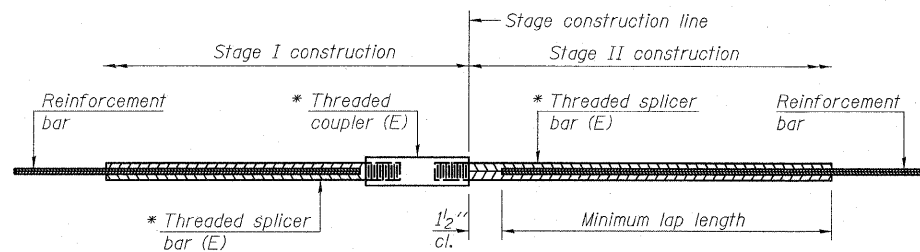


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

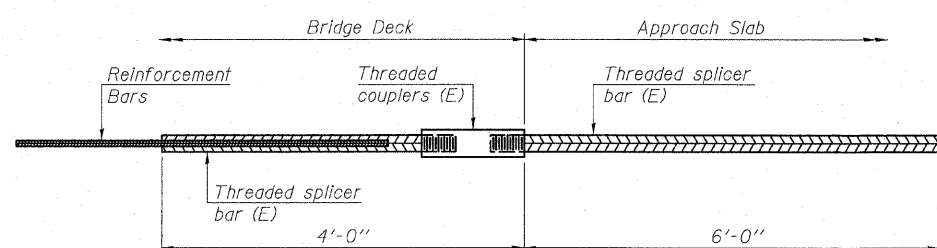
Bar size to be spliced	Minimum Lap Lengths			
	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length + 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

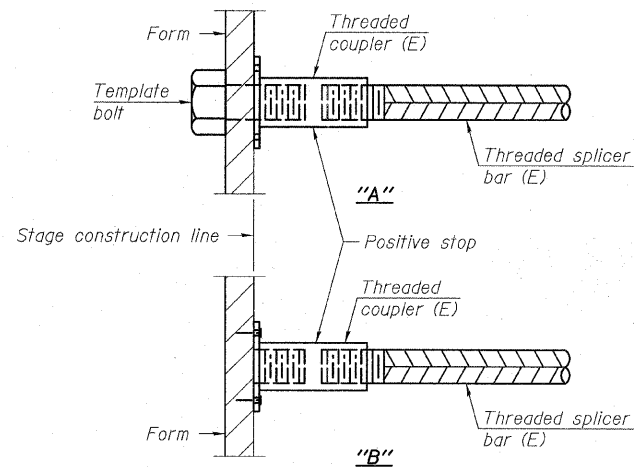
Location	Bar size	No. assemblies required	Table for minimum lap length
Pier 1	#8	16	4
Pier 1	#5	28	3
Pier 1	#7	18	3
Pier 2	#8	16	4
Pier 2	#5	28	3
Pier 2	#7	20	3



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

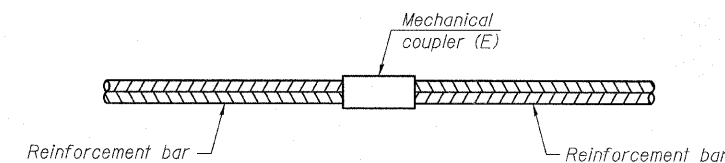
No. required =

BSD-1 11-1-09



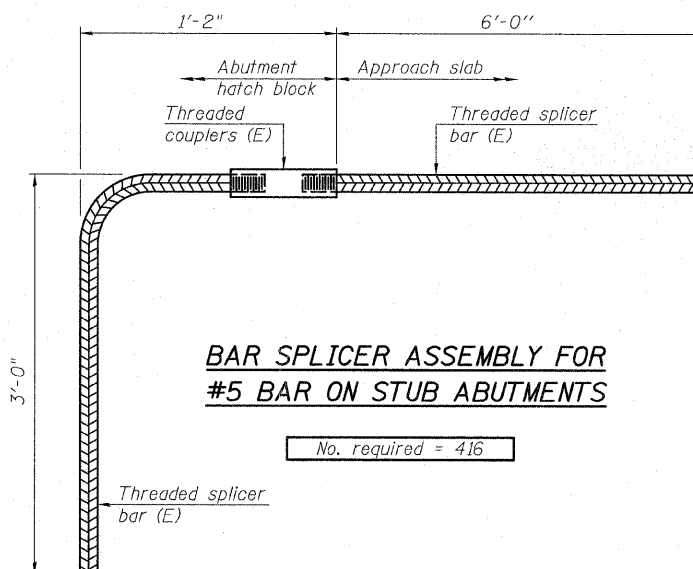
INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt.
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E): Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 416

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See special provision for Mechanical Splicers.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 016-1251**

TYLIN INTERNATIONAL	DESIGNED - SP	REVISIONS		SHEET NO. 56	F.A.I RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 301
	CHECKED - SP,	NAME	DATE						
	DRAWN - SP								
	CHECKED - SP,PDF								
	DATE - 03/18/10								
				68 SHEETS	CONTRACT NO. 60J27				
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 2

SOIL BORING LOG

DATE 9/22-28/2008

LOGGED BY MR

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57 Over I-294

COUNTY Cook DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097 Surface Water Elev. na D B U M
Station - Stream Bed Elev. na E L C O
BORING NO. I57-I294 B-3 Groundwater Elevation: P O S I
Station: 256+13 First Encounter na T W S I
Offset: 71.0' Right Upon Completion na H S Qu T
Ground Surface Elev. 634.5 After _____ Hrs. (ft) (6") (tsf) (%) (ft) (6") (tsf) (%)

13.0" ASPHALT 633.4

CLAY-brown & gray-stiff to hard (A-6) Fill

CLAY-brown & gray-stiff to hard (A-6) Fill

SILTY LOAM-gray-loose (A-4)

SAND & GRAVEL-gray-dense (A-1)

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 (ASTM D 1586). The Unit Dry Weight (pcf) is noted in italics above moist (%).
NB-No Recovery

PAGE 2 of 2

SOIL BORING LOG

DATE 9/22-28/2008

LOGGED BY MR

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57 Over I-294

COUNTY Cook DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097 Surface Water Elev. na D B U M
Station - Stream Bed Elev. na E L C O
BORING NO. I57-I294 B-3 Groundwater Elevation: P O S I
Station: 256+13 First Encounter na T W S I
Offset: 71.0' Right Upon Completion na H S Qu T
Ground Surface Elev. 634.5 After _____ Hrs. (ft) (6") (tsf) (%) (ft) (6") (tsf) (%)

SAND & GRAVEL-gray-dense (A-1)

SANDY LOAM-gray-very dense (A-2)

SILTY LOAM-gray-dense to very dense (A-4)

FRACTURED ROCK-gray-very dense (A-1)

Drillers Observation: Fractured Rock.

Drillers Observation: Apparent Bedrock.

Run 1 (-65.0' to -72.0')
Silurian System Niagaran Series Dolomite

Light gray to gray with horizontal bedding. Fine grained with some varving. Horizontal fractures @ -65.3', -67.2' & -67.4'. Vertical fracture with intersecting horizontal fractures from -67.7' to -68.9'. Highly fractured from 68.9' to -70.7'.

Recovery = 81.3%
R.Q.D. = 22.9%
100.0% Water Loss.

End Of Boring @ -72.0'
Straight Flight Augers To -10.0'
Rotary Drilling To Completion
CME Automatic Hammer
10.0' 4.0" Casing Used
63.0' 3.0" Casing Used

Drillers Observation: Fractured Rock.

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 (ASTM D 1586). The Unit Dry Weight (pcf) is noted in italics above moist (%).
NB-No Recovery

PAGE 1 of 1

ROCK CORE LOG

DATE 9/22-28/2008

LOGGED BY MR

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57 Over I-294

COUNTY Cook CORING METHOD Rotary Wash

STRUCT. NO. 016-1096 & 016-1097 CORING BARREL TYPE & SIZE NX Double Swivel-10 ft
Station - Core Diameter 2.0 in
BORING NO. I57-I294 B-3 Top of Rock Elev. 571.5
Station: 256+13 Begin Core Elev. 569.5
Offset: 71.0' Right
Ground Surface Elev. 634.5

DEPTH (ft)	RECOVERY (%)	UNIT DRY WEIGHT (pcf)	UNIT WEIGHT (pcf)	UNIAxIAL COMPRESSIVE STRENGTH (tsf)	REMARKS
569.5	100.0	22.9	na	1082@ -65.3'	Run 1 (-65.0' to -72.0') Silurian System Niagaran Series Dolomite
-5					Light gray to gray with horizontal bedding. Fine grained with some varving. Horizontal fractures @ -65.3', -67.2' & -67.4'. Vertical fracture with intersecting horizontal fractures from -67.7' to -68.9'. Highly fractured from 68.9' to -70.7'.
-10					100.0% Water Loss.

Color pictures of the cores Yes Cores will be stored for examination for
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BORING LOGS 3
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 59	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - SP,	NAME	DATE		57	1414.2B	COOK	516	304	
	DRAWN - JMA				CONTRACT NO. 60J27					
	CHECKED - SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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3/17/2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 2

SOIL BORING LOG

DATE 11/13/2008

LOGGED BY MR

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION LOCATION I-57 Over I-294

COUNTY Cook DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097
Station -
BORING NO. I57-I294 B-5
Station: 258+82
Offset: 80.5' Left
Ground Surface Elev. 614.9

DRILLING METHOD		Surface Water Elev.		Stream Bed Elev.		Groundwater Elevation:			
		(ft)	(6")	(tsf)	(%)	(ft)	(6")	(tsf)	(%)
12.0" ASPHALT.									
24.0" CRUSHED STONE-dense									
	17								
	19								
	20	NP	15						
	4								
	8								
CLAY LOAM-brown & gray-hard (A-6) Fill	-5	11	4.5+P	14					
	7								
	10								
	14	4.5+P	17						
	5								
	8								
	10	4.2B	20						
	3								
	5								
	7	NP	17						
	2								
	2								
	-15	2	0.5P	31					
	3								
	4								
	5	NP	20						
	4								
	5								
	5	NP	21						

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 (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

PAGE 2 of 2

SOIL BORING LOG

DATE 11/13/2008

LOGGED BY MR

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION LOCATION I-57 Over I-294

COUNTY Cook DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097
Station -
BORING NO. I57-I294 B-5
Station: 258+82
Offset: 80.5' Left
Ground Surface Elev. 614.9

DRILLING METHOD		Surface Water Elev.		Stream Bed Elev.		Groundwater Elevation:	
(ft)	(6")	(tsf)	(%)	(ft)	(6")	(tsf)	(%)
Drillers Observation: Cobbles & Boulders. 573.9							
Run 1 (-41.0' to -47.0') Silurian System Niagaran Series Dolomite							
Light gray to gray with horizontal bedding. Fine grained with some pyrite inclusions. Highly fractured & weathered to -43.0' with 2.0" clay parting @ -41.6' & 0.25" clay parting @ -43.4'. Horizontal fractures @ -43.6', -43.8' & -43.9'. Weathered fracture zone from -44.2' to -44.4'. Horizontal fractures @ -44.6', -45.6', -45.7' & -46.1'. Recovery = 98.3% R.Q.D. = 45.8% 100.0% Water Loss 587.9							
End Of Boring @ -47.0' Straight Flight Augers To -10.0' Rotary Drilling To Completion CME Automatic Hammer 10.0' 4.0" Casing Used 3.0" Casing Used							

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 (ASTM D 1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

PAGE 1 of 1

ROCK CORE LOG

DATE 11/13/2008

LOGGED BY MR

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION LOCATION I-57 Over I-294

COUNTY Cook CORING METHOD Rotary Wash

STRUCT. NO. 016-1096 & 016-1097
Station -
BORING NO. I57-I294 B-5
Station: 258+82
Offset: 80.5' Left
Ground Surface Elev. 614.9

CORING METHOD	CORING BARREL TYPE & SIZE		Core Diameter	Top of Rock Elev.	Begin Core Elev.
	(ft)	(#)			
Run 1 (-41.0' to -47.0')	1	98.3	48.5	n/a	573.9
Silurian System Niagaran Series Dolomite					
Light gray to gray with horizontal bedding. Fine grained with some pyrite inclusions. Highly fractured & weathered to -43.0' with 2.0" clay parting @ -41.6' & 0.25" clay parting @ -43.4'. Horizontal fractures @ -43.6', -43.8' & -43.9'. Weathered fracture zone from -44.2' to -44.4'. Horizontal fractures @ -44.6', -45.6', -45.7' & -46.1'. 100.0% Water Loss					

Color pictures of the cores Yes Cores will be stored for examination for
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BORING LOGS 5
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS				SHEET NO. 61	F.A.I R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - SP,	NAME	DATE				57	1414.2B	COOK	516	306
	DRAWN - JMA										
	CHECKED - SP,PDF										
	DATE - 03/18/10										
							CONTRACT NO. 60J27				
							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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3/17/2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 2 of 2

ROCK CORE LOG

DATE 9/19/2008

LOGGED BY DR

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57 Over I-294

COUNTY Cook CORING METHOD Rotary Wash

STRUCT. NO. 016-1096 & 016-1097 CORING BARREL TYPE & SIZE NX Double Swivel-10 ft

Station - Core Diameter 2.0 in

BORING NO. I57-I294 B-8 Top of Rock Elev. 577.6

Station: 260+46 Begin Core Elev. 569.6

Offset: 67.5' Left

Ground Surface Elev. 635.1

DEPTH (ft)	DIAMETER (in)	UNIT WEIGHT (pcf)	DRY WEIGHT (pcf)	WATER CONTENT (%)	SHRINKAGE (%)	STRENGTH (tsf)
569.6	2	97.5	95.6	na	na	648@ -66.2'
-68.5						
-73.5						

Run 2 (-65.5' to -73.5')
Silurian System Niagaran Series Dolomite

Light gray to gray with horizontal bedding. Fine grained with some varving. Horizontal fractures @ -66.1' & -66.6'. Tight vertical fracture from -67.8' to -69.5'. Horizontal fractures @ -68.4', -70.4', -70.8' & -71.5'.

Color pictures of the cores Yes Cores will be stored for examination for
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

PAGE 1 of 2

SOIL BORING LOG

DATE 9/18/2008

LOGGED BY MD

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57 Over I-294

COUNTY Cook DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097

Station -

BORING NO. I57-I294 B-9

Station: 260+15

Offset: 6.0' Right

Ground Surface Elev. 636.0

DEPTH (ft)	DIAMETER (in)	UNIT WEIGHT (pcf)	DRY WEIGHT (pcf)	WATER CONTENT (%)	SHRINKAGE (%)	STRENGTH (tsf)
634.8	4					106
633.0	6					21
	6 NP					12
	3					109
	5					20
	-5 5 4.0P					19
	3					109
	5 3.7S@					20
	6 11.3%					20
	4					106
	7					17
	-10 8 4.5P					17
	6					108
	9					18
	10 4.25B					18
	3					106
	4					22
	-15 5 2.5B					22
	5					106
	8					20
	9 2.6B					20
	5					107
	6					506*
	-20 7 3.5B					20

5.0" ASPHALT, 6.5" CONCRETE,
2.5" CRUSHED STONE

CLAY with Crushed Stone-
medium dense (Fill)

CLAY-brown & gray-
very stiff to hard (A-6) Fill

CLAY-brown & gray-
very stiff to hard (A-6) Fill

SILTY LOAM to SILT-gray-
medium dense to very dense (A-4)

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

PAGE 2 of 2

SOIL BORING LOG

DATE 9/18/2008

LOGGED BY MD

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57 Over I-294

COUNTY Cook DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097

Station -

BORING NO. I57-I294 B-9

Station: 260+15

Offset: 6.0' Right

Ground Surface Elev. 636.0

DEPTH (ft)	DIAMETER (in)	UNIT WEIGHT (pcf)	DRY WEIGHT (pcf)	WATER CONTENT (%)	SHRINKAGE (%)	STRENGTH (tsf)
589.0						21
	17					109
	19					20
	-45 22 NP					12
	8					105
	10					22
	11 2.4B					22
	6					106
	8					22
	-30 10 2.7B					22
	3					106
	4					23
	-35 6 NP					10
	3					106
	4					20
	5					106
	8					20
	9 2.6B					20
	5					107
	6					506*
	-40 7 3.5B					20

SILTY LOAM to SILT-gray-
medium dense to very dense (A-4)

Run 1 (-60.0' to -70.0')
Silurian System Niagaran Series Dolomite

Light gray to gray with horizontal bedding. Fine grained with some varving. Horizontal fractures @ -60.3', -60.8', -60.9', -61.1', -62.0' & -62.3'. Vertical fracture from -62.3' to -62.8'. Horizontal fractures @ -62.9', -63.3', -63.4', -63.9', -64.2', -65.9', -66.1', -66.2', -67.2', -67.6' & -67.9'. 1.5" clay parting @ -68.4'. Horizontal fracture @ -68.9'.

Recovery = 93.0%
R.Q.D. = 47.0%

Drillers Observation: Cobbles or boulder from -49.5' to -51.0'.

End Of Boring @ -70.0'
Straight Flight Augers To -10.0'
Rotary Drilling To Completion
CME Automatic Hammer
10.0' 4.0" Casing Used
60.0' 3.0" Casing Used

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 LOGS 9
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 65	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - SP,	NAME	DATE						
	DRAWN - JMA								
	CHECKED - SP,PDF								
	DATE - 03/18/10								
				68 SHEETS	57	1414.2B	COOK	516	310
				CONTRACT NO. 60J27					
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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3/17/2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 1

DATE 10/10/08

LOGGED BY DR

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57 Over I-294

COUNTY Cook CORING METHOD Rotary Wash

STRUCT. NO. 016-1096 & 016-1097 CORING BARREL TYPE & SIZE NX Double Swivel-10 ft

Station - Core Diameter 2.0 in

BORING NO. I57-I294 B-10 Top of Rock Elev. 574.9

Station: 259+88 Begin Core Elev. 574.9

Offset: 71.0' Right

Ground Surface Elev. 635.4

(ft)	(#)	(%)	(%)	(min)	(tsf)	D E P T H	B L O W S	U N D E R L I N E	M O S T L I Q U E S	C O M P R E S S I O N	S T R E N G T H
574.9	1	98.9	88.4	1.00	1300	1300					
-65.5											
-70.5											

Run 1 (-60.5' to -70.0')
Silurian System Niagaran Series Dolomite

Light gray to gray with horizontal bedding. Fine grained with some varving. Horizontal fractures -61.3', -61.5', -61.9', -62.4', -62.5', -63.2', -63.3', -64.1', -64.4', -65.1', -65.6' & -69.5'.

100.0% Water Loss

Color pictures of the cores Yes Cores will be stored for examination for
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

PAGE 1 of 2

DATE 11/3/2008

LOGGED BY RJ

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57-I-294 RAMP B Fly-Over Bridge

COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. - Surface Water Elev. na

Station - Stream Bed Elev. na

BORING NO. RMP B B-8 Groundwater Elevation: -

Station: 258+24 First Encounter na

Offset: 85.0' Left Upon Completion na

Ground Surface Elev. 614.1 After - Hrs. -

(ft)	(#)	(tsf)	(%)	(min)	(tsf)	(%)	D E P T H	B L O W S	U N D E R L I N E	M O S T L I Q U E S	C O M P R E S S I O N	S T R E N G T H
593.6												
591.1												
586.1												
575.1												
40	46	NP	14									

10.0" ASPHALT,
26.0" CRUSHED STONE-medium dense

CLAY-gray-stiff (A-6) Wet

CLAY-brown & gray-hard (A-6) Fill

SILT-gray-dense (A-4)

SILTY CLAY LOAM-brown & gray-
loose to medium dense (A-4)

SILTY LOAM-gray-loose (A-4)

SAND-gray-loose (A-3)

Drillers Observation: Apparent Bedrock.

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

PAGE 2 of 2

DATE 11/3/2008

LOGGED BY RJ

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57-I-294 RAMP B Fly-Over Bridge

COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. - Surface Water Elev. na

Station - Stream Bed Elev. na

BORING NO. RMP B B-8 Groundwater Elevation: -

Station: 258+24 First Encounter na

Offset: 85.0' Left Upon Completion na

Ground Surface Elev. 614.1 After - Hrs. -

(ft)	(#)	(tsf)	(%)	(min)	(tsf)	(%)	D E P T H	B L O W S	U N D E R L I N E	M O S T L I Q U E S	C O M P R E S S I O N	S T R E N G T H
572.1												
568.1												
563.1												
560												
555												
550												
545												
540												
535												
530												
525												
520												
515												
510												
505												
500												
495												
490												
485												
480												

Drillers Observation: Apparent Bedrock.

Run 1 (-42.0' to -51.0')
Silurian System Niagaran Series Dolomite

Light gray mottled gray with horizontal bedding. Fine grained with some varving. Horizontal fractures @ -42.4', -42.6', -42.8', -43.2', -47.5' & -47.8'.

Recovery = 99.4%
R.Q.D. = 87.2%

End Of Boring @ -51.0'
Hollow Stem Augers To -10.0'
Rotary Drilling To Completion
CME Automatic Hammer
10.0' of 4.0" Casing Used

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 LOGS 11
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 67	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.							
	CHECKED - SP,	NAME	DATE							68 SHEETS	57	1414.2B	COOK	516	312	
	DRAWN - JMA															CONTRACT NO. 60J27
	CHECKED - SP,PDF															
DATE - 03/18/10																
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT											

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 1

ROCK CORE LOG

DATE 11/3/2008
LOGGED BY RJ
JOB NUMBER P-91-186-08
GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)
SECTION - LOCATION I-57A-294 RAMP B Fly-Over Bridge
COUNTY Cook CORING METHOD Rotary Wash

STRUCT. NO. - CORING BARREL TYPE & SIZE NX Double Swivel-10 ft
Station - Core Diameter 2.0 in
BORING NO. RMP B B-8 Top of Rock Elev. 575.1
Station: 258+24 Begin Core Elev. 572.1
Offset: 85.0' Left
Ground Surface Elev. 614.1

DEPTH (ft)	ROCK TYPE	UNIT WEIGHT (%)	MOISTURE (%)	STRENGTH (tsf)
572.1	1	99.4	87.2	na
1121@				42.8'
-47				
-52				

RUN 1 (-42.0' to -51.0')
Silurian System Niagaran Series Dolomite
Light gray mottled gray with horizontal bedding. Fine grained with some varving. Horizontal fractures @ -42.4', -42.6', -42.8', -43.2', -47.5' & -47.8'.

Color pictures of the cores Yes No. Cores will be stored for examination for
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BORING LOGS 12
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 68	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - SP,	NAME	DATE			57	1414.2B	COOK	516	313
	DRAWN - JMA					CONTRACT NO. 60J27				
	CHECKED - SP,PDF									
	DATE - 03/18/10					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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3/17/2010

Bench Mark: Iron rod with yellow cap set 7'± off west side of N.B. I-294 shoulder at Sta. 400+00. Elev. 610.79

Existing Structures: None. Structure to be constructed in 3 stages utilizing stage construction.

Salvage: None

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PROPOSED HORIZONTAL RAMP B CURVE DATA

PI STA. = 3042+99.82
 $\Delta = 128^\circ 46' 46''$ (LT)
 $D = 6^\circ 45' 52''$
 $R = 847.00'$
 $T = 1,767.01'$
 $L = 1,903.74'$
 $E = 1,112.52'$
 $e = 5.9\%$
 $S.E. RUN = 196.5'$
 P.C. STA. = 3025+32.81
 P.T. STA. = 3044+36.55

STATION 1261+04.11
 BUILT 20 BY
 STATE OF ILLINOIS
 F.A.I. RTE. 57 SEC. 1414.2B
 LOADING HL-93
 STRUCTURE NO. 016-1252

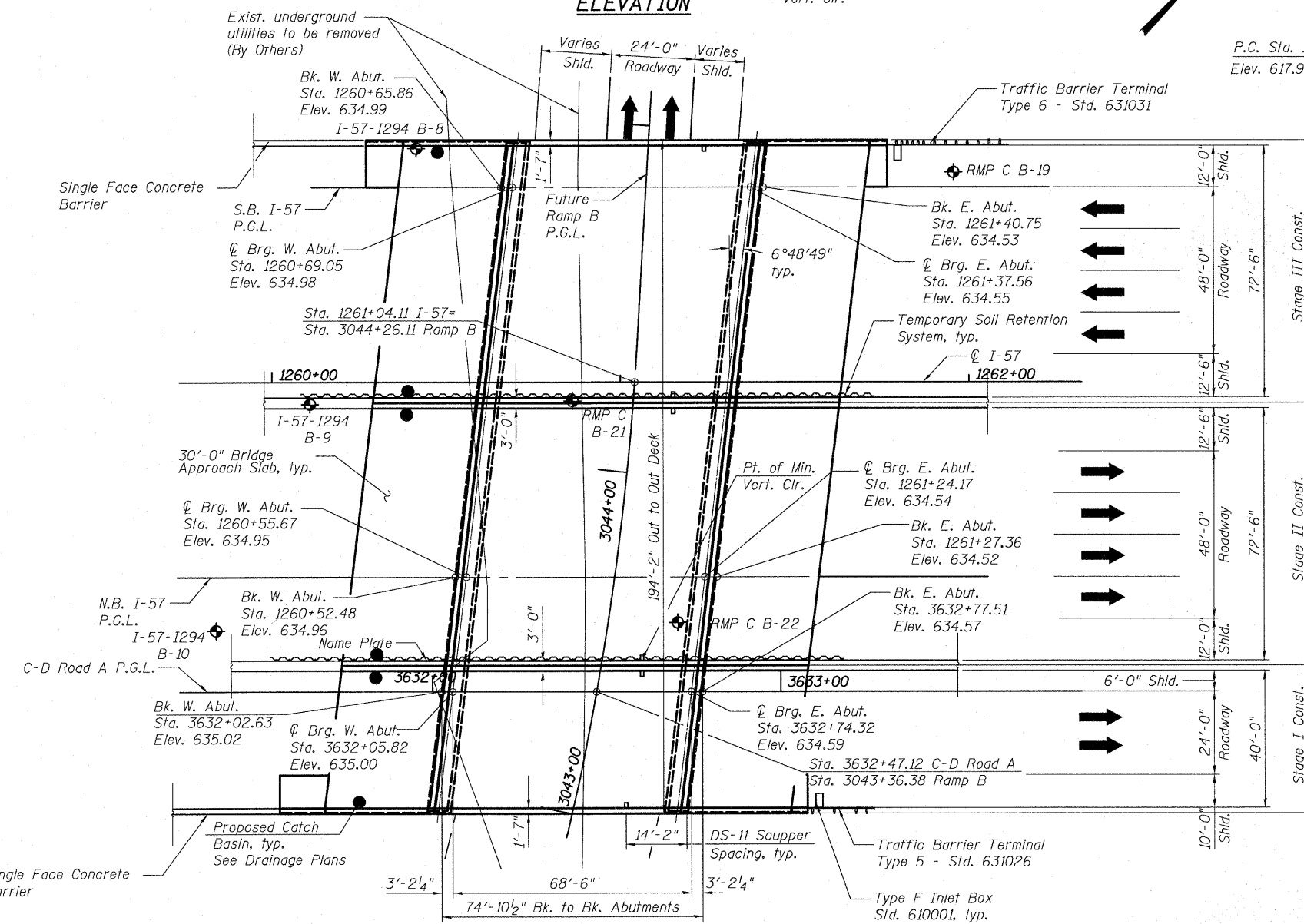
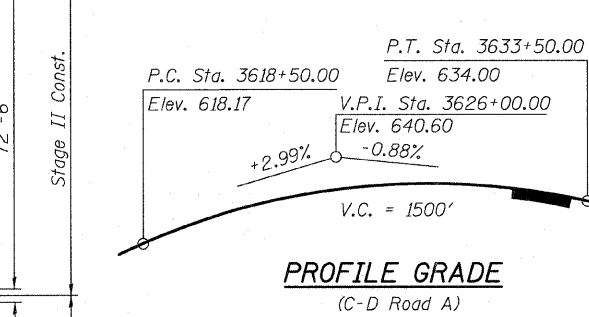
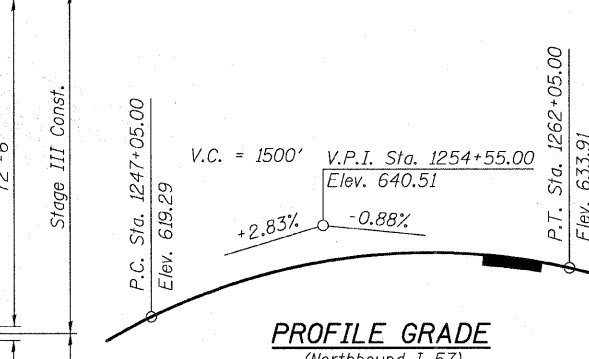
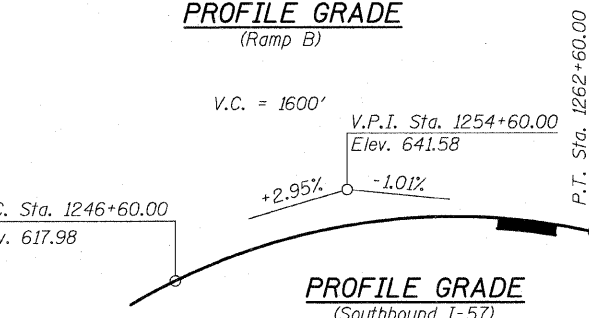
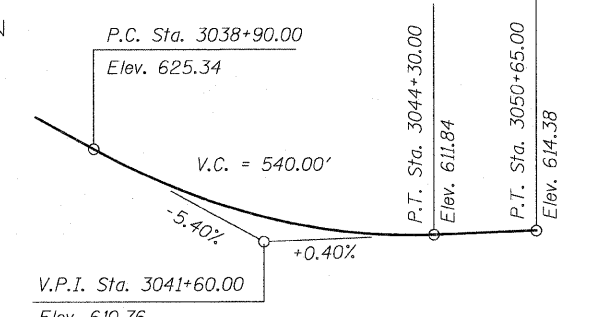
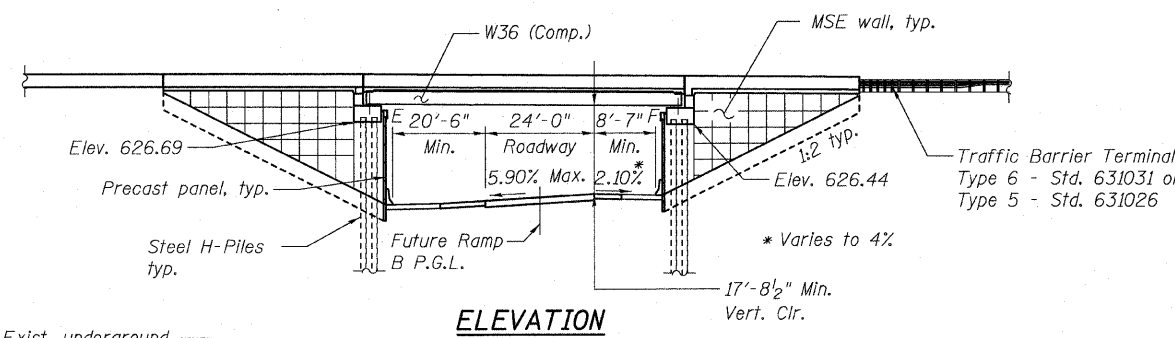
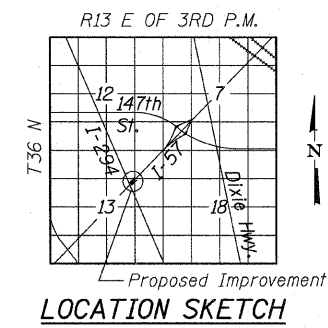
NAME PLATE
 See Std. 515001

DESIGN SPECIFICATIONS
 2007 AASHTO LRFD Bridge Design Specifications,
 4th Edition, with 2008 and 2009 Interims

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES
FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)

SEISMIC DATA
 Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.065g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.116g
 Soil Site Class = C



APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Pantazis (TS)
 ENGINEER OF BRIDGES AND STRUCTURES
 Signed *J.P.O.*
 Spiros Pantazis, S.E. Il. Lic. No. 081-006448
 Expires 11-30-2010.
 Date 3-18-10



TYLIN INTERNATIONAL

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CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO. 1	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 314
62 SHEETS			CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts.
Bolts 7/8-in.φ, holes 15/16-in.φ, unless otherwise noted.

