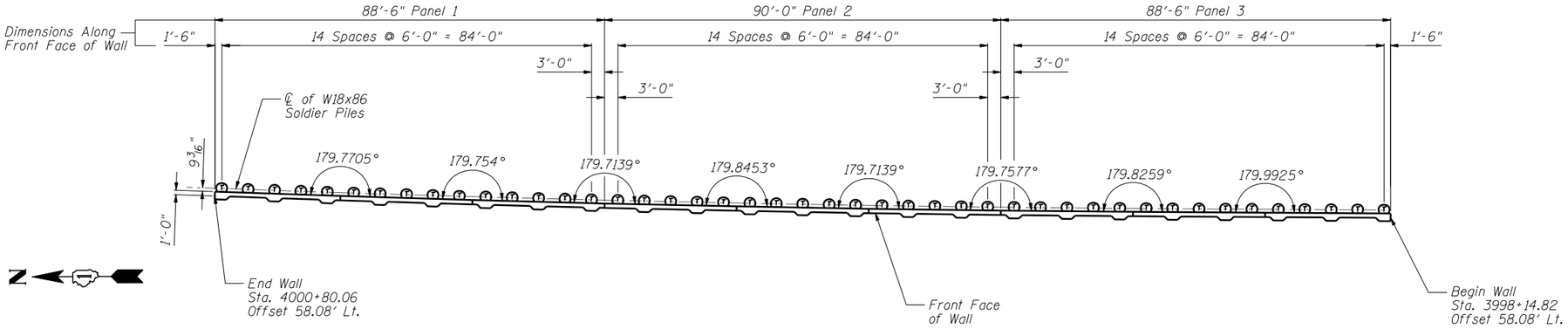
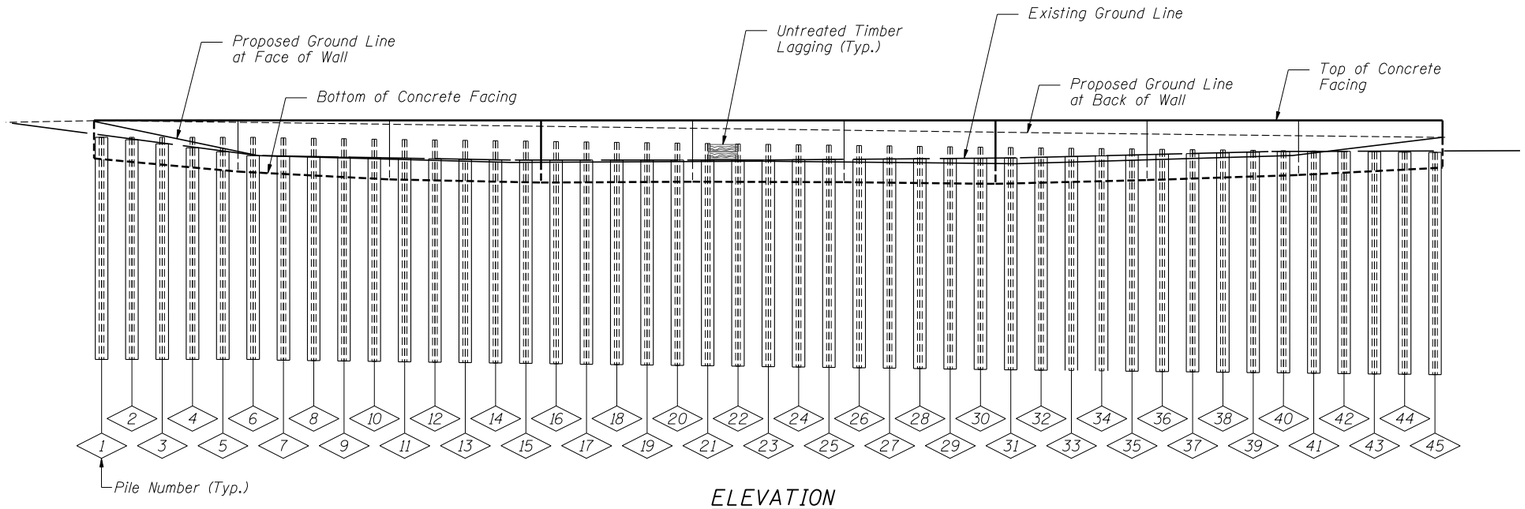


PLAN



ELEVATION

PILE SUMMARY

Pile No.	Station	Offset to ℄ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation	Pile No.	Station	Offset to ℄ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation	Pile No.	Station	Offset to ℄ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation
1	4000+78.57	56.31	W18x86	22'-0"	690.33	712.33	16	3999+89.31	56.31	W18x86	22'-0"	689.91	711.91	31	3999+00.05	56.31	W18x86	22'-0"	689.31	711.31
2	4000+72.62	56.30	W18x86	22'-0"	690.33	712.33	17	3999+83.36	56.29	W18x86	22'-0"	689.87	711.87	32	3998+94.09	56.30	W18x86	22'-0"	689.28	711.28
3	4000+66.67	56.30	W18x86	22'-0"	690.33	712.33	18	3999+77.41	56.29	W18x86	22'-0"	689.83	711.83	33	3998+88.14	56.30	W18x86	22'-0"	689.24	711.24
4	4000+60.72	56.30	W18x86	22'-0"	690.33	712.33	19	3999+71.45	56.28	W18x86	22'-0"	689.79	711.79	34	3998+82.19	56.30	W18x86	22'-0"	689.21	711.21
5	4000+54.76	56.31	W18x86	22'-0"	690.33	712.33	20	3999+65.50	56.29	W18x86	22'-0"	689.75	711.75	35	3998+76.24	56.31	W18x86	22'-0"	689.18	711.18
6	4000+48.82	56.31	W18x86	22'-0"	690.33	712.33	21	3999+59.55	56.29	W18x86	22'-0"	689.71	711.71	36	3998+70.29	56.31	W18x86	22'-0"	689.14	711.14
7	4000+42.87	56.30	W18x86	22'-0"	690.26	712.26	22	3999+53.60	56.28	W18x86	22'-0"	689.67	711.67	37	3998+64.32	56.31	W18x86	22'-0"	689.11	711.11
8	4000+36.91	56.30	W18x86	22'-0"	690.22	712.22	23	3999+47.65	56.29	W18x86	22'-0"	689.63	711.63	38	3998+58.32	56.31	W18x86	22'-0"	689.07	711.07
9	4000+30.96	56.30	W18x86	22'-0"	690.18	712.18	24	3999+41.70	56.29	W18x86	22'-0"	689.59	711.59	39	3998+52.32	56.31	W18x86	22'-0"	689.04	711.04
10	4000+25.01	56.31	W18x86	22'-0"	690.15	712.15	25	3999+35.74	56.31	W18x86	22'-0"	689.55	711.55	40	3998+46.32	56.31	W18x86	22'-0"	689.01	711.01
11	4000+19.06	56.31	W18x86	22'-0"	690.11	712.11	26	3999+29.80	56.31	W18x86	22'-0"	689.51	711.51	41	3998+40.33	56.31	W18x86	22'-0"	688.97	710.97
12	4000+13.11	56.30	W18x86	22'-0"	690.07	712.07	27	3999+23.85	56.30	W18x86	22'-0"	689.47	711.47	42	3998+34.33	56.31	W18x86	22'-0"	688.94	710.94
13	4000+07.16	56.30	W18x86	22'-0"	690.03	712.03	28	3999+17.90	56.30	W18x86	22'-0"	689.43	711.43	43	3998+28.33	56.31	W18x86	22'-0"	688.91	710.91
14	4000+01.20	56.30	W18x86	22'-0"	689.99	711.99	29	3999+11.94	56.30	W18x86	22'-0"	689.39	711.39	44	3998+22.33	56.31	W18x86	22'-0"	688.87	710.87
15	3999+95.25	56.31	W18x86	22'-0"	689.95	711.95	30	3999+05.99	56.31	W18x86	22'-0"	689.35	711.35	45	3998+16.33	56.31	W18x86	22'-0"	688.84	710.84

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing Soldier Piles (W Section)	Foot	990
Drilling and Setting Soldier Piles (In Soil)	Cu Ft	4,635
Untreated Timber Lagging	Sq Ft	732
Stud Shear Connectors	Each	197

Note: All offsets are to the left of centerline of IL Rte 59

FILE NAME = ...\60R31-W049-003-Pile Layouts.dgn

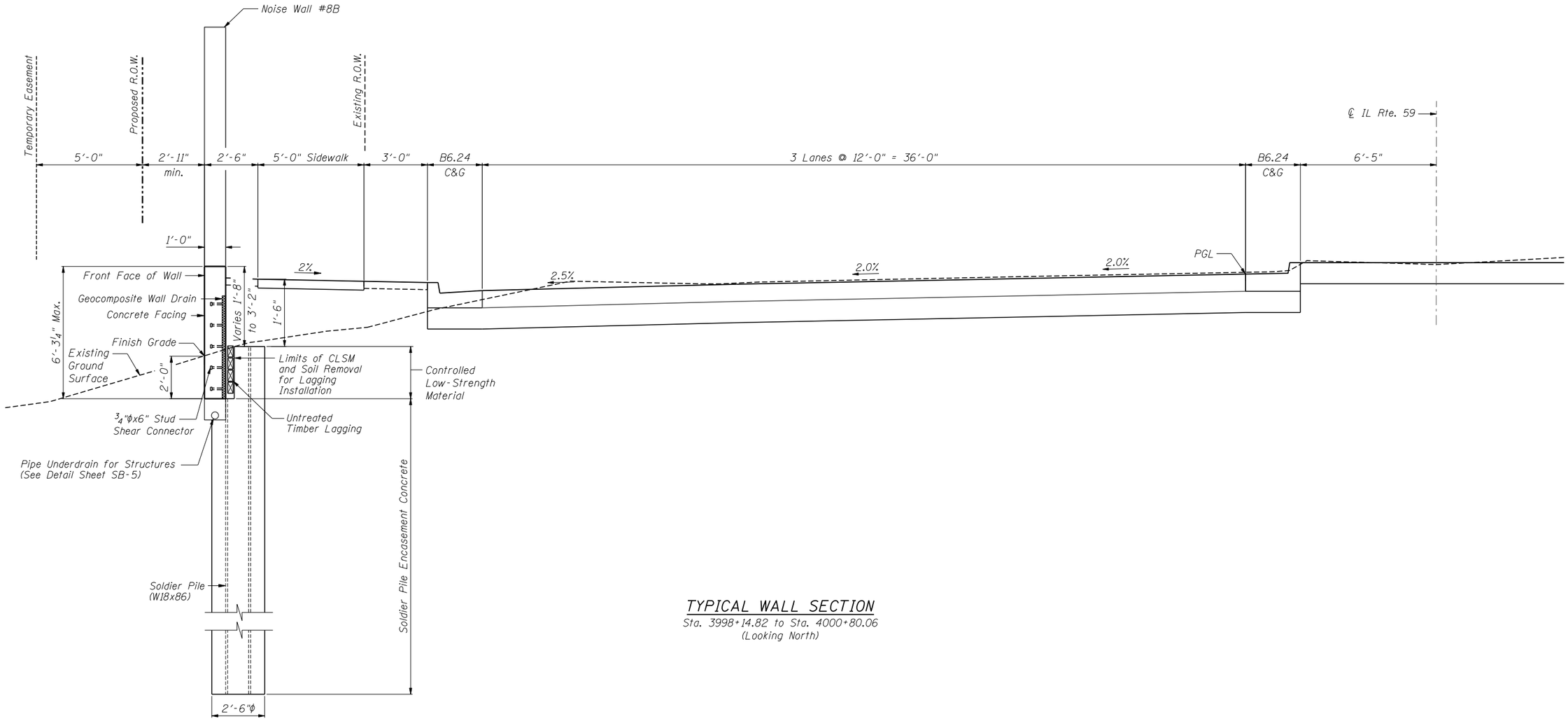
ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - JLA	REVISED -	
	CHECKED - LAS	REVISED -	
SCALE - NONE	DRAWN - SAW	REVISED -	
DATE - 12/14/2012	CHECKED - JLA	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOLDIRE PILE LAYOUT
STA. 3998+14.82 TO STA. 4000+80.06 SN 022-W049
SHEET NO. SB-3 OF SB-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	501
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



TYPICAL WALL SECTION

Sta. 3998+14.82 to Sta. 4000+80.06
(Looking North)

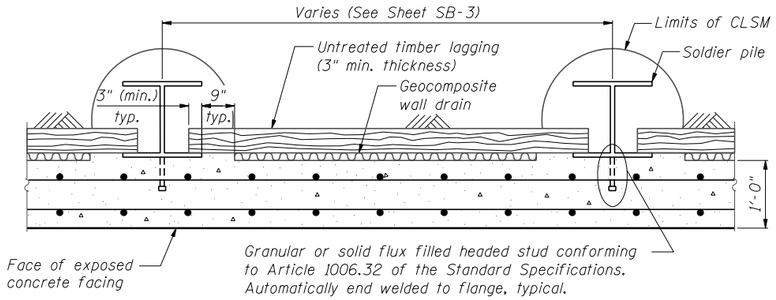
FILE NAME = ...\60R31-W049-0004-TypSec.dgn

ZROKA engineering — Zroka Engineering, P.C., 4216 North Hermitage, Chicago, IL 60613		DESIGNED - JLA	REVISED -
		CHECKED - LAS	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - JLA	REVISED -

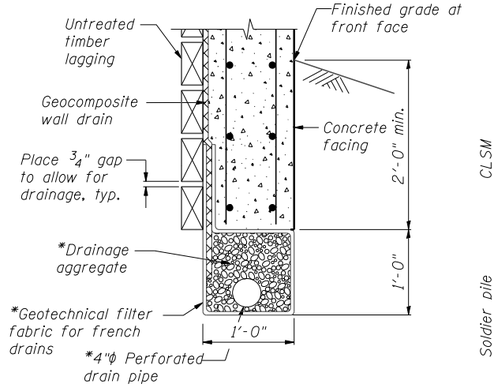
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION
STA. 3998+14.82 TO STA. 4000+80.06 SN 022-W049
SHEET NO. SB-4 OF SB-10 SHEETS

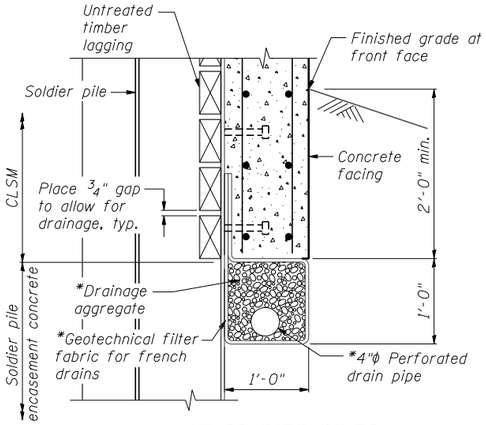
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	502
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



SECTION THRU DRILLED SOLDIER PILE WALL



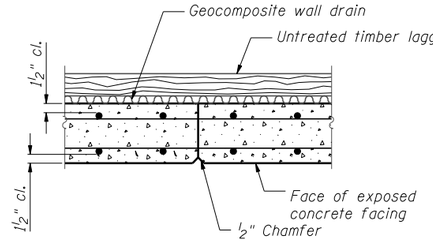
BETWEEN SOLDIER PILES



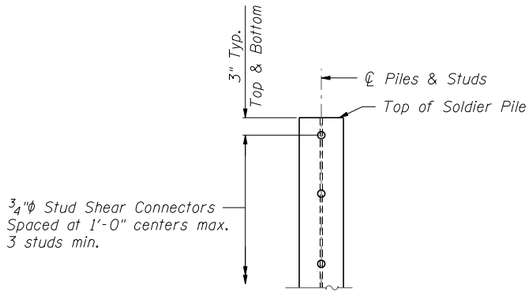
AT SOLDIER PILES

PIPE UNDERDRAIN DETAIL

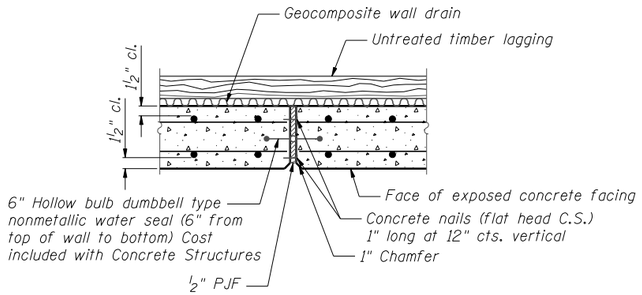
*Included in the cost of Pipe
Underdrains for Structures



CONSTRUCTION JOINT DETAIL



DETAIL OF SHEAR STUD PLACEMENT



EXPANSION JOINT DETAIL

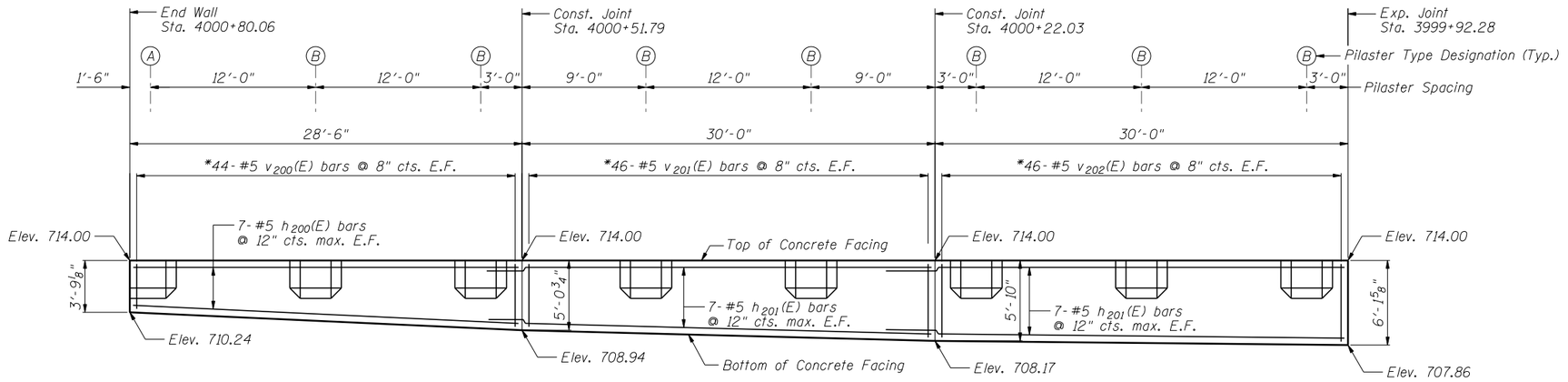
FILE NAME = ...\60R31-W049-005-Details.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - JLA	REVISED -
		CHECKED - LAS	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - JLA	REVISED -

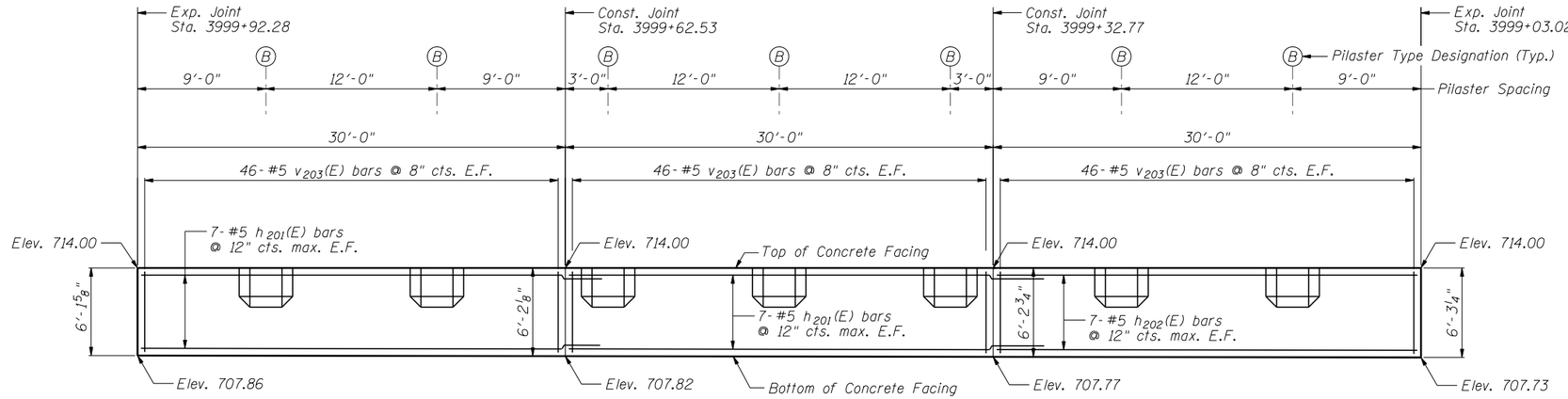
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS
STA. 3998+14.82 TO STA. 4000+80.06 SN 022-W049
SHEET NO. SB-5 OF SB-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	503
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



ELEVATION



ELEVATION

Notes:

Minimum lap for #5 bar is 3'-8".

Space reinforcement in wall to miss shear studs.

* signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.

See Sheet SB-7 for Concrete Facing Details and Bill of Material.

For pilaster reinforcement and details, see Sheet SB-8.

FILE NAME = ...\60R31-W049-006-ConcreteFacing1.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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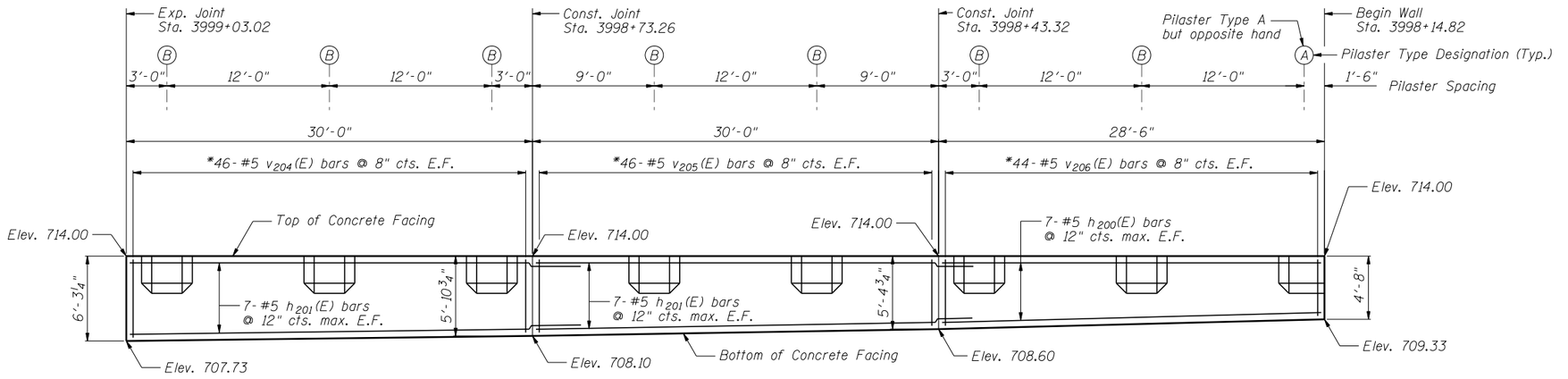
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - JLA	REVISED -

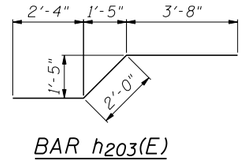
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE FACING
STA. 3998+14.82 TO STA. 4000+80.06 SN 022-W049
SHEET NO. SB-6 OF SB-10 SHEETS

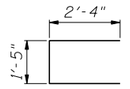
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	504
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



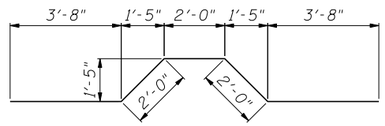
ELEVATION



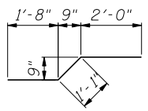
BAR $h_{203}(E)$



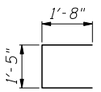
BAR $h_{204}(E)$



BAR $h_{205}(E)$



BAR $v_{207}(E)$



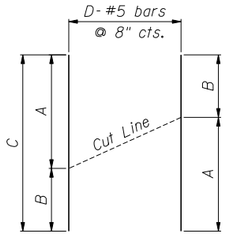
BAR $v_{208}(E)$

Notes:

Minimum lap for #5 bar is 3'-8".

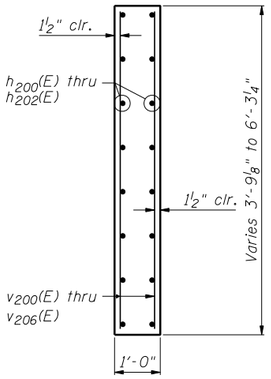
Space reinforcement in wall to miss shear studs.

* signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.



CUTTING DIAGRAM

Bar	A	B	C	D
$v_{200}(E)$	3'-6"	4'-9"	8'-3"	44
$v_{201}(E)$	4'-9"	5'-7"	10'-4"	46
$v_{202}(E)$	5'-7"	5'-10"	11'-5"	46
$v_{204}(E)$	6'-0"	5'-8"	11'-8"	46
$v_{205}(E)$	5'-8"	5'-1"	10'-9"	46
$v_{206}(E)$	5'-1"	4'-5"	9'-6"	44



SECTION THRU
CONCRETE FACING

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{200}(E)$	28	#5	28'-2"	
$h_{201}(E)$	84	#5	33'-8"	
$h_{202}(E)$	14	#5	29'-8"	
$h_{203}(E)$	6	#5	8'-0"	
$h_{204}(E)$	6	#5	6'-1"	
$h_{205}(E)$	63	#5	13'-4"	
$v_{200}(E)$	44	#5	8'-3"	
$v_{201}(E)$	46	#5	10'-4"	
$v_{202}(E)$	46	#5	11'-5"	
$v_{203}(E)$	276	#5	5'-10"	
$v_{204}(E)$	46	#5	11'-8"	
$v_{205}(E)$	46	#5	10'-9"	
$v_{206}(E)$	44	#5	9'-6"	
$v_{207}(E)$	71	#5	4'-9"	
$v_{208}(E)$	71	#5	4'-9"	
Item			Unit	Quantity
Concrete Structures			Cu. Yd.	60.8
Reinforcement Bars, Epoxy Coated			Pound	10,490
Pipe Underdrains for Structures, 4"			Foot	282
Geocomposite Wall Drain			Sq. Yd.	68

FILE NAME = ...\60R31-W049-007-ConcreteFacing2.dgn

ZROKA engineering

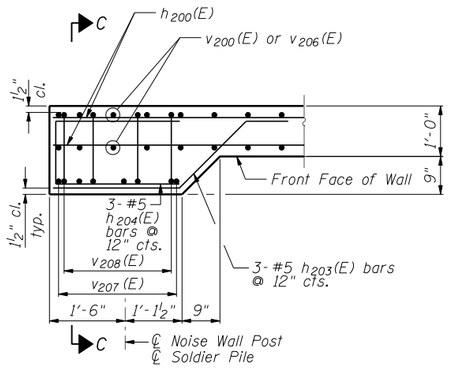
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - JLA	REVISED -
	CHECKED - LAS	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - JLA	REVISED -

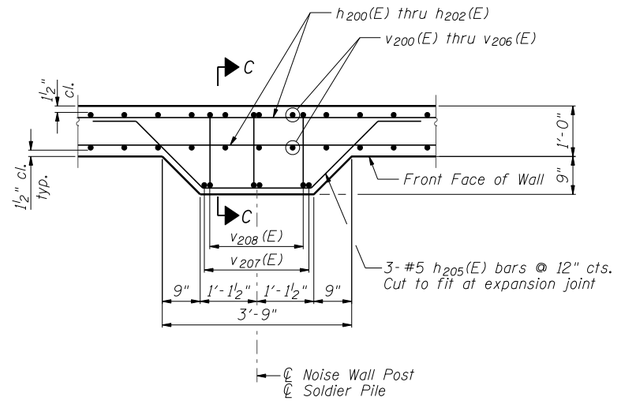
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE FACING & DETAILS
STA. 3998+14.82 TO STA. 4000+80.06 SN 022-W049
SHEET NO. SB-7 OF SB-10 SHEETS

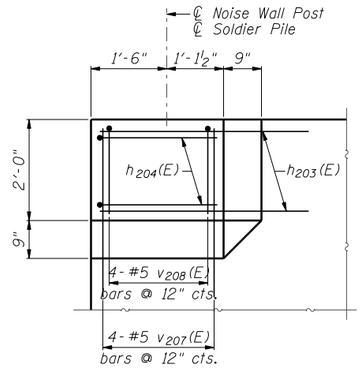
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	505
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



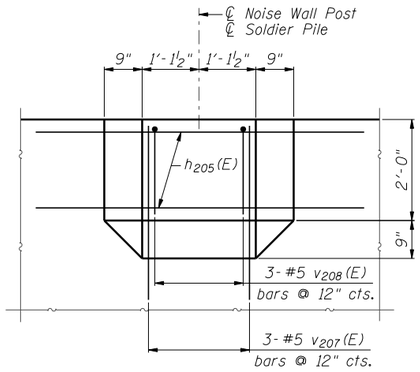
PLAN
(2 Locations)



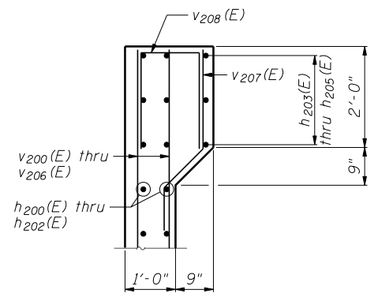
PLAN
(21 Locations)



PILASTER A



PILASTER B



SECTION C-C

Notes:

See Sheet SB-7 for Bill of Material.

See Sheets SB-6 and SB-7 for pilaster spacing.

FILE NAME = ...\60R31-W049-008-Pilaster-Details.dgn

ZROKA engineering — Zroka Engineering, P.C., 4216 North Hermitage, Chicago, IL 60613		DESIGNED - JLA	REVISED -
		CHECKED - LAS	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - JLA	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PILASTER & DETAILS
STA. 3998+14.82 TO STA. 4000+80.06 SN 022-W049
SHEET NO. SB-8 OF SB-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	506
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		

BORING LOG RW-29

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-3838

SOIL BORING LOG

PAGE 1 of 1
DATE 4/11/2011
LOGGED BY RJ
GSI JOB No. 09173

ROUTE IL Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 022–W049
Station: 3998+15 to 4000+80
BORING NO. **RW–29**
Station: 3998+33 IL RTE–59
Offset: 40.0' Left
Ground Surface Elev. 712.3

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 699.8 ▽
Upon Completion 707.3 ▽
After ____ Hrs. ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
18.0" TOPSOIL–black 710.8	AS – 24		
	6		
	8		
CLAY LOAM–dark brown, gray & black–stiff (A–6) Fill	10	1.5P	16
	6		
▽707.3	9		
–5	9	1.0P	23
	5		114
	7		
CLAY–brown & gray–very stiff to hard (A–6)	11	2.5B	15
	8		115
	10		
–10	13	8.4B	15
701.8			
	8		118
	10		
▼	16	4.1B	14
	7		115
CLAY–gray–very stiff to hard (A–6)	9		
–15	16	2.6B	17
	3		112
	6		
	8	2.4B	18
	4		126
End Of Boring @ –20.0' Hollow Stem Augers CME Automatic Hammer 692.3 –20	8		
	12	3.4B	12

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
–25			
–30			
–35			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

BORING LOG RW-30

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-3838

SOIL BORING LOG

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LOGGED BY RJ
GSI JOB No. 09173

ROUTE IL Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 022–W049
Station: 3998+15 to 4000+80
BORING NO. **RW–30**
Station: 3998+88 IL RTE–59
Offset: 39.0' Left
Ground Surface Elev. 712.6

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 682.6 ▽
Upon Completion 682.6 ▽
After ____ Hrs. ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
18.0" TOPSOIL–black 711.1	AS – 35		
	3		
	4		
CLAY LOAM–dark brown, gray & black–stiff (A–6) Fill	8	1.75P	15
709.6			
SILTY CLAY–dark brown, gray & black–medium stiff (A–6) Wet	2		92
	2		
–5	3	0.5B	28
707.1			
	3		
SILTY LOAM–brown–medium dense (A–4)	5		
	5	NP	14
704.6			
	3		
CLAY–brown & gray–medium stiff (A–6)	6		
–10	9	0.75P	23
702.1			
	7		
	9		
	11	4.5P	15
CLAY–gray–very stiff to hard (A–6)	7		115
	7		
–15	9	4.4B	17
	4		109
	4		
	6	1.9B	20
	4		108
	4		
–20	8	2.3B	20

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY–gray–very stiff to hard (A–6) 692.1			
	3		129
	6		
	8	2.4B	11
	4		105
	9		
–25	12	4.1B	21
CLAY LOAM–gray–stiff to hard (A–6)	3		116
	4		
	6	1.3B	16
	3		117
	5		
▼▼ –30	7	8.9B	14
	4		109
	4		
677.6 –35	7	3.6B	19
End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

BORING LOG RW-31

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-3838

SOIL BORING LOG

PAGE 1 of 1
DATE 4/11/2011
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ROUTE IL Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 022–W049
Station: 3998+15 to 4000+80
BORING NO. **RW–31**
Station: 3999+44 IL RTE–59
Offset: 39.5' Left
Ground Surface Elev. 712.9

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 687.9 ▽
Upon Completion 687.9 ▽
After ____ Hrs. ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
18.0" TOPSOIL–black 711.4	AS – 25		
	2		
	4		
CLAY LOAM–dark brown, gray & black–stiff to very stiff (A–6) Fill	8	1.75P	21
	14		
	12		
–5	7	3.0P	16
707.4			
	4		
SILTY CLAY LOAM–brown–medium dense (A–4)	8		
	8	2.0P	11
704.9			
	3		104
	5		
–10	9	2.1B	22
	7		115
CLAY–brown & gray–very stiff to hard (A–6)	12		
	14	4.9B	16
	5		109
	6		
–15	10	5.7B	19
697.4			
	4		112
	5		
CLAY–gray–very stiff (A–6)	7	2.9B	19
	4		116
	6		
–20	7	3.5B	17

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY–gray–very stiff (A–6) 692.4			
	5		
	8		
CLAY LOAM to LOAM–gray–medium dense (A–4)	8	2.25P	12
	3		
▽▼ 687.9 –25	9		
	11	–	15
	7		125
	9		
CLAY–gray–stiff to very stiff (A–6)	11	2.0B	12
	5		120
	10		
–30	11	1.4B	13
	5		120
	8		
677.9 –35	13	2.6B	14
End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

FILE NAME = ...\60R31-W049-009-Boring Logs.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - JLA	REVISED -
	CHECKED - LAS	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - JLA	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
STA. 3998+14.82 TO STA. 4000+80.06 SN 022–W049
SHEET NO. SB-9 OF SB-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	507
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

BORING LOG RW-32

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630)-355-2638

SOIL BORING LOG

PAGE 1 of 1
DATE 4/28/2011
LOGGED BY MD
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS–5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 022–W049
Station: 3998+15 to 4000+80
BORING NO. **RW–32**
Station: 4000+03 IL RTE–59
Offset: 49.5' Left
Ground Surface Elev. 711.0

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 677.5
Upon Completion 677.0
After ____ Hrs.

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				15.0" ASPHALT
709.7				
	5			CLAY–gray–very stiff to hard (A–6)
	7			
	10	–	16	CLAY LOAM with Asphalt & Stone– gray–medium dense (Fill)
708.0				
	3		*118*	
	6			
–5	8	6.0B	15	
	3		*116*	CLAY LOAM–brown & gray– very stiff to hard (A–6)
	6			
	7	3.1B	14	
	4		*115*	
	6			
–10	8	4.25B	17	
700.5				
	3		*116*	
	5			
	7	4.5B	16	
	3		*109*	CLAY–gray–very stiff to hard (A–6)
	5			
–15	5	2.0B	20	
	3		*110*	
	5			
	7	4.1B	19	
	2		*109*	
	3			
–20	4	2.7B	19	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	3		*110*	CLAY–gray–very stiff to hard (A–6)
	5			
	8	3.9B	19	
688.0				
	5		*119*	
	6			
–25	8	3.8B	12	
	5		*119*	CLAY LOAM–gray– very stiff to hard (A–6)
	6			
	8	3.3B	13	
	7		*119*	
	10			
–30	13	6.2B	13	
				Silt seams from –33.5' to –35.0'.
	9			
	9			
676.0 –35	10	2.25P	13	End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

BORING LOG RW-33

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630)-355-2638

SOIL BORING LOG

PAGE 1 of 1
DATE 4/28/2011
LOGGED BY MD
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS–5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 022–W049
Station: 3998+15 to 4000+80
BORING NO. **RW–33**
Station: 4000+61 IL RTE–59
Offset: 52.5' Left
Ground Surface Elev. 710.4

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 684.9
Upon Completion 678.0
After ____ Hrs.

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				15.0" ASPHALT
709.1				
	9			
	12			
	15	4.5P	13	CLAY LOAM with Stone– brown & gray–medium dense (Fill)
	14			
	14			
–5	12	–	15	
704.9				
	3			SILTY CLAY–brown & gray– very stiff (A–4/A–6)
	5			
	5	3.5P	15	
702.4				
	4			CLAY LOAM–brown–very stiff (A–6)
	7			
–10	9	3.0P	14	
699.9				
	5		*119*	
	7			
	10	4.2B	14	
	3		*114*	CLAY–gray–stiff to hard (A–6)
	6			
–15	9	4.7B	18	
	3		*110*	
	6			
	8	3.25B	19	
	3		*108*	
	4			
–20	5	2.0B	21	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	3		*108*	CLAY–gray–stiff to hard (A–6)
	5			
	7	1.4B	21	
687.4				
	4		*120*	
	6			
–25	8	3.4B	13	
	4		*123*	CLAY LOAM–gray– very stiff to hard (A–6)
	7			
	9	4.8B	12	
	6		*112*	
	11			
–30	15	6.5B	18	
	9		*126*	
	11			
675.4 –35	13	1.5B	12	End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

FILE NAME = ...\60R31-W049-B10-BoringLog2.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - JLA	REVISED -
	CHECKED - LAS	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - JLA	REVISED -

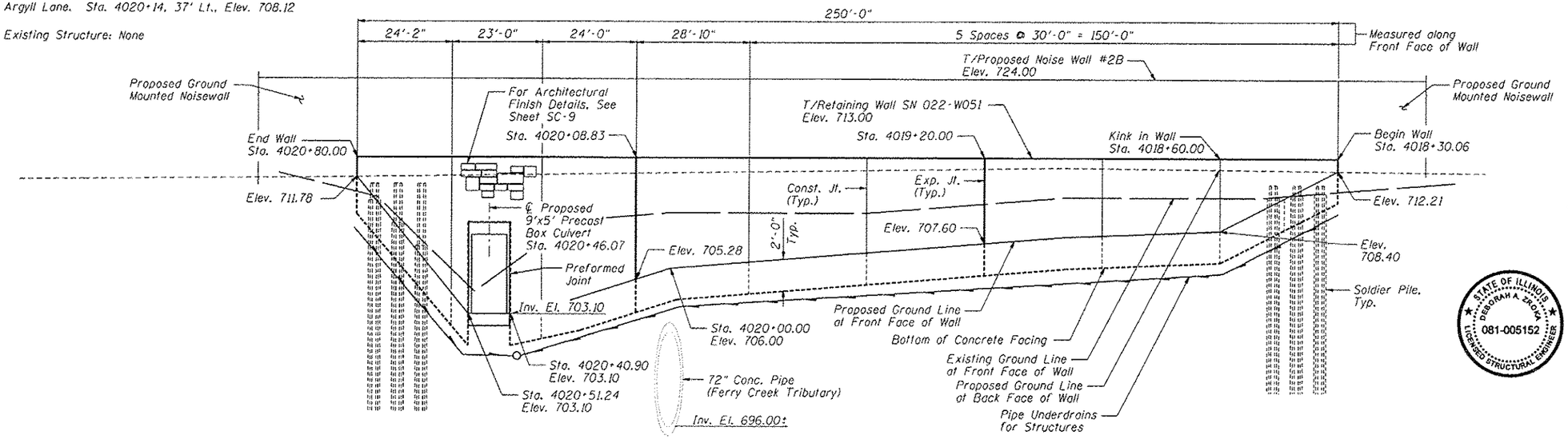
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 2
STA. 3998+14.82 TO STA. 4000+80.06 SN 022–W049
SHEET NO. SB-10 OF SB-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	508
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

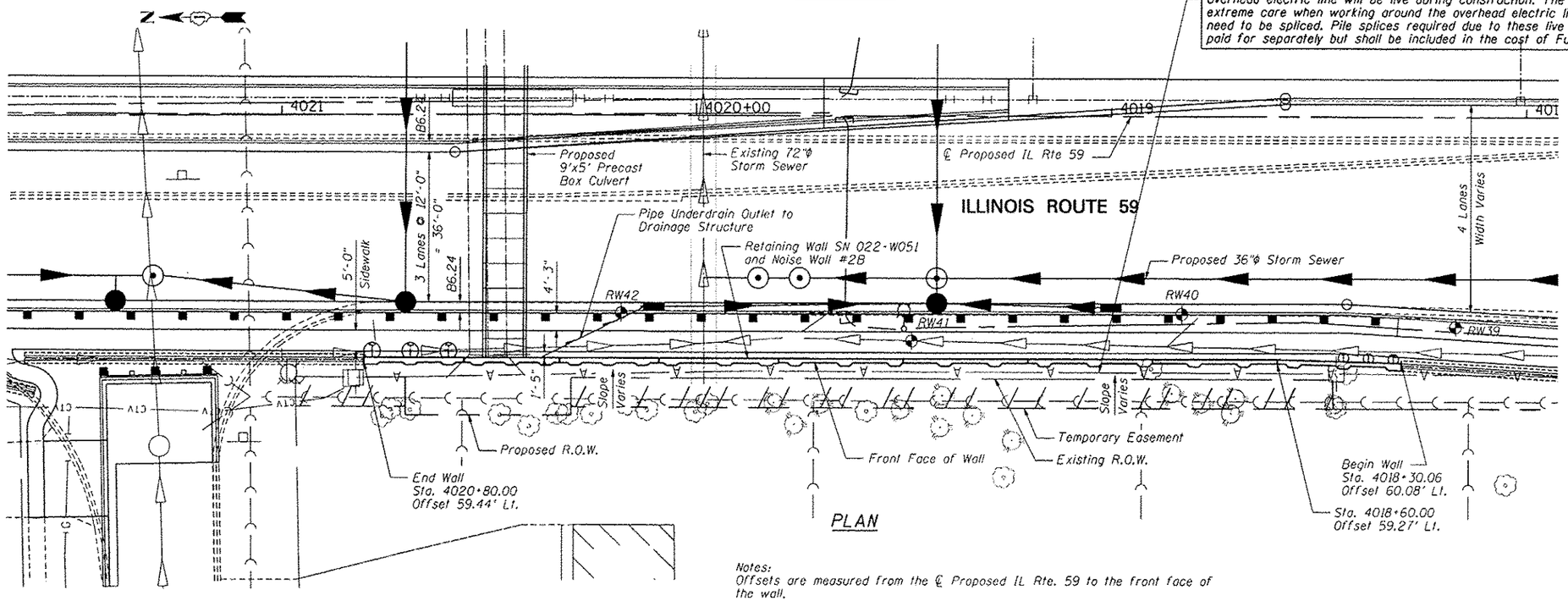
Bench Mark: Chiseled "□" on top of north end of headwall, west side of IL Rte. 59 about 75' south of centerline of Argyll Lane. Sta. 4020+14, 37' Lt., Elev. 708.12

Existing Structure: None

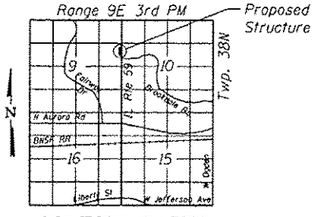


ELEVATION

Overhead electric line will be live during construction. The Contractor shall utilize extreme care when working around the overhead electric line. Piles in this area may need to be spliced. Pile splices required due to these live electric lines shall not be paid for separately but shall be included in the cost of Furnishing Soldier Piles.



PLAN



LOCATION SKETCH

Notes:
Offsets are measured from the ℄ Proposed IL Rte. 59 to the front face of the wall.

Existing utilities except for the overhead electric line to be relocated as necessary to construct wall.

For Index of Sheets, General Notes, Design Specifications, PGL Information, Name Plate and Total Bill of Material, see Sheet SC-2.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

STATE OF ILLINOIS
DEBORAH A. ZROKA
081-005152
LICENSED STRUCTURAL ENGINEER

12.14.12
Signature Date

November 30, 2014
Expires

GENERAL PLAN & ELEVATION
IL. RTE. 59
F.A.P. RTE. 338
SECTION (112 & 113) WRS-6
DUPAGE COUNTY
STA. 4018+30.06 TO STA. 4020+80.00
SN 022-W051

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

		DESIGNED - JLA	REVISED -
		CHECKED - LAS	REVISED -
SCALE - NONE		DRAWN - SAW	REVISED -
DATE - 12/14/2012		CHECKED - JLA	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
SHEET NO. SC-1 OF SC-12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	509
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

FILE NAME = ...\60R31-W051-051-GPE.dgn

INDEX OF SHEETS

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.
3. Concrete Sealer shall be applied to exposed surfaces of the front face, top face and back face of wall.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	230
Concrete Structures	Cu. Yd.	92.2
Concrete Sealer	Sq. Ft.	2,189
Stud Shear Connectors	Each	216
Reinforcement Bars, Epoxy Coated	Pound	15,840
Geocomposite Wall Drain	Sq. Yd.	102
Untreated Timber Lagging	Sq. Ft.	1,196
Furnishing Soldier Piles (W Section)	Foot	1,075
Pipe Underdrains for Structures, 4"	Foot	290
Drilling and Setting Soldier Piles (In Soil)	Cu. Ft.	7,996
Form Liner Textured Surface	Sq. Ft.	1,184

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications
for Highway Bridges, 17th Edition

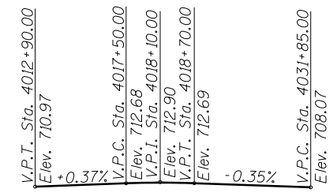
LOADING

Wind Load on Noise Wall = 35 psf

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 36,000 psi (M270 Grade 36)



LVC = 120'

PROFILE GRADE

(along inside edge of pavement IL Route 59)

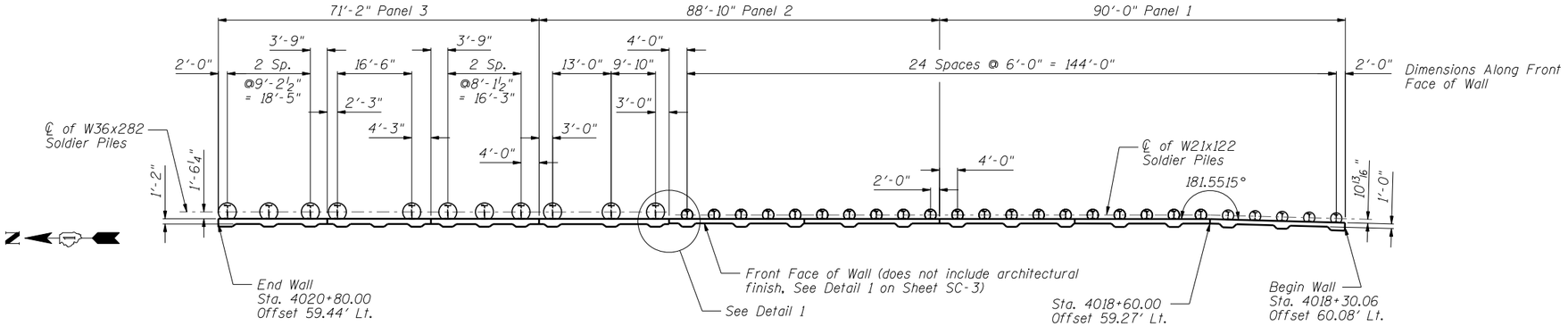
FILE NAME = ...\60R31-W051-002-GenData.dgn

ZROKA engineering — Zroka Engineering, P.C., 4216 North Hermitage, Chicago, IL 60613		DESIGNED - JLA	REVISED -
		CHECKED - LAS	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - JLA	REVISED -

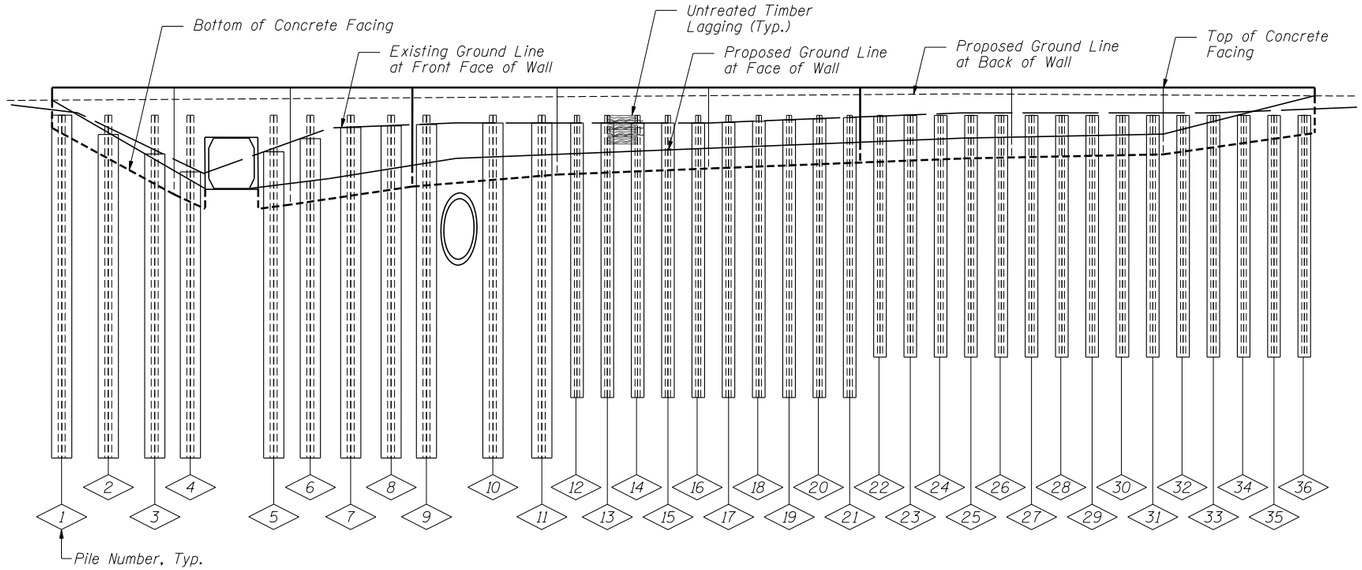
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
SHEET NO. SC-2 OF SC-12 SHEETS

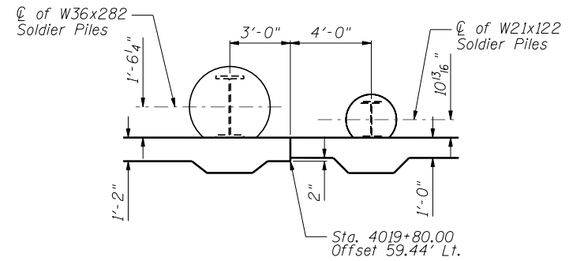
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	510
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



PLAN



ELEVATION



DETAIL 1

PILE SUMMARY

Pile No.	Station	Offset to ℄ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation	Pile No.	Station	Offset to ℄ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation	Pile No.	Station	Offset to ℄ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation
1	4020+78.00	56.75	W36x282	35'-0"	675.25	710.25	13	4019+70.00	57.37	W21x122	30'-0"	680.25	710.25	25	4018+98.00	57.37	W21x122	26'-0"	684.25	710.25
2	4020+68.79	56.75	W36x282	35'-0"	675.25	710.25	14	4019+64.00	57.37	W21x122	30'-0"	680.25	710.25	26	4018+92.00	57.37	W21x122	26'-0"	684.25	710.25
3	4020+59.58	56.75	W36x282	35'-0"	675.25	710.25	15	4019+58.00	57.37	W21x122	30'-0"	680.25	710.25	27	4018+86.00	57.37	W21x122	26'-0"	684.25	710.25
4	4020+52.58	56.75	W36x282	35'-0"	675.25	710.25	16	4019+52.00	57.37	W21x122	30'-0"	680.25	710.25	28	4018+80.00	57.37	W21x122	26'-0"	684.25	710.25
5	4020+36.08	56.75	W36x282	35'-0"	675.25	710.25	17	4019+46.00	57.37	W21x122	30'-0"	680.25	710.25	29	4018+74.00	57.37	W21x122	26'-0"	684.25	710.25
6	4020+29.08	56.75	W36x282	35'-0"	675.25	710.25	18	4019+40.00	57.37	W21x122	30'-0"	680.25	710.25	30	4018+68.00	57.37	W21x122	26'-0"	684.25	710.25
7	4020+20.96	56.75	W36x282	35'-0"	675.25	710.25	19	4019+34.00	57.37	W21x122	30'-0"	680.25	710.25	31	4018+62.00	57.37	W21x122	26'-0"	684.25	710.25
8	4020+12.83	56.75	W36x282	35'-0"	675.25	710.25	20	4019+28.00	57.37	W21x122	30'-0"	680.25	710.25	32	4018+55.97	57.49	W21x122	26'-0"	684.25	710.25
9	4020+05.83	56.75	W36x282	35'-0"	675.25	710.25	21	4019+22.00	57.37	W21x122	30'-0"	680.25	710.25	33	4018+49.97	57.65	W21x122	26'-0"	684.25	710.25
10	4019+92.83	56.75	W36x282	35'-0"	675.25	710.25	22	4019+16.00	57.37	W21x122	26'-0"	684.25	710.25	34	4018+43.97	57.82	W21x122	26'-0"	684.25	710.25
11	4019+83.00	56.75	W36x282	35'-0"	675.25	710.25	23	4019+10.00	57.37	W21x122	26'-0"	684.25	710.25	35	4018+37.97	57.97	W21x122	26'-0"	684.25	710.25
12	4019+76.00	57.37	W21x122	30'-0"	680.25	710.25	24	4019+04.00	57.37	W21x122	26'-0"	684.25	710.25	36	4018+31.97	58.14	W21x122	26'-0"	684.25	710.25

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing Soldier Piles (W Section)	Foot	1,075
Drilling and Setting Soldier Piles (In Soil)	Cu Ft	7,996
Untreated Timber Lagging	Sq Ft	1,196
Stud Shear Connectors	Each	216

Note: All offsets are to the left of ℄ of Proposed IL Rte 59

FILE NAME = ...\60R31-W051 0803-P1el.sgout.dgn

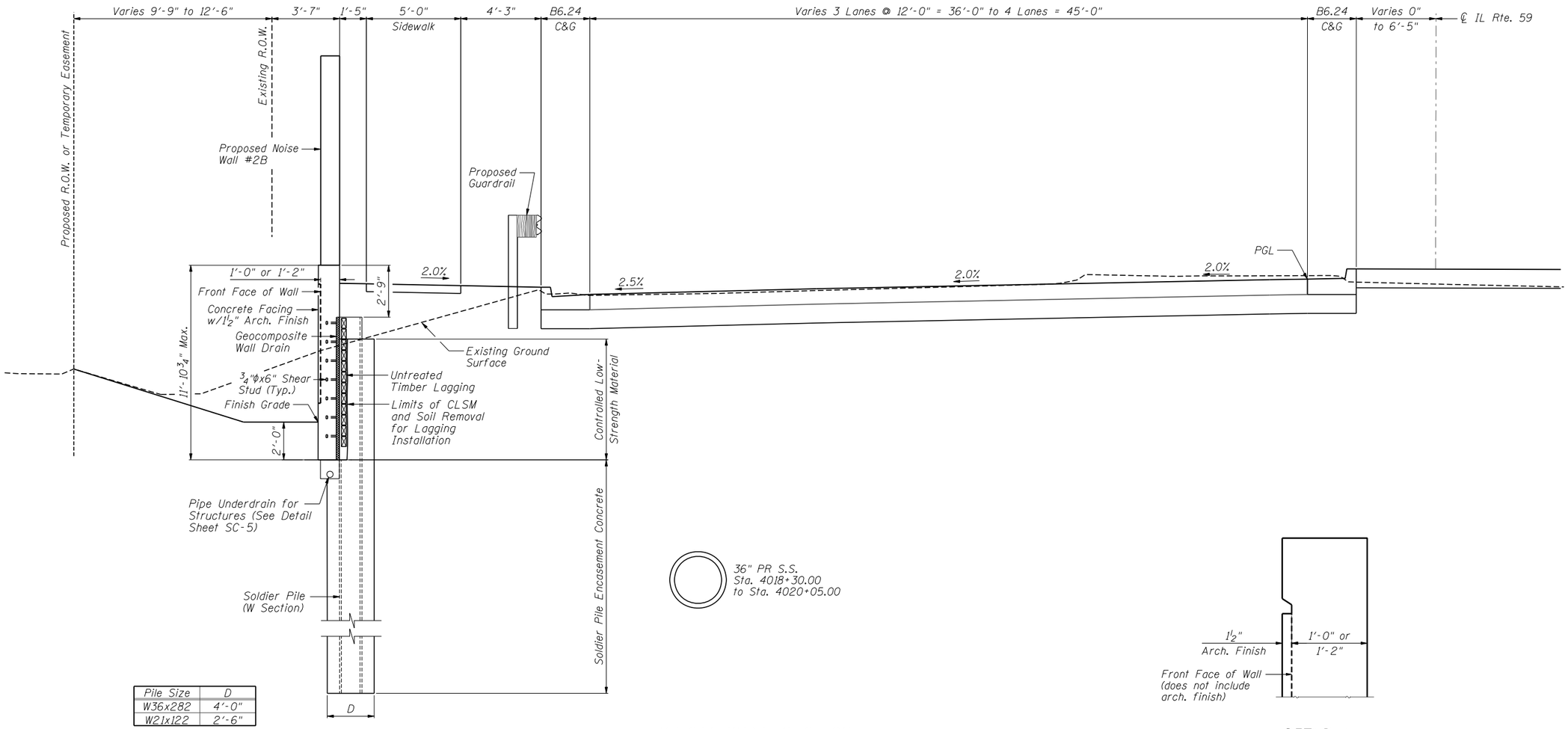
ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - JLA	REVISED -
	CHECKED - LAS	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - JLA	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOLDIER PILE LAYOUT
STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
SHEET NO. SC-3 OF SC-12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	511
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



Pile Size	D
W36x282	4'-0"
W21x122	2'-6"

TYPICAL WALL SECTION

Sta. 4018+30.06 to Sta. 4020+80.00
(Looking North)

DETAIL 1

FILE NAME = ...\60R31-W051-004-TypSec.dgn

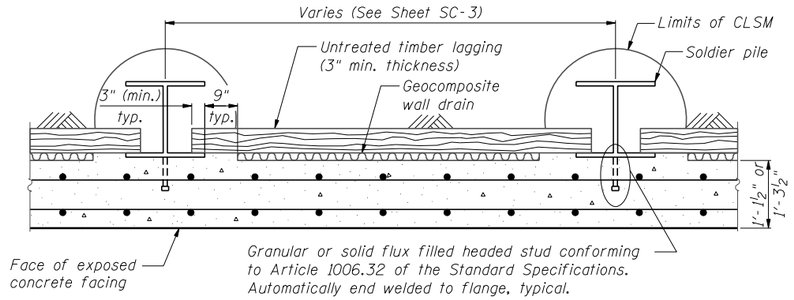
ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - JLA	REVISED -
	CHECKED - LAS	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - JLA	REVISED -

