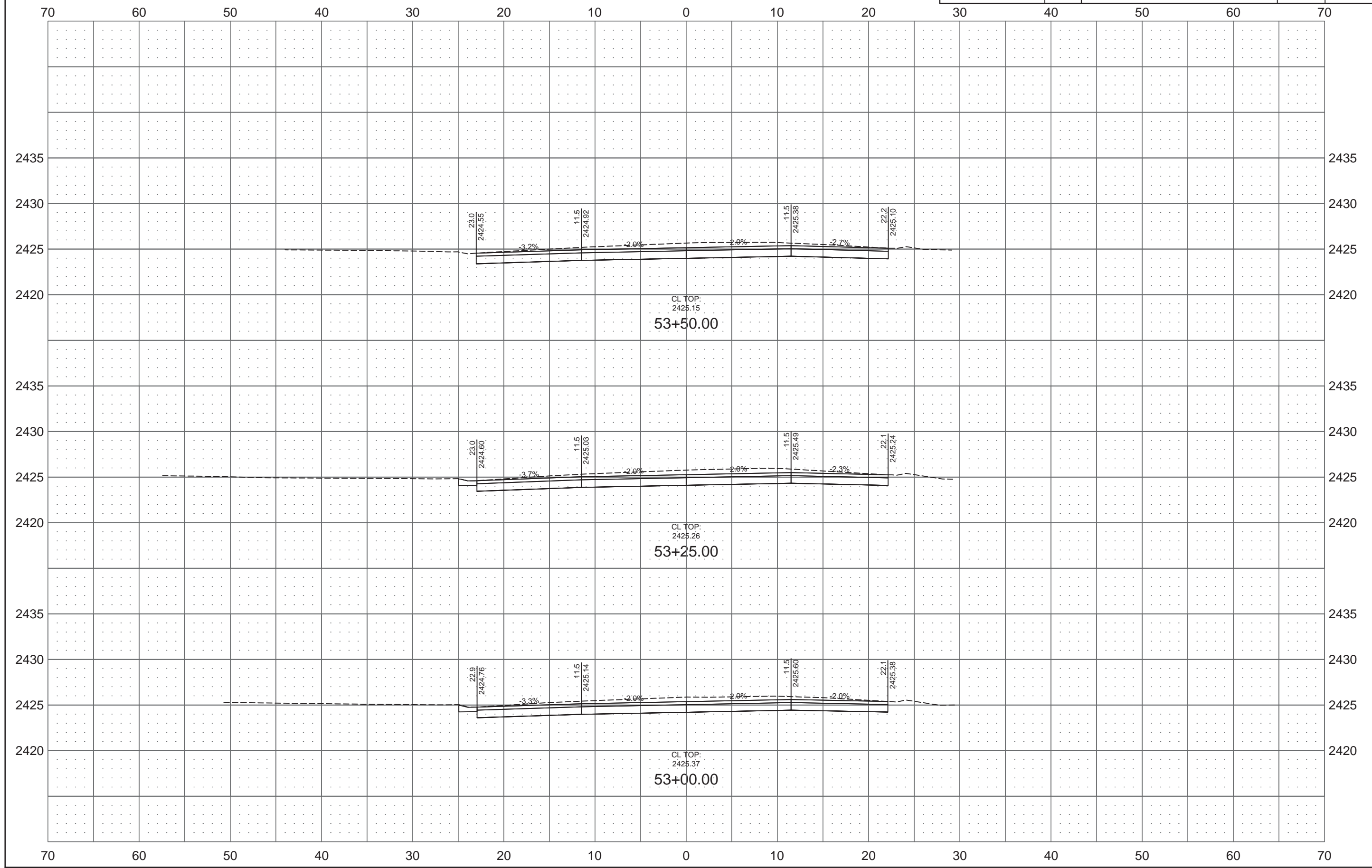
REVISED 10/23/17

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12



8TH STREET SE

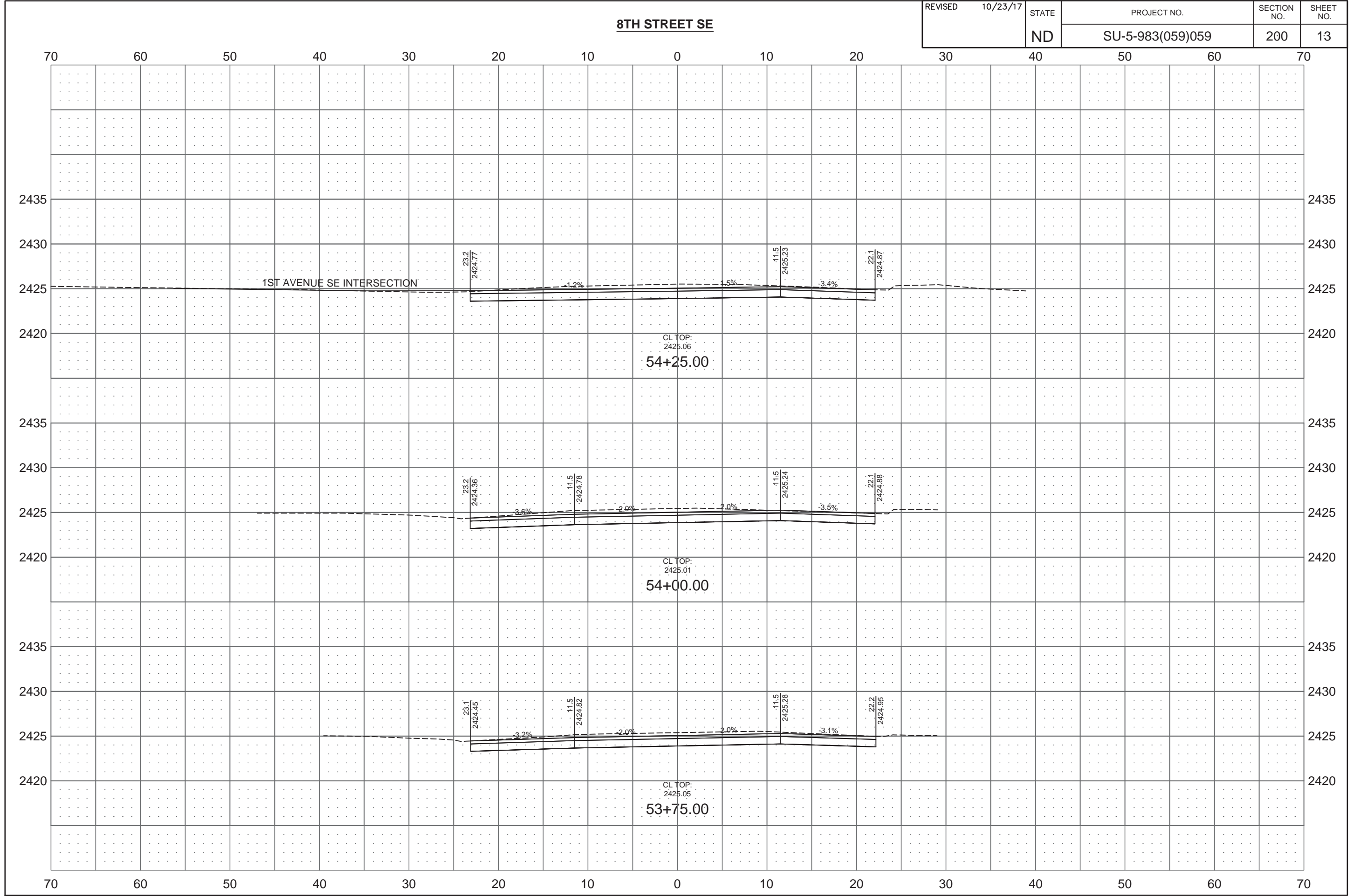
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SU-5-983(059)059