Calculated weight of Structural Steel =
Grade 50 = 323,180 lbs
Grade 36 = 33,700 lbs

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706
Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

If the Contractor elects to use cantilever forming brackets on the exterior
beams or girders, the brackets shall be placed at the same locations as
required for the hardwood blocks in Article 503.06(b) of the Standard
Specifications. If additional cantilever forming brackets are required,
hardwood blocking shall be wedged between the exterior and first interior
beam at each of these additional bracket locations.

Concrete Sealer shall be applied to the exposed surfaces of backwalls, bridge seats
and front face of pile caps at the abutments.

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used
for painting of new structural steel except where otherwise noted. The entire
system shall be shop applied, with the exception that masked off connection
surfaces, field installed fasteners and damaged areas shall be touched up in the
field. The color of the final finish coat for all interior steel surfaces shall be
Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior
and bottom flange of the fascia beams shall be Interstate Green, Munsell
No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal
Structures".

Slipforming of the parapet is not allowed.

The conduit shown embedded in structure and attached to structure is paid for in the Roadway Plans.

It shall be the Contractor's responsibility to verify the location of all fiber optic utilities prior to starting
construction. The Contractor shall initiate the locate process for the fiber optic cable by completing
a "Request to Locate Tollway Facilities" form (Tollway Form A-36) and submitting it to the Tollway.
Copies of Form A-36 are available from the Tollway's Utility/Permit Section (630-241-6800, ext 3306).
Completed A-36 forms shall be faxed to the Tollway to the attention of Tollway Utility Administrator
at 630-271-7568, at least four (4) business days prior to starting any underground operations,
excavations or digging of any type in general area of the fiber optic cable.

INDEX OF SHEETS

1	General Plan & Elevation
2	Gen Notes, Index of Sheets, Bill of Material
3	Stage Construction
4	Stage Construction Details
5	Temporary Concrete Barrier
6	Top of Slab Elevations - Layout
7	Top of Slab Elevations-SB 157 - 1
8	Top of Slab Elevations -SB 157 - 2
9	Top of Slab Elevations -SB & NB I-57
10	Top of Slab Elevations-NB 157 - 1
11	Top of Slab Elevations-NB 157 & C-D Road A
12	Top of Slab Elevations C-D Road A
13	Top of West Approach Slab Elevations - 1
14	Top of West Approach Slab Elevations - 2
15	Top of East Approach Slab Elevations - 1
16	Top of East Approach Slab Elevations - 2
17	Superstructure - SB 157
18	Superstructure - NB 157
19	Superstructure - C-D Road A
20	Parapet Elevations
21	Superstructure Details
22-27	West Approach Slab Details
28-33	East Approach Slab Details
34	West Anchorage Slab Details
35	East Anchorage Slab Details
36	Anchorage Slab Details
37	Drainage Details
38	Drainage Scupper, DS II
39	Preformed Joint Strip Seal
40	Framing Plan
41	Structural Steel Details
42	Bearing Details
43	West Abutment - 1
44	West Abutment - 2
45	West Abutment - 3
46	West Abutment Details
47	East Abutment - 1
48	East Abutment - 2
49	East Abutment - 3
50	East Abutment Details
51	West Mechanically Stabilized Earth Retaining Wall
52	West Mechanically Stabilized Earth Retaining Wall Details
53	East Mechanically Stabilized Earth Retaining Wall
54	East Mechanically Stabilized Earth Retaining Wall Details
55	Bar Splicer Assembly and Mechanical Splicer Details
56	HP Pile Details
57-62	Boring Logs

TOTAL BILL OF MATERIAL

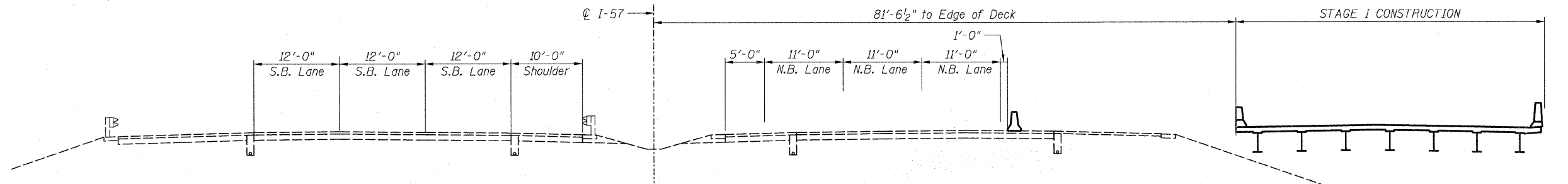
ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu Yd		8,020	8,020
Concrete Structures	Cu Yd		551.7	551.7
Concrete Superstructure	Cu Yd	1,051.8		1,051.8
Bridge Deck Grooving	Sq Yd	2,511		2,511
Protective Coat	Sq Yd	3,148		3,148
Furnishing and Erecting Structural Steel	L Sum	0.20		0.20
Stud Shear Connectors	Each	9,765		9,765
Reinforcement Bars, Epoxy Coated	Pound	239,520	58,330	297,850
Bar Splicers	Each	396		396
Furnishing Steel Piles HP12x53	Foot		3,774	3,774
Driving Piles	Foot		3,774	3,774
Test Pile Steel HP12x53	Each		2	2
Pile Shoes	Each		104	104
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	385.0		385.0
Elastomeric Bearing Assembly, Type I	Each	31		31
Anchor Bolts, 1"	Each	124		124
Concrete Sealer	Sq Ft		3,260	3,260
Drainage Scuppers, DSII	Each	6		6
Temporary Soil Retention System	Sq Ft		6,820	6,820
Mechanically Stabilized Earth Retaining Wall	Sq Ft		9,555	9,555
Drainage System	L Sum	0.20		0.20

**GENERAL NOTES, INDEX OF SHEETS,
BILL OF MATERIAL
STRUCTURE NO. 016-1252**

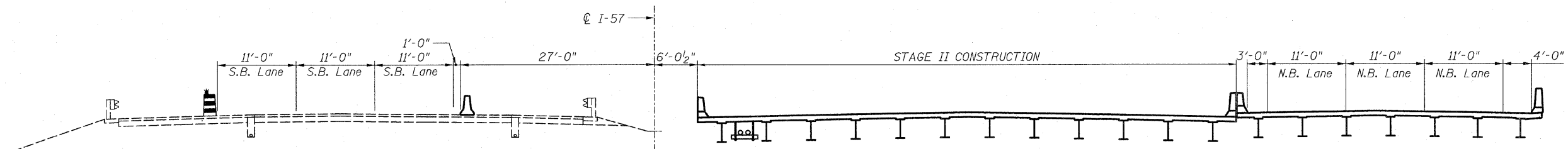
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	CHECKED - LS,SP,PDF								
	DATE - 03/18/10	Δ REVISED	05/24/10						
				62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT									

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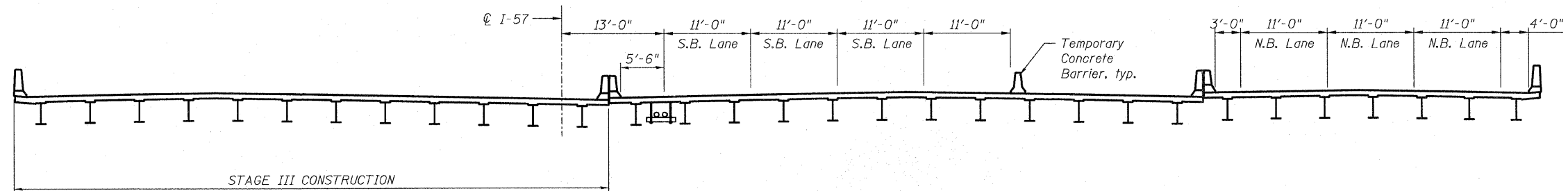
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STAGE I CONSTRUCTION
(LOOKING EAST)



STAGE II CONSTRUCTION
(LOOKING EAST)



STAGE III CONSTRUCTION
(LOOKING EAST)

STAGE CONSTRUCTION
STRUCTURE NO. 016-1252

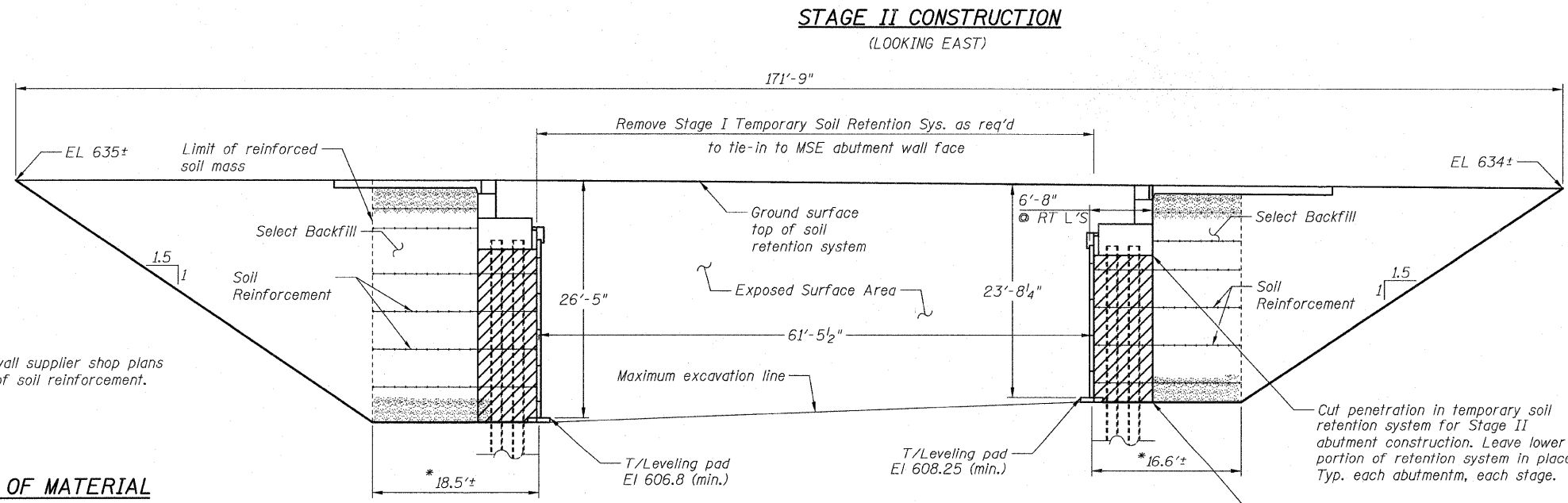
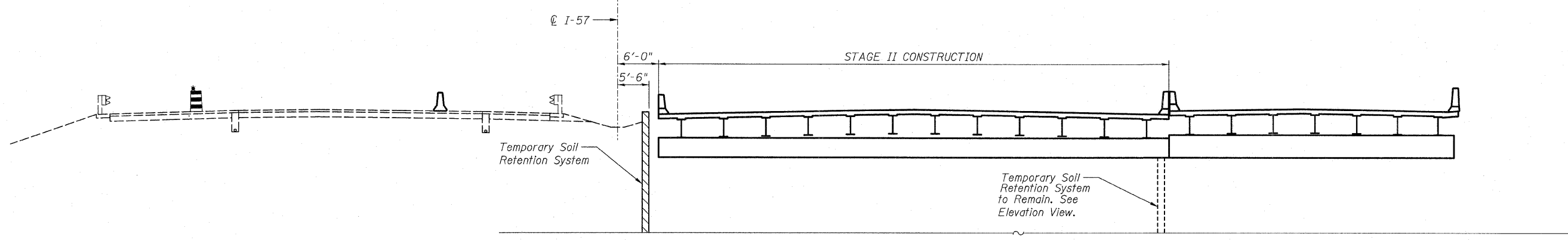
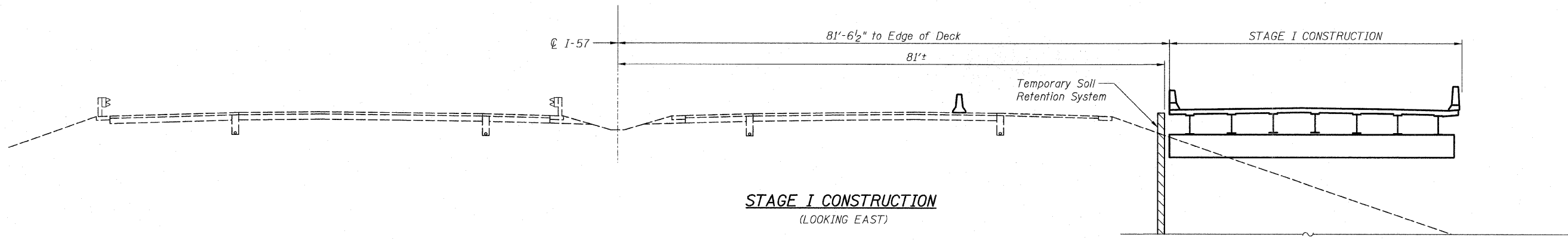
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DATE - 03/18/10			

SHEET NO. 3	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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62 SHEETS	CONTRACT NO. 60J27				
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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* See MSE wall supplier shop plans for limit of soil reinforcement.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Temporary Soil Retention System	Sq Ft	6820

TEMPORARY SOIL RETENTION ELEVATION

(LOOKING NORTH)
Stage I Retention shown. Stage II Retention similar.

NOTES

1. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the engineer.

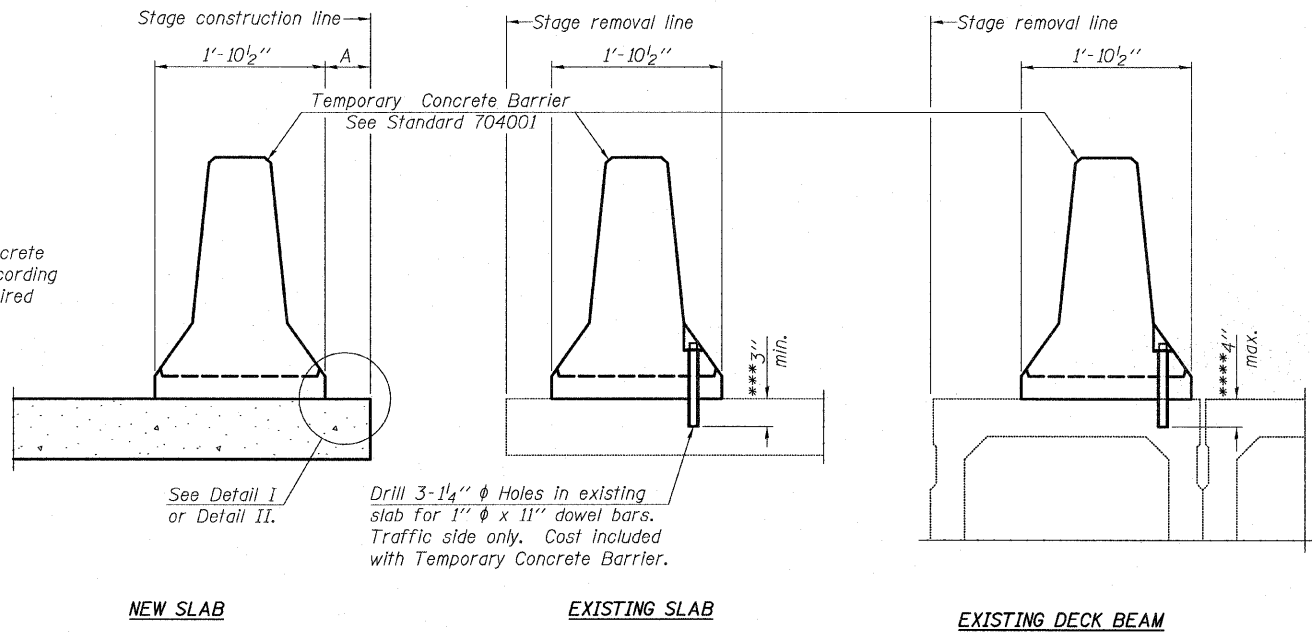
**TEMPORARY SOIL RETENTION SYSTEM
STRUCTURE NO. 016-1252**

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	DRAWN - MRB				CONTRACT NO. 60J27					
	CHECKED - AMD				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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STATE OF ILLINOIS
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When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

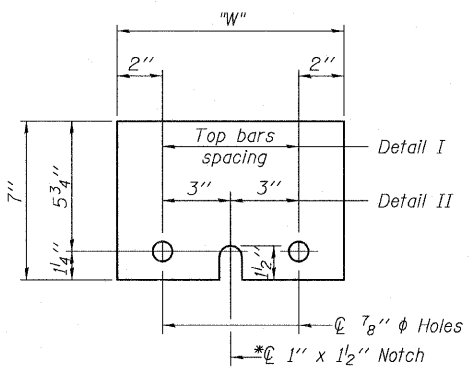
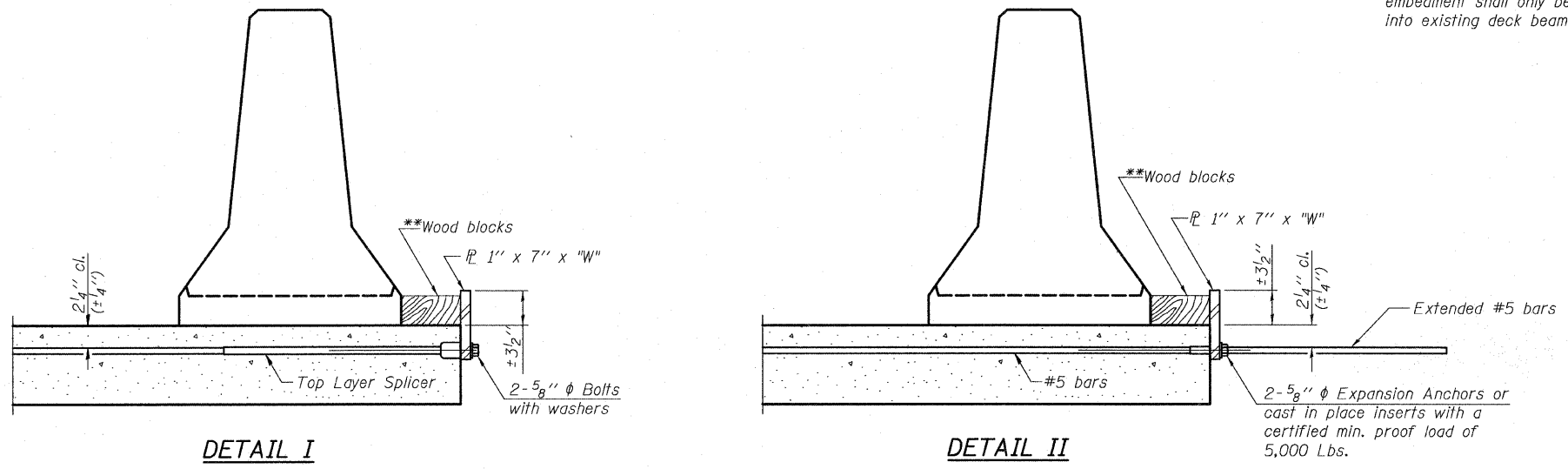
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



STEEL RETAINER \bar{P} 1" x 7" x 10"
* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

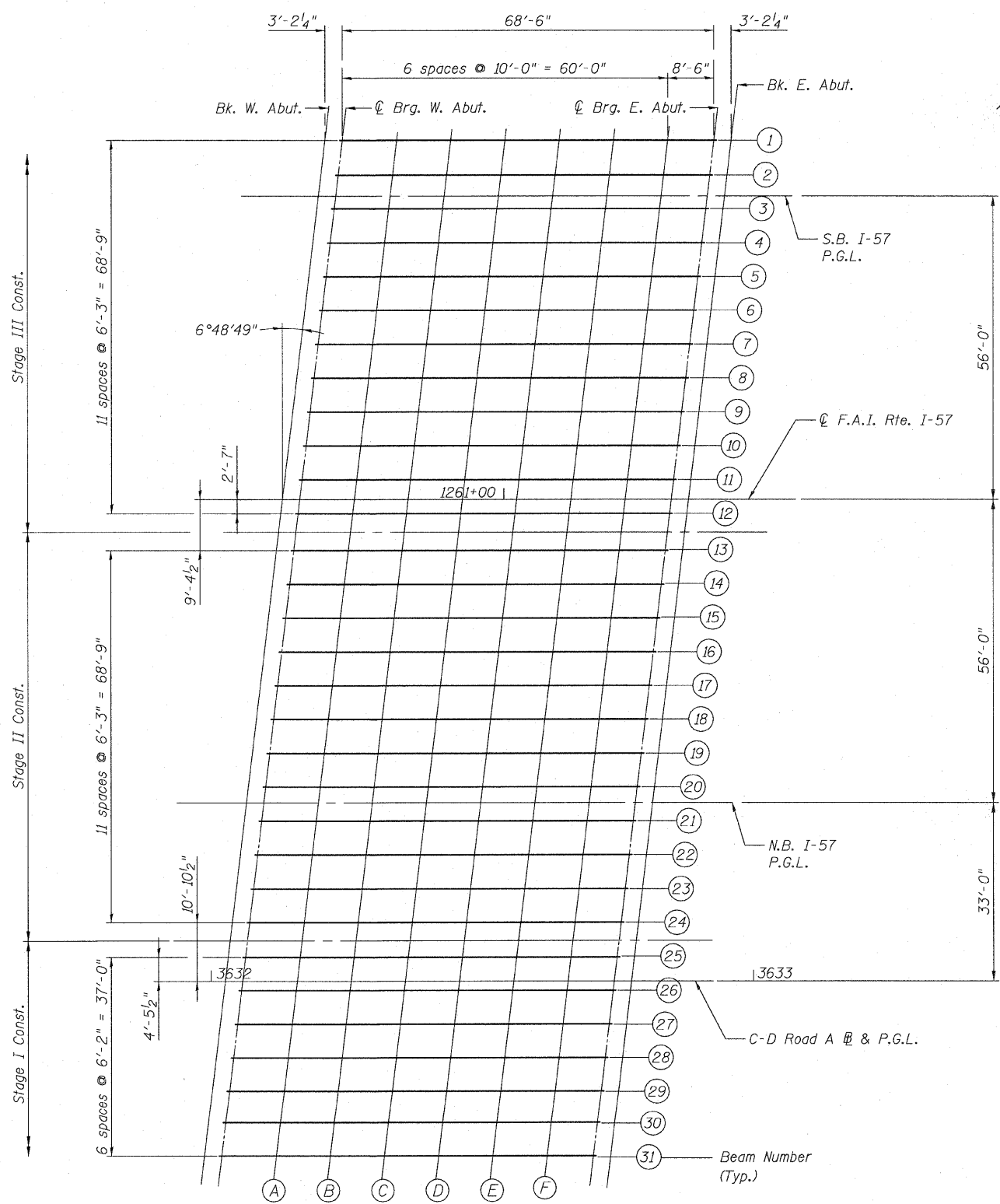
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**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 016-1252**

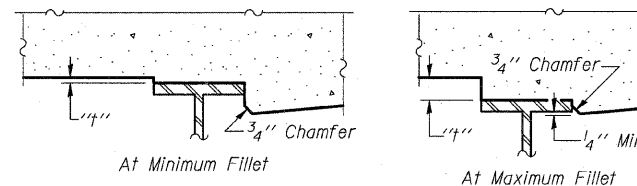
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	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

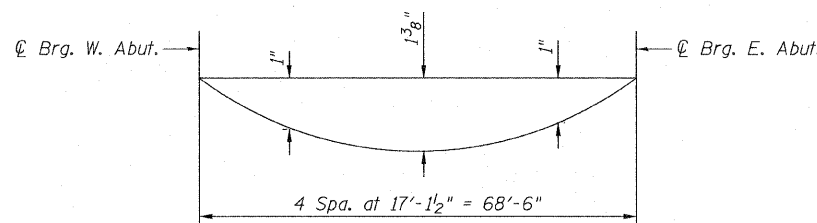


PLAN



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grading as shown on sheets 7 to 12.