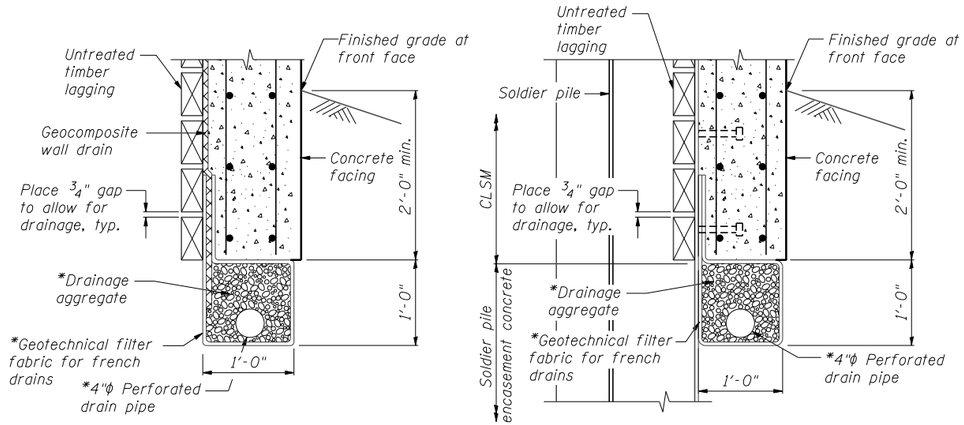
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION
STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
SHEET NO. SC-4 OF SC-12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	512
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



SECTION THRU DRILLED SOLDIER PILE WALL

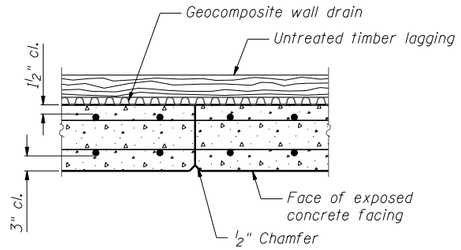


BETWEEN SOLDIER PILES

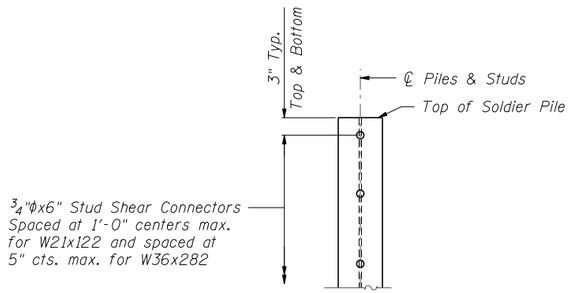
AT SOLDIER PILES

PIPE UNDERDRAIN DETAIL

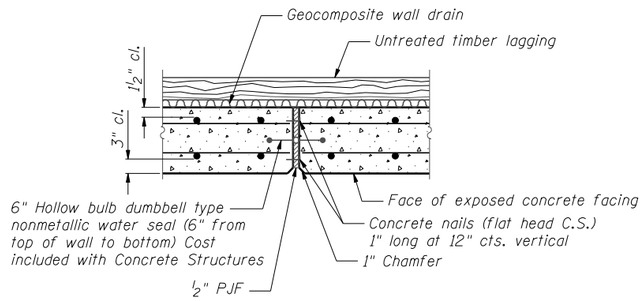
*Included in the cost of "Pipe Underdrains for Structures, 4""



CONSTRUCTION JOINT DETAIL



DETAIL OF SHEAR STUD PLACEMENT

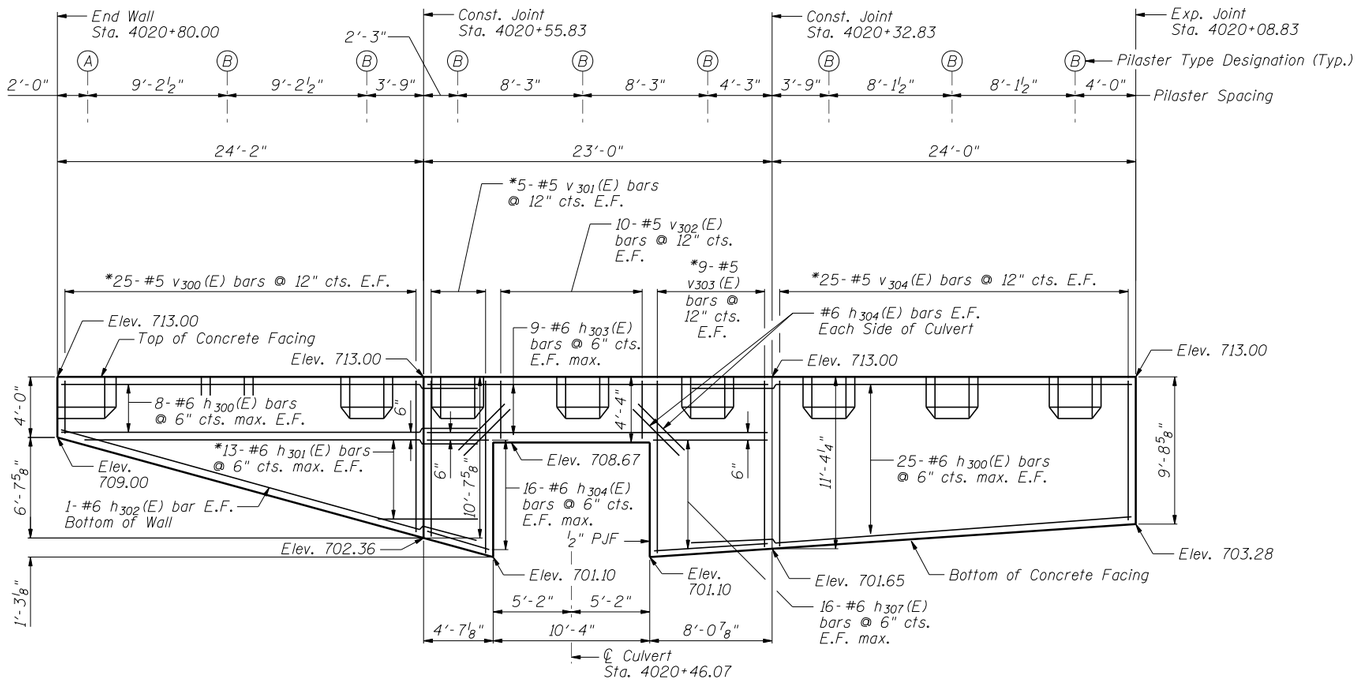


EXPANSION JOINT DETAIL

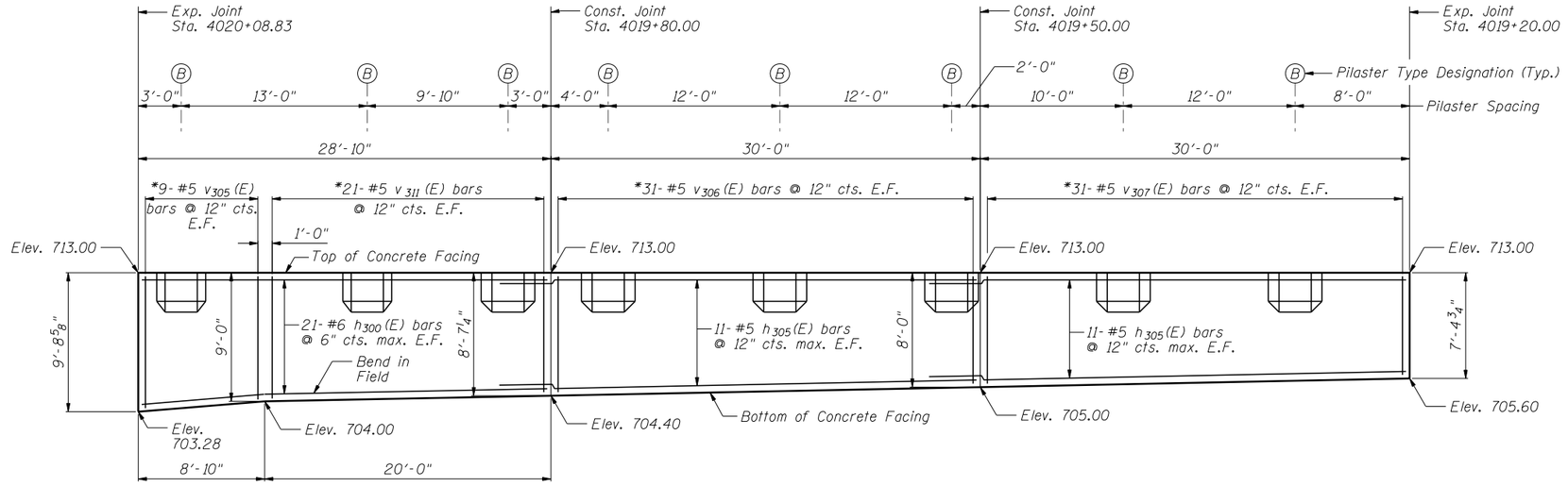
FILE NAME = ...\60R31-W051-005-Details.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - JLA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
		CHECKED - LAS	REVISED -		
	SCALE - NONE	DRAWN - SAW	REVISED -		SHEET NO. SC-5 OF SC-12 SHEETS
	DATE - 12/14/2012	CHECKED - JLA	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	513
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



ELEVATION



ELEVATION

Notes:

Minimum lap for #5 bar is 3'-8", minimum lap for #6 bar is 4'-5".

Space reinforcement in wall to miss shear studs.

* signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.

See Sheet SC-7 for Concrete Facing Details and Bill of Material.

For pilaster reinforcement and details, see Sheet SC-8.

FILE NAME = ...\60R31-W051-006-ConcreteFacing1.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - JLA	REVISED -
	CHECKED - LAS	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - JLA	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE FACING 1
STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
SHEET NO. SC-6 OF SC-12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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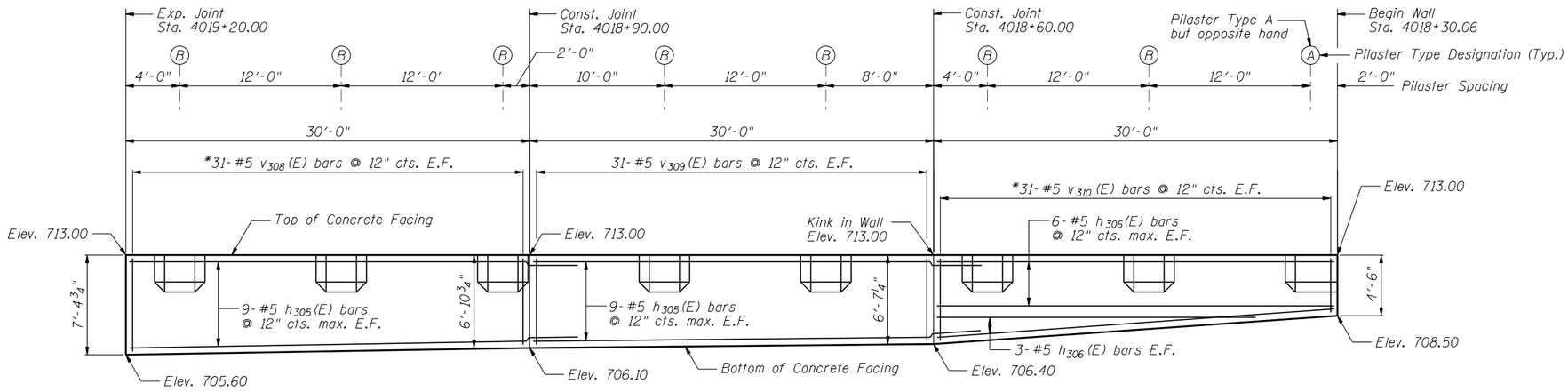
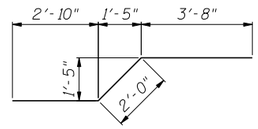
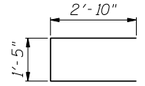
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



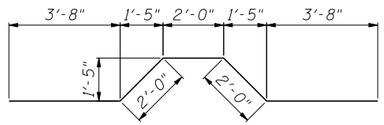
ELEVATION



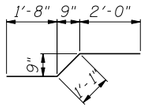
BAR $h_{308}(E)$



BAR $h_{309}(E)$



BAR $h_{310}(E)$



BAR $v_{312}(E)$

BAR $v_{313}(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{300}(E)$	108	#6	28'-7"	——
$h_{301}(E)$	13	#6	33'-9"	——
$h_{302}(E)$	2	#6	29'-6"	——
$h_{303}(E)$	18	#6	22'-8"	——
$h_{304}(E)$	40	#6	4'-4"	——
$h_{305}(E)$	80	#5	33'-8"	——
$h_{306}(E)$	18	#5	29'-8"	——
$h_{307}(E)$	32	#6	7'-8"	——
$h_{308}(E)$	6	#5	8'-6"	⌐
$h_{309}(E)$	6	#5	7'-1"	⊏
$h_{310}(E)$	69	#5	13'-4"	⌐⌙
$v_{300}(E)$	25	#5	14'-1"	——
$v_{301}(E)$	5	#5	22'-0"	——
$v_{302}(E)$	20	#5	4'-0"	——
$v_{303}(E)$	9	#5	22'-7"	——
$v_{304}(E)$	25	#5	20'-6"	——
$v_{305}(E)$	9	#5	18'-3"	——
$v_{306}(E)$	31	#5	15'-11"	——
$v_{307}(E)$	31	#5	14'-9"	——
$v_{308}(E)$	31	#5	13'-8"	——
$v_{309}(E)$	62	#5	6'-3"	——
$v_{310}(E)$	31	#5	10'-5"	——
$v_{311}(E)$	21	#5	16'-11"	——
$v_{312}(E)$	77	#5	4'-9"	⌐
$v_{313}(E)$	77	#5	4'-9"	⊏

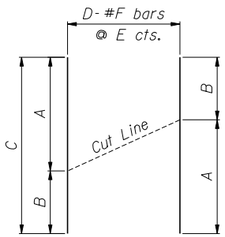
Item	Unit	Quantity
Concrete Structures	Cu. Yd.	92.2
Reinforcement Bars, Epoxy Coated	Pound	15,840
Pipe Underdrains for Structures, 4"	Foot	290
Geocomposite Wall Drain	Sq. Yd.	102

Notes:

Minimum lap for #5 bar is 3'-8".

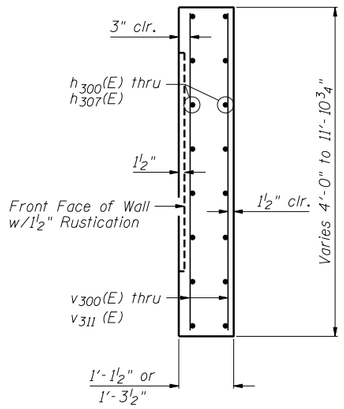
Space reinforcement in wall to miss shear studs.

** signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.*



CUTTING DIAGRAM

Bar	A	B	C	D	E	F
$h_{301}(E)$	28'-0"	5'-9"	33'-9"	13	6"	#6
$v_{300}(E)$	3'-8"	10'-5"	14'-1"	25	12"	#5
$v_{301}(E)$	10'-5"	11'-7"	22'-0"	5	12"	#5
$v_{303}(E)$	11'-7"	11'-0"	22'-7"	9	12"	#5
$v_{304}(E)$	11'-0"	9'-6"	20'-6"	25	12"	#5
$v_{305}(E)$	9'-6"	8'-9"	18'-3"	9	12"	#5
$v_{306}(E)$	8'-3"	7'-8"	15'-11"	31	12"	#5
$v_{307}(E)$	7'-8"	7'-1"	14'-9"	31	12"	#5
$v_{308}(E)$	7'-1"	6'-7"	13'-8"	31	12"	#5
$v_{310}(E)$	6'-3"	4'-2"	10'-5"	31	12"	#5
$v_{311}(E)$	8'-8"	8'-3"	16'-11"	21	12"	#5



SECTION THRU CONCRETE FACING

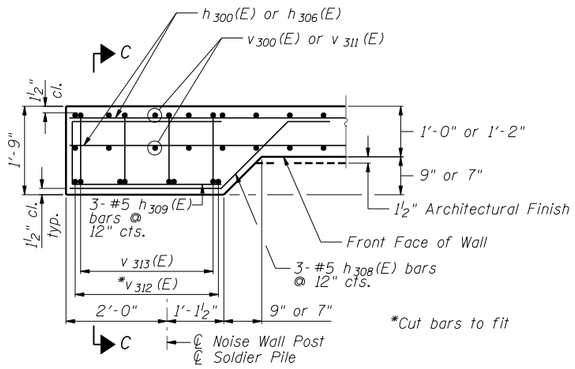
FILE NAME = ...\60R31-W051-007-Concretefacing2.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - JLA	REVISED -
		CHECKED - LAS	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - JLA	REVISED -

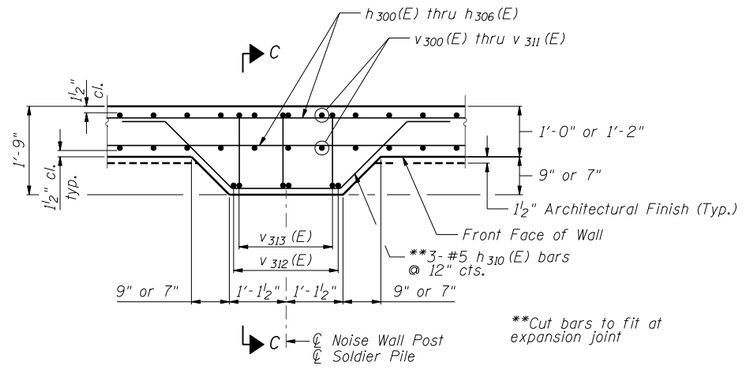
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE FACING & DETAILS
STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
SHEET NO. SC-7 OF SC-12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	515
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



PLAN
(2 Locations)



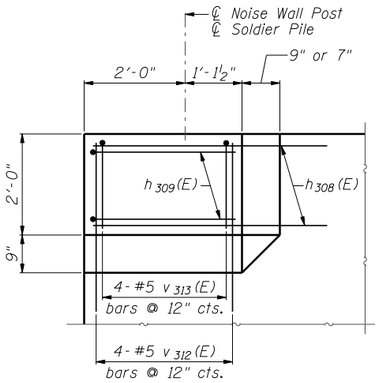
PLAN
(23 Locations)

Notes:

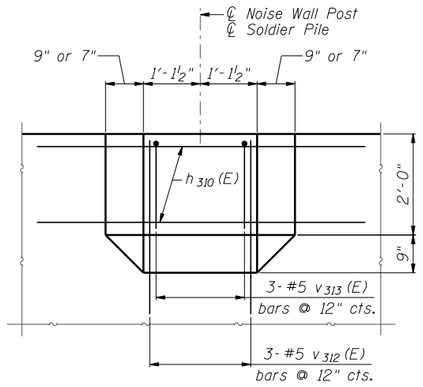
See Sheet SC-7 for Bill of Material.

See Sheets SC-6 and SC-7 for pilaster spacing.

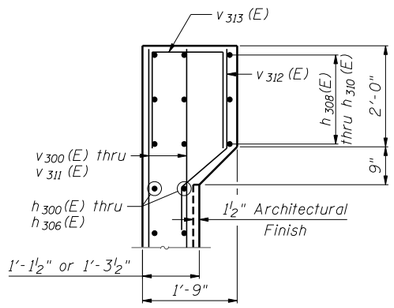
See Sheet SC-9 for Architectural Finish Details.



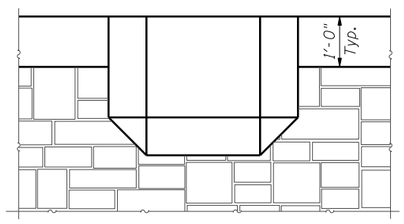
PILASTER A



PILASTER B



SECTION C-C

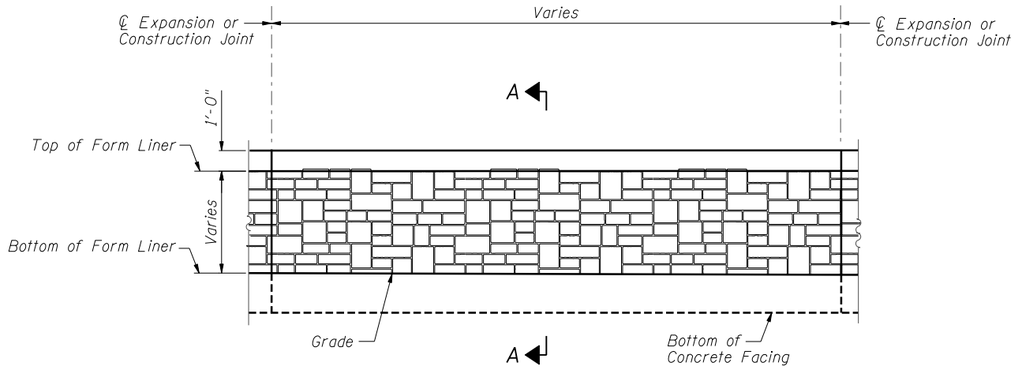


ARCHITECTURAL FINISH AT PILASTER

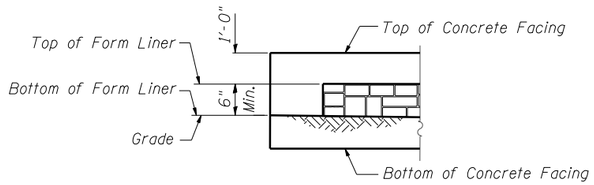
FILE NAME = ...\60R31-W051-008-PilasterDetails.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - JLA	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PILASTER & DETAILS STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
		CHECKED - LAS	REVISED -		
	SCALE - NONE	DRAWN - SAW	REVISED -		SHEET NO. SC-8 OF SC-12 SHEETS
	DATE - 12/14/2012	CHECKED - JLA	REVISED -		

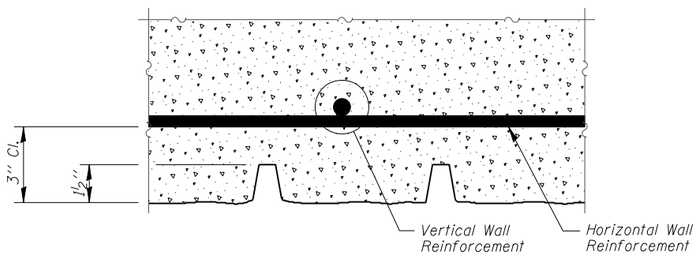
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	516
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



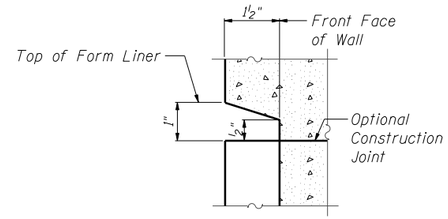
ELEVATION - FORM LINER

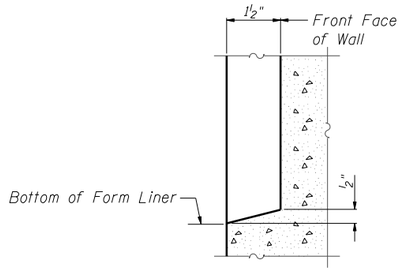


END FORM LINER FINISH

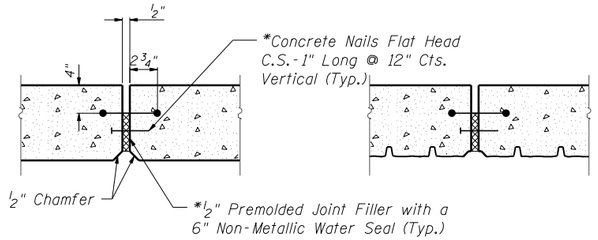


PLAN - FORM LINER



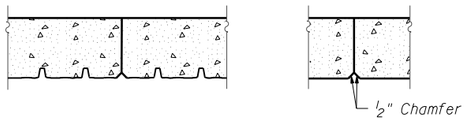


SECTION A-A



EXPANSION JOINT DETAIL

*Cost included with "Concrete Structures"



CONSTRUCTION JOINT DETAIL

FORM LINER ELEVATION TABLE

Station	Form Liner Top Elevation	Form Liner Bottom Elevation
4020+80.00	None	None
4020+76.29	712.00	710.66
4020+55.83	712.00	704.36
4020+51.24	712.00	703.10
4020+51.24	712.00	708.67
4020+40.90	712.00	708.67
4020+40.90	712.00	703.10
4020+32.83	712.00	703.65
4020+08.83	712.00	705.28
4019+80.00	712.00	706.40
4019+50.00	712.00	707.00
4019+20.00	712.00	707.60
4018+90.00	712.00	708.10
4018+60.00	712.00	708.40
4018+33.94	712.00	711.50
4018+30.06	None	None

FILE NAME = ...\60R31-W051-0819-ArchFinish.dgn

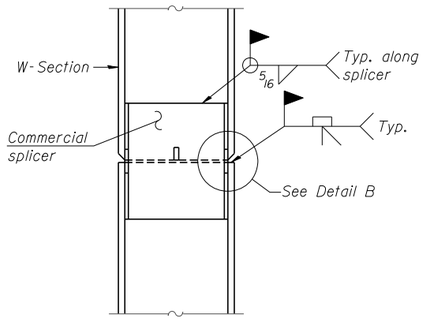
ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - JLA	REVISED -	
	CHECKED - LAS	REVISED -	
SCALE - NONE	DRAWN - SAW	REVISED -	
DATE - 12/14/2012	CHECKED - JLA	REVISED -	

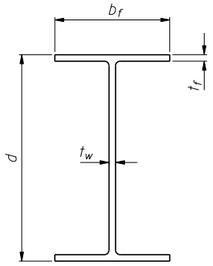
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARCHITECTURAL FINISH DETAILS
STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
SHEET NO. SC-9 OF SC-12 SHEETS

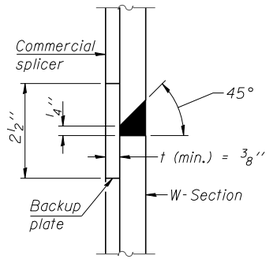
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	517
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



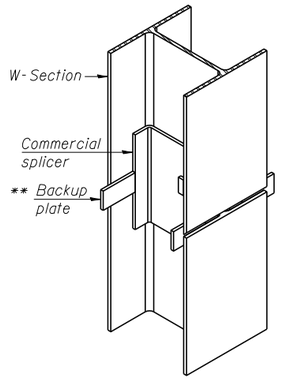
ELEVATION



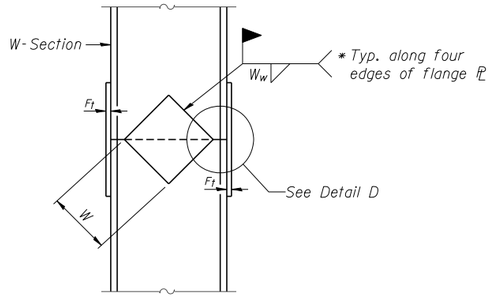
Designation	Depth d	Flange width b_f	Flange thickness t_f	Web thickness t_w	Encasement diameter A
W36x282	36 1/2"	16 5/8"	1 9/16"	7/8"	48"
W21x122	21 5/8"	12 3/8"	15/16"	5/8"	30"



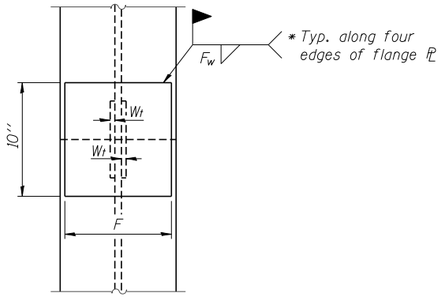
DETAIL "B"



ISOMETRIC VIEW

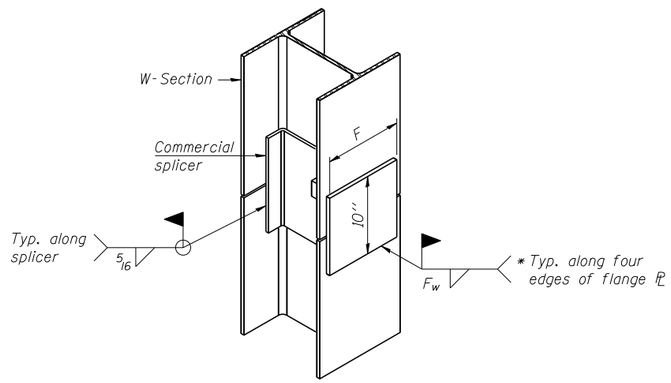


ELEVATION

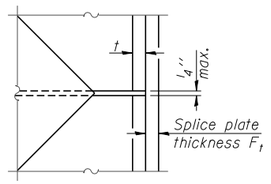


END VIEW

WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
W36x282	13 1/2"	2"	1 1/4"	22"	3/4"	1/2"
W21x122	10"	1 1/4"	3/4"	12 3/4"	5/8"	3/8"

WELDED PLATE FIELD SPLICE

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

Note:
The steel W-Sections shall be according to AASHTO M270 Grade 36.

FILE NAME = ...\60R31-W051-010-PileSpliceDetails.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - JLA	REVISED -
	CHECKED - LAS	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - JLA	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PILE SPLICE DETAILS
STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
SHEET NO. SC-10 OF SC-12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	518
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

BORING LOG RW-39

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630)-355-3638

SOIL BORING LOG

PAGE 1 of 1
DATE 1/7/2011
LOGGED BY RJ
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022-W051
Station: 4018+30 to 4020+80
BORING NO. **RW-39**
Station: 4018+17 IL RTE-59
Offset: 50.5' Left
Ground Surface Elev. 711.9

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter Dry
Upon Completion Dry
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
710.4				SANDY TOPSOIL–dark brown
	AS 4	–	15 *116*	
708.9	3 4	1.6B	14	CLAY LOAM–dark brown–stiff (A–6) Fill
	3		*112*	
–5	3 5	1.75P	28	SILTY CLAY–dark brown & gray–stiff (A–6) Wet
	2		*91*	
703.9	3 3	1.5B	30	
	2		*116*	CLAY–brown & gray–hard (A–6)
–10	4 7	3.8B	16	
	3		*119*	
	5 8	4.5B	15	
	3		*113*	
–15	6 11	4.2B	18	
696.4				
	7		*114*	CLAY–gray–very stiff to hard (A–6)
	9 11	5.6B	16	
	4		*114*	
–20	7 9	5.2B	17	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				CLAY–gray–very stiff to hard (A–6)
	5		*112*	
–25	7 11	4.6B	18	
	4		*112*	
	7 11	4.6B	18	
	3		*108*	
	4 7	2.6B	20	
	3		*108*	
–30	4 5	2.0B	21	
	5		*126*	
676.9 –35	8 13	4.2B	12	
				End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

BORING LOG RW-40

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630)-355-3638

SOIL BORING LOG

PAGE 1 of 1
DATE 1/6/2011
LOGGED BY RJ
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022-W051
Station: 4018+30 to 4020+80
BORING NO. **RW-40**
Station: 4018+83 IL RTE-59
Offset: 47.5' Left
Ground Surface Elev. 712.1

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 701.6
Upon Completion 690.1
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
711.1				SANDY TOPSOIL with Stone–dark brown
	AS 6	–	11	
	4 4	3.0P	18	CLAY LOAM–brown–very stiff (A–6) Fill
	3		*109*	
–5	5 5	2.25P 12.7%	17	
706.1				
	3 6			TOPSOIL–black
704.1	7	–	39	
	1		*95*	SILTY CLAY–brown & gray–stiff (A–6) Wet
–10	2 4	1.9B	26	
▼701.6				
	1			SILTY SAND–brown–very loose (A–2)
699.6	1 1	NP	17	
	4		*115*	CLAY–brown & gray–very stiff (A–6)
–15	6 11	2.75B	17	
696.6				
	4		*111*	
	8 11	4.8B	18	CLAY–gray–stiff to hard (A–6)
	4		*114*	
–20	6 10	5.3B	18	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	2		*105*	
	4 4	1.9B	21	CLAY–gray–stiff to hard (A–6)
	2		*108*	
–25	4 6	1.9B	21	
686.6				
	10 11			SAND & GRAVEL–gray–medium dense (A–1)
684.1	8	NP	12	
	7			
	9			SAND–brown & gray–medium dense (A–3)
–30	12	NP	15	
679.6				
	2			CLAY–gray–stiff (A–6)
	4			
677.1 –35	7	1.5B	19	
				End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

FILE NAME = ...\60R31-W051-01-Boring-Log1.dgn

ZROKA engineering Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - JLA	REVISED -
		CHECKED - LAS	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - JLA	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
SHEET NO. SC-11 OF SC-12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	519
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

BORING LOG RW-41

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-7638

SOIL BORING LOG

PAGE 1 of 1
DATE 1/6/2011
LOGGED BY RJ
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022-W051
Station: 4018+30 to 4020+80
BORING NO. **RW-41**
Station: 4019+48 IL RTE-59
Offset: 54.0' Left
Ground Surface Elev. 710.2

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 696.2
Upon Completion 678.2
After ____ Hrs.

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL–black 709.0	AS	–	14
	4		
	2		
	3	1.25P	16
CLAY LOAM–dark brown, gray & black–medium stiff stiff (A–6) Fill	1		*110*
	3		
–5	5	1.0B	17
	1		*102*
	1		
702.2	2	0.7B	20
CRUSHED STONE SCREENINGS – loose (Fill)	2		
	2		
–10	3	NP	5
699.7			
	1		*105*
CLAY LOAM–dark brown & gray–soft to medium stiff (A–6) Fill	2		
	3	0.9B	21
	1		
	1		
–15	1	0.25P	26
694.7			
	3		*116*
CLAY–gray–stiff to very stiff (A–6)	5		
	8	1.8B	13
	3		*112*
	5		
–20	6	3.8B	18

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	3		*112*
	5		
	7	2.2B	19
	3		
	10		
–25	7	1.25P	17
	2		*106*
	3		
	3	1.9B	22
	3		*112*
	5		
–30	6	1.9B	19
	5		*116*
	3		
675.2 –35	5	1.1B	14
End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

BORING LOG RW-42

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-7638

SOIL BORING LOG

PAGE 1 of 1
DATE 1/6/2011
LOGGED BY RJ
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022-W051
Station: 4018+30 to 4020+80
BORING NO. **RW-42**
Station: 4020+18 IL RTE-59
Offset: 47.5' Left
Ground Surface Elev. 711.3

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter Dry
Upon Completion Dry
After ____ Hrs.

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL–black 710.8	AS	–	15
	4		
CLAY LOAM with Stone–brown–stiff (A–6) Fill	3		
	2	1.25P	17
708.3			
	2		*87*
	1		
–5	2	0.7B	33
SILTY CLAY–dark brown, gray & black–medium stiff to stiff (A–6) Fill, Wet	1		
	3		
	9	1.5P	29
703.3			
	2		
TOPSOIL–black	4		
–10	5	–	32
700.8			
	1		*84*
SILTY CLAY–dark brown, gray & black–medium stiff (A–6/A–7) Wet	2		
	2	0.5B	33
698.3			
SILTY CLAY LOAM–gray–loose (A–4)	1		
	3		
–15	5	–	22
695.8			
	3		*120*
	3		
CLAY–gray–very stiff to hard (A–6)	6	2.4B	15
	3		*122*
	6		
–20	7	3.5B	14

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
	4		*116*
	6		
	7	4.0B	16
	5		*116*
	7		
–25	10	3.5B	17
CLAY–gray–very stiff to hard (A–6)	4		*115*
	6		
	9	3.6B	16
	4		*114*
	6		
–30	6	3.4B	18
	3		*109*
	6		
676.3 –35	6	2.0B	20
End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

FILE NAME = ...\60R31-W051-012-Boring Log2.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - JLA	REVISED -
	CHECKED - LAS	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - JLA	REVISED -

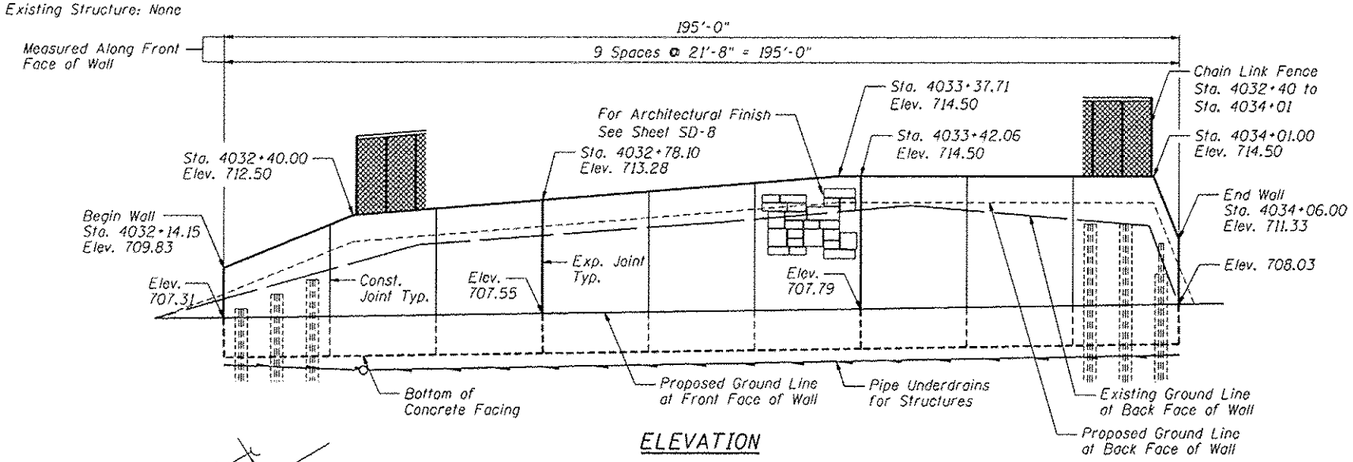
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 2
STA. 4018+30.06 TO STA. 4020+80.00 S.N. 022-W051
SHEET NO. SC-12 OF SC-12 SHEETS

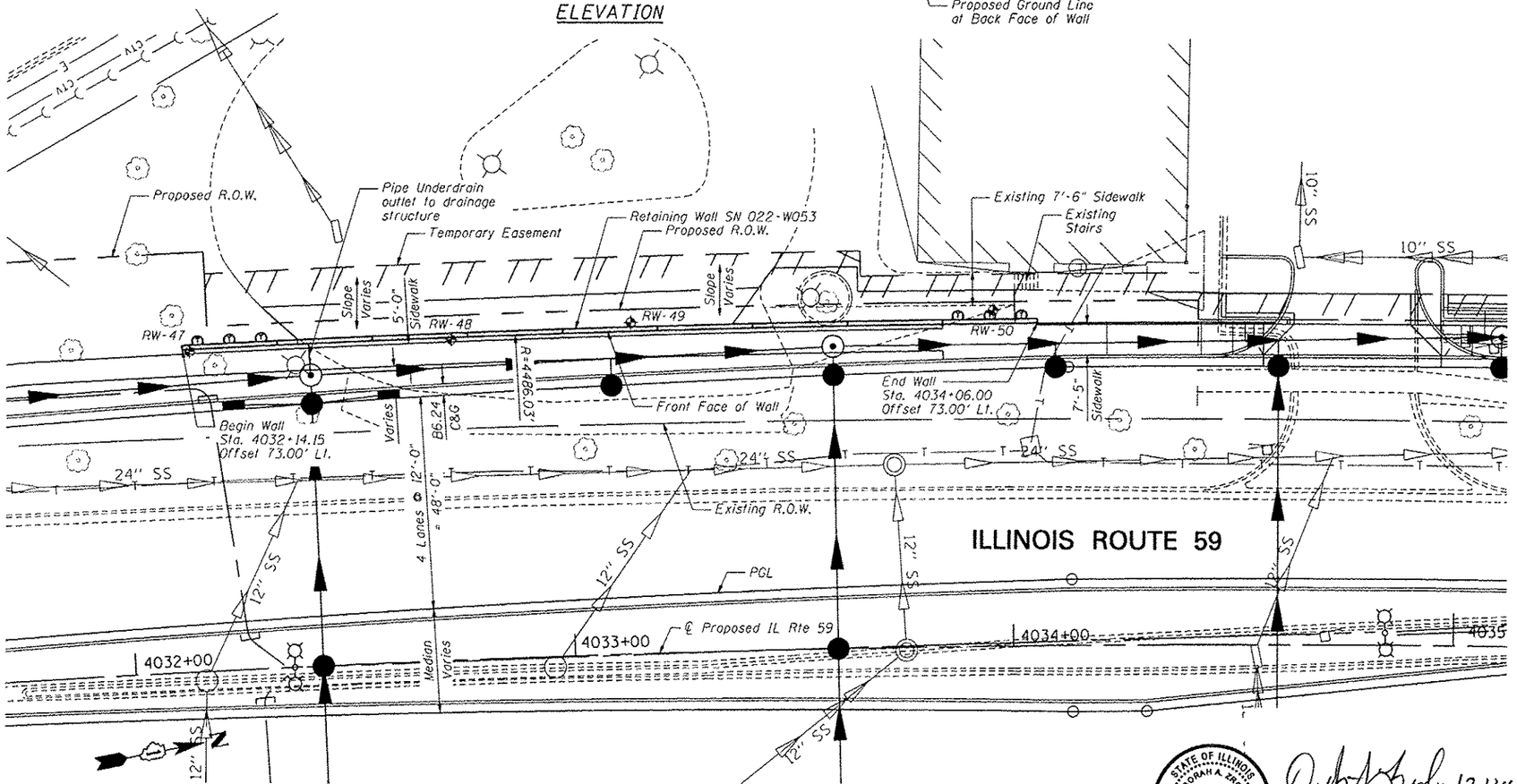
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	520
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

Bench Mark: Square "□" on top north end of headwall, west side of IL Rte 59, 75' south of centerline of Argyll Lane
Sta. 4020+14, 37' Lt., Elev. 708.12

Existing Structure: None



ELEVATION



PLAN

Notes:
Offsets are measured from the ℄ Proposed IL Rte. 59 to the front face of the wall.

Wall to be built along straight chords between construction joints.

INDEX OF SHEETS

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 36,000 psi (M270 Grade 36)

GENERAL NOTES

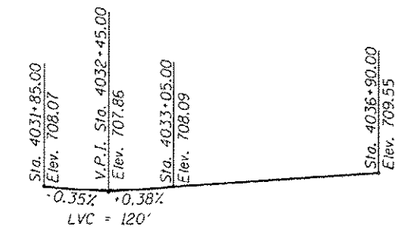
1. Reinforcement bars designated (E) shall be epoxy coated.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.
3. Concrete Sealer shall be applied to exposed surfaces of the top and both faces of wall.

TOTAL BILL OF MATERIAL

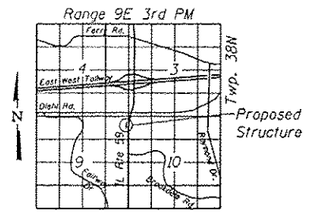
ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	295
Concrete Structures	Cu. Yd.	63.6
Concrete Sealer	Sq. Ft.	1,989
Stud Shear Connectors	Each	167
Reinforcement Bars, Epoxy Coated	Pound	7,640
Geocomposite Wall Drain	Sq. Yd.	80
Untreated Timber Lagging	Sq. Ft.	988
Furnishing Soldier Piles (W Section)	Foot	675
Pipe Underdrains for Structures, 4"	Foot	215
Drilling and Setting Soldier Piles (In Soil)	Cu. Ft.	3,496
Form Liner Textured Surface	Sq. Ft.	747
Chain Link Fence 4', Attached to Structure	Foot	195

HORIZONTAL CURVE DATA

Proposed Curve PRIL59-7
PI Sta. = 4032+07.95
Δ = 15° 24' 28" (RT)
D = 1° 17' 54"
R = 4,413.03'
T = 596.97'
L = 1,186.73'
E = 40.19'
P.C. Sta. = 4026+10.99
P.T. Sta. = 4037+97.72



PROFILE GRADE
(along inside edge of pavement proposed IL Route 59)



LOCATION SKETCH

STATE OF ILLINOIS DEBORAH A. ZROKA 081-005152 LICENSED STRUCTURAL ENGINEER

Signature Date 12-11-12

November 30, 2014
Expires

GENERAL PLAN AND ELEVATION
IL RTE 59 FAP RTE 338
SECTION (112 & 113) WRS-6
DUPAGE COUNTY
STA. 4032+14.15 TO STA. 4034+06.00
SN 022-W053

FILE NAME = $FILE1$

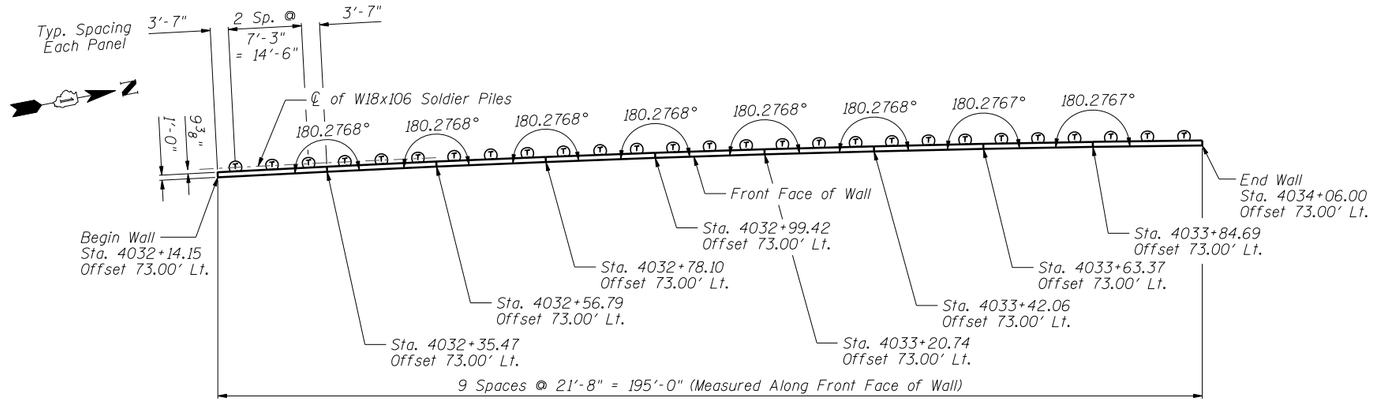
ZROKA engineering — Zroka Engineering, P.C., 4216 North Hermitage, Chicago, IL 60613

	DESIGNED - LAS	REVISED -	
	CHECKED - DAZ	REVISED -	
SCALE - NONE	DRAWN - SAW	REVISED -	
DATE - 12/14/2012	CHECKED - LAS	REVISED -	

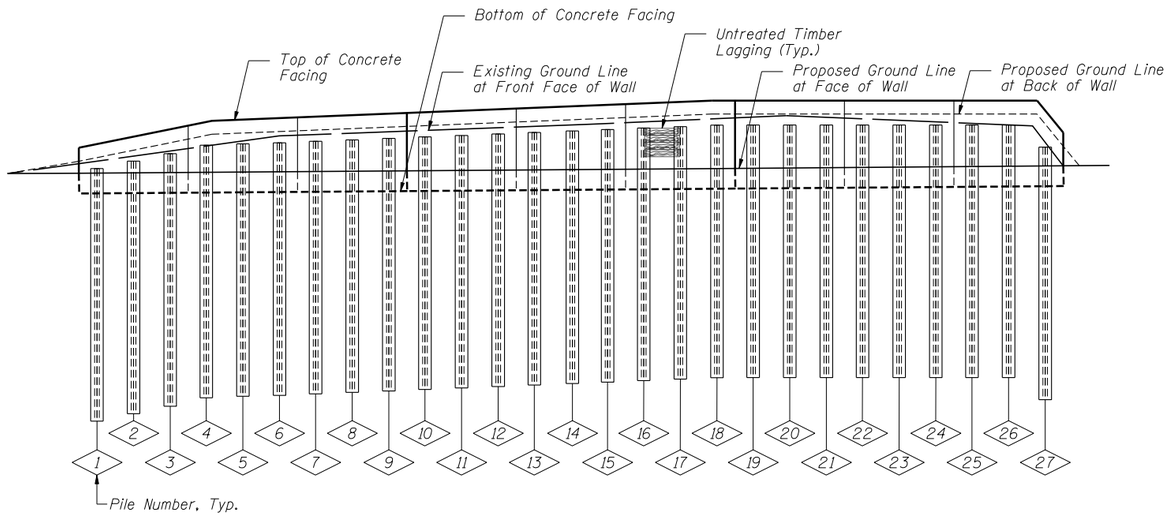
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STA. 4032+14.15 TO STA. 4034+06.00 SN 022-W053
SHEET NO. SD-1 OF SD-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	521
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



PLAN



ELEVATION

PILE SUMMARY

Pile No.	Station	Offset to ℄ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation	Pile No.	Station	Offset to ℄ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation
1	4032+17.68	74.77	W18x106	25'-0"	682.53	707.53	15	4033+17.21	74.77	W18x106	25'-0"	686.33	711.33
2	4032+24.81	74.77	W18x106	25'-0"	683.23	708.23	16	4033+24.27	74.77	W18x106	25'-0"	686.47	711.47
3	4032+31.94	74.77	W18x106	25'-0"	683.93	708.93	17	4033+31.40	74.77	W18x106	25'-0"	686.62	711.62
4	4032+39.00	74.77	W18x106	25'-0"	684.65	709.65	18	4033+38.52	74.77	W18x106	25'-0"	686.75	711.75
5	4032+46.13	74.77	W18x106	25'-0"	684.87	709.87	19	4033+45.58	74.77	W18x106	25'-0"	686.75	711.75
6	4032+53.26	74.77	W18x106	25'-0"	685.02	710.02	20	4033+52.71	74.77	W18x106	25'-0"	686.75	711.75
7	4032+60.31	74.77	W18x106	25'-0"	685.16	710.16	21	4033+59.84	74.77	W18x106	25'-0"	686.75	711.75
8	4032+67.44	74.77	W18x106	25'-0"	685.31	710.31	22	4033+66.90	74.77	W18x106	25'-0"	686.75	711.75
9	4032+74.57	74.77	W18x106	25'-0"	685.46	710.46	23	4033+74.03	74.77	W18x106	25'-0"	686.75	711.75
10	4032+81.63	74.77	W18x106	25'-0"	685.60	710.60	24	4033+81.16	74.77	W18x106	25'-0"	686.75	711.75
11	4032+88.76	74.77	W18x106	25'-0"	685.75	710.75	25	4033+88.22	74.77	W18x106	25'-0"	686.75	711.75
12	4032+95.89	74.77	W18x106	25'-0"	685.90	710.90	26	4033+95.34	74.77	W18x106	25'-0"	686.75	711.75
13	4033+02.95	74.77	W18x106	25'-0"	686.04	711.04	27	4034+02.47	74.77	W18x106	25'-0"	685.81	710.81
14	4033+10.08	74.77	W18x106	25'-0"	686.18	711.18							

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing Soldier Piles (W Section)	Foot	675
Drilling and Setting Soldier Piles (In Soil)	Cu Ft	3,496
Untreated Timber Lagging	Sq Ft	988
Stud Shear Connectors	Each	167

Note: All offsets are to the left of centerline of IL Rte 59

FILE NAME = ...\60R31-W053-002-Pile Layout.dgn

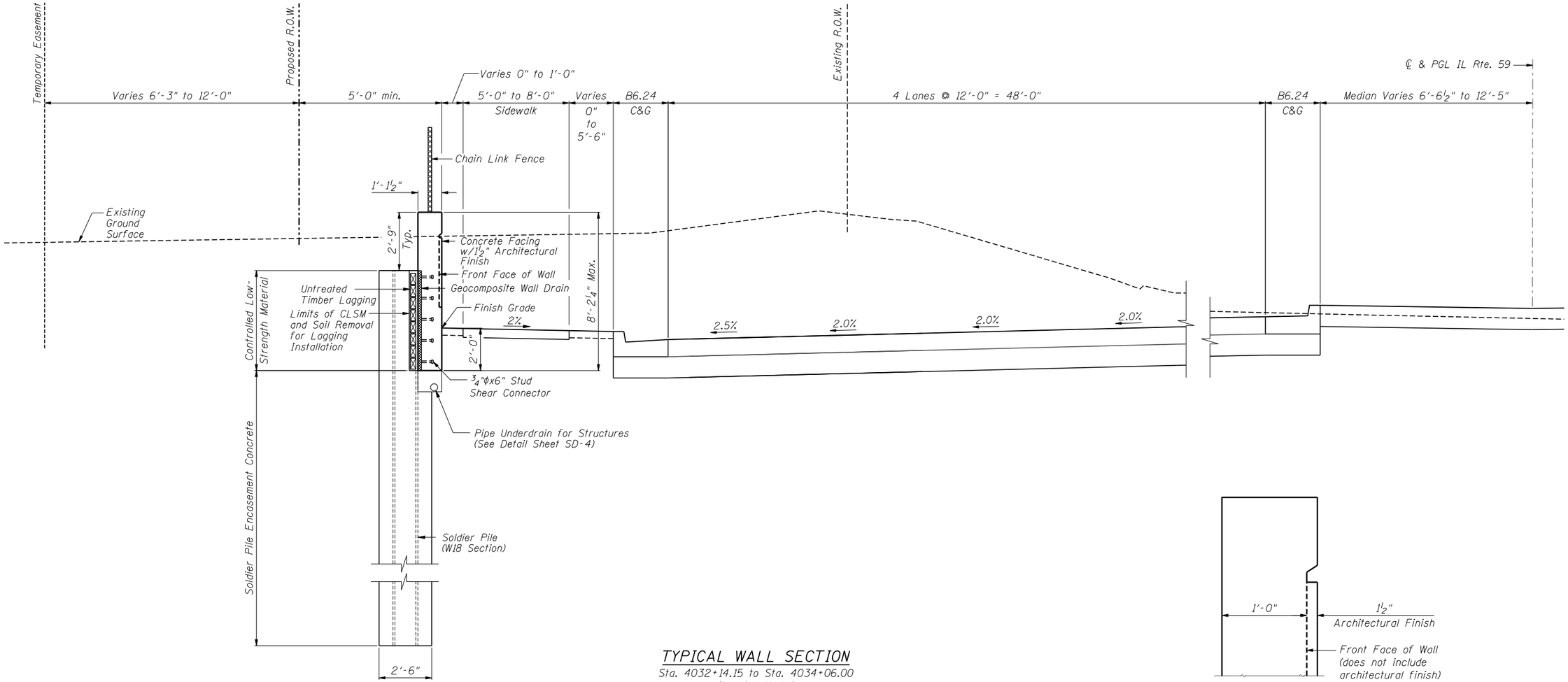
ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - LAS	REVISED -
	CHECKED - DAZ	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOLDIER PILE LAYOUT
STA. 4032+14.15 TO STA. 4034+06.00 SN 022-W053
SHEET NO. SD-2 OF SD-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	522
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



TYPICAL WALL SECTION

Sta. 4032+14.15 to Sta. 4034+06.00
(Looking North)

DETAIL 1

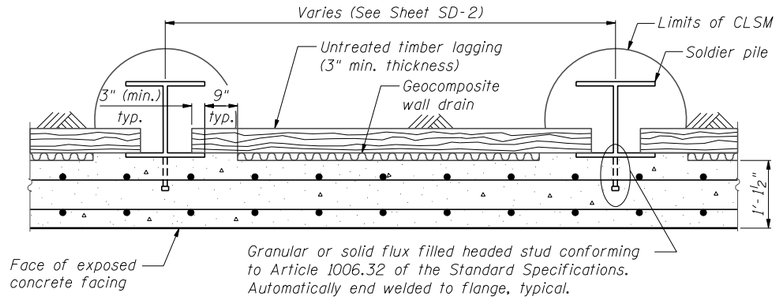
FILE NAME = ...\60R31-W053-003-TypSec.dgn

Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -
		CHECKED - DAZ	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

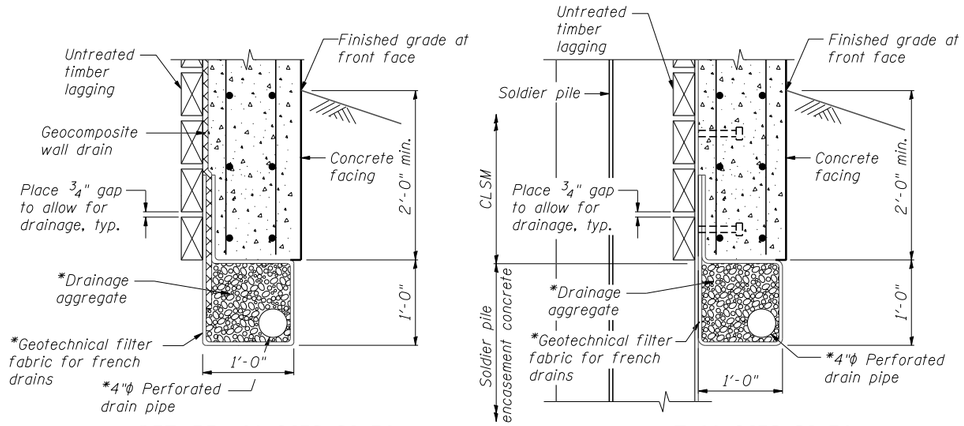
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION
STA. 4032+14.15 TO STA. 4034+06.00 SN 022-W053
SHEET NO. SD-3 OF SD-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	523
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



SECTION THRU DRILLED SOLDIER PILE WALL

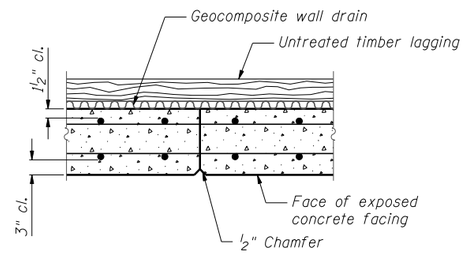


BETWEEN SOLDIER PILES

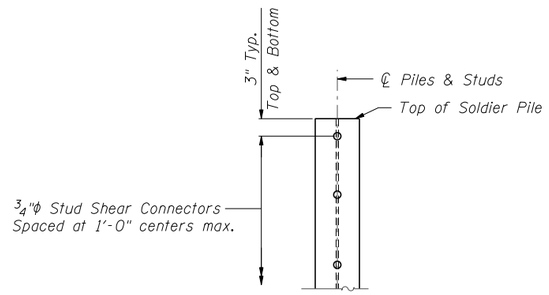
AT SOLDIER PILES

PIPE UNDERDRAIN DETAIL

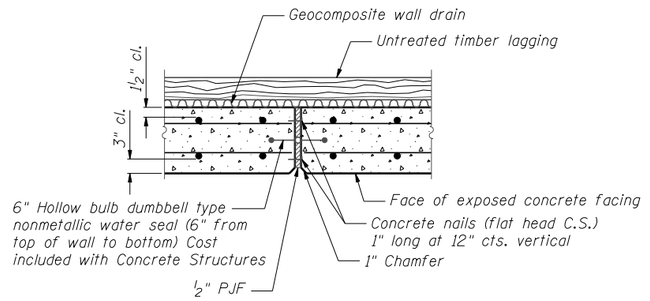
*Included in the cost of Pipe
Underdrains for Structures



CONSTRUCTION JOINT DETAIL



DETAIL OF SHEAR STUD PLACEMENT



EXPANSION JOINT DETAIL

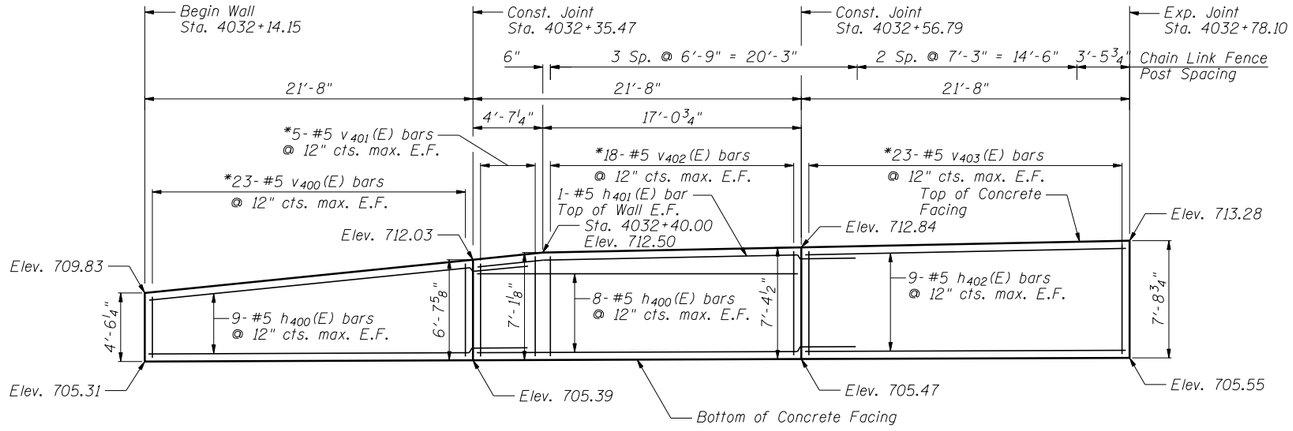
FILE NAME = ...\60R31-W053-004-Details.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -
		CHECKED - DAZ	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

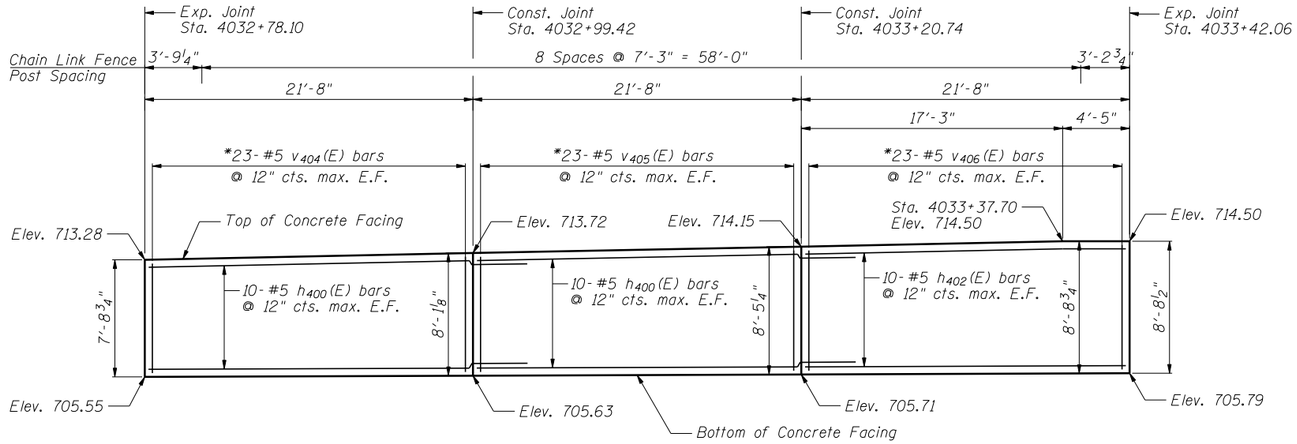
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS
STA. 4032+14.15 TO STA. 4034+06.00 SN 022-W053
SHEET NO. SD-4 OF SD-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	524
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



ELEVATION



ELEVATION

Notes:

Minimum lap for #5 bar is 3'-8".