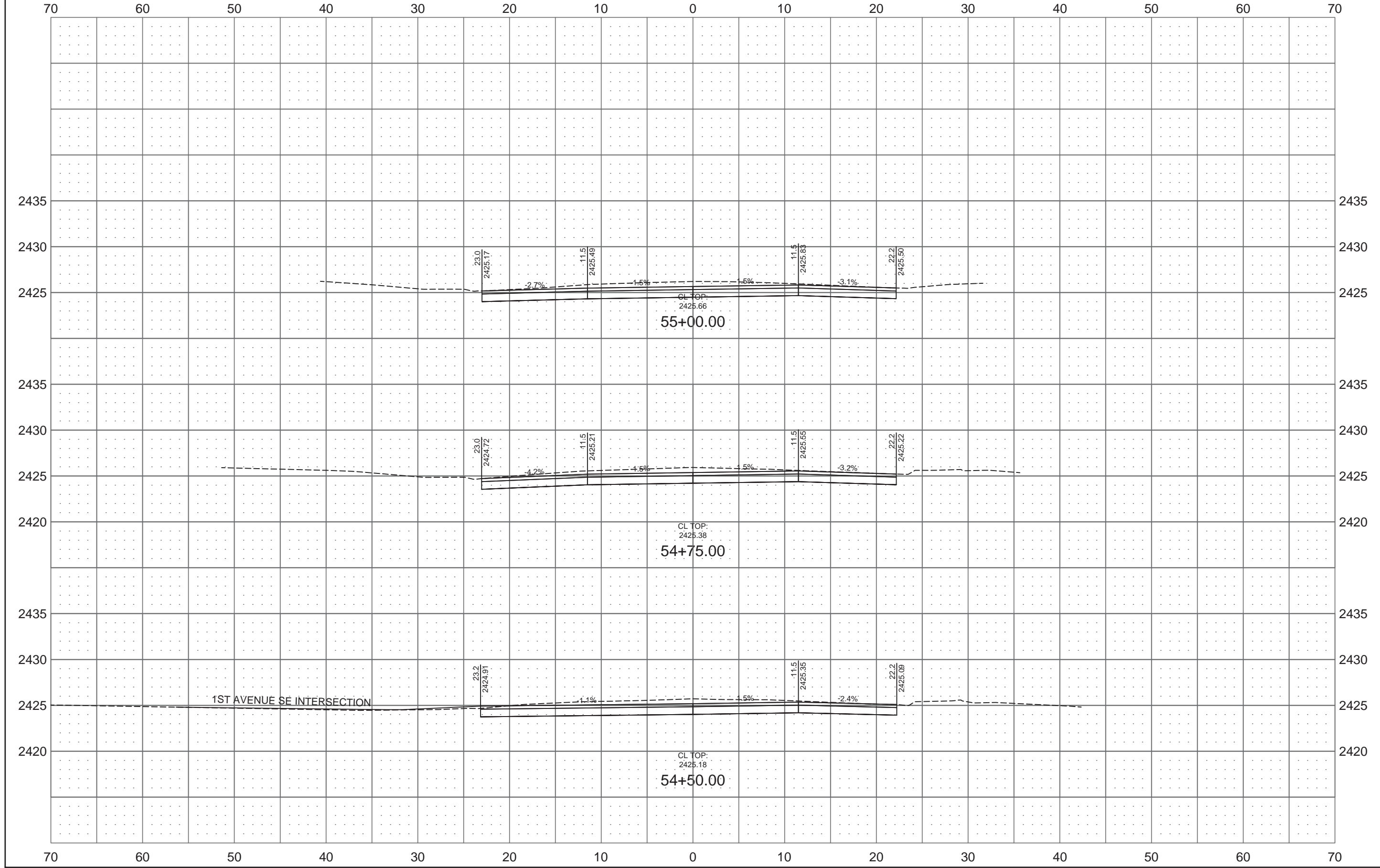
SECTION NO.
200

SHEET NO.
13



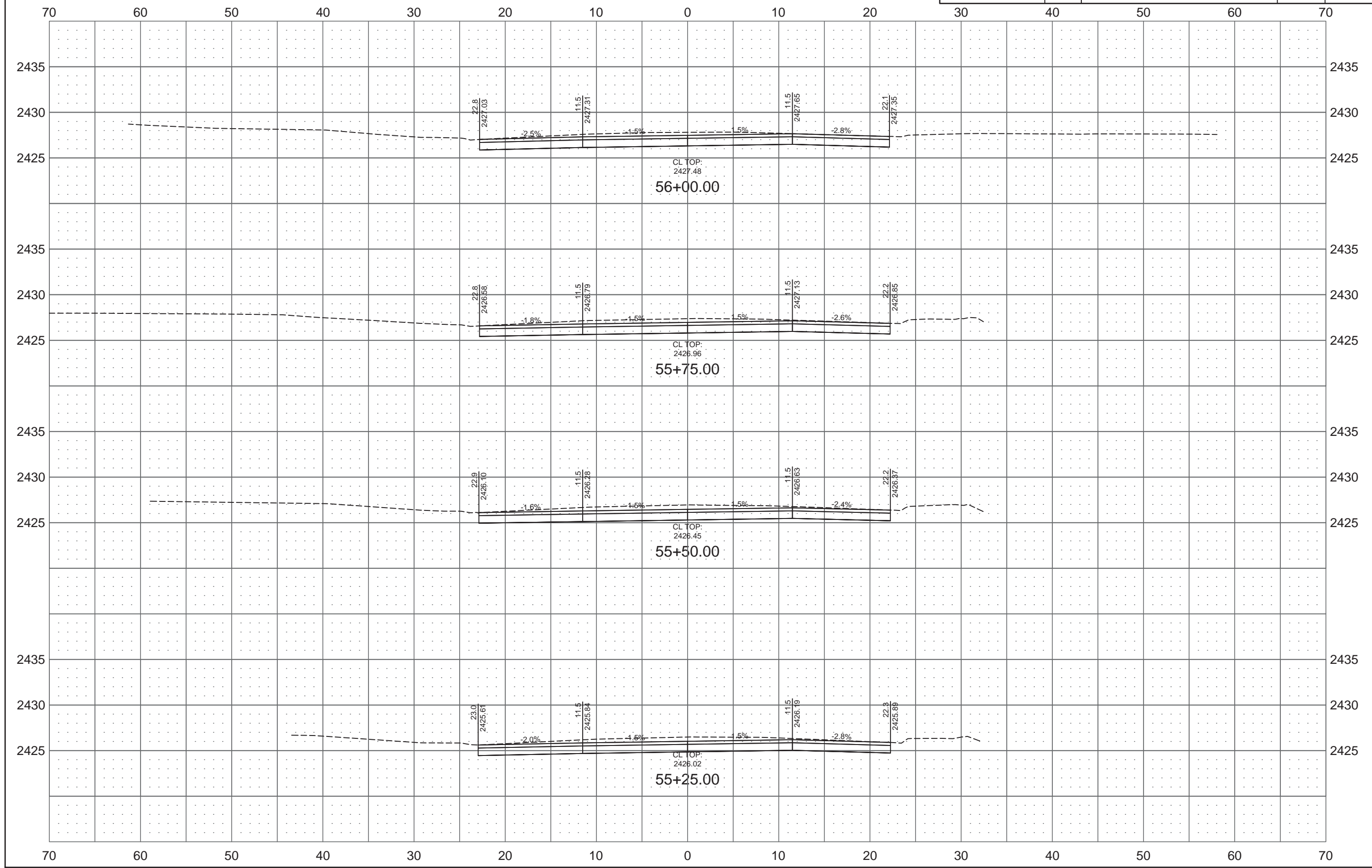
8TH STREET SE

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		ND	SU-5-983(059)059	200	14



8TH STREET SE

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		ND	SU-5-983(059)059	200	15



8TH STREET SE

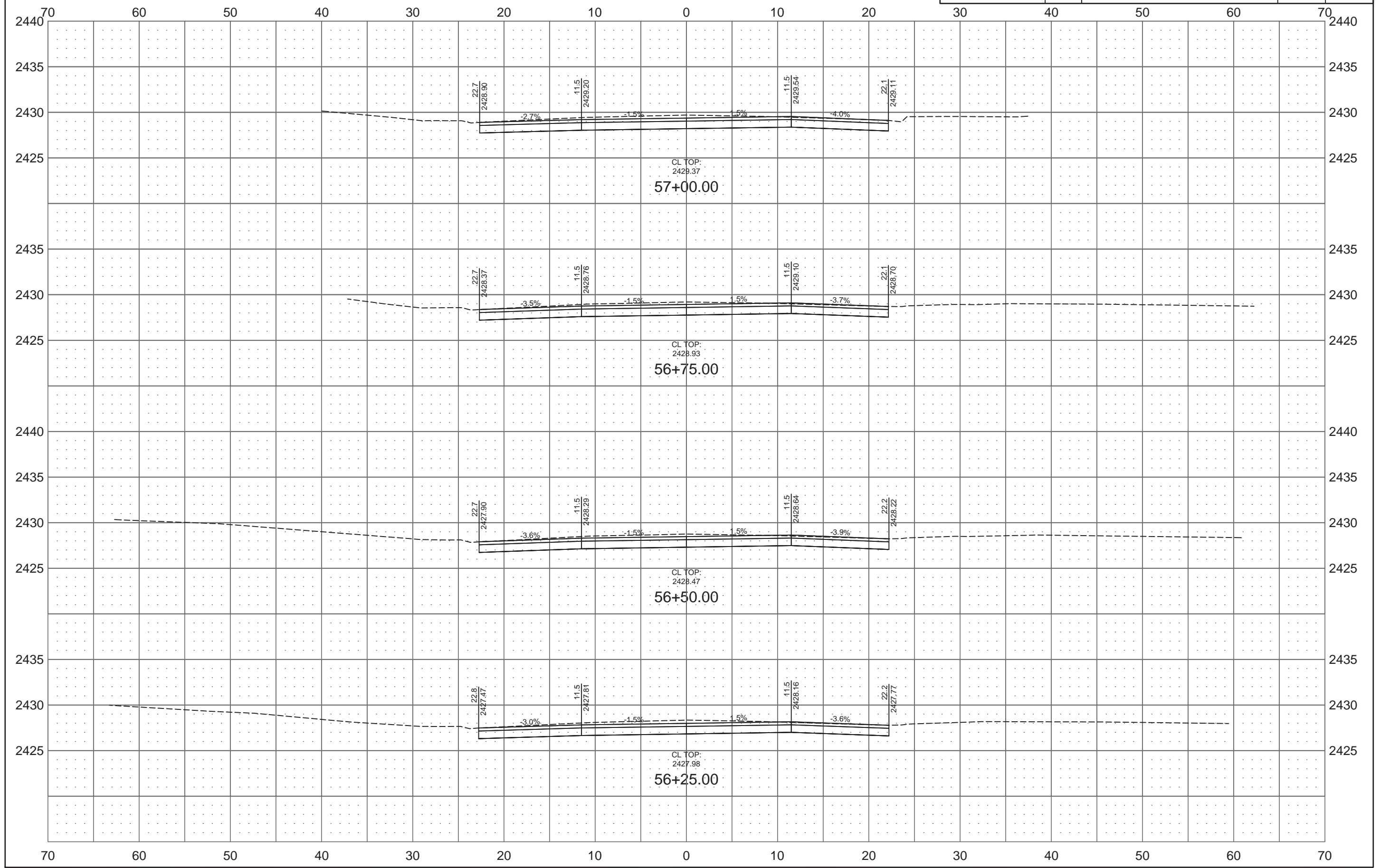
REVISED 10/23/17

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PROJECT NO.
SU-5-983(059)059

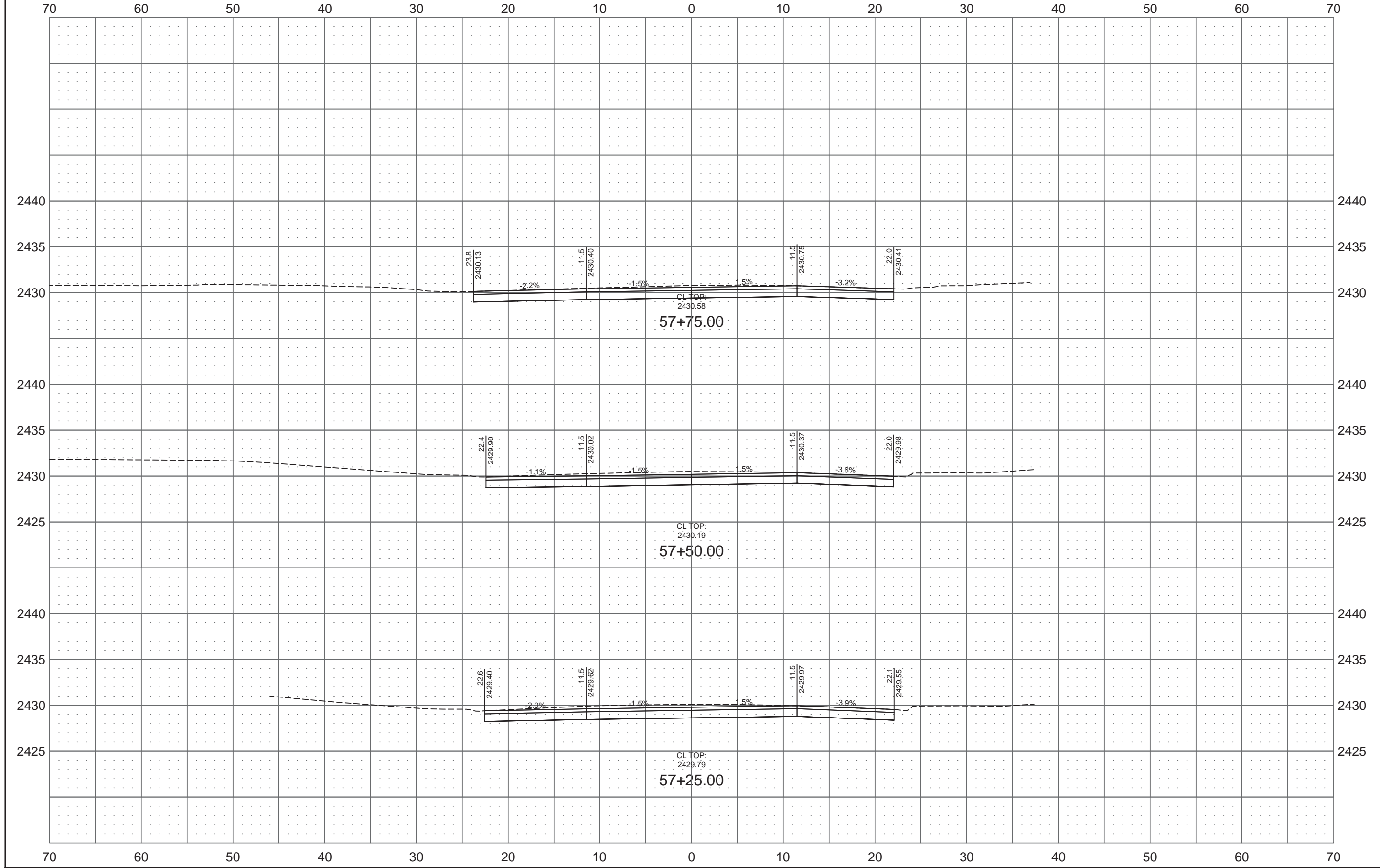
SECTION NO.
200

SHEET NO.
16



8TH STREET SE

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	200	17



8TH STREET SE

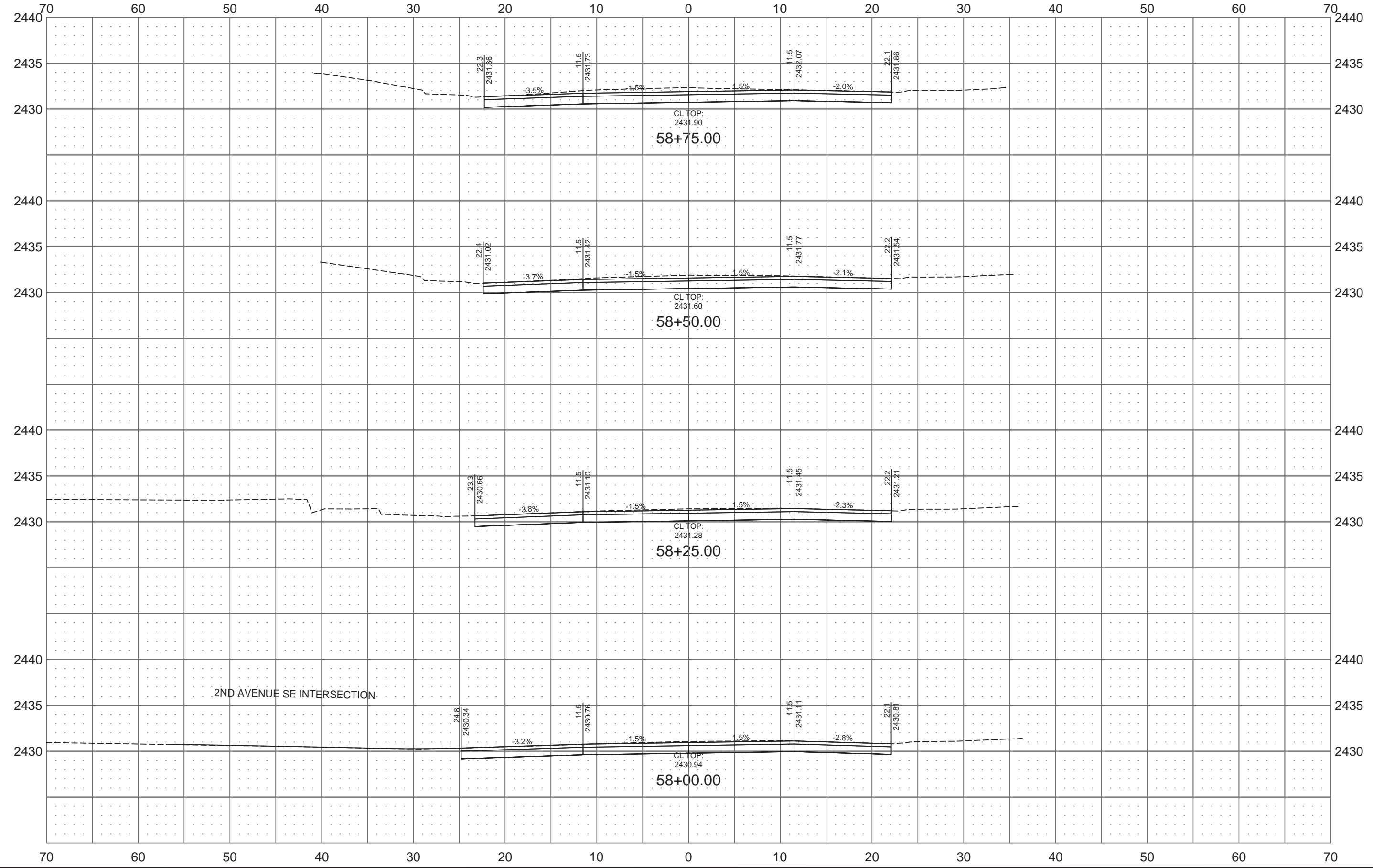
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SU-5-983(059)059

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SHEET NO.
18



8TH STREET SE

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PROJECT NO.