**TOP OF SLAB ELEVATIONS - LAYOUT
SN. 016-1252**

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 6	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+67.07	-10.17	634.78	634.78
CL Brg. West Abut	1260+70.26	-10.17	634.76	634.76
A	1260+80.26	-10.17	634.76	634.70
B	1260+90.26	-10.17	634.74	634.65
C	1261+00.26	-10.17	634.70	634.59
D	1261+10.26	-10.17	634.64	634.52
E	1261+20.26	-10.17	634.55	634.46
F	1261+30.26	-10.17	634.44	634.39
CL Brg. East Abut	1261+38.78	-10.17	634.33	634.33
Bk. of East Abut	1261+41.96	-10.17	634.31	634.31

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+66.33	-3.92	634.91	634.91
CL Brg. West Abut	1260+69.52	-3.92	634.89	634.89
A	1260+79.52	-3.92	634.84	634.89
B	1260+89.52	-3.92	634.78	634.88
C	1260+99.52	-3.92	634.72	634.84
D	1261+09.52	-3.92	634.66	634.77
E	1261+19.52	-3.92	634.59	634.68
F	1261+29.52	-3.92	634.53	634.57
CL Brg. East Abut	1261+38.03	-3.92	634.47	634.47
Bk. of East Abut	1261+41.22	-3.92	634.44	634.44

SB I-57 P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+65.86	0.00	634.99	634.99
CL Brg. West Abut	1260+69.05	0.00	634.98	634.98
A	1260+79.05	0.00	634.92	634.98
B	1260+89.05	0.00	634.86	634.96
C	1260+99.05	0.00	634.81	634.92
D	1261+09.05	0.00	634.74	634.86
E	1261+19.05	0.00	634.68	634.77
F	1261+29.05	0.00	634.61	634.66
CL Brg. East Abut	1261+37.56	0.00	634.55	634.55
Bk. of East Abut	1261+40.75	0.00	634.53	634.53

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+65.58	2.33	635.03	635.03
CL Brg. West Abut	1260+68.77	2.33	635.02	635.02
A	1260+78.77	2.33	634.96	635.01
B	1260+88.77	2.33	634.90	635.00
C	1260+98.77	2.33	634.84	634.96
D	1261+08.77	2.33	634.78	634.90
E	1261+18.77	2.33	634.72	634.81
F	1261+28.77	2.33	634.65	634.69
CL Brg. East Abut	1261+37.28	2.33	634.59	634.59
Bk. of East Abut	1261+40.47	2.33	634.57	634.57

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+64.83	8.58	635.13	635.13
CL Brg. West Abut	1260+68.02	8.58	635.12	635.12
A	1260+78.02	8.58	635.06	635.12
B	1260+88.02	8.58	635.01	635.10
C	1260+98.02	8.58	634.95	635.06
D	1261+08.02	8.58	634.88	635.00
E	1261+18.02	8.58	634.82	634.91
F	1261+28.02	8.58	634.75	634.80
CL Brg. East Abut	1261+36.54	8.58	634.69	634.69
Bk. of East Abut	1261+39.72	8.58	634.67	634.67

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+64.09	14.83	635.15	635.15
CL Brg. West Abut	1260+67.28	14.83	635.13	635.13
A	1260+77.28	14.83	635.08	635.13
B	1260+87.28	14.83	635.02	635.11
C	1260+97.28	14.83	634.96	635.08
D	1261+07.28	14.83	634.90	635.01
E	1261+17.28	14.83	634.83	634.92
F	1261+27.28	14.83	634.77	634.81
CL Brg. East Abut	1261+35.79	14.83	634.71	634.71
Bk. of East Abut	1261+38.98	14.83	634.68	634.68

TOP OF SLAB ELEVATIONS-SB I-57-1
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 7	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.								
	CHECKED - AD,LS	NAME	DATE							57	1414.2B	COOK	516	320			
	DRAWN - DY,EI																
	CHECKED - LS,SP,PDF														CONTRACT NO. 60J27		
	DATE - 03/18/10														FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+63.34	21.08	635.05	635.05
CL Brg. West Abut	1260+66.53	21.08	635.04	635.04
A	1260+76.53	21.08	634.98	635.04
B	1260+86.53	21.08	634.93	635.02
C	1260+96.53	21.08	634.87	634.98
D	1261+06.53	21.08	634.80	634.92
E	1261+16.53	21.08	634.74	634.83
F	1261+26.53	21.08	634.67	634.72
CL Brg. East Abut	1261+35.04	21.08	634.61	634.61
Bk. of East Abut	1261+38.23	21.08	634.59	634.59

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+62.59	27.33	634.94	634.94
CL Brg. West Abut	1260+65.78	27.33	634.93	634.93
A	1260+75.78	27.33	634.87	634.92
B	1260+85.78	27.33	634.81	634.91
C	1260+95.78	27.33	634.76	634.87
D	1261+05.78	27.33	634.69	634.81
E	1261+15.78	27.33	634.63	634.72
F	1261+25.78	27.33	634.56	634.61
CL Brg. East Abut	1261+34.29	27.33	634.50	634.50
Bk. of East Abut	1261+37.48	27.33	634.48	634.48

BEAM 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+61.85	33.58	634.82	634.82
CL Brg. West Abut	1260+65.04	33.58	634.80	634.80
A	1260+75.04	33.58	634.75	634.80
B	1260+85.04	33.58	634.69	634.78
C	1260+95.04	33.58	634.63	634.75
D	1261+05.04	33.58	634.57	634.68
E	1261+15.04	33.58	634.50	634.59
F	1261+25.04	33.58	634.44	634.48
CL Brg. East Abut	1261+33.55	33.58	634.38	634.38
Bk. of East Abut	1261+36.74	33.58	634.36	634.36

BEAM 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+61.10	39.83	634.69	634.69
CL Brg. West Abut	1260+64.29	39.83	634.67	634.67
A	1260+74.29	39.83	634.62	634.67
B	1260+84.29	39.83	634.56	634.66
C	1260+94.29	39.83	634.50	634.62
D	1261+04.29	39.83	634.44	634.56
E	1261+14.29	39.83	634.38	634.47
F	1261+24.29	39.83	634.31	634.36
CL Brg. East Abut	1261+32.80	39.83	634.25	634.25
Bk. of East Abut	1261+35.99	39.83	634.23	634.23

BEAM 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+60.35	46.08	634.56	634.56
CL Brg. West Abut	1260+63.54	46.08	634.55	634.55
A	1260+73.54	46.08	634.49	634.55
B	1260+83.54	46.08	634.44	634.53
C	1260+93.54	46.08	634.38	634.50
D	1261+03.54	46.08	634.32	634.43
E	1261+13.54	46.08	634.25	634.34
F	1261+23.54	46.08	634.19	634.23
CL Brg. East Abut	1261+32.05	46.08	634.13	634.13
Bk. of East Abut	1261+35.24	46.08	634.11	634.11

BEAM 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+59.61	52.33	634.44	634.44
CL Brg. West Abut	1260+62.80	52.33	634.42	634.42
A	1260+72.80	52.33	634.37	634.42
B	1260+82.80	52.33	634.31	634.41
C	1260+92.80	52.33	634.25	634.37
D	1261+02.80	52.33	634.19	634.31
E	1261+12.80	52.33	634.13	634.22
F	1261+22.80	52.33	634.06	634.11
CL Brg. East Abut	1261+31.31	52.33	634.00	634.00
Bk. of East Abut	1261+34.50	52.33	633.98	633.98

TOP OF SLAB ELEVATIONS-SB I-57-2
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 8	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 321
	CHECKED - AD,LS	NAME	DATE						
	DRAWN - DY,EI								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
				62 SHEETS		CONTRACT NO. 60J27			
						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SB I-57

BEAM 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+58.86	58.58	634.31	634.31
CL Brg. West Abut	1260+62.05	58.58	634.29	634.29
A	1260+72.05	58.58	634.24	634.29
B	1260+82.05	58.58	634.18	634.28
C	1260+92.05	58.58	634.13	634.24
D	1261+02.05	58.58	634.07	634.18
E	1261+12.05	58.58	634.00	634.09
F	1261+22.05	58.58	633.94	633.98
CL Brg. East Abut	1261+30.56	58.58	633.88	633.88
Bk. of East Abut	1261+33.75	58.58	633.86	633.86

NB I-57

BEAM 13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+58.05	-46.63	634.46	634.46
CL Brg. West Abut	1260+61.24	-46.63	634.45	634.45
A	1260+71.24	-46.63	634.39	634.45
B	1260+81.24	-46.63	634.34	634.43
C	1260+91.24	-46.63	634.28	634.39
D	1261+01.24	-46.63	634.22	634.33
E	1261+11.24	-46.63	634.16	634.24
F	1261+21.24	-46.63	634.09	634.13
CL Brg. East Abut	1261+29.74	-46.63	634.03	634.03
Bk. of East Abut	1261+32.93	-46.63	634.01	634.01

BEAM 14

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+57.30	-40.38	634.60	634.60
CL Brg. West Abut	1260+60.49	-40.38	634.58	634.58
A	1260+70.49	-40.38	634.53	634.58
B	1260+80.49	-40.38	634.47	634.57
C	1260+90.49	-40.38	634.41	634.53
D	1261+00.49	-40.38	634.35	634.47
E	1261+10.49	-40.38	634.29	634.38
F	1261+20.49	-40.38	634.22	634.27
CL Brg. East Abut	1261+28.99	-40.38	634.17	634.17
Bk. of East Abut	1261+32.18	-40.38	634.14	634.14

BEAM 15

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+56.56	-34.13	634.73	634.73
CL Brg. West Abut	1260+59.75	-34.13	634.72	634.72
A	1260+69.75	-34.13	634.66	634.72
B	1260+79.75	-34.13	634.61	634.70
C	1260+89.75	-34.13	634.55	634.67
D	1260+99.75	-34.13	634.49	634.60
E	1261+09.75	-34.13	634.43	634.51
F	1261+19.75	-34.13	634.36	634.41
CL Brg. East Abut	1261+28.25	-34.13	634.30	634.30
Bk. of East Abut	1261+31.44	-34.13	634.28	634.28

BEAM 16

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+55.81	-27.88	634.87	634.87
CL Brg. West Abut	1260+59.00	-27.88	634.85	634.85
A	1260+69.00	-27.88	634.80	634.85
B	1260+79.00	-27.88	634.74	634.84
C	1260+89.00	-27.88	634.68	634.80
D	1260+99.00	-27.88	634.62	634.74
E	1261+09.00	-27.88	634.56	634.65
F	1261+19.00	-27.88	634.49	634.54
CL Brg. East Abut	1261+27.50	-27.88	634.44	634.44
Bk. of East Abut	1261+30.69	-27.88	634.41	634.41

BEAM 17

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+55.06	-21.63	634.99	634.99
CL Brg. West Abut	1260+58.25	-21.63	634.97	634.97
A	1260+68.25	-21.63	634.92	634.97
B	1260+78.25	-21.63	634.86	634.96
C	1260+88.25	-21.63	634.81	634.92
D	1260+98.25	-21.63	634.75	634.86
E	1261+08.25	-21.63	634.68	634.77
F	1261+18.25	-21.63	634.62	634.66
CL Brg. East Abut	1261+26.75	-21.63	634.56	634.56
Bk. of East Abut	1261+29.94	-21.63	634.54	634.54

**TOP OF SLAB ELEVATIONS-SB & NB I-57
SN. 016-1252**

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 9	F.A.I RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 322
	CHECKED - AD,LS	NAME	DATE						
	DRAWN - DY,EI								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
				62 SHEETS	CONTRACT NO. 60J27				
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 18

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+54.32	-15.38	635.09	635.09
CL Brg. West Abut	1260+57.51	-15.38	635.07	635.07
A	1260+67.51	-15.38	635.02	635.07
B	1260+77.51	-15.38	634.97	635.06
C	1260+87.51	-15.38	634.91	635.02
D	1260+97.51	-15.38	634.85	634.96
E	1261+07.51	-15.38	634.79	634.88
F	1261+17.51	-15.38	634.72	634.77
CL Brg. East Abut	1261+26.01	-15.38	634.66	634.66
Bk. of East Abut	1261+29.20	-15.38	634.64	634.64

BEAM 19

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+53.57	-9.13	635.10	635.10
CL Brg. West Abut	1260+56.76	-9.13	635.09	635.09
A	1260+66.76	-9.13	635.03	635.09
B	1260+76.76	-9.13	634.98	635.07
C	1260+86.76	-9.13	634.92	635.04
D	1260+96.76	-9.13	634.86	634.98
E	1261+06.76	-9.13	634.80	634.89
F	1261+16.76	-9.13	634.73	634.78
CL Brg. East Abut	1261+25.26	-9.13	634.68	634.68
Bk. of East Abut	1261+28.45	-9.13	634.65	634.65

BEAM 20

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+52.82	-2.88	635.01	635.01
CL Brg. West Abut	1260+56.01	-2.88	634.99	634.99
A	1260+66.01	-2.88	634.94	634.99
B	1260+76.01	-2.88	634.88	634.98
C	1260+86.01	-2.88	634.83	634.94
D	1260+96.01	-2.88	634.77	634.88
E	1261+06.01	-2.88	634.70	634.79
F	1261+16.01	-2.88	634.64	634.69
CL Brg. East Abut	1261+24.51	-2.88	634.58	634.58
Bk. of East Abut	1261+27.70	-2.88	634.56	634.56

NB I-57 P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+52.48	0.00	634.96	634.96
CL Brg. West Abut	1260+55.67	0.00	634.95	634.95
A	1260+65.67	0.00	634.90	634.95
B	1260+75.67	0.00	634.84	634.94
C	1260+85.67	0.00	634.78	634.90
D	1260+95.67	0.00	634.72	634.84
E	1261+05.67	0.00	634.66	634.75
F	1261+15.67	0.00	634.60	634.64
CL Brg. East Abut	1261+24.17	0.00	634.54	634.54
Bk. of East Abut	1261+27.36	0.00	634.52	634.52

BEAM 21

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+52.08	3.38	634.90	634.90
CL Brg. West Abut	1260+55.27	3.38	634.88	634.88
A	1260+65.27	3.38	634.83	634.88
B	1260+75.27	3.38	634.77	634.87
C	1260+85.27	3.38	634.72	634.83
D	1260+95.27	3.38	634.66	634.77
E	1261+05.27	3.38	634.59	634.68
F	1261+15.27	3.38	634.53	634.58
CL Brg. East Abut	1261+23.77	3.38	634.47	634.47
Bk. of East Abut	1261+26.96	3.38	634.45	634.45

BEAM 22

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+51.33	9.63	634.77	634.77
CL Brg. West Abut	1260+54.52	9.63	634.75	634.75
A	1260+64.52	9.63	634.70	634.76
B	1260+74.52	9.63	634.65	634.74
C	1260+84.52	9.63	634.59	634.71
D	1260+94.52	9.63	634.53	634.65
E	1261+04.52	9.63	634.47	634.56
F	1261+14.52	9.63	634.40	634.45
CL Brg. East Abut	1261+23.02	9.63	634.35	634.35
Bk. of East Abut	1261+26.21	9.63	634.33	634.33

TOP OF SLAB ELEVATIONS-NB I-57-1
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 10	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 323
	CHECKED - AD,LS	NAME	DATE						
	DRAWN - DY,EI								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
						CONTRACT NO. 60J27			
						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NB I-57

BEAM 23

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+50.58	15.88	634.64	634.64
CL Brg. West Abut	1260+53.77	15.88	634.63	634.63
A	1260+63.77	15.88	634.58	634.63
B	1260+73.77	15.88	634.52	634.62
C	1260+83.77	15.88	634.46	634.58
D	1260+93.77	15.88	634.41	634.52
E	1261+03.77	15.88	634.34	634.43
F	1261+13.77	15.88	634.28	634.33
CL Brg. East Abut	1261+22.27	15.88	634.22	634.22
Bk. of East Abut	1261+25.46	71.88	634.20	634.20

BEAM 24

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	1260+49.84	22.13	634.52	634.52
CL Brg. West Abut	1260+53.03	22.13	634.50	634.50
A	1260+63.03	22.13	634.45	634.50
B	1260+73.03	22.13	634.40	634.49
C	1260+83.03	22.13	634.34	634.45
D	1260+93.03	22.13	634.28	634.39
E	1261+03.03	22.13	634.22	634.30
F	1261+13.03	22.13	634.15	634.20
CL Brg. East Abut	1261+21.53	22.13	634.10	634.10
Bk. of East Abut	1261+24.72	22.13	634.08	634.08

C - D ROAD A

BEAM 25

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	3632+03.16	-4.46	634.92	634.92
CL Brg. West Abut	3632+06.35	-4.46	634.91	634.91
A	3632+16.35	-4.46	634.85	634.90
B	3632+26.35	-4.46	634.80	634.89
C	3632+36.35	-4.46	634.74	634.85
D	3632+46.35	-4.46	634.68	634.79
E	3632+56.35	-4.46	634.62	634.70
F	3632+66.35	-4.46	634.55	634.60
CL Brg. East Abut	3632+74.85	-4.46	634.50	634.50
Bk. of East Abut	3632+78.04	-4.46	634.47	634.47

C-D ROAD A P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	3632+02.63	0.00	635.02	635.02
CL Brg. West Abut	3632+05.82	0.00	635.00	635.00
A	3632+15.82	0.00	634.95	635.00
B	3632+25.82	0.00	634.89	634.99
C	3632+35.82	0.00	634.84	634.95
D	3632+45.82	0.00	634.78	634.89
E	3632+55.82	0.00	634.71	634.80
F	3632+65.82	0.00	634.65	634.69
CL Brg. East Abut	3632+74.32	0.00	634.59	634.59
Bk. of East Abut	3632+77.51	0.00	634.57	634.57

BEAM 26

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	3632+02.43	1.71	635.04	635.04
CL Brg. West Abut	3632+05.62	1.71	635.03	635.03
A	3632+15.62	1.71	634.98	635.03
B	3632+25.62	1.71	634.92	635.01
C	3632+35.62	1.71	634.86	634.98
D	3632+45.62	1.71	634.80	634.92
E	3632+55.62	1.71	634.74	634.83
F	3632+65.62	1.71	634.68	634.72
CL Brg. East Abut	3632+74.12	1.71	634.62	634.62
Bk. of East Abut	3632+77.31	1.71	634.60	634.60

BEAM 27

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	3632+01.69	7.88	635.14	635.14
CL Brg. West Abut	3632+04.88	7.88	635.13	635.13
A	3632+14.88	7.88	635.08	635.13
B	3632+24.88	7.88	635.02	635.11
C	3632+34.88	7.88	634.97	635.08
D	3632+44.88	7.88	634.91	635.02
E	3632+54.88	7.88	634.84	634.93
F	3632+64.88	7.88	634.78	634.82
CL Brg. East Abut	3632+73.38	7.88	634.72	634.72
Bk. of East Abut	3632+76.57	7.88	634.70	634.70

TOP OF SLAB ELEVATIONS-NB I-57 & C-D ROAD A
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 11	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 324
	CHECKED - AD,LS	NAME	DATE						
	DRAWN - DY,EI								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
						CONTRACT NO. 60J27			
						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 28

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	3632+00.95	14.04	635.18	635.18
CL Brg. West Abut	3632+04.14	14.04	635.16	635.16
A	3632+14.14	14.04	635.11	635.16
B	3632+24.14	14.04	635.06	635.15
C	3632+34.14	14.04	635.00	635.12
D	3632+44.14	14.04	634.94	635.05
E	3632+54.14	14.04	634.88	634.97
F	3632+64.14	14.04	634.82	634.86
CL Brg. East Abut	3632+72.64	14.04	634.76	634.76
Bk. of East Abut	3632+75.83	14.04	634.74	634.74

BEAM 29

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	3632+00.22	20.21	635.09	635.09
CL Brg. West Abut	3632+03.40	20.21	635.07	635.07
A	3632+13.40	20.21	635.02	635.07
B	3632+23.40	20.21	634.97	635.06
C	3632+33.40	20.21	634.91	635.02
D	3632+43.40	20.21	634.85	634.96
E	3632+53.40	20.21	634.79	634.88
F	3632+63.40	20.21	634.72	634.77
CL Brg. East Abut	3632+71.91	20.21	634.67	634.67
Bk. of East Abut	3632+75.10	20.21	634.65	634.65

BEAM 30

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	3631+99.48	26.38	634.98	634.98
CL Brg. West Abut	3632+02.67	26.38	634.97	634.97
A	3632+12.67	26.38	634.92	634.97
B	3632+22.67	26.38	634.86	634.95
C	3632+32.67	26.38	634.81	634.92
D	3632+42.67	26.38	634.75	634.86
E	3632+52.67	26.38	634.68	634.77
F	3632+62.67	26.38	634.62	634.67
CL Brg. East Abut	3632+71.17	26.38	634.56	634.56
Bk. of East Abut	3632+74.36	26.38	634.54	634.54

BEAM 31

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut	3631+98.74	32.54	634.86	634.86
CL Brg. West Abut	3632+01.93	32.54	634.84	634.84
A	3632+11.93	32.54	634.79	634.84
B	3632+21.93	32.54	634.74	634.83
C	3632+31.93	32.54	634.68	634.79
D	3632+41.93	32.54	634.62	634.73
E	3632+51.93	32.54	634.56	634.65
F	3632+61.93	32.54	634.50	634.54
CL Brg. East Abut	3632+70.43	32.54	634.44	634.44
Bk. of East Abut	3632+73.62	32.54	634.42	634.42

**TOP OF SLAB ELEVATIONS C-D ROAD A
SN. 016-1252**

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 12	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.							
	CHECKED - AD,LS	NAME	DATE							62 SHEETS	57	1414.2B	COOK	516	325	
	DRAWN - DY,EI															CONTRACT NO. 60J27
	CHECKED - LS,SP,PDF															
	DATE - 03/18/10															

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH EDGE OF SHOULDER - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+37.80	-12.00	634.88
A	1260+47.80	-12.00	634.84
B	1260+57.80	-12.00	634.79
Begin W. Appr. Pav't	1260+67.80	-12.00	634.73

P.G.L - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+36.36	0.00	635.14
A	1260+46.36	0.00	635.09
B	1260+56.36	0.00	635.04
Begin W. Appr. Pav't	1260+66.36	0.00	634.99

CROWN - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+34.93	12.00	635.33
A	1260+44.93	12.00	635.29
B	1260+54.93	12.00	635.24
Begin W. Appr. Pav't	1260+64.93	12.00	635.19

CROSS SLOPE BREAK - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+33.50	24.00	635.15
A	1260+43.50	24.00	635.11
B	1260+53.50	24.00	635.06
Begin W. Appr. Pav't	1260+63.50	24.00	635.01

SOUTH EDGE OF PAVEMENT - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+30.63	48.00	634.67
A	1260+40.63	48.00	634.62
B	1260+50.63	48.00	634.57
Begin W. Appr. Pav't	1260+60.63	48.00	634.52

SOUTH EDGE OF SHOULDER - SB I-57

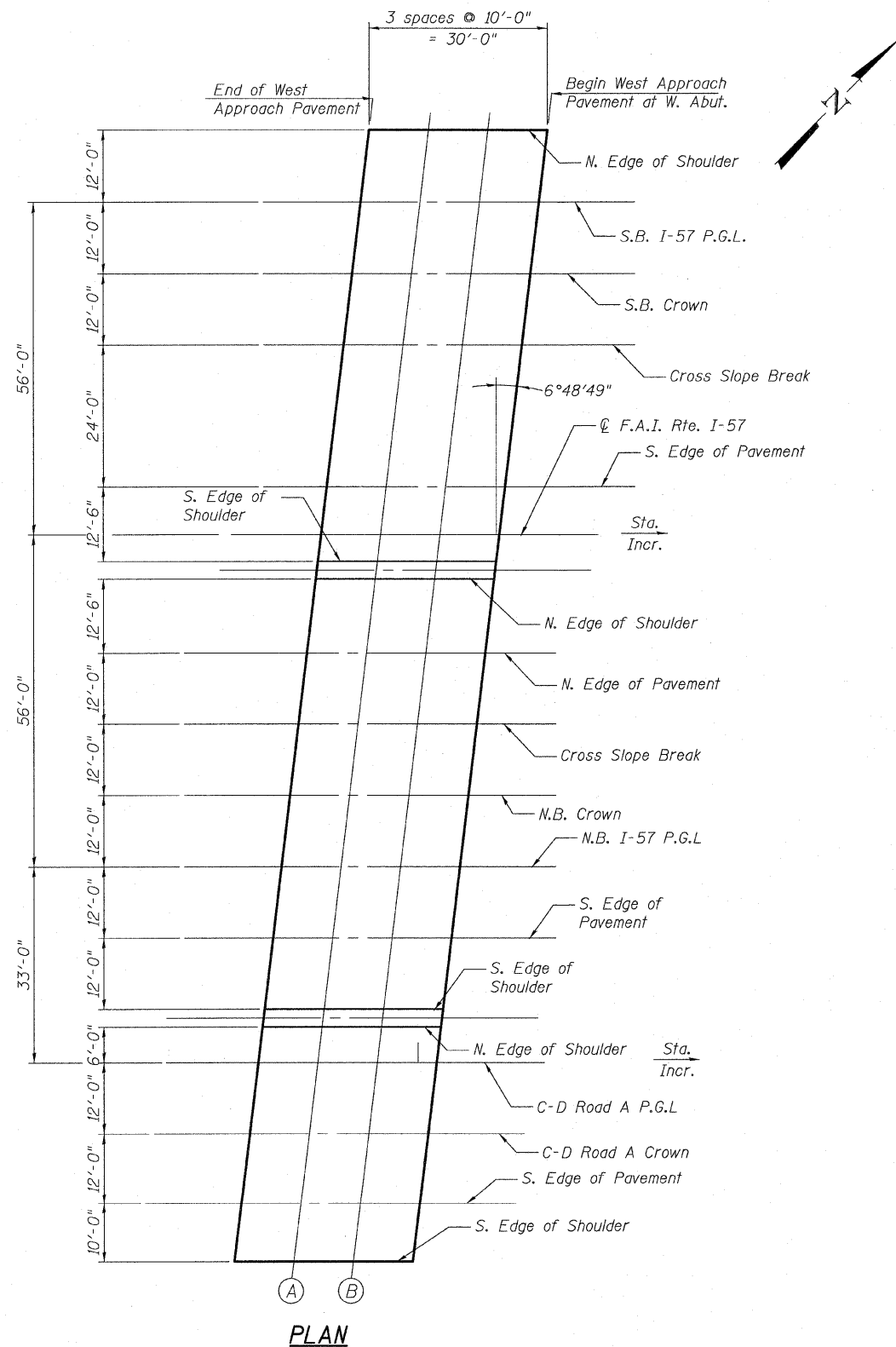
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+29.13	60.50	634.41
A	1260+39.13	60.50	634.37
B	1260+49.13	60.50	634.32
Begin W. Appr. Pav't	1260+59.13	60.50	634.27

NORTH EDGE OF SHOULDER - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+28.78	-48.50	634.57
A	1260+38.78	-48.50	634.52
B	1260+48.78	-48.50	634.47
Begin W. Appr. Pav't	1260+58.78	-48.50	634.42

NORTH EDGE OF PAVEMENT - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+27.29	-36.00	634.83
A	1260+37.29	-36.00	634.79
B	1260+47.29	-36.00	634.74
Begin W. Appr. Pav't	1260+57.29	-36.00	634.69



PLAN

TOP OF WEST APPROACH SLAB ELEVATIONS - 1
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 13	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 326
	CHECKED - AD,LS	NAME	DATE						
	DRAWN - DY,EI								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
				62 SHEETS	CONTRACT NO. 60J27				
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SLOPE BREAK - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+25.85	-24.00	635.09
A	1260+35.85	-24.00	635.04
B	1260+45.85	-24.00	635.00
Begin W. Appr. Pav't	1260+55.85	-24.00	634.95

CROWN - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+24.42	-12.00	635.28
A	1260+34.42	-12.00	635.24
B	1260+44.42	-12.00	635.19
Begin W. Appr. Pav't	1260+54.42	-12.00	635.14

P.G.L - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+22.98	0.00	635.10
A	1260+32.98	0.00	635.06
B	1260+42.98	0.00	635.01
Begin W. Appr. Pav't	1260+52.98	0.00	634.96

SOUTH EDGE OF PAVEMENT - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+21.55	12.00	634.86
A	1260+31.55	12.00	634.81
B	1260+41.55	12.00	634.77
Begin W. Appr. Pav't	1260+51.55	12.00	634.72

SOUTH EDGE OF SHOULDER - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+20.12	24.00	634.61
A	1260+30.12	24.00	634.57
B	1260+40.12	24.00	634.52
Begin W. Appr. Pav't	1260+50.12	24.00	634.48

NORTH EDGE OF SHOULDER - C-D ROAD A

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	3631+73.85	-6.00	635.02
A	3631+83.85	-6.00	634.98
B	3631+93.85	-6.00	634.93
Begin W. Appr. Pav't	3632+03.85	-6.00	634.89

P.G.L - C-D ROAD A

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	3631+73.13	0.00	635.15
A	3631+83.13	0.00	635.11
B	3631+93.13	0.00	635.06
Begin W. Appr. Pav't	3632+03.13	0.00	635.01

CROWN - C-D ROAD A

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	3631+71.70	12.00	635.35
A	3631+81.70	12.00	635.30
B	3631+91.70	12.00	635.26
Begin W. Appr. Pav't	3632+01.70	12.00	635.21

SOUTH EDGE OF PAVEMENT - C-D ROAD A

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	3631+70.27	24.00	635.16
A	3631+80.27	24.00	635.12
B	3631+90.27	24.00	635.08
Begin W. Appr. Pav't	3632+00.27	24.00	635.03