Space reinforcement in wall to miss shear studs.

* signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.

See Sheet SD-6 for Concrete Facing Details and Bill of Material.

Horizontal dimensions measured along front face of wall.

FILE NAME = ...\60R31-W053-005-ConcreteFacing1.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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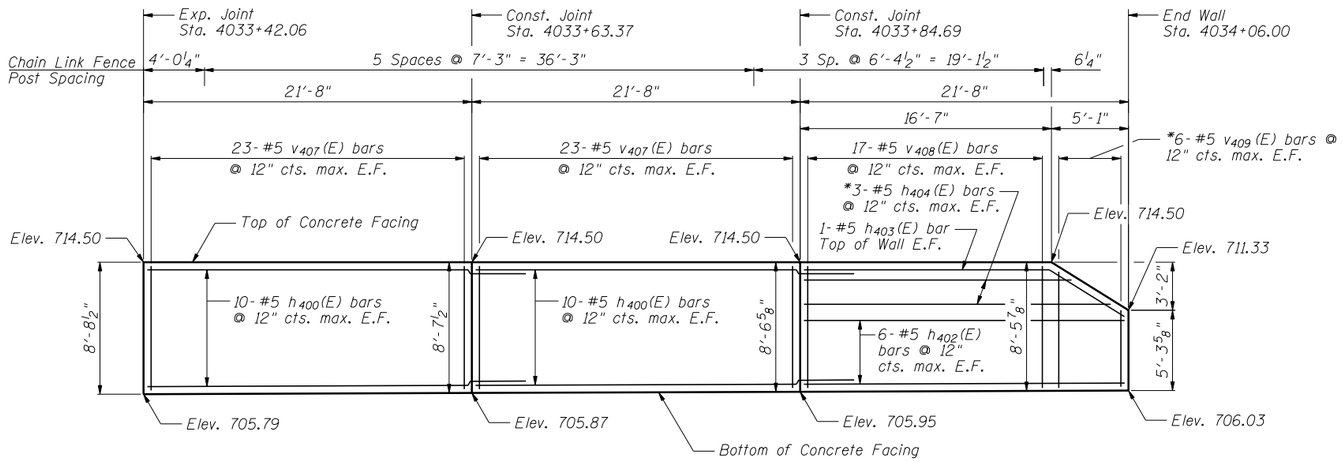
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE FACING 1
STA. 4032+14.15 TO STA. 4034+06.00 SN 022-W053
SHEET NO. SD-5 OF SD-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	525
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



ELEVATION

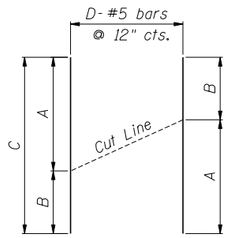
Notes:

Minimum lap for #5 bar is 3'-8".

Space reinforcement in wall to miss shear studs.

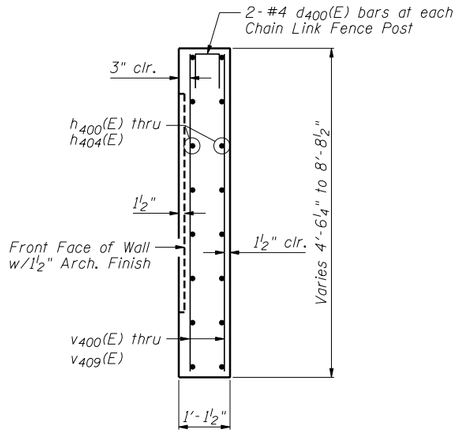
* signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.

Horizontal dimensions measured along front face of wall.

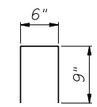


CUTTING DIAGRAM

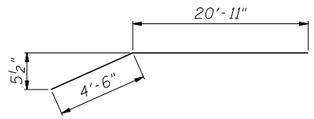
Bar	A	B	C	D
h404(E)	17'-11"	20'-10"	38'-9"	3
v400(E)	4'-2"	6'-4"	10'-6"	23
v401(E)	6'-4"	6'-9"	13'-1"	5
v402(E)	6'-9"	7'-1"	13'-10"	18
v403(E)	7'-1"	7'-5"	14'-6"	23
v404(E)	7'-5"	7'-9"	15'-2"	23
v405(E)	7'-9"	8'-1"	15'-10"	23
v406(E)	8'-1"	8'-5"	16'-6"	23
v409(E)	8'-2"	5'-0"	13'-2"	6



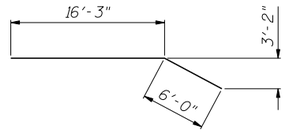
SECTION THRU CONCRETE FACING



BAR d400(E)



BAR h401(E)



BAR h403(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d400(E)	48	#4	2'-0"	⊓
h400(E)	114	#5	25'-4"	——
h401(E)	2	#5	25'-5"	／
h402(E)	50	#5	21'-4"	——
h403(E)	2	#5	22'-3"	＼
h404(E)	3	#5	38'-9"	——
v400(E)	23	#5	10'-6"	——
v401(E)	5	#5	13'-1"	——
v402(E)	18	#5	13'-10"	——
v403(E)	23	#5	14'-6"	——
v404(E)	23	#5	15'-2"	——
v405(E)	23	#5	15'-10"	——
v406(E)	23	#5	16'-6"	——
v407(E)	92	#5	8'-3"	——
v408(E)	34	#5	8'-2"	——
v409(E)	6	#5	13'-2"	——
Item			Unit	Quantity
Concrete Structures			Cu. Yd.	63.6
Reinforcement Bars, Epoxy Coated			Pound	7,640
Pipe Underdrains for Structures, 4"			Foot	215
Geocomposite Wall Drain			Sq. Yd.	80

FILE NAME = ...\60R31-W053-006-ConcreteFacing2.dgn

Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

SCALE - NONE
DATE - 12/14/2012

DESIGNED - LAS
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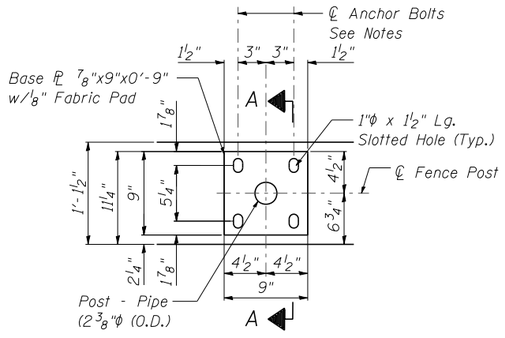
CHECKED - LAS

REVISED -
REVISED -
REVISED -
REVISED -

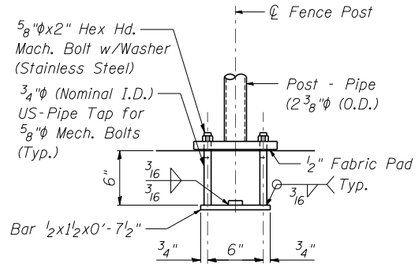
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE FACING AND DETAILS
STA. 4032+14.15 TO STA. 4034+06.00 SN 022-W053
SHEET NO. SD-6 OF SD-10 SHEETS

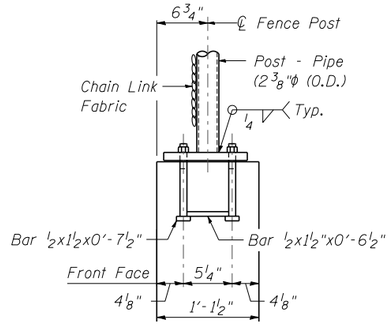
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	526
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



PLAN

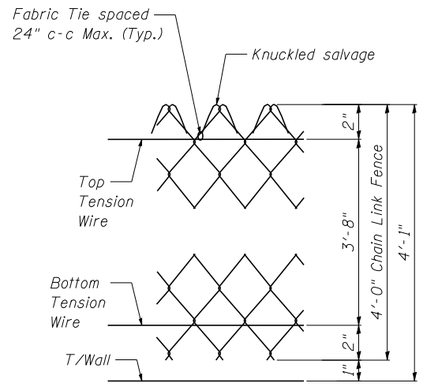


ELEVATION



SECTION A-A

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



DETAIL 1

FENCE POST ANCHOR ASSEMBLY DETAILS

FILE NAME = ...\60R31-W053-007-FenceDetails.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -
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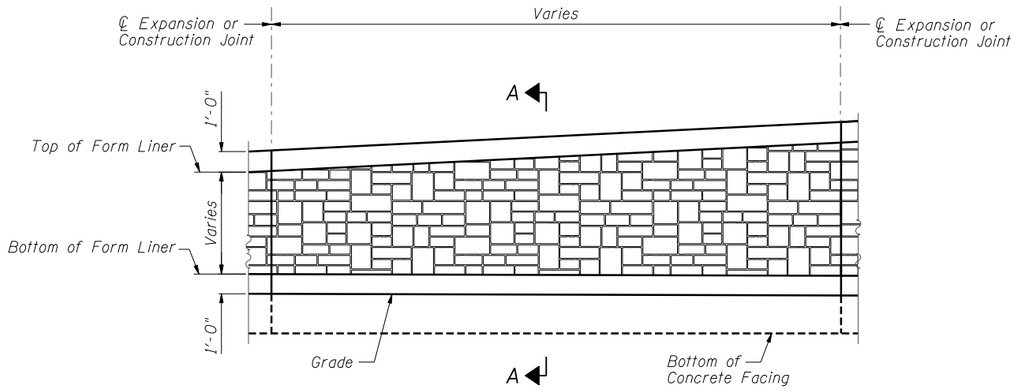
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

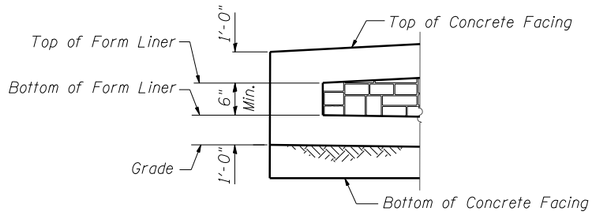
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE
STA. 4032+14.15 TO STA. 4034+06.00 SN 022-W053
SHEET NO. SD-7 OF SD-10 SHEETS

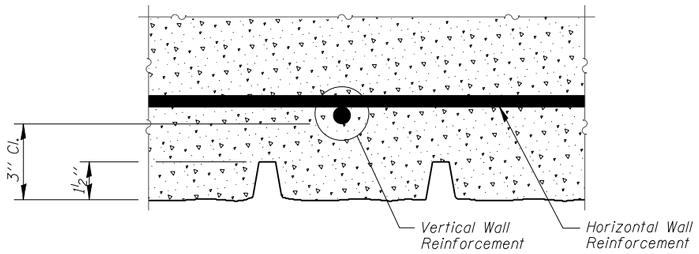
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	527
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



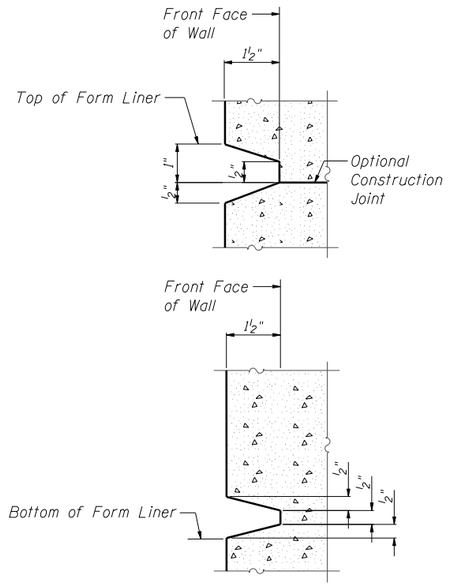
ELEVATION - FORM LINER



END FORM LINER FINISH



PLAN - FORM LINER



SECTION A-A

FORM LINER ELEVATION TABLE

Station	Form Liner Top Elevation	Form Liner Bottom Elevation
4032+14.15	708.83	708.31
4032+35.47	711.03	708.39
4032+40.00	711.50	708.41
4032+56.79	711.84	708.47
4032+78.10	712.28	708.55
4032+99.42	712.72	708.63
4033+20.74	713.15	708.71
4033+37.71	713.50	708.77
4033+42.06	713.50	708.79
4033+63.37	713.50	708.87
4033+84.69	713.50	708.95
4034+01.00	713.50	709.01
4034+06.00	710.33	709.03

FILE NAME = ...\60R31-W053-008-ArchFinish.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARCHITECTURAL FINISH DETAILS
STA. 4032+14.15 TO STA. 4034+06.00 SN 022-W053
SHEET NO. SD-8 OF SD-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	528
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

BORING LOG RW-47

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630)-355-3638

SOIL BORING LOG

PAGE 1 of 1
DATE 3/14/2011
LOGGED BY RJ
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS–5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022–W053
Station: 4032+15 to 4034+49
BORING NO. **RW–47**
Station: 4032+16 IL RTE–59
Offset: 72.5' Left
Ground Surface Elev. 710.8

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 693.3
Upon Completion 693.3
After ____ Hrs.

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
710.0 4.0" ASPHALT, 7.0" CRUSHED STONE			
	5		
CLAY LOAM–brown– stiff (A–6) Possible Fill	5		
	6	1.5P	22
707.8			
	3		
	4		
–5	4	NP	14
SANDY LOAM–brown– loose to medium dense (A–2)	2		
	2		
	5	NP	15
	4		
	6		
–10	8	NP	9
699.8			
	2		
	2		
	2	NP	22
SILTY LOAM–gray– loose to medium dense (A–4)	6		
	10		
–15	14	NP	20
694.8			
	7		
SAND & GRAVEL–gray– medium dense (A–1)	11		
693.3	14	NP	8
CLAY–gray–very stiff (A–6)			
	4		*122*
End Of Boring @ –20.0' Hollow Stem Augers CME Automatic Hammer 690.8	5 13	2.2B	14
–20			
–25			
–30			
–35			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

BORING LOG RW-48

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Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630)-355-3638

SOIL BORING LOG

PAGE 1 of 1
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ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS–5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022–W053
Station: 4032+15 to 4034+49
BORING NO. **RW–48**
Station: 4032+74 IL RTE–59
Offset: 72.5' Left
Ground Surface Elev. 711.8

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter Dry
Upon Completion Dry
After ____ Hrs.

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
711.0 3.0" ASPHALT, 6.0" CRUSHED STONE			
	3		*90*
	3		
CLAY to CLAY LOAM–brown– medium stiff to stiff (A–6) Wet	3	1.6B	27
	1		*96*
	2		
–5	2	0.5B	27
706.3			
	2		
SILTY LOAM to LOAM–brown– loose to medium dense (A–4)	3		
	4	NP	12
	4		
	6		
–10	7	NP	15
701.3			
	2		*106*
SILTY CLAY–gray–medium stiff (A–6)	2		
	3	0.6B	22
698.8			
	16		
SAND & GRAVEL–brown– medium dense (A–1)	16		
–15	13	NP	5
696.3			
	6		
SAND & GRAVEL–gray– medium dense (A–1)	9		
693.8	8	NP	8
CLAY–gray–very stiff (A–6)			
	3		
End Of Boring @ –20.0' Hollow Stem Augers CME Automatic Hammer 691.8 –20	6 9	2.0P	20
–25			
–30			
–35			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

FILE NAME = ...\60R31-W053-009-Boring-Log.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS 1
STA. 4032+14.15 TO STA. 4034+06.00 SN 022–W053
SHEET NO. SD-9 OF SD-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	529
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

BORING LOG RW-49

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-3838

SOIL BORING LOG

PAGE 1 of 1
DATE 3/14/2011
LOGGED BY RJ
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS–5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022–W053
Station: 4032+15 to 4034+49
BORING NO. **RW–47**
Station: 4032+16 IL RTE–59
Offset: 72.5' Left
Ground Surface Elev. 710.8

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 693.3 ▼
Upon Completion 693.3 ▽
After ____ Hrs. ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
710.0 4.0" ASPHALT, 7.0" CRUSHED STONE			
	5		
CLAY LOAM–brown– stiff (A–6) Possible Fill	5		
	6	1.5P	22
707.8			
	3		
	4		
–5	4	NP	14
SANDY LOAM–brown– loose to medium dense (A–2)	2		
	2		
	5	NP	15
	4		
	6		
–10	8	NP	9
699.8			
	2		
	2		
SILTY LOAM–gray– loose to medium dense (A–4)	2	NP	22
	6		
	10		
–15	14	NP	20
694.8			
	7		
SAND & GRAVEL–gray– medium dense (A–1)	11		
693.3 ▽	14	NP	8
CLAY–gray–very stiff (A–6)			
	4		*122*
End Of Boring @ –20.0' Hollow Stem Augers CME Automatic Hammer 690.8	5 13	2.2B	14

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
–25			
–30			
–35			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

BORING LOG RW-50

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-3838

SOIL BORING LOG

PAGE 1 of 1
DATE 3/14/2011
LOGGED BY RJ
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS–5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022–W053
Station: 4032+15 to 4034+49
BORING NO. **RW–48**
Station: 4032+74 IL RTE–59
Offset: 72.5' Left
Ground Surface Elev. 711.8

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter Dry ▼
Upon Completion Dry ▽
After ____ Hrs. ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
711.0 3.0" ASPHALT, 6.0" CRUSHED STONE			
	3		*90*
	3		
CLAY to CLAY LOAM–brown– medium stiff to stiff (A–6) Wet	3	1.6B	27
	1		*96*
	2		
–5	2	0.5B	27
706.3			
	2		
	3		
SILTY LOAM to LOAM–brown– loose to medium dense (A–4)	4	NP	12
	4		
	6		
–10	7	NP	15
701.3			
	2		*106*
SILTY CLAY–gray–medium stiff (A–6)	2		
	3	0.6B	22
698.8			
	16		
SAND & GRAVEL–brown– medium dense (A–1)	16		
–15	13	NP	5
696.3			
	6		
SAND & GRAVEL–gray– medium dense (A–1)	9		
693.8	8	NP	8
CLAY–gray–very stiff (A–6)			
	3		
End Of Boring @ –20.0' Hollow Stem Augers CME Automatic Hammer 691.8 –20	6 9	2.0P	20

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
–25			
–30			
–35			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

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ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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DATE - 12/14/2012	CHECKED - LAS	REVISED -

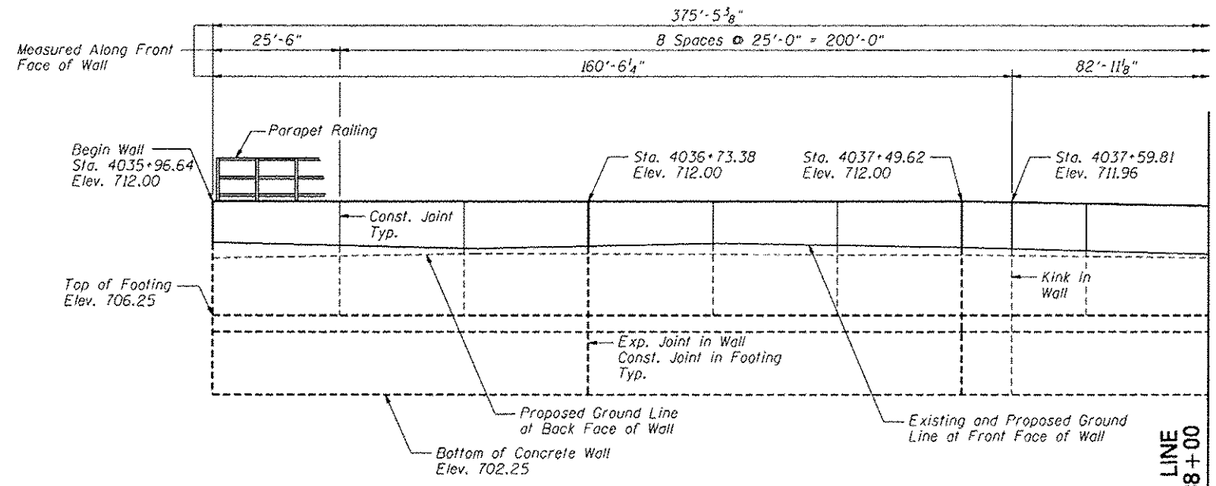
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS 2
STA. 4032+14.15 TO STA. 4034+06.00 SN 022–W053
SHEET NO. SD-10 OF SD-10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	530
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

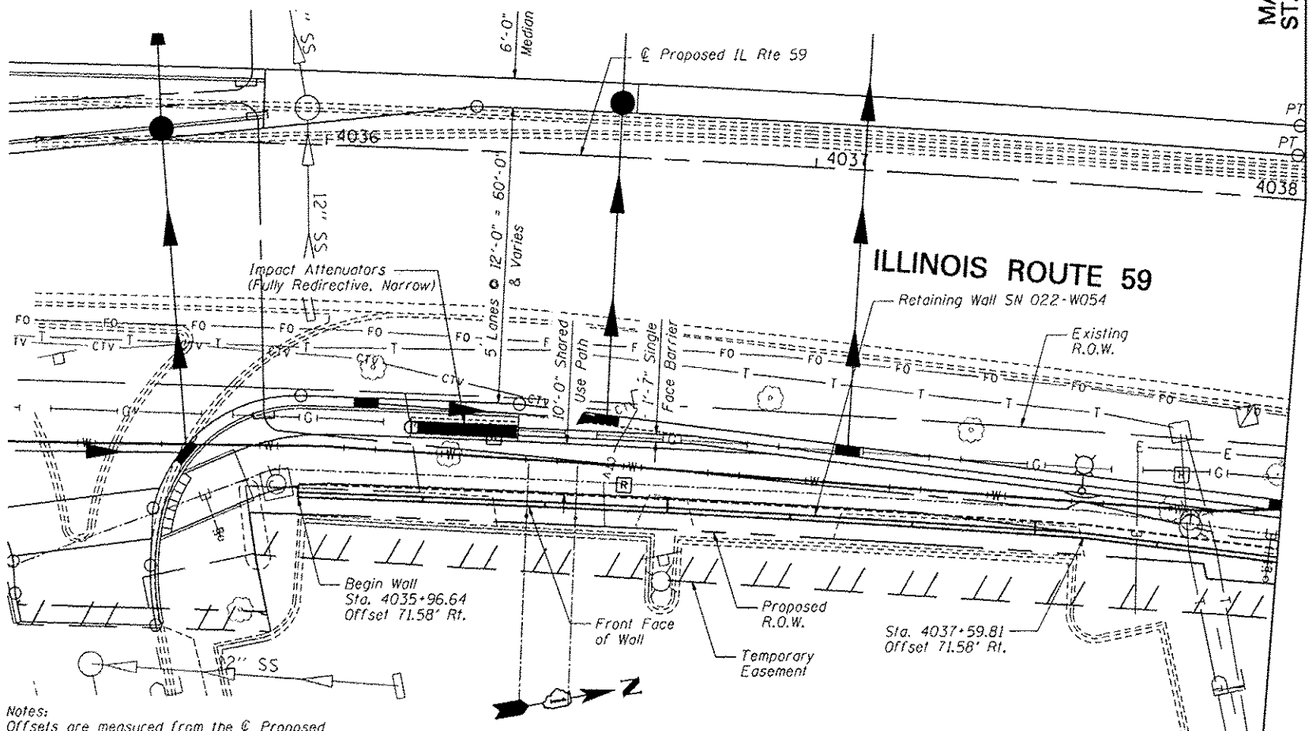
Bench Mark: Square "□" cut in west side of light pole base at Steak & Shake restaurant sign
Elev. 711.66

Existing Structure: None



ELEVATION

MATCH LINE STA. 4038+00



PLAN

Notes:
Offsets are measured from the ℄ Proposed IL Rte. 59 to the front face of the wall.

Wall to be built along straight chords between construction joints.

INDEX OF SHEETS

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete sealer shall be applied to exposed surfaces of the top and back faces of wall.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	501
Concrete Structures	Cu. Yd.	151.7
Concrete Sealer	Sq. Ft.	1,408
Reinforcement Bars, Epoxy Coated	Pound	12,720
Parapet Railing	Foot	376
Geocomposite Wall Drain	Sq. Yd.	26
Pipe Underdrains for Structures, 4"	Foot	165
Granular Backfill for Structures	Cu. Yd.	54

HORIZONTAL CURVE DATA

Proposed Curve PRIL59-7
PI Sta. = 4032+07.95
Δ = 15° 24' 28" (RT)
D = 1° 17' 54"
R = 4,413.03'
T = 596.97'
L = 1,186.73'
E = 40.19'
P.C. Sta. = 4026+10.99
P.T. Sta. = 4037+97.72

Signature — Date 12.14.12

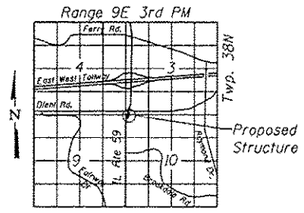
November 30, 2014
Expires

V.P.T. Sta. 4033+05.00
Elev. 708.09
-0.38%
V.P.C. Sta. 4036+90.00
Elev. 709.55
V.P.I. Sta. 4037+50.00
Elev. 709.78
V.P.T. Sta. 4038+10.00
Elev. 709.57
-0.35%
℄ Diehl Road
Sta. 4041+23.18
V.P.C. Sta. 4045+40.00
Elev. 707.01

LVC = 120'

PROFILE GRADE

(along edge of pavement proposed IL Route 59)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL RTE 59 FAP RTE 338
SECTION (112 & 113) WRS-6
DUPAGE COUNTY
STA. 4035+96.64 TO STA. 4039+75.26
SN 022-W054

FILE NAME = #FILE#

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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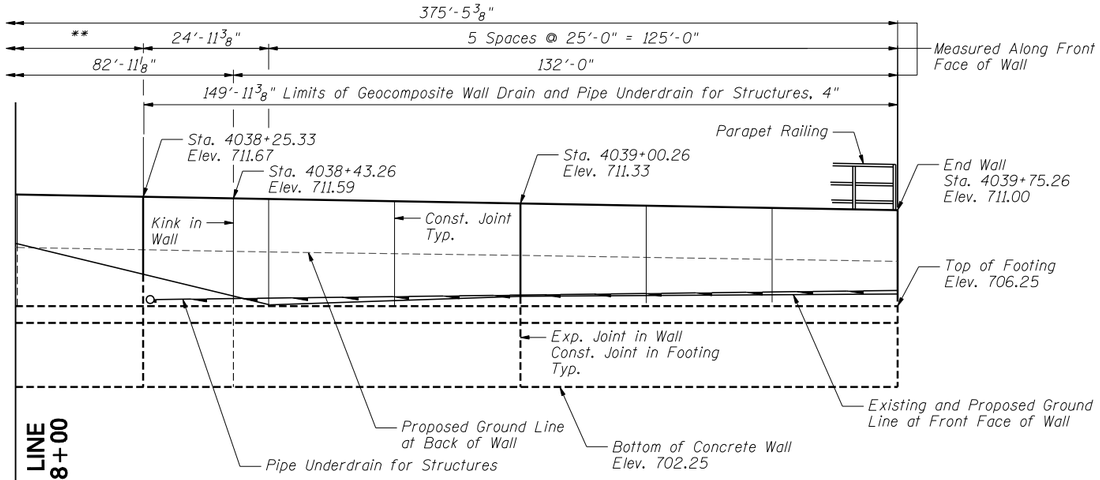
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

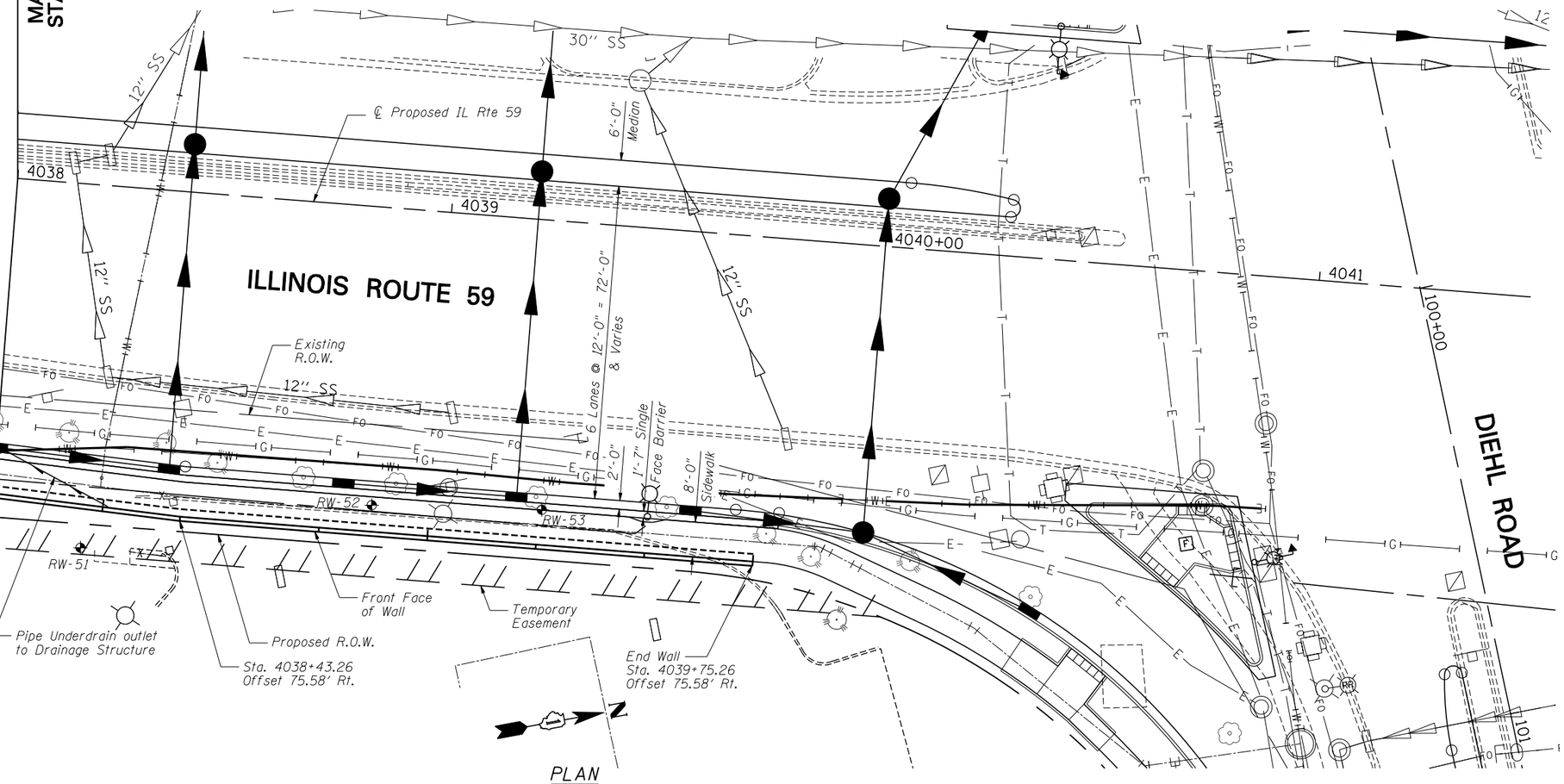
GENERAL PLAN & ELEVATION 1
STA. 4035+96.64 TO STA. 4039+75.26 SN 022-W054
SHEET NO. SE-1 OF SE-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	531
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



ELEVATION

MATCH LINE STA. 4038+00



PLAN

Note:
Offsets are measured from the ℄ Proposed IL Rte. 59 to the front face of the wall.

GENERAL PLAN & ELEVATION
IL RTE 59 FAP RTE 338
SECTION (112 & 113) WRS-6
DUPAGE COUNTY
STA. 4035+96.64 TO STA. 4039+75.26
SN 022-W054

FILE NAME = ...\60R31-W054-002-GPE2.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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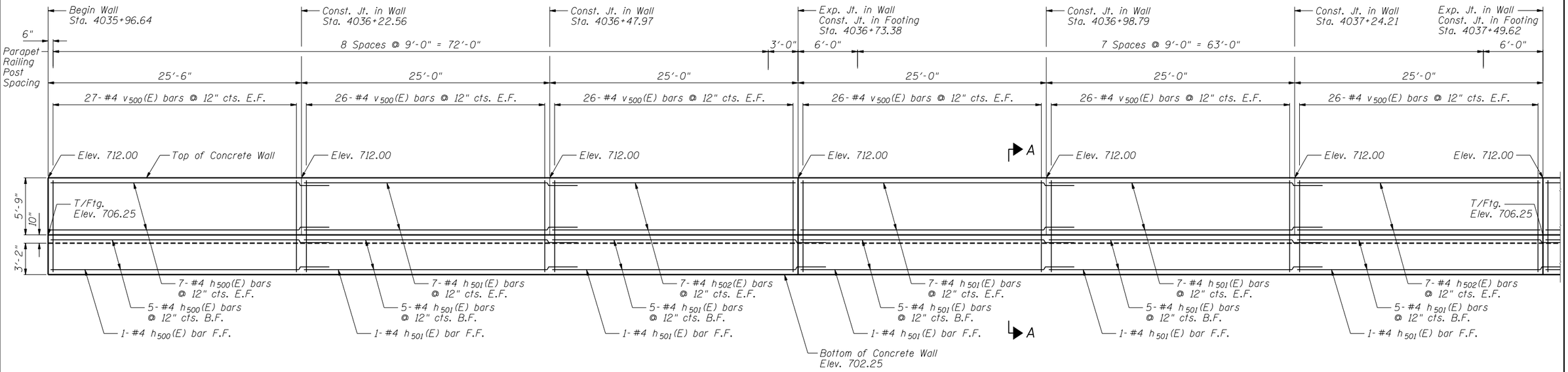
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

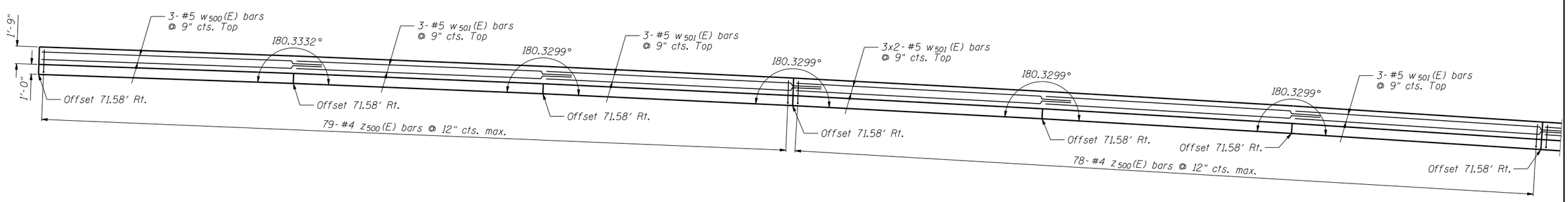
GENERAL PLAN & ELEVATION 2
STA. 4035+96.64 TO STA. 4039+75.26 SN 022-W054
SHEET NO. SE-2 OF SE-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	532
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



DEVELOPED ELEVATION

Horizontal dimensions measured along front face of wall



PLAN

Notes:

Minimum lap for #4 bar is 2'-11", #5 bar is 3'-8".

Bars indicated thus: 3x3-#5 etc. indicates 3 lines of bars with 3 lengths per line.

See Sheet SE-6 for Section A-A, Details and Bill of Material.

FILE NAME = ...\60R31-W054-003-WallPlanElevl.dgn

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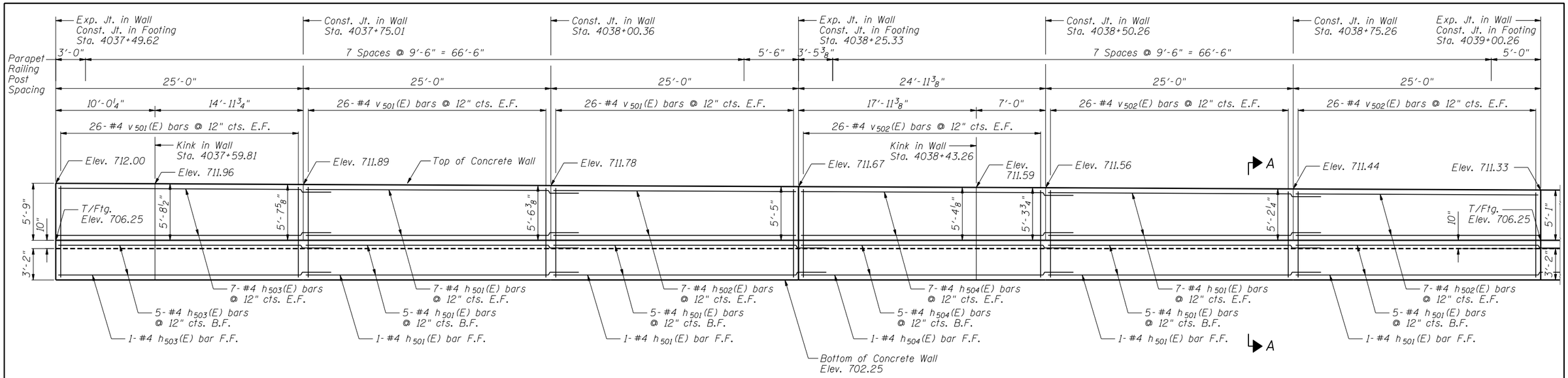
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

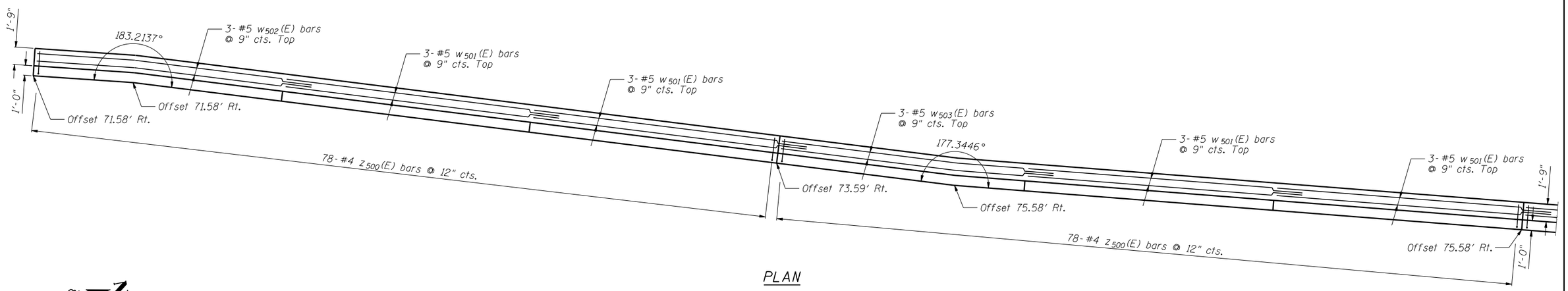
WALL PLAN AND ELEVATION 1
STA. 4035+96.64 TO STA. 4039+75.26 SN 022-W054
SHEET NO. SE-3 OF SE-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	533
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



DEVELOPED ELEVATION

Horizontal dimensions measured along front face of wall



PLAN

Notes:

Minimum lap for #4 bar is 2'-11", #5 bar is 3'-8".

Bars indicated thus: 3x2-#5 etc. indicates 3 lines of bars with 2 lengths per line.

See Sheet SE-6 for Section A-A, Details and Bill of Material.

FILE NAME = ...\60R31-W054-004-WallPlanElev2.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -
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	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL PLAN AND ELEVATION 2
STA. 4035+96.64 TO STA. 4039+75.26 SN 022-W054
SHEET NO. SE-4 OF SE-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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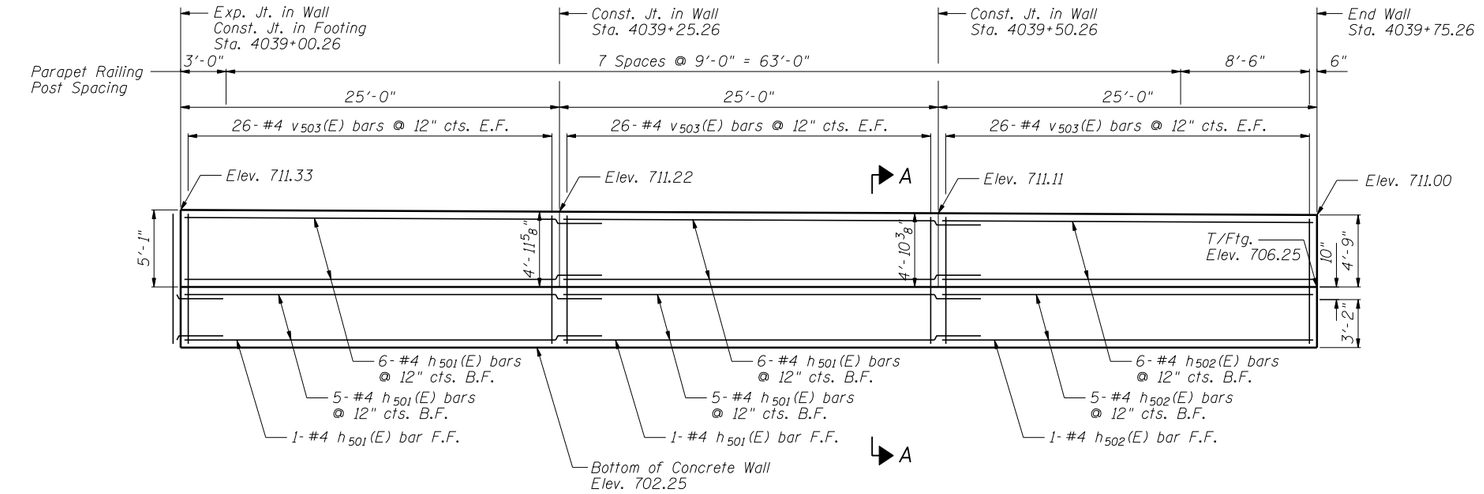
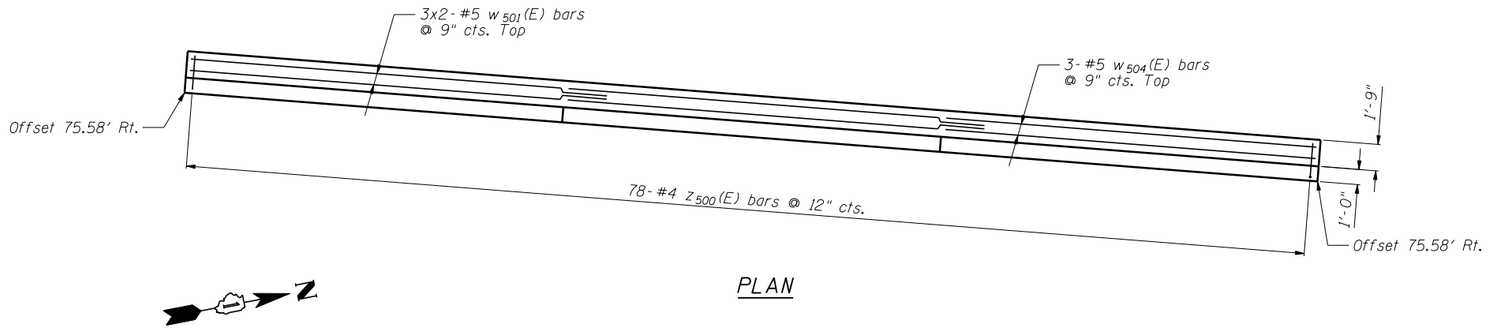
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



DEVELOPED ELEVATION

Horizontal dimensions measured along front face of wall



PLAN

Notes:

Minimum lap for #4 bar is 2'-11", #5 bar is 3'-8".

Bars indicated thus: 3x3-#5 etc. indicates 3 lines of bars with 3 lengths per line.

See Sheet SE-6 for Section A-A, Details and Bill of Material.

FILE NAME = ...\60R31-W054-005-WallPlanElev3.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL PLAN AND ELEVATION 3
STA. 4035+96.64 TO STA. 4039+75.26 SN 022-W054
SHEET NO. SE-5 OF SE-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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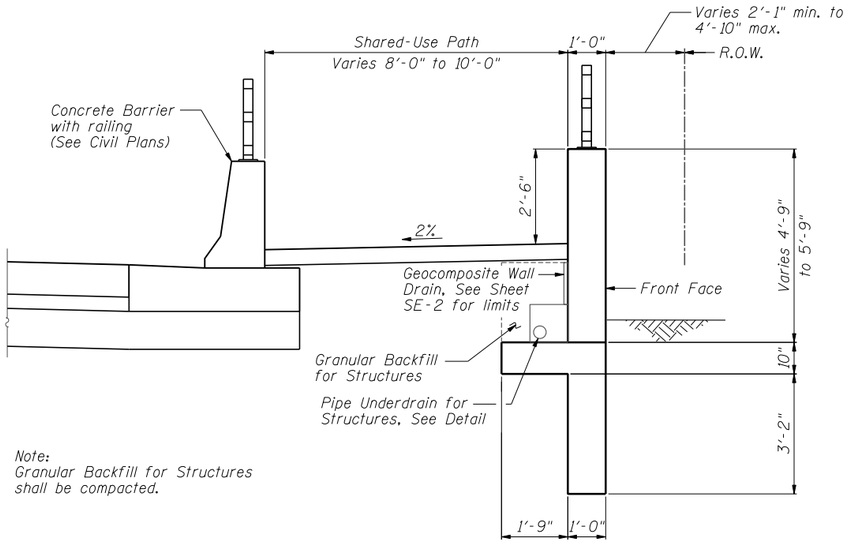
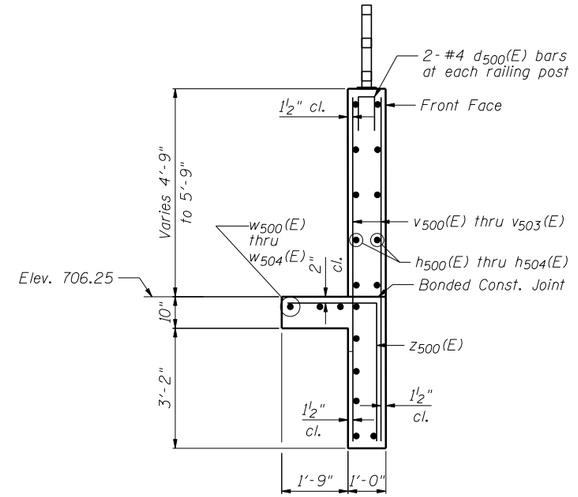
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



Note:
Granular Backfill for Structures shall be compacted.

TYPICAL SECTION

Sta. 4035+96.64 to Sta. 4039+75.26



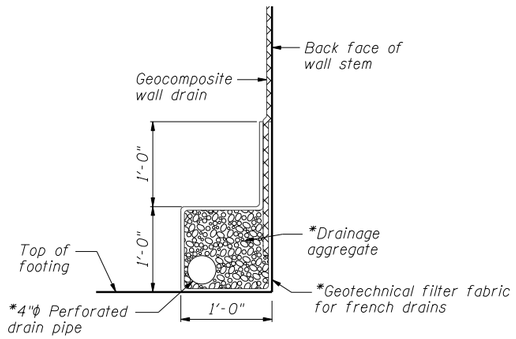
SECTION A-A

Maximum Soil Bearing Pressure = 840 psf

BILL OF MATERIAL

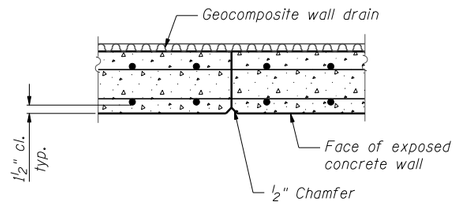
Bar	No.	Size	Length	Shape
d_{500}(E)	84	#4	2'-1"	⊓
h_{500}(E)	20	#4	28'-5"	—
h_{501}(E)	160	#4	27'-11"	—
h_{502}(E)	60	#4	24'-8"	—
h_{503}(E)	20	#4	27'-11"	╲
h_{504}(E)	20	#4	27'-11"	╲
v_{500}(E)	314	#4	9'-5"	—
v_{501}(E)	156	#4	9'-1"	—
v_{502}(E)	156	#4	8'-9"	—
v_{503}(E)	156	#4	8'-5"	—
w_{500}(E)	3	#5	29'-0"	—
w_{501}(E)	33	#5	28'-6"	—
w_{502}(E)	3	#5	28'-8"	╲
w_{503}(E)	3	#5	28'-8"	╲
w_{504}(E)	3	#5	24'-8"	—
z_{500}(E)	391	#4	6'-1"	⌐

Item	Unit	Quantity
Concrete Structures	Cu. Yd.	151.7
Reinforcement Bars, Epoxy Coated	Pound	12,720
Pipe Underdrains for Structures, 4"	Foot	165
Geocomposite Wall Drain	Sq. Yd.	26
Granular Backfill for Structures	Cu. Yd.	54

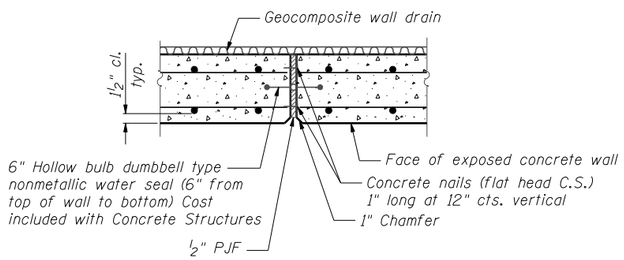


PIPE UNDERDRAIN DETAIL

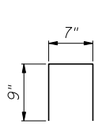
*Included in the cost of "Pipe Underdrains for Structures"
Limits of Pipe Underdrains are from St. 4038+25.33 to Sta. 4039+75.26



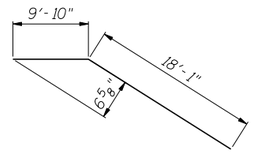
CONSTRUCTION JOINT DETAIL



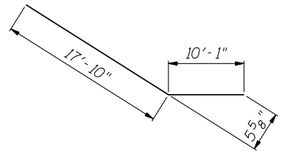
EXPANSION JOINT DETAIL



BAR d500(E)



BAR h503(E)



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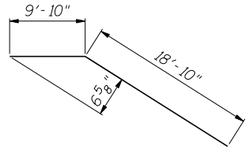
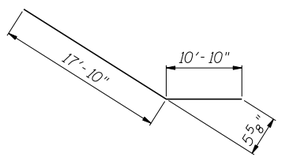
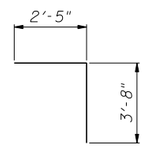


BAR w502(E)



BAR w503(E)



BAR z500(E)

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	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL SECTION & DETAILS
STA. 4035+96.64 TO STA. 4039+75.26 SN 022-W054
SHEET NO. SE-6 OF SE-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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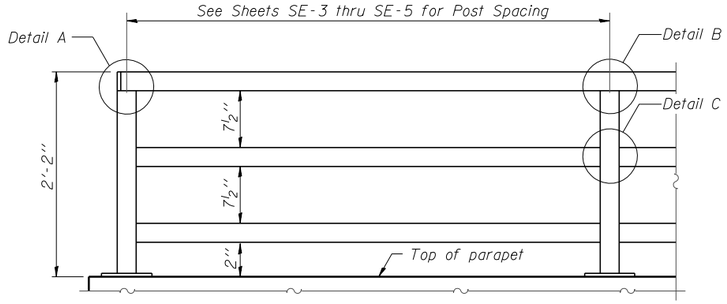
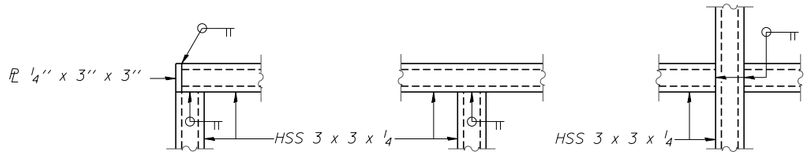
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

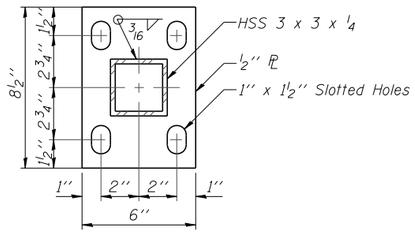


PARAPET RAILING ELEVATION
(Inside Face of Three Element Rail)

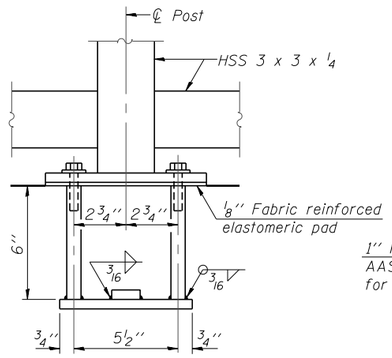


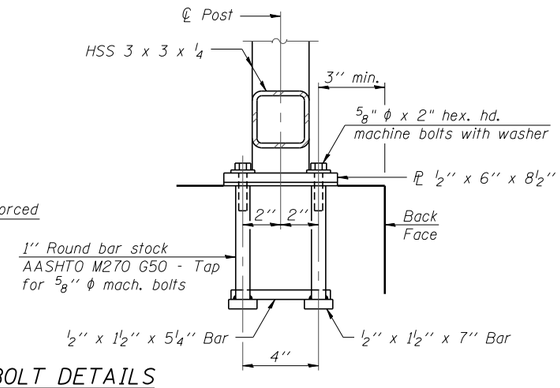
DETAIL A DETAIL B DETAIL C

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



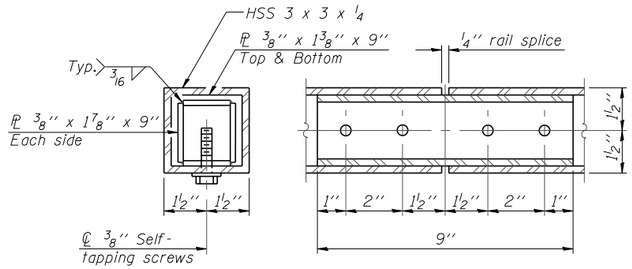
BASE PL





ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



RAIL SPLICE

BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing	Foot	376

FILE NAME = ...\60R31-W054-007-Parapetrailing.dgn

Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -
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	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET RAILING
STA. 4035+96.64 TO STA. 4039+75.26 SN 022-W054
SHEET NO. SE-7 OF SE-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	537
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

BORING LOG RW-51

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-3838

SOIL BORING LOG

PAGE 1 of 1
DATE 3/17/2011
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GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022–W054
Station: 4035+97 to 4039+80
BORING NO. **RW–51**
Station: 4038+21 IL RTE–59
Offset: 83.5' Right
Ground Surface Elev. 707.9

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 697.9
Upon Completion 697.9
After ____ Hrs.

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
706.9			
TOPSOIL–black	AS	–	33
	4		
SAND & GRAVEL–brown–medium dense (A–1) Fill	5		
	5	NP	9
704.9			
	4		*108*
	7		
–5	10	4.75B	20
CLAY LOAM–brown & gray–very stiff to hard (A–6)			
	5		*123*
	6		
	6	2.0B	14
699.9			
	3		
	3		
▽▼ –10	6	NP	8
SAND & GRAVEL–gray–loose to medium dense (A–1)			
	4		
	5		
	7	NP	17
694.9			
	5		*126*
	7		
–15	14	2.1B	12
CLAY LOAM–gray–stiff to very stiff (A–4/A–6)			
	3		
	4		
	6	1.0P	12
End Of Boring @ –20.0'			
Hollow Stem Augers			
CME Automatic Hammer	3		
687.9 –20	6	1.0P	10
	6		
–40			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
–25			
–30			
–35			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

BORING LOG RW-52

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-3838

SOIL BORING LOG

PAGE 1 of 1
DATE 3/17/2011
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GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022–W054
Station: 4035+97 to 4039+80
BORING NO. **RW–52**
Station: 4038+87 IL RTE–59
Offset: 88.5' Right
Ground Surface Elev. 706.8

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 694.3
Upon Completion 694.3
After ____ Hrs.

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
705.8			
TOPSOIL–black	AS	–	28
	4		*102*
	5		
	7	2.75B	23
CLAY LOAM–brown, gray & black–stiff to very stiff (A–6) Fill			
	2		
	3		
–5	4	1.75P	22
701.3			
	5		*109*
	7		
	9	5.6B	20
CLAY–brown & gray–stiff to hard (A–6)			
	3		*107*
	7		
–10	10	3.6B	21
Sand seams from –11.0' to –12.5'.			
	4		
	7		
694.3 ▽▼	12	1.25P	22
	9		
SANDY LOAM–gray–medium dense (A–2)	10		
–15	12	NP	12
691.3			
	4		*130*
	10		
	10	3.8B	11
CLAY LOAM–brown & gray–stiff to hard (A–6)			
	4		*128*
	6		
–20	8	2.6B	11

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
	6		
	9		
	9	1.25P	9
	4		*127*
–25	5		
	6	2.4B	11
CLAY LOAM–brown & gray–stiff to hard (A–6)			
	4		*124*
	6		
	8	3.4B	13
	2		*113*
	4	2.2S@	
–30	5	14.1%	18
	3		*114*
	5		
671.8 –35	7	3.8B	17
End Of Boring @ –35.0'			
Hollow Stem Augers			
CME Automatic Hammer			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

BORING LOG RW-53

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-3838

SOIL BORING LOG

PAGE 1 of 1
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ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022–W054
Station: 4035+97 to 4039+80
BORING NO. **RW–53**
Station: 4039+26 IL RTE–59
Offset: 86.5' Right
Ground Surface Elev. 707.1

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 697.1
Upon Completion 697.1
After ____ Hrs.