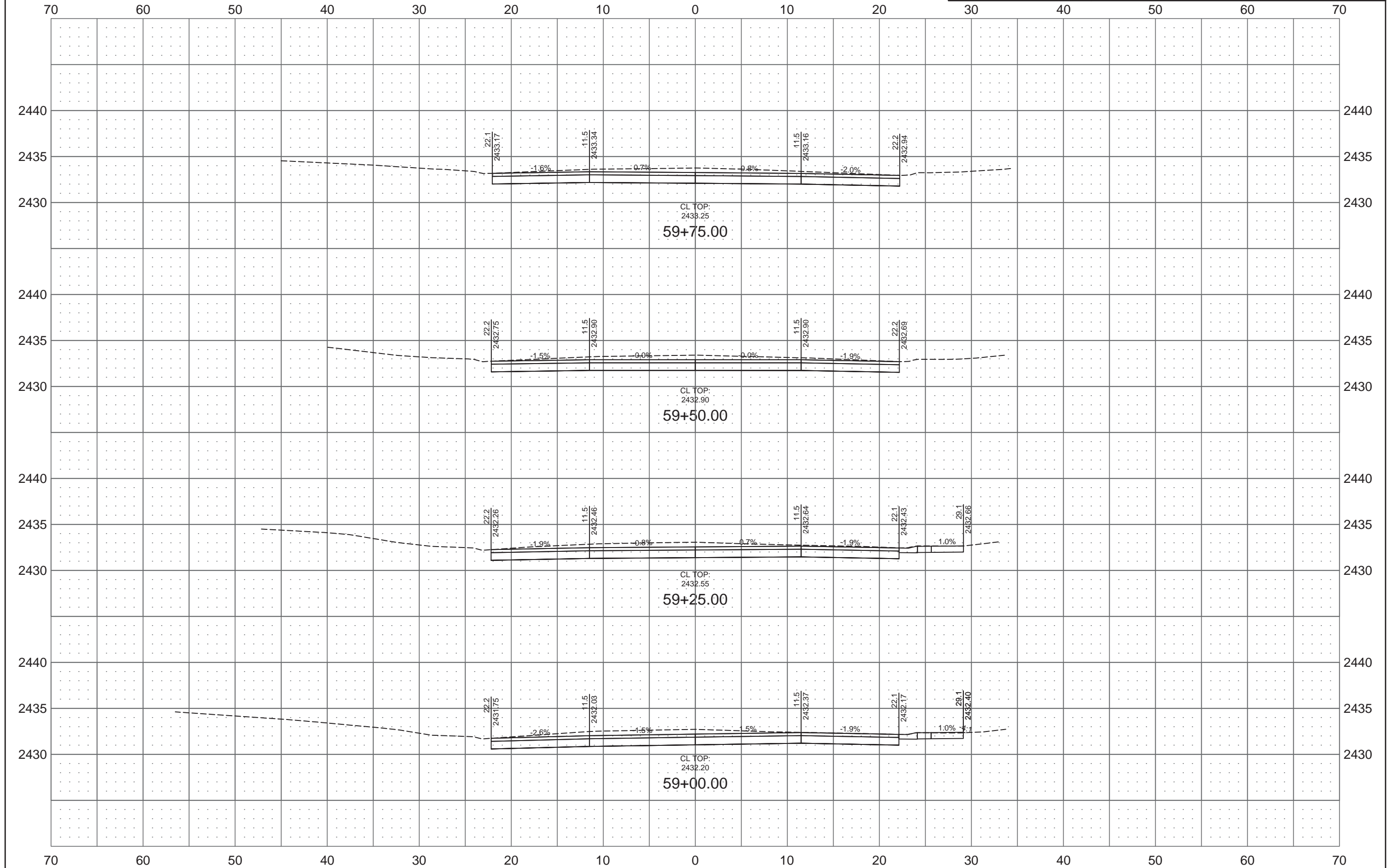
SU-5-983(059)059

SECTION NO.

200

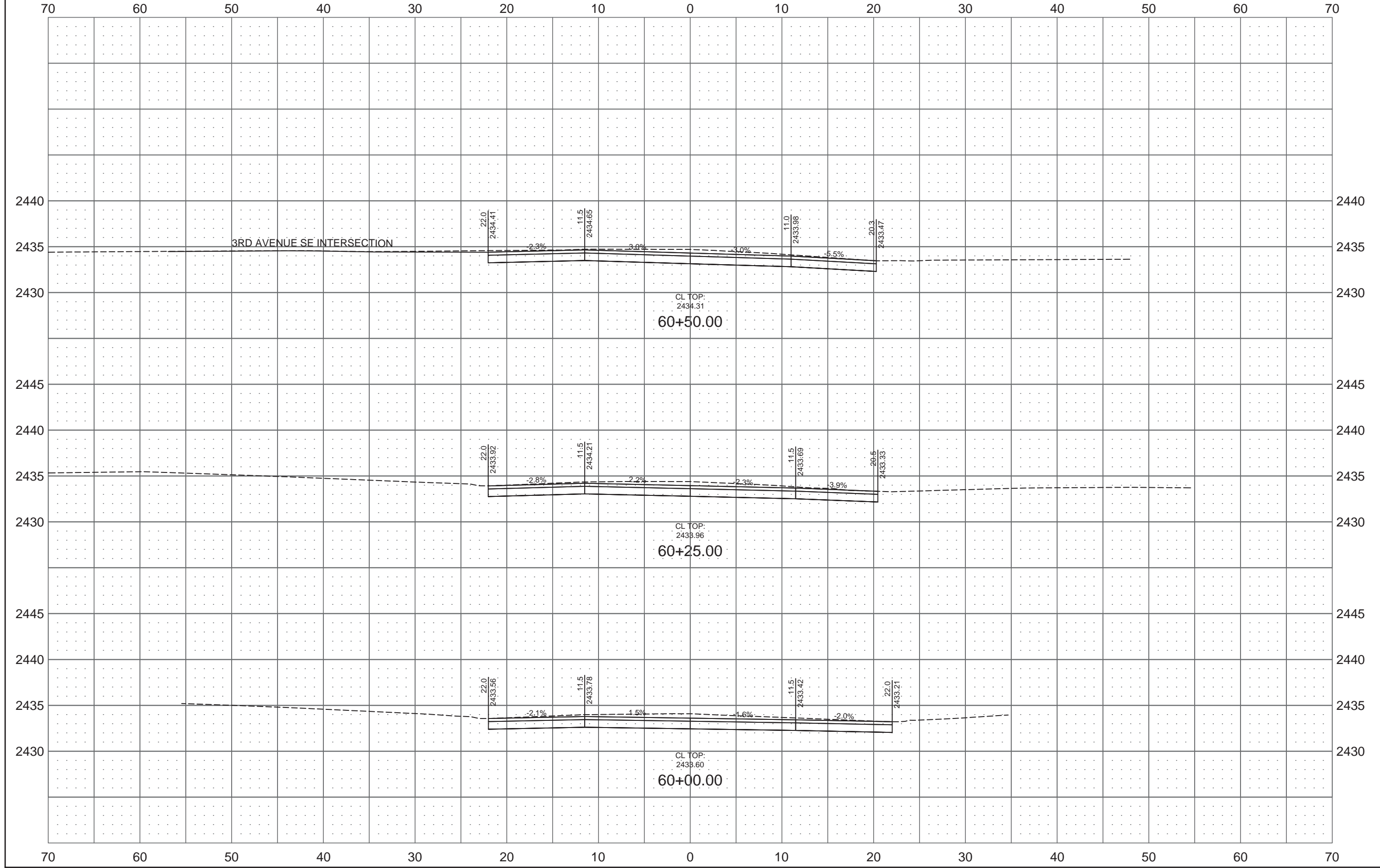
SHEET NO.