SOUTH EDGE OF SHOULDER - C-D ROAD A

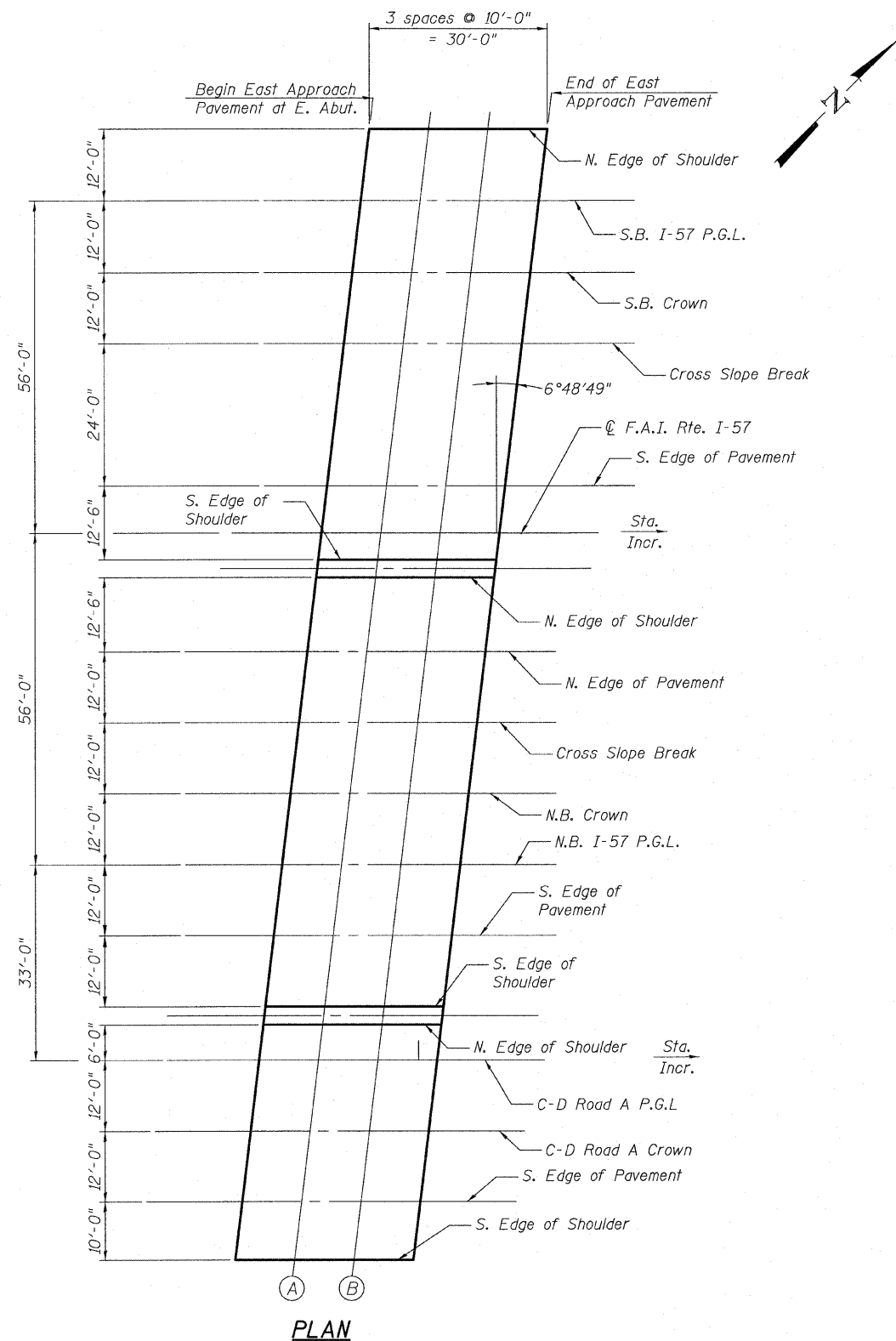
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	3631+69.07	34.00	634.96
A	3631+79.07	34.00	634.92
B	3631+89.07	34.00	634.87
Begin W. Appr. Pav't	3631+99.07	34.00	634.83

TOP OF WEST APPROACH SLAB ELEVATIONS - 2
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 14	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AD,LS	NAME	DATE		57	1414.2B	COOK	516	327	
	DRAWN - DY,EI				CONTRACT NO. 60J27					
	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

NORTH EDGE OF SHOULDER - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+41.68	-12.00	634.27
A	1261+51.68	-12.00	634.20
B	1261+61.68	-12.00	634.12
End E. Appr. Pav't	1261+71.68	-12.00	634.05

P.G.L. - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+40.25	0.00	634.53
A	1261+50.25	0.00	634.46
B	1261+60.25	0.00	634.38
End E. Appr. Pav't	1261+70.25	0.00	634.31

CROWN - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+38.81	12.00	634.73
A	1261+48.81	12.00	634.66
B	1261+58.81	12.00	634.58
End E. Appr. Pav't	1261+68.81	12.00	634.51

CROSS SLOPE BREAK - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+37.38	24.00	634.55
A	1261+47.38	24.00	634.48
B	1261+57.38	24.00	634.41
End E. Appr. Pav't	1261+67.38	24.00	634.33

SOUTH EDGE OF PAVEMENT - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+34.51	48.00	634.07
A	1261+44.51	48.00	634.00
B	1261+54.51	48.00	633.93
End E. Appr. Pav't	1261+64.51	48.00	633.85

SOUTH EDGE OF SHOULDER - SB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+33.02	60.50	633.82
A	1261+43.02	60.50	633.75
B	1261+53.02	60.50	633.68
End E. Appr. Pav't	1261+63.02	60.50	633.60

NORTH EDGE OF SHOULDER - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+32.65	-48.50	633.97
A	1261+42.65	-48.50	633.90
B	1261+52.65	-48.50	633.83
End E. Appr. Pav't	1261+62.65	-48.50	633.75

NORTH EDGE OF PAVEMENT - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+31.16	-36.00	634.24
A	1261+41.16	-36.00	634.17
B	1261+51.16	-36.00	634.10
End E. Appr. Pav't	1261+61.16	-36.00	634.02

TOP OF EAST APPROACH SLAB ELEVATIONS - 1
SN. 016-1252

TYLIN INTERNATIONAL

DESIGNED	DY	REVISIONS	
CHECKED	AD,LS	NAME	DATE
DRAWN	DY,EI		
CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO. 15	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 328
62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SLOPE BREAK - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+29.72	-24.00	634.50
A	1261+39.72	-24.00	634.43
B	1261+49.72	-24.00	634.36
End E. Appr. Pav't	1261+59.72	-24.00	634.28

CROWN - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+28.29	-12.00	634.70
A	1261+38.29	-12.00	634.63
B	1261+48.29	-12.00	634.56
End E. Appr. Pav't	1261+58.29	-12.00	634.48

P.G.L - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+26.86	0.00	634.52
A	1261+36.86	0.00	634.45
B	1261+46.86	0.00	634.38
End E. Appr. Pav't	1261+56.86	0.00	634.31

SOUTH EDGE OF PAVEMENT - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+25.42	12.00	634.28
A	1261+35.42	12.00	634.21
B	1261+45.42	12.00	634.14
End E. Appr. Pav't	1261+55.42	12.00	634.07

SOUTH EDGE OF SHOULDER - NB I-57

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	1261+23.99	24.00	634.04
A	1261+33.99	24.00	633.97
B	1261+43.99	24.00	633.90
End E. Appr. Pav't	1261+53.99	24.00	633.83

NORTH EDGE OF SHOULDER - C-D ROAD A

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	3632+77.72	-6.00	634.44
A	3632+87.72	-6.00	634.37
B	3632+97.72	-6.00	634.30
End E. Appr. Pav't	3633+07.72	-6.00	634.22

P.G.L - C-D ROAD A

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	3632+77.01	0.00	634.57
A	3632+87.01	0.00	634.50
B	3632+97.01	0.00	634.43
End E. Appr. Pav't	3633+07.01	0.00	634.35

CROWN - C-D ROAD A

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	3632+75.57	12.00	634.77
A	3632+85.57	12.00	634.70
B	3632+95.57	12.00	634.63
End E. Appr. Pav't	3633+05.57	12.00	634.55

SOUTH EDGE OF PAVEMENT - C-D ROAD A

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	3632+74.14	24.00	634.59
A	3632+84.14	24.00	634.52
B	3632+94.14	24.00	634.45
End E. Appr. Pav't	3633+04.14	24.00	634.38

SOUTH EDGE OF SHOULDER - C-D ROAD A

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	3632+72.94	34.00	634.39
A	3632+82.94	34.00	634.32
B	3632+92.94	34.00	634.25
End E. Appr. Pav't	3633+02.94	34.00	634.18

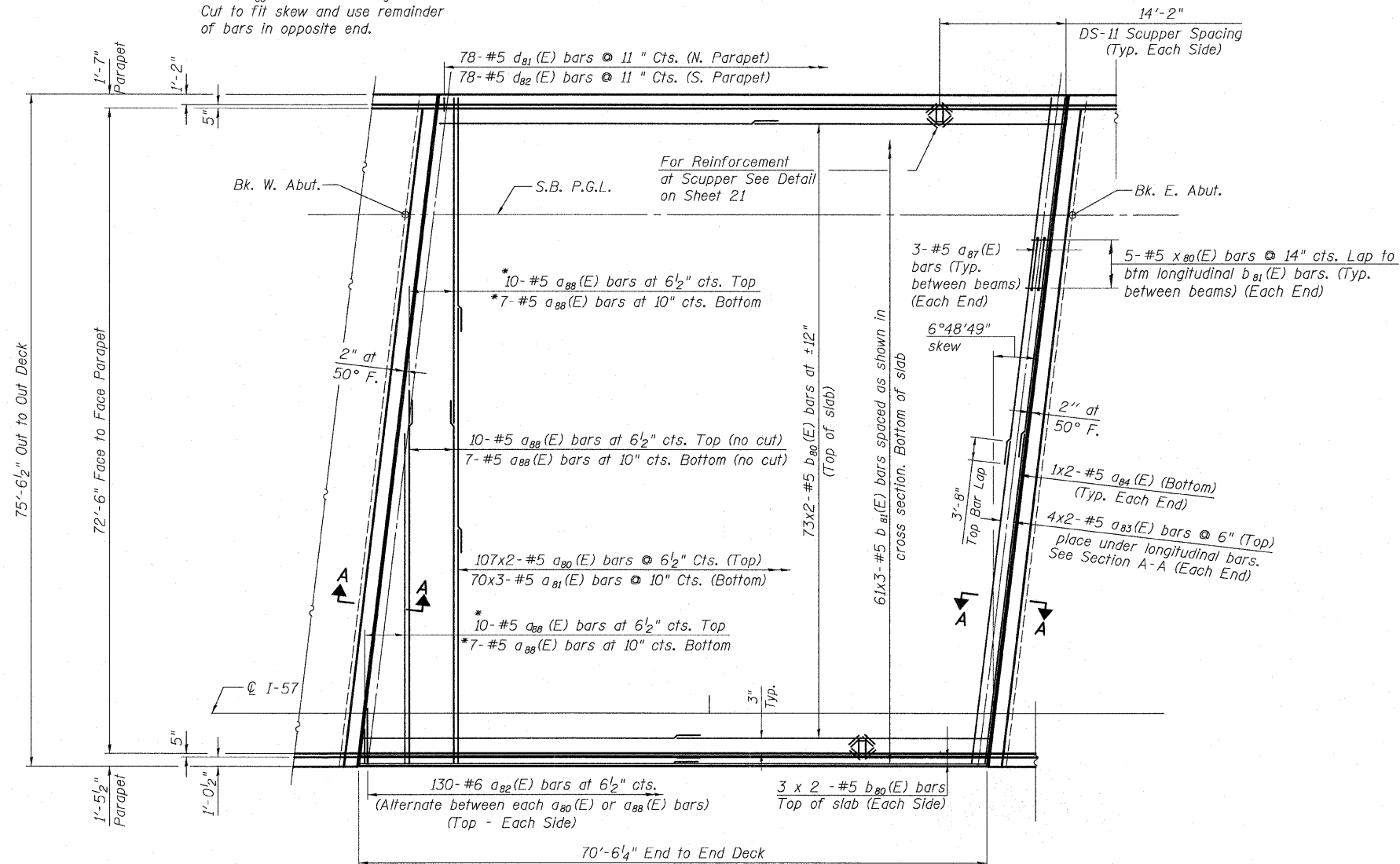
TOP OF EAST APPROACH SLAB ELEVATIONS - 2
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 16	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 329
	CHECKED - AD,LS	NAME	DATE						
	DRAWN - DY,EI								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
				62 SHEETS	CONTRACT NO. 60J27				
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

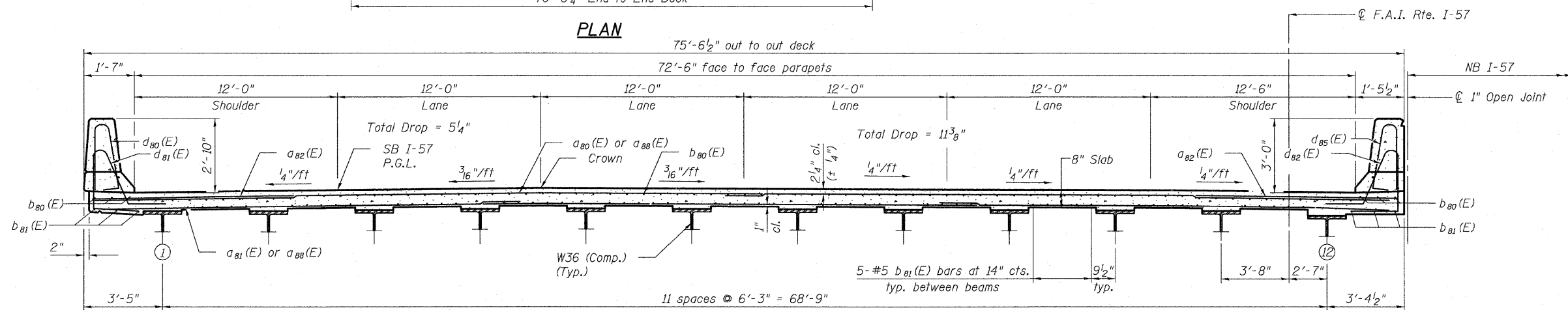
P:\602540(57-294)\STRUCTURAL\1-57 OVER RAMP.B\Final submittal.03172010\Final submittal.03172010\0161252-60J27-016-E.TOP_APPR.ELEV2.dgn 3/18/2010 9:53:56 AM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Order $a_{88}(E)$ bars full length.
Cut to fit skew and use remainder
of bars in opposite end.



PLAN



CROSS SECTION
(Looking East)

SUPERSTRUCTURE - SB I-57
SN. 016-1252

MINIMUM BAR LAPS

Bar	Lap
#5	3'-3"
#5	3'-8" (Top)

- Notes:
- See Sheet 21 of 62 for superstructure details and Bill of Material.
 - Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 - See Sheet 20 of 62 for parapet reinforcement.
 - Dimensions are based on a rolled rail strip seal joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on expansion joint detail sheet.
 - Cut longitudinal bars to clear drainage scuppers.

TYLIN INTERNATIONAL

DESIGNED	DY	REVISIONS	
CHECKED	AD,LS	NAME	DATE
DRAWN	DY,EI		
CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO. 17

62 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	330
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

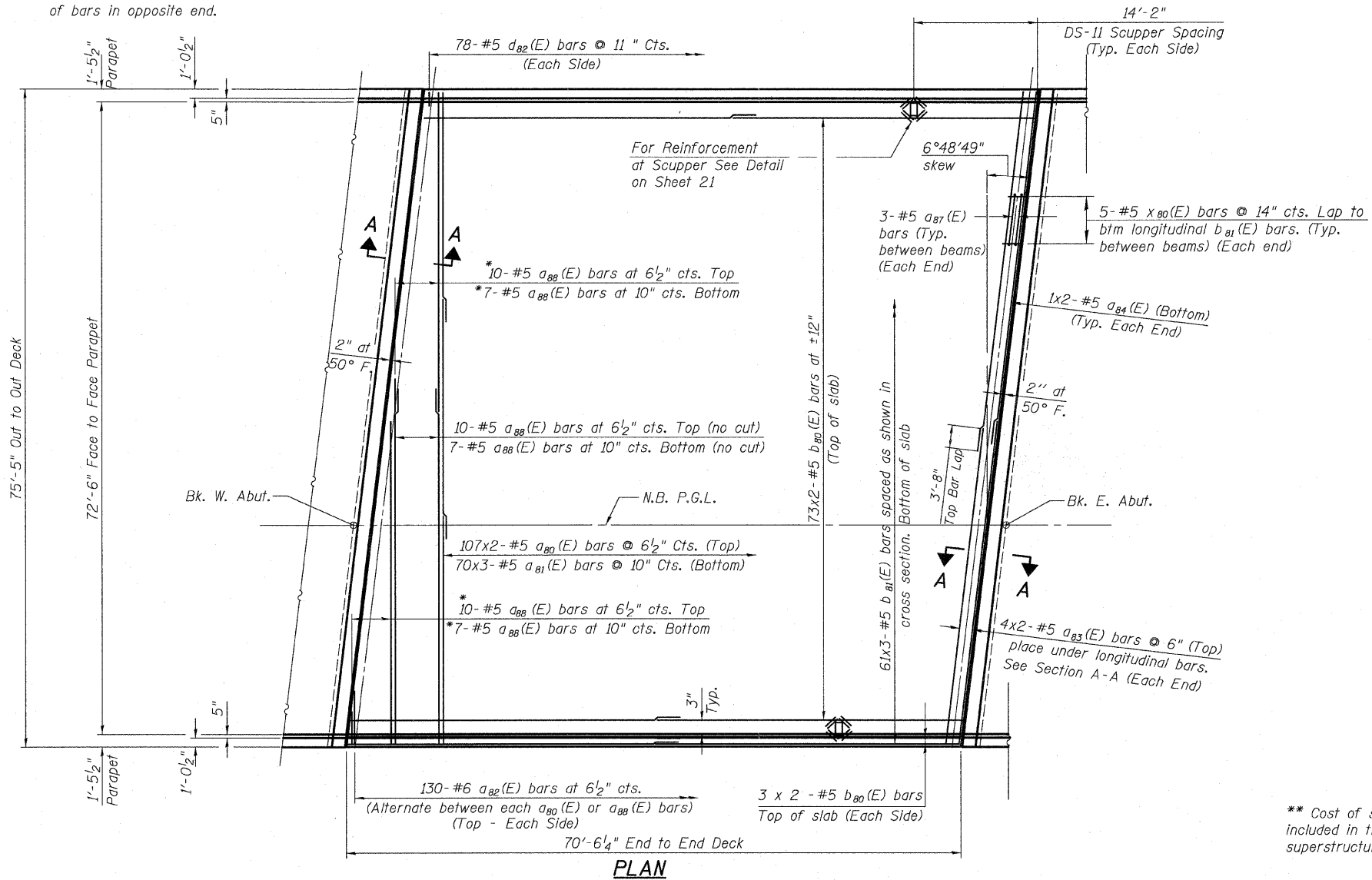
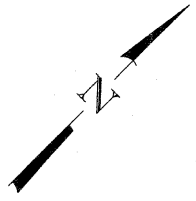
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3/18/2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

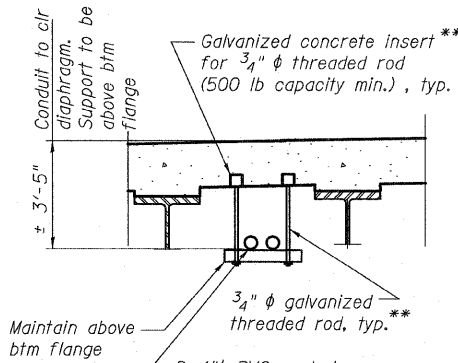
*Order $a_{88}(E)$ bars full length.
Cut to fit skew and use remainder
of bars in opposite end.



MINIMUM BAR LAPS

Bar	Lap
#5	3'-3"
#5	3'-8" (Top)

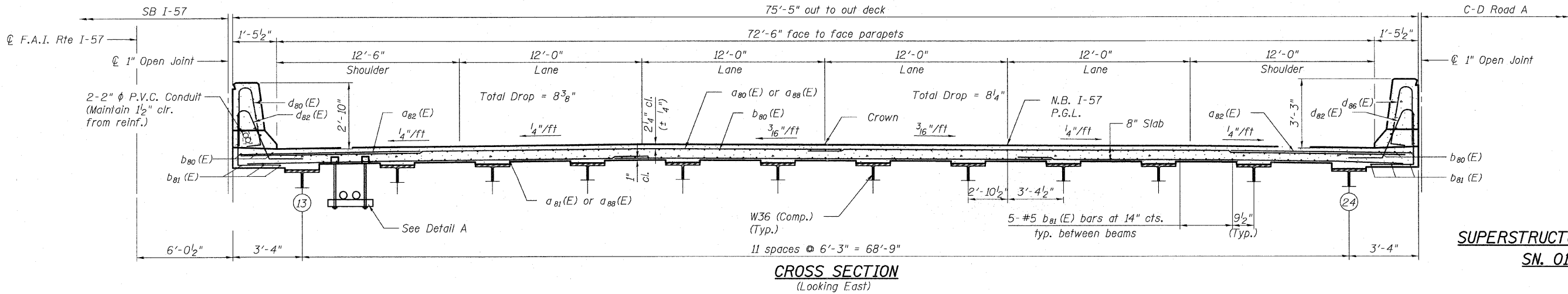
Notes:
For notes see Sheet 17 of 62.



** Cost of support detail shall be included in the cost of concrete superstructure.

DETAIL A
(Not to Scale)

PLAN



CROSS SECTION
(Looking East)

SUPERSTRUCTURE - NB I-57
SN. 016-1252

TYLIN INTERNATIONAL

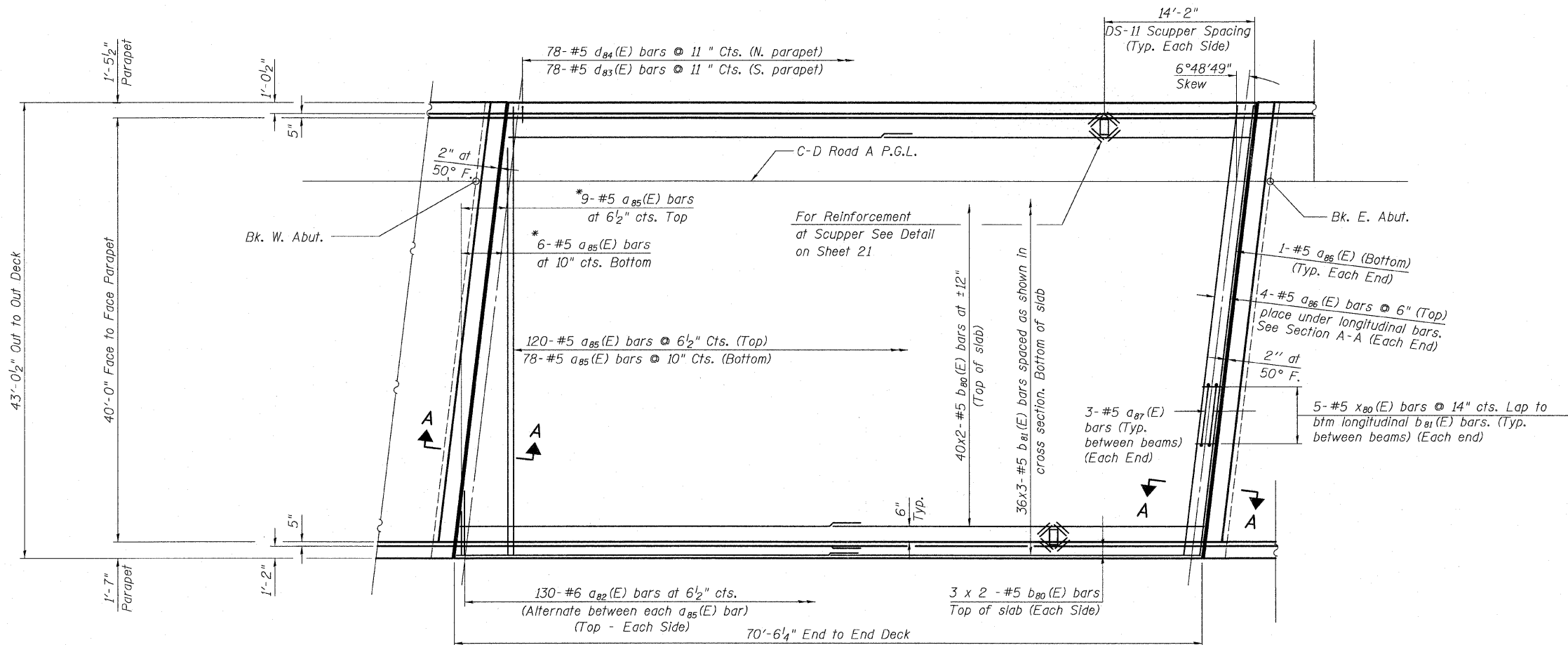
DESIGNED	BY	REVISIONS	
CHECKED	AD,LS	NAME	DATE
DRAWN	DY,EI		
CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO. 18	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	331
62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

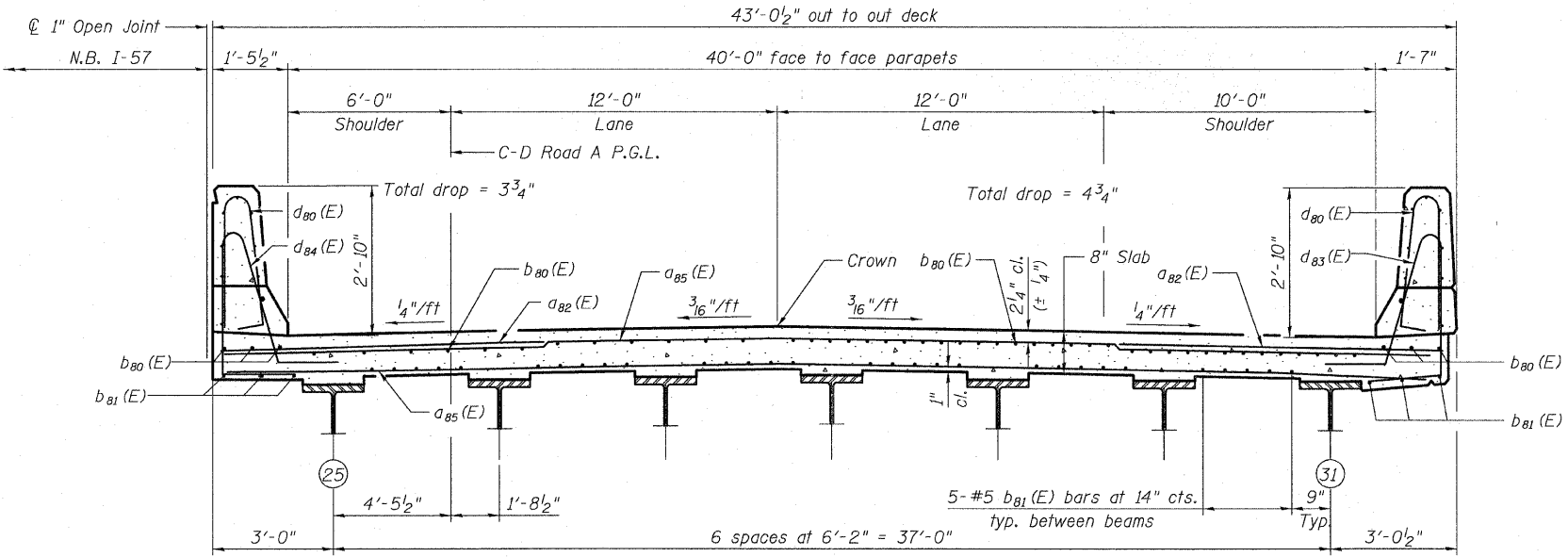
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Order $a_{85}(E)$ bars full length.
Cut to fit skew and use remainder
of bars in opposite end.