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
706.1			
TOPSOIL–black	AS	–	30
	3		
SILTY CLAY–dark brown, gray & black–very stiff (A–6) Possible Fill	3		
	6	3.25P	23
704.1			
	3		*84*
SILTY CLAY–brown & gray–stiff (A–6) Wet	4		
–5	5	1.25B	32
701.6			
	3		*108*
	4		
	6	3.4B	21
CLAY–brown & gray–very stiff to stiff (A–6)			
	3		*111*
	6		
▽▼ –10	8	3.75B	19
	4		*109*
	7		
694.6	10	4.0B	20
CLAY–gray–very stiff (A–6)	4		*112*
	8		
–15	12	2.75B	18
691.6			
CLAY to CLAY LOAM–gray–stiff (A–6)	2		
	3		
689.6	6	2.0P	11
End Of Boring @ –20.0'			
Hollow Stem Augers			
CME Automatic Hammer	3		
687.1 –20	4	1.25P	13
	8		
–40			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
–25			
–30			
–35			
–40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

FILE NAME = ...\60R31-W054-008 Boring Logs.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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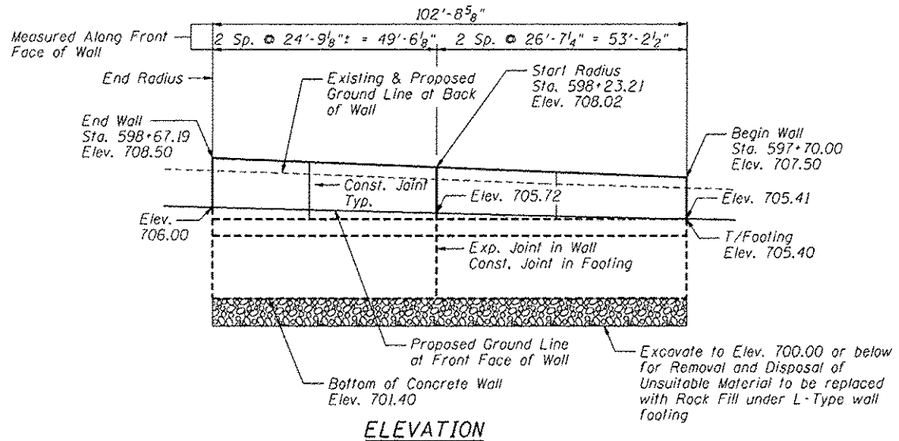
DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

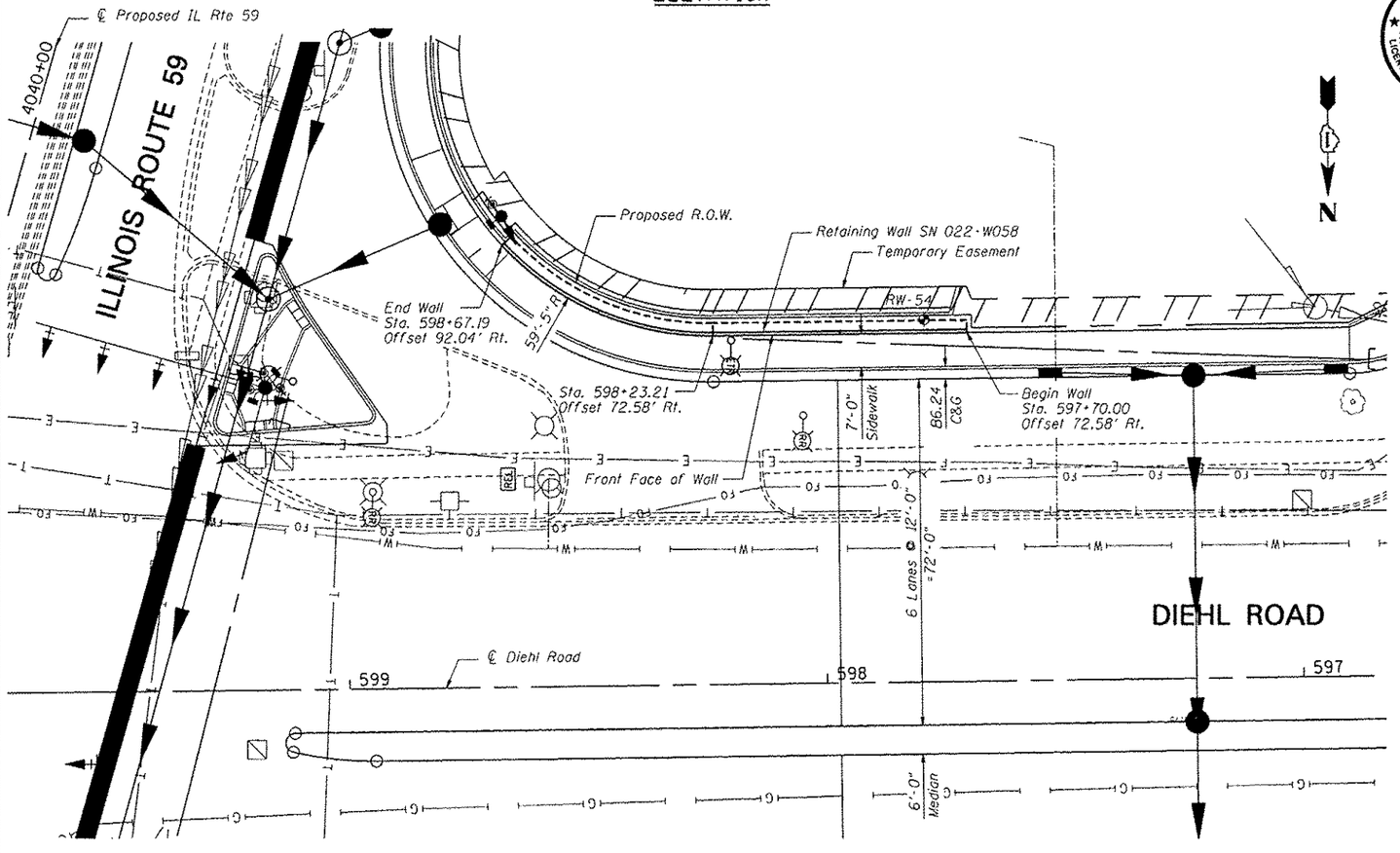
SOIL BORING LOGS
STA. 4035+96.64 TO STA. 4039+75.26 SN 022–W054
SHEET NO. SE-8 OF SE-8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	538
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		

Bench Mark: Cross "+" at north end of the east bridge wall, IL Route 59 over Interstate Route 88
Elev. 731.62
Existing Structure: None



ELEVATION



Note:
Offsets are measured from the ℄ Proposed Diehl Road to the front face of the wall.

PLAN

INDEX OF SHEETS

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete sealer shall be applied to exposed surfaces of the front face and top of wall.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

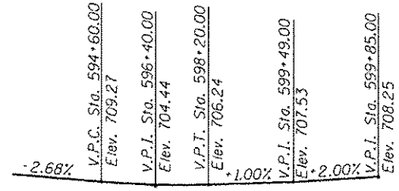
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	130
Concrete Structures	Cu. Yd.	23.1
Concrete Sealer	Sq. Ft.	387
Reinforcement Bars, Epoxy Coated	Pound	1,820
Removal and Disposal of Unsuitable Material	Cu. Yd.	21
Rock Fill	Cu. Yd.	21
Granular Backfill for Structures	Cu. Yd.	15

STATE OF ILLINOIS
DEBORAH A. ZROKA
081-005152
LICENSED STRUCTURAL ENGINEER

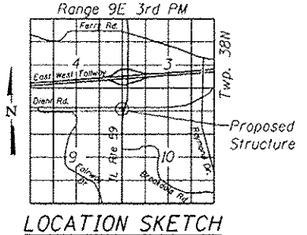
Signature — Date 12-14-12

November 30, 2014
Expires



LVC = 360'

PROFILE GRADE
(along ℄ Diehl Road)



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
IL RTE 59 FAP RTE 338
SECTION (112 & 113) WRS-6
DUPAGE COUNTY
STA. 597+70.00 TO STA. 598+67.19
SN 022-W058

FILE NAME = #FILE1#

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Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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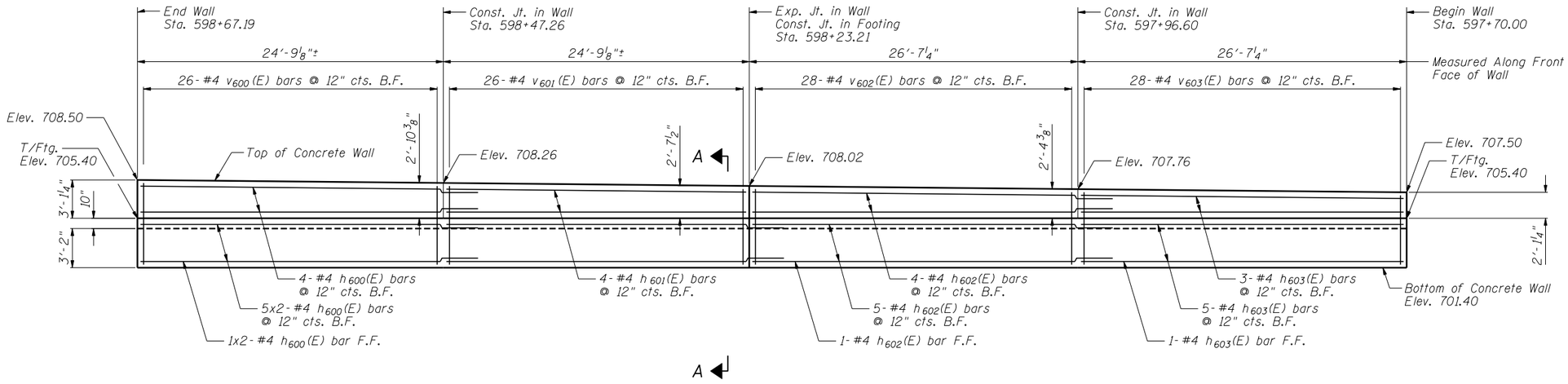
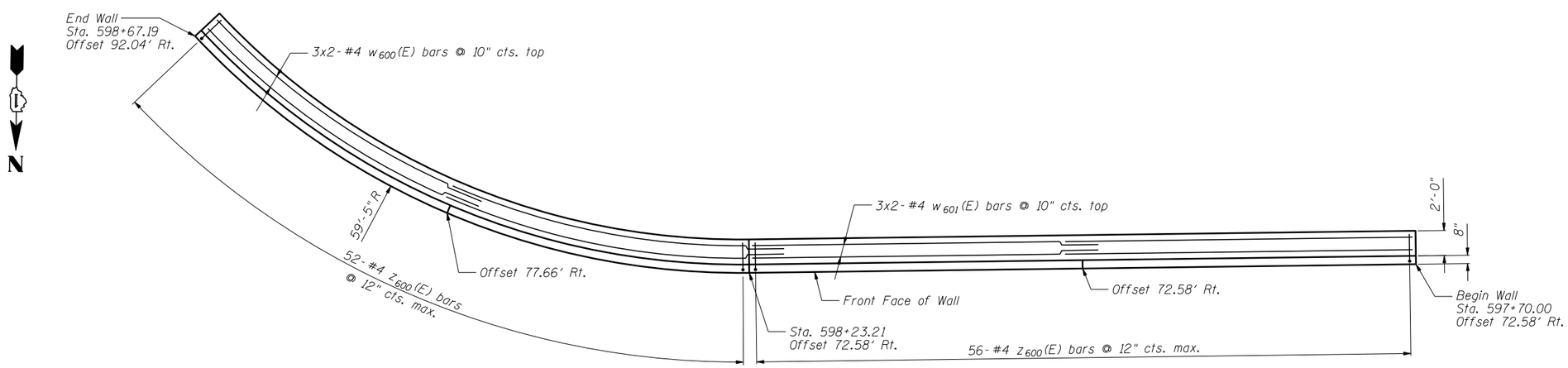
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STA. 597+70.00 TO STA. 598+67.19 SN 022-W058
SHEET NO. SF-1 OF SF-4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	539
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



DEVELOPED ELEVATION



PLAN

Notes:

Minimum lap for #4 bar is 2'-11".

Bend h and w bars as required to fit curve.

Bars indicated thus: 3x2-#4 etc. indicates 3 lines of bars with 2 lengths per line.

See Sheet SF-3 for Section A-A, Details and Bill of Material.

FILE NAME = ...\60R31-W058-002-WallPlanElev.dgn

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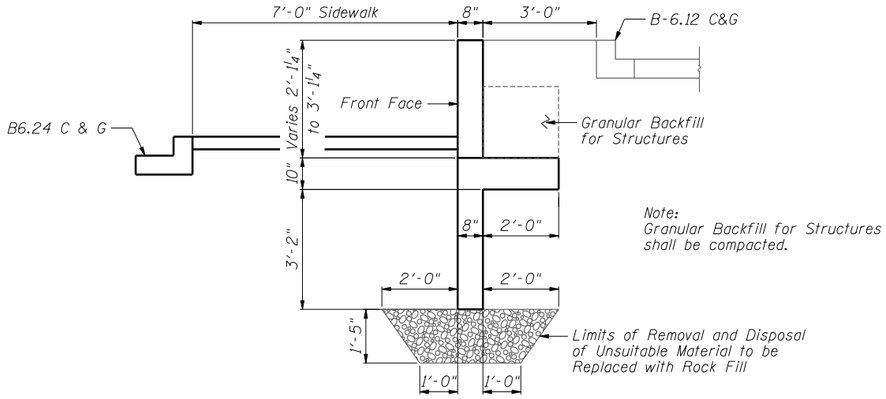
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL PLAN AND ELEVATION
STA. 597+70.00 TO STA. 598+67.19 SN 022-W058
SHEET NO. SF-2 OF SF-4 SHEETS

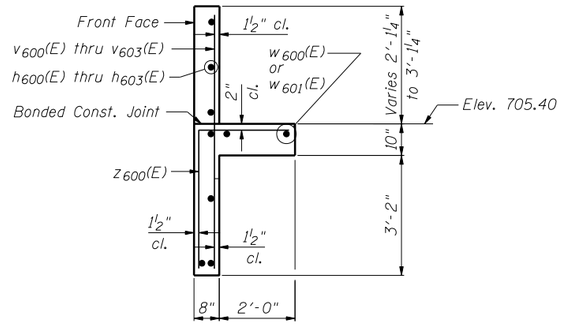
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	540
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



Note:
Granular Backfill for Structures shall be compacted.

TYPICAL SECTION

Sta. 597+70.00 to Sta. 598+67.19



SECTION A-A

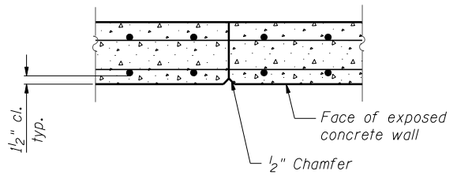
Maximum Soil Bearing Pressure = 1200 psf

BILL OF MATERIAL

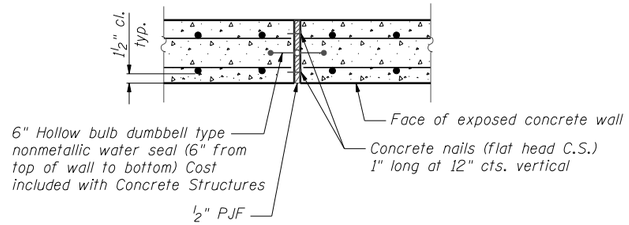
	Bar	No.	Size	Length	Shape
*	$h_{600}(E)$	16	#4	27'-8"	——
*	$h_{601}(E)$	4	#4	24'-5"	——
	$h_{602}(E)$	10	#4	29'-6"	——
	$h_{603}(E)$	9	#4	26'-3"	——
	$v_{600}(E)$	26	#4	6'-7"	——
	$v_{601}(E)$	26	#4	6'-4"	——
	$v_{602}(E)$	28	#4	6'-1"	——
	$v_{603}(E)$	28	#4	5'-10"	——
*	$w_{600}(E)$	6	#4	27'-8"	——
	$w_{601}(E)$	6	#4	27'-10"	——
	$z_{600}(E)$	108	#4	6'-1"	⌐

Item	Unit	Quantity
Concrete Structures	Cu. Yd.	23.1
Reinforcement Bars, Epoxy Coated	Pound	1,820
Granular Backfill for Structures	Cu. Yd.	15

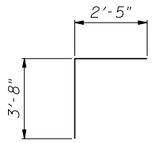
* Bars to be curved in the field as required to fit



CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL



BAR z600(E)

FILE NAME = ...\60R31-W058-003-Details.dgn

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4216 North Hermitage
Chicago, IL 60613

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL SECTION AND DETAILS
STA. 597+70.00 TO STA. 598+67.19 SN 022-W058
SHEET NO. SF-3 OF SF-4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	541
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		

BORING LOG RW-54

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-3838

SOIL BORING LOG

PAGE 1 of 1
DATE 5/31/2011
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GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. 022–W058
Station: 97+70 to 98+63
BORING NO. RW-54
Station: 97+79 DIEHL RD.
Offset: 75.5' Right
Ground Surface Elev. 706.5

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 673.0
Upon Completion Cave In
After ____ Hrs.

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				6.0" ASPHALT 706.0
	6		115	CLAY–brown & gray–
	4			hard (A–6) Apparent Fill
	6	7.0B	17	
				703.5
	4		87	
	4			
–5	6	2.1B	29	SILTY CLAY–brown & gray–
				stiff to very stiff (A–6) Wet
	2		95	Strong petroleum odor from –3.5' to
	3			–7.5'.
	4	1.0B	28	
				698.5
	4		108	
	6			
–10	10	7.3B	20	CLAY–brown & gray–hard (A–6)
	4		113	
	7			
	10	4.5B	17	
				693.5
	5		109	
	7			
–15	11	5.0B	18	CLAY–gray–
				very stiff to hard (A–6)
	3		108	
	5			
	8	3.7B	20	
	3		109	
	5			
–20	9	3.2B	19	

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
	2		105	CLAY–gray–
	6			very stiff to hard (A–6)
	8	2.6B	23	
				683.5
	2		106	
	2			
–25	2	1.0B	20	CLAY LOAM–gray–stiff (A–6)
	2			
	1			
	2	1.0P	21	
				678.5
	7			
	7			
–30	9	NP	20	SILT–gray–medium dense (A–4)
				674.5
	3		126	CLAY LOAM–gray–stiff (A–6)
	5			
	7	1.4B	13	
				End Of Boring @ –35.0'
				Hollow Stem Augers
				CME Automatic Hammer
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

FILE NAME = ...\60R31-W058-004-Boring1.sgl.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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	CHECKED - DAZ	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

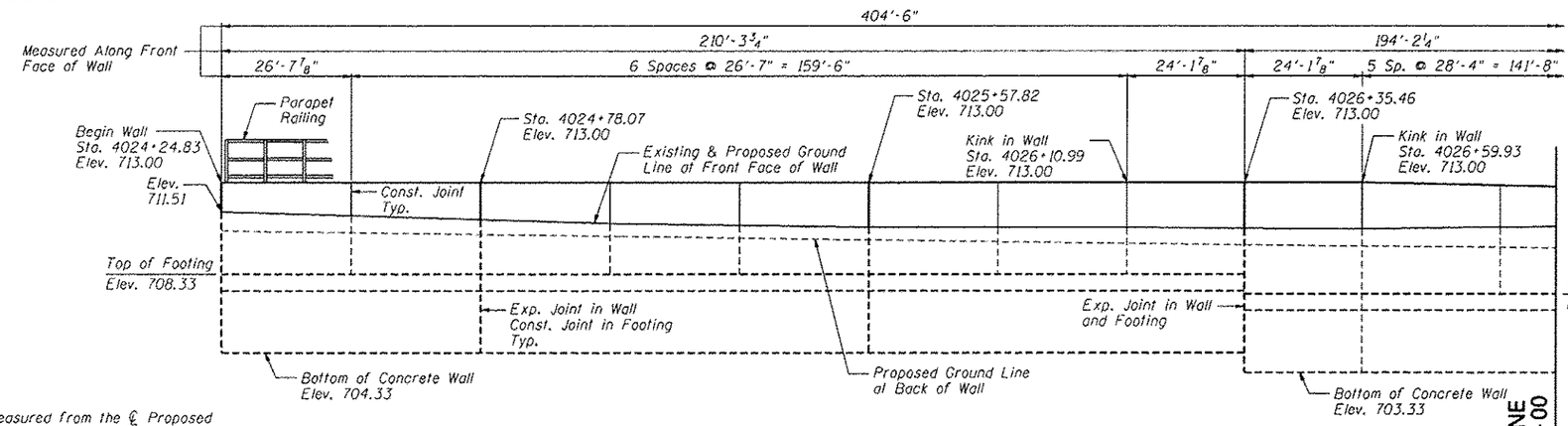
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STA. 597+70.00 TO STA. 598+67.19 SN 022–W058
SHEET NO. SF-4 OF SF-4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	542
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

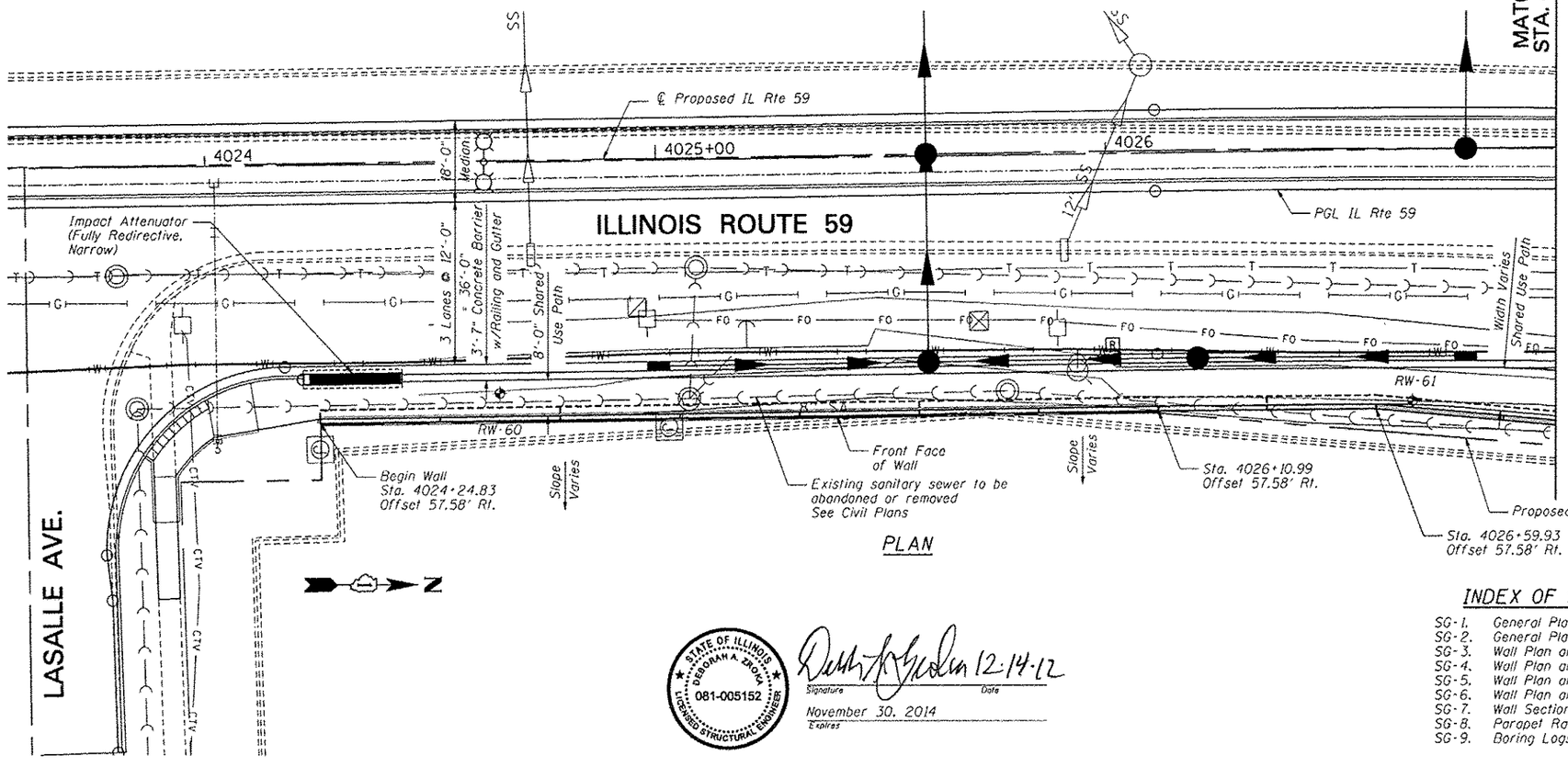
Bench Mark: Square "□" on top north end of headwall, west side of IL Rte 59, 75' south of centerline of Argyll Lane
Sta. 4020+14, 37' Lt., Elev. 708.12

Existing Structure: None



Note:
Offsets are measured from the ℄ Proposed IL Rte. 59 to the front face of the wall.

DEVELOPED ELEVATION



PLAN

STATE OF ILLINOIS
DEBORAH A. ZROKA
081-005152
LICENSED STRUCTURAL ENGINEER

Signature 12-14-12 Date

November 30, 2014
Expires

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete sealer shall be applied to exposed surfaces of the front face, back face and top of wall.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	616
Concrete Structures	Cu. Yd.	159.2
Concrete Sealer	Sq. Ft.	2,506
Reinforcement Bars, Epoxy Coated	Pound	13,920
Parapet Railing	Foot	405
Geocomposite Wall Drain	Sq. Yd.	111
Granular Backfill for Structures	Cu. Yd.	74
Removal & Disposal of Unsuitable Material	Cu. Yd.	4
Rock Fill	Cu. Yd.	4

HORIZONTAL CURVE DATA

Proposed Curve PRIL 59-7
PI Sta. = 4032+07.95
Δ = 15° 24' 28" (RT)
D = 1° 17' 54"
R = 4,413.03'
T = 596.97'
L = 1,186.73'
E = 40.19'
P.C. Sta. = 4026+10.99
P.T. Sta. = 4037+97.72

DESIGN SPECIFICATIONS

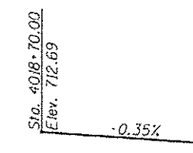
2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

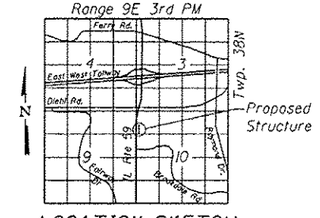
DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

PROFILE GRADE

(along edge of pavement proposed IL Route 59)





LOCATION SKETCH

INDEX OF SHEETS

GENERAL PLAN AND ELEVATION
IL RTE 59 FAP RTE 338
SECTION (112 & 113) WRS-6
DUPAGE COUNTY
STA. 4024+24.83 TO STA. 4028+32.00
SN 022-W059

FILE NAME = $FILE$

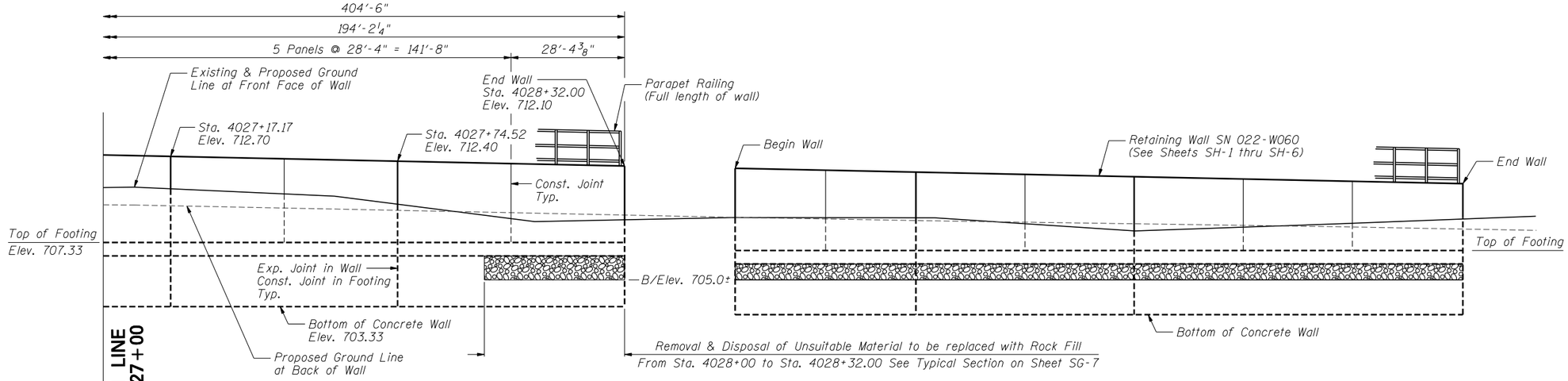
ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - LAS	REVISED -
	CHECKED - DAZ	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

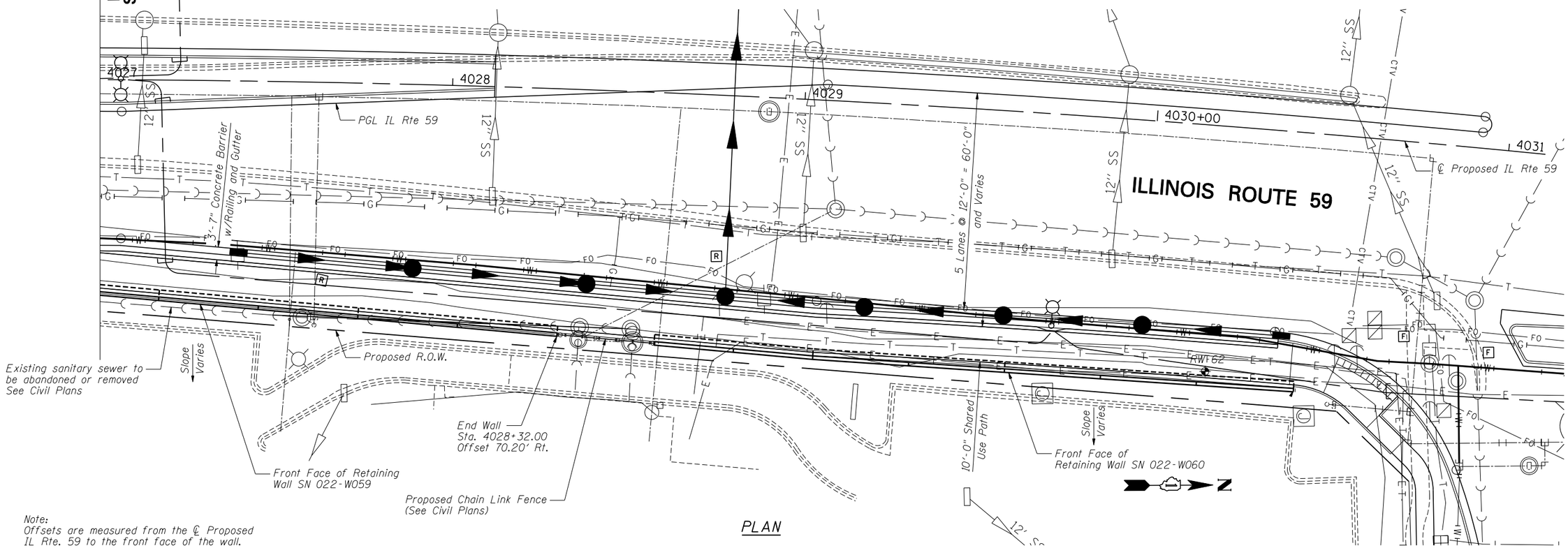
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STA. 4024+24.83 TO STA. 4028+32.00 SN 022-W059
SHEET NO. SG-1 OF SG-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734 543	
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



DEVELOPED ELEVATION



PLAN

Note:
Offsets are measured from the ℄ Proposed IL Rte. 59 to the front face of the wall.

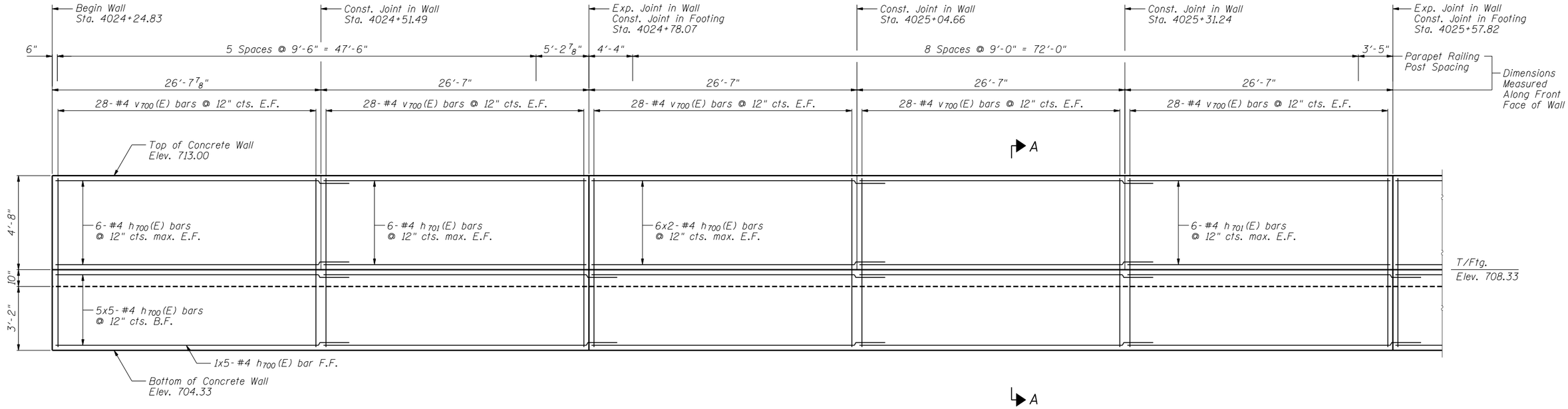
FILE NAME = ...\60R31-W059-002-GPE2.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -
		CHECKED - DAZ	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

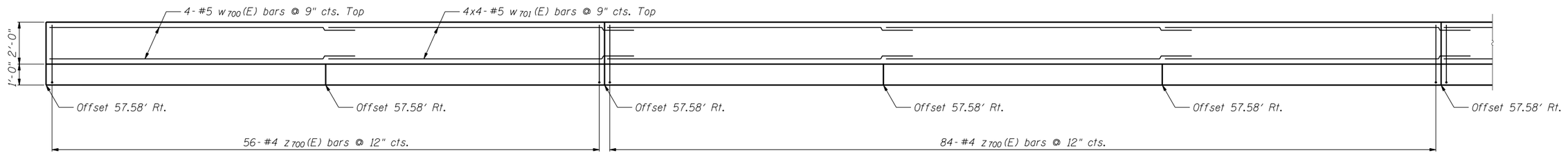
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION 2
STA. 4024+24.83 TO STA. 4028+32.00 SN 022-W059
SHEET NO. SG-2 OF SG-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	544
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



ELEVATION



PLAN

Notes:

Minimum lap for #4 bar is 2'-11", #5 bar is 3'-8".

Bars indicated thus: 1x5-#4 etc. indicates 1 line of bars with 5 lengths per line.

See Sheet SG-7 for Section A-A, Details and Bill of Material.

FILE NAME = ...\60R31-W059-003-WallPlanElevl.dgn

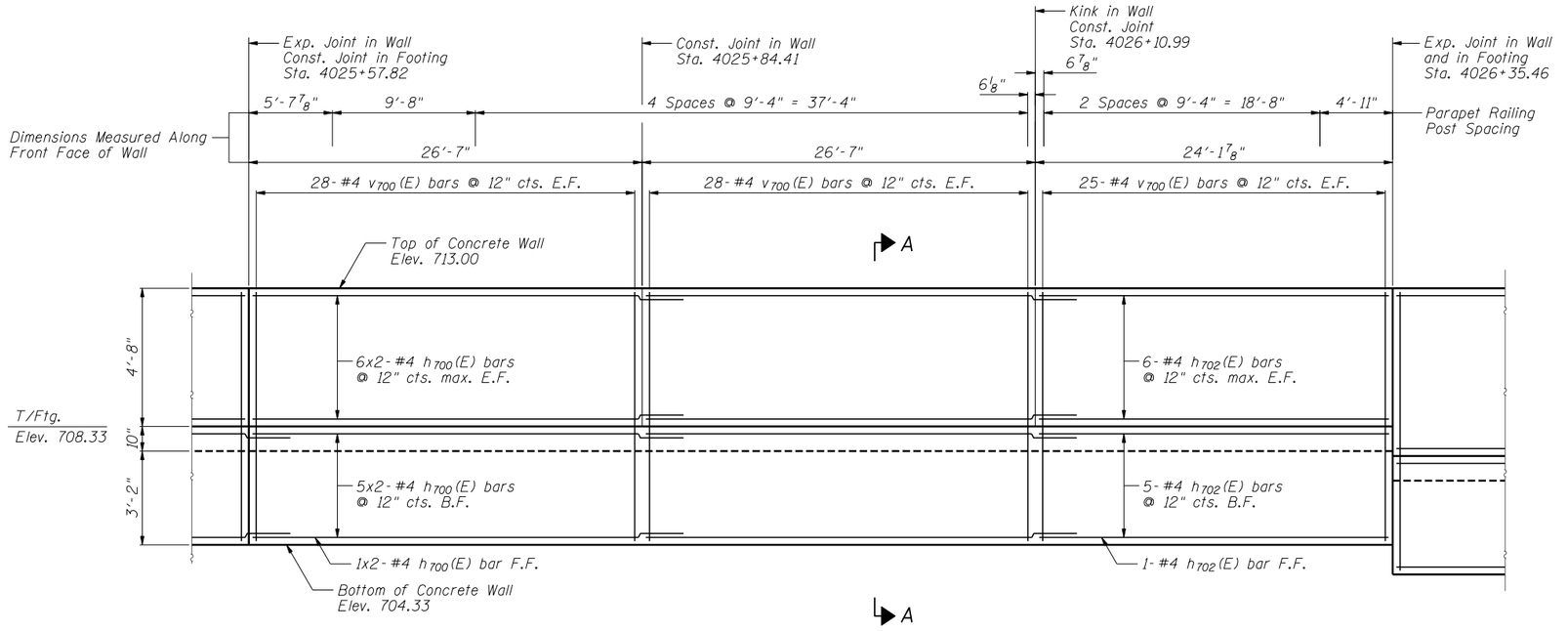
ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - LAS	REVISED -
	CHECKED - DAZ	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

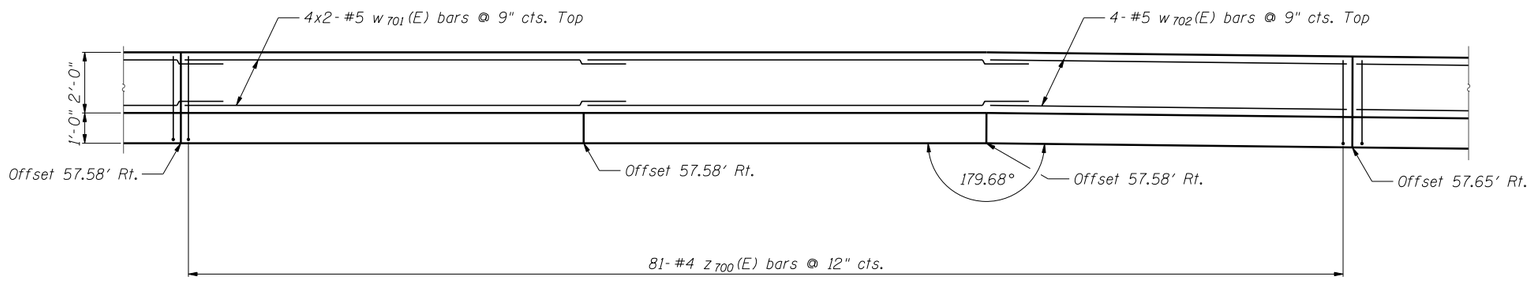
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL PLAN AND ELEVATION 1
STA. 4024+24.83 TO STA. 4028+32.00 SN 022-W059
SHEET NO. SG-3 OF SG-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	545
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



ELEVATION



PLAN

Notes:

Minimum lap for #4 bar is 2'-11", #5 bar is 3'-8".

Bars indicated thus: 6x2-#4 etc. indicates 6 lines of bars with 2 lengths per line.

See Sheet SG-7 for Section A-A, Details and Bill of Material.

FILE NAME = ...\60R31-W059-004-WallPlanElev2.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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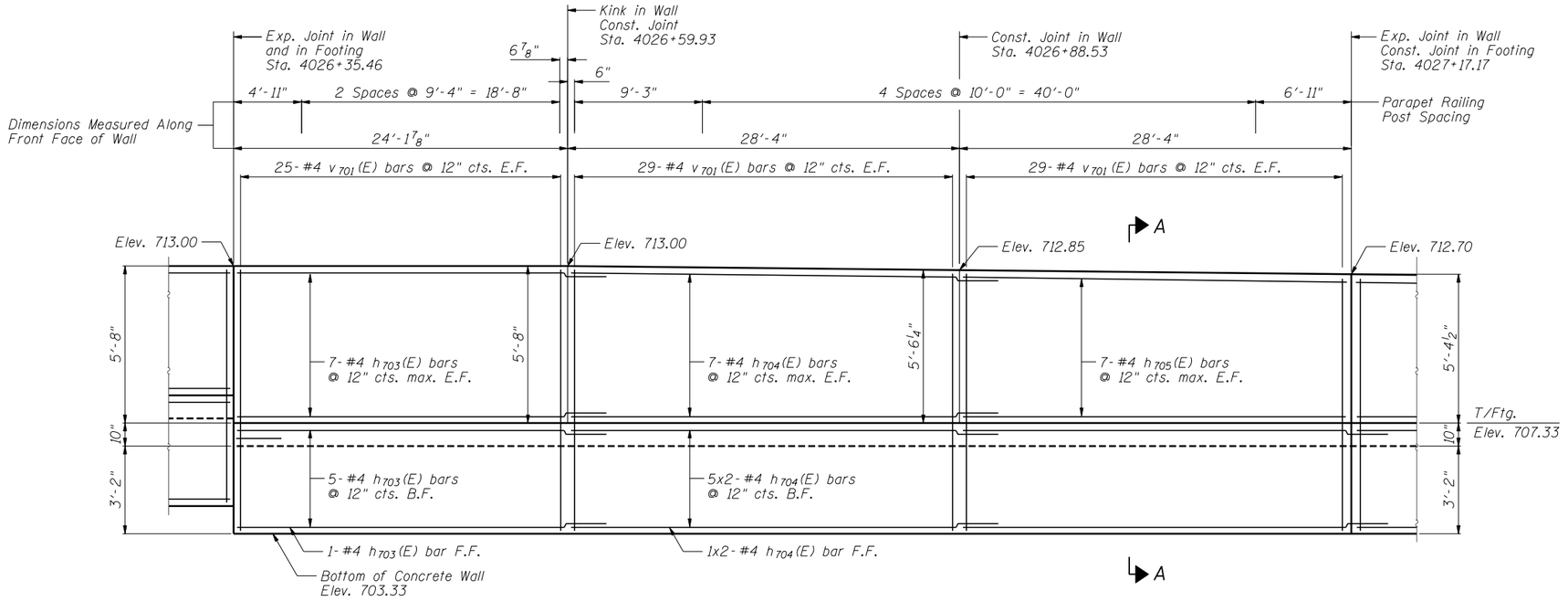
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

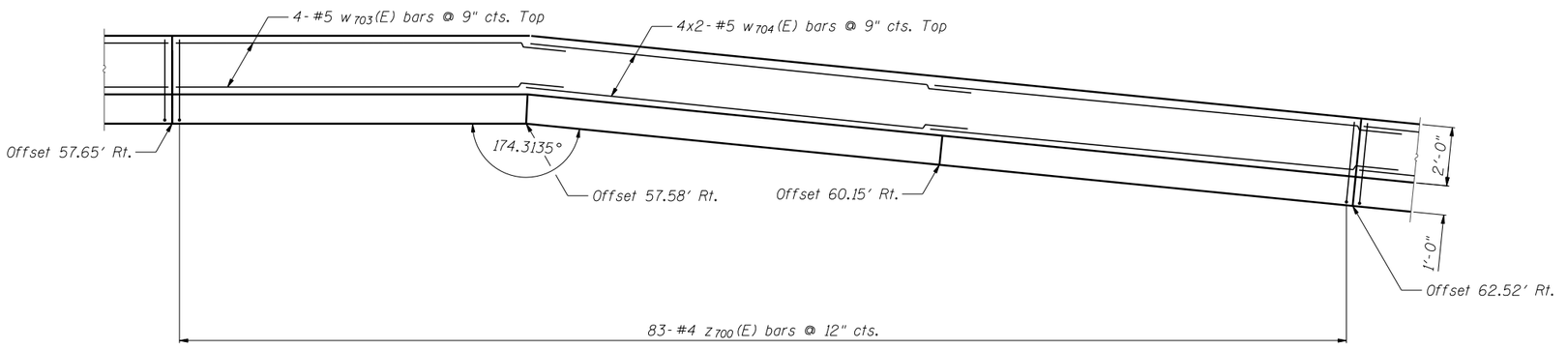
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL PLAN AND ELEVATION 2
STA. 4024+24.83 TO STA. 4028+32.00 SN 022-W059
SHEET NO. SG-4 OF SG-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	546
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



ELEVATION



PLAN

Notes:

Minimum lap for #4 bar is 2'-11", #5 bar is 3'-8".

Bars indicated thus: 5x2-#4 etc. indicates 5 lines of bars with 2 lengths per line.

See Sheet SG-7 for Section A-A, Details and Bill of Material.

FILE NAME = ...\60R31-W059-005-WallPlanElev3.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -
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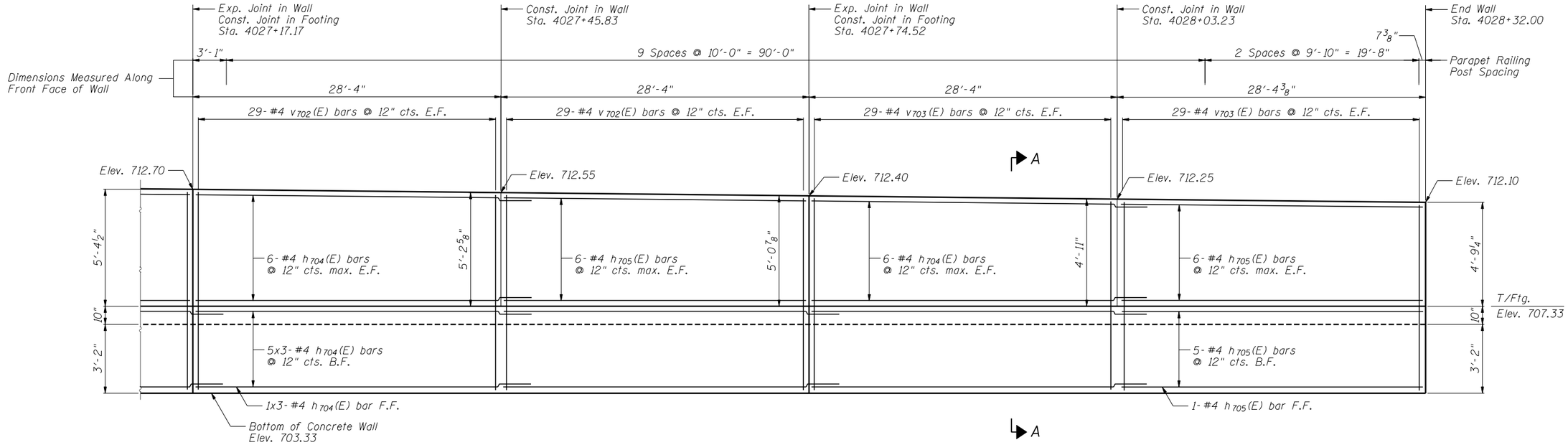
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

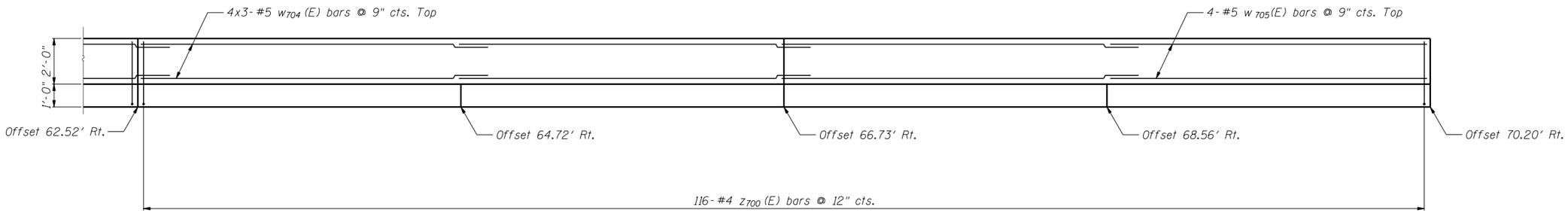
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL PLAN AND ELEVATION 3
STA. 4024+24.83 TO STA. 4028+32.00 SN 022-W059
SHEET NO. SG-5 OF SG-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	547
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			



ELEVATION



PLAN

N

Notes:

Minimum lap for #4 bar is 2'-11", #5 bar is 3'-8".

Bars indicated thus: 5x3-#4 etc. indicates 5 lines of bars with 3 lengths per line.

See Sheet SG-7 for Section A-A, Details and Bill of Material.

FILE NAME = ...\60R31-W059-006-WallPlanElev4.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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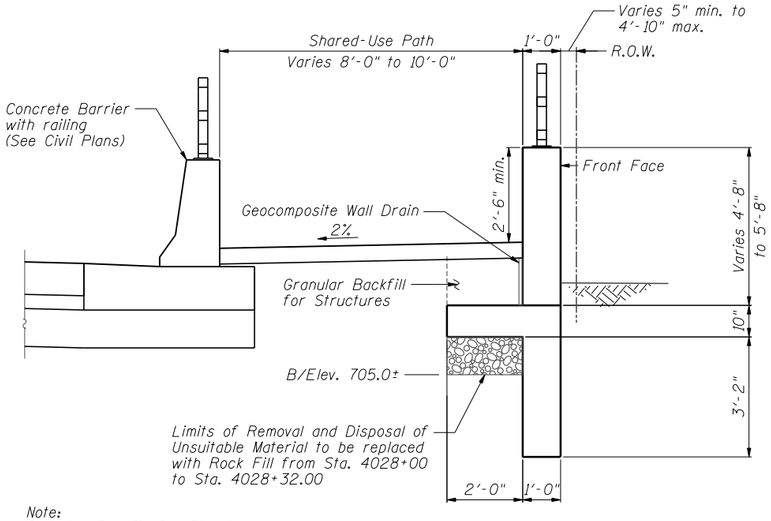
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL PLAN AND ELEVATION 4
STA. 4024+24.83 TO STA. 4028+32.00 SN 022-W059
SHEET NO. SG-6 OF SG-9 SHEETS

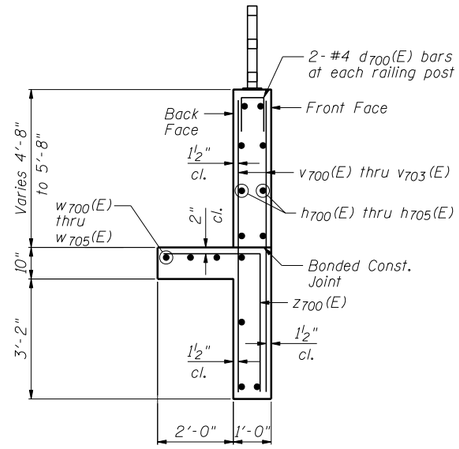
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	548
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



Note:
Granular Backfill for Structures shall be compacted.

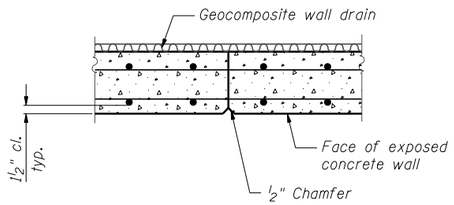
TYPICAL SECTION

Sta. 4024+24.83 to Sta. 4028+32.00

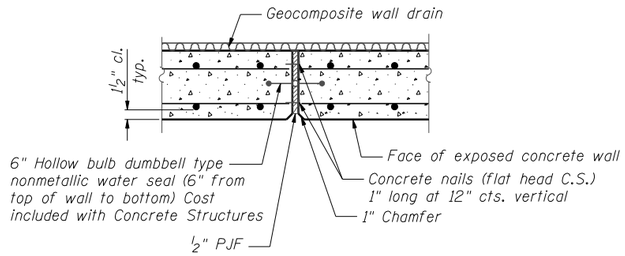


SECTION A-A

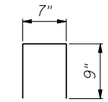
Maximum Soil Bearing Pressure = 1,670 psf



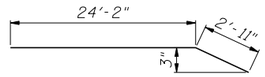
CONSTRUCTION JOINT DETAIL



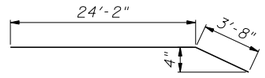
EXPANSION JOINT DETAIL



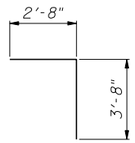
BAR d700(E)



BAR h703(E)



BAR w703(E)



BAR z700(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d 700 (E)	90	#4	2'-1"	⊓
h 700 (E)	102	#4	29'-7"	—
h 701 (E)	24	#4	26'-3"	—
h 702 (E)	18	#4	23'-10"	—
h 703 (E)	20	#4	27'-1"	◺
h 704 (E)	68	#4	31'-3"	—
h 705 (E)	44	#4	28'-0"	—
v 700 (E)	442	#4	8'-4"	—
v 701 (E)	166	#4	9'-1"	—
v 702 (E)	116	#4	8'-9"	—
v 703 (E)	116	#4	8'-5"	—
w 700 (E)	4	#5	30'-4"	—
w 701 (E)	24	#5	30'-3"	—
w 702 (E)	4	#5	23'-10"	—
w 703 (E)	4	#5	27'-10"	◺
w 704 (E)	20	#5	32'-0"	—
w 705 (E)	4	#5	28'-0"	—
z 700 (E)	420	#4	6'-4"	⌐

Item	Unit	Quantity
Concrete Structures	Cu. Yd.	159.2
Reinforcement Bars, Epoxy Coated	Pound	13,920
Geocomposite Wall Drain	Sq. Yd.	111
Granular Backfill for Structures	Cu. Yd.	74

FILE NAME = ...\60R31-W059-007-Details.dgn

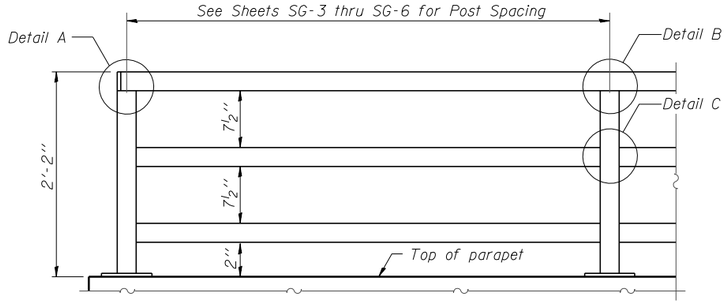
ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - LAS	REVISED -
	CHECKED - DAZ	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

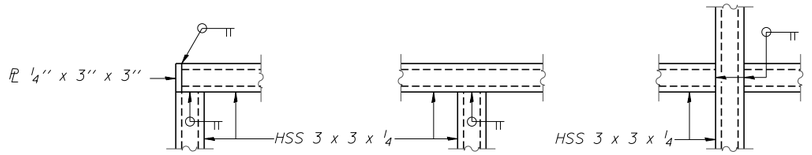
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL SECTION AND DETAILS
STA. 4024+24.83 TO STA. 4028+32.00 SN 022-W059
SHEET NO. SG-7 OF SG-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	549
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

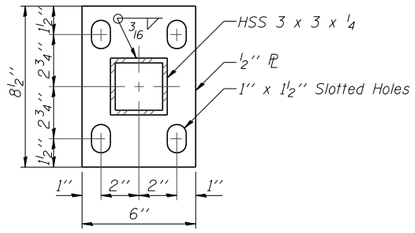


PARAPET RAILING ELEVATION
(Inside Face of Three Element Rail)

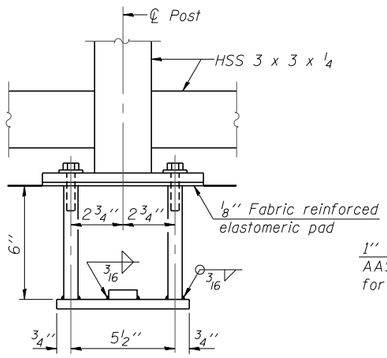


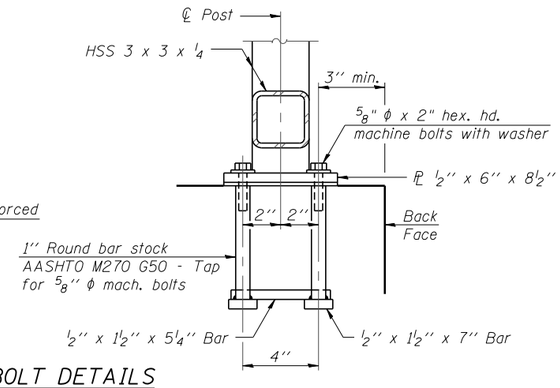
DETAIL A DETAIL B DETAIL C

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



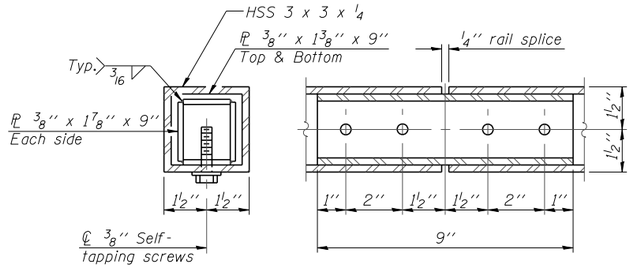
BASE PL





ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



RAIL SPLICE

BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing	Foot	405

FILE NAME = ...\60R31-W059-008-Parapetrailing.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -
		CHECKED - DAZ	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET RAILING
STA. 4024+24.83 TO STA. 4028+32.00 SN 022-W059
SHEET NO. SG-8 OF SG-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	550
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

BORING LOG RW-60

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Ammeraal-Court, Unit# 204
Naperville, Illinois 60565
(630)-355-3638

SOIL BORING LOG

PAGE 1 of 1
DATE 5/31/2011
LOGGED BY MD
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. n/a
Station: 4024+25 to 4030+55
BORING NO. **RW-60**
Station: 4024+65 IL RTE-59
Offset: 60.5' Right
Ground Surface Elev. 710.6

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 703.6
Upon Completion Dry
After ____ Hrs.