19



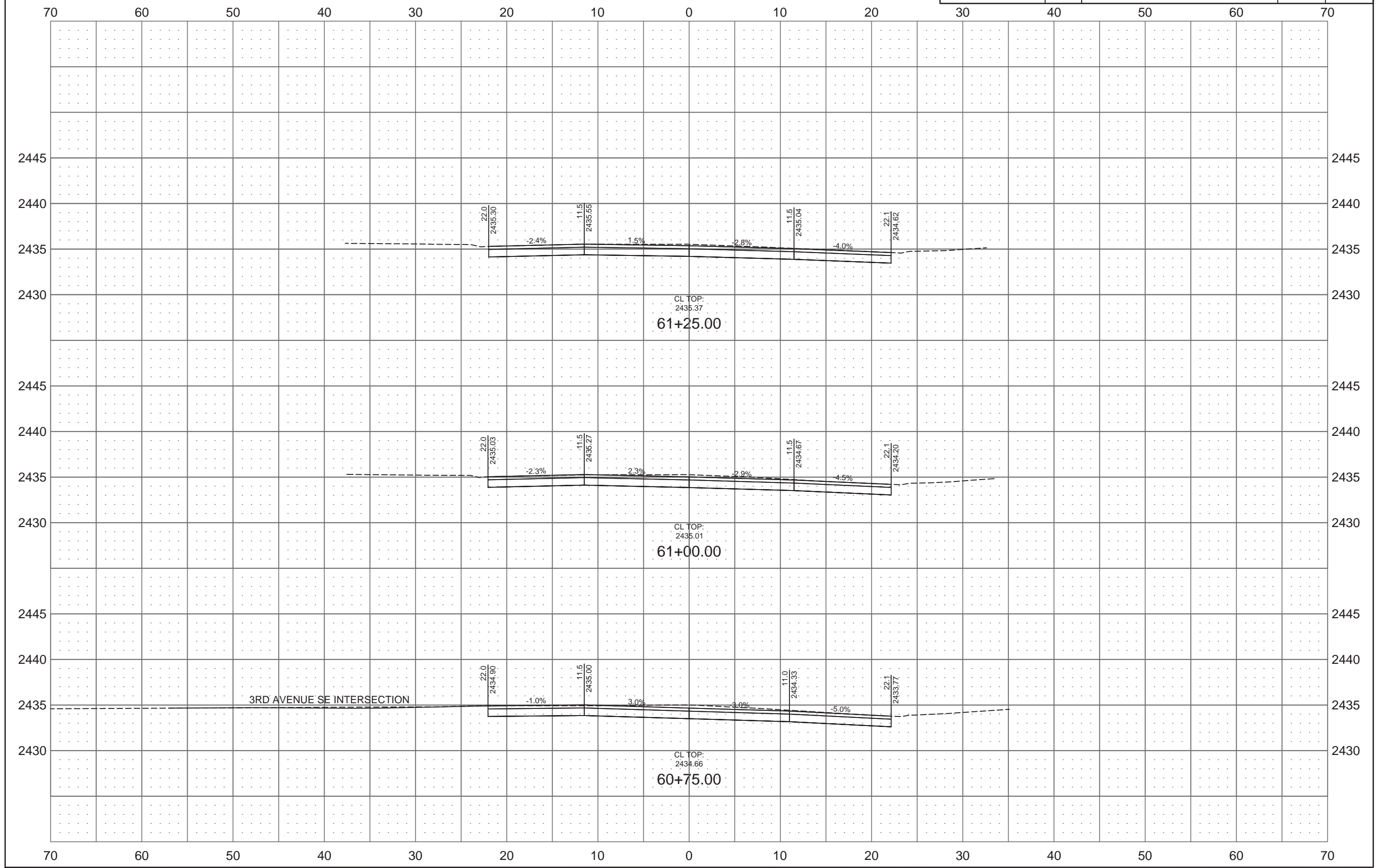
8TH STREET SE

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	200	20



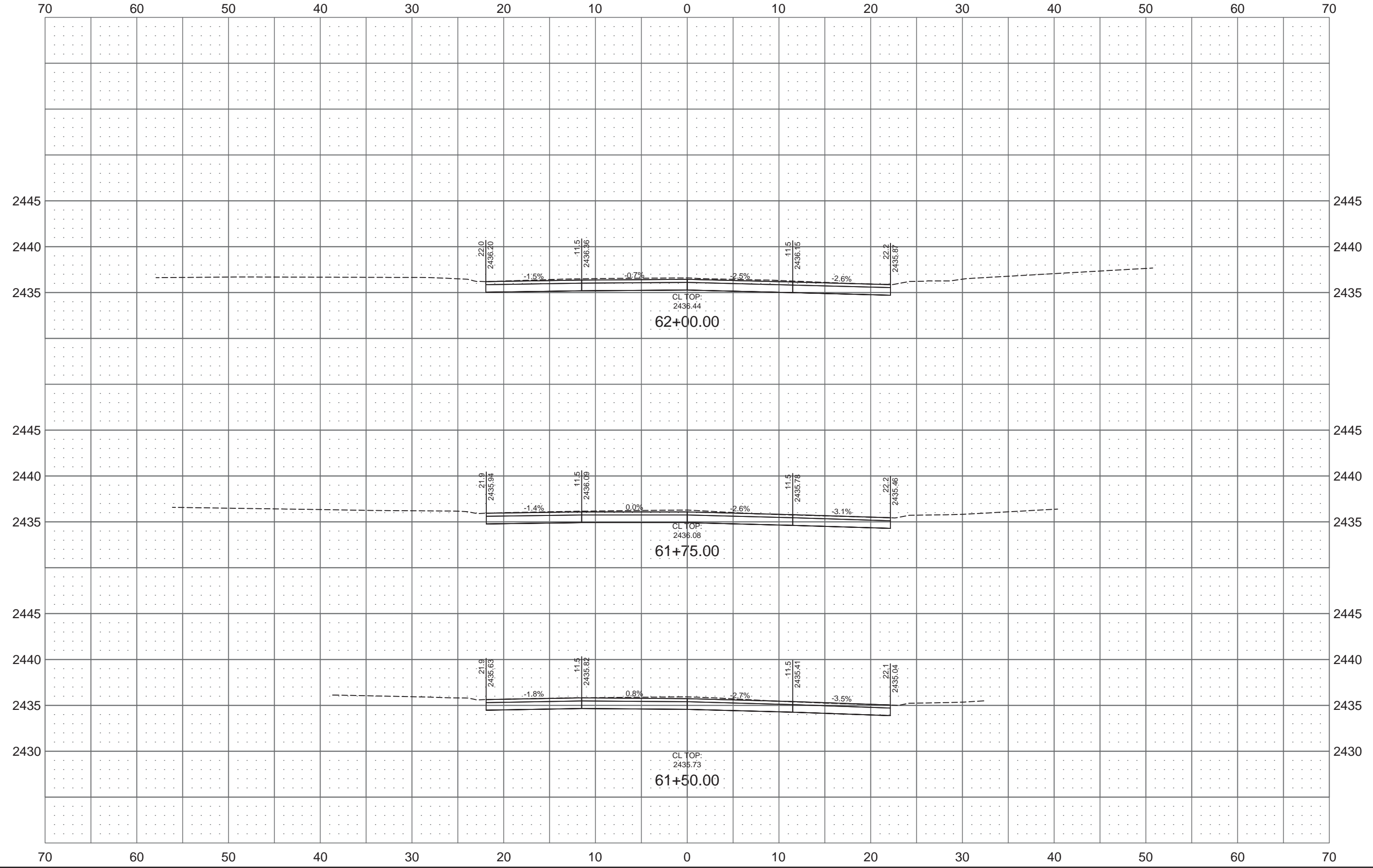
8TH STREET SE

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		ND	SU-5-983(059)059	200	21



8TH STREET SE

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	200	22



8TH STREET SE

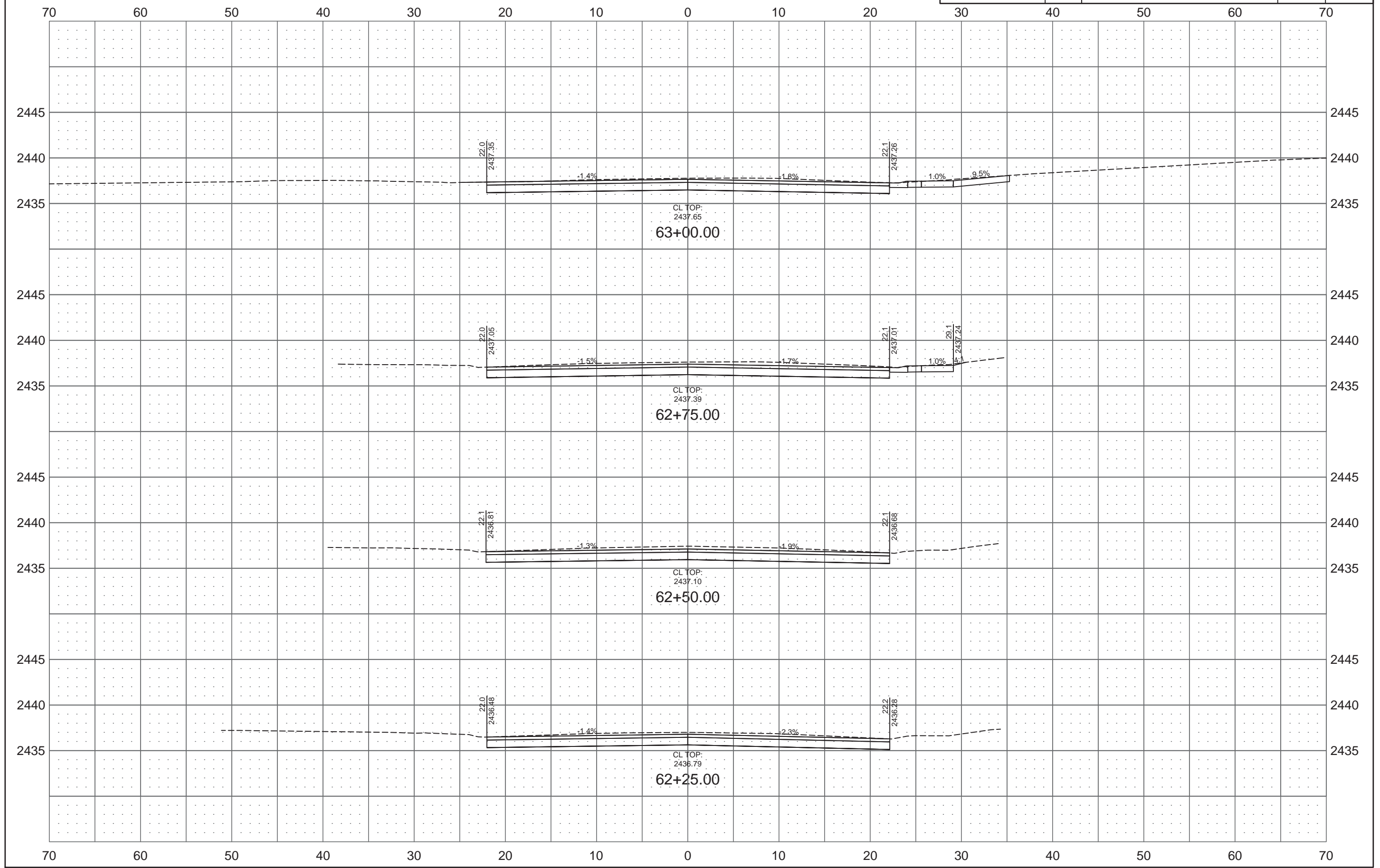
REVISED 10/23/17

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ND

PROJECT NO.
SU-5-983(059)059

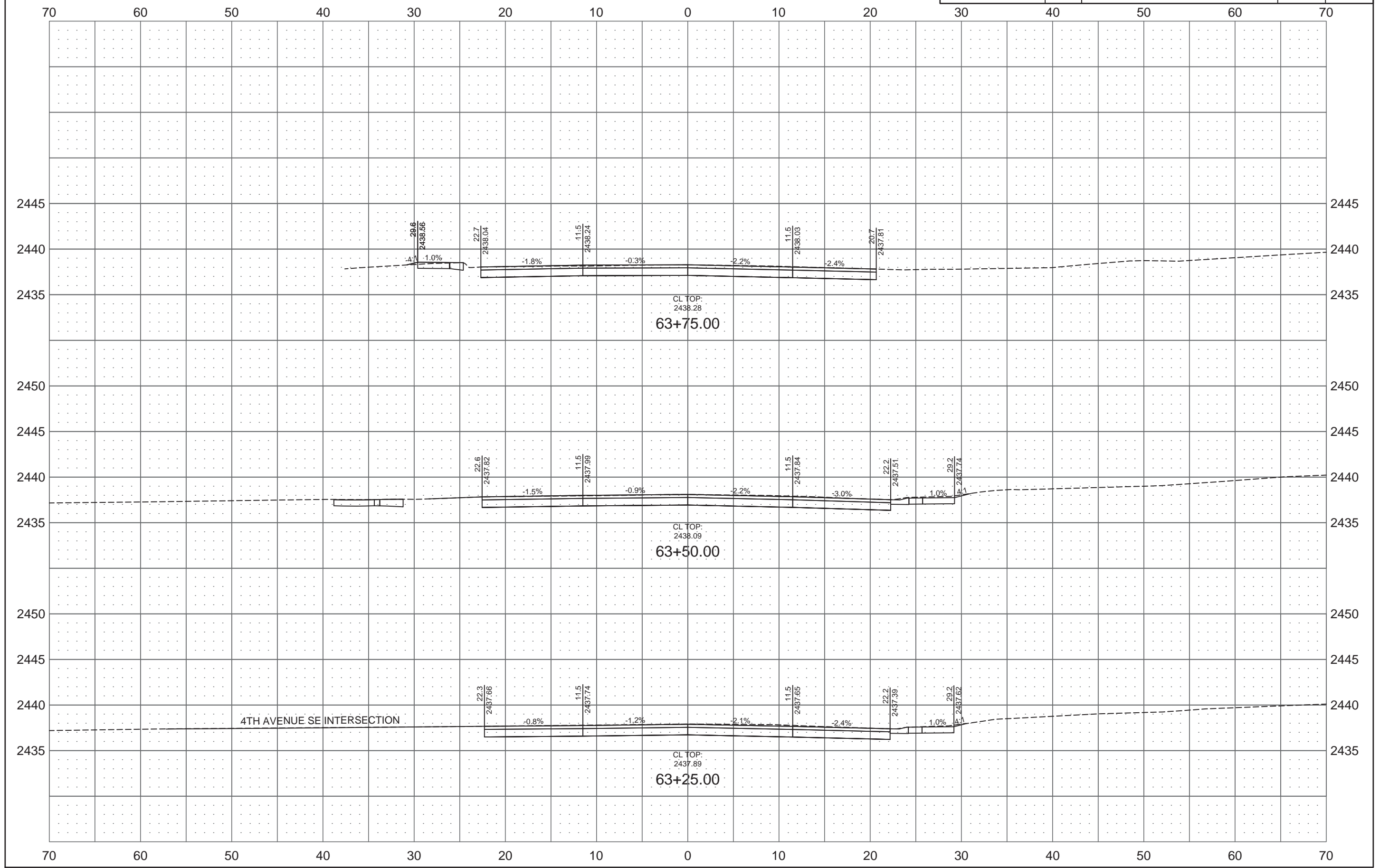
SECTION NO.
200

SHEET NO.
23



8TH STREET SE

REVISED	10/23/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	SU-5-983(059)059	200	24