PLAN



CROSS SECTION
(Looking East)

MINIMUM BAR LAPS

Bar	Lap
#5	3'-3"
#5	3'-8" (Top)

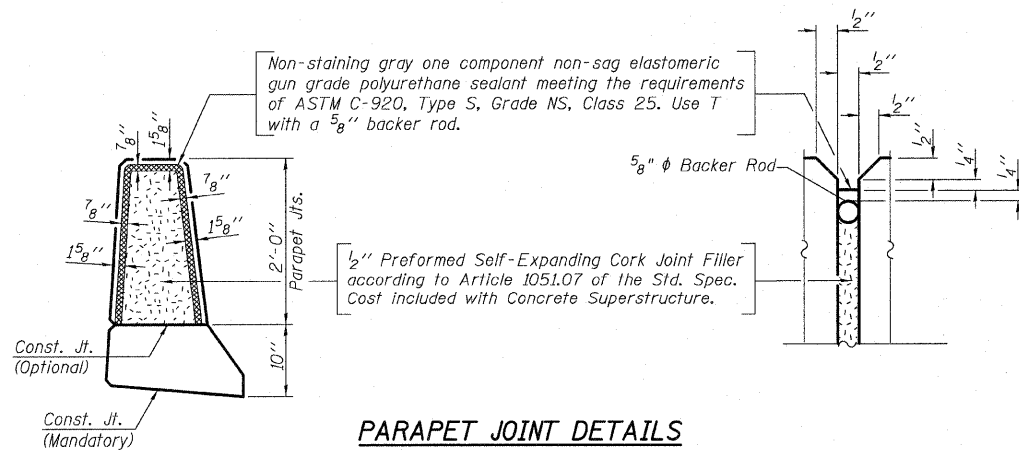
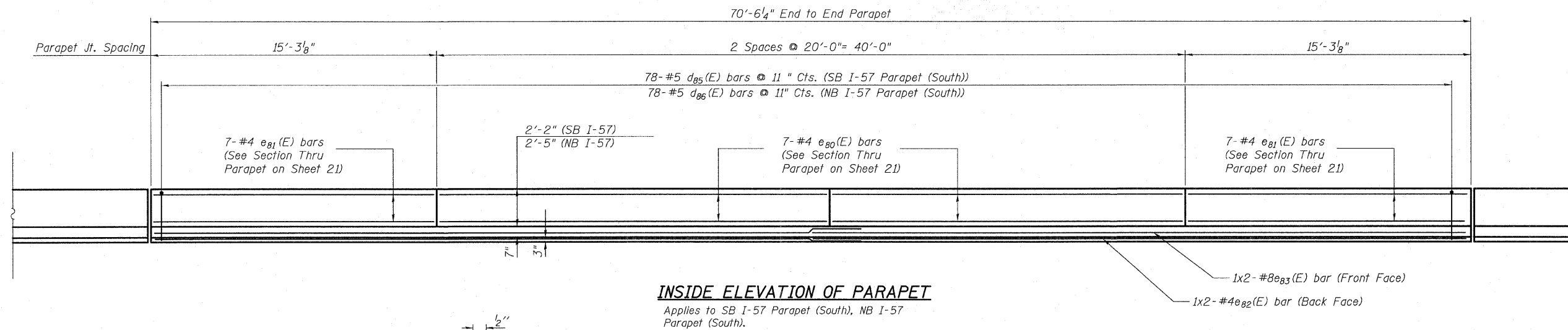
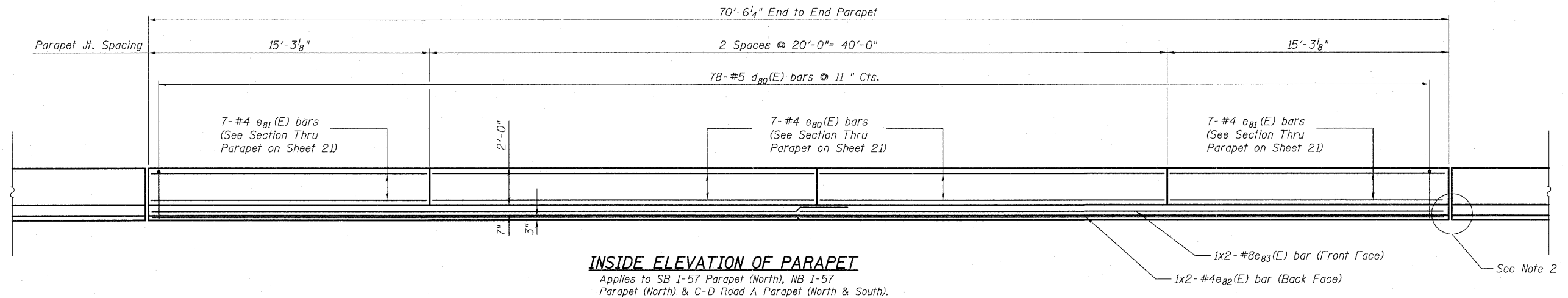
Notes:
For notes see Sheet 17 of 62.

SUPERSTRUCTURE - C-D ROAD A
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 19 62 SHEETS	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 332
	CHECKED - AD,LS	NAME	DATE		CONTRACT NO. 60J27				
	DRAWN - DY,EI				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



MINIMUM BAR LAPS
(Parapet)

Bar	Lap
#4	2'-0"
#8	5'-2"

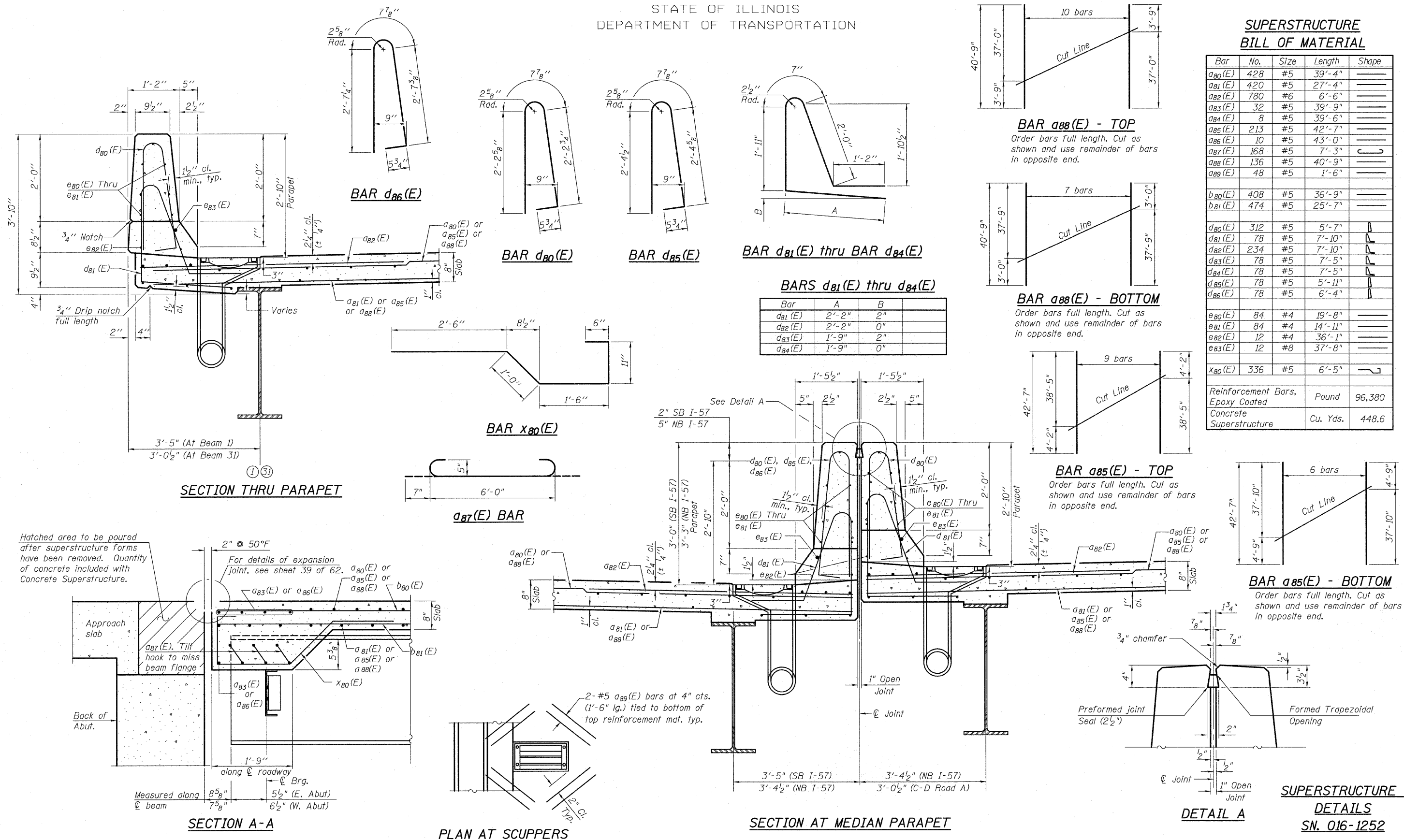
- Notes:
- Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 - Provide expansion/deflection coupling per Section 812 of the Standard Specifications for embedded conduits at NB-I-57, center median.

PARAPET ELEVATIONS
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 20	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AD,LS	NAME	DATE		57	1414.2B	COOK	516	333	
	DRAWN - DY,EI				CONTRACT NO. 60J27					
	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d80(E)	428	#5	39'-4"	—
d81(E)	420	#5	27'-4"	—
d82(E)	780	#6	6'-6"	—
d83(E)	32	#5	39'-9"	—
d84(E)	8	#5	39'-6"	—
d85(E)	213	#5	42'-7"	—
d86(E)	10	#5	43'-0"	—
a87(E)	168	#5	7'-3"	U
a88(E)	136	#5	40'-9"	—
a89(E)	48	#5	1'-6"	—
b80(E)	408	#5	36'-9"	—
b81(E)	474	#5	25'-7"	—
d80(E)	312	#5	5'-7"	—
d81(E)	78	#5	7'-10"	—
d82(E)	234	#5	7'-10"	—
d83(E)	78	#5	7'-5"	—
d84(E)	78	#5	7'-5"	—
d85(E)	78	#5	5'-11"	—
d86(E)	78	#5	6'-4"	—
e80(E)	84	#4	19'-8"	—
e81(E)	84	#4	14'-11"	—
e82(E)	12	#4	36'-11"	—
e83(E)	12	#8	37'-8"	—
x80(E)	336	#5	6'-5"	—
Reinforcement Bars, Epoxy Coated			Pound	96,380
Concrete Superstructure			Cu. Yds.	448.6

Reinforcement Bars, Epoxy Coated
Concrete Superstructure

**SUPERSTRUCTURE
DETAILS**

SN. 016-1252

TYLIN INTERNATIONAL

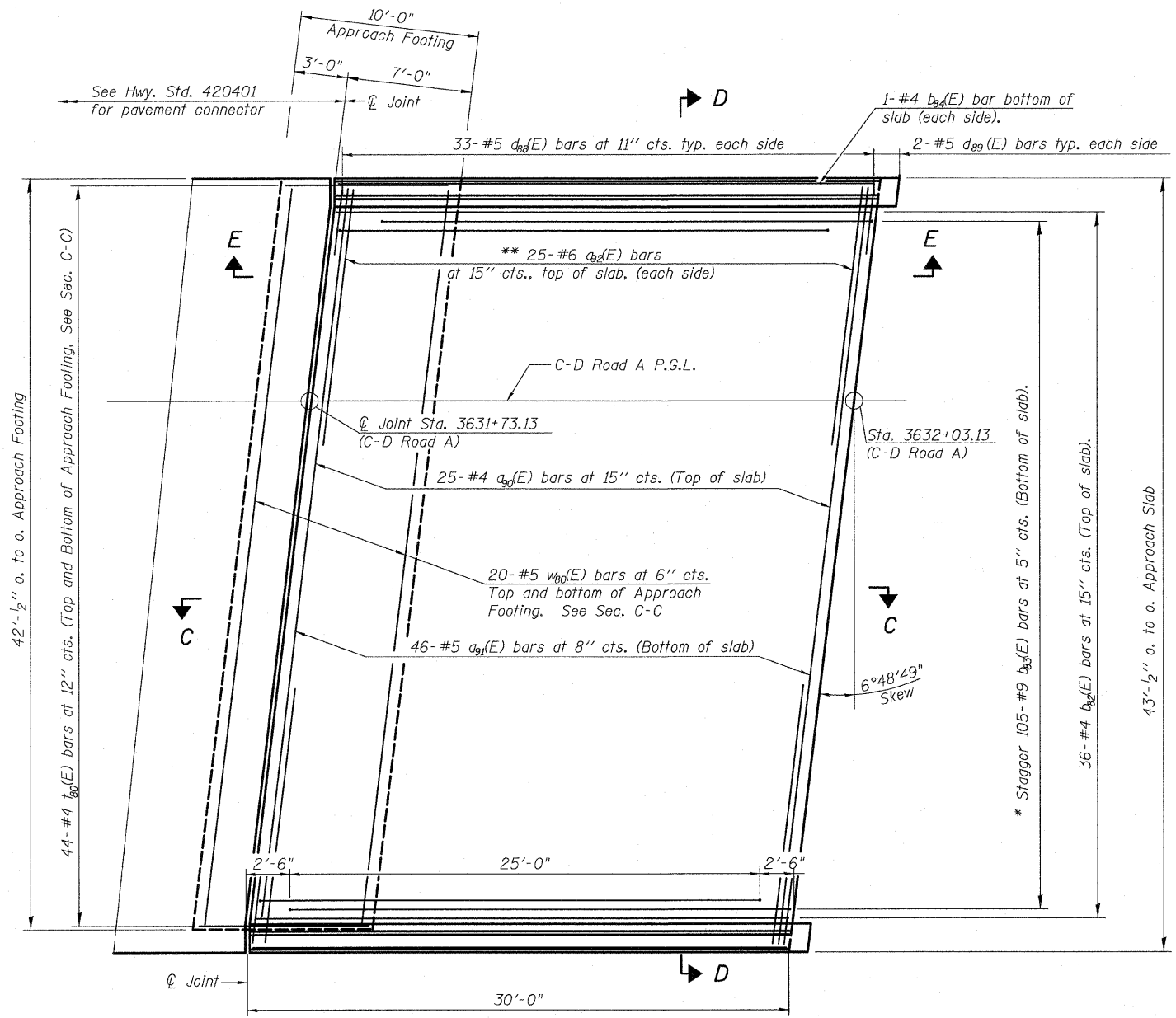
DESIGNED	DY	REVISIONS	NAME	DATE
CHECKED	AD,LS			
DRAWN	DY,EI			
CHECKED	LS,SP,PDF			
DATE	03/18/10			

SHEET NO. 21	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 334
62 SHEETS	FED. ROAD DIST. NO. 1 ILLINOIS		CONTRACT NO. 60J27		
FED. AID PROJECT					

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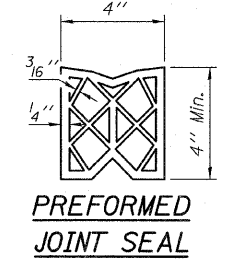
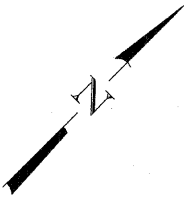
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 23 of 62 for Sections C-C & D-D and View E-E.
 $a_{9d}(E)$ and $a_{9l}(E)$ bar spacings measured along \varnothing Rdwy.



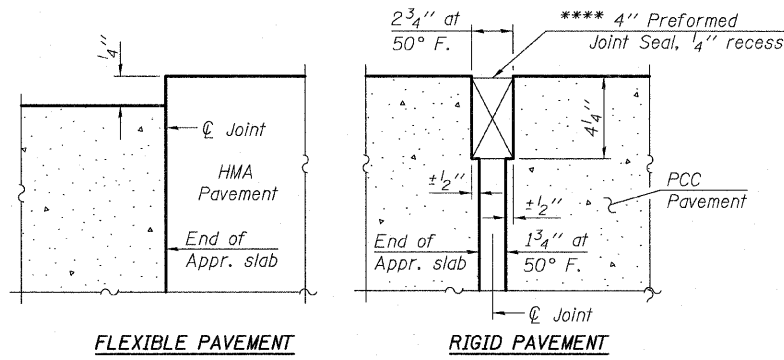
PLAN

* Tilt #9 $b_{9l}(E)$ bars as required to maintain clearance.
** Space between $a_{9d}(E)$ bars, typ. each parapet.



PREFORMED
JOINT SEAL

**** Cost included with Concrete Superstructure.



FLEXIBLE PAVEMENT

RIGID PAVEMENT

DETAIL A

MINIMUM BAR LAPS

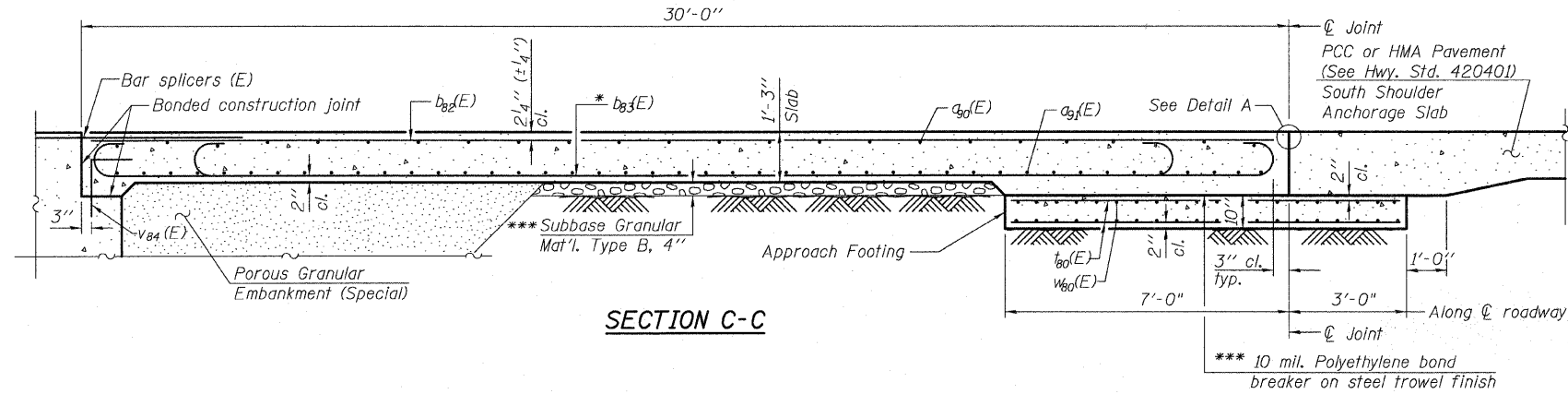
#4 Bar 2'-11"
#5 Bar 3'-3"

WEST APPROACH SLAB C-D ROAD A - 1
STRUCTURE NO. 016-1252

TYLIN INTERNATIONAL	DESIGNED - MRB	REVISIONS		SHEET NO. 22	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD	NAME	DATE		57	1414.2B	COOK	516	335	
	DRAWN - MRB				CONTRACT NO. 60J27					
	CHECKED - LS, SP, PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

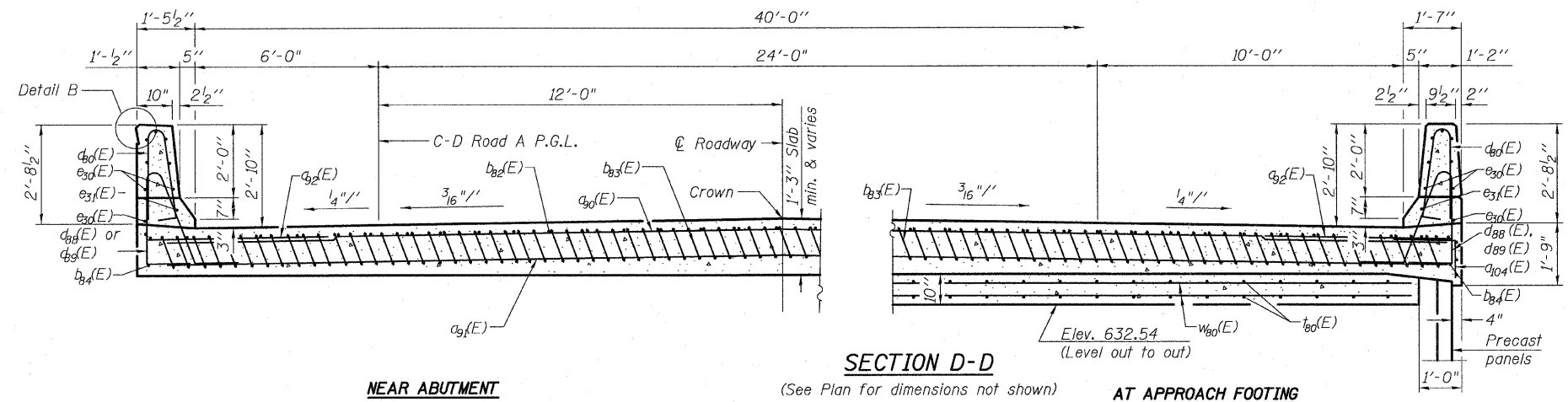


SECTION C-C

Notes:

See sheet 22 of 62 for Detail A.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For $w_{84}(E)$ bar details, see sheet 46 of 62.
The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
For bar splicer details, see sheet 55 of 62.
Cost of excavation for approach footing included with Concrete Structures.

The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 62.

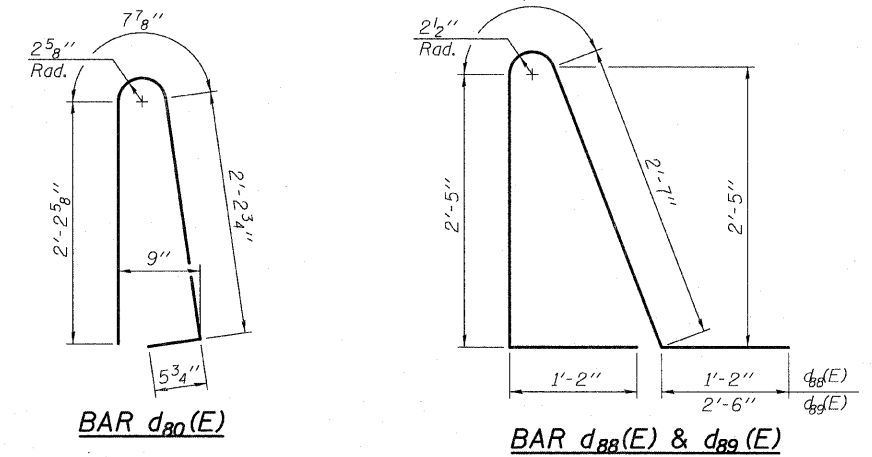


SECTION D-D

NEAR ABUTMENT

(See Plan for dimensions not shown)

AT APPROACH FOOTING

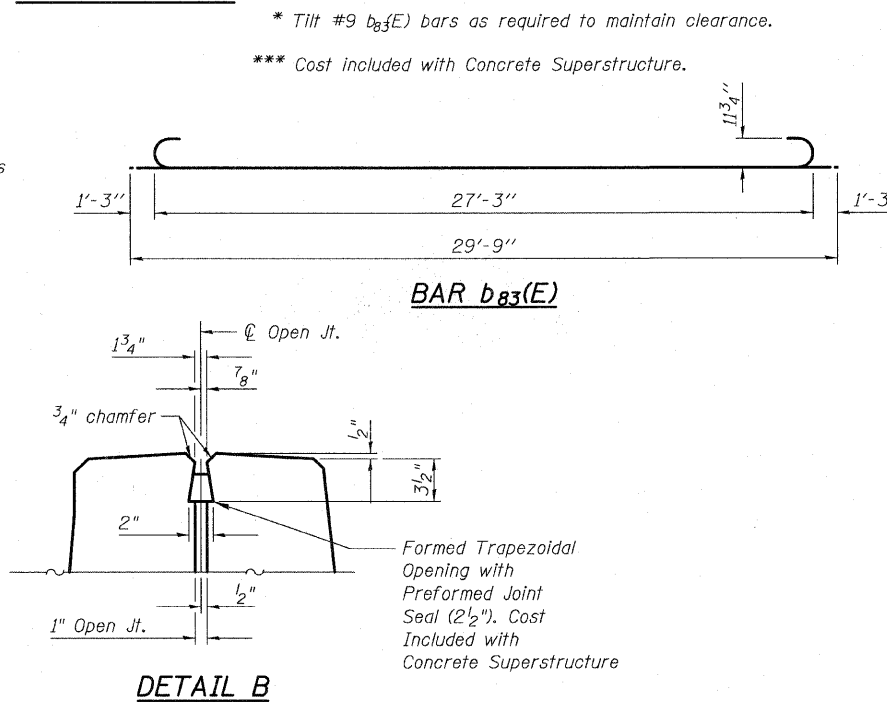


BILL OF MATERIAL

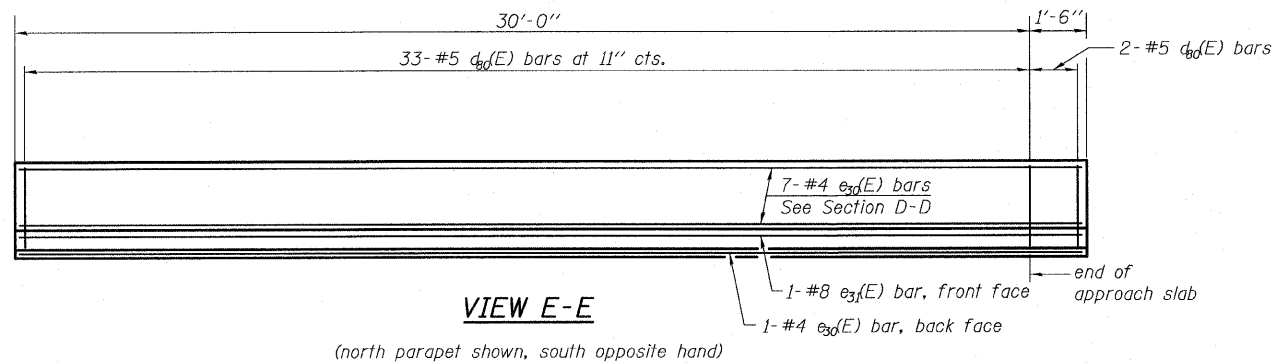
Bar	No.	Size	Length	Shape
$a_{30}(E)$	25	#4	43'-0"	—
$a_{31}(E)$	46	#5	43'-0"	—
$a_{32}(E)$	50	#6	6'-6"	—
$b_{32}(E)$	36	#4	29'-8"	—
$b_{33}(E)$	105	#9	29'-9"	—
$b_{34}(E)$	2	#4	31'-2"	—
$b_{80}(E)$	70	#5	5'-7"	—
$b_{88}(E)$	66	#5	7'-11"	—
$b_{89}(E)$	4	#5	9'-3"	—
$e_{30}(E)$	16	#4	31'-2"	—
$e_{31}(E)$	2	#8	31'-2"	—
$t_{80}(E)$	88	#4	9'-9"	—
$w_{80}(E)$	40	#5	43'-0"	—
Concrete Superstructure		Cu. Yd.	66.5	
Concrete Structures		Cu. Yd.	13.4	
(1.) Reinforcement Bars, Epoxy Coated		Pound	18,510	

(1.) 2,370 pounds billed in Substructure
Total in Total Bill of Material on sheet 2 of 62.