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Soil Description
709.6	AS	–	30	TOPSOIL–black
	3			
	3			SILTY CLAY–brown & gray–stiff (A–6)
	4	1.5P	20	
707.6				
	3		*119*	
	4			
–5	6	4.1B	15	CLAY LOAM–brown & gray–very stiff to hard (A–6)
	3			
	4			
	5	2.0P	13	
			117	
	6			
–10	8	3.3B	15	
700.1				
	12		*115*	CLAY–gray–stiff to very stiff (A–6)
	10			
	10	1.1B	17	
	2		*110*	
	3			
–15	6	2.5B	19	
	3		*109*	
	5			
	7	2.2B	20	
	8			
	8			
–20	8	1.0P	21	
	6		*116*	CLAY–gray–stiff to very stiff (A–6)
	7			
	9	3.25B	15	
685.1				
	3		*106*	CLAY LOAM–gray–medium dense (A–4)
	4			
–25	5	2.25B	20	
682.6				
	7		*117*	CLAY LOAM–gray–very stiff to hard (A–6)
	8			
–30	11	4.0B	13	
	12		*120*	
	30			
675.6	50/6"	3.9B	12	
				End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample V–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

BORING LOG RW-61

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Ammeraal-Court, Unit# 204
Naperville, Illinois 60565
(630)-355-3638

SOIL BORING LOG

PAGE 1 of 1
DATE 5/31/2011
LOGGED BY MD
GSI JOB No. 09173

ROUTE Il. Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. n/a
Station: 4024+25 to 4030+55
BORING NO. **RW-61**
Station: 4026+67 IL RTE-59
Offset: 65.0' Right
Ground Surface Elev. 710.0

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 691.0
Upon Completion 677.0
After ____ Hrs.

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Soil Description
709.0	AS	–	34	TOPSOIL–black
	3			
	3			
	5	3.25P	12	
	3		*111*	
	6	8.4S@		
	9	12.7%	17	
702.0				
	3			CLAY–gray–hard (A–6)
	6			
–10	9	4.5+P	14	
699.5				
	4		*121*	SILTY CLAY LOAM–gray–medium dense (A–4)
	7	5.5S@		
	7	11.3%	14	
697.0				
	8			
	8			SILTY LOAM–gray–medium dense (A–4)
–15	8	NP	12	
694.5				
	5		*116*	
	6			
	9	5.3B	16	CLAY LOAM–gray–very stiff to hard (A–6)
	50/6"			
–20		4.5+P	13	
	3		*111*	CLAY LOAM–gray–very stiff to hard (A–6)
	6			
	9	12.7%	17	
685.1				
	3		*109*	CLAY LOAM–gray–medium dense (A–4)
	5			
–25	8	4.5B	19	
	4		*110*	CLAY LOAM–gray–very stiff to hard (A–6)
	7			
	10	3.9B	19	
	7		*111*	
	9			
–30	10	5.6B	19	
	8			Silt seams from –33.5' to –35.0'.
	8			
675.0 –35	10	2.25P	21	
				End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample V–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR–No Recovery

FILE NAME = ...\60R31-W059-009-Boring Logs.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - LAS	REVISED -
	CHECKED - DAZ	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

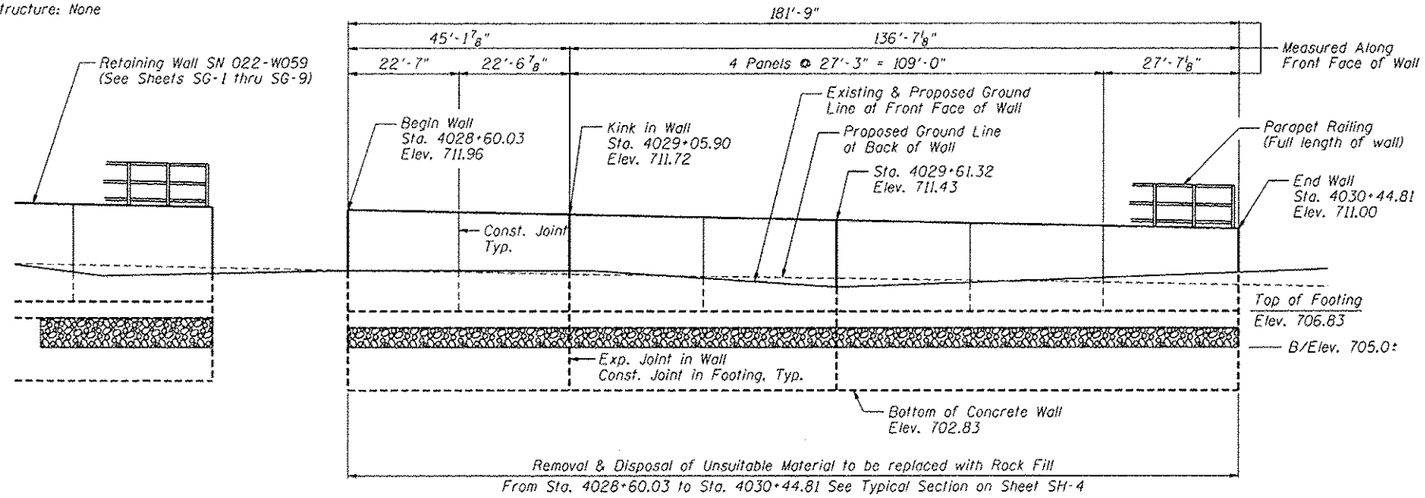
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STA. 4024+24.83 TO STA. 4028+32.00 SN 022–W059
SHEET NO. SG-9 OF SG-9 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	551
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

Bench Mark: Square "□" on top north end of headwall, west side of IL Rte 59, 75' south of centerline of Argyll Lane
Sta. 4020+14, 37' Lt., Elev. 708.12

Existing Structure: None



INDEX OF SHEETS

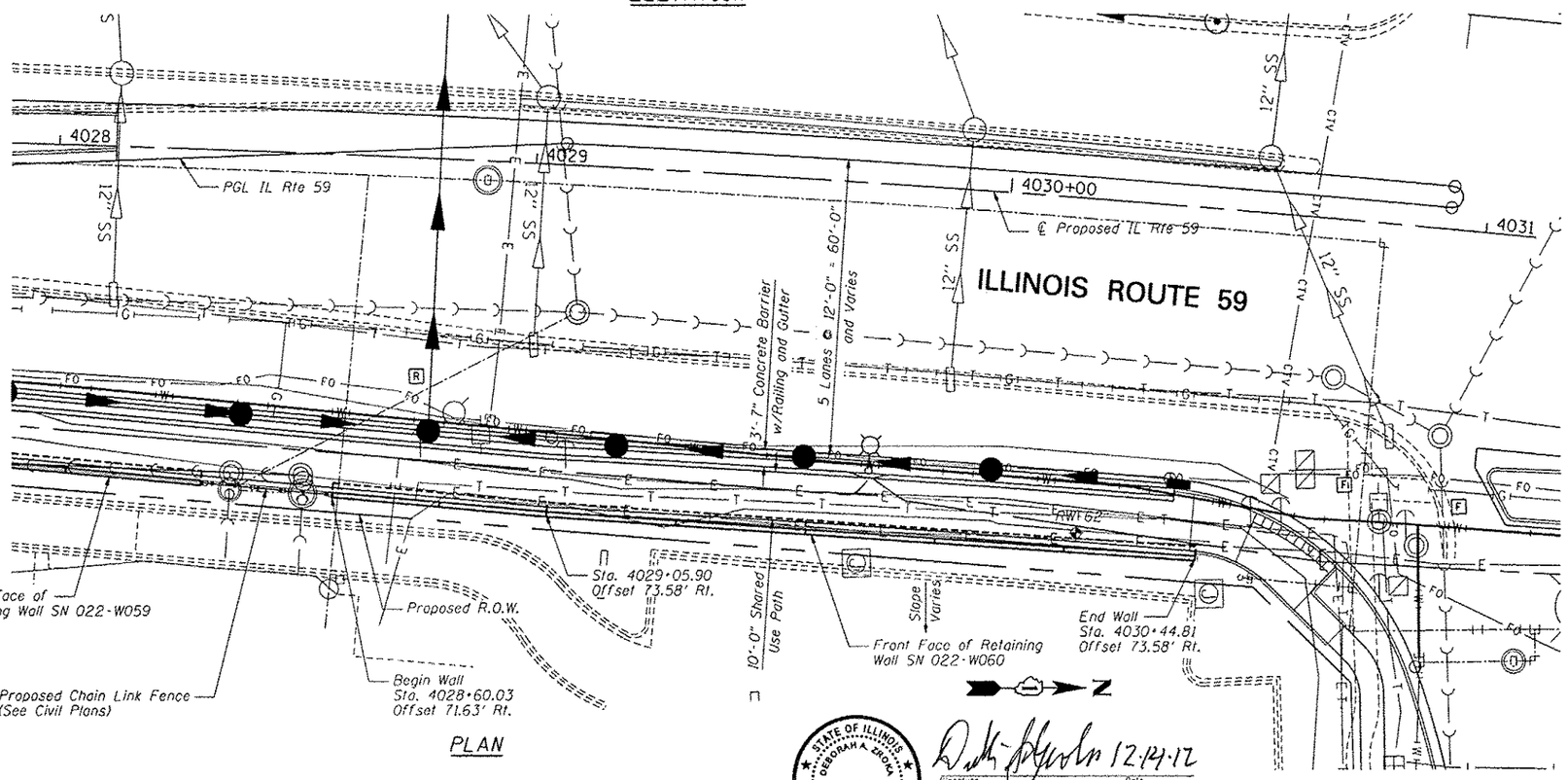
GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete sealer shall be applied to exposed surfaces of the front face, back face and top of wall.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	227
Concrete Structures	Cu. Yd.	69.4
Concrete Sealer	Sq. Ft.	1,225
Reinforcement Bars, Epoxy Coated	Pound	6,110
Parapet Railing	Foot	182
Geocomposite Wall Drain	Sq. Yd.	43
Granular Backfill for Structures	Cu. Yd.	29
Removal & Disposal of Unsuitable Material	Cu. Yd.	14
Rock Fill	Cu. Yd.	14

ELEVATION



PLAN

Note:
Offsets are measured from the ℄ Proposed IL Rte. 59 to the front face of the wall.

HORIZONTAL CURVE DATA

Proposed Curve PRIL59-7
PI Sta. = 4032+07.95
Δ = 15° 24' 28" (RT)
D = 1° 17' 54"
R = 4,413.03'
T = 596.97'
L = 1,186.73'
E = 40.19'
P.C. Sta. = 4026+10.99
P.T. Sta. = 4037+97.72

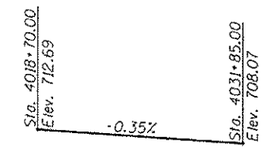
DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

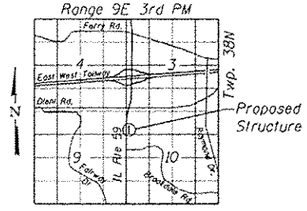
DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)



PROFILE GRADE
(along edge of pavement proposed IL Route 59)



LOCATION SKETCH

STATE OF ILLINOIS
DEBORAH A. ZROKA
081-005152
LICENSED STRUCTURAL ENGINEER

Signature 12-14-12 Date

November 30, 2014
Expires

GENERAL PLAN AND ELEVATION
IL RTE 59 FAP RTE 338
SECTION (112 & 113) WRS-6
DUPAGE COUNTY
STA. 4028+60.03 TO STA. 4030+44.81
SN 022-W060

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

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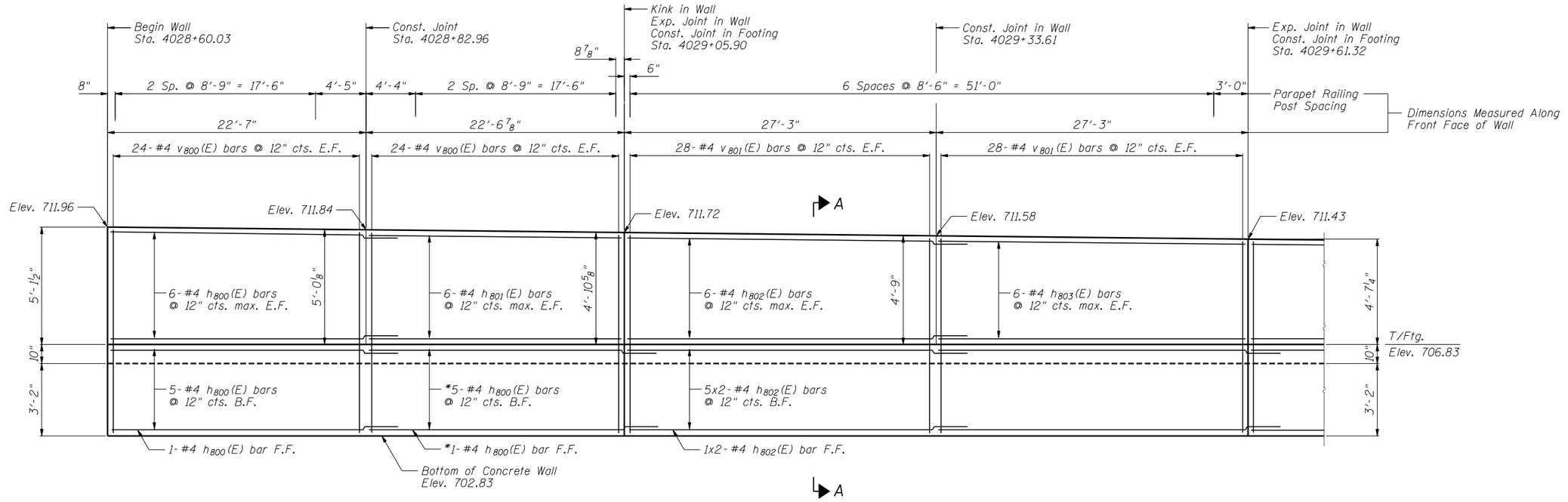
	CHECKED - DAZ	REVISED -	
SCALE - NONE	DRAWN - SAW	REVISED -	
DATE - 12/14/2012	CHECKED - LAS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

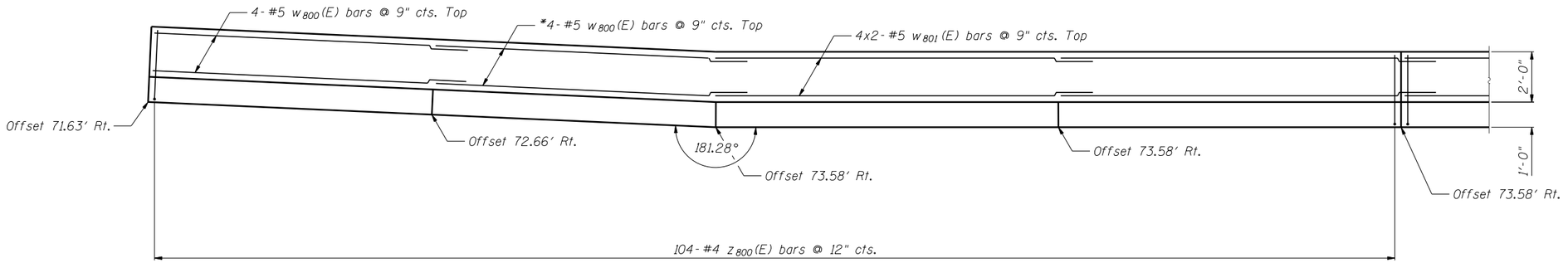
GENERAL PLAN AND ELEVATION
STA. 4028+60.03 TO STA. 4030+44.81 SN 022-W060
SHEET NO. SH-1 OF SH-6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	552
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

FILE NAME = #FILE#



ELEVATION



PLAN

Notes:

Minimum lap for #4 bar is 2'-11", #5 bar is 3'-8".

Bars indicated thus: 5x2-#4 etc. indicates 5 lines of bars with 2 lengths per line.

See Sheet SH-4 for Section A-A, Details and Bill of Material.

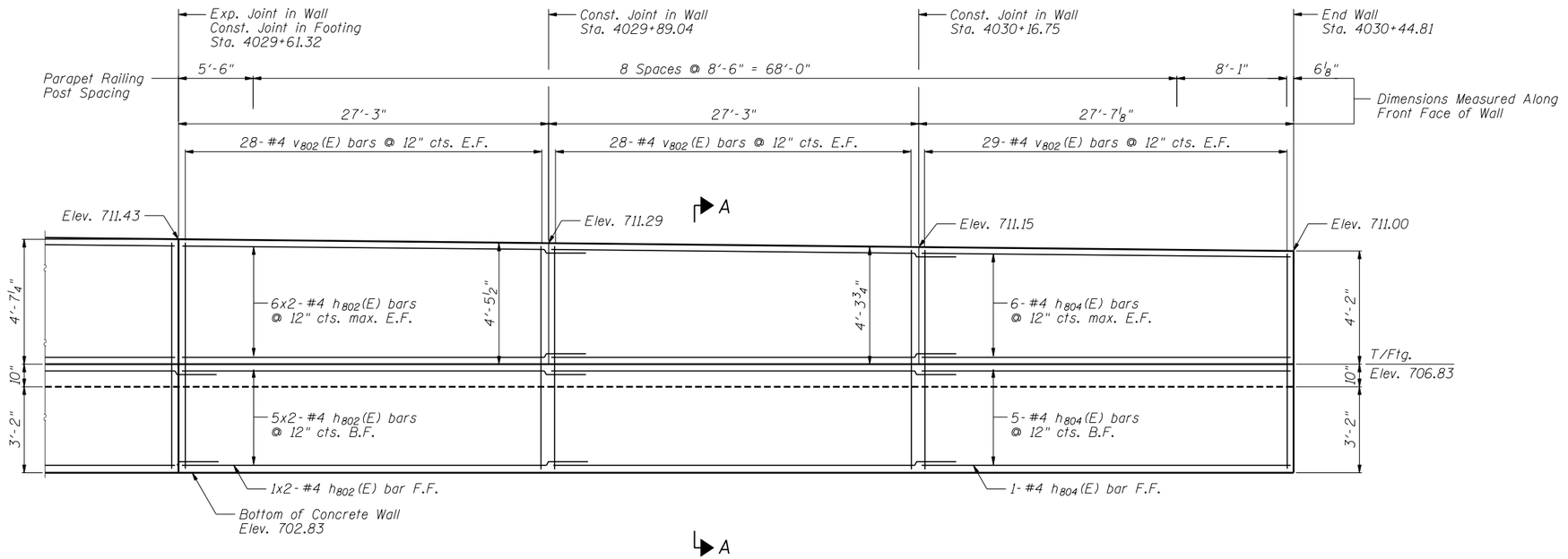
* Bend bars in field to fit

FILE NAME = ...\60R31-W060-002-WallPlanElevl.dgn

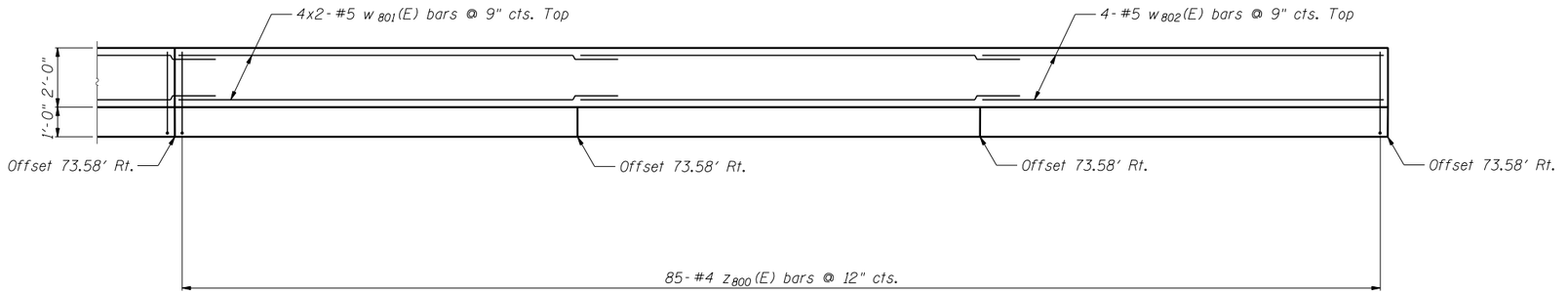
ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - DAZ	REVISED -	
	SCALE - NONE	DRAWN - SAW	REVISED -	
	DATE - 12/14/2012	CHECKED - LAS	REVISED -	

WALL PLAN AND ELEVATION 1
STA. 4028+60.03 TO STA. 4030+44.81 SN 022-W060
SHEET NO. SH-2 OF SH-6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	553
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



ELEVATION



PLAN

N

Notes:

Minimum lap for #4 bar is 2'-11", #5 bar is 3'-8".

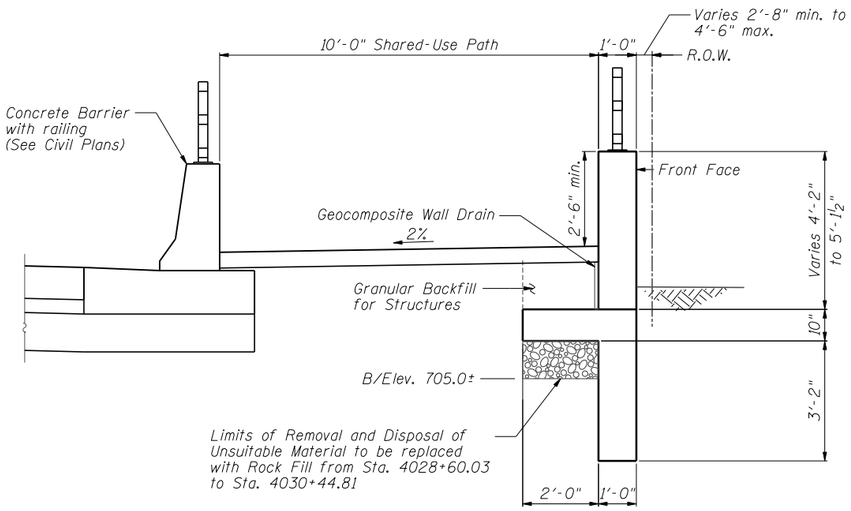
Bars indicated thus: 6x2-#4 etc. indicates 6 lines of bars with 2 lengths per line.

See Sheet SH-4 for Section A-A, Details and Bill of Material.

FILE NAME = ...\60R31-W060-003-WallPlanElev2.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WALL PLAN AND ELEVATION 2 STA. 4028+60.03 TO STA. 4030+44.81 SN 022-W060
		CHECKED - DAZ	REVISED -		
	SCALE - NONE	DRAWN - SAW	REVISED -		
	DATE - 12/14/2012	CHECKED - LAS	REVISED -		SHEET NO. SH-3 OF SH-6 SHEETS

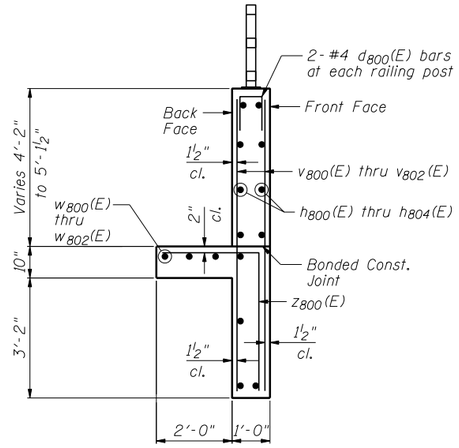
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	554
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		



Note:
Granular Backfill for Structures shall be compacted.

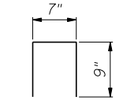
TYPICAL SECTION

Sta. 4028+60.03 to Sta. 4030+44.81



SECTION A-A

Maximum Soil Bearing Pressure = 1,670 psf

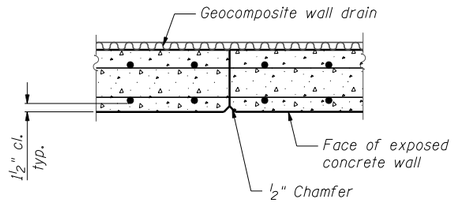


BAR d800(E)

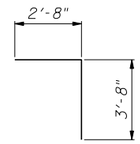
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_{800}(E)$	46	#4	2'-1"	⊓
$h_{800}(E)$	24	#4	25'-6"	——
$h_{801}(E)$	12	#4	22'-3"	——
$h_{802}(E)$	60	#4	30'-2"	——
$h_{803}(E)$	12	#4	26'-11"	——
$h_{804}(E)$	18	#4	27'-3"	——
$v_{800}(E)$	96	#4	8'-6"	——
$v_{801}(E)$	112	#4	8'-3"	——
$v_{802}(E)$	170	#4	7'-10"	——
$w_{800}(E)$	8	#5	26'-3"	——
$w_{801}(E)$	16	#5	31'-0"	——
$w_{802}(E)$	4	#5	27'-3"	——
$z_{800}(E)$	189	#4	6'-4"	⌐

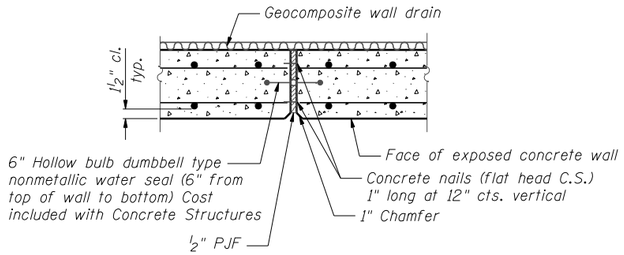
Item	Unit	Quantity
Concrete Structures	Cu. Yd.	69.4
Reinforcement Bars, Epoxy Coated	Pound	6,110
Geocomposite Wall Drain	Sq. Yd.	43
Granular Backfill for Structures	Cu. Yd.	29



CONSTRUCTION JOINT DETAIL



BAR z800(E)



EXPANSION JOINT DETAIL

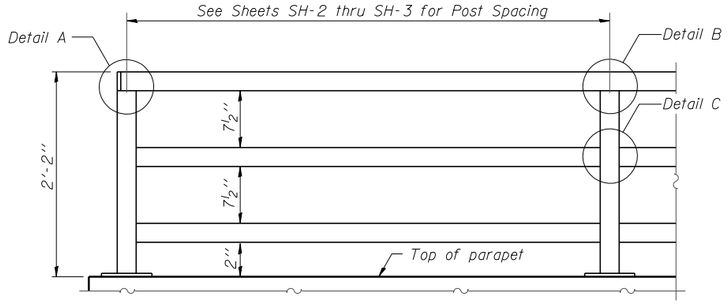
FILE NAME = ...\60R31-W060-004-Details.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -
		CHECKED - DAZ	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

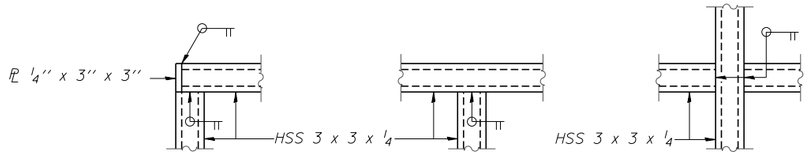
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL SECTION AND DETAILS
STA. 4028+60.03 TO STA. 4030+44.81 SN 022-W060
SHEET NO. SH-4 OF SH-6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	555
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

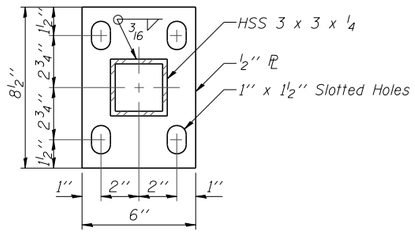


PARAPET RAILING ELEVATION
(Inside Face of Three Element Rail)

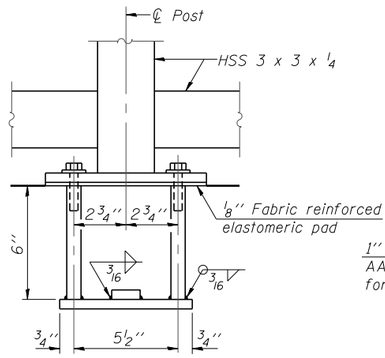


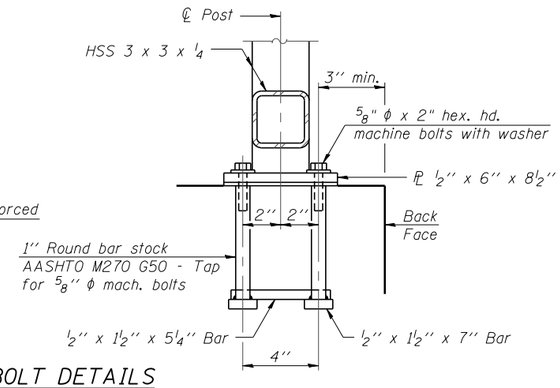
DETAIL A DETAIL B DETAIL C

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



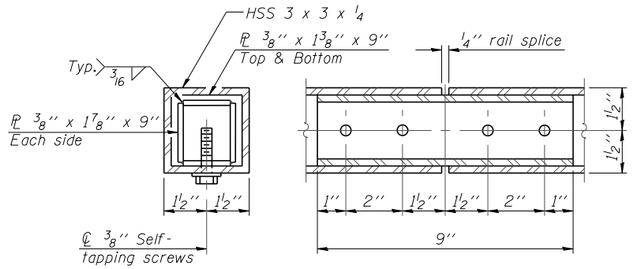
BASE PL





ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



RAIL SPLICE

BILL OF MATERIAL

Item	Unit	Quantity
Parapet Railing	Foot	182

FILE NAME = ...\60R31-W060-005-Parapetrailing.dgn

ZROKA engineering — Zroka Engineering, P.C. 4216 North Hermitage Chicago, IL 60613		DESIGNED - LAS	REVISED -
		CHECKED - DAZ	REVISED -
	SCALE - NONE	DRAWN - SAW	REVISED -
	DATE - 12/14/2012	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET RAILING
STA. 4028+60.03 TO STA. 4030+44.81 SN 022-W060
SHEET NO. SH-5 OF SH-6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	556
		CONTRACT NO. 60R31		
	ILLINOIS FED. AID PROJECT			

BORING LOG RW-62

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2638

SOIL BORING LOG

PAGE 1 of 1
DATE 5/31/2011
LOGGED BY RJ
GSI JOB No. 09173

ROUTE IL Route 59 (FAP 338) DESCRIPTION Illinois Route 59–Aurora Avenue/New York Street To Ferry Road
SECTION (112 & 113) WRS-5 LOCATION SEC. 3, 9–10, 15–16, 21–22 TWP. 38N, RNG. 9E, Naperville Township
COUNTY DuPage DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic
STRUCT. NO. n/a
Station: 4024+25 to 4030+55
BORING NO. RW-62
Station: 4030+19 IL RTE-59
Offset: 79.5' Right
Ground Surface Elev. 708.3

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter 688.3 ▽
Upon Completion n/a ▽
After ____ Hrs. ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	AS	–	30	
	3		*91*	TOPSOIL–black
	5			
	5	2.0B	30	
705.3				
	2		*94*	SILTY CLAY–dark brown & gray– medium stiff to stiff (A–6) Wet
	2			
–5	4	1.25B	27	
	2			
	3			
	5	0.5B	32	
700.3				
	5		*114*	CLAY–brown & gray– very stiff to hard (A–6)
	9			
–10	11	6.5B	17	
	4		*122*	
	7			SAND–gray– loose to medium dense (A–3)
	12	2.8B	14	
695.3				
	6		*112*	CLAY LOAM–gray– very stiff to hard (A–6)
	11			
–15	13	5.8B	19	
	5			
	5			
	10	3.0P	13	
	13		*123*	
	10			
▼ –20	13	7.0B	12	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	3		*113*	
	6			
	10	2.3B	18	
	4		*106*	CLAY LOAM–gray– very stiff to hard (A–6)
	5			
–25	7	2.2B	22	
	4		*102*	
	6			
	10	1.9B	24	
	5			
678.8				
	7	3.75P		
–30	7	NP	17	
	2			
	3			
673.3 –35	6	NP	19	End Of Boring @ –35.0' Hollow Stem Augers CME Automatic Hammer
–40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS–Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR–No Recovery

FILE NAME = ...\60R31-W060-006-Boringlogi.dgn

ZROKA engineering
Zroka Engineering, P.C.
4216 North Hermitage
Chicago, IL 60613

	DESIGNED - LAS	REVISED -
	CHECKED - DAZ	REVISED -
SCALE - NONE	DRAWN - SAW	REVISED -
DATE - 12/14/2012	CHECKED - LAS	REVISED -

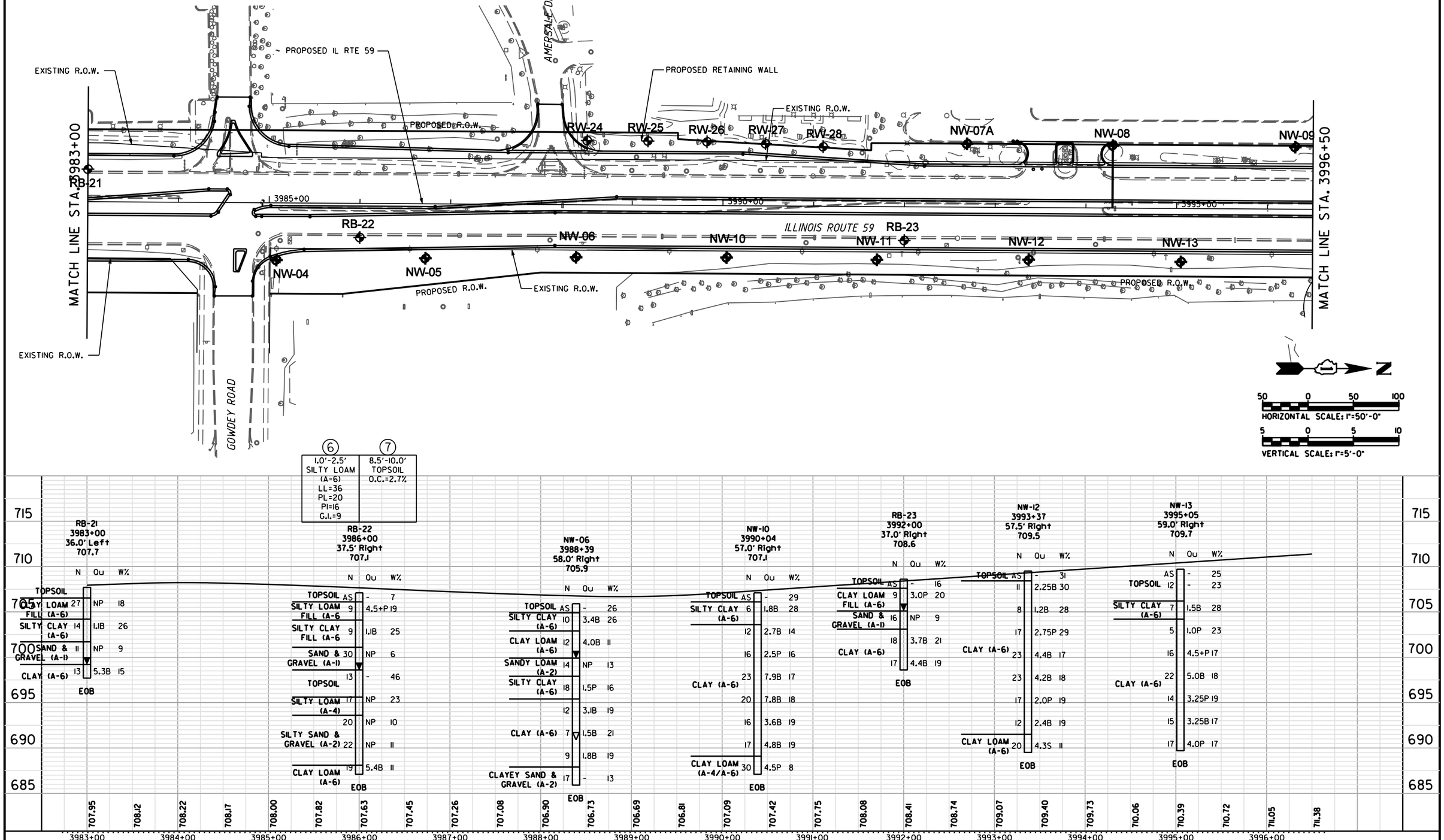
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STA. 4028+60.03 TO STA. 4030+44.81 SN 022–W060
SHEET NO. SH-6 OF SH-6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	557
		CONTRACT NO. 60R31		
	ILLINOIS	FED. AID PROJECT		

PLAN
SURVEYED
PLOTTED
HORIZ. ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
VERT. ALIGNMENT CHECKED
BLM. NOTED
STRUCTURE NO'S/STN'S CHKD
NOTE BOOK
NO.
BY
DATE



⑥	⑦
1.0'-2.5' SILTY LOAM (A-6) LL=36 PL=20 PI=16 G.I.=9	8.5'-10.0' TOPSOIL O.C.=2.7%

RB-21
3983+00
36.0' Left
707.7

	N	Qu	W%
TOPSOIL			
SILTY LOAM FILL (A-6)	27	NP	18
SILTY CLAY (A-6)	14	1.1B	26
SAND & GRAVEL (A-1)	11	NP	9
CLAY (A-6)	13	5.3B	15
EOB			

RB-22
3986+00
37.5' Right
707.1

	N	Qu	W%
TOPSOIL	AS	-	7
SILTY LOAM FILL (A-6	9	4.5+P	19
SILTY CLAY FILL (A-6	9	1.1B	25
SAND & GRAVEL (A-1)	30	NP	6
TOPSOIL	13	-	46
SILTY LOAM (A-4)	17	NP	23
	20	NP	10
SILTY SAND & GRAVEL (A-2)	22	NP	11
CLAY LOAM (A-6)	19	5.4B	11
EOB			

NW-06
3988+39
58.0' Right
705.9

	N	Qu	W%
TOPSOIL	AS	-	26
SILTY CLAY (A-6)	10	3.4B	26
CLAY LOAM (A-6)	12	4.0B	11
SANDY LOAM (A-2)	14	NP	13
SILTY CLAY (A-6)	18	1.5P	16
	12	3.1B	19
CLAY (A-6)	7	1.5B	21
	9	1.8B	19
CLAYEY SAND & GRAVEL (A-2)	17	-	13
EOB			

NW-10
3990+04
57.0' Right
707.1

	N	Qu	W%
TOPSOIL	AS	-	29
SILTY CLAY (A-6)	6	1.8B	28
	12	2.7B	14
	16	2.5P	16
CLAY (A-6)	23	7.9B	17
	20	7.8B	18
	16	3.6B	19
	17	4.8B	19
CLAY LOAM (A-4/A-6)	30	4.5P	8
EOB			

RB-23
3992+00
37.0' Right
708.6

	N	Qu	W%
TOPSOIL	AS	-	16
CLAY LOAM FILL (A-6)	9	3.0P	20
SAND & GRAVEL (A-1)	16	NP	9
	18	3.7B	21
CLAY (A-6)	17	4.4B	19
EOB			

NW-12
3993+37
57.5' Right
709.5

	N	Qu	W%
TOPSOIL	AS	-	31
	11	2.25B	30
	8	1.2B	28
	17	2.75P	29
CLAY (A-6)	23	4.4B	17
	23	4.2B	18
	17	2.0P	19
	12	2.4B	19
CLAY LOAM (A-6)	20	4.3S	11
EOB			

NW-13
3995+05
59.0' Right
709.7

	N	Qu	W%
TOPSOIL	AS	-	25
	12	-	23
SILTY CLAY (A-6)	7	1.5B	28
	5	1.0P	23
	16	4.5+P	17
CLAY (A-6)	22	5.0B	18
	14	3.25P	19
	15	3.25B	17
	17	4.0P	17
EOB			

715 710 705 700 695 690 685

707.95 708.12 708.22 708.17 708.00 707.82 707.63 707.45 707.26 707.08 706.90 706.73 706.69 706.81 707.09 707.42 707.75 708.08 708.41 708.74 709.07 709.40 709.73 710.06 710.39 710.72 711.05 711.38

3983+00 3984+00 3985+00 3986+00 3987+00 3988+00 3989+00 3990+00 3991+00 3992+00 3993+00 3994+00 3995+00 3996+00

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Amherst Court, Suite 204
Naperville, Illinois 60565
(630) 355-2838

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	DRAWN - RWC	REVISED -	
PLOT SCALE =	CHECKED - AJP	REVISED -	
PLOT DATE =	DATE - 3/24/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

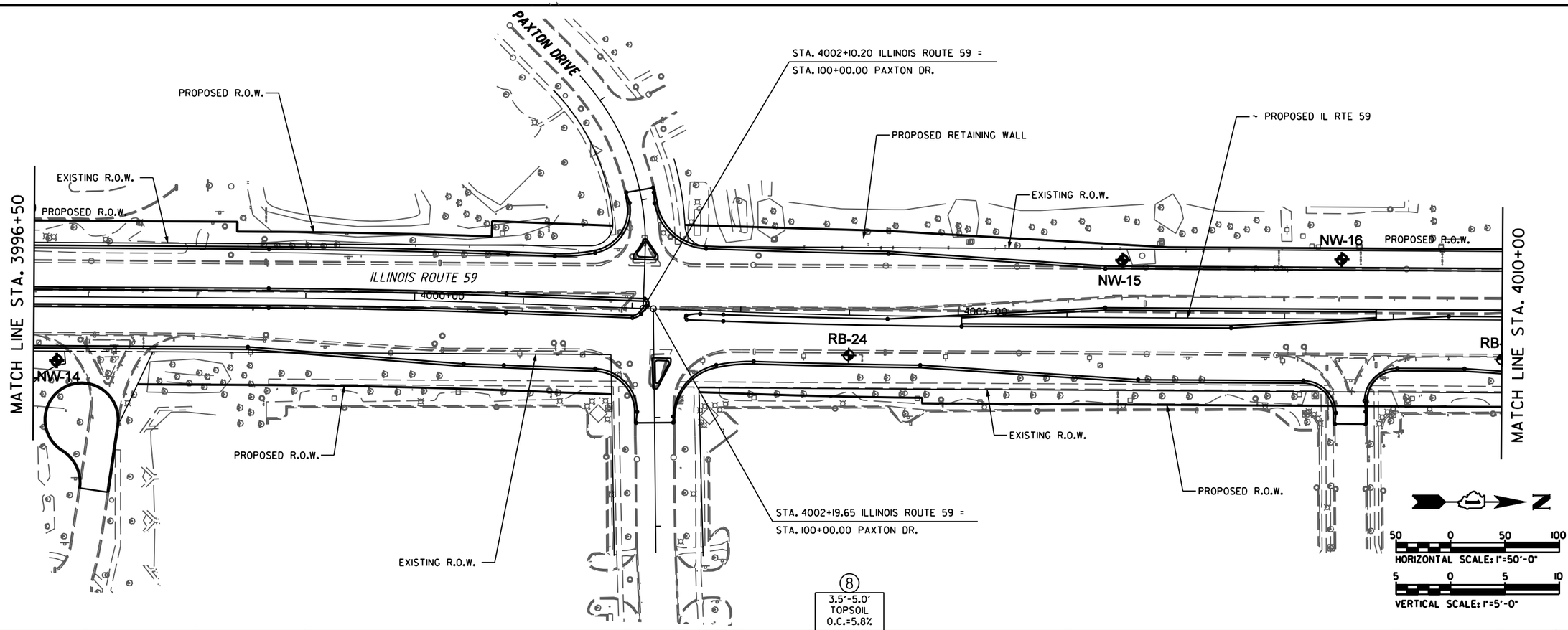
SOIL BORING
PLAN / PROFILE ILLINOIS ROUTE 59

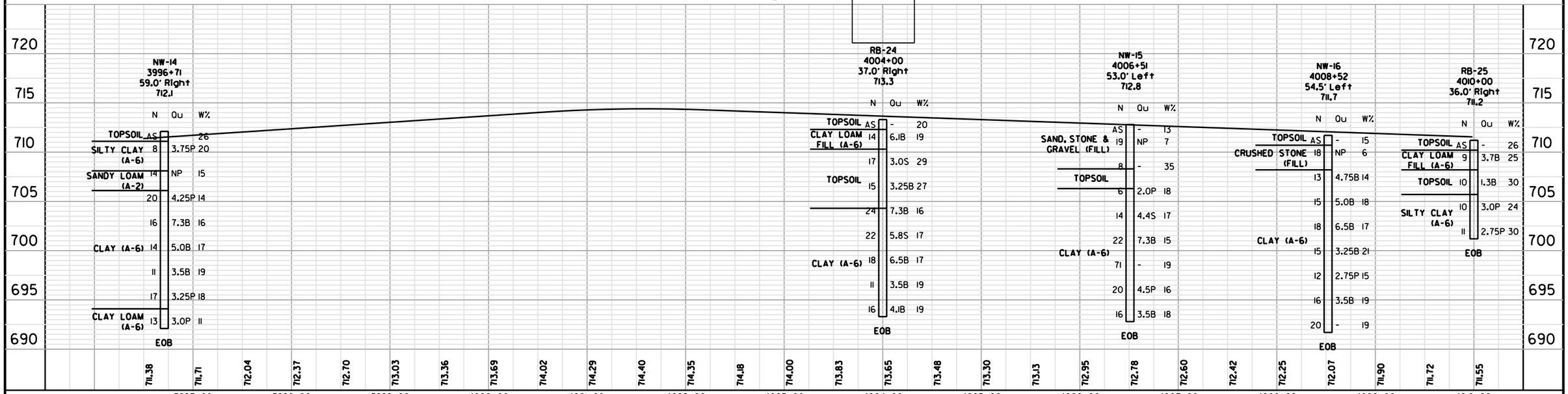
SCALE: | SHEET NO. OF SHEETS | STA. 3983+00 | TO STA. 3996+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	~~(12 & 13) RS-5~~	DUPAGE	734	558
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT.-OF-WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
CROSS SECTS CHECKED
BM. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE





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	DRAWN - RWC	REVISED -	
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PLOT DATE =	DATE - 3/24/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

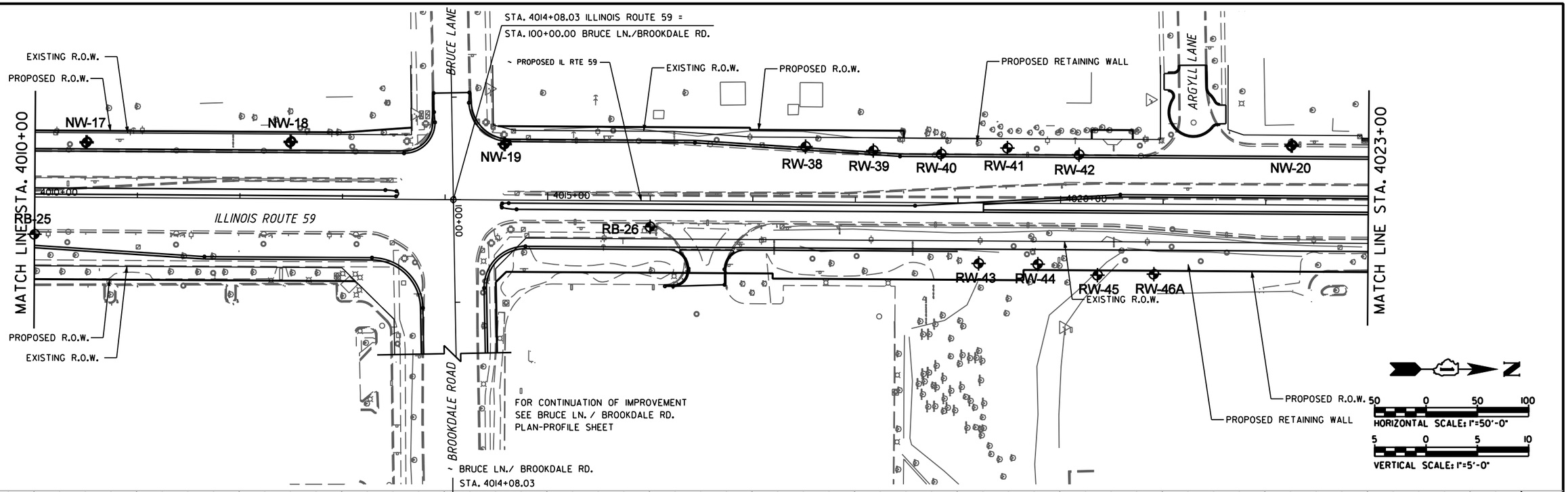
SOIL BORING
PLAN / PROFILE ILLINOIS ROUTE 59

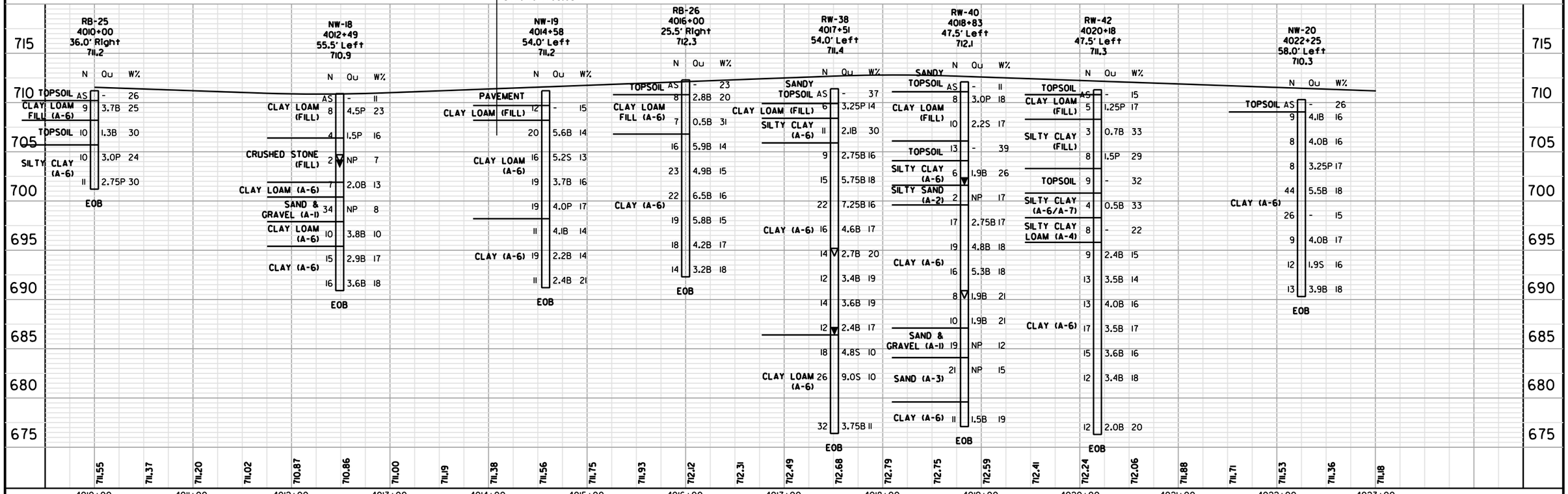
SCALE: | SHEET NO. OF SHEETS | STA. 3996+00 | TO STA. 4010+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	~~112 & 131 WRS-5~~	DUPAGE	734	559
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN — SURVEYED | PLOTTED | DRAWN | ALIGNMENT CHECKED | RT. OF WAY CHECKED | CADD FILE NAME | NOTE BOOK | NO. | BY | DATE

PROFILE — SURVEYED | PLOTTED | DRAWN | CROSS SECTIONS CHECKED | BM. NOTED | STRUCTURE NOTATIONS CHKD | NOTE BOOK | NO. | BY | DATE





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Geotechnical, Environmental & Civil Engineering 805 Amherst Court, Suite 204 Naperville, Illinois 60565 (630) 355-2838		DRAWN - RWC	REVISED -
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	PLOT DATE =	DATE - 3/24/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

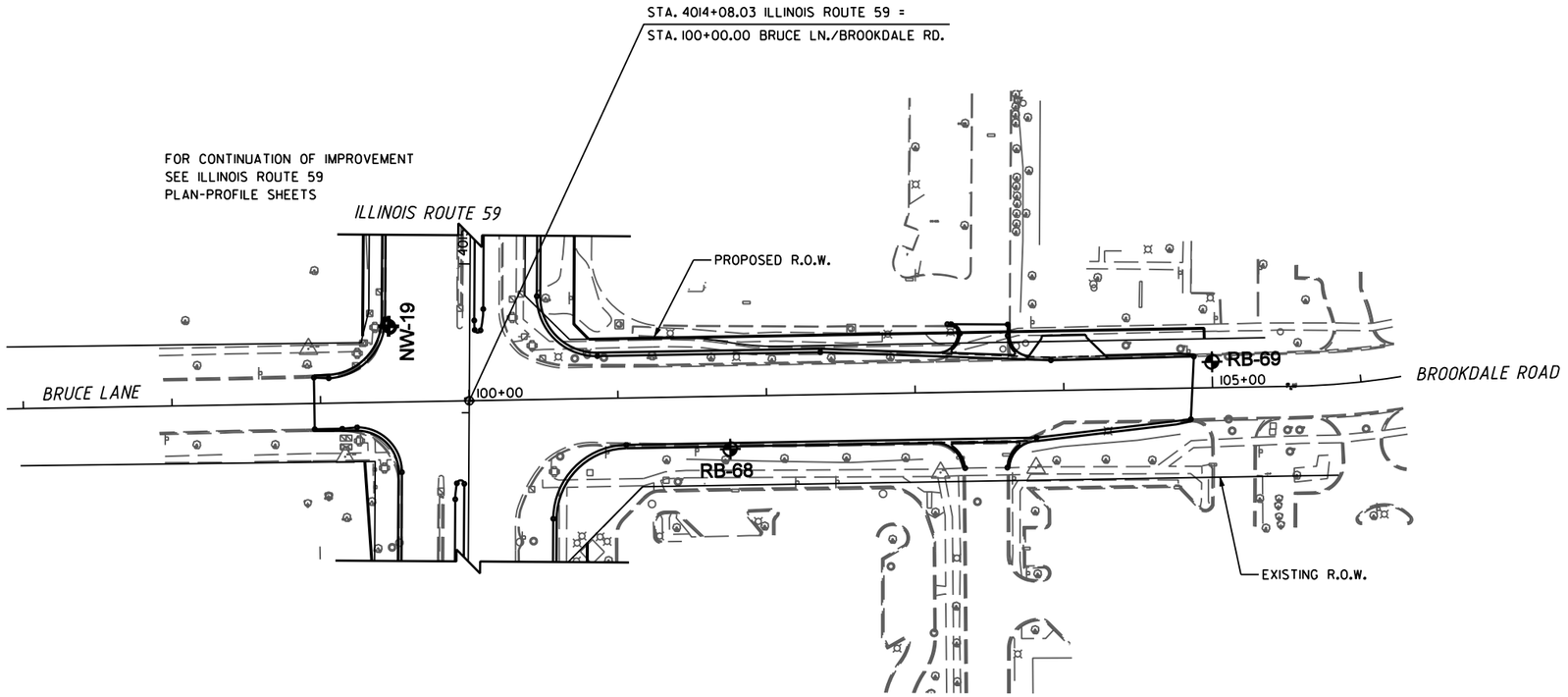
SOIL BORING
PLAN / PROFILE ILLINOIS ROUTE 59

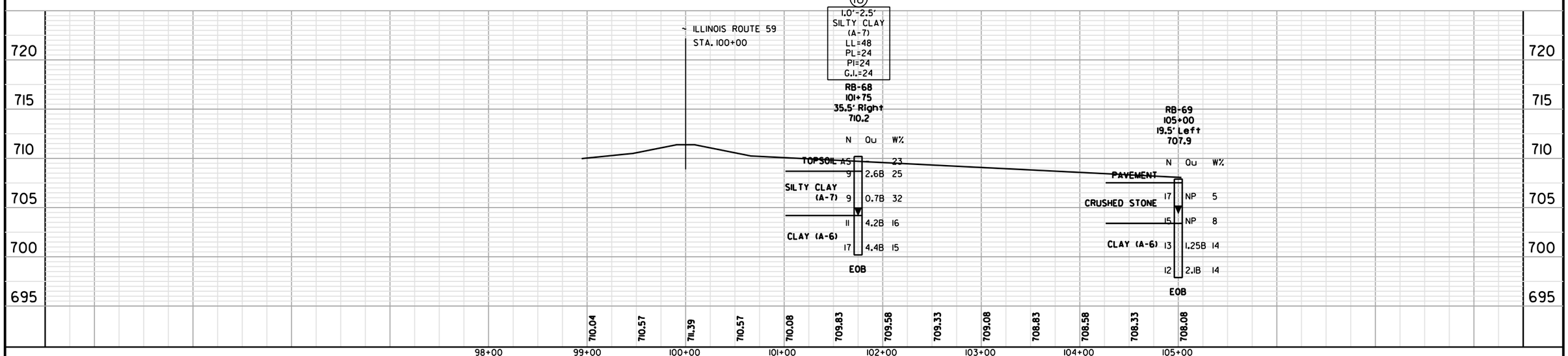
SCALE: | SHEET NO. OF SHEETS | STA. 4010+00 | TO STA. 4023+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	~~(12 & 13) WR5-5~~	DUPAGE	734	560
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
BEAM NOTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE





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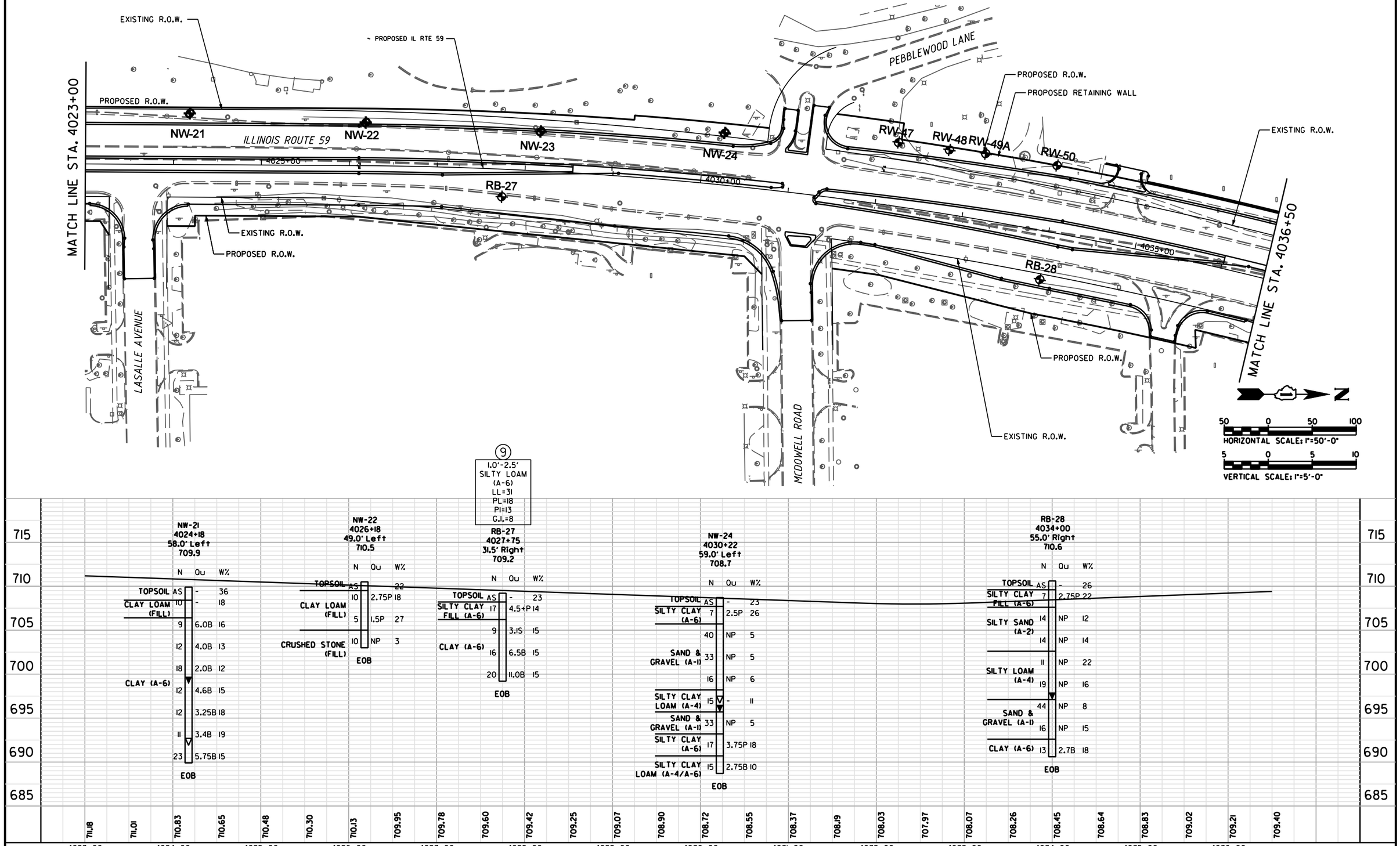
PLOT SCALE =	CHECKED - AJP	REVISED -	
PLOT DATE =	DATE - 3/24/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING
PLAN / PROFILE BRUCE LN./BROOKDALE RD.