8TH STREET SE

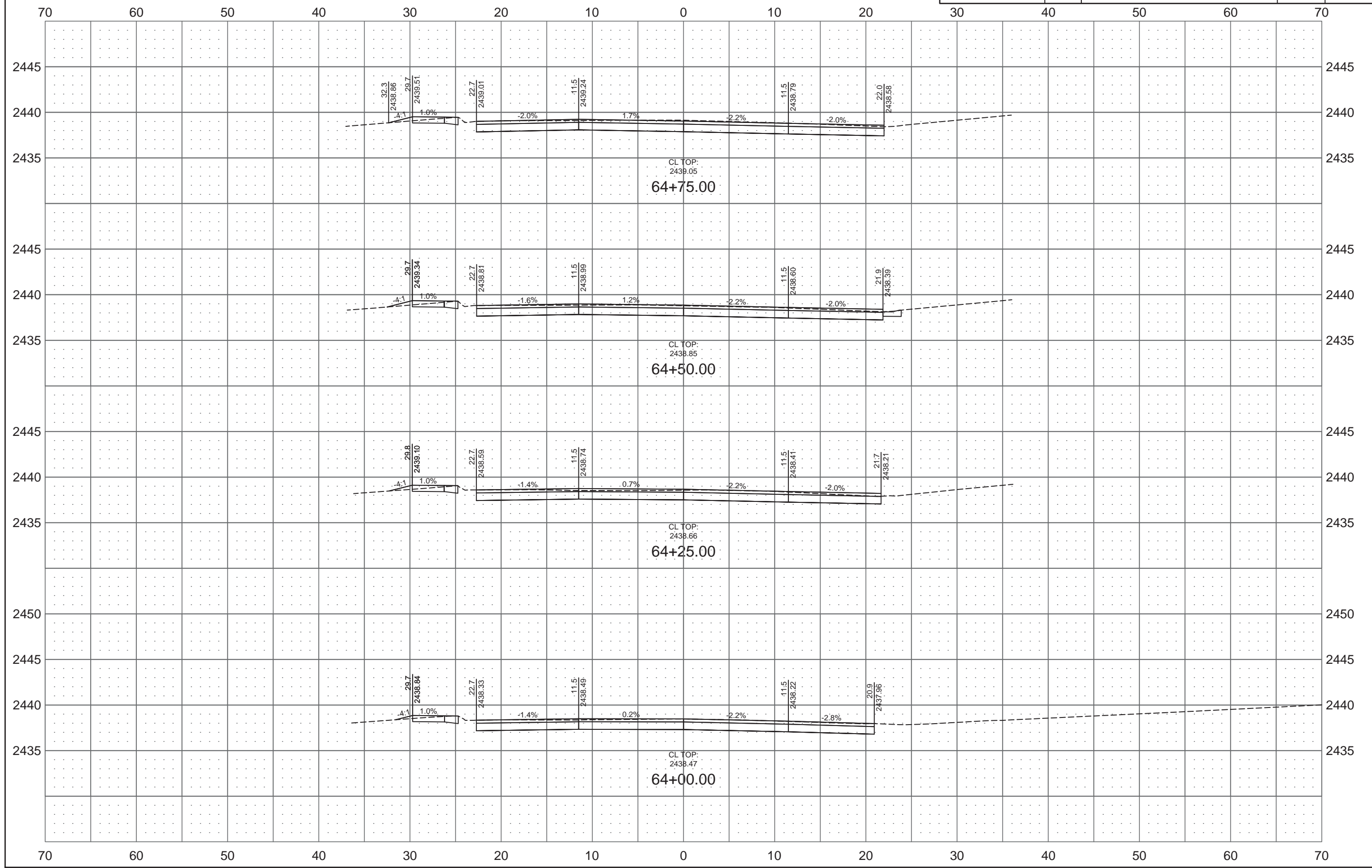
REVISED 10/23/17

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ND

PROJECT NO.
SU-5-983(059)059

SECTION NO.
200

SHEET NO.
25



8TH STREET SE

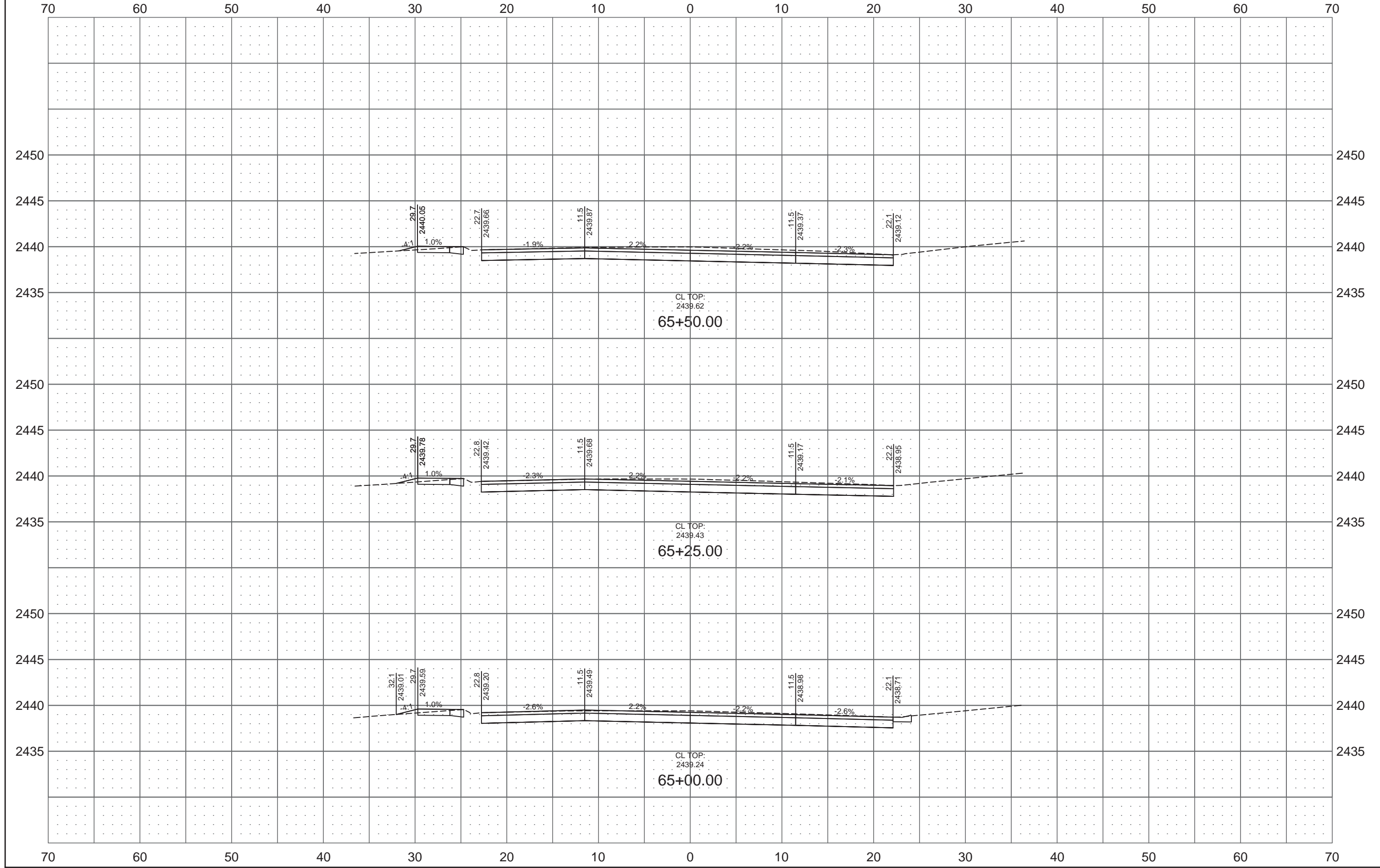
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SU-5-983(059)059

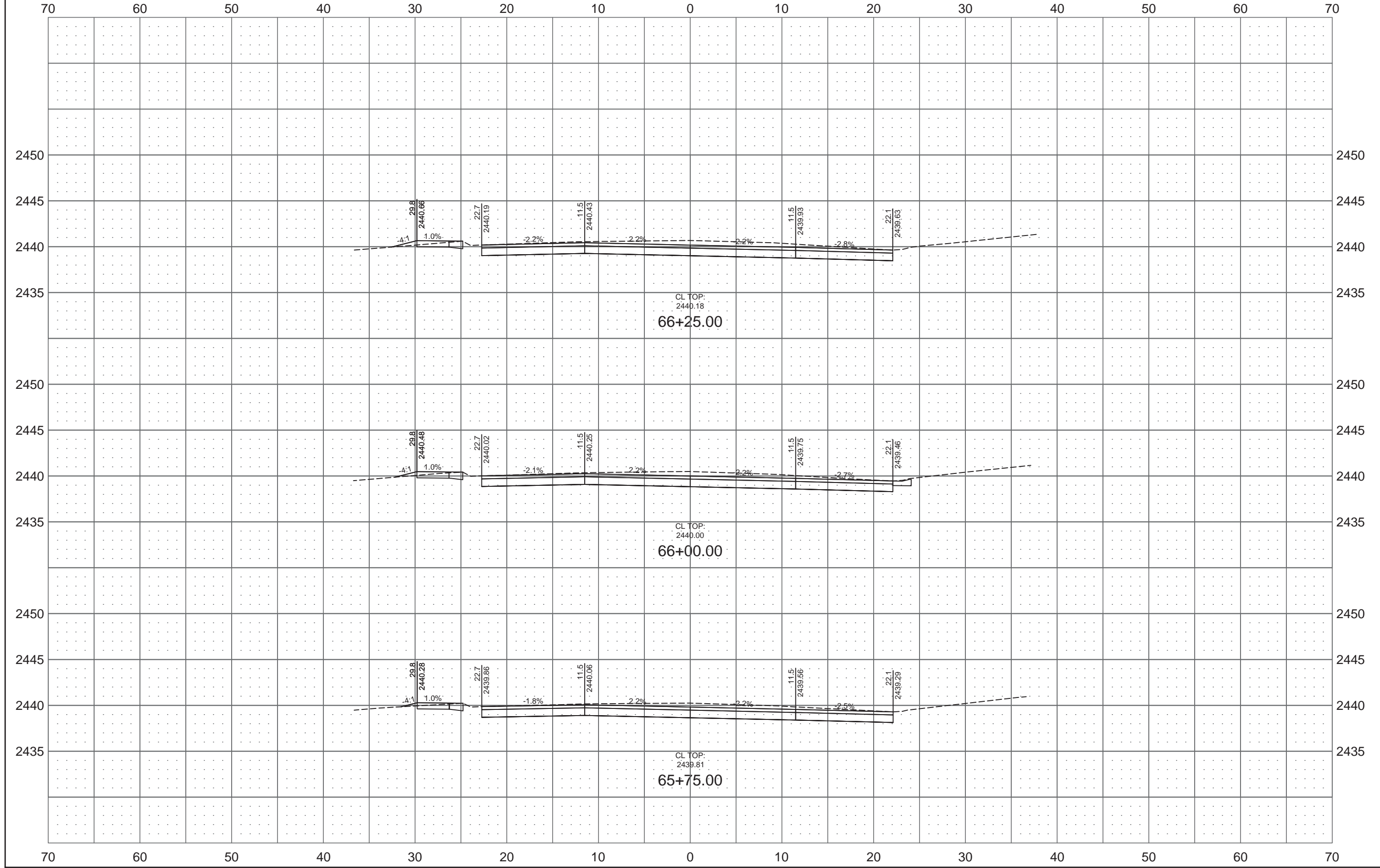
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200

SHEET NO.
26



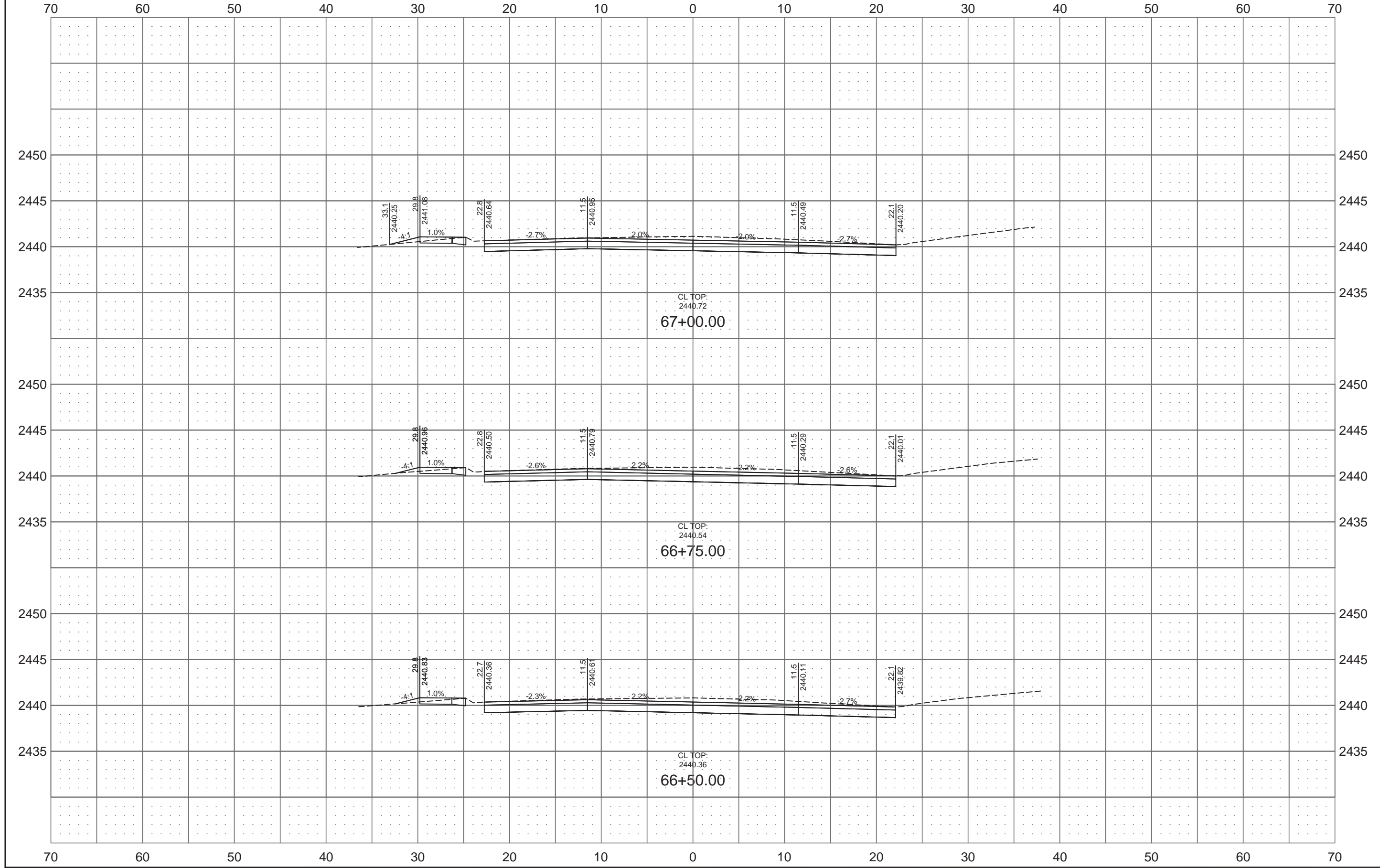
8TH STREET SE

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		ND	SU-5-983(059)059	200	27