WEST APPROACH SLAB C-D ROAD A - 2
STRUCTURE NO. 016-1252



DETAIL B



VIEW E-E

(north parapet shown, south opposite hand)

TYLIN INTERNATIONAL

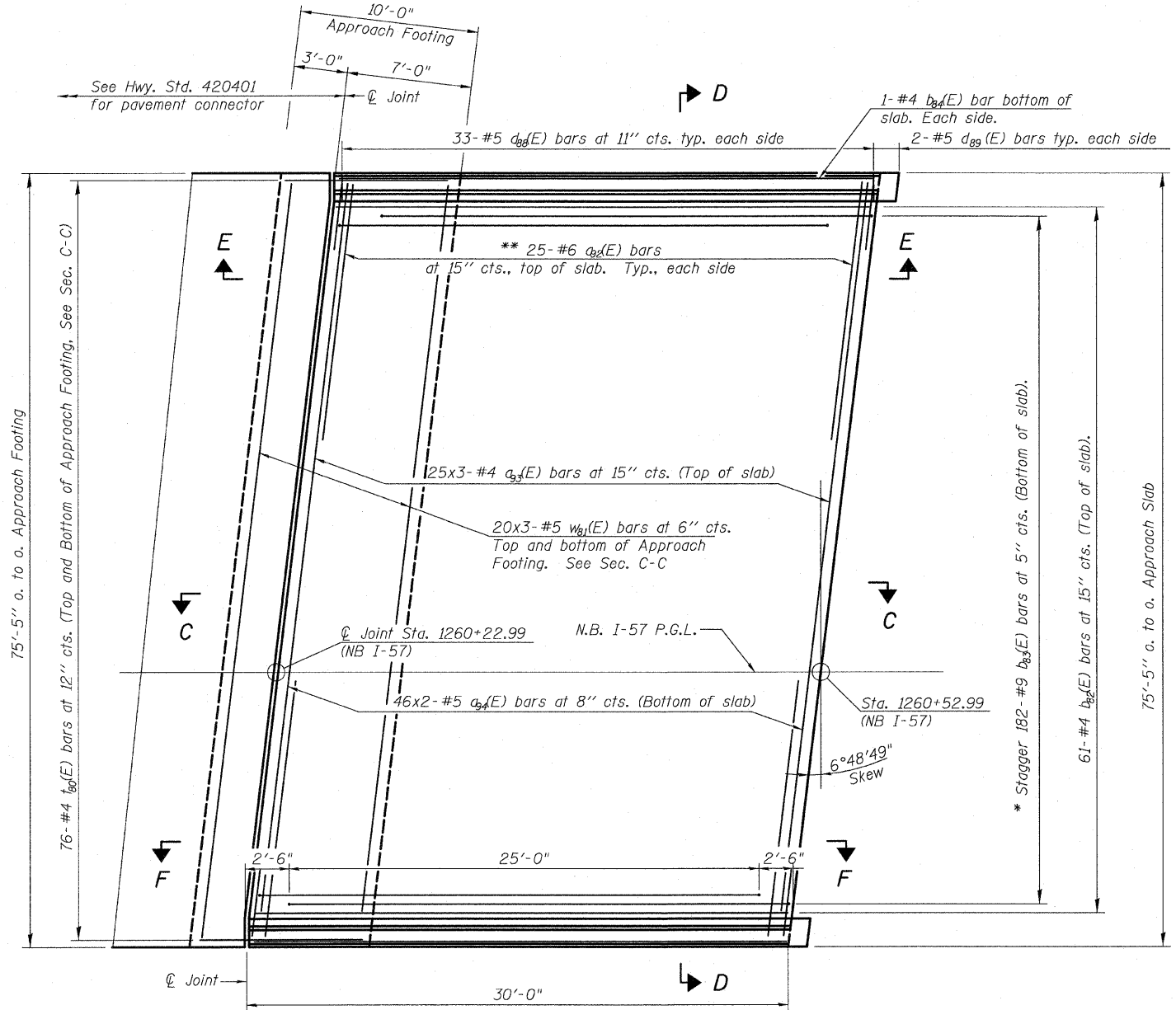
DESIGNED	MRB	REVISIONS	
CHECKED	AMD	NAME	DATE
DRAWN	MRB		
CHECKED	LS, SP, PDF		
DATE	03/18/10		

SHEET NO. 23	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
62 SHEETS	57	1414.2B	COOK	516	336
CONTRACT NO. 60J27					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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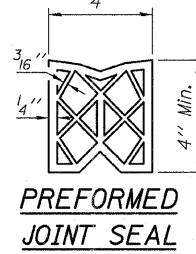
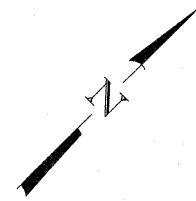
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 25 of 62 for Sections C-C & D-D and Views E-E and F-F.
 $a_{93}(E)$ and $a_{94}(E)$ bar spacings measured along C Rdwy.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with three lengths per line.

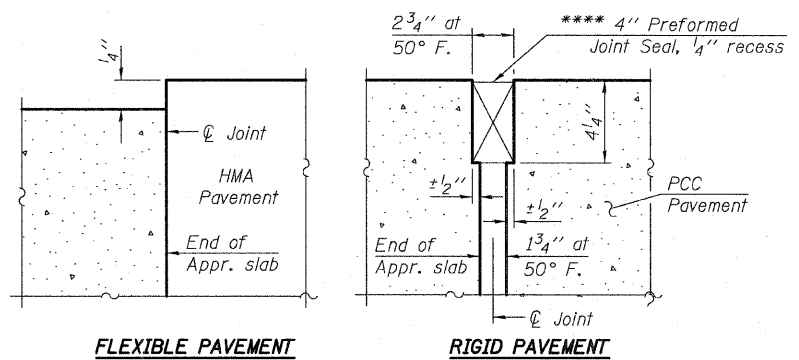


PLAN

* Tilt #9 $b_{93}(E)$ bars as required to maintain clearance.
** Space between $a_{93}(E)$ bars, typ. each parapet.



**** Cost included with Concrete Superstructure.



DETAIL A

MINIMUM BAR LAPS
#4 Bar 2'-11"
#5 Bar 3'-3"

WEST APPROACH SLAB NB I-57 - 1
STRUCTURE NO. 016-1252

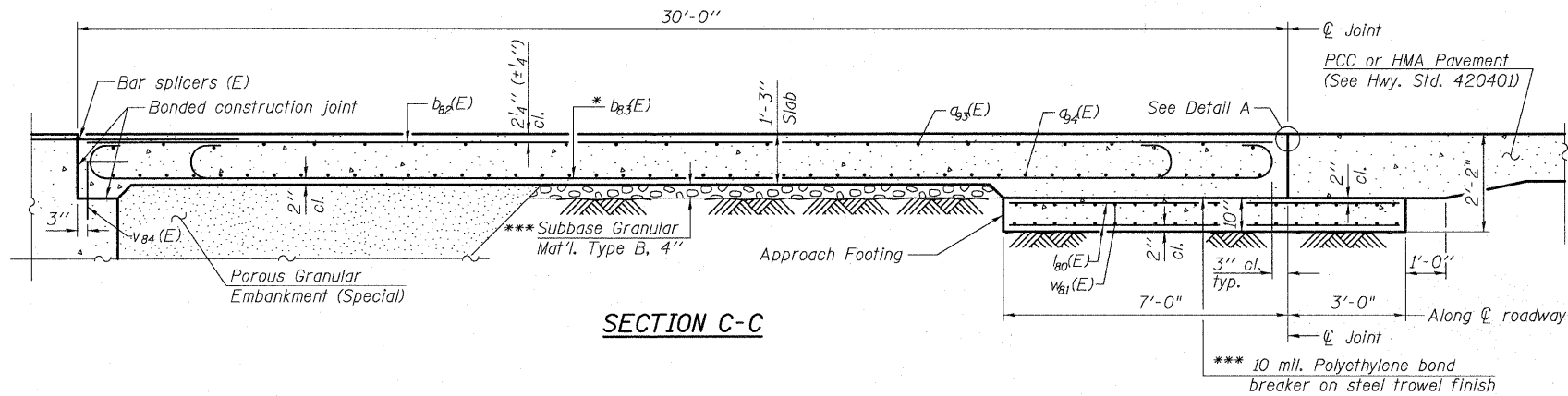
TYLIN INTERNATIONAL

DESIGNED - MRB	REVISIONS	
	NAME	DATE
CHECKED - AMD		
DRAWN - MRB		
CHECKED - LS,SP,PDF		
DATE - 03/18/10		

SHEET NO. 24	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	337
62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT		

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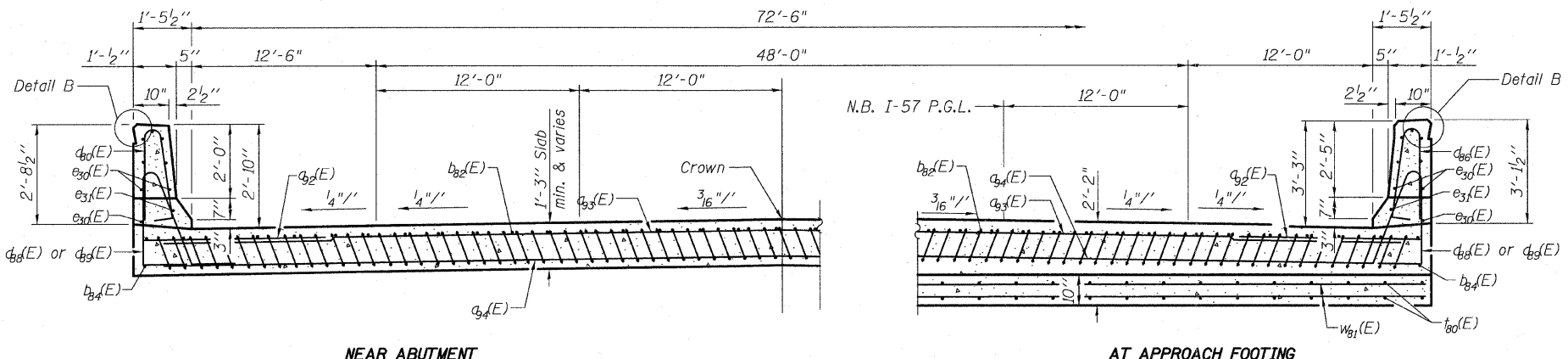
STATE OF ILLINOIS
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SECTION C-C

Notes:
See sheet 24 of 62 for Detail A.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For $v_{84}(E)$ bar details, see sheet 46 of 62.
The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
For bar splicer details, see sheet 55 of 62.
Cost of excavation for approach footing included with Concrete Structures.

The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 62.

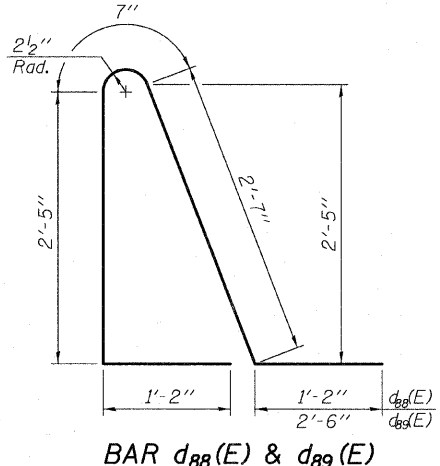
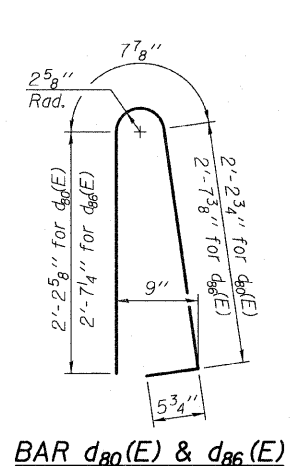


NEAR ABUTMENT

SECTION D-D

(See Plan for dimensions not shown)

AT APPROACH FOOTING



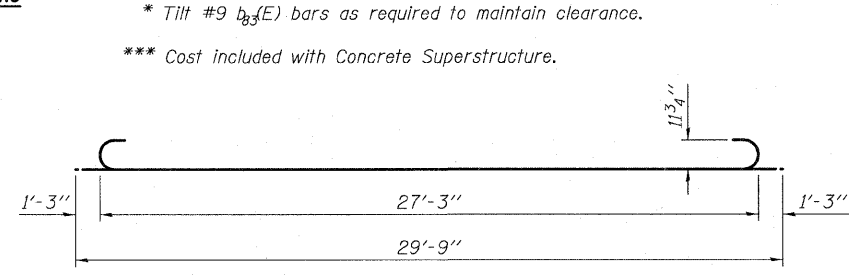
BAR $d_{80}(E)$ & $d_{86}(E)$

BAR $d_{88}(E)$ & $d_{89}(E)$

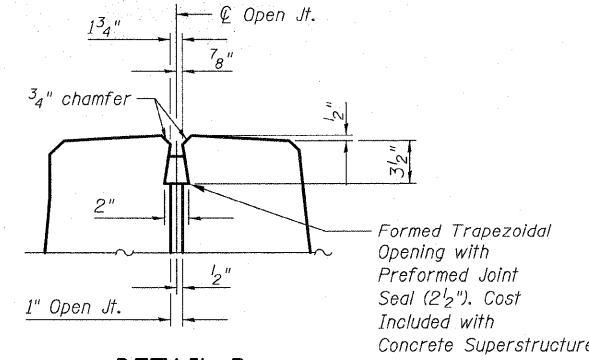
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$c_{82}(E)$	50	#6	6'-6"	—
$c_{83}(E)$	75	#4	27'-3"	—
$c_{84}(E)$	92	#5	39'-6"	—
$b_{82}(E)$	61	#4	29'-8"	—
$b_{83}(E)$	182	#9	29'-9"	—
$b_{84}(E)$	2	#4	31'-2"	—
$c_{85}(E)$	35	#5	5'-7"	—
$c_{86}(E)$	66	#5	7'-11"	—
$c_{87}(E)$	4	#5	9'-3"	—
$c_{88}(E)$	35	#5	6'-4"	—
$e_{30}(E)$	16	#4	31'-2"	—
$e_{31}(E)$	2	#8	31'-2"	—
$b_{80}(E)$	152	#4	9'-9"	—
$w_{81}(E)$	120	#5	27'-5"	—
Concrete Superstructure		Cu. Yd.	111.5	
Concrete Structures		Cu. Yd.	23.5	
Reinforcement Bars, Epoxy Coated		Pound	31,250	

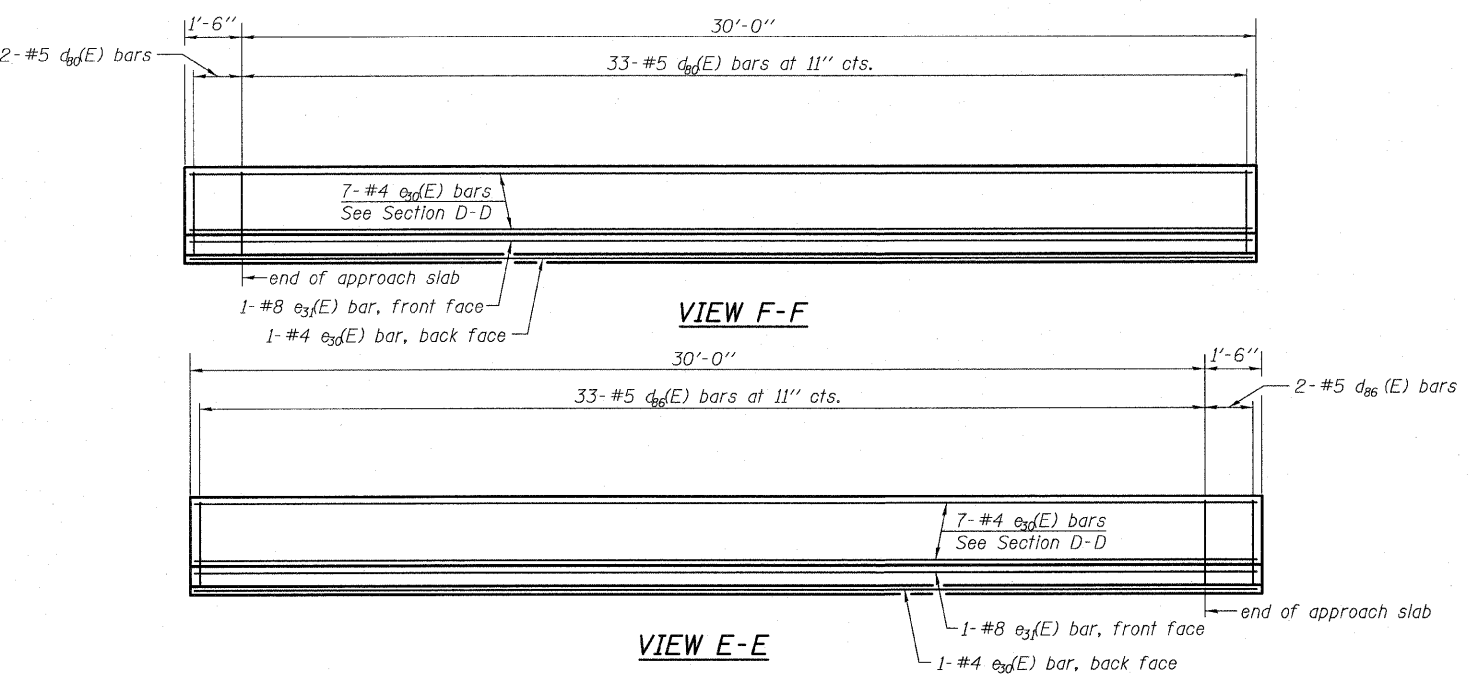
(1) 4,420 pounds billed in Substructure
Total in Total Bill of Material on sheet 2 of 62.



BAR $b_{83}(E)$



DETAIL B



VIEW F-F

VIEW E-E

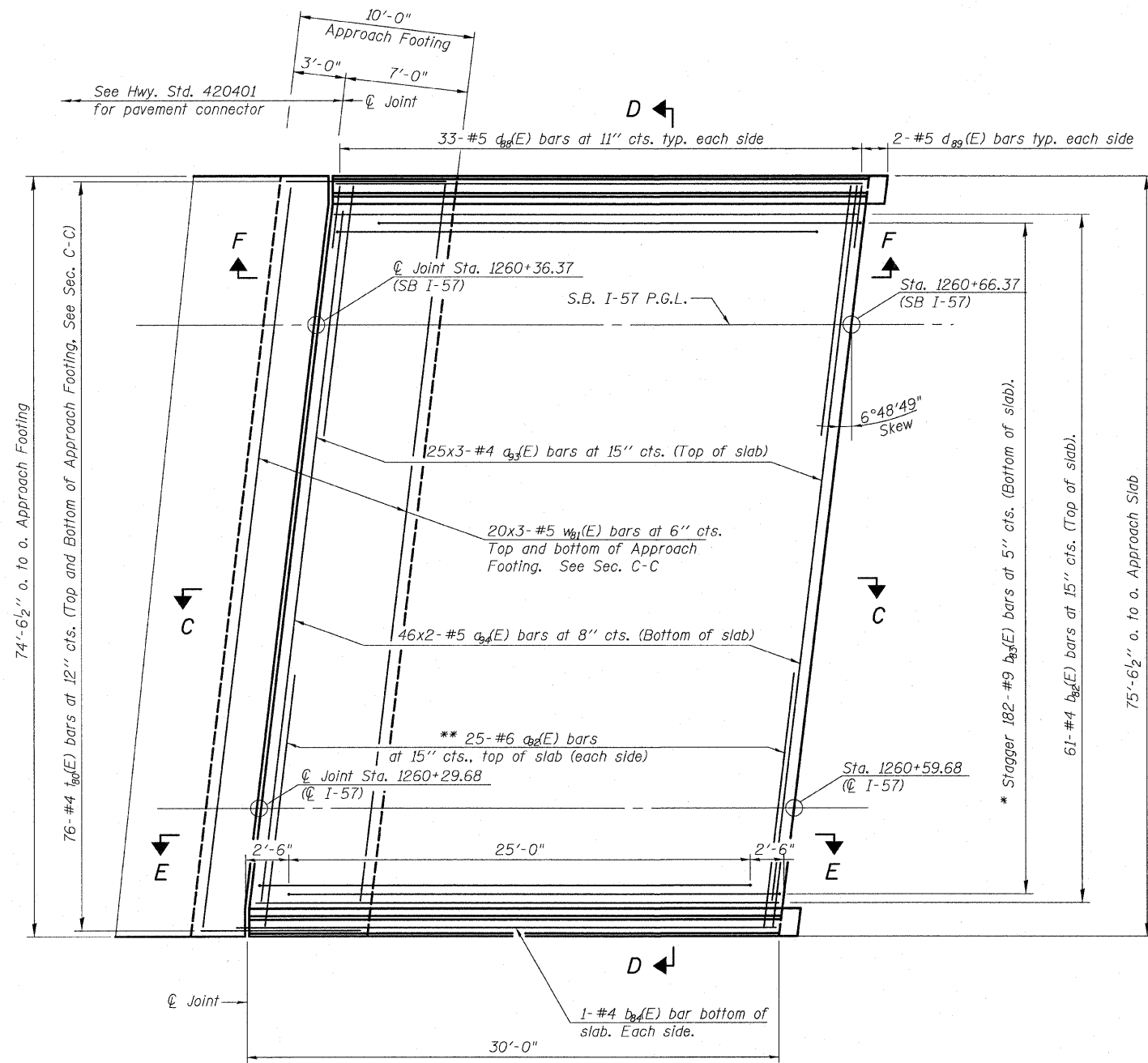
WEST APPROACH SLAB NB I-57 - 2
STRUCTURE NO. 016-1252

TYLIN INTERNATIONAL	DESIGNED - MRB	REVISIONS		SHEET NO. 25	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD	NAME	DATE					516	338
	DRAWN - MRB								
	CHECKED - LS, SP, PDF							CONTRACT NO. 60J27	
	DATE - 03/18/10							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	

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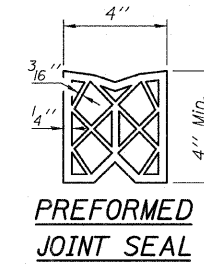
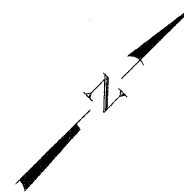
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 27 of 62 for Sections C-C & D-D and View E-E.
a₉₅(E) and a₉₆(E) bar spacings measured along \bar{C} Rdwy.
Bars indicated thus 20x3-#5 etc indicates 20 lines of bars
with three lengths per line.

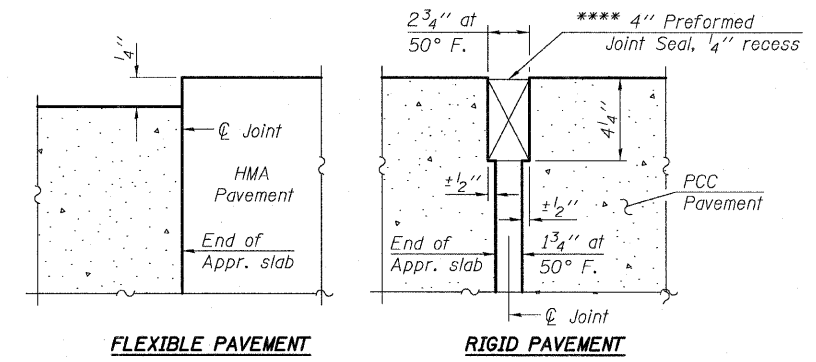


PLAN

* Tilt #9 bars as required to maintain clearance.
** Space between a₃(E) bars, typ. each parapet.



**** Cost included with Concrete Superstructure.



DETAIL A

MINIMUM BAR LAPS

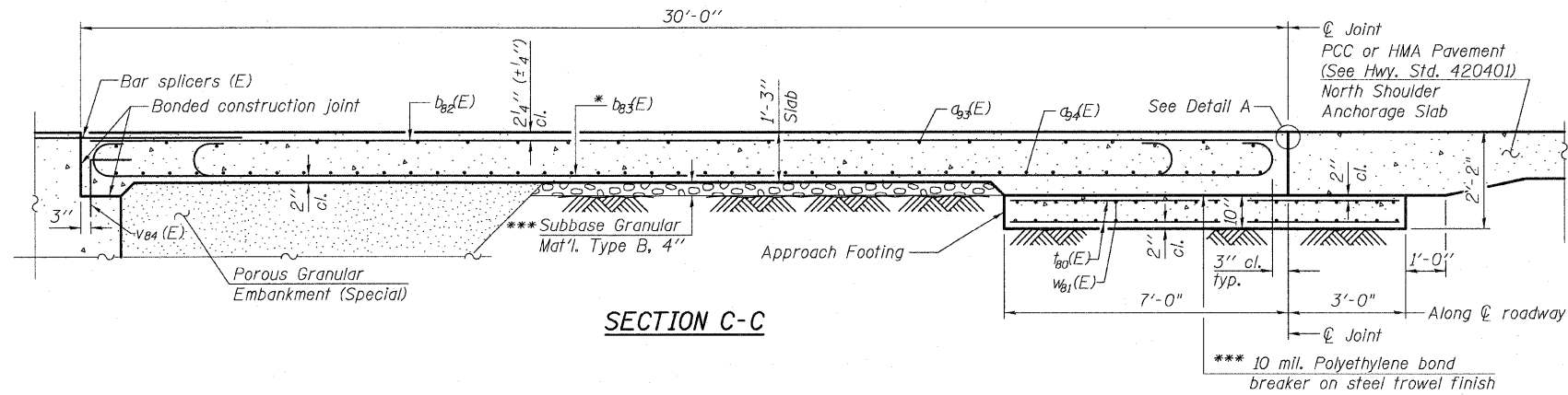
#4 Bar 2'-11"
#5 Bar 3'-3"

**WEST APPROACH SLAB SB I-57 - 1
STRUCTURE NO. 016-1252**

TYLIN INTERNATIONAL	DESIGNED - MRB	REVISIONS		SHEET NO. 26	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD	NAME	DATE		57	1414.2B	COOK	516	339	
	DRAWN - MRB				62 SHEETS	CONTRACT NO. 60J27				
	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

P:\602540157-294\STRUCTURAL\I-57 OVER RAMP.BV\Final.submittal_03-17-2010\Final.submittal_03172010\0161252-60127-026-W_APPR5.dgn 9:54:13 AM 3/18/2010

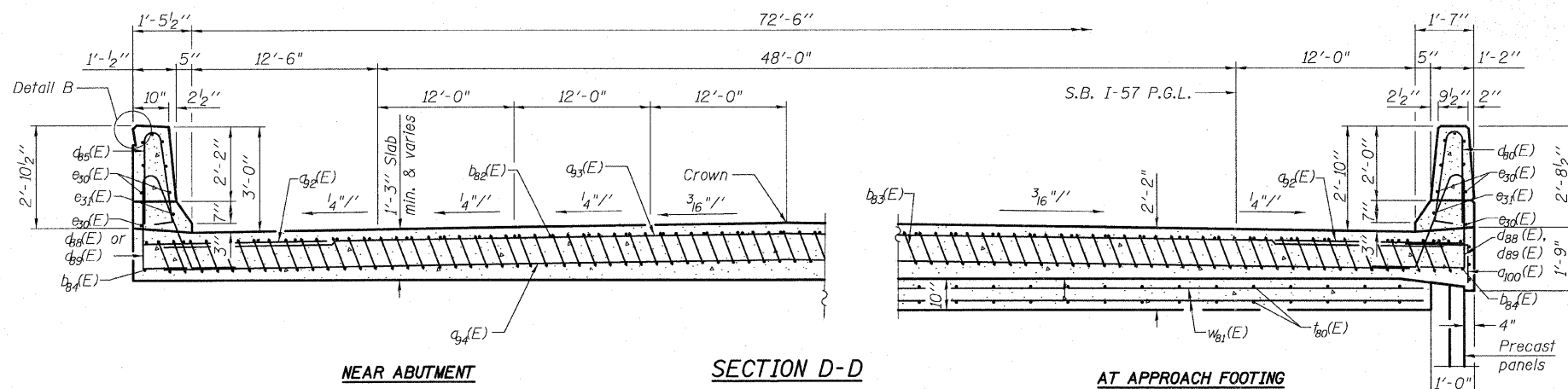
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C

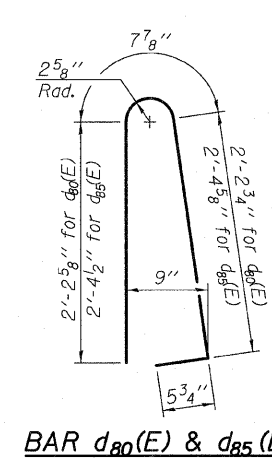
Notes:
See sheet 26 of 62 for Detail A.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For $v_{84}(E)$ bar details, see sheet 46 of 62.
The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
For bar splicer details, see sheet 55 of 62.
Cost of excavation for approach footing included with Concrete Structures.

The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 62.

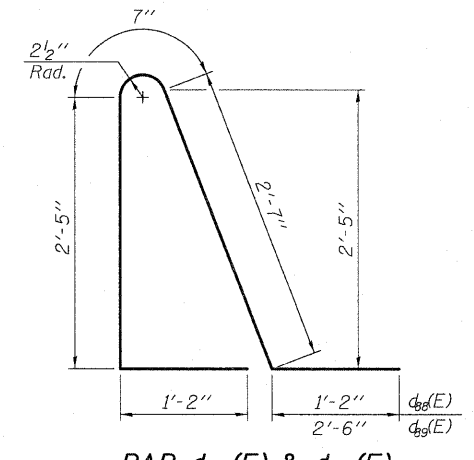


SECTION D-D

(See Plan for dimensions not shown)



BAR $d_{80}(E)$ & $d_{85}(E)$



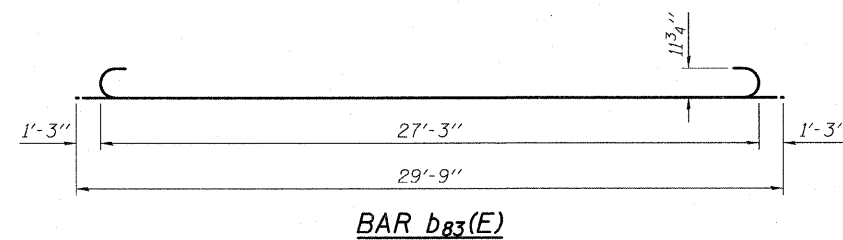
BAR $d_{88}(E)$ & $d_{89}(E)$

* Tilt #9 $b_{83}(E)$ bars as required to maintain clearance.
*** Cost included with Concrete Superstructure.