SCALE: | SHEET NO. OF SHEETS | STA. 97+00 TO STA. 106+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	~~(12 & 13) WRS-5~~	DUPAGE	734	561
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN — SURVEYED — PLOTTED — ALIGNMENT CHECKED — RT. OF WAY CHECKED — CADD FILE NAME — NOTE BOOK — NO. — BY — DATE

PROFILE — SURVEYED — PLOTTED — PROFILE CHECKED — BLM NOTED — STRUCTURE NO'S/ITMS CHKD — NOTE BOOK — NO. — BY — DATE

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Naperville, Illinois 60565
(630) 355-2838

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	DRAWN - RWC	REVISED -	
PLOT SCALE =	CHECKED - AJP	REVISED -	
PLOT DATE =	DATE - 3/24/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING
PLAN / PROFILE ILLINOIS ROUTE 59

SCALE: | SHEET NO. OF SHEETS | STA. 4023+00 | TO STA. 4036+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	~~(12 & 13) WRS-5~~	DUPAGE	734	562
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
CROSS CHECKED
BAL NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE

FOR CONTINUATION OF IMPROVEMENT
SEE DIEHL ROAD
PLAN-PROFILE SHEET

STA. 4041+23.18 ILLINOIS ROUTE 59 =
STA. 100+00.00 DIEHL RD.

DIEHL ROAD

MATCH LINE STA. 4036+50

EXISTING R.O.W.
PROPOSED R.O.W.

RB-29

4040+00

100+00

PROPOSED IL RTE 59

PROPOSED R.O.W.
EXISTING R.O.W.

RB-30

ILLINOIS ROUTE 59

RB-32

4045+00

MATCH LINE STA. 4050+00

RB-31

RW-51
RW-52
RW-53

PROPOSED R.O.W.
PROPOSED RETAINING WALL
EXISTING R.O.W.

RB-75

PROPOSED R.O.W.

EXISTING R.O.W.

DIEHL ROAD

N

50 0 50 100
HORIZONTAL SCALE: 1"=50'-0"

5 0 5 10
VERTICAL SCALE: 1"=5'-0"

(10)
1.0'-2.5'
CLAY LOAM
(A-6)
LL=31
PL=17
PI=14
G.I.=8

RB-29
4037+00
72.0' Left
709.5

		N	Qu	W%
TOPSOIL AS		-		25
CLAY LOAM FILL (A-6)	7	2.25P	19	
SILTY CLAY (A-6)	9	2.0P	23	
SILTY CLAY LOAM (A-4/A-6)	10	1.5P	25	
CLAY (A-6)	13	6.6B	19	

EOB

RW-51
4038+21
83.5" Right
707.9

		N	Qu	W%
TOPSOIL AS		-		33
SAND & GRAVEL (FILL)		10	NP	9
CLAY LOAM (A-6)	17	4.75B	20	
	12	2.0B	14	
SAND & GRAVEL (A-1)	9	NP	8	
	12	NP	17	
CLAY LOAM (A-4/A-6)	21	2.1B	12	
	10	1.0P	12	
	12	1.0P	10	

EOB

DIEHL ROAD
STA. 4041+23.18

RB-30
4043+00
48.5' Left
707.3

		N	Qu	W%
TOPSOIL AS		-		21
	10	4.1S	14	
CLAY LOAM (A-6)	13	6.4B	16	
	12	4.5P	13	
	11	5.6B	16	
	12	3.7B	18	
CLAY (A-6)	14	4.25B	18	
	13	2.8B	20	
	11	1.7B	22	

EOB

RB-31
4046+00
45.0' Right
708.3

		N	Qu	W%
TOPSOIL AS		-		21
SILTY CLAY (A-6)	10	3.0P	29	
	15	4.5+P	14	
CLAY (A-6)	18	2.9B	16	
	22	7.2B	15	

EOB

RB-32
4049+00
36.5' Left
709.9

		N	Qu	W%
TOPSOIL AS		-		21
CLAY LOAM FILL (A-6)	4	4.0P	12	
	16	4.25P	16	
	16	4.9B	16	
CLAY (A-6)	20	6.2B	15	
	31	10.4B	17	
	21	4.8B	16	
	11	3.9B	13	
SILTY CLAY LOAM (A-4/A-6)	18	NP	12	

EOB

715 710 705 700 695 690 685

709.40 709.59 709.67 709.60 709.43 709.25 709.08 708.90 708.73 708.55 708.38 708.20 708.03 707.85 707.68 707.50 707.33 707.15 706.98 706.91 707.00 707.25 707.65 708.21 708.92 709.79 710.81 711.99

4037+00 4038+00 4039+00 4040+00 4041+00 4042+00 4043+00 4044+00 4045+00 4046+00 4047+00 4048+00 4049+00 4050+00

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	DRAWN - RWC	REVISED -	
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PLOT DATE =	DATE - 3/24/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING
PLAN / PROFILE ILLINOIS ROUTE 59

SCALE: | SHEET NO. OF SHEETS | STA. 4036+50 | TO STA. 4050+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	~~(12 & 13) WRS-5~~	DUPAGE	734	563
		CONTRACT 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
SURVEYED
PLOTTED
DRAWN BY CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
CROSS SECTIONS CHECKED
B.M. NOTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE

PROPOSED R.O.W.
EXISTING R.O.W.
RB-70
DIEHL ROAD
RB-72
85+00
90+00
RB-71
RB-73
COUNTRY LAKES DRIVE
PROPOSED R.O.W.
EXISTING R.O.W.
MATCH LINE STA. 94+00
N
50 0 50 100
HORIZONTAL SCALE: 1"=50'-0"
5 0 5 10
VERTICAL SCALE: 1"=5'-0"

730
725
720
715
710
705
700
695

19
1.0'-2.5" CRUSHED STONE (A-1-a) LL=N/A PL=N/A PI=NP G.I.=0
RB-71
86+25
18.0' Right
718.2

20
1.0'-2.5' CRUSHED STONE (A-1-a) LL=N/A PL=N/A PI=NP G.I.=0
RB-72
89+00
37.0' Left
719.1

RB-70
82+75
42.5' Left
711.8

		N	Qu	W%
TOPSOIL AS		-		22
CLAY LOAM (A-6) FILL	4	2.0P		25
CRUSHED STONE	5	NP		7
CLAY (A-6)	10	3.0S		15
	13	7.3B		15

EOB

		N	Qu	W%
PAVEMENT				
CRUSHED STONE	11	NP		6
SILTY LOAM (A-4)	9	NP		18
CLAY (A-6)	11	3.4B		18
	14	5.1B		18

EOB

		N	Qu	W%
TOPSOIL AS		-		18
CRUSHED STONE	9	NP		7
	11	3.7B		17
CLAY (A-6)	18	9.1B		17
	22	8.4B		18

EOB

RB-73
92+15
27.0' Right
715.2

		N	Qu	W%
PAVEMENT				
CLAY LOAM (A-6) FILL	19	4.5P		18
	12	4.5P		14
CLAY (A-6)	13	4.4S		18
	15	12.9B		17

EOB

712.19 713.09 713.99 714.89 715.79 716.69 717.59 718.41 719.08 719.59 719.94 720.14 720.18 720.07 719.80 719.38 718.79 718.06 717.17 716.12 714.91 713.58 712.24 710.89

82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00 90+00 91+00 92+00 93+00 94+00

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PLOT DATE =	DATE - 3/24/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

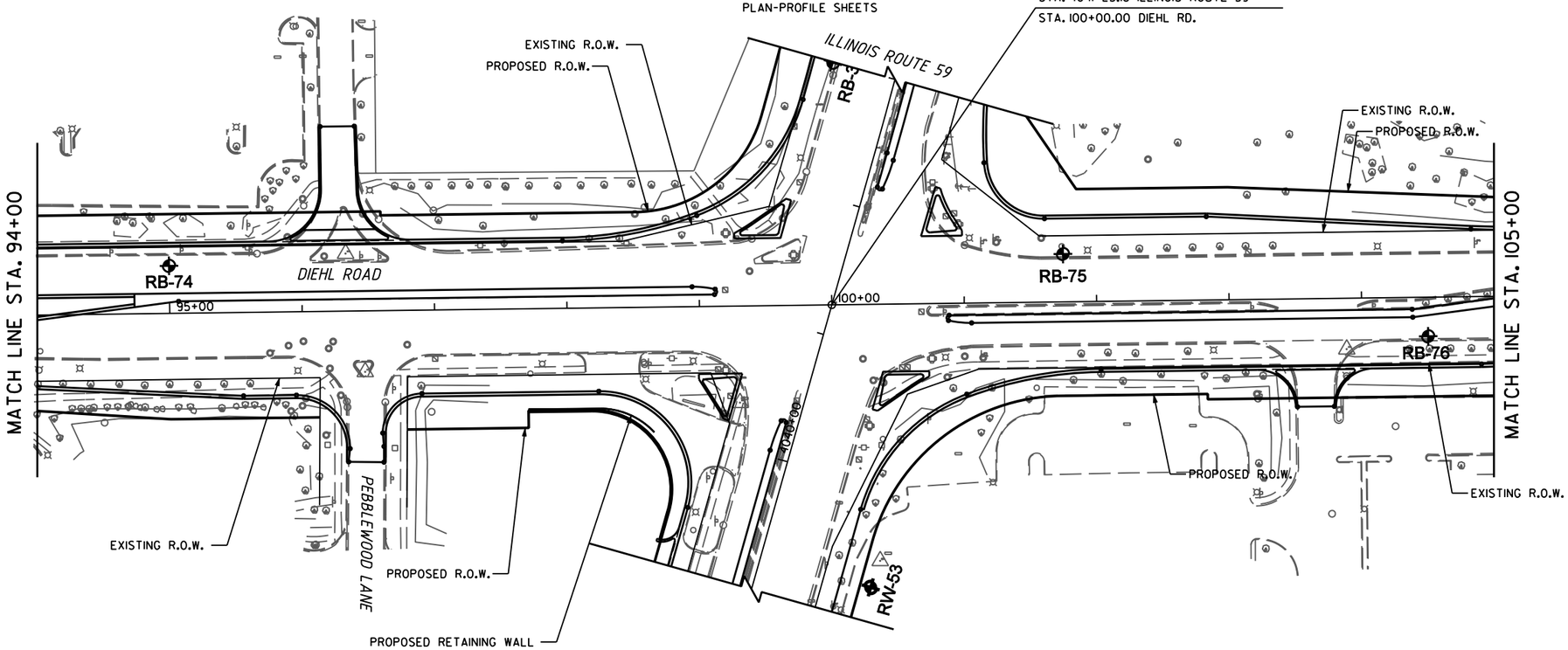
SOIL BORING
PLAN / PROFILE DIEHL ROAD

SCALE: | SHEET NO. OF SHEETS | STA. 81+00 | TO STA. 94+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	~~(II2 & II3) WRS-5~~	DUPAGE	734	564
		CONTRACT 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR CONTINUATION OF IMPROVEMENT
SEE ILLINOIS ROUTE 59
PLAN-PROFILE SHEETS

STA. 404I+23.I8 ILLINOIS ROUTE 59 =
STA. I00+00.00 DIEHL RD.



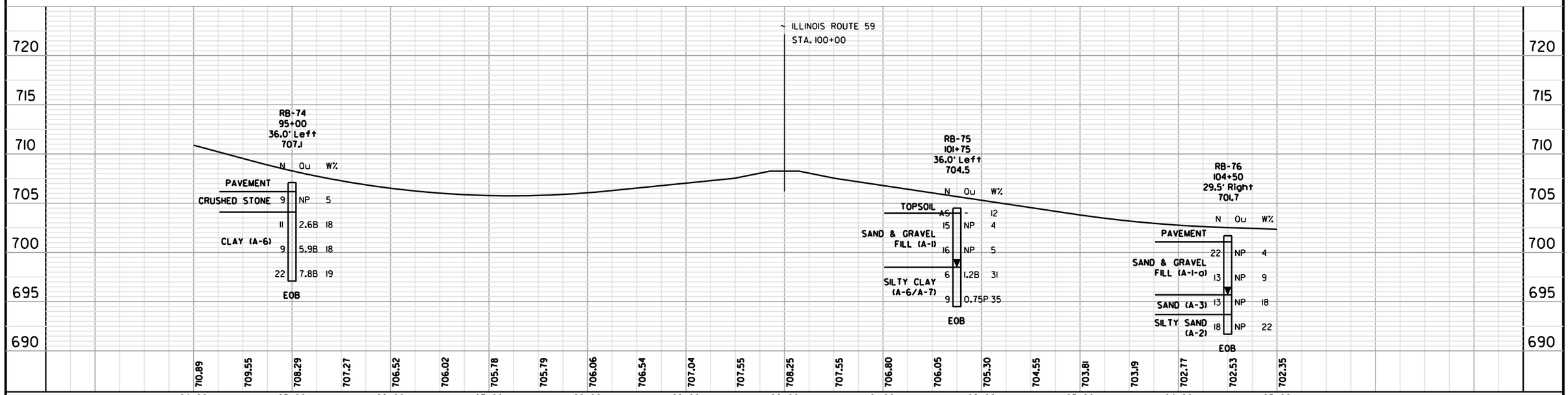
N

50 0 50 100
HORIZONTAL SCALE: I"=50'-0"

5 0 5 I0
VERTICAL SCALE: I"=5'-0"

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
BM. NOTED
STRUCTURE NO'S/ITMS CHKD
NOTE BOOK
NO.
BY
DATE



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	DRAWN - RWC	REVISED -	
PLOT SCALE =	CHECKED - AJP	REVISED -	
PLOT DATE =	DATE - 3/24/20II	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

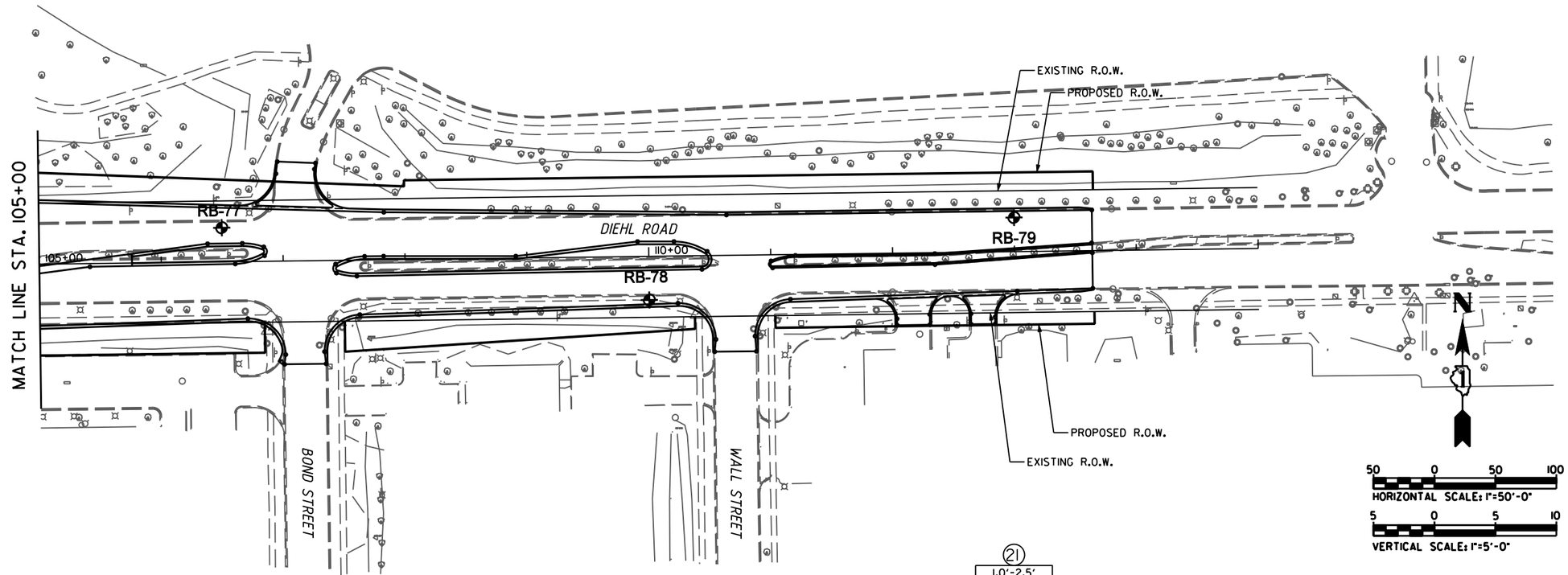
SOIL BORING
PLAN / PROFILE DIEHL ROAD

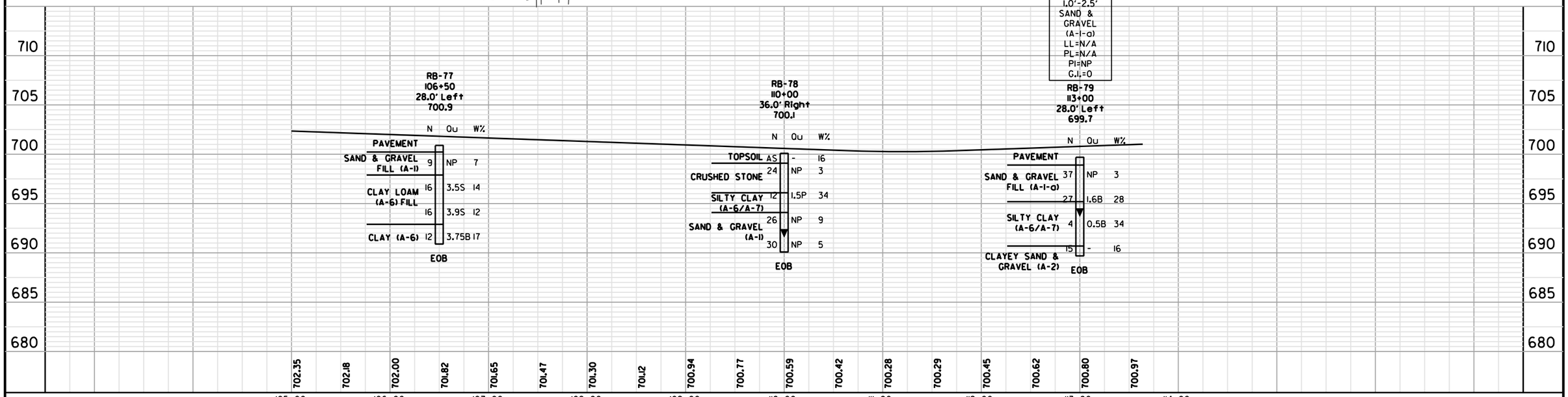
SCALE: | SHEET NO. OF SHEETS | STA. 94+00 | TO STA. I05+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	~~II2 & II3 WRS-5~~	DUPAGE	734	565
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
SURVEYED
PLOTTED
QUANTITIES CHECKED
R.O.W. MONUMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

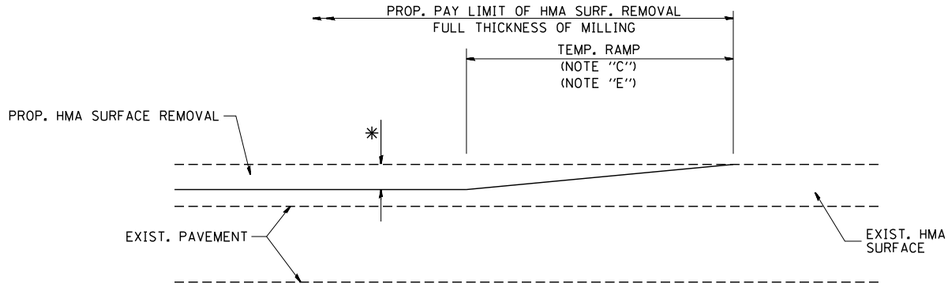
PROFILE
SURVEYED
PLOTTED
QUANTITIES CHECKED
BAL. NOTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE





Geo Services, Inc. Geotechnical, Environmental & Civil Engineering 805 Amherst Court, Suite 204 Naperville, Illinois 60565 (630) 355-2838	USER NAME =	DESIGNED - RWC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING PLAN / PROFILE DIEHL ROAD
		DRAWN - RWC	REVISED -		
	PLOT SCALE =	CHECKED - AJP	REVISED -		SCALE: SHEET NO. OF SHEETS STA. 105+00 TO STA. 115+00
	PLOT DATE =	DATE - 3/24/2011	REVISED -		

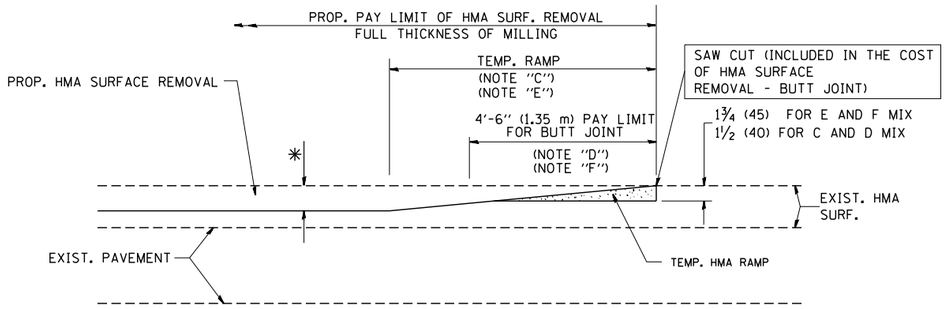
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	~~(112 & 113) WRS-5~~	DUPAGE	734	566
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

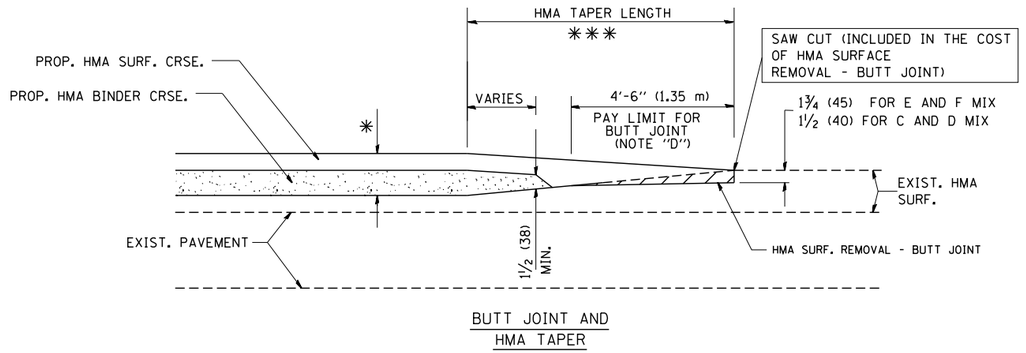


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

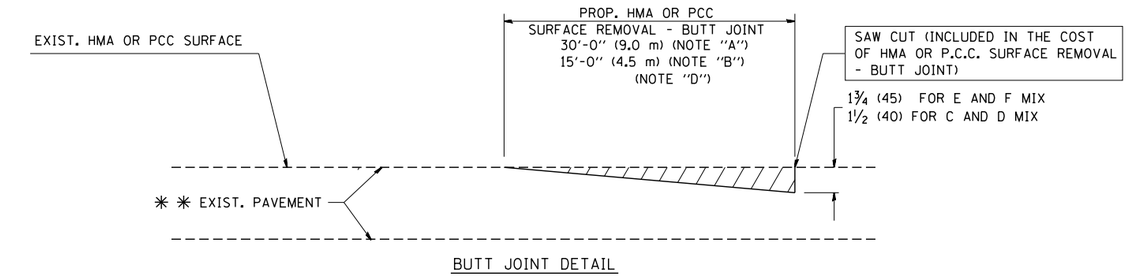
OPTION 2

TYPICAL TEMPORARY RAMP

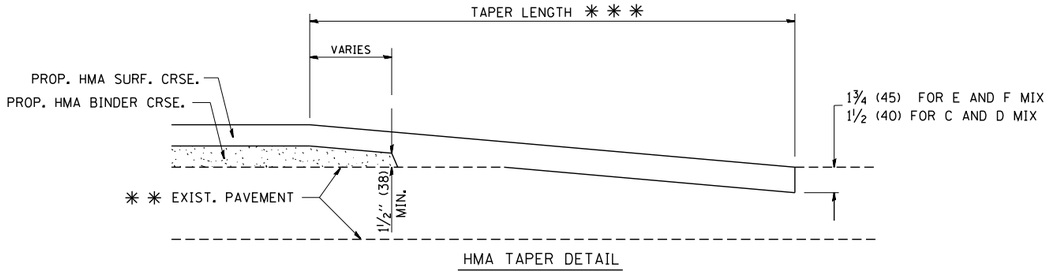


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

* * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

* * * 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

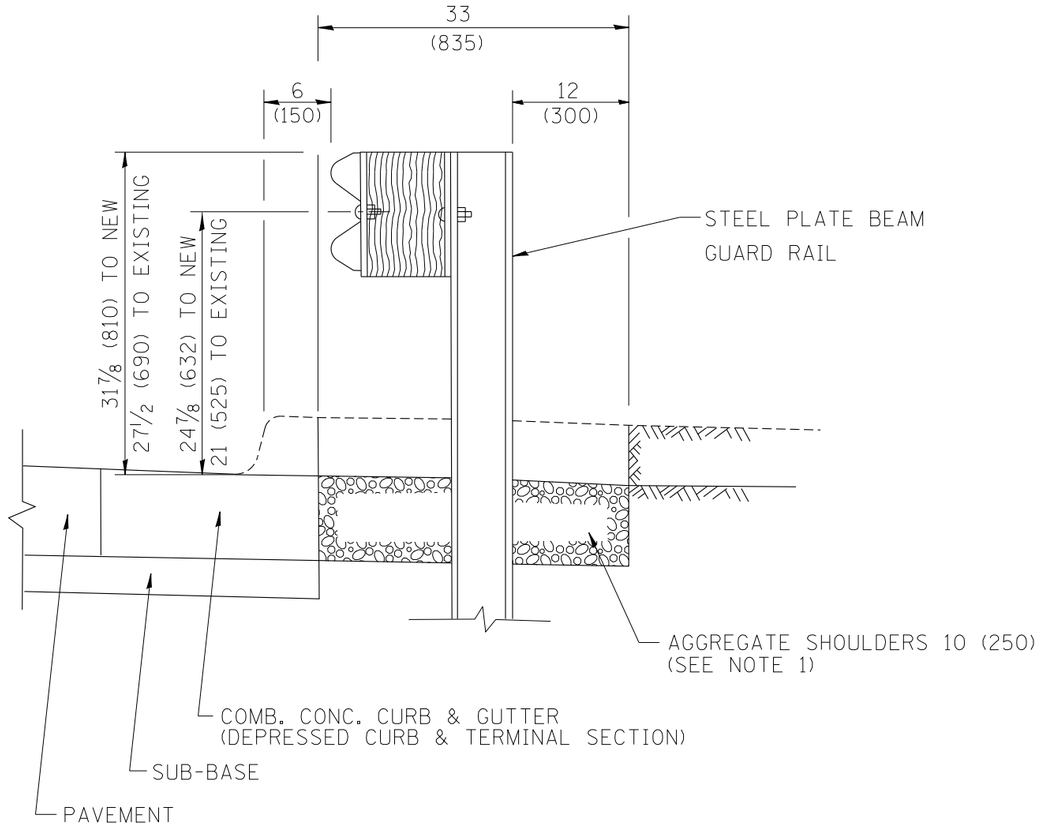
BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\bd32.dgn	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**BUTT JOINT AND HMA TAPER DETAILS**
		DRAWN -	REVISED - A. ABBAS 03-21-97		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01		
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	567
	BD400-05 BD32	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

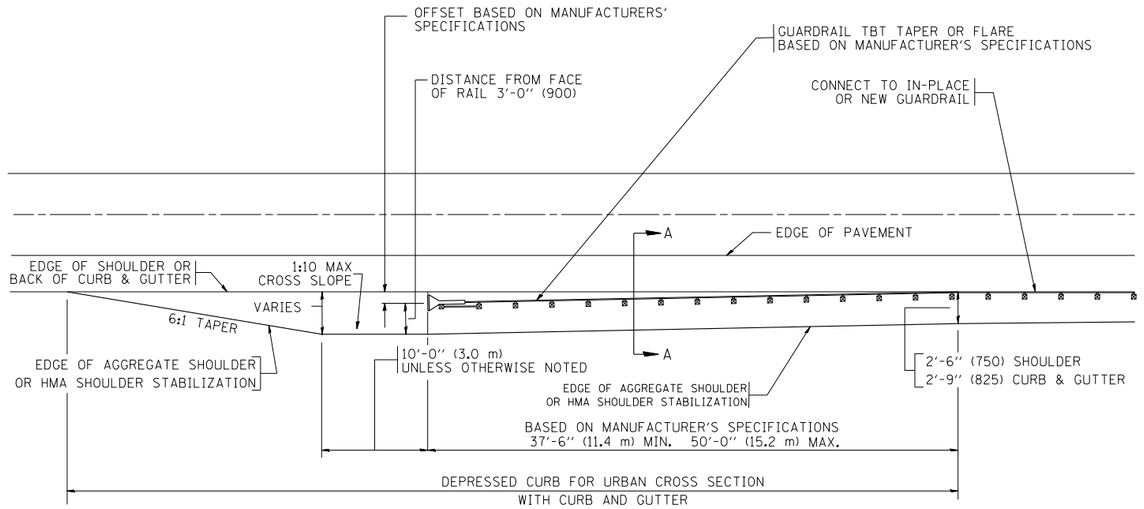


SECTION A-A

NOTES:
1. THE AGGREGATE SHOULDER, 10'' OR HMA SHOULDER, 6'' (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
2. ''EXISTING'' GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER

[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



DEPRESSED CURB AND GUTTER AND SHOULDER TREATMENT AT TBT TY. 1 SPL.

BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR ''HOT-MIX ASPHALT SHOULDERS 6'' (150 mm)''.

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

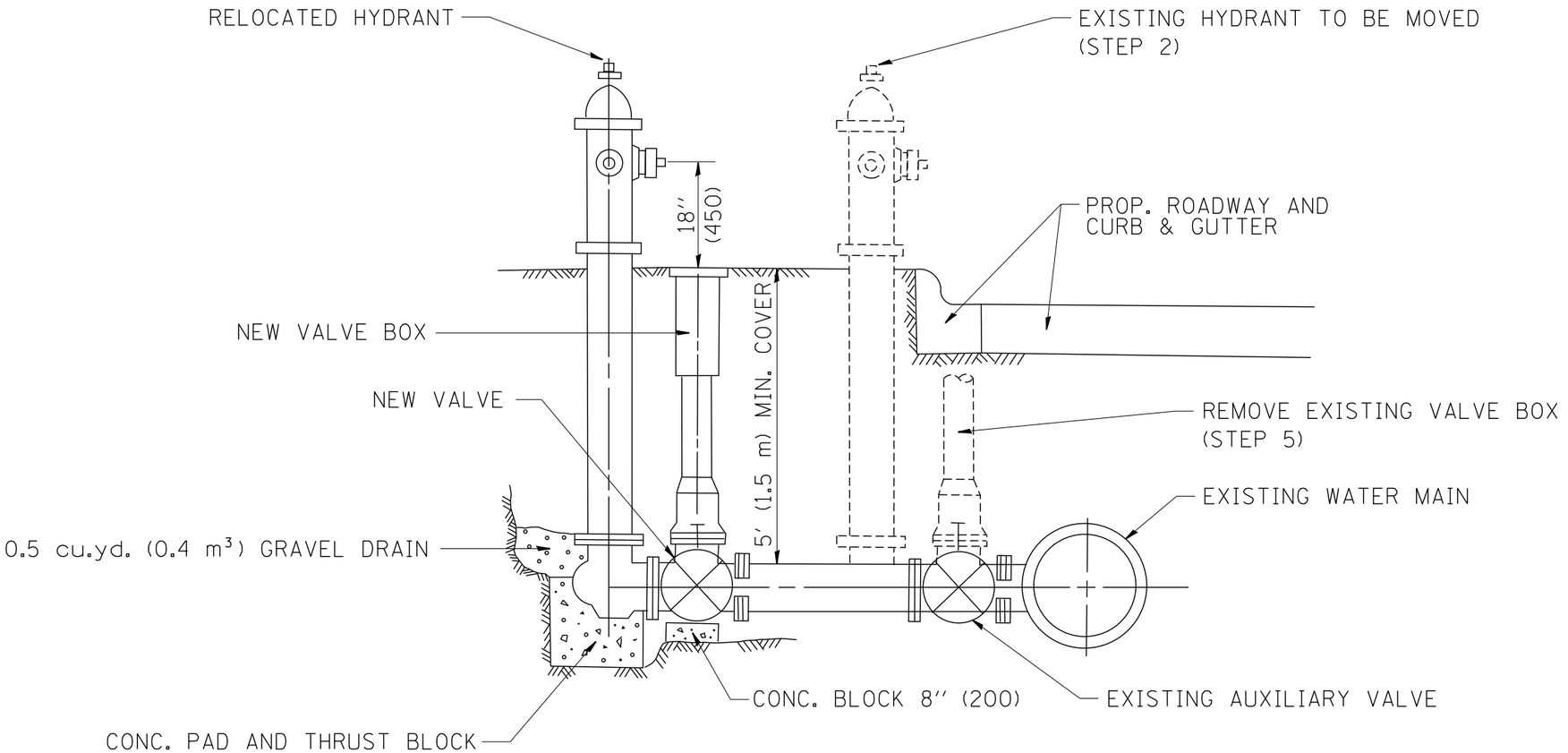
FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\bd34.dgn	USER NAME = drivakosgn	DESIGNED - M. DE YONG	REVISED - E. GOMEZ 08-28-00
		DRAWN -	REVISED - R. BORO 01-01-07
	PLOT SCALE = 49.9999 '/ IN.	CHECKED -	REVISED - R. BORO 12-08-2008
	PLOT DATE = 9/21/2009	DATE - 09-22-90	REVISED - R. BORO 09-14-2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS FOR DEPRESSED CURB & GUTTER AND SHOULDER TREATMENT AT TBT TY 1 SPL.

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	568
	BD600-10 (BD 34)	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SEQUENCE OF CONSTRUCTION:

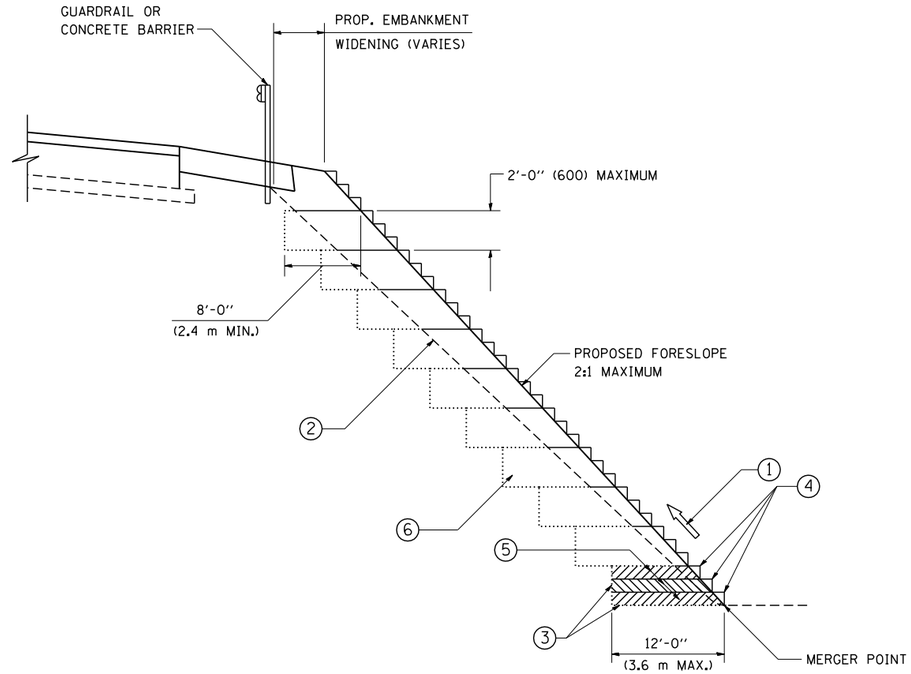
1. CLOSE EXISTING VALVE.
2. REMOVE EXISTING HYDRANT.
3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
4. RELOCATE EXISTING HYDRANT.
5. OPEN EXISTING VALVE, REMOVE BOX.
6. BACKFILL.
7. FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

ALL WORK TO BE DONE IN ACCORDANCE WITH ARTICLE 564 OF THE STANDARD SPECIFICATIONS. NEW VALVE AND BOX SHALL BE SAME MAKE AND MODEL AS EXISTING.

FIRE HYDRANT TO BE MOVED

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\bd36.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - R. SHAH 09-09-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FIRE HYDRANT TO BE MOVED			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. SHAH 10-25-94					338	(112 & 113) WRS-6	DUPAGE	734	569
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -						BD-36	CONTRACT NO. 60R31		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

1. CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
2. EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
3. BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
4. TRIM TO FINAL SLOPE.
5. EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
6. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = W:\diststd\22x34\bd51.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED -
		DRAWN - CADD	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - S.E.B.	REVISED -
	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -

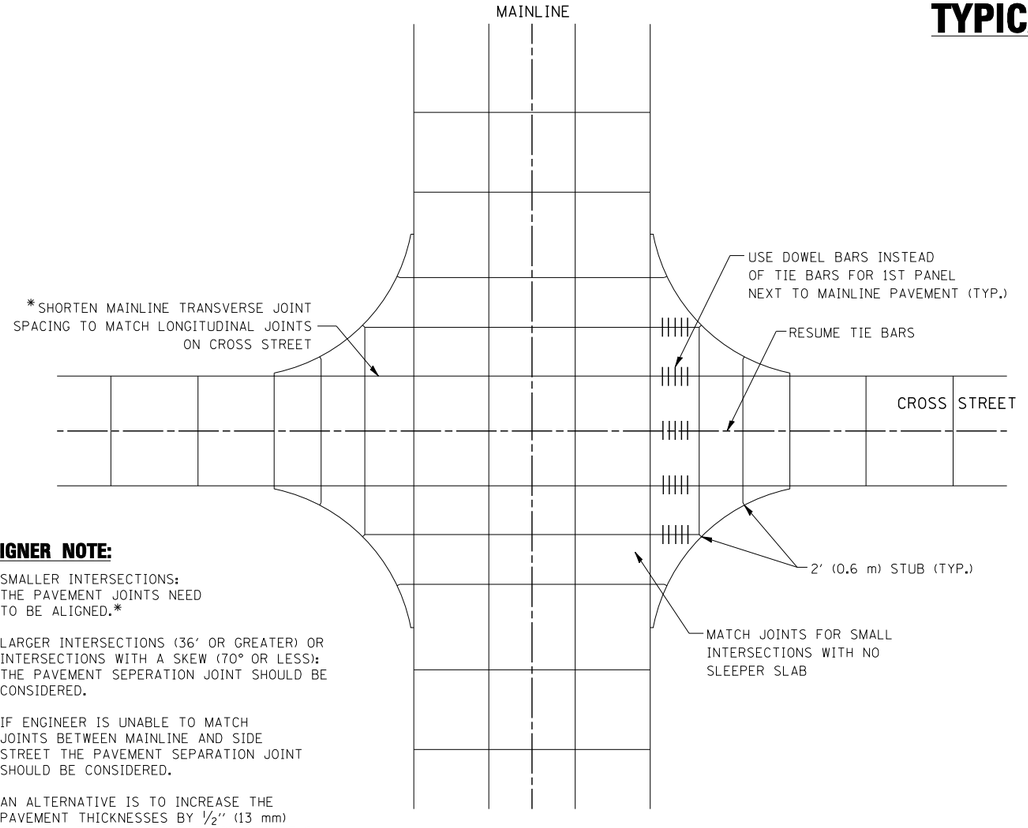
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL
FOR EMBANKMENT WIDENING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	570
	BD-51	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TYPICAL APPLICATION

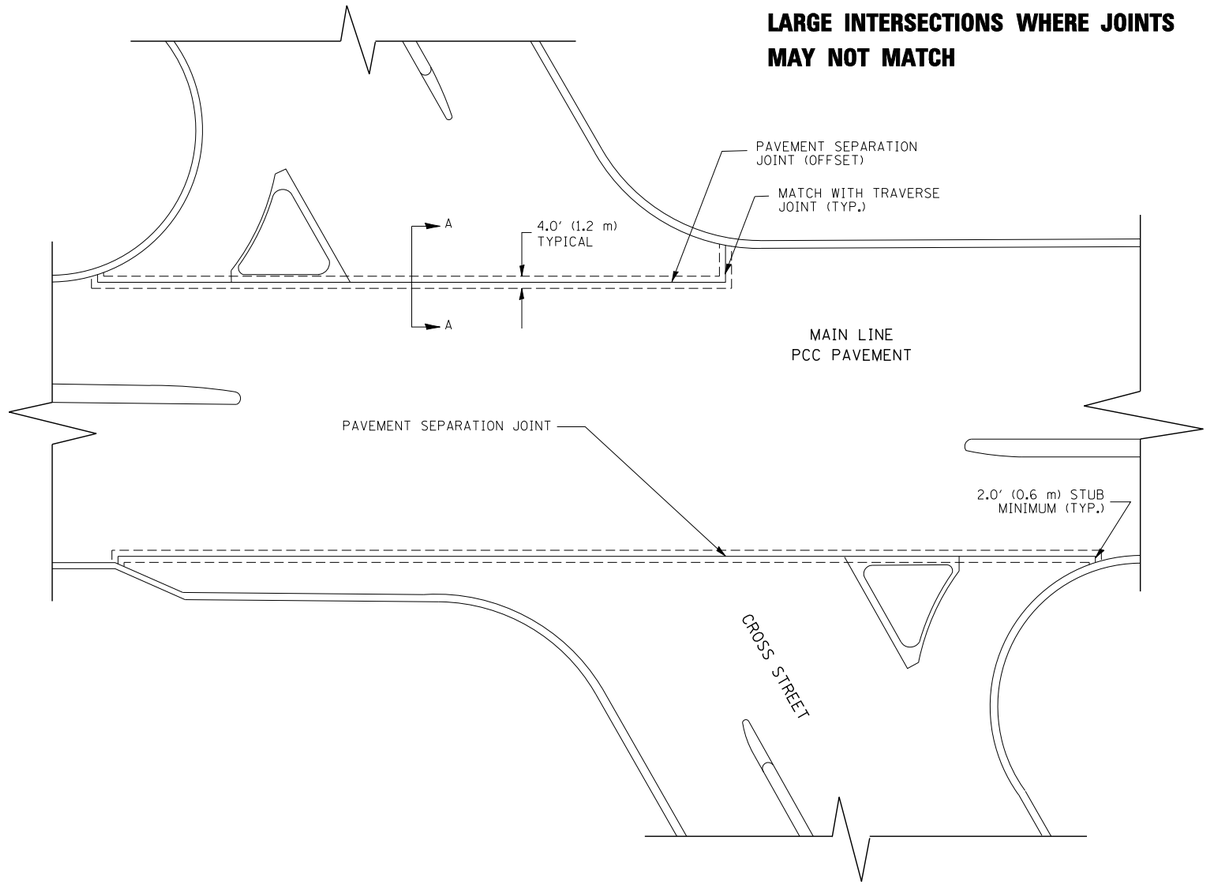


PLAN

DESIGNER NOTE:

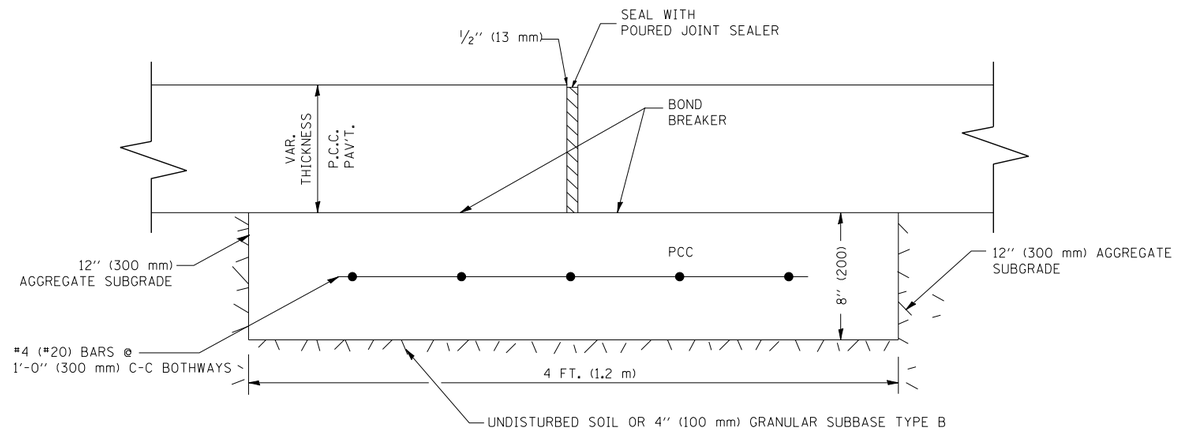
1. SMALLER INTERSECTIONS: THE PAVEMENT JOINTS NEED TO BE ALIGNED.*
2. LARGER INTERSECTIONS (36' OR GREATER) OR INTERSECTIONS WITH A SKEW (70° OR LESS): THE PAVEMENT SEPERATION JOINT SHOULD BE CONSIDERED.
3. IF ENGINEER IS UNABLE TO MATCH JOINTS BETWEEN MAINLINE AND SIDE STREET THE PAVEMENT SEPARATION JOINT SHOULD BE CONSIDERED.
4. AN ALTERNATIVE IS TO INCREASE THE PAVEMENT THICKNESSES BY 1/2" (13 mm) FOR THE LENGTH OF THE AFFECTED PANELS AT THE INTERSECTION. FOR LARGE INTERSECTIONS (6 LANES
5. OR MORE) WHERE JOINTS CAN BE MATCHED, USE #8 (25) DOWEL BARS INSTEAD OF #8 (25) TIE BARS AT EDGE OF MAINLINE PAVEMENT WHEN NO PAVEMENT SEPARATION JOINTS USED.

THE USE OF CROSS STREET PAVEMENT SEPARATION JOINTS FOR SKEWED OR LARGE INTERSECTIONS WHERE JOINTS MAY NOT MATCH



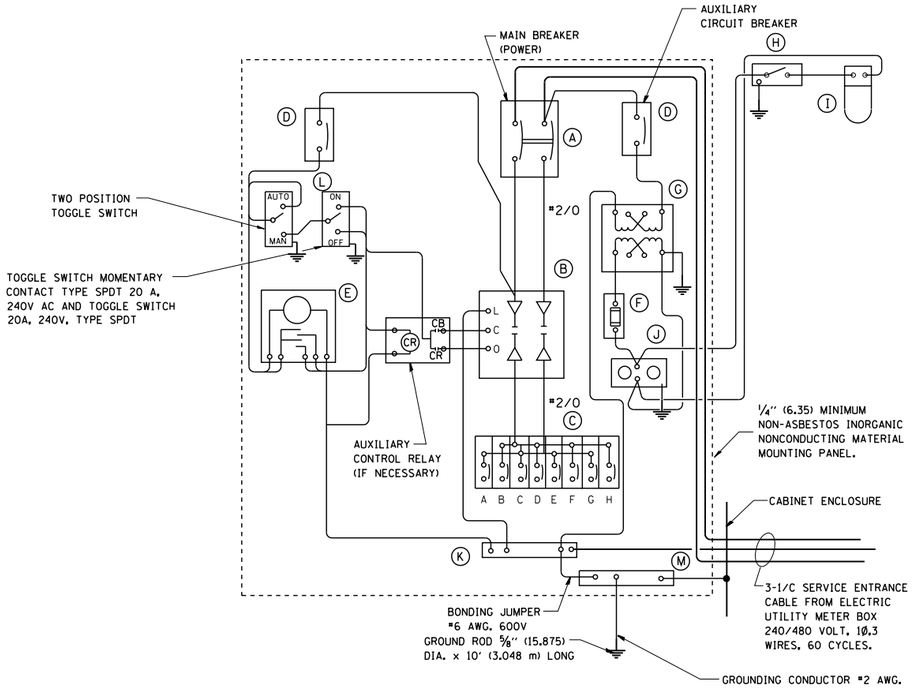
NOTE:

1. JOINT FILLER SHALL CONSIST OF A SHEET OF 1/2" (13 mm) BITUMINOUS PREFORMED FIBER JOINT FILLER CONFORMING TO ARTICLE 1051.03 OF THE STANDARD SPECIFICATIONS.
2. THE JOINT SHALL BE SEALED WITH A HOT POUR JOINT SEALER CONFORMING TO ARTICLE 1050.02 OF THE STANDARD SPECIFICATIONS.
3. A SINGLE LAYER OF FELT ROOFING PAPER SHALL SERVE AS A BOND BREAKER.
4. JOINT SHALL CONTINUE THROUGH COMBINATION CURB & GUTTER OR PCC SHOULDER.
5. PAVEMENT SEPARATION JOINT IS TO BE PAID FOR AS "SLEEPER SLAB" AND IS TO BE MEASURED IN PLACE BY THE LINEAL FOOT.
6. BOND BREAKER AND 1/2" (13 mm) JOINT AND FILLER SHALL BE INCIDENTAL TO THE PAY ITEM "SLEEPER SLAB".



PROPOSED SECTION A–A

FILE NAME = bd52.dgn	USER NAME = leyso	DESIGNED -	REVISED - CADD 06-18-10	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**DETAIL OF PAVEMENT SEPARATION JOINT FOR JOINTED PCC PAVEMENTS AT INTERSECTIONS**	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			338	(112 & 113) WRS-6	DUPAGE	734	571
	PLOT SCALE = 49.9999 '/ IN.	CHECKED -	REVISED -				**BD52**	CONTRACT NO. 60R31		
	PLOT DATE = 2/25/2011	DATE -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

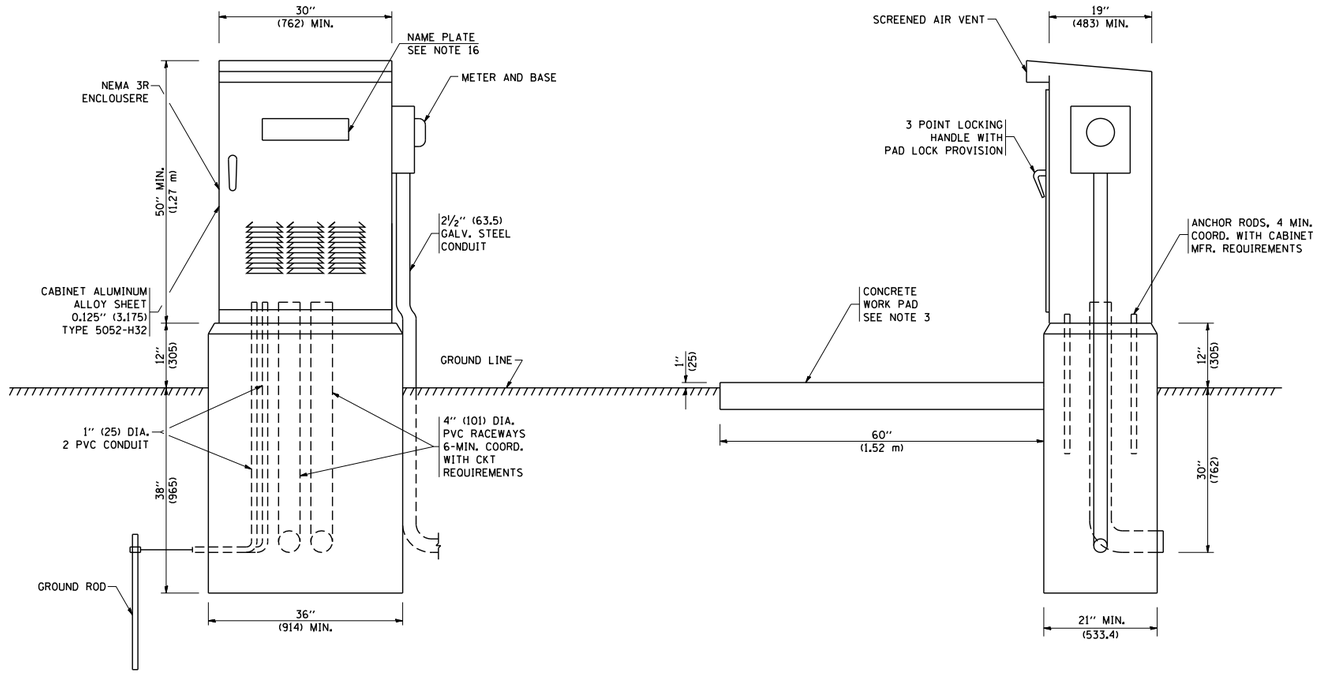


PANEL WIRING DIAGRAM

PANEL EQUIPMENT

BILL OF MATERIAL

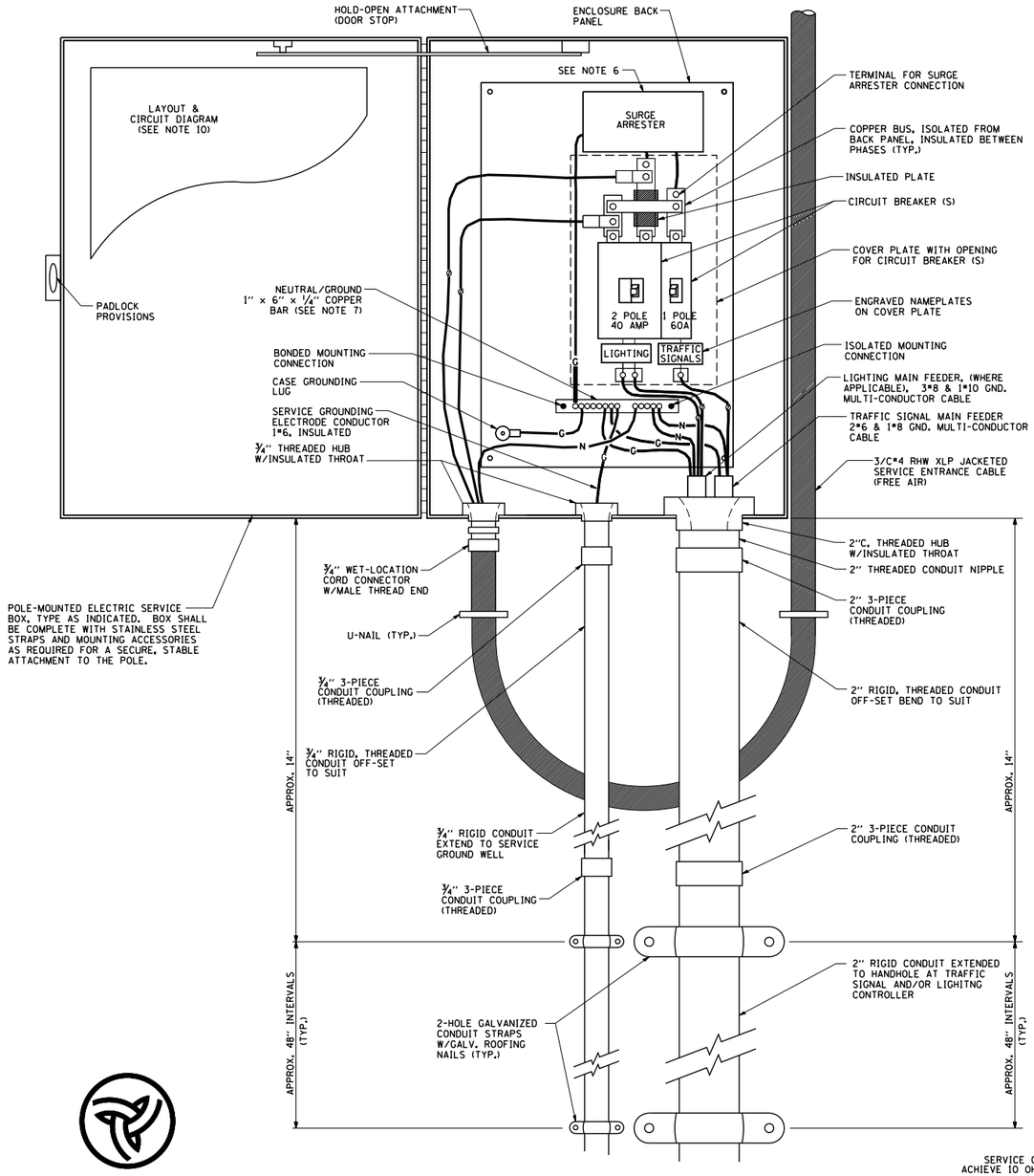
ITEM	QUANTITY	DESCRIPTION
A	1	MAIN CIRCUIT BREAKER, 2 POLE, 600 VOLT 100 AMP. FRAME, 100 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-22000 AMP. AT 480 VOLT.
B	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 100 AMP., 600 VOLTS CONTROL CIRCUIT 240 VOLT.
C	8	CIRCUIT BREAKERS, 1 POLE, 100AMP. FRAME , 50 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-10,000 AMP. AT 240 V.
D	2	CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 240 V., 100 AMP. FRAME, 15 AMP. NON-INTERCHANGEABLE TRIP INTERRUPTING RATING NEMA-5000 AMP. AT 240 V.
E	1	ASTRONOMIC MICROPROCESSOR-BASED 2-CHANNEL CONTROLLER [TIME SWITCH].
F	1	20 A., 120 V. FUSE.
G	1	1.5 KVA, SINGLE PHASE, ENCAPSULATED TRANSFORMER 240 X 480 / 120 X 240 VOLT, 60 Hz.
H	1	SPST 20A SWITCH ON DOOR, TO TURN LIGHT ON WHEN DOOR IS OPEN,
I	1	INCANDESCENT LIGHTING FIXTURE ENCLOSED AND GASKETED WITH 60 WATT, 120 V. LAMP.
J	1	20 A., 120 V., DUPLEX RECEPTACLE, GFCI.
K	1	COPPER GROUND BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
L	1	TOGGLE SWITCHES MOUNTED IN 4" (101.6) X 4" (101.6 mm) BOX.
M	1	COPPER GROUND BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND SPARE LUGS



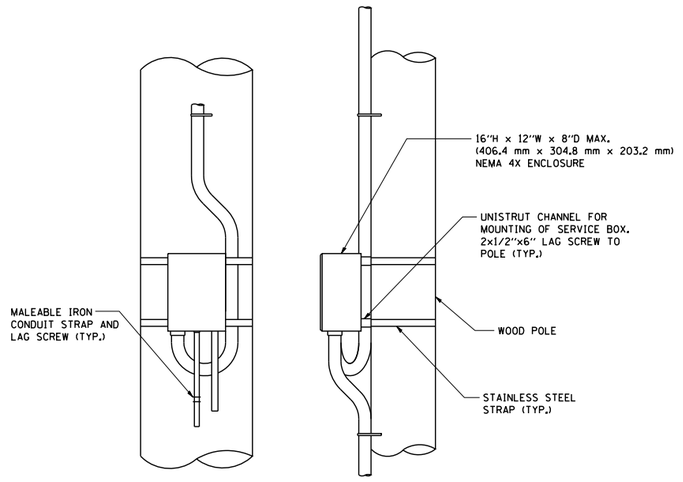
NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. FOUNDATION SIZE SHALL BE COORDINATED WITH CABINET SIZE AND MFR.
3. IN FRONT OF CONTROL CABINET DOOR, REMOVE VEGETATION AND 2" (50.8 mm) TOP SOIL, LEVEL THE AREA AND ON TOP, PLACE LENGTH WISE PARALLEL TO CONTROL CABINET, A CONCRETE PAD 36" (914.4 mm) x 60" (18.288 m) x 4" (101 mm) MIN. SIZE. THE COST OF LABOR AND MATERIALS ARE INCLUDED IN THE COST OF THE CONTROLLER.
4. DOOR SHALL BE CONSTRUCTED FROM SAME TYPE OF MATERIAL AND THICKNESS AS CABINET.
5. DOOR SHALL BE EQUIPPED WITH THREE POINT LATCHING MECHANISM WITH NYLON ROLLERS AT TOP THE BOTTOM.
6. DOOR HINGE SHALL BE A HEAVY GAUGE CONTINUOUS HINGE WITH A 1/4" (6.35 mm) DIA. STAINLESS STEEL HINGE PIN.
7. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL.
8. CONTROL WIRING TO BE #12 AWG, 600V, TYPE "SIS" GRAY SWITCH BOARD WIRE, STRANDED COPPER.
9. METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET, NEAR TO THE SERVICE POLE.
10. CABINETS SHALL BE PRIMED AND PAINTED AS SPECIFIED.
11. THE HEADS OF CONNECTORS SCREWS SHALL BE PAINTED WHITE FOR NEUTRAL BAR CONNECTION AND GREEN FOR GROUND BAR CONNECTORS.
12. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED.
    R = RED BL = BLUE W = WHITE
    B = BLACK Y = YELLOW G = GREEN
13. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL CABINET.
14. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
15. THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL".
16. 12" (304.8) X 16" (406.4 mm) STAINLESS STEEL EXTERIOR NAMEPLATE SHALL BE ENGRAVED TO "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.