8TH STREET SE

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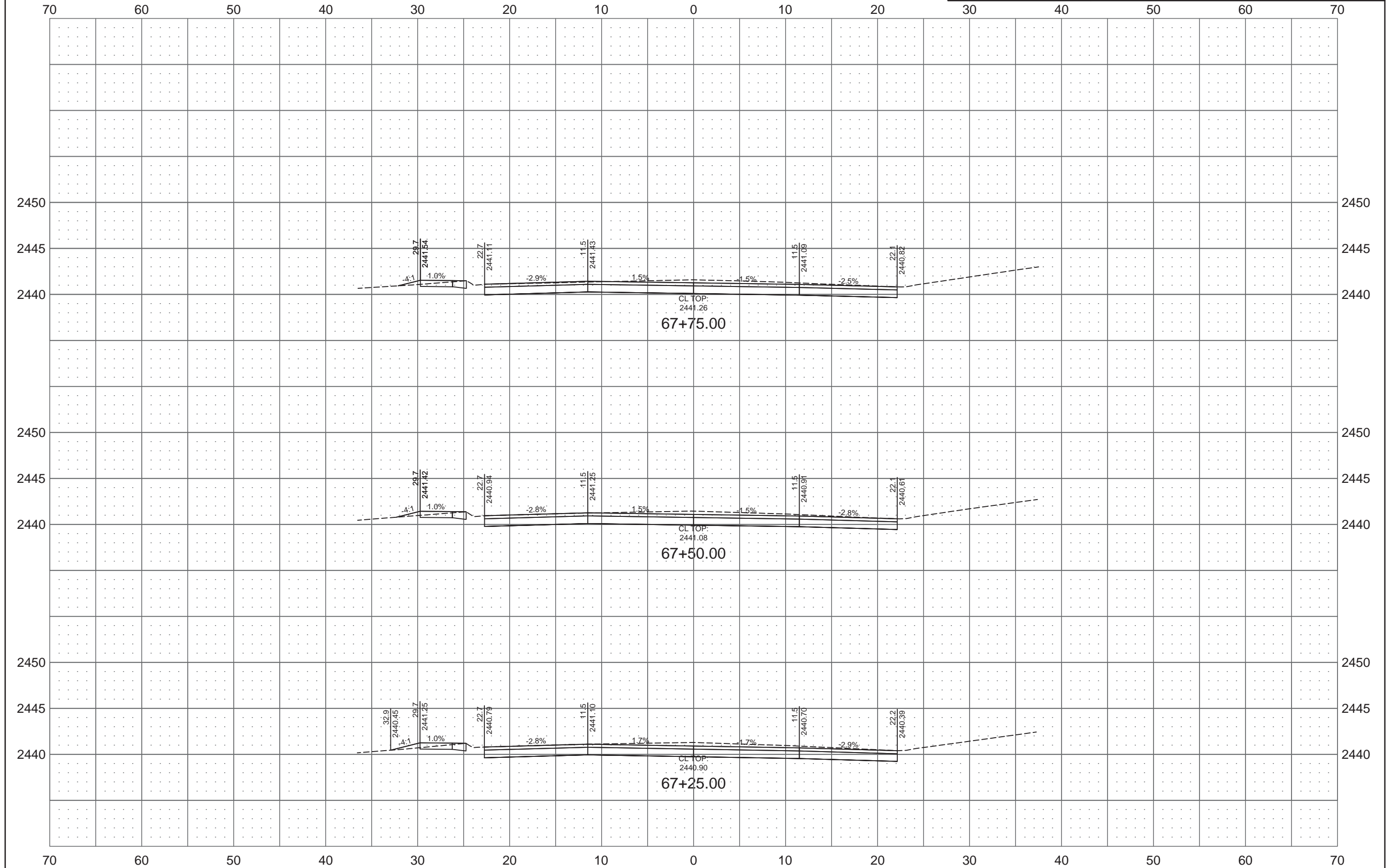
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8TH STREET SE

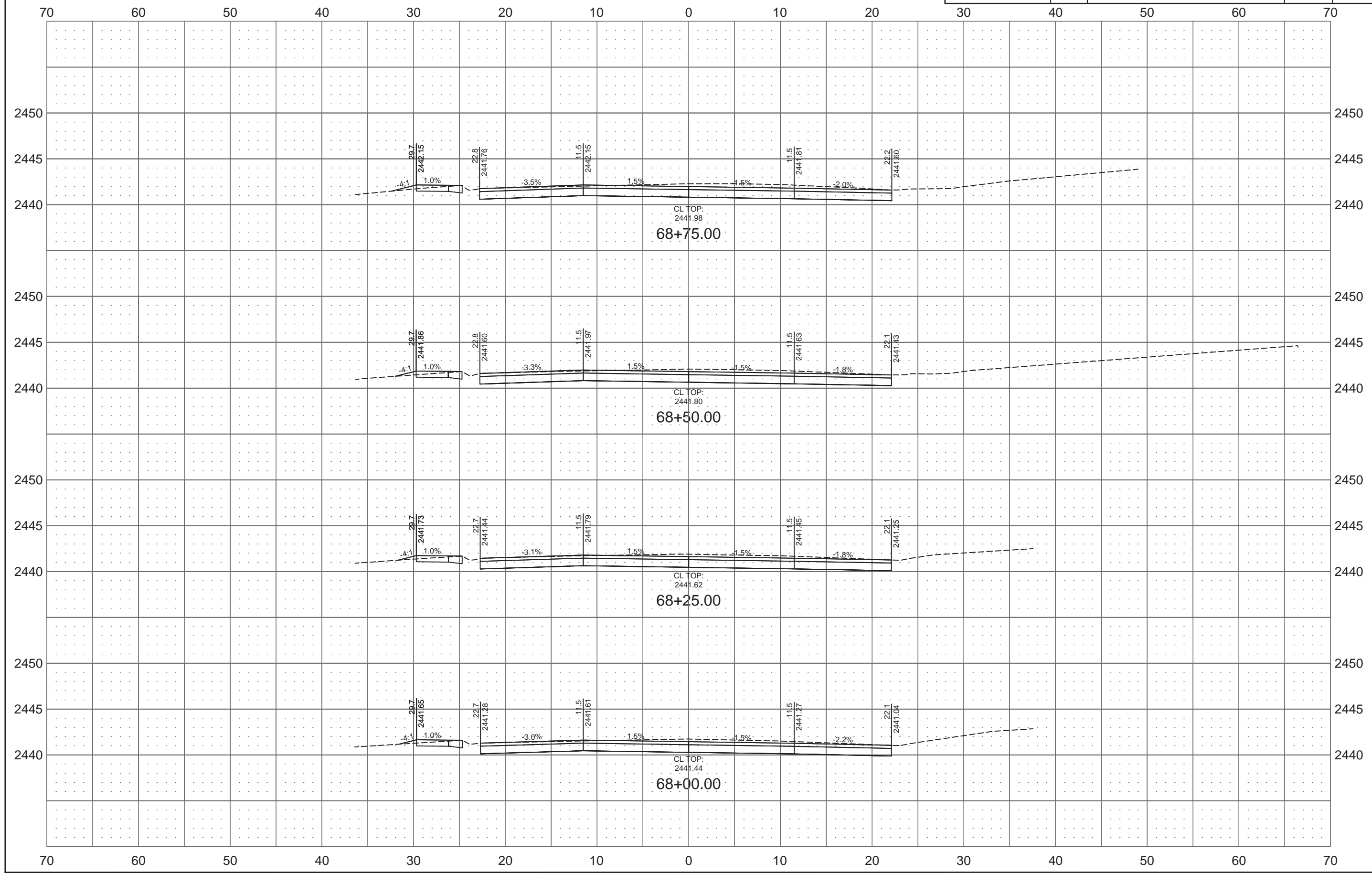
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8TH STREET SE

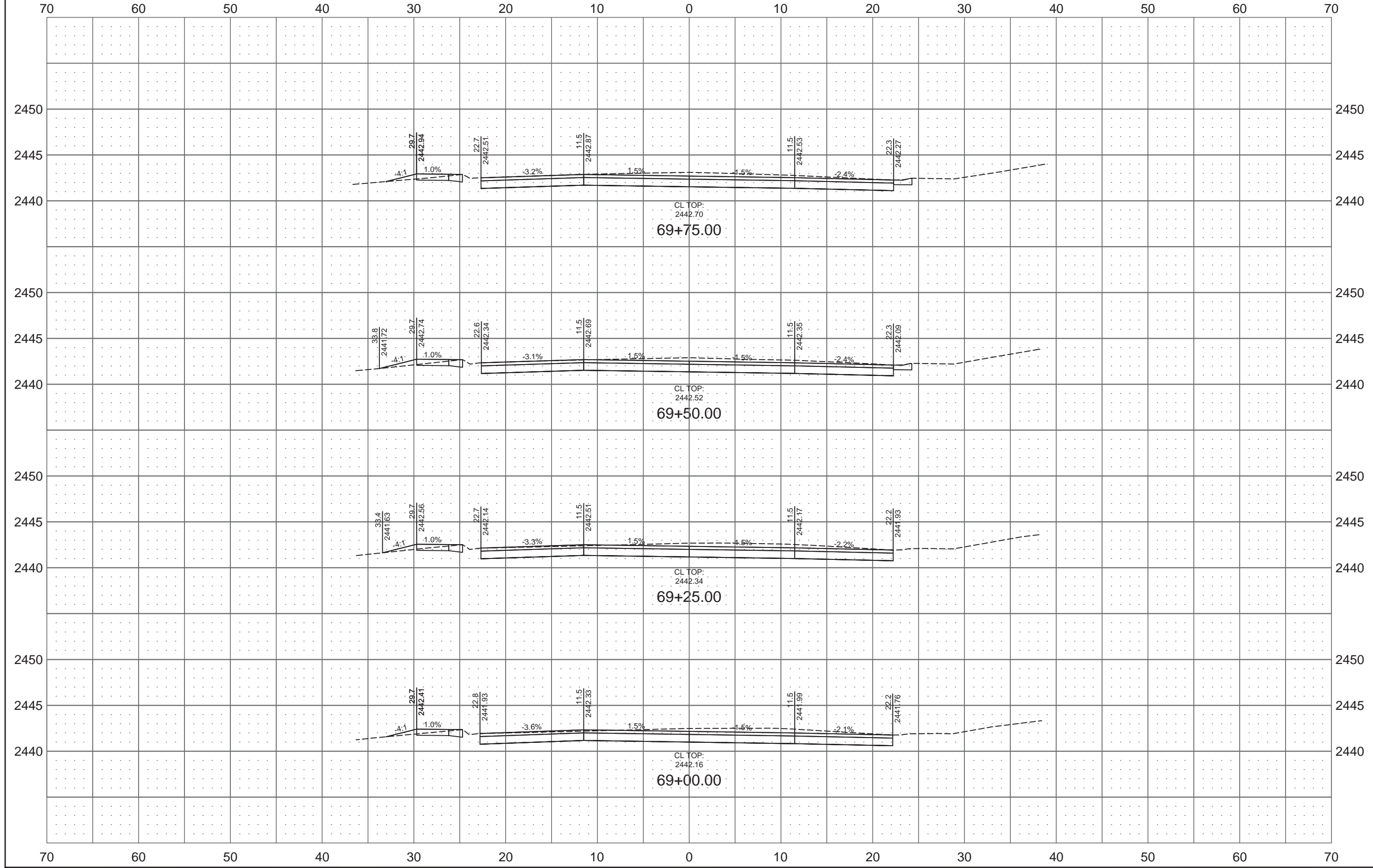
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8TH STREET SE