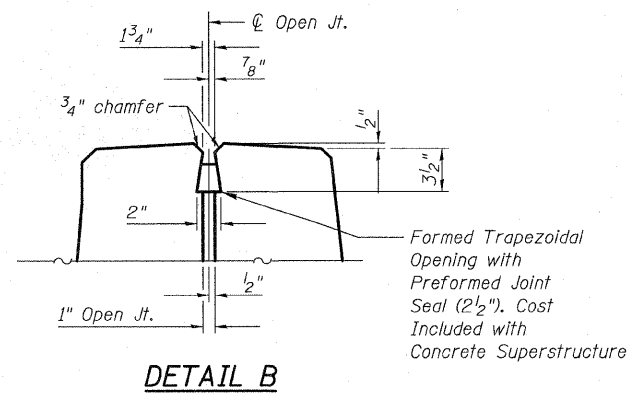
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_{83}(E)$	75	#4	27'-3"	—
$d_{84}(E)$	92	#5	39'-6"	—
$d_{85}(E)$	50	#6	6'-6"	—
$b_{83}(E)$	61	#4	29'-8"	—
$b_{84}(E)$	182	#9	29'-9"	—
$b_{85}(E)$	2	#4	31'-2"	—
$d_{80}(E)$	35	#5	5'-7"	—
$d_{81}(E)$	66	#5	7'-11"	—
$d_{82}(E)$	4	#5	9'-3"	—
$d_{83}(E)$	35	#5	5'-11"	—
$e_{30}(E)$	16	#4	31'-2"	—
$e_{31}(E)$	2	#8	31'-2"	—
$v_{81}(E)$	120	#5	27'-5"	—
Concrete Superstructure		Cu. Yd.	111.6	
Concrete Structures		Cu. Yd.	23.5	
Reinforcement Bars, Epoxy Coated		Pound	31,240	

(1.) 4,420 pounds billed in Substructure
Total in Total Bill of Material on sheet 2 of 62.

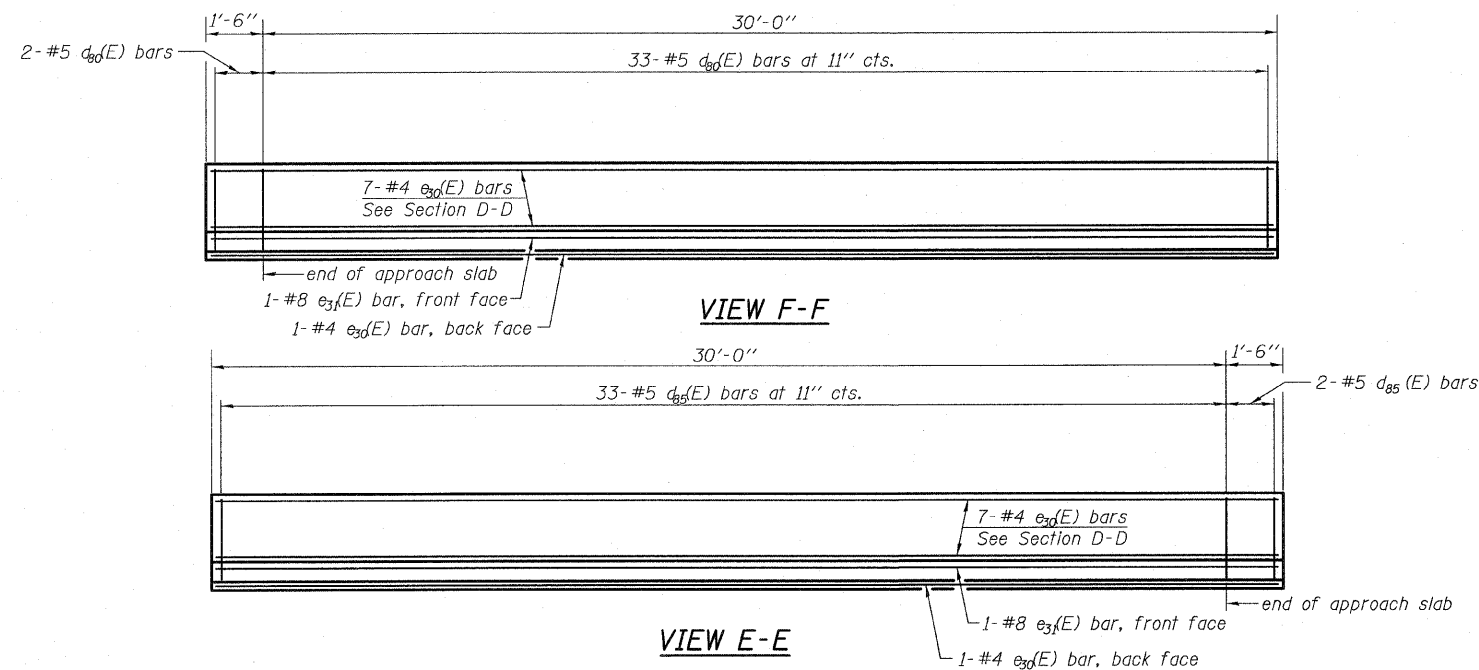


BAR $b_{83}(E)$



DETAIL B

WEST APPROACH SLAB SB I-57 - 2
STRUCTURE NO. 016-1252



VIEW F-F

VIEW E-E

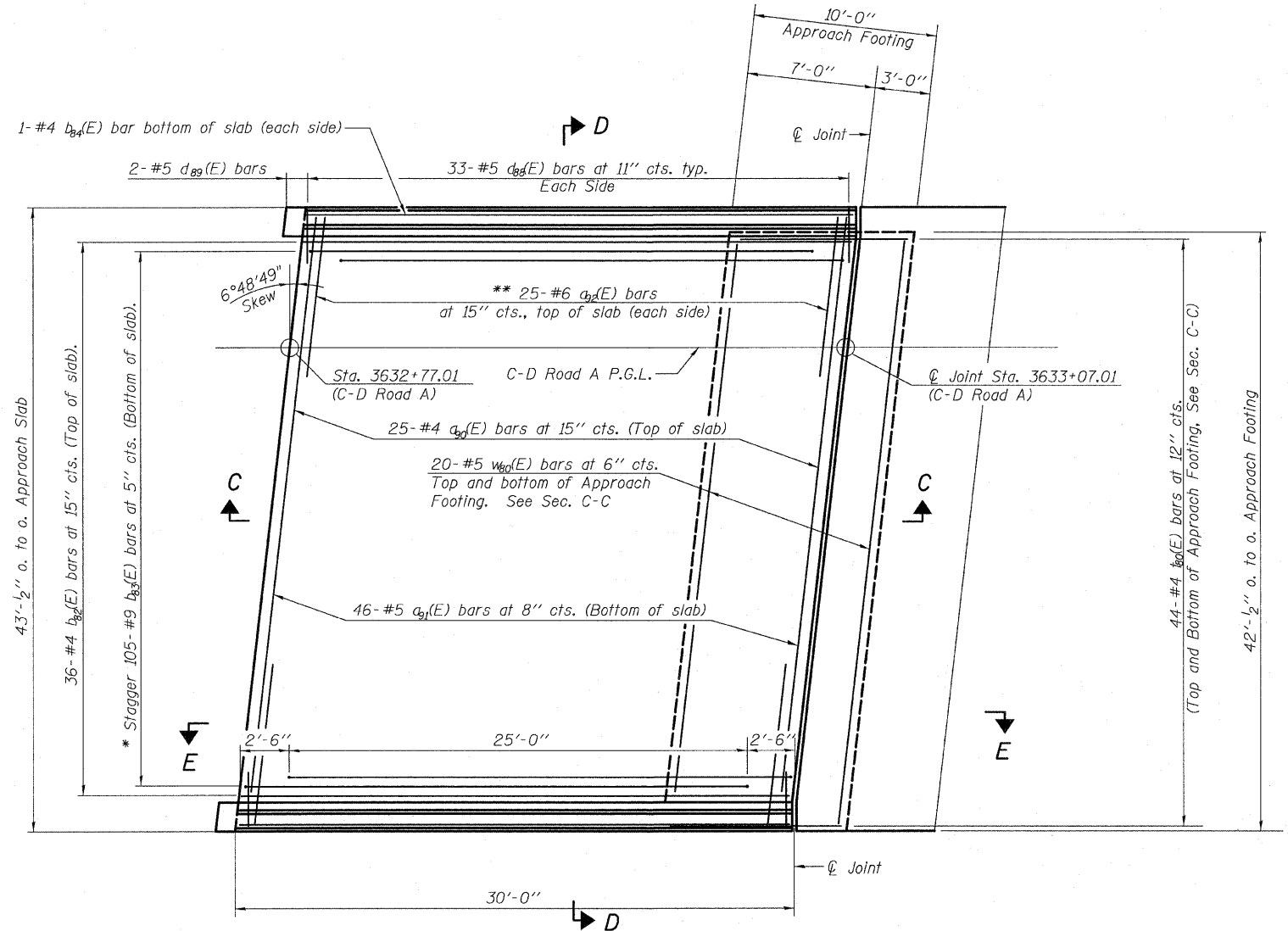
TYLIN INTERNATIONAL

DESIGNED	MRB	REVISIONS	
CHECKED	AMD	NAME	DATE
DRAWN	MRB		
CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO. 27	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
62 SHEETS	57	1414.2B	COOK	516	340
			CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

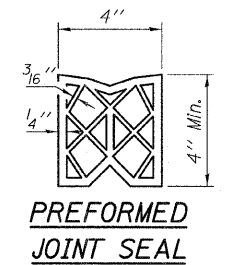
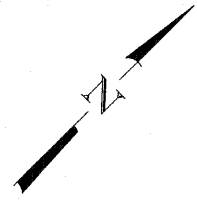
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 29 of 62 for Sections C-C & D-D and Views E-E and F-F.
 $a_d(E)$ and $a_b(E)$ bar spacings measured along ϕ Rdwy.

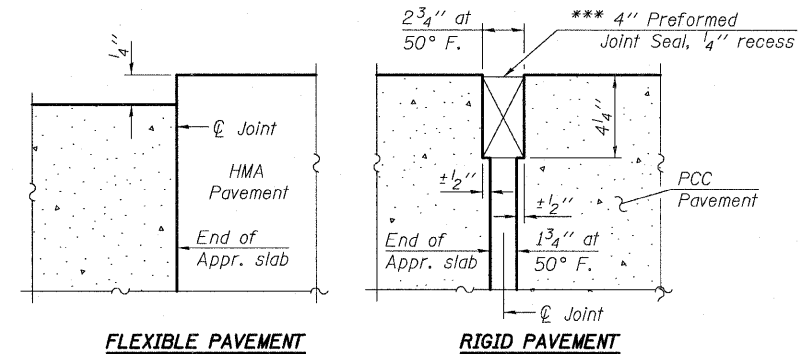


PLAN

* Tilt #9 bars as required to maintain clearance.
** Space between $a_d(E)$ bars, typ. each parapet.



*** Cost included with Concrete Superstructure.



FLEXIBLE PAVEMENT

RIGID PAVEMENT

DETAIL A

MINIMUM BAR LAPS

#4 Bar 2'-11"
#5 Bar 3'-3"

EAST APPROACH SLAB C-D ROAD A - 1
STRUCTURE NO. 016-1252

TYLIN INTERNATIONAL	DESIGNED - MRB	REVISIONS		SHEET NO. 28	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 341
	CHECKED - AMD	NAME	DATE						
	DRAWN - MRB								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
				62 SHEETS	CONTRACT NO. 60J27				
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

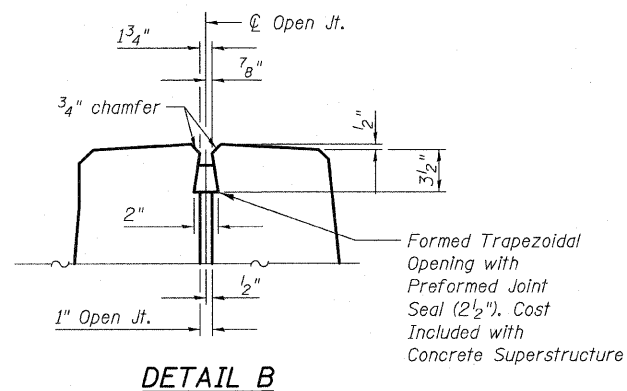
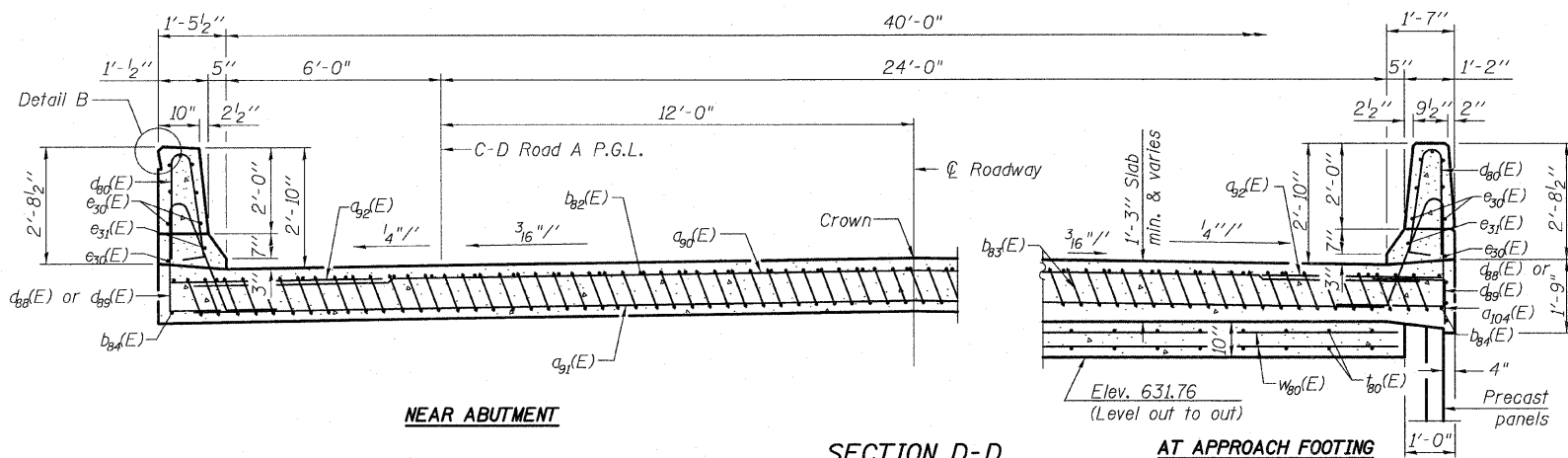
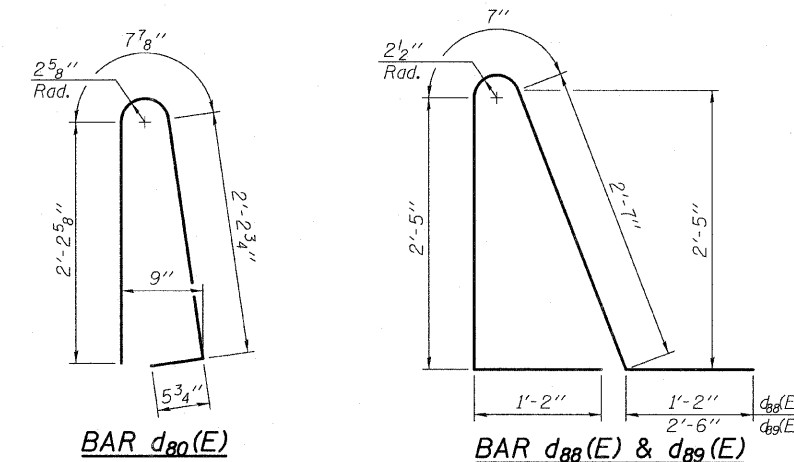
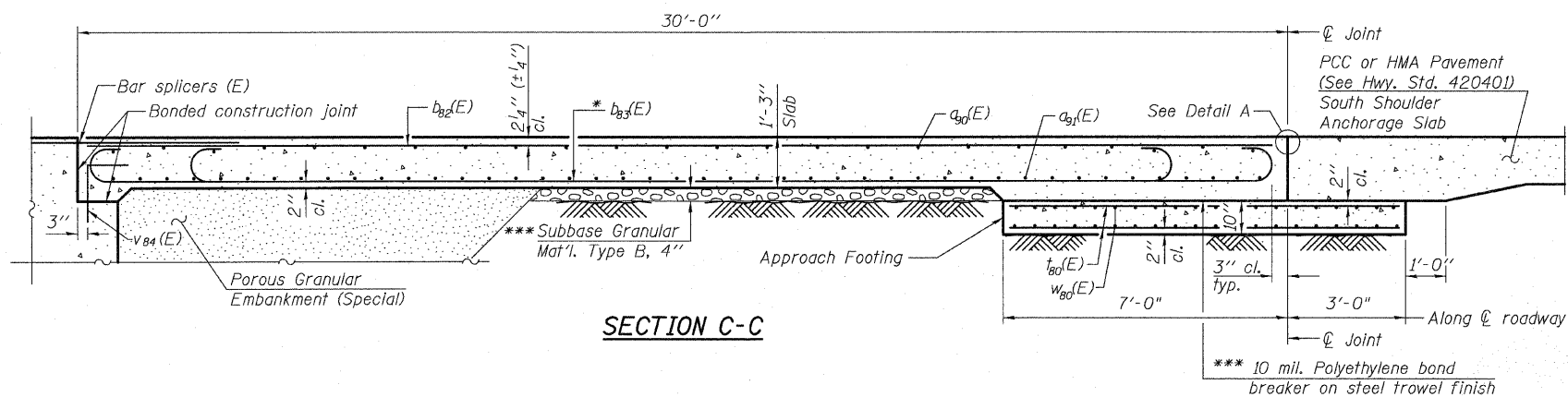
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:

See sheet 28 of 62 for Detail A.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For $v_{B4}(E)$ bar details, see sheet 50 of 62.
The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
For bar splicer details, see sheet 55 of 62.
Cost of excavation for approach footing included with Concrete Structures.

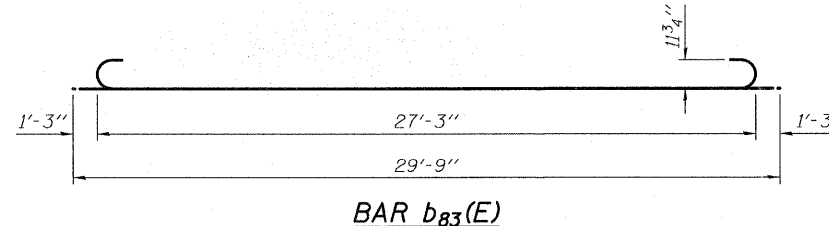
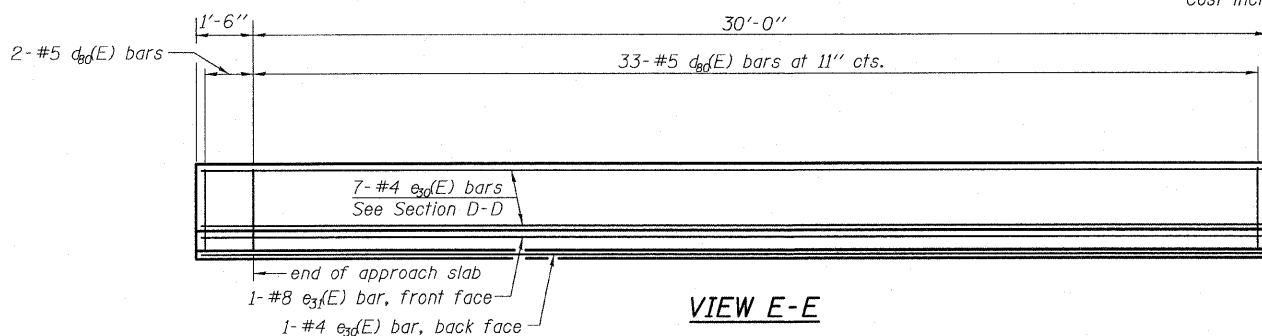
The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 62.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_{B0}(E)$	25	#4	43'-0"	U
$a_{B4}(E)$	46	#5	43'-0"	—
$a_{B5}(E)$	50	#6	6'-6"	—
$b_{B2}(E)$	36	#4	29'-8"	—
$b_{B3}(E)$	105	#9	29'-9"	—
$b_{B4}(E)$	2	#4	31'-2"	—
$d_{B8}(E)$	70	#5	5'-7"	U
$d_{B9}(E)$	66	#5	7'-11"	U
$e_{B3}(E)$	4	#5	9'-3"	—
$e_{B4}(E)$	16	#4	31'-2"	—
$e_{B5}(E)$	2	#8	31'-2"	—
$t_{B0}(E)$	88	#4	9'-9"	—
$w_{B0}(E)$	40	#5	43'-0"	—
Concrete Superstructure		Cu. Yd.	66.5	
Concrete Structures		Cu. Yd.	13.4	
(1.) Reinforcement Bars, Epoxy Coated		Pound	18,510	

(1.) 2,370 pounds billed in Substructure
Total in Total Bill of Material on sheet 2 of 62.



EAST APPROACH SLAB C-D ROAD A - 2
STRUCTURE NO. 016-1252

TYLIN INTERNATIONAL

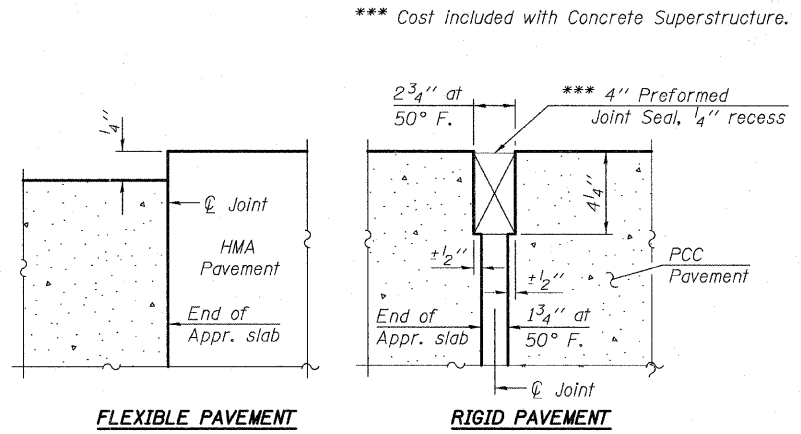
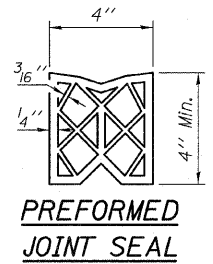
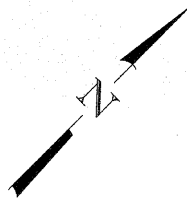
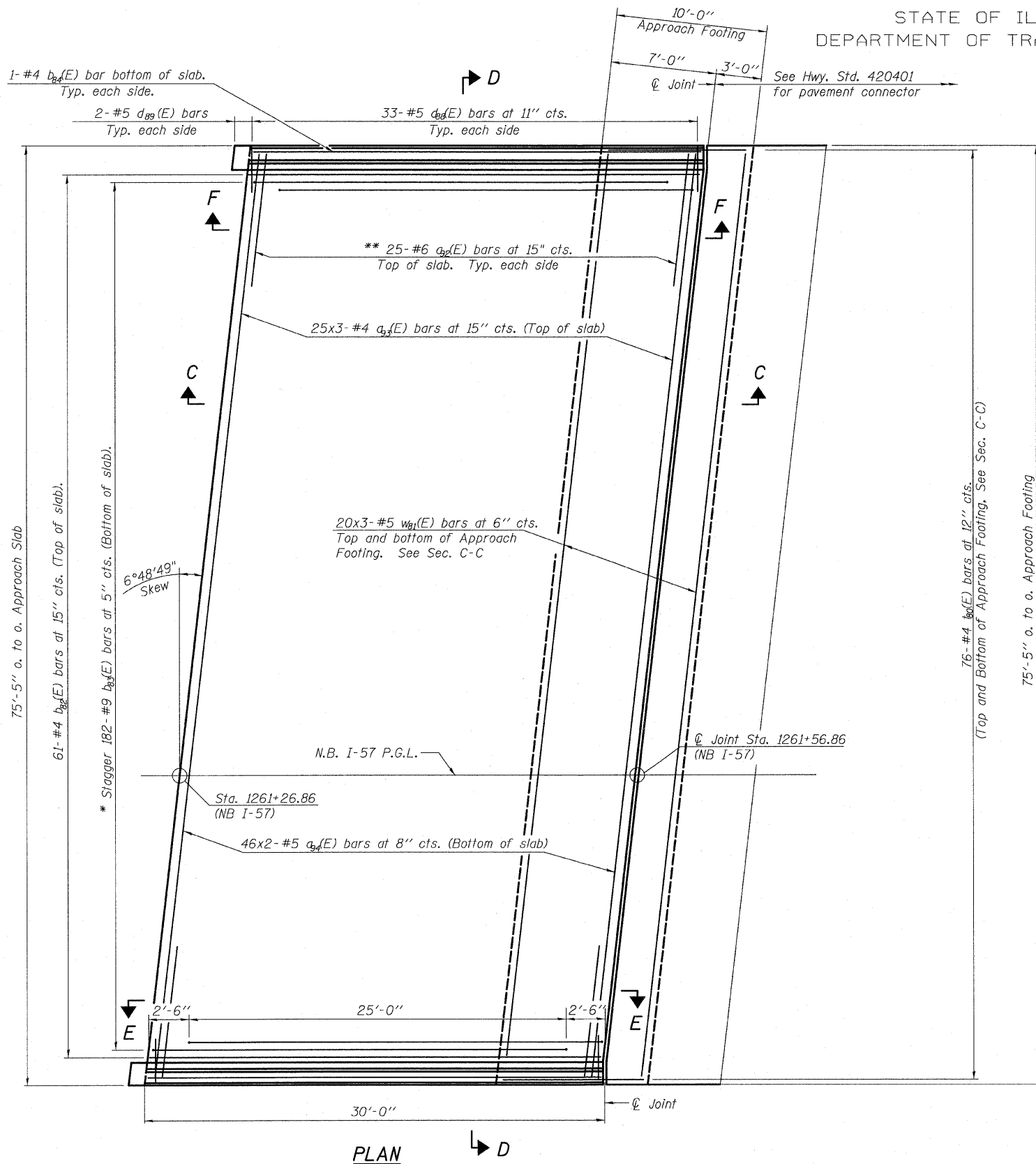
DESIGNED	MRB	REVISIONS	
CHECKED	AMD	NAME	DATE
DRAWN	MRB		
CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	57	1414.2B	COOK	516	342
62 SHEETS				CONTRACT NO. 60J27	
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 31 of 62 for Sections C-C & D-D and Views E-E and F-F.
a₃₃(E) and a₃₄(E) bar spacings measured along C Rdwy.
Bars indicated thus 20x3-#5 etc indicates 20 lines of bars with three lengths per line.



DETAIL A

MINIMUM BAR LAPS
#4 Bar 2'-11"
#5 Bar 3'-3"

PLAN

* Tilt #9 b₃(E) bars as required to maintain clearance.
** Space between a₃(E) bars, typ. each parapet.