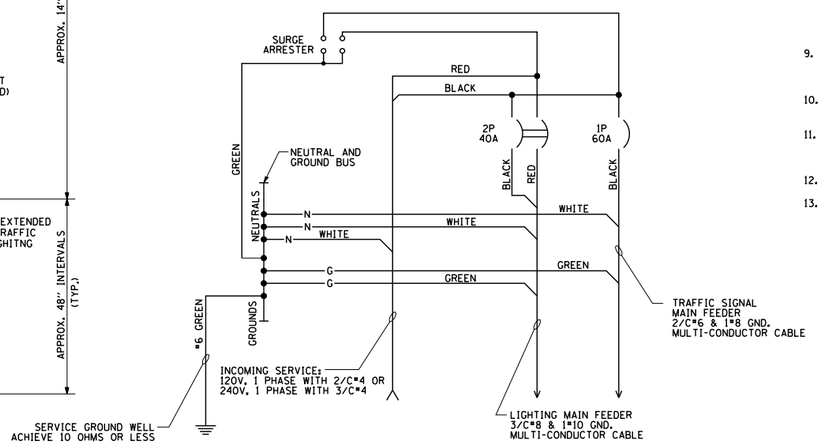
FILE NAME = W:\diststd\22x34\be215.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-20-04	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**LIGHTING CONTROLLER SINGLE DOOR**		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				338	(112 & 113) WRS-6	DUPAGE	734	572
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -					**BE-215**	CONTRACT NO. 60R31		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



POLE-MOUNTED ELECTRIC SERVICE ENTRANCE
GENERAL LAYOUT DIAGRAM



DISCONNECT MOUNTING DETAIL
N.T.S.



SCHEMATIC DIAGRAM

NOTES:

1. ELECTRIC SERVICE SHALL BE OF THE VOLTAGE INDICATED OR DESIGNATED BY THE ENGINEER, AND SERVICE DROP CABLE SHALL BE COMPATIBLE WITH THE SERVICE ACCORDINGLY. SOME INSTALLATIONS MAY CALL FOR SERVICE ENTRANCE EQUIPMENT SUITABLE FOR 3-WIRE SERVICE EVEN THOUGH INITIALLY WIRED FOR 2-WIRE SERVICE.
2. THE POLE-MOUNTED ELECTRIC SERVICE BOX DETAIL DEPICTS THE BASIC CONSTRUCTION OF THE EQUIPMENT. SLIGHT MODIFICATIONS APPLY FOR DIFFERING SERVICES AND APPLICATIONS AS FOLLOWS:
   - TYPE A — FULLY EQUIPPED FOR 240/120V. 3W SERVICE, COMPLETE WITH LIGHTING MAIN BREAKER
   - TYPE A1 — FULLY EQUIPPED FOR 240/120V. 3W SERVICE, BLANK COVER IN LIEU OF LIGHTING MAIN BREAKER
   - TYPE B — EQUIPPED FOR 120V. SERVICE, COMPLETE WITH 1P, 60A. TRAFFIC SIGNALS MAIN BREAKER
   - TYPE B1 — EQUIPPED FOR 120V. SERVICE, COMPLETE WITH 1P, 40A. TRAFFIC SURVEILLANCE MAIN BREAKER
3. THE ELECTRIC SERVICE EQUIPMENT ASSEMBLY SHALL BE UL LISTED AS SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT.
4. THE ELECTRIC SERVICE EQUIPMENT ENCLOSURE SHALL BE NEMA 4X STAINLESS STEEL, NOMINALLY 12"W X 16"H X 8"D, WITH A PIANO-HINGED DOOR, STEEL BACK PANEL, FAST-ACTING STAINLESS STEEL ENCLOSURE CLAMPS, PADLOCK PROVISIONS AND DOOR STOP. HOFFMAN CATALOG NO. A-16H12085SSGLP/A-16 P12/A-DSTOPK/C-PMK12, OR APPROVED EQUAL.
5. CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC BOLT-ON TYPE WITH A MINIMUM INTERRUPTING CAPACITY OF 25,000 SYMMETRICAL AMPERES AT 240 VOLTS. THEY SHALL BE LOCKABLE IN THE "OFF" POSITION FOR COMPLIANCE WITH OSHA LOCK-OUT/ TAG-OUT REQUIREMENTS. HANDLES SHALL BE TRIP FREE.
6. THE SURGE PROTECTOR SHALL BE SUITABLE FOR 240/120 VOLT SINGLE PHASE 60HZ AC ELECTRICAL SERVICE, WITH A SURGE ENERGY CAPABILITY OF 2160 JOULES OR BETTER AT 8/20 MICRO-SECONDS, RATED -40 TO 60 DEGREES C., WITH LED OPERATING INDICATORS, AND SHALL BE UL LISTED PER UL 1449, CUTLER-HAMMER CMOV230L065XST OR APPROVED EQUAL.
7. BUS BARS, CONNECTORS, AND LUGS SHALL BE COPPER, INSULATED AND ISOLATED, AND CONFIGURED TO PREVENT SHORTED CONDITIONS FROM TIGHTENING TERMINATIONS, ETC. THE OVERALL BUS SECTION SHALL BE CONFIGURED BEHIND AN INSULATING BARRIER SHIELD WHICH IS REMOVABLE FOR ACCESS TO CONNECTIONS, OR THE ASSEMBLY SHALL BE A MANUFACTURED SPECIALTY PANELBOARD, CUTLER-HAMMER PRL2A OR APPROVED EQUAL.
8. THE COMBINATION GROUND AND NEUTRAL BAR SHALL BE CONFIGURED WITH SEPARATE GROUND AND NEUTRAL SECTIONS AND SPARE TERMINALS AS INDICATED. THE HEADS OF GROUND SCREWS SHALL BE PAINTED GREEN. THE HEADS OF NEUTRAL SCREWS SHALL BE PAINTED WHITE. THE SERVICE NEUTRAL AND SERVICE GROUNDING ELECTRODE CONDUCTOR SHALL BE TERMINATED ADJACENT TO EACH OTHER AT THE DIVIDE BETWEEN THE SECTIONS AND WIRING SHALL BE TERMINATED ONLY UPON THE APPROPRIATE SECTION.
9. THE WIRING TERMINALS, INCLUDING THE GROUND/NEUTRAL BAR SHALL BE ARRANGED TO PROVIDE ADEQUATE ROOM FOR PERFORMING FIELD TERMINATIONS.
10. A PLASTIC LAMINATED LAYOUT AND CIRCUIT DIAGRAM SHALL BE MECHANICALLY SECURED TO THE INTERIOR SIDE OF THE ENCLOSURE DOOR.
11. A 2-COLOR ENGRAVED PLASTIC NAMEPLATE, ATTACHED WITH SCREWS, AND ENGRAVED AS INDICATED, SHALL BE PROVIDED FOR EACH MAIN BREAKER.
12. LUGS AND CONNECTORS SHALL BE RATED FOR 75°C CONDUCTOR.
13. THE EXACT MOUNTING HEIGHT OF THE BOX SHALL BE FIELD DETERMINED TO AVOID OBSTRUCTIONS AND PUBLIC ACCESS. TYPICAL HEIGHT SHALL BE APPROXIMATELY 10 FEET ABOVE GRADE.

6" DECAL ON FRONT COVER

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		DRAWN -	REVISED -
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	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

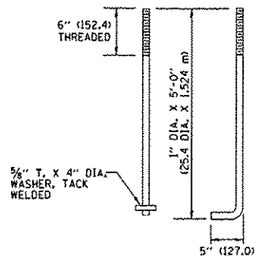
COMBINATION LIGHTING & TRAFFIC POLE MOUNTED ELECTRIC SERVICE BOX DETAIL

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

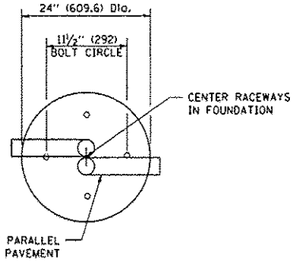
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	573
	BE-230	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LIGHT POLE FOUNDATION DEPTH TABLE
30 FT. (9.144 m) TO 35 FT. (10.668 m) MOUNTING HEIGHT

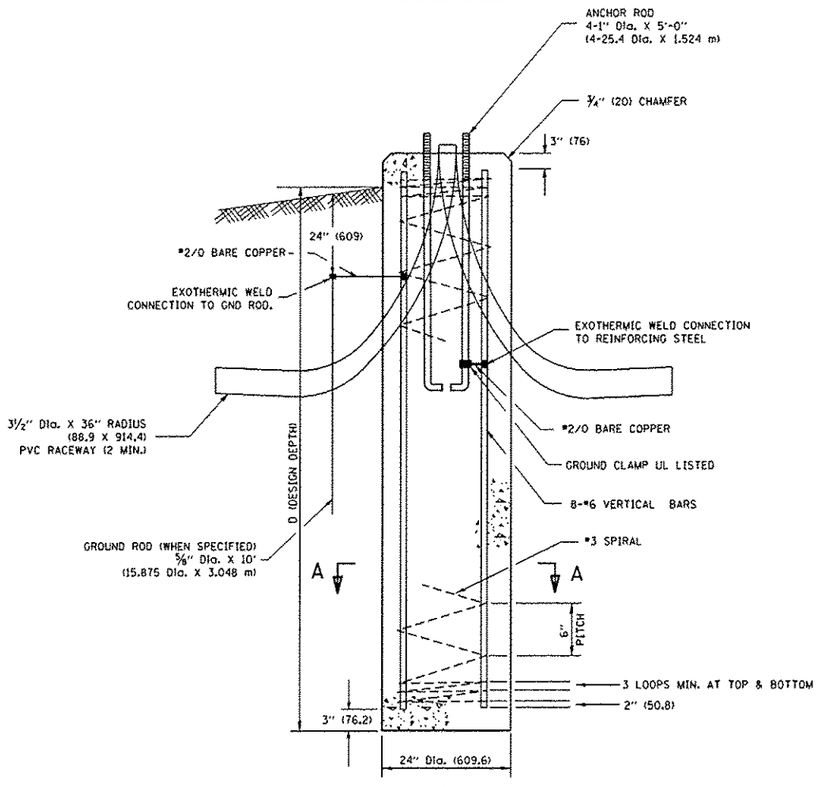
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	11'-0" (3.35 m)	12'-8" (3.85 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-0" (2.74 m)	14'-10" (4.52 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-6" (2.29 m)	8'-7" (2.61 m)
LOOSE SAND Ø = 34°	9'-6" (2.90 m)	10'-7" (3.22 m)
MEDIUM SAND Ø = 37.5°	9'-0" (2.74 m)	9'-10" (2.99 m)
DENSE SAND Ø = 40°	8'-3" (2.51 m)	9'-7" (2.91 m)



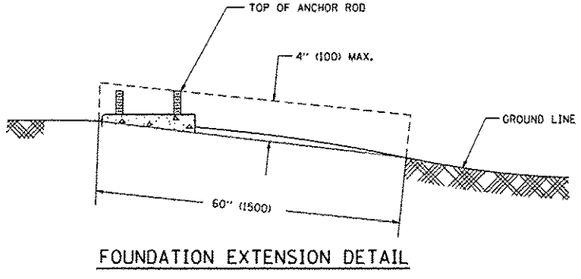
ANCHOR BOLT DETAIL



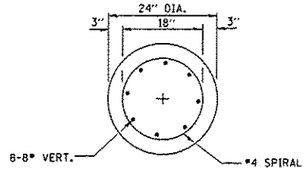
TOP VIEW



FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A

NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
3. THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 4 IN. (100 mm) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
4. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
5. THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED ¾-IN. (20 mm).
6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
7. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
8. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
9. ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
11. ANCHOR RODS SHALL PROJECT 2¾" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
12. THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
14. THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

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	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

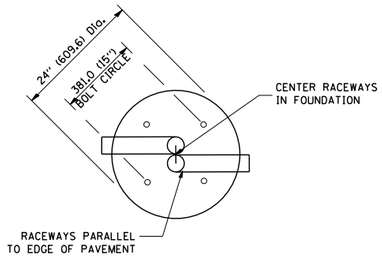
LIGHT POLE FOUNDATION
30' (9.144 m) TO 35' (10.668 m) M.H. 11 1/2" (292 mm) BOLT CIRCLE

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

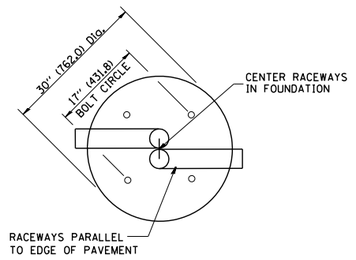
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113)WRS-G	DUPAGE	734	573A
	BE-300	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LIGHT POLE FOUNDATION DEPTH TABLE
40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

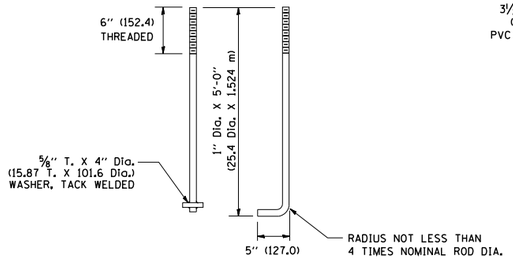
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)	15'-0" (4.57 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.09 m)	10'-9" (3.23 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)	8'-0" (2.44 m)
LOOSE SAND Ø = 34°	9'-0" (2.74 m)	10'-0" (3.05 m)
MEDIUM SAND Ø = 37.5°	8'-3" (2.52 m)	9'-0" (2.74 m)
DENSE SAND Ø = 40°	7'-9" (2.36 m)	9'-0" (2.74 m)



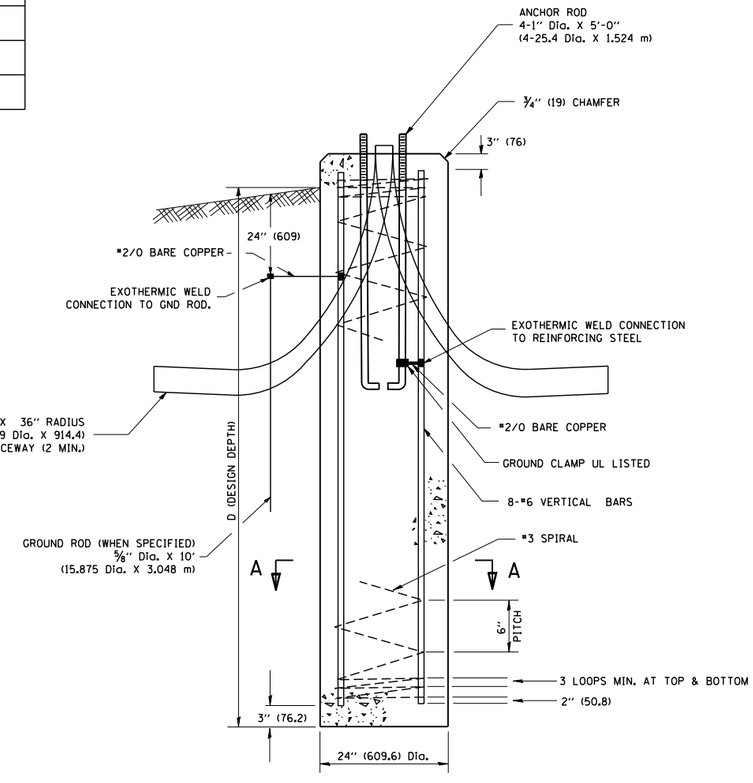
TOP VIEW



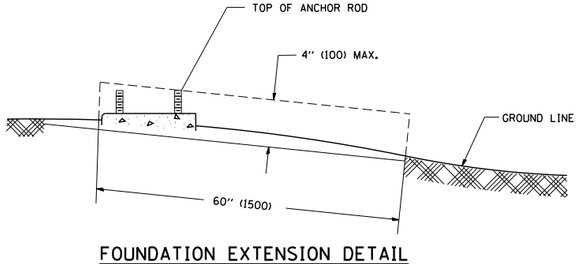
TOP VIEW



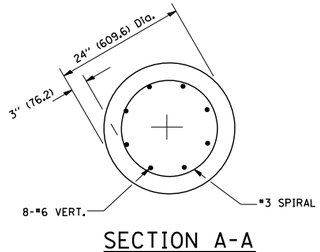
ANCHOR ROD DETAIL



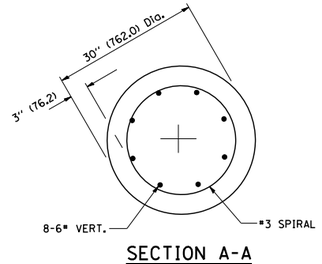
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SECTION A-A

NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
3. THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
4. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
5. THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
7. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
8. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
9. ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
11. ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
12. THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
14. THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

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	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHT POLE FOUNDATION
40' (12.192 m) TO 47 1/2' (14.478 m) M.H. 15" (381 mm) BOLT CIRCLE

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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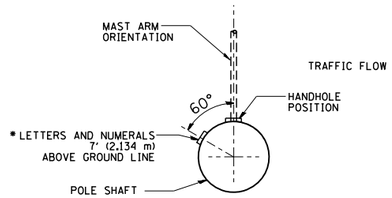
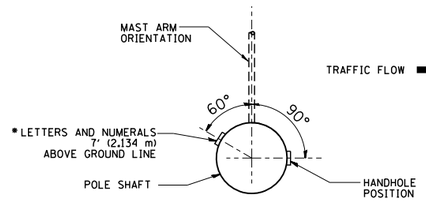
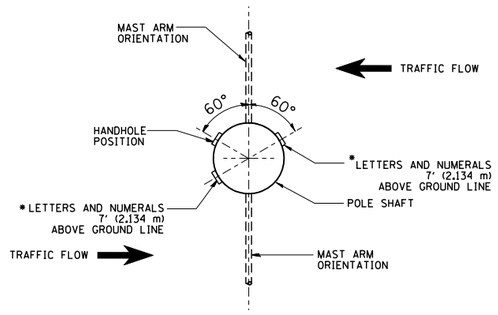
	BE-301	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



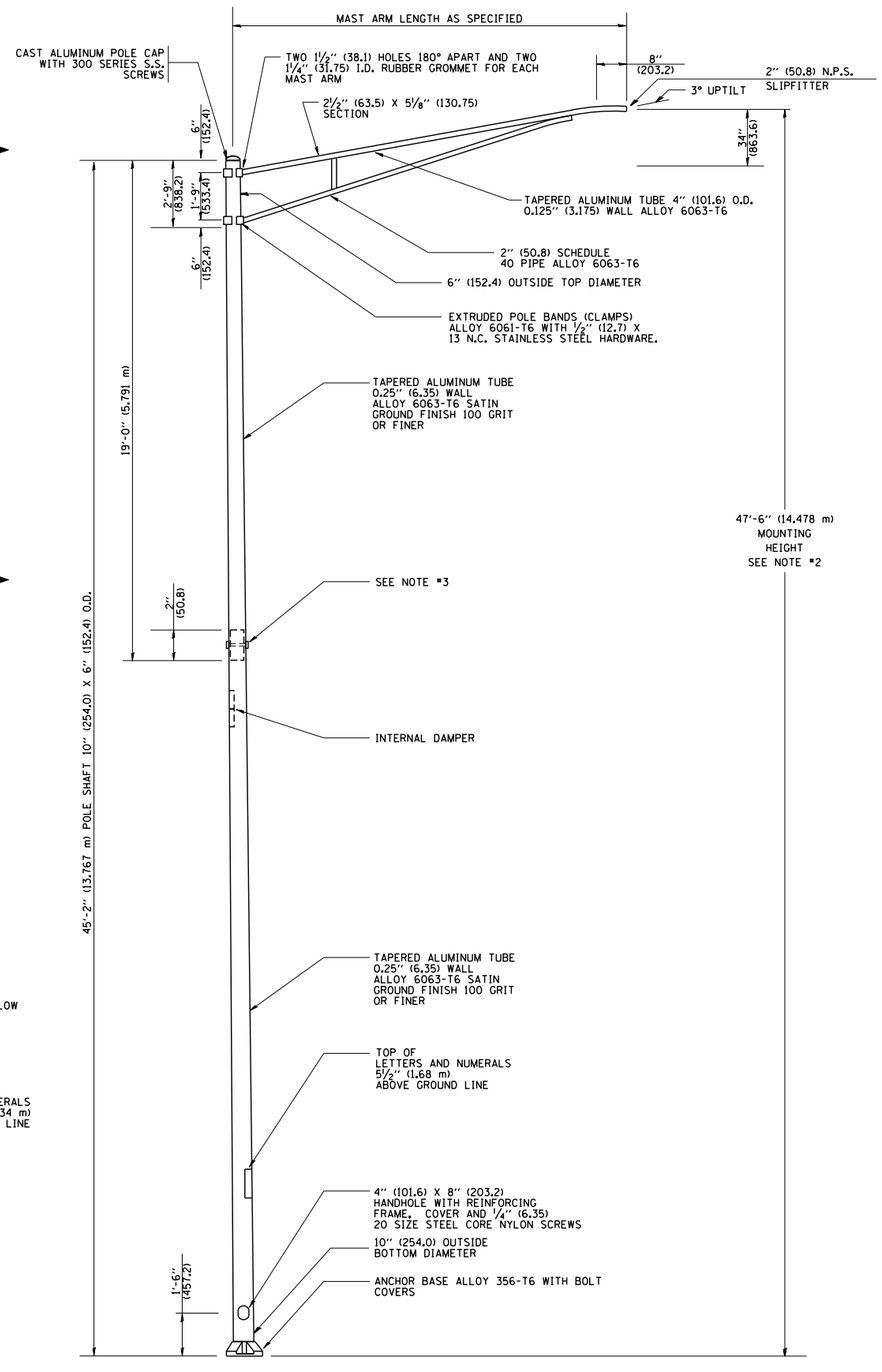
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL

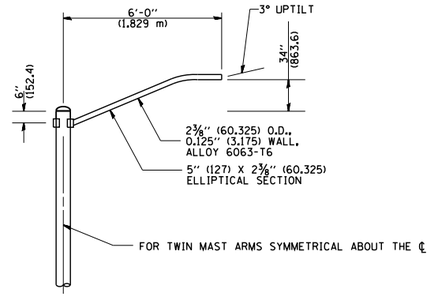


POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES

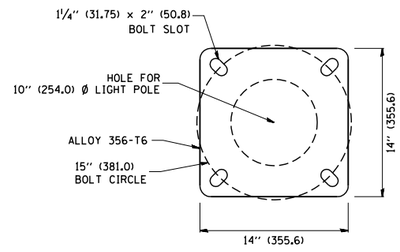




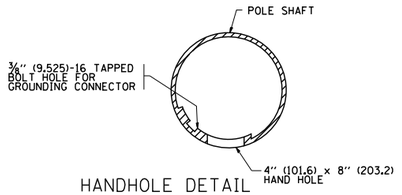
6' (1.8 m) SINGLE MEMBER MAST ARM
(N.T.S.)

NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR. BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
8. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.



LIGHT POLE BASE PLATE DETAIL
15 INCH (381.0) BOLT CIRCLE



HANDHOLE DETAIL
(N.T.S.)

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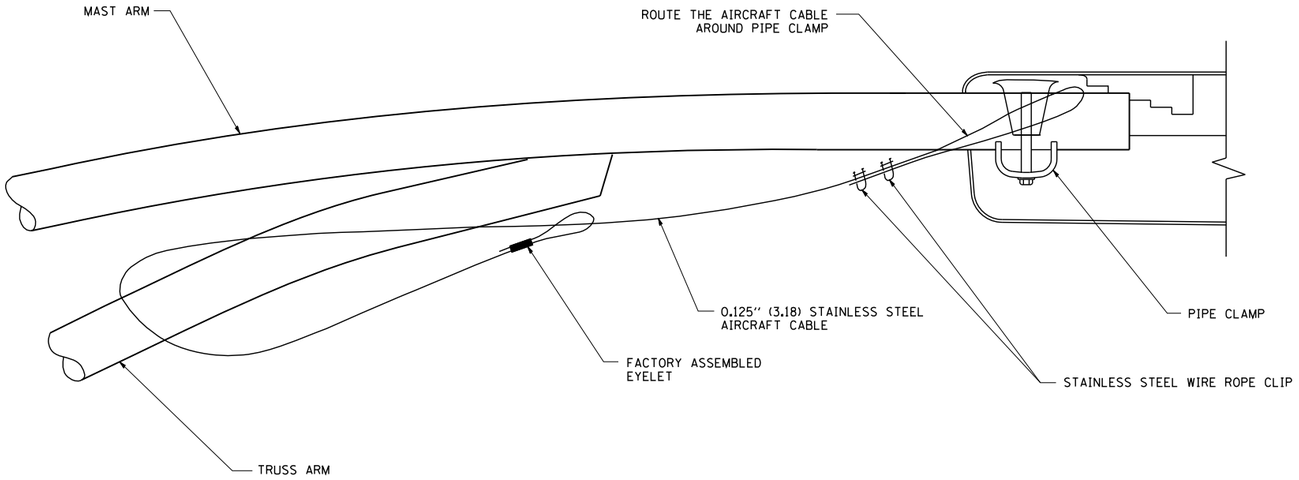
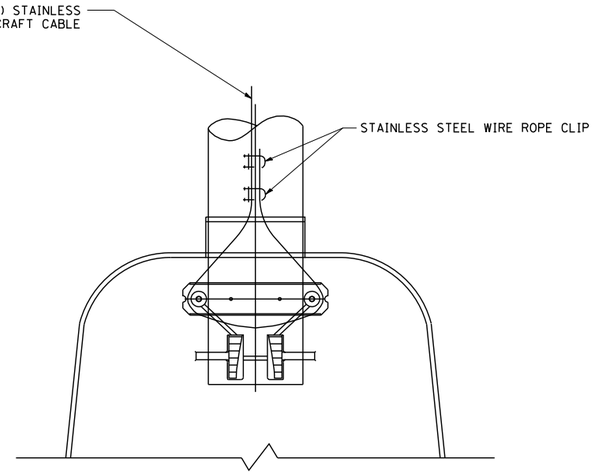
		DRAWN -	REVISED - R. TOMSONS 09-03-03			338	(112 & 113) WRS-6	DUPAGE	734	577
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -			BE-400		CONTRACT NO. 60R31		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE / SHEET NO. 1 OF 1 SHEETS / STA. / TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



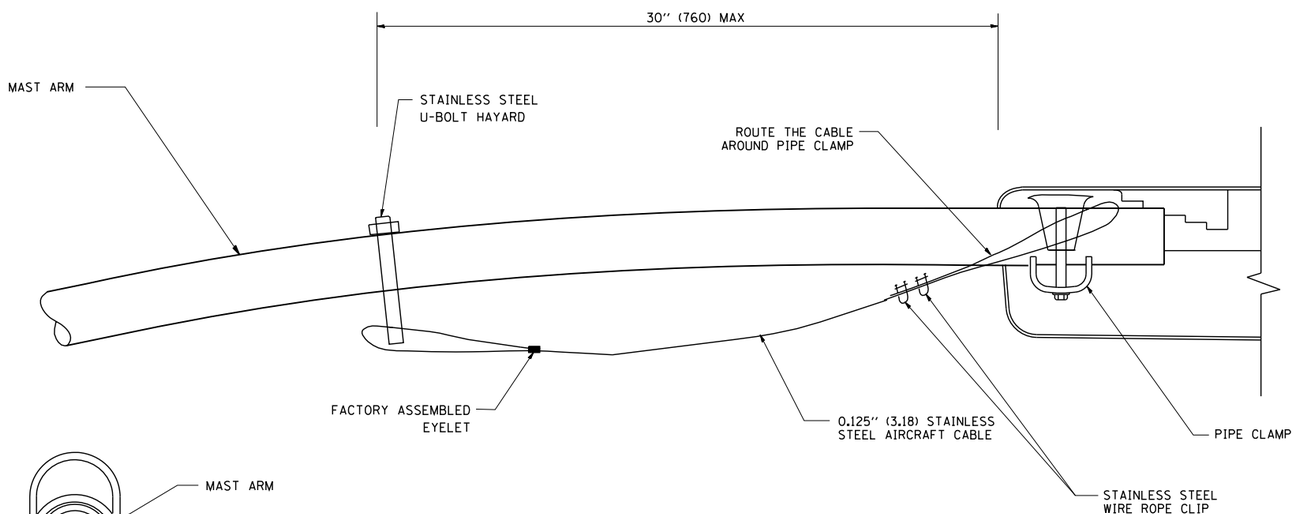
SIDE VIEW (TRUSS ARM)

N.T.S.



BOTTOM VIEW

N.T.S.



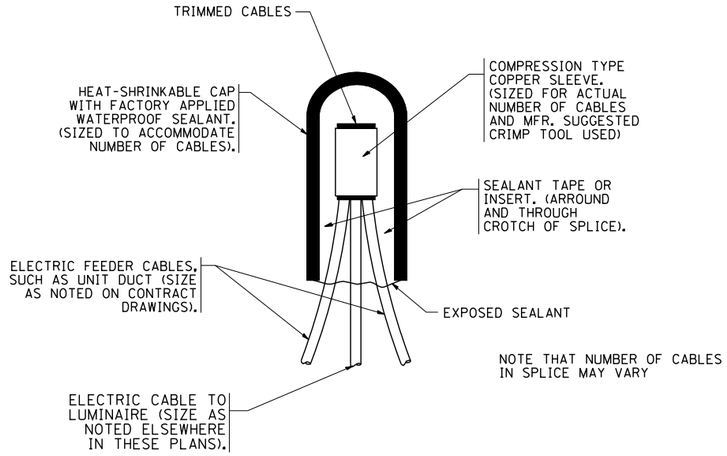
SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)

N.T.S.

NOTES:

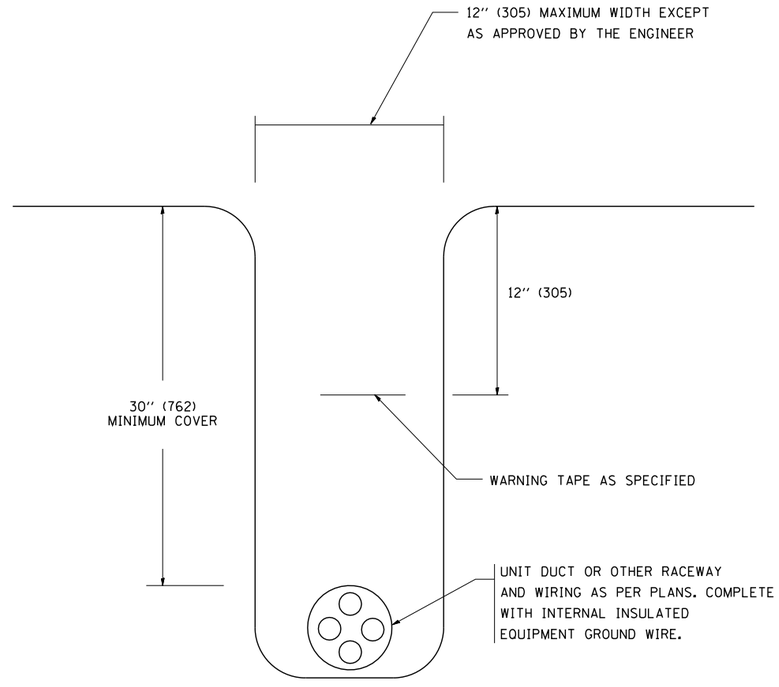
1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

FILE NAME = W:\diststd\22x34\be701.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**LUMINAIRE SAFETY CABLE ASSEMBLY**			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					338	(112 & 113) WRS-6	DUPAGE	734	579
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -						**BE-701**	CONTRACT NO. 60R31		
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



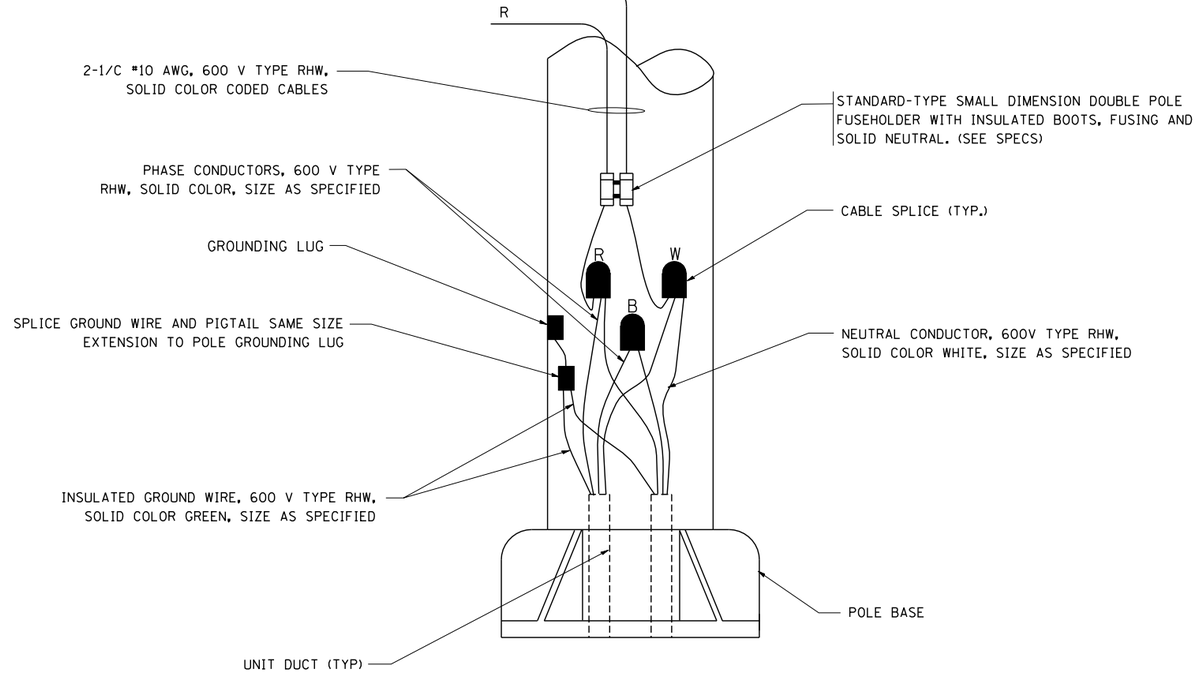
TYPICAL SPLICE DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

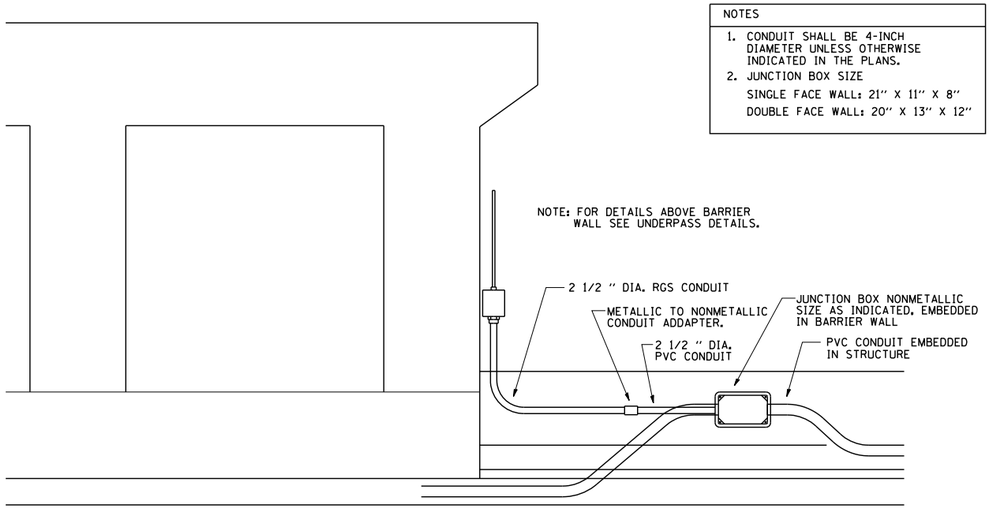
N.T.S.



POLE WIRING DETAIL

N.T.S.

FILE NAME = W:\diststd\22x34\be702.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**MISC. ELECTRICAL DETAILS SHEET A**			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					338	(112 & 113) WRS-6	DUPAGE	734	580
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -						**BE-702**		CONTRACT NO. 60R31	
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

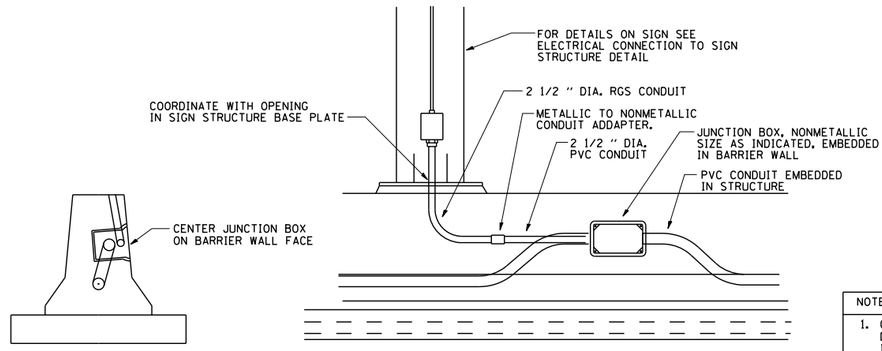


NOTES

1. CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
2. JUNCTION BOX SIZE
   SINGLE FACE WALL: 21" X 11" X 8"
   DOUBLE FACE WALL: 20" X 13" X 12"

ED - BWD

ELECTRIC CONNECTION TO UNDERPASS LIGHTING

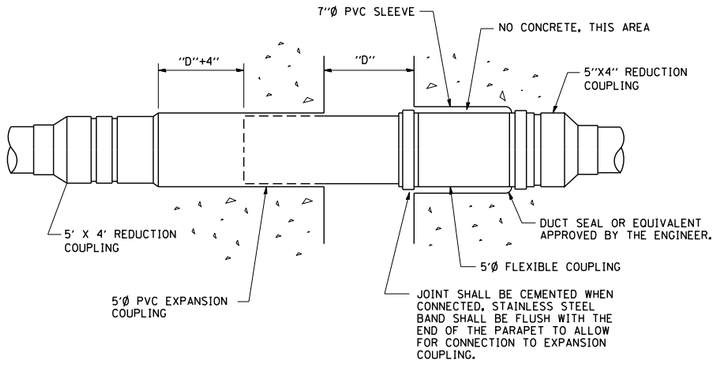


NOTES

1. CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
2. JUNCTION BOX SIZE
   SINGLE FACE WALL: 21" X 11" X 8"
   DOUBLE FACE WALL: 20" X 13" X 12"

ED - SGN

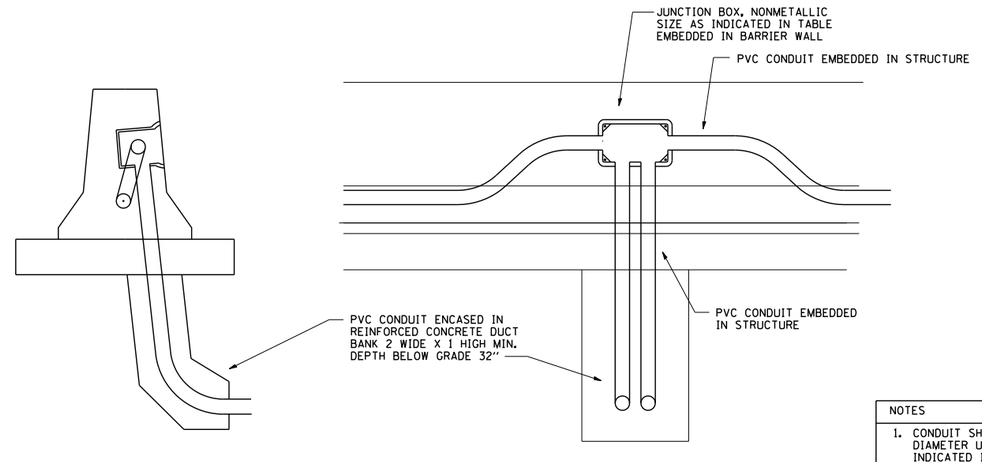
JUNCTION BOX EMBEDDED IN BARRIER WALL FOR SIGN LIGHTING



INSTALLATION OF CONDUIT

IN BRIDGE PARAPET EXPANSION JOINT

(N.T.S.)



NOTES

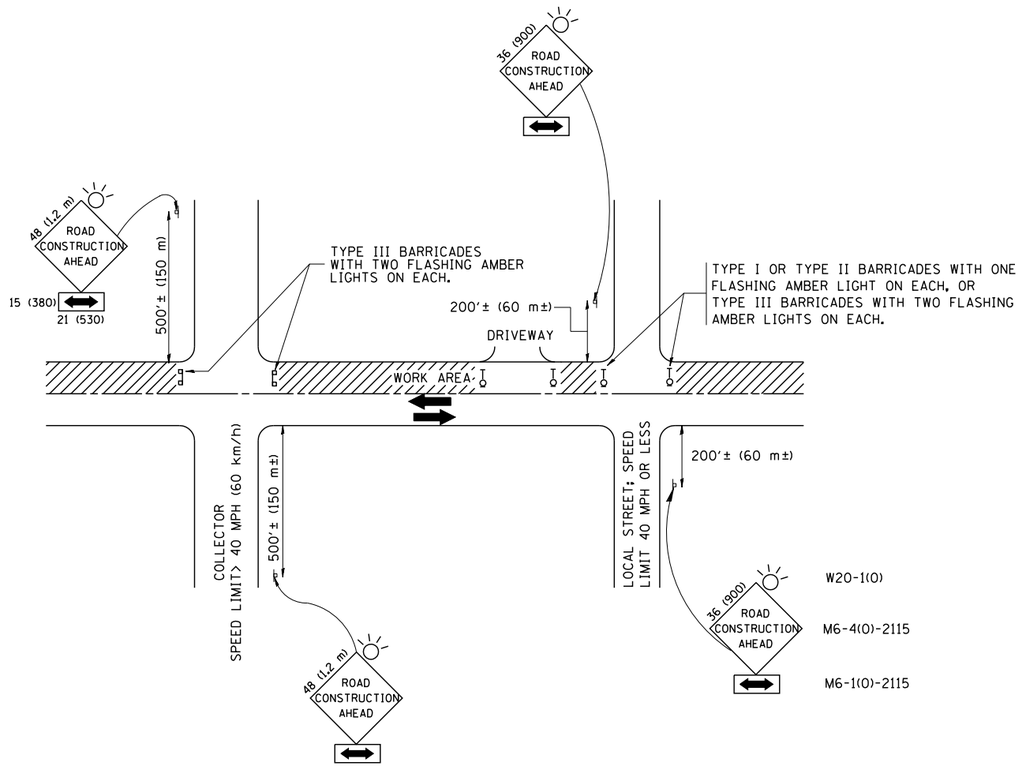
1. CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
2. JUNCTION BOX SIZE
   SINGLE FACE WALL: 21" X 11" X 8"
   DOUBLE FACE WALL: 20" X 13" X 12"

ED - BW

JUNCTION BOX EMBEDDED IN BARRIER WALL

FILE NAME = be703.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISCELLANEOUS ELECTRICAL DETAILS, SHEET B J BOX EMBEDDED IN BARRIER WALL – INSTALLATION OF CONDUIT IN BRIDGE PARAPET EXPANSION JOINT – ELECTRIC CONNECTION TO UNDERPASS LIGHTING
		DRAWN -	REVISED -		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.
	PLOT DATE = 2/5/2009	DATE - 01-20-2009	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	581
	BE-703	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

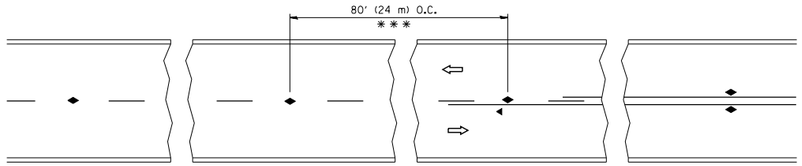
FILE NAME = W:\diststd\22x34\tc10.dgn	USER NAME = gaglianobt	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

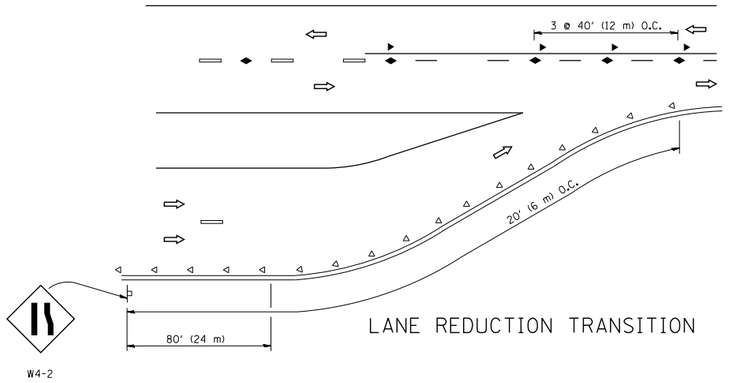
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	582
	TC-10	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

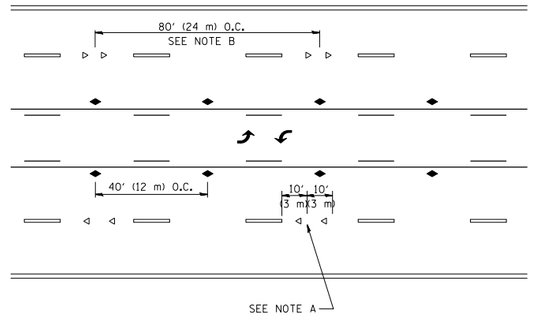


* * * REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

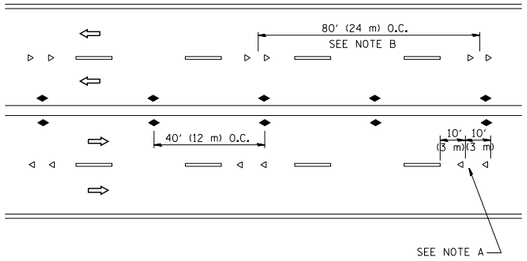
TWO-LANE/TWO-WAY



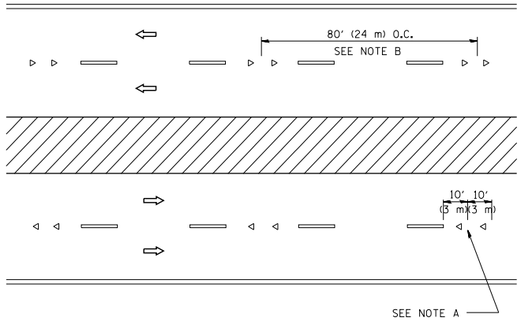
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

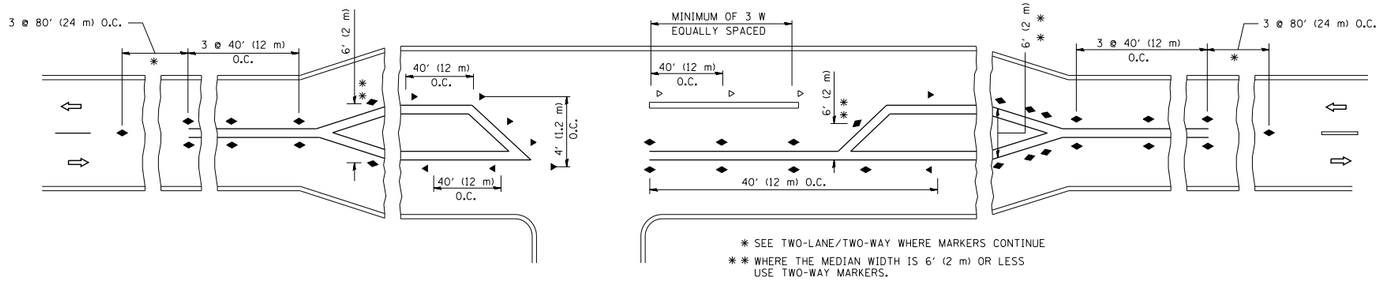
LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



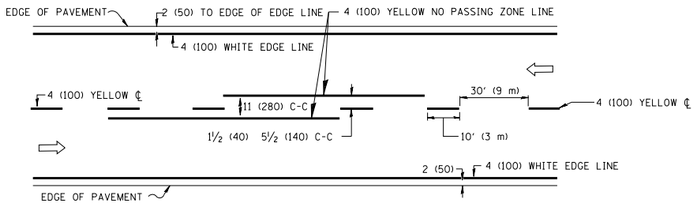
* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

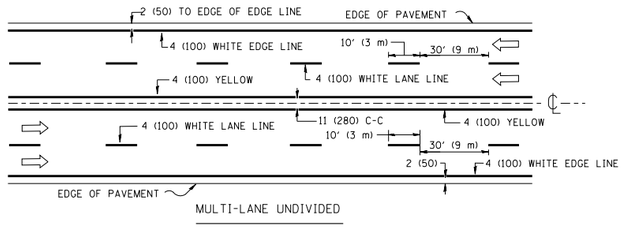
LEFT TURN

All dimensions are in inches (millimeters) unless otherwise shown.

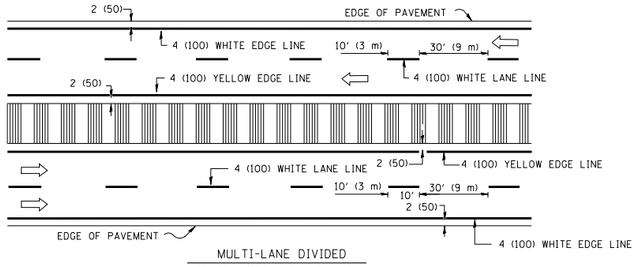
FILE NAME = c:\pw_work\pwidot\leysa\d0108315\tc11.dgn	USER NAME = leysa	DESIGNED -	REVISED - T. RAMMACHER 09-19-94	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)**		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - T. RAMMACHER 03-12-99				338	(112 & 113) WRS-6	DUPAGE	734	583
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00					**TC-11**	CONTRACT NO. 60R31		
	PLOT DATE = 3/2/2011	DATE -	REVISED - C. JUCIUS 09-09-09		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.		FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	



2-LANE ROADWAY



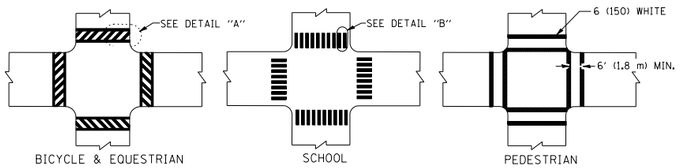
MULTI-LANE UNDIVIDED

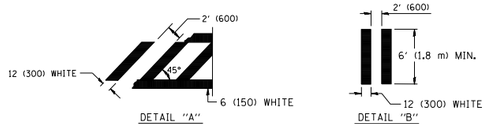


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

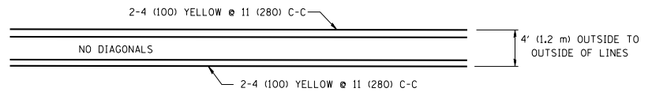
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

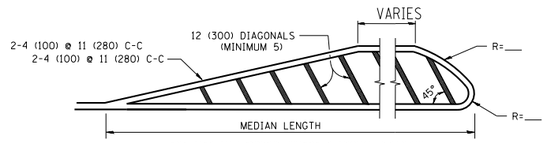




TYPICAL CROSSWALK MARKING



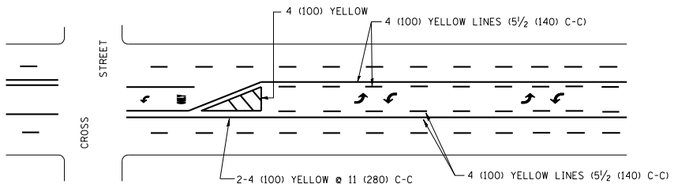
4' (1.2 m) WIDE MEDIANS ONLY



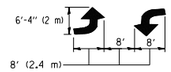
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

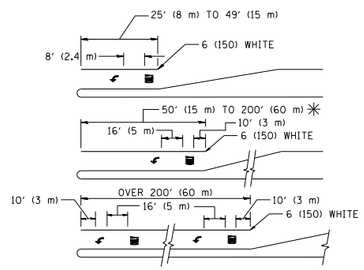


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

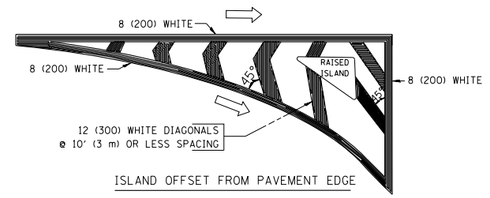


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m^2) **ONLY** AREA = 20.8 SQ. FT. (1.9 m^2)

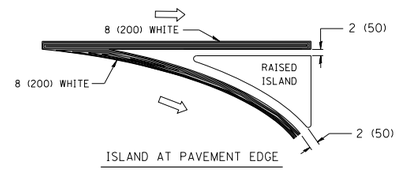
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 ø 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 ø 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 ø 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 ø 6 (150) 12 (300) ø 45° 12 (300) ø 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 ø 4 (100) WITH 12 (300) DIAGONALS ø 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS ø 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m^2) EACH "X"=54.0 SQ. FT. (5.0 m^2)
SHOULDER DIAGONALS	12 (300) ø 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

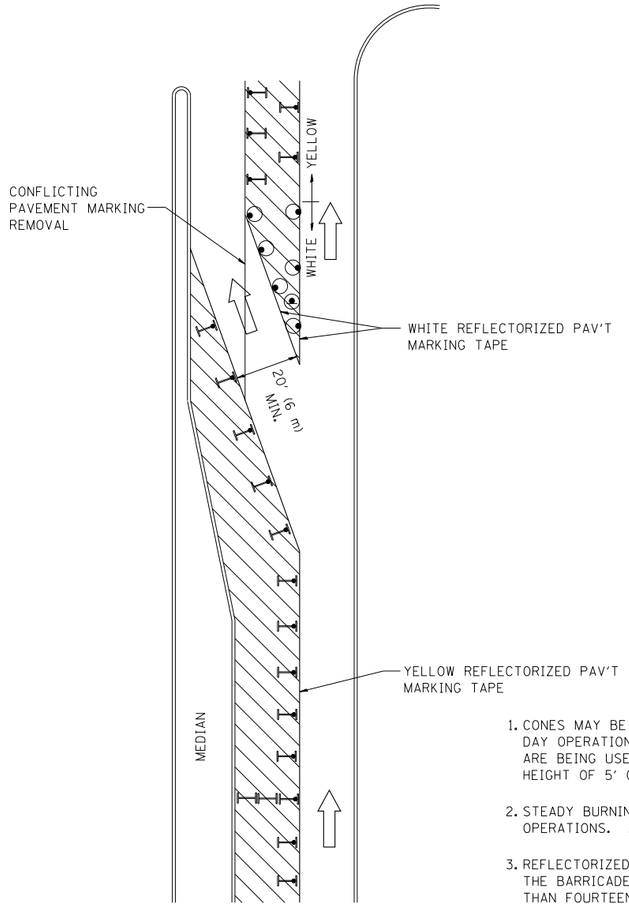
FILE NAME = c:\pw_work\pwidot\drivakosgn\d0108315\tc13.dgn	USER NAME = drivakosgn	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-94
		DRAWN -	REVISED -C. JUCIUS 09-09-09
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

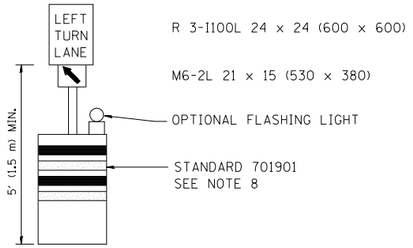
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	584
	TC-13	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHR 350 PREQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

All dimensions are in inches (millimeters) unless otherwise shown.