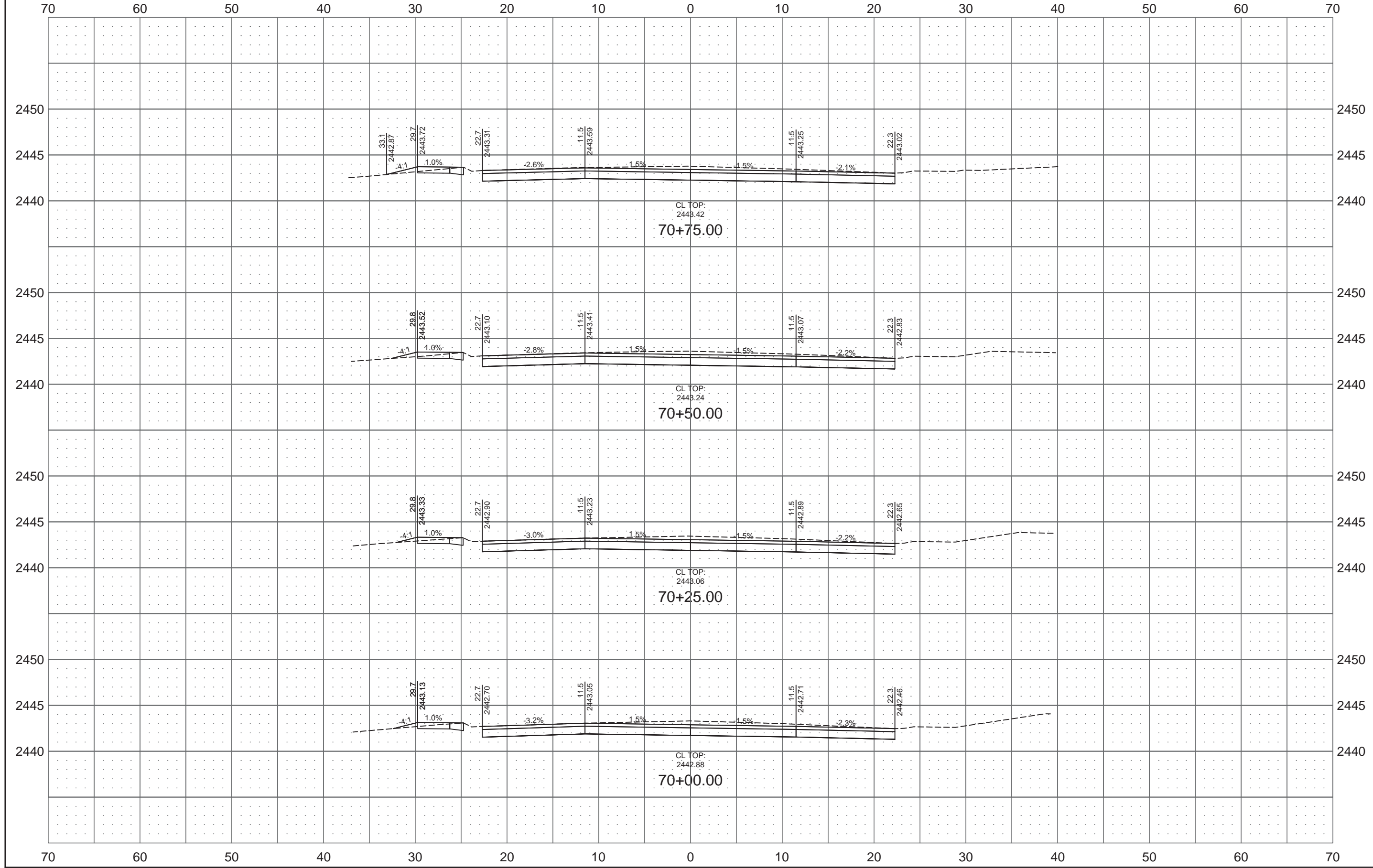
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200

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8TH STREET SE

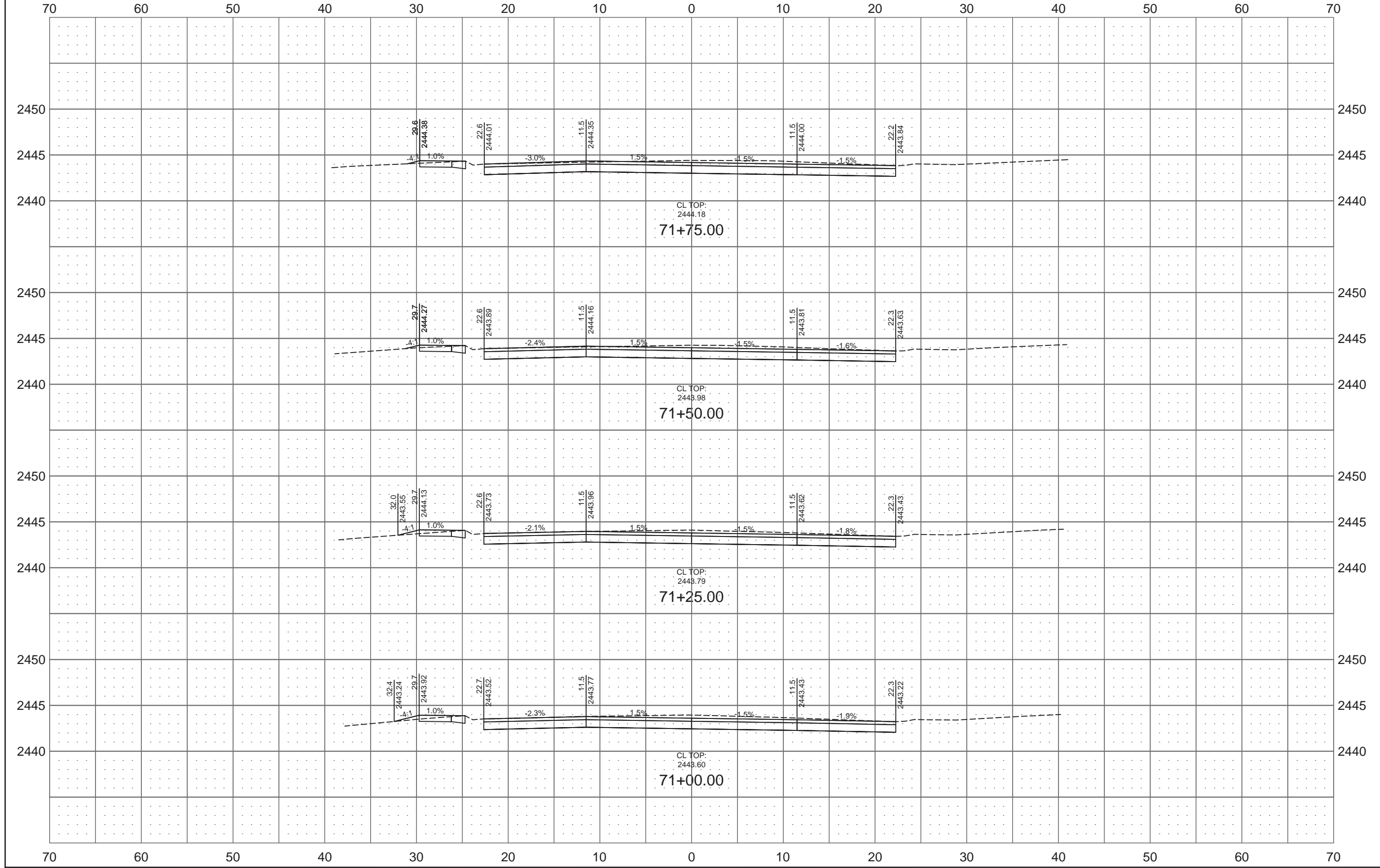
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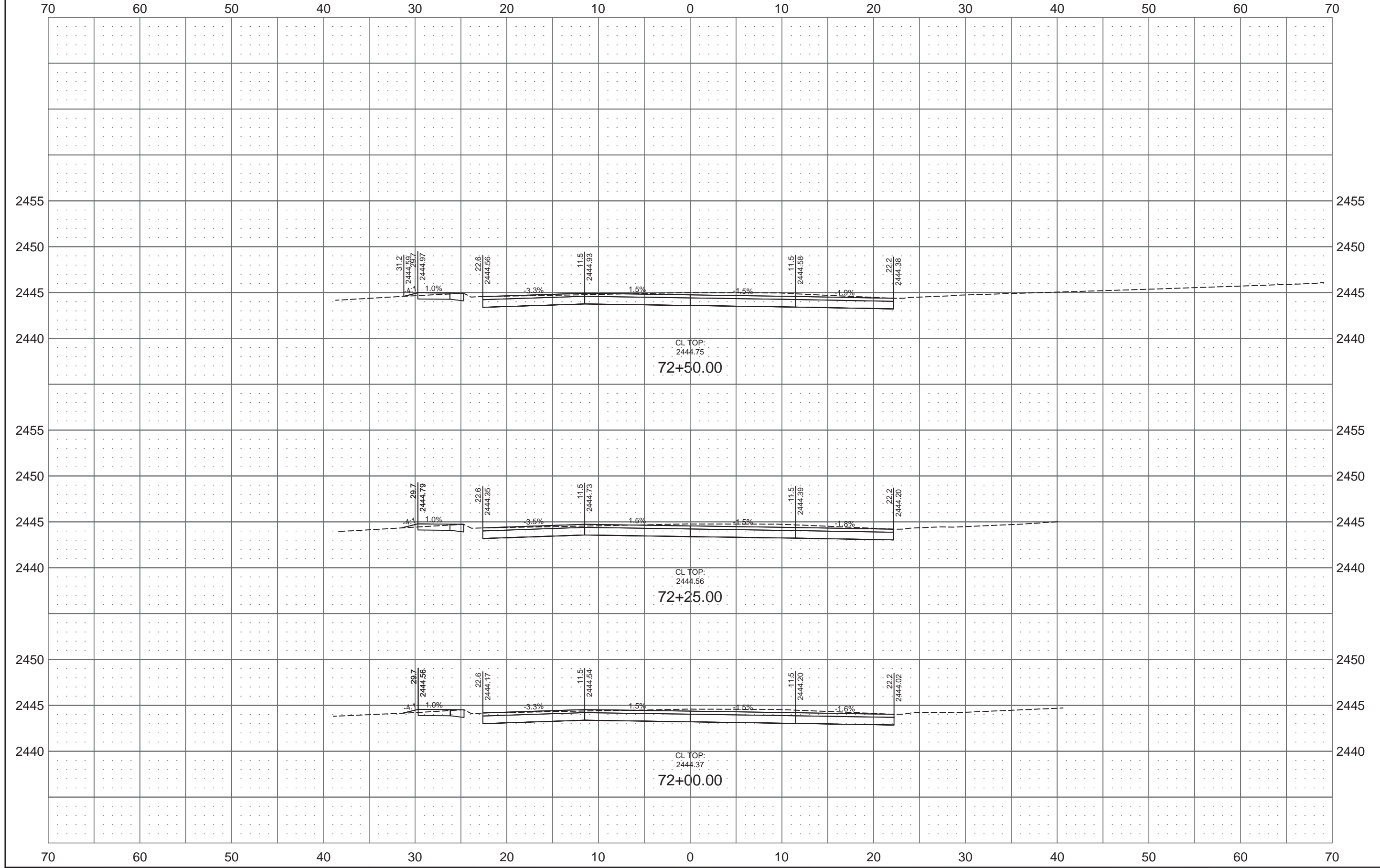
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8TH STREET SE

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		ND	SU-5-983(059)059	200	34