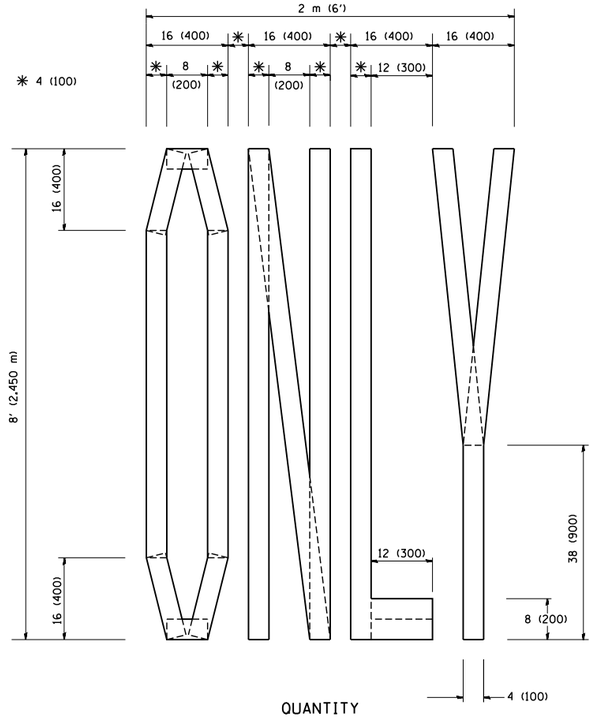
FILE NAME = c:\pw_work\PWIDOT\DRIVAKOSGN\d0108315\tc14.dgn	USER NAME = drivakosgn	REVISED -T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09
		REVISED - A. HOUSEH 11-07-95	REVISED -
	PLOT SCALE = 49.9999 ' / IN.	REVISED - A. HOUSEH 10-12-96	REVISED -
	PLOT DATE = 9/14/2009	REVISED -T. RAMMACHER 01-06-00	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

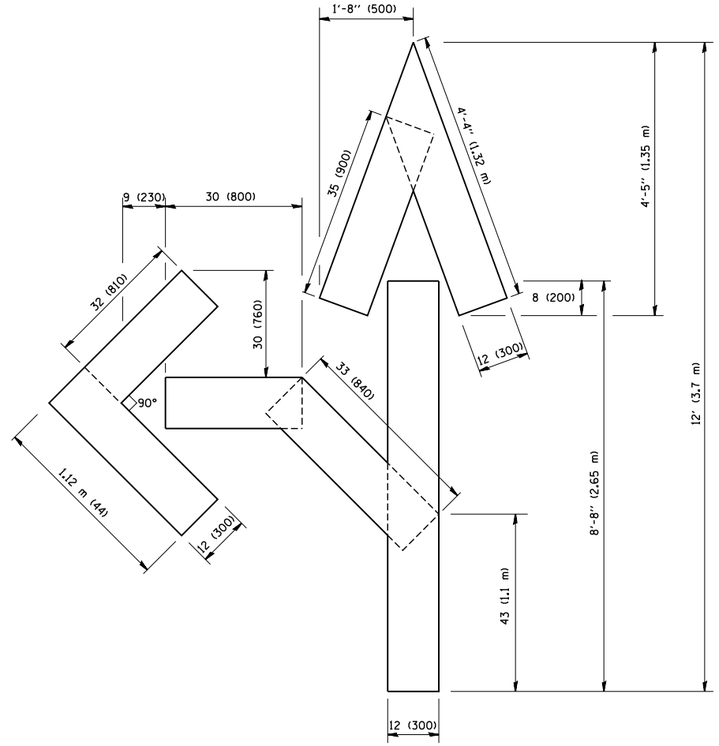
TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

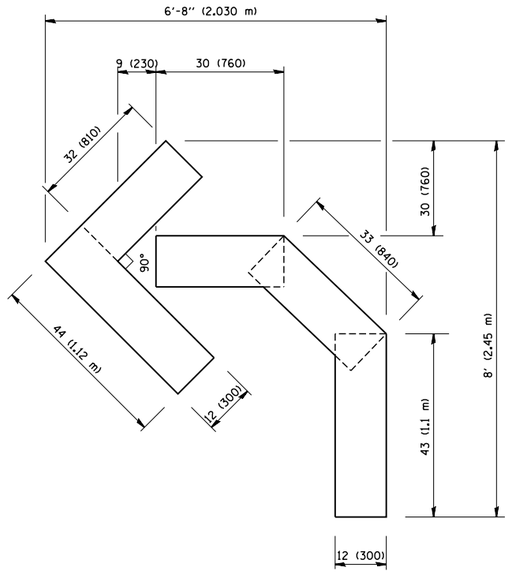
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	585
	TC-14	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



QUANTITY
4 (100) LINE = 64.1 ft. (19.7 m)
21.1 sq. ft. (1.97 sq. m)



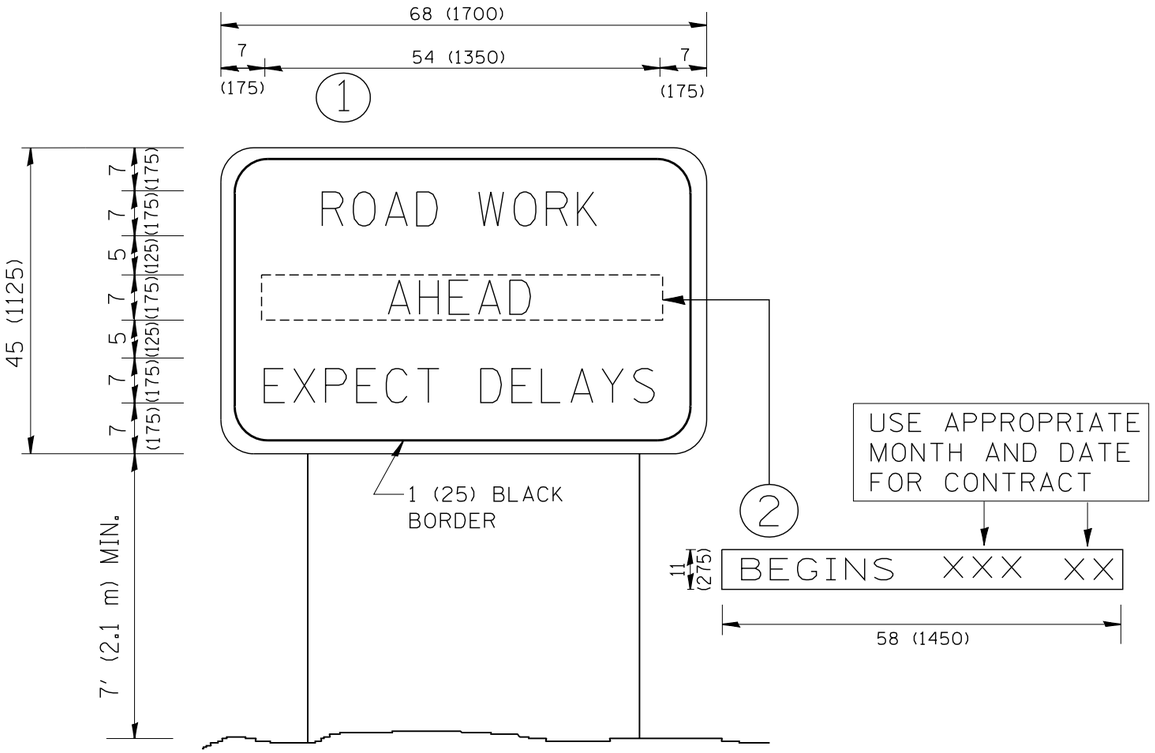
QUANTITY
4 (100) LINE = 82.5 ft. (25.3 m)
27.5 sq. ft. (2.53 sq. m)



QUANTITY
4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.39 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME = W:\diststd\22x34\tc16.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED -T. RAMMACHER 06-05-96	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING**	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -T. RAMMACHER 11-04-97			338	(112 & 113) WRS-6	DUPAGE	734	586
	PLOT SCALE = 50.0000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 03-02-98				**TC-16**		CONTRACT NO. 60R31	
	PLOT DATE = 1/4/2008	DATE - 09-18-94	REVISED -E. GOMEZ 08-28-00		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE ''ROAD CONSTRUCTION AHEAD'' SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR ''TEMPORARY INFORMATION SIGNING'' FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

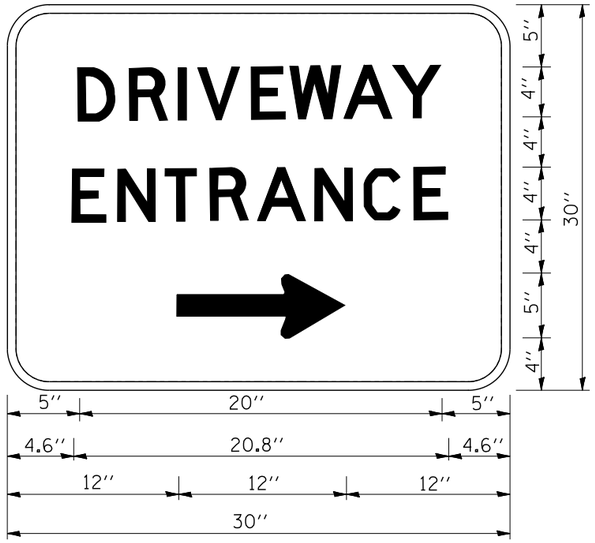
FILE NAME = W:\diststd\22x34\tc22.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	587
	TC-22	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



3.0'' RADIUS, 0.5'' BORDER, WHITE ON GREEN; REFLECTORIZED
''DRIVEWAY'' D; ''ENTRANCE'' D; STANDARD ARROW CUSTOM 12.0'' × 5.0''

NOTES:

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK: ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM ''TEMPORARY INFORMATION SIGNING''.

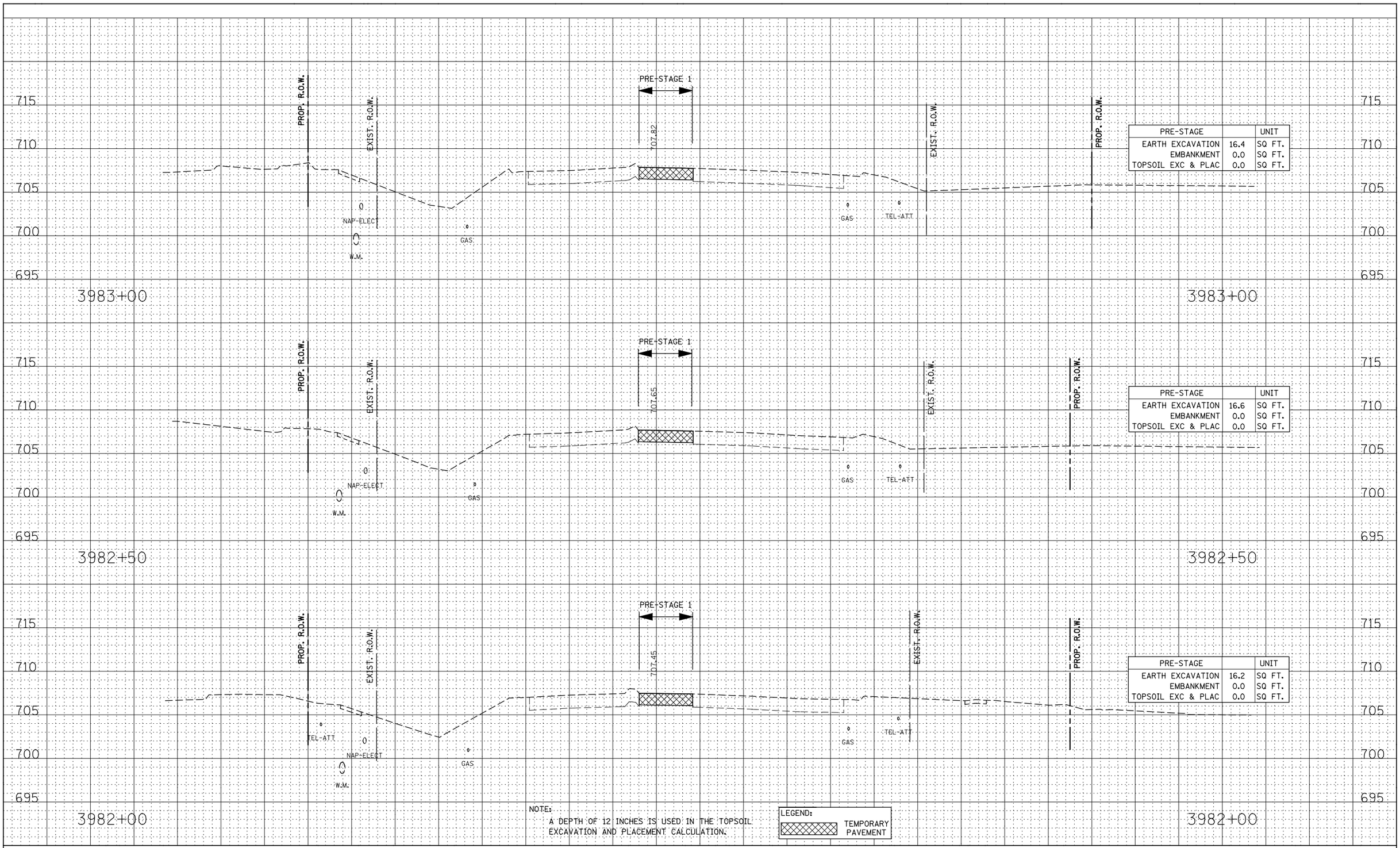
FILE NAME = W:\diststd\22x34\tc26.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - C. JUCIUS 02-15-07
		DRAWN -	REVISED -
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRIVEWAY ENTRANCE SIGNING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	588
	TC-26	CONTRACT NO. 60R31		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

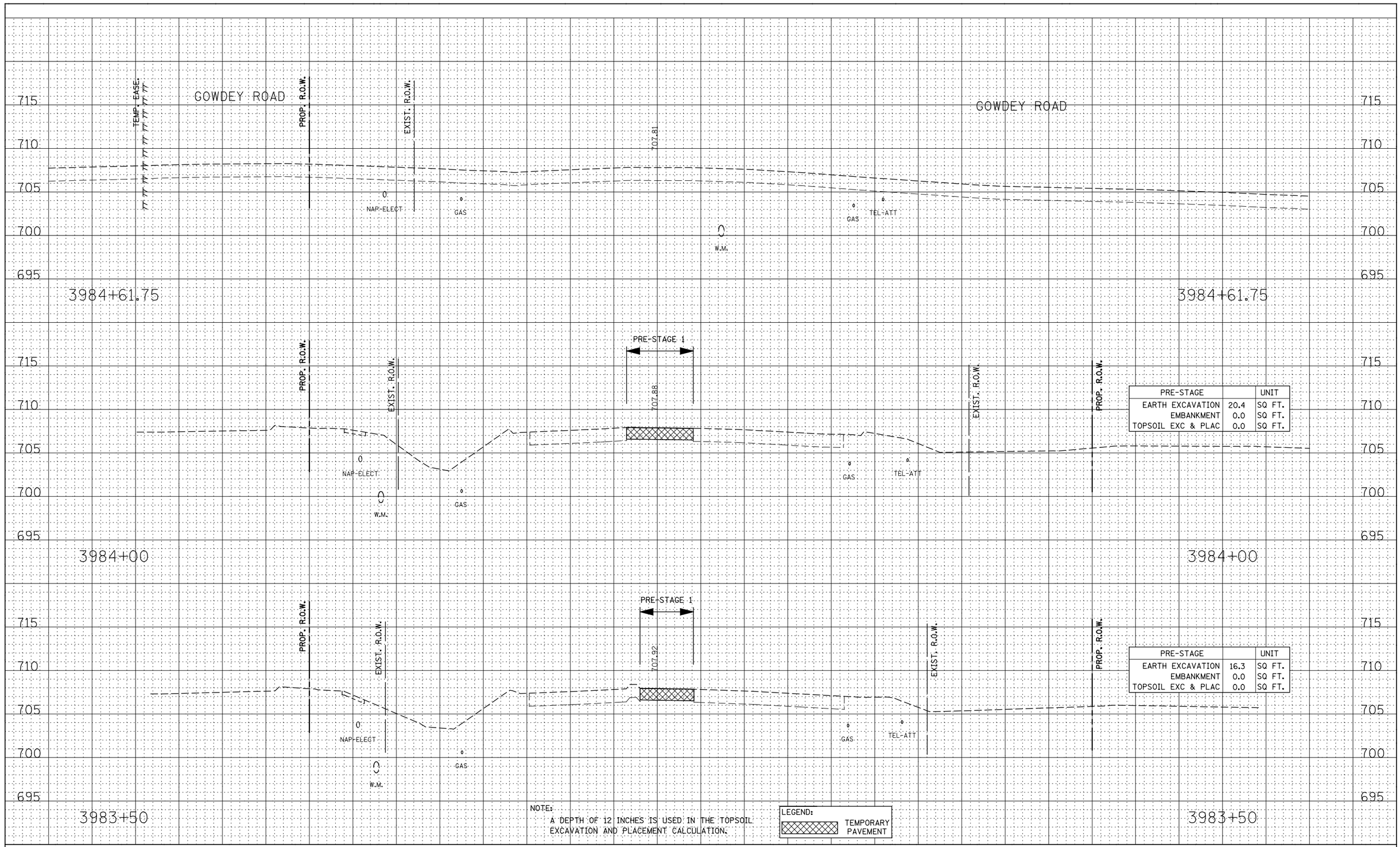
DESIGNED	- RTA	REVISED	-
DRAWN	- KES	REVISED	-
CHECKED	- PJO	REVISED	-
DATE	- 12/14/2012	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE: | SHEET NO. 1 OF 53 SHEETS | STA. 3982+00 | TO STA. 3983+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	589
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PRE-STAGE		UNIT
EARTH EXCAVATION	20.4	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

PRE-STAGE		UNIT
EARTH EXCAVATION	16.3	SQ FT.
EMBANKMENT	0.0	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

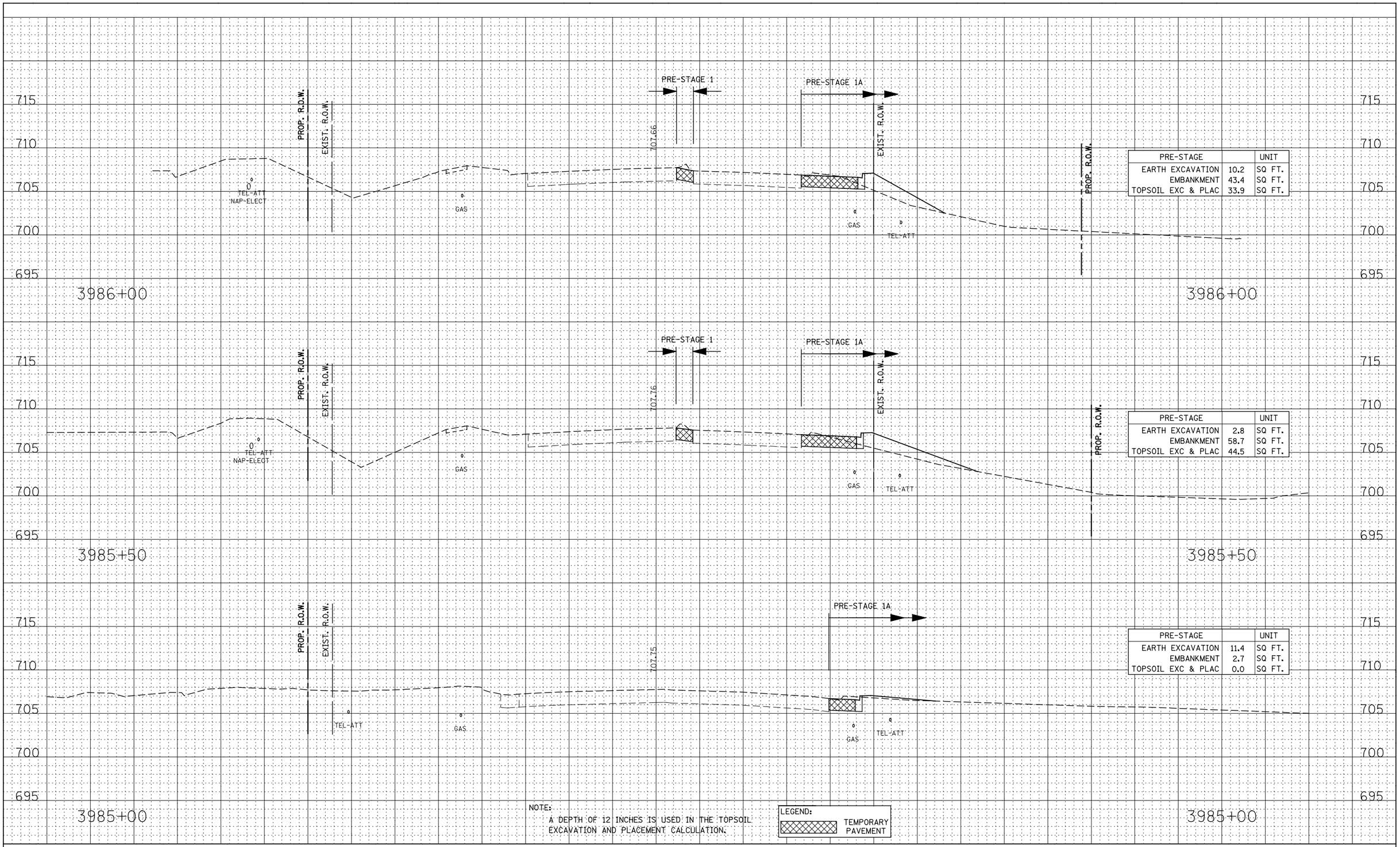
DESIGNED	- RTA	REVISED	-
DRAWN	- KES	REVISED	-
CHECKED	- PJO	REVISED	-
DATE	- 12/14/2012	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE: | SHEET NO. 2 OF 53 SHEETS | STA. 3983+50 | TO STA. 3984+61.75

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	590
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PRE-STAGE		UNIT
EARTH EXCAVATION	10.2	SQ FT.
EMBANKMENT	43.4	SQ FT.
TOPSOIL EXC & PLAC	33.9	SQ FT.

PRE-STAGE		UNIT
EARTH EXCAVATION	2.8	SQ FT.
EMBANKMENT	58.7	SQ FT.
TOPSOIL EXC & PLAC	44.5	SQ FT.

PRE-STAGE		UNIT
EARTH EXCAVATION	11.4	SQ FT.
EMBANKMENT	2.7	SQ FT.
TOPSOIL EXC & PLAC	0.0	SQ FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

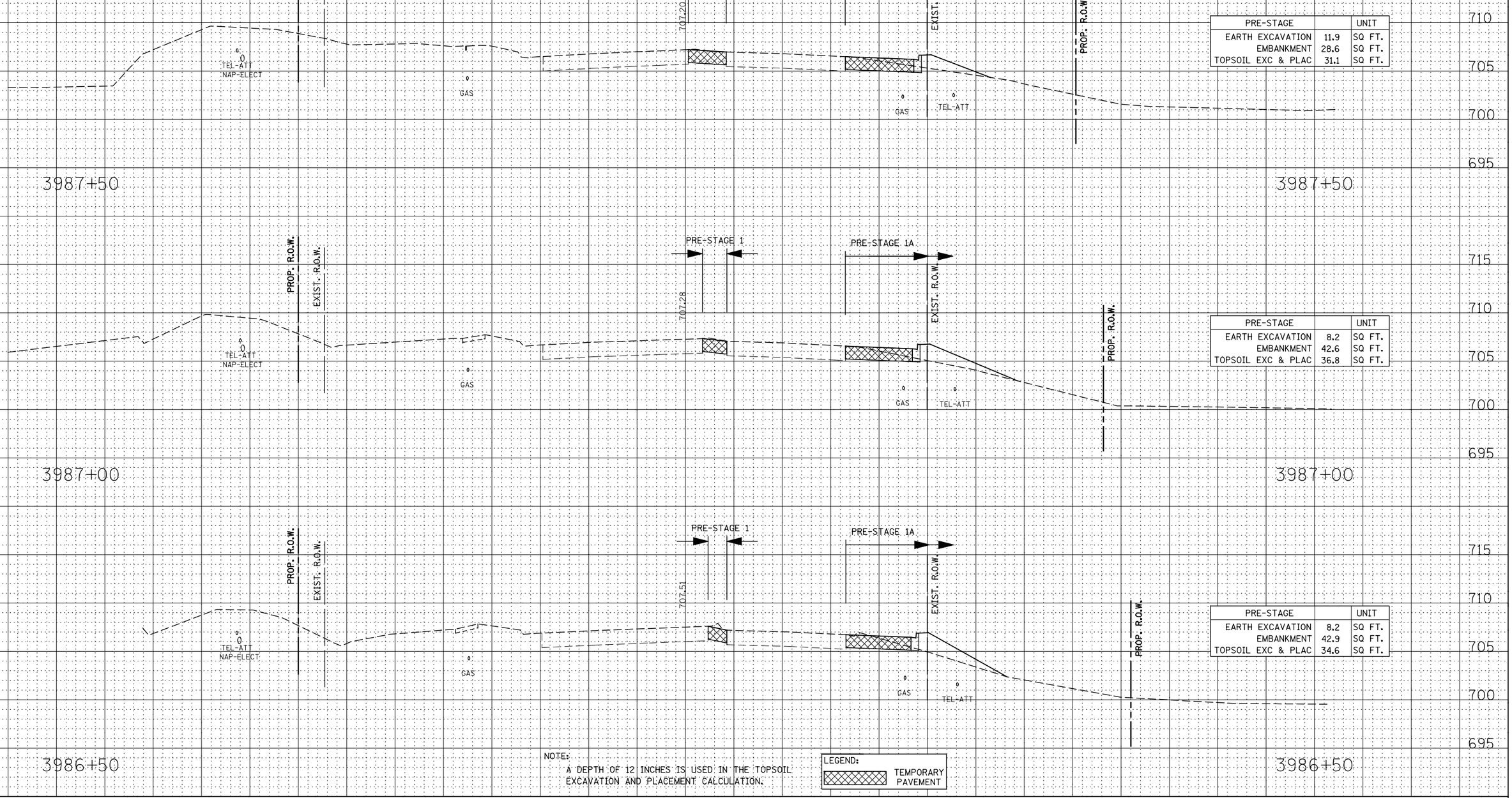
DESIGNED	- RTA	REVISED	-
DRAWN	- KES	REVISED	-
CHECKED	- PJO	REVISED	-
DATE	- 12/14/2012	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE: | SHEET NO. 3 OF 53 SHEETS | STA. 3985+00 | TO STA. 3986+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	591
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY — NOTE BOOK — NO.
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED
BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO.
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED
BY — DATE

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

DESIGNED	- RTA	REVISED	-
DRAWN	- KES	REVISED	-
CHECKED	- PJO	REVISED	-
DATE	- 12/14/2012	REVISED	-

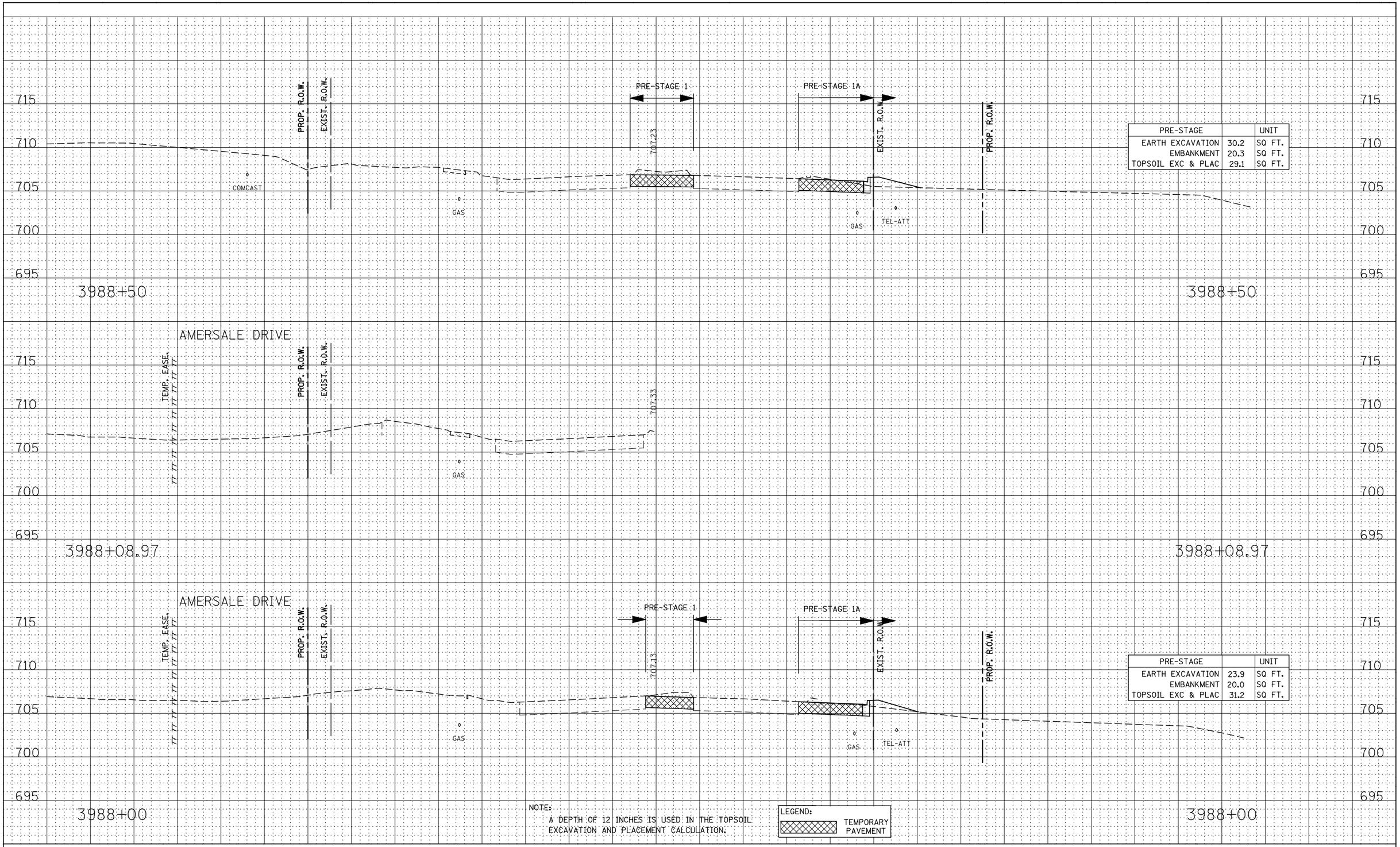
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE: | SHEET NO. 4 OF 53 SHEETS | STA. 3986+50 | TO STA. 3987+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	592
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
AREAS	PLOTTED	
NO.	TEMPLATE	
	AREAS	
	AREAS CHECKED	



ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
AREAS	PLOTTED	
NO.	TEMPLATE	
	AREAS	
	AREAS CHECKED	

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

DESIGNED - RTA	REVISED -	
DRAWN - KES	REVISED -	
CHECKED - PJO	REVISED -	
DATE - 12/14/2012	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

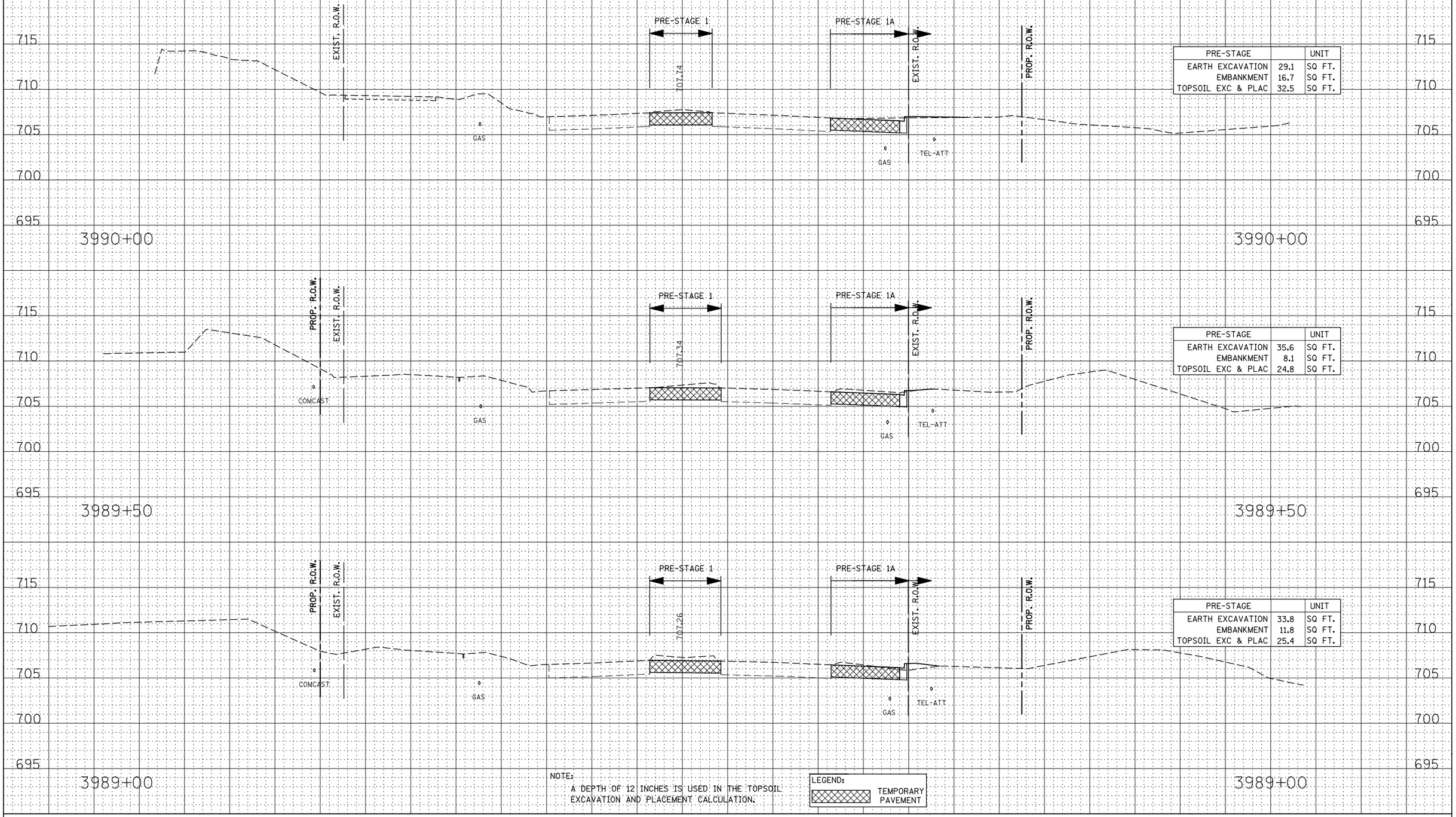
ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE:
SHEET NO. 5 OF 53 SHEETS
STA. 3988+00 TO STA. 3988+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	593
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE



NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

DESIGNED - RTA	REVISED -	
DRAWN - KES	REVISED -	
CHECKED - PJO	REVISED -	
DATE - 12/14/2012	REVISED -	

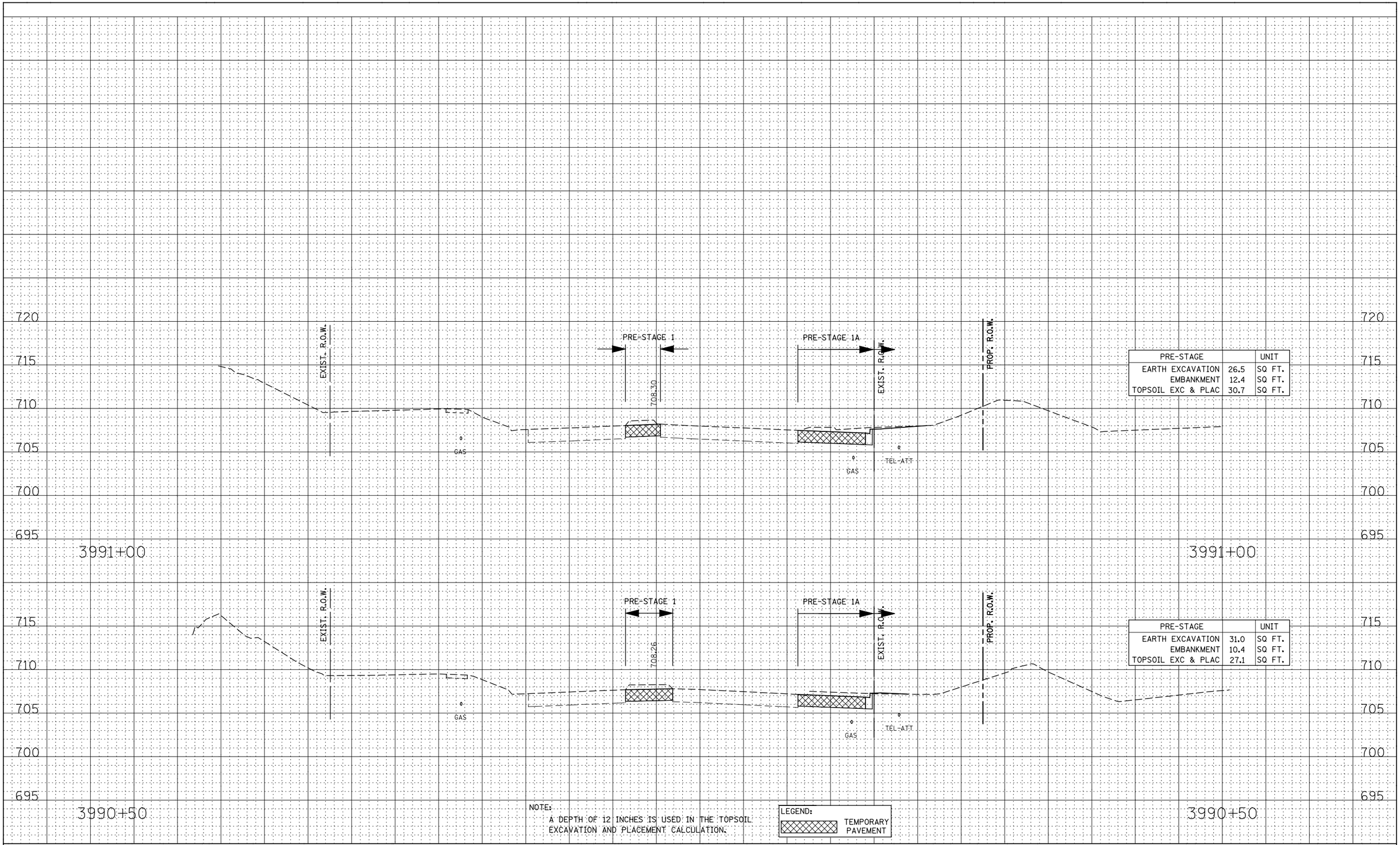
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE:
SHEET NO. 6 OF 53 SHEETS
STA. 3989+00 TO STA. 3990+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	594
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	BY
	PLOTTED	DATE
	TEMPLATE	
	AREAS	
	AREAS CHECKED	



NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

ORIGINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	BY
	PLOTTED	DATE
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

DESIGNED	- RTA	REVISED	-
DRAWN	- KES	REVISED	-
CHECKED	- PJO	REVISED	-
DATE	- 12/14/2012	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

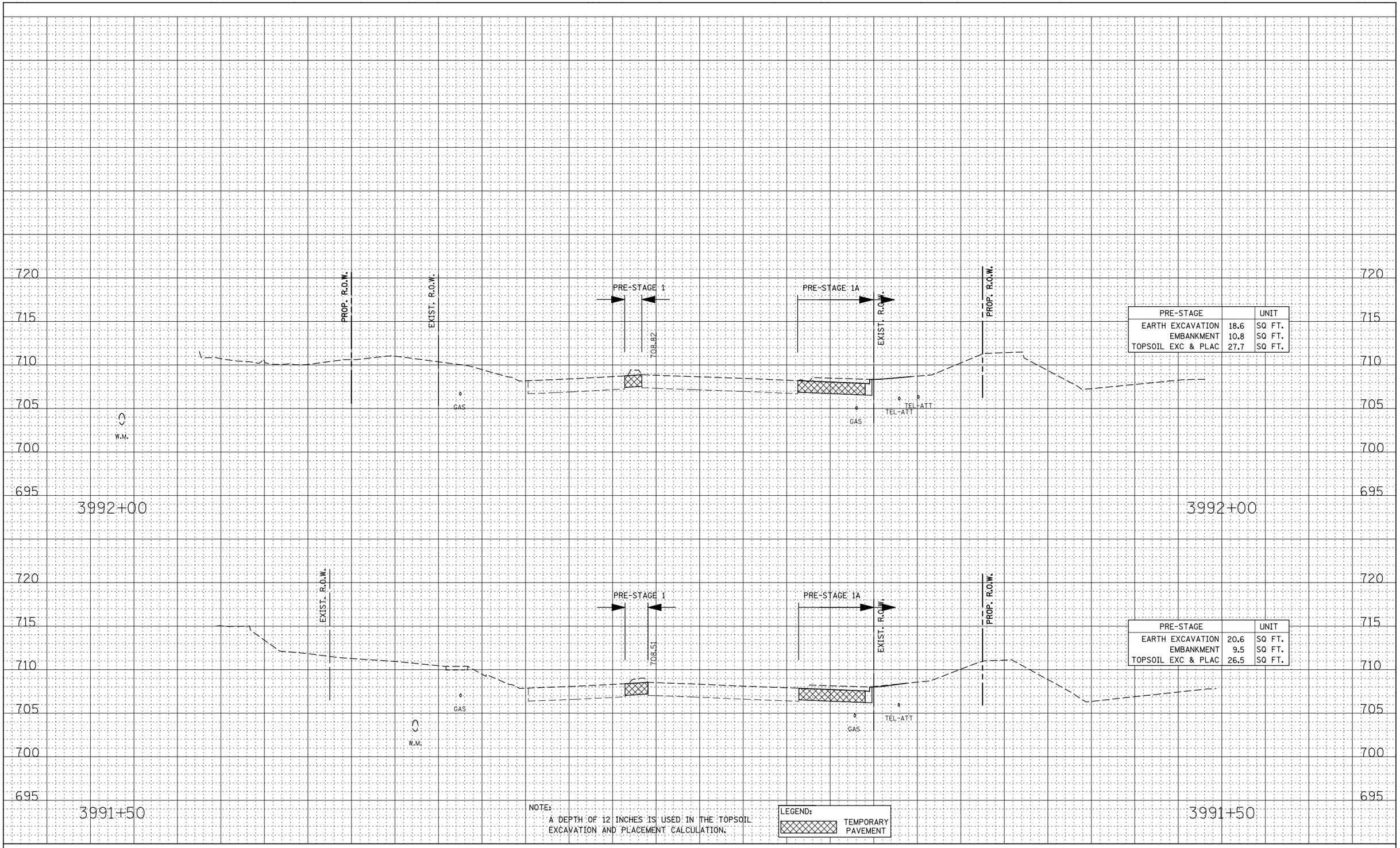
ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE: | SHEET NO. 7 OF 53 SHEETS | STA. 3990+50 | TO STA. 3991+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	595
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.

SURVEYED	BY
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	DATE



PRE-STAGE		UNIT
EARTH EXCAVATION	18.6	SQ FT.
EMBANKMENT	10.8	SQ FT.
TOPSOIL EXC & PLAC	27.7	SQ FT.

PRE-STAGE		UNIT
EARTH EXCAVATION	20.6	SQ FT.
EMBANKMENT	9.5	SQ FT.
TOPSOIL EXC & PLAC	26.5	SQ FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

ORIGINAL SURVEY	NOTE BOOK	NO.

SURVEYED	BY
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	DATE

DESIGNED	- RTA	REVISED	-
DRAWN	- KES	REVISED	-
CHECKED	- PJO	REVISED	-
DATE	- 12/14/2012	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

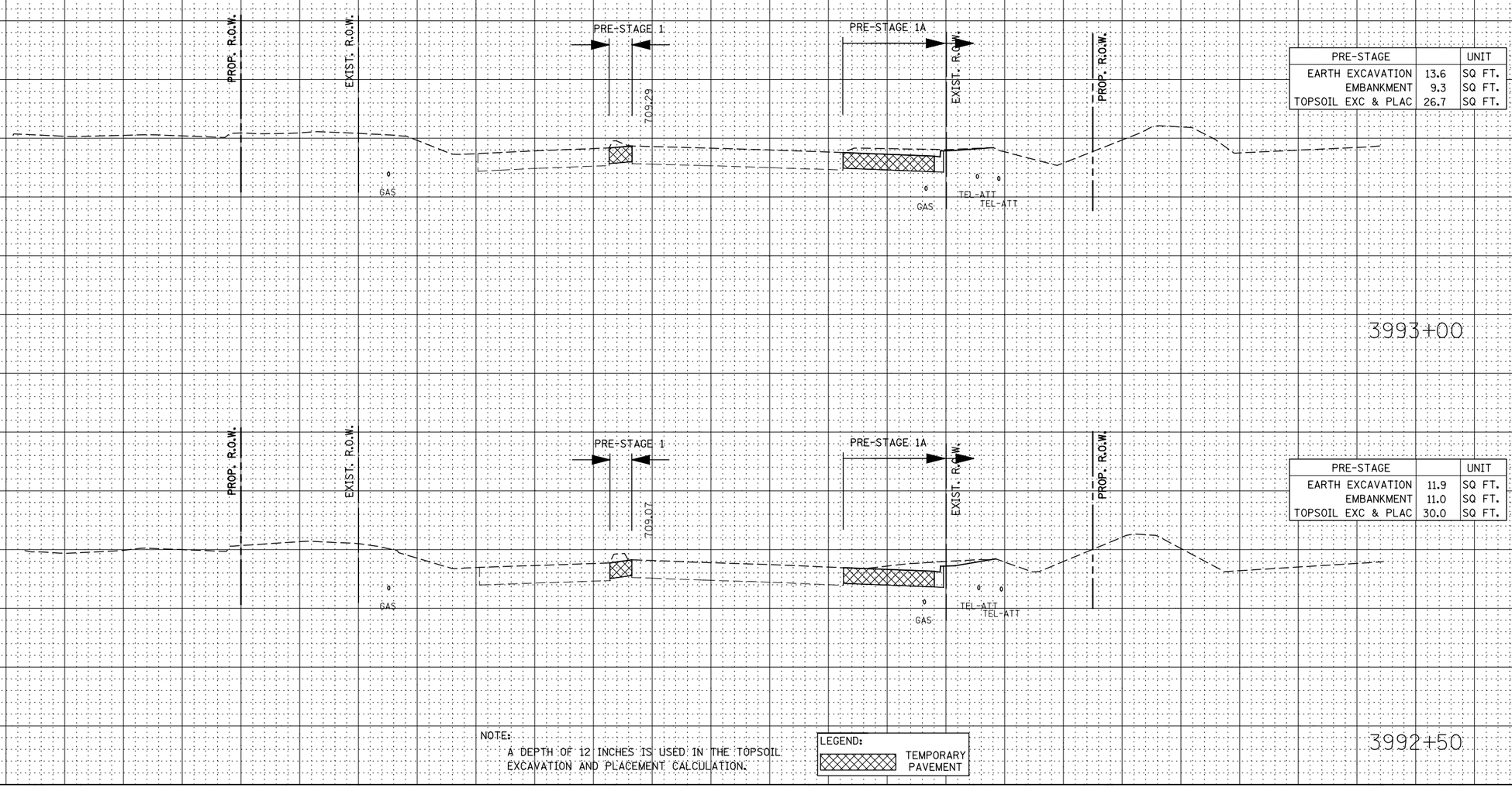
ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE: | SHEET NO. 8 OF 53 SHEETS | STA. 3991+50 | TO STA. 3992+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	596
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	
	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

BY	DATE



PRE-STAGE		UNIT
EARTH EXCAVATION	13.6	SQ FT.
EMBANKMENT	9.3	SQ FT.
TOPSOIL EXC & PLAC	26.7	SQ FT.

PRE-STAGE		UNIT
EARTH EXCAVATION	11.9	SQ FT.
EMBANKMENT	11.0	SQ FT.
TOPSOIL EXC & PLAC	30.0	SQ FT.

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

ORIGINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	
	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

BY	DATE

DESIGNED	- RTA	REVISED	-
DRAWN	- KES	REVISED	-
CHECKED	- PJO	REVISED	-
DATE	- 12/14/2012	REVISED	-

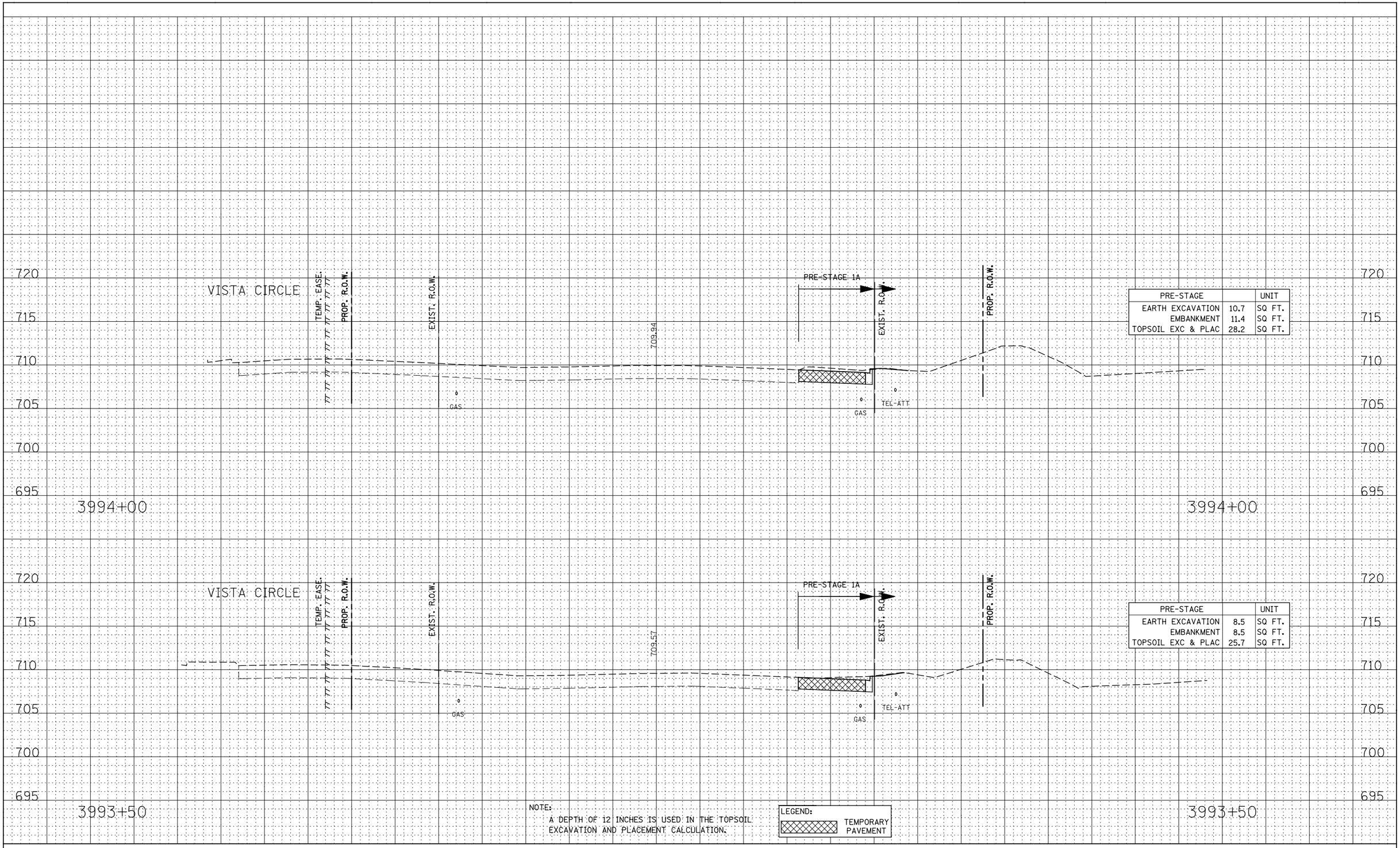
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE: | SHEET NO. 9 OF 53 SHEETS | STA. 3992+50 | TO STA. 3993+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	597
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	SURVEYED	BY	DATE
NO.		PLOTTED		
		TEMPLATE		
		AREAS		
		AREAS CHECKED		



ORIGINAL SURVEY	NOTE BOOK	SURVEYED	BY	DATE
NO.		PLOTTED		
		TEMPLATE		
		AREAS		
		AREAS CHECKED		

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

DESIGNED	- RTA	REVISED	-
DRAWN	- KES	REVISED	-
CHECKED	- PJO	REVISED	-
DATE	- 12/14/2012	REVISED	-

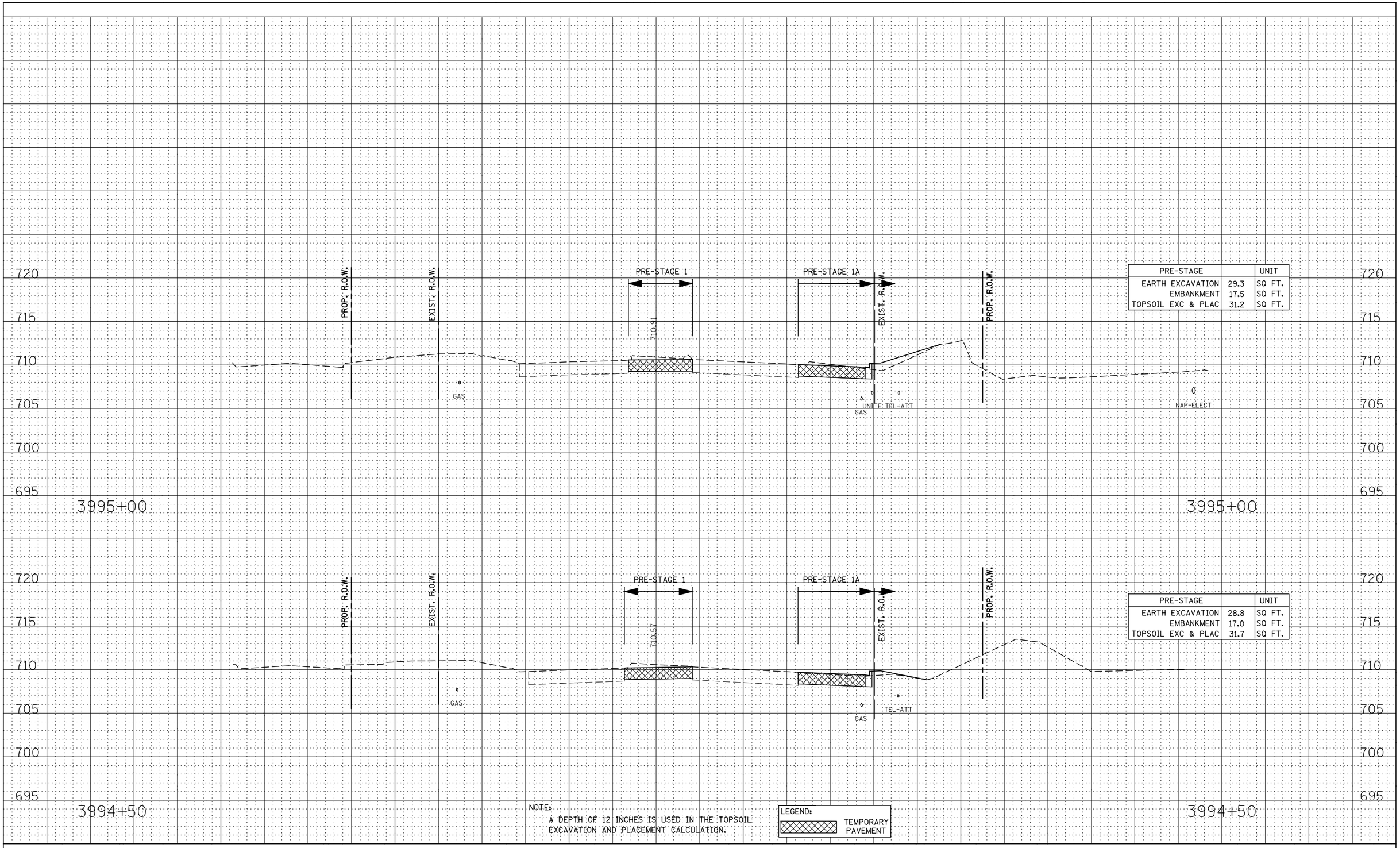
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE: | SHEET NO. 10 OF 53 SHEETS | STA. 3993+50 | TO STA. 3994+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	598
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	SURVEYED	BY
		PLOTTED	
		TEMPLATE	
		AREAS	
NO.		AREAS CHECKED	DATE



ORIGINAL SURVEY	NOTE BOOK	SURVEYED	BY
		PLOTTED	
		TEMPLATE	
		AREAS	
NO.		AREAS CHECKED	DATE

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

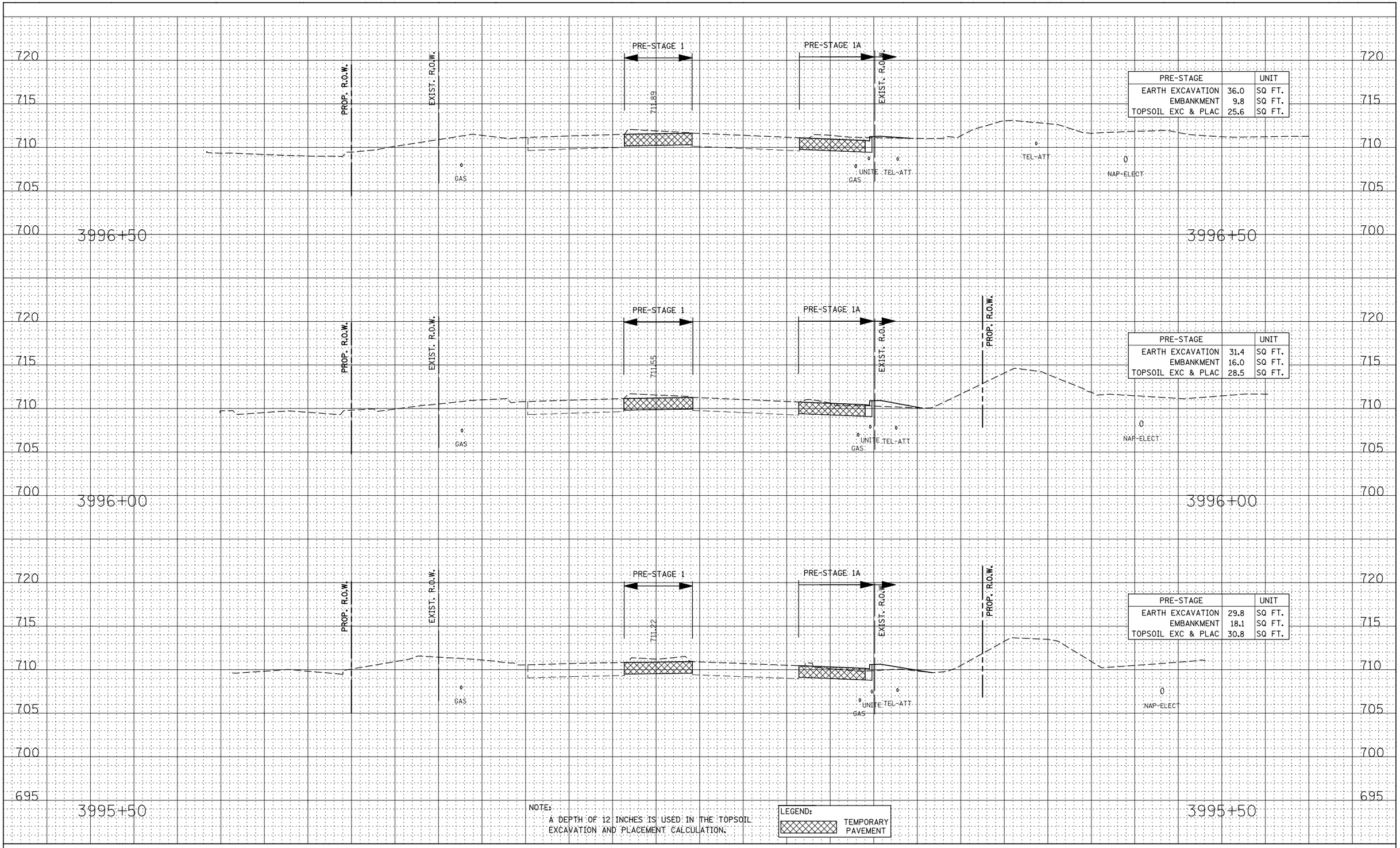
DESIGNED	- RTA	REVISED	-
DRAWN	- KES	REVISED	-
CHECKED	- PJO	REVISED	-
DATE	- 12/14/2012	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE: | SHEET NO. 11 OF 53 SHEETS | STA. 3994+50 | TO STA. 3995+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	599
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

NOTE:
A DEPTH OF 12 INCHES IS USED IN THE TOPSOIL EXCAVATION AND PLACEMENT CALCULATION.

LEGEND:
TEMPORARY PAVEMENT

DESIGNED	- RTA	REVISED	-
DRAWN	- KES	REVISED	-
CHECKED	- PJO	REVISED	-
DATE	- 12/14/2012	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 59
PRE-STAGE CROSS-SECTIONS

SCALE: | SHEET NO. 12 OF 53 SHEETS | STA. 3995+50 | TO STA. 3996+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(112 & 113) WRS-6	DUPAGE	734	600
		CONTRACT NO. 60R31		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		