8TH STREET SE

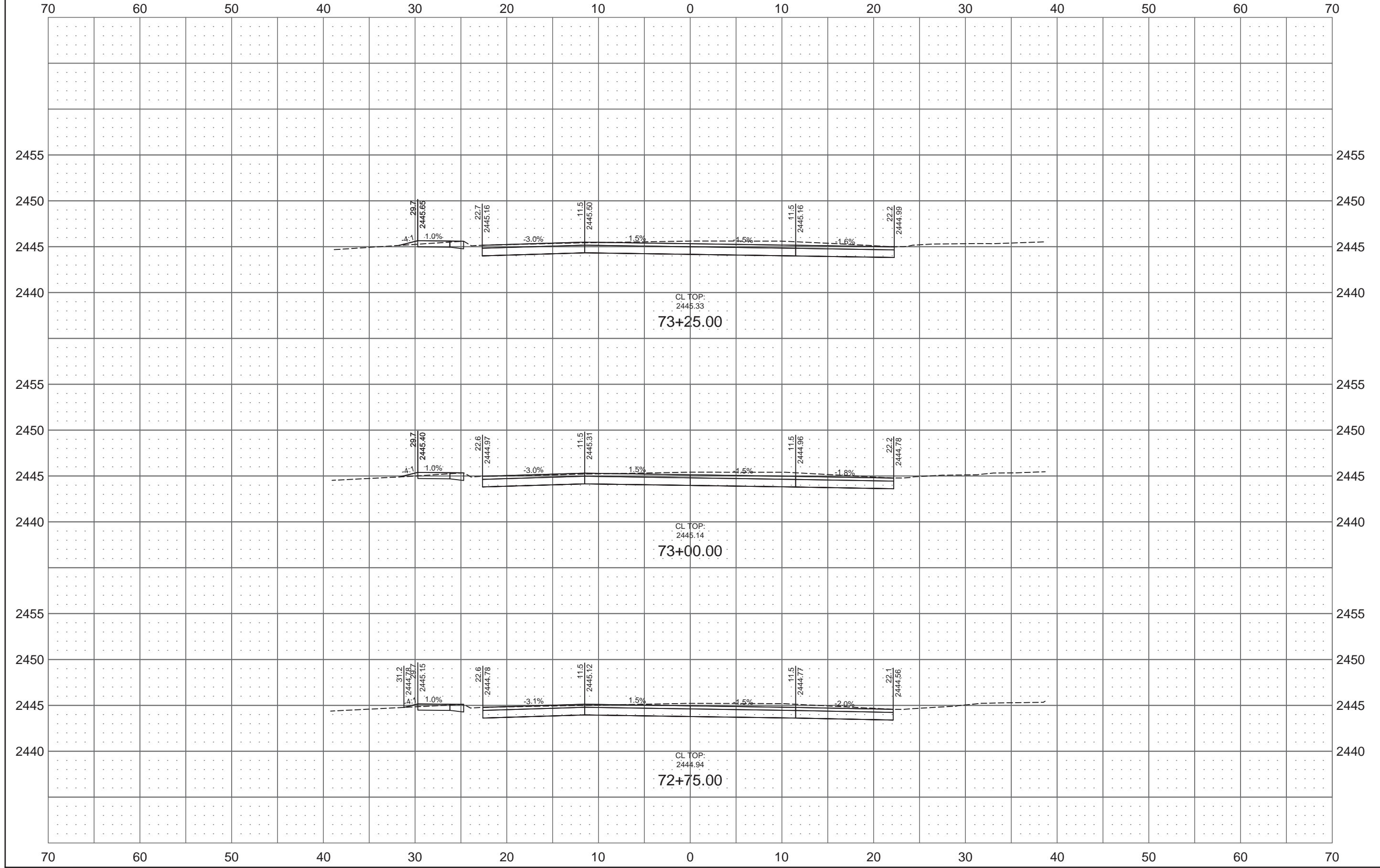
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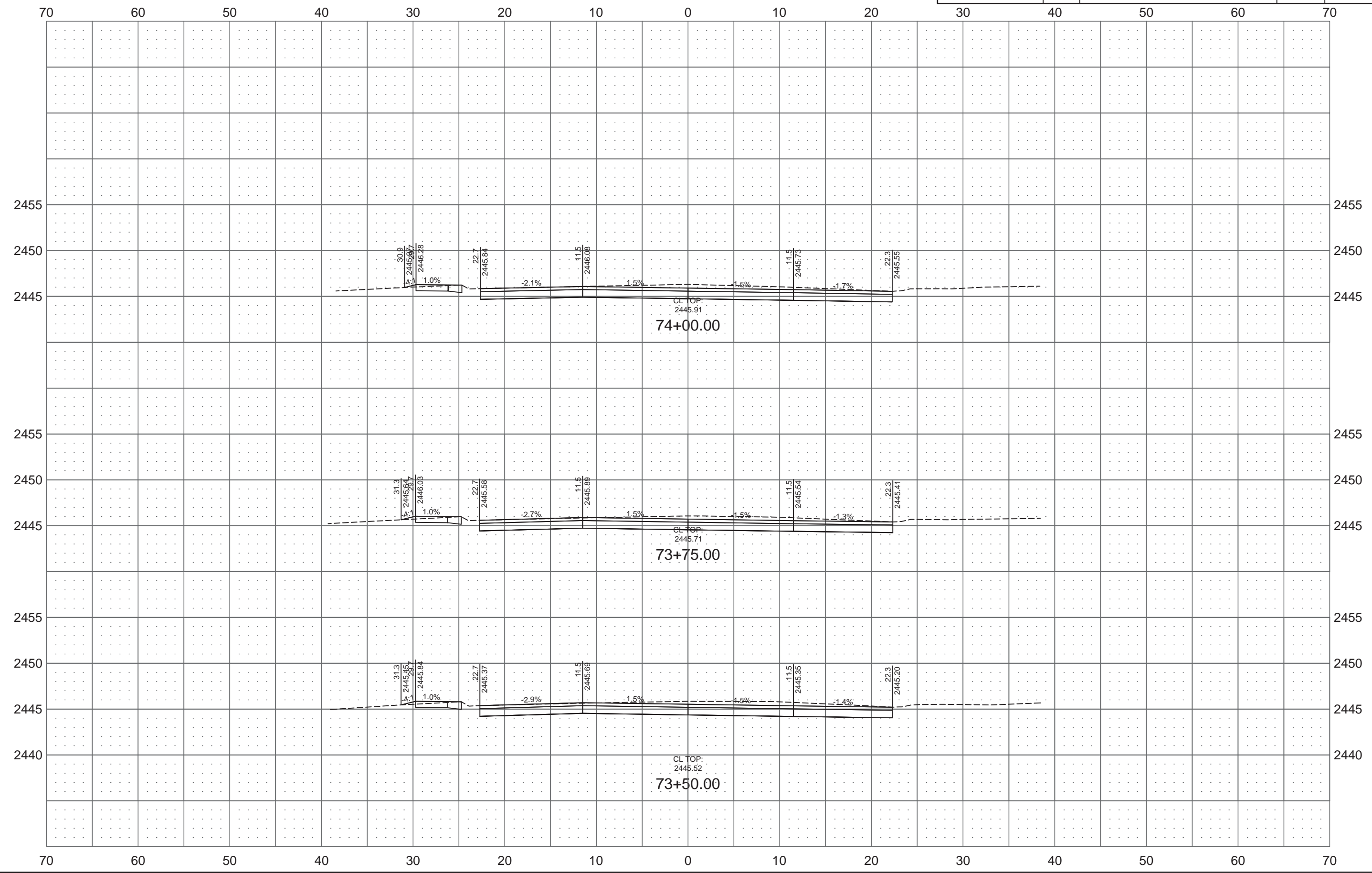
SECTION NO.
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SHEET NO.
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8TH STREET SE

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		ND	SU-5-983(059)059	200	36



8TH STREET SE

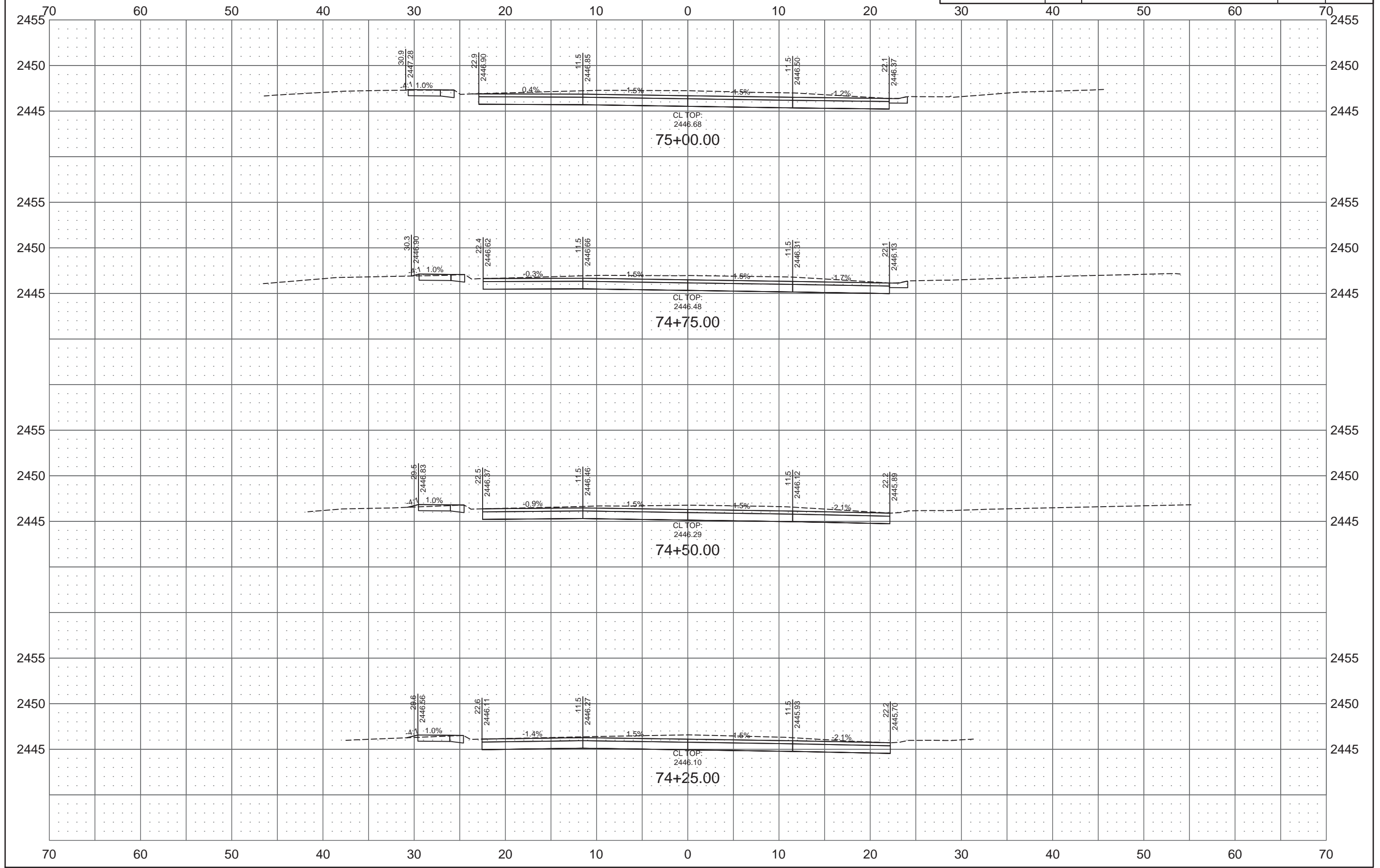
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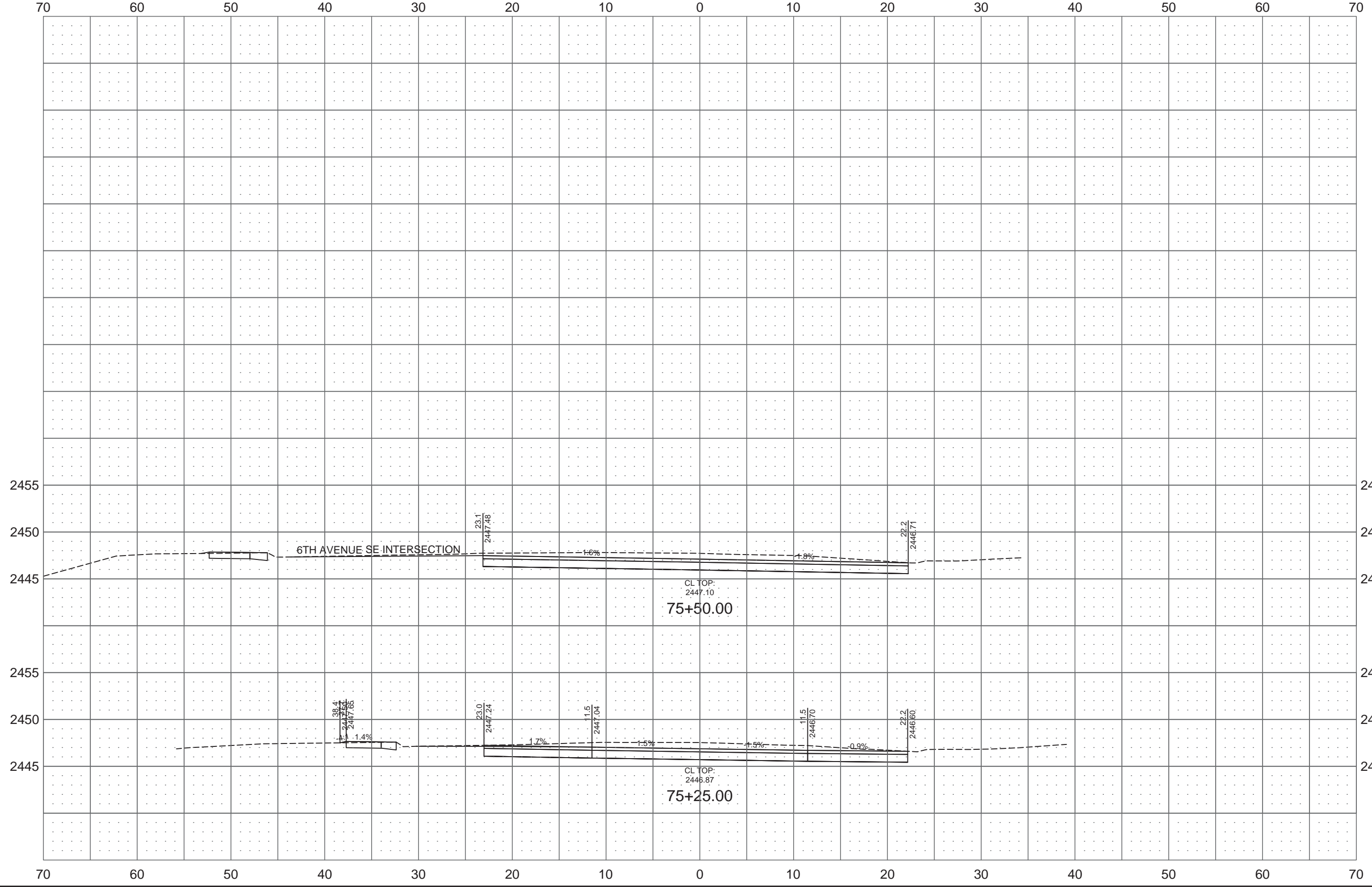
SECTION NO.
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8TH STREET SE

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		ND	SU-5-983(059)059	200	38



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