EAST APPROACH SLAB NB I-57 - 1
STRUCTURE NO. 016-1252

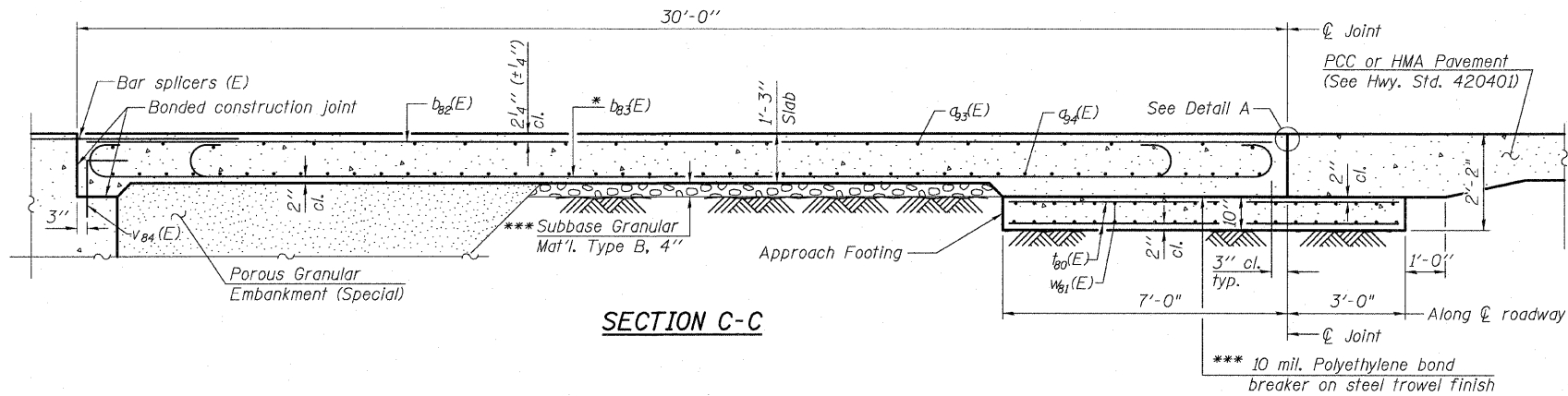
TYLIN INTERNATIONAL

DESIGNED	MRB	REVISIONS	
CHECKED	AMD	NAME	DATE
DRAWN	MRB		
CHECKED	LS, SP, PDF		
DATE	03/18/10		

SHEET NO. 30	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	343
62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

9:54:20 AM P:\602540\57-294\STRUCTURAL\I-57 OVER RAMP BA\Final submittal_03-17-2010\Final submittal_03172010\0161252-60J27-030-E-APPR3.dgn

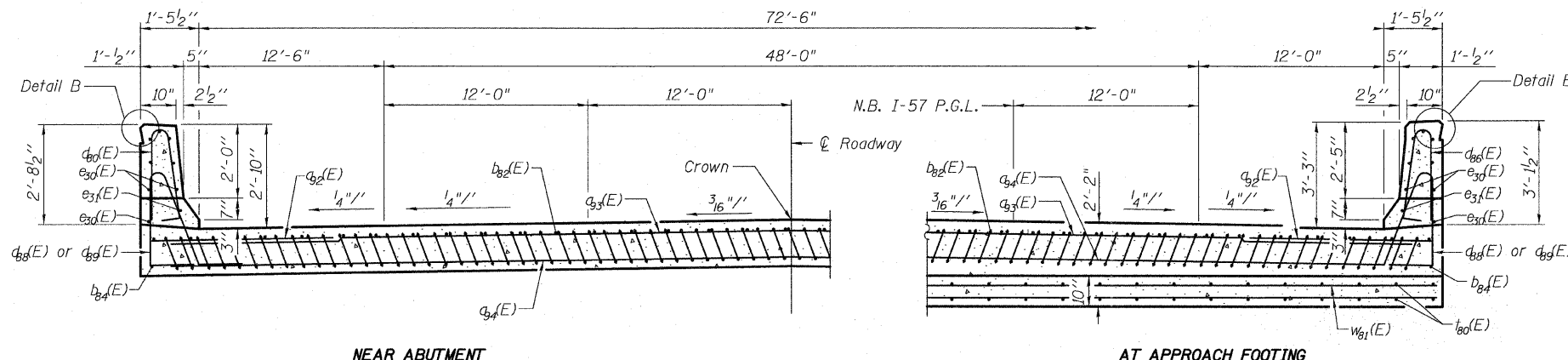
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C

Notes:
See sheet 30 of 62 for Detail A.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For $v_{84}(E)$ bar details, see sheet 50 of 62.
The approach footing maximum applied service bearing pressure (q_{max}) = 2.0 ksf.
For bar splicer details, see sheet 55 of 62.
Cost of excavation for approach footing included with Concrete Structures.

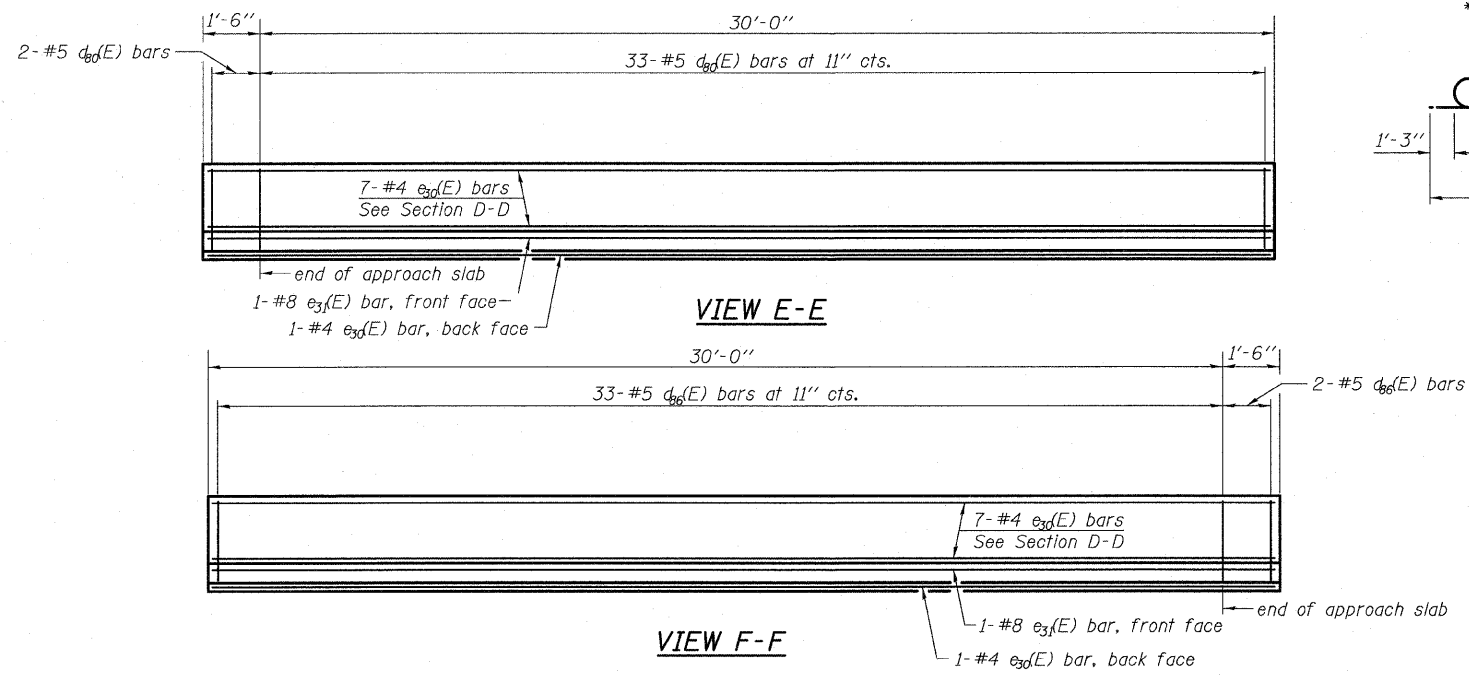
The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 62.



NEAR ABUTMENT

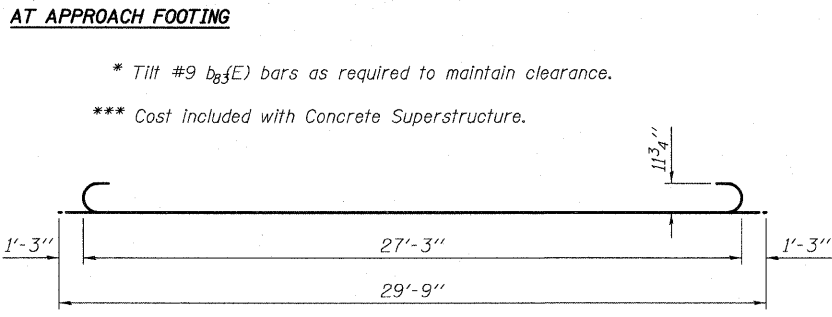
SECTION D-D

(See Plan for dimensions not shown)

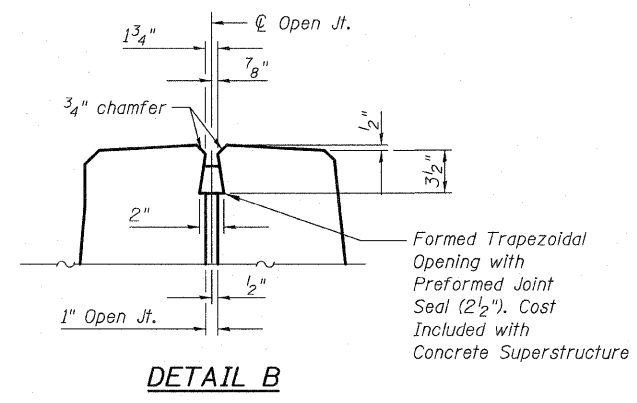


VIEW E-E

VIEW F-F

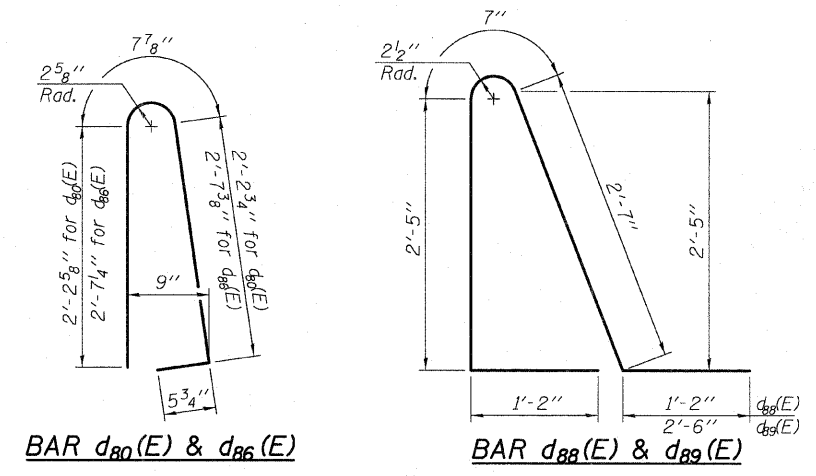


BAR $b_{83}(E)$



DETAIL B

* Tilt #9 $b_{83}(E)$ bars as required to maintain clearance.
*** Cost included with Concrete Superstructure.



BAR $d_{80}(E)$ & $d_{86}(E)$

BAR $d_{88}(E)$ & $d_{89}(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$c_{2}(E)$	50	#6	6'-6"	—
$c_{3}(E)$	75	#4	27'-3"	—
$c_{4}(E)$	92	#5	39'-6"	—
$b_{2}(E)$	61	#4	29'-8"	—
$b_{3}(E)$	182	#9	29'-9"	—
$b_{4}(E)$	2	#4	31'-2"	—
$c_{10}(E)$	35	#5	5'-7"	—
$c_{11}(E)$	66	#5	7'-11"	—
$c_{12}(E)$	4	#5	9'-3"	—
$c_{13}(E)$	35	#5	6'-4"	—
$e_{3}(E)$	16	#4	31'-2"	—
$e_{4}(E)$	2	#8	31'-2"	—
$t_{80}(E)$	152	#4	9'-9"	—
$w_{81}(E)$	120	#5	27'-5"	—
Concrete Superstructure		Cu. Yd.		111.5
Concrete Structures		Cu. Yd.		23.5
Reinforcement Bars, Epoxy Coated		Pound		31,250

(L) 4,420 pounds billed in Substructure
Total in Total Bill of Material on sheet 2 of 62.

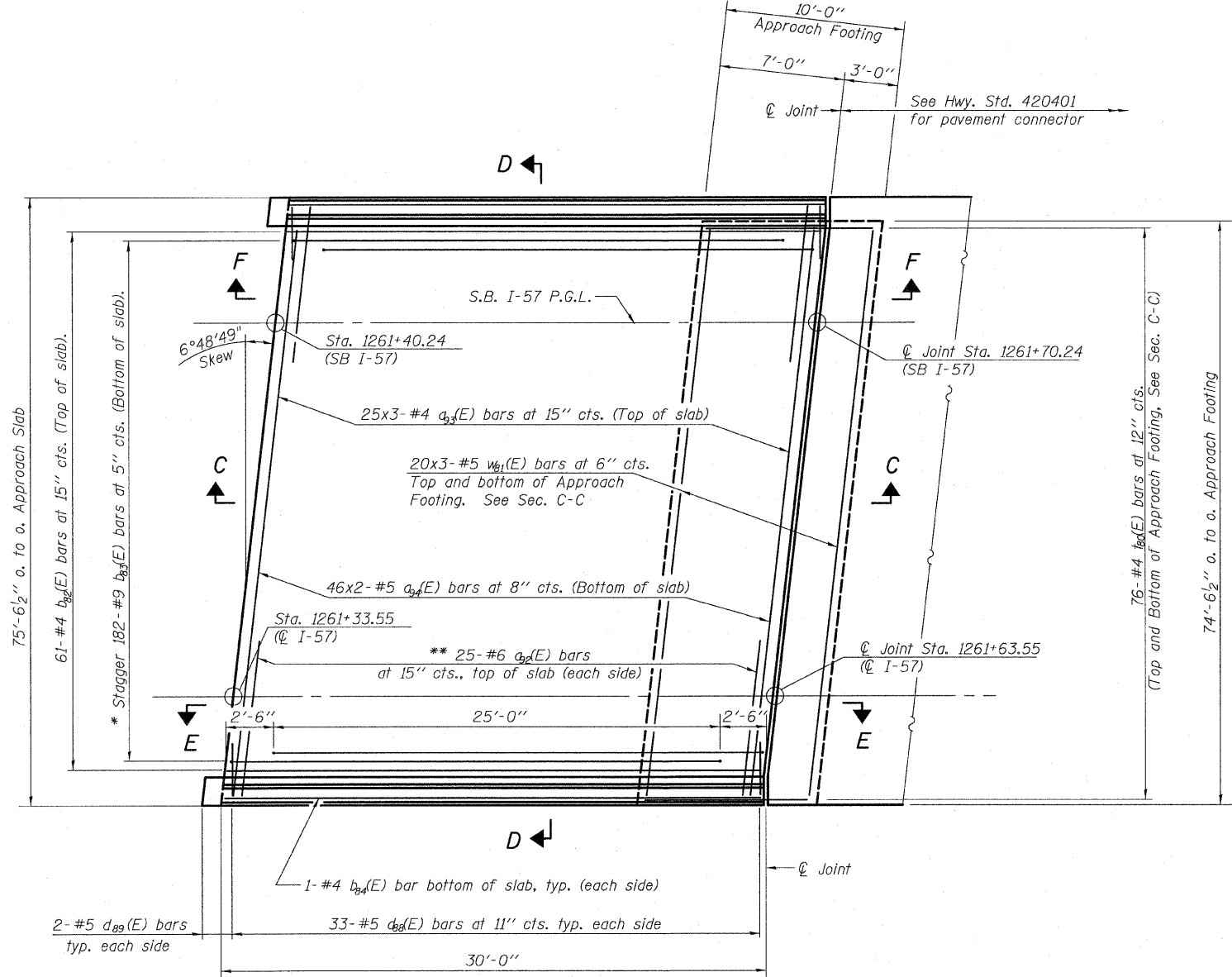
EAST APPROACH SLAB NB I-57 - 2
STRUCTURE NO. 016-1252

TYLIN INTERNATIONAL	DESIGNED - MRB	REVISIONS		SHEET NO. 31	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD	NAME	DATE					516	344
	DRAWN - MRB							CONTRACT NO. 60J27	
	CHECKED - LS,SP,PDF							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
	DATE - 03/18/10								

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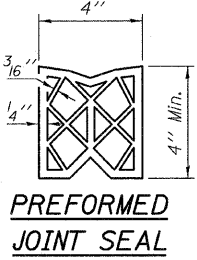
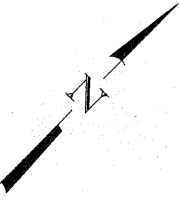
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 33 of 62 for Sections C-C & D-D and Views E-E and F-F.
 $a_{95}(E)$ and $a_{96}(E)$ bar spacings measured along $\text{C} \perp \text{Rdwy}$.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with three lengths per line.

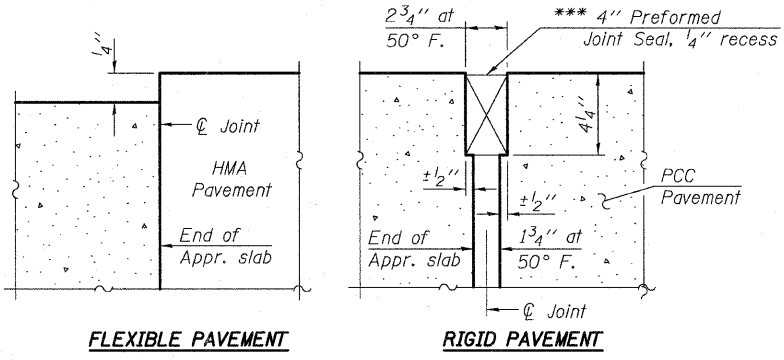


PLAN

* Tilt #9 $b_{93}(E)$ bars as required to maintain clearance.
** Space between $a_{93}(E)$ bars, typ. each parapet.



*** Cost included with Concrete Superstructure.



DETAIL A

Minimum Bar Laps
#4 Bar 2'-11"
#5 Bar 3'-3"

EAST APPROACH SLAB SB I-57 - 1
STRUCTURE NO. 016-1252

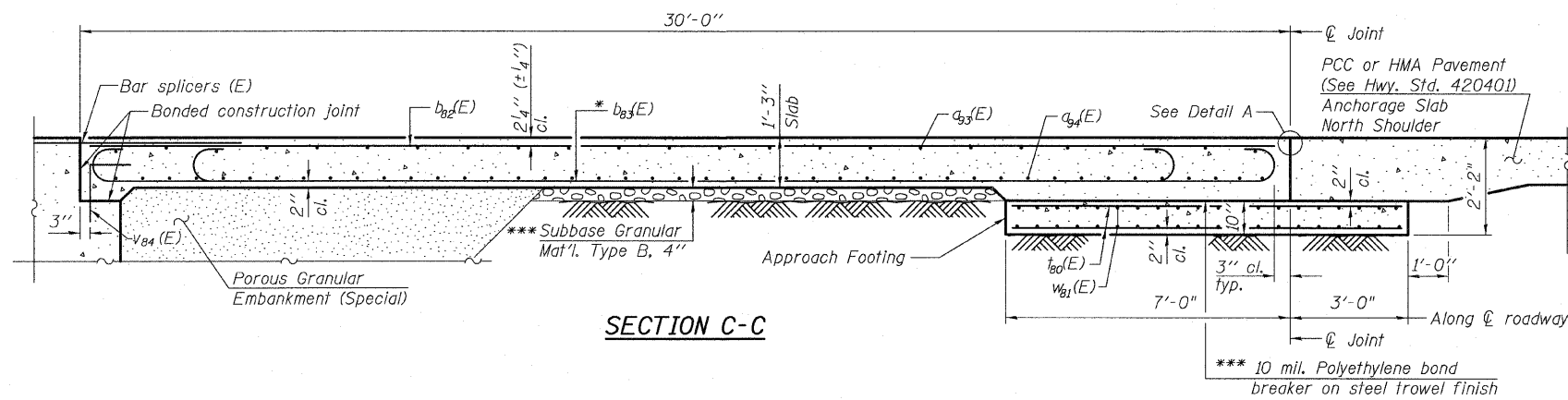
TYLIN INTERNATIONAL

DESIGNED - MRB	REVISIONS	
CHECKED - AMD	NAME	DATE
DRAWN - MRB		
CHECKED - LS,SP,PDF		
DATE - 03/18/10		

SHEET NO. 32	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	345
62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

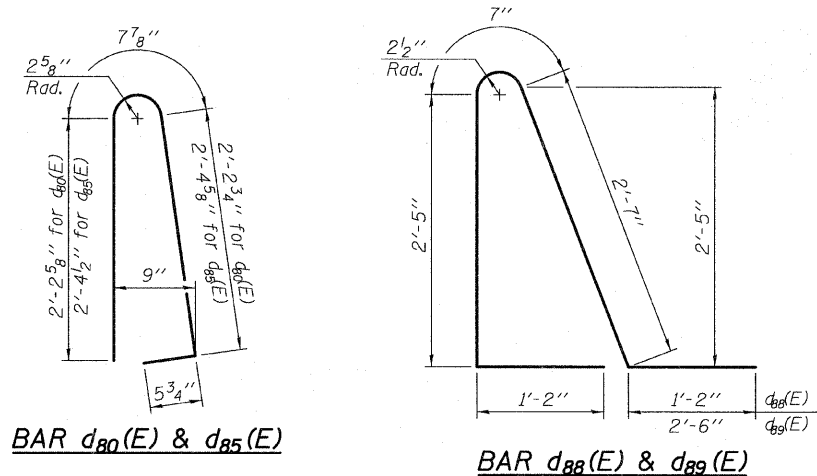
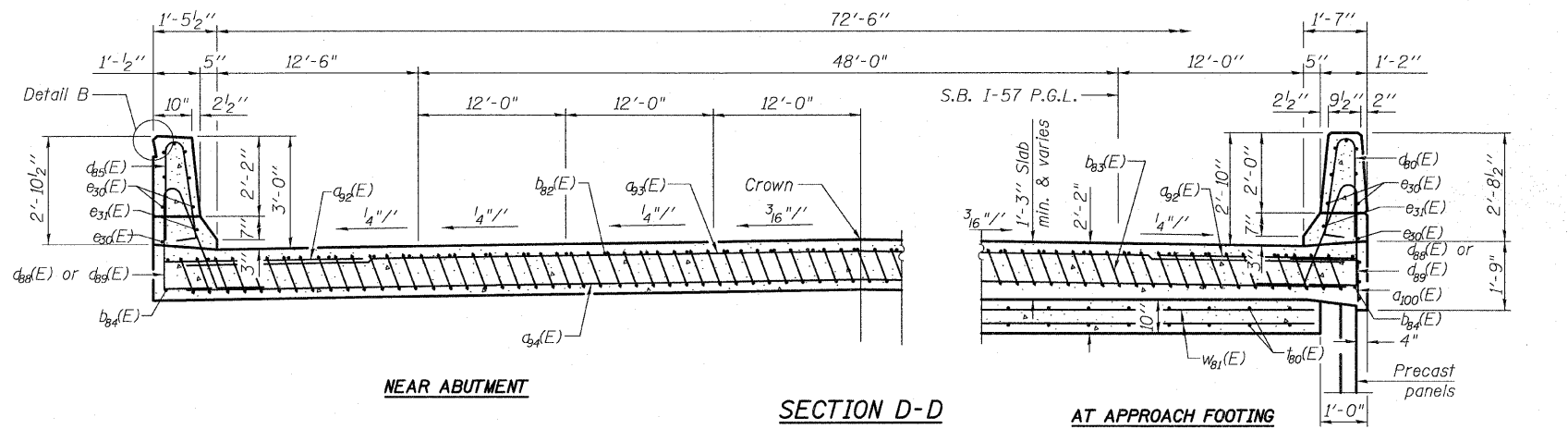
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Notes:
See sheet 32 of 62 for Detail A.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For $v_{84}(E)$ bar details, see sheet 50 of 62.
The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
For bar splicer details, see sheet 55 of 62.
Cost of excavation for approach footing included with Concrete Structures.

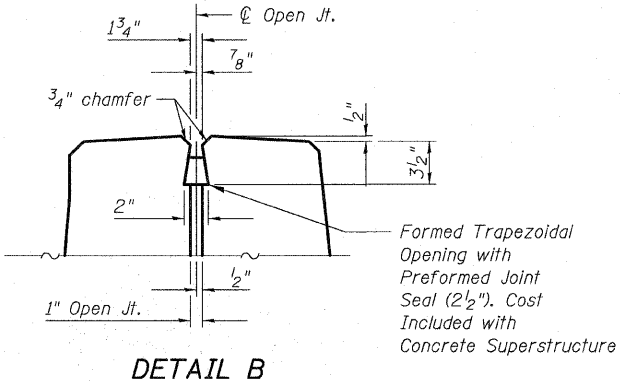
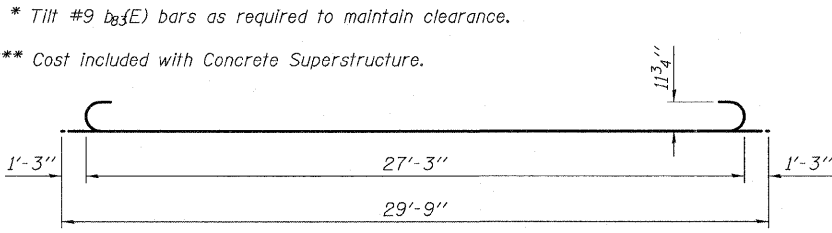
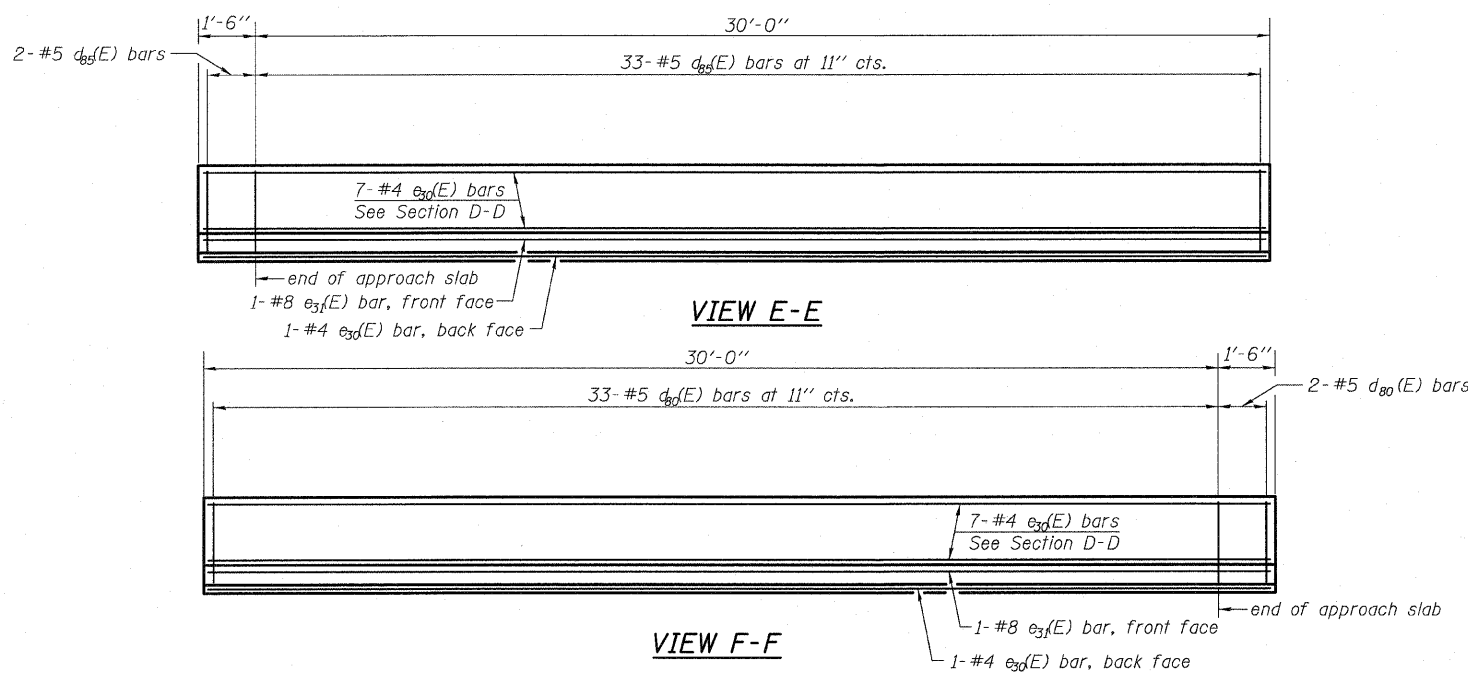
The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 62.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_{83}(E)$	75	#4	27'-3"	—
$d_{84}(E)$	92	#5	39'-6"	—
$d_{82}(E)$	50	#6	6'-6"	—
$d_{82}(E)$	61	#4	29'-8"	—
$d_{83}(E)$	182	#9	29'-9"	—
$d_{84}(E)$	2	#4	31'-2"	—
$d_{84}(E)$	35	#5	5'-7"	—
$d_{88}(E)$	66	#5	7'-11"	—
$d_{89}(E)$	4	#5	9'-3"	—
$d_{85}(E)$	35	#5	5'-11"	—
$e_{33}(E)$	16	#4	31'-2"	—
$e_{31}(E)$	2	#8	31'-2"	—
$b_{80}(E)$	152	#4	9'-9"	—
$w_{81}(E)$	120	#5	27'-5"	—
Concrete Superstructure		Cu. Yd.	111.6	
Concrete Structures		Cu. Yd.	23.5	
(1.) Reinforcement Bars, Epoxy Coated		Pound	31,240	

(1.) 4,420 pounds billed in Substructure
Total in Total Bill of Material on sheet 2 of 62.

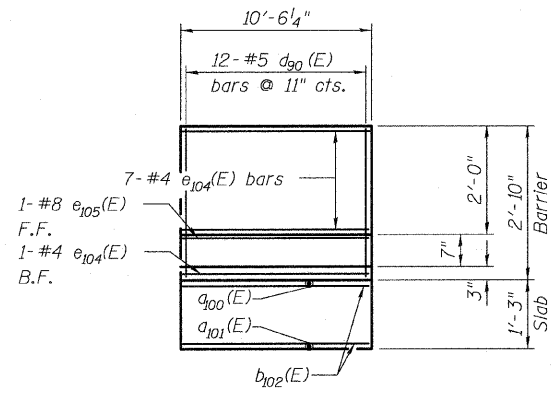


EAST APPROACH SLAB SB I-57 - 2
STRUCTURE NO. 016-1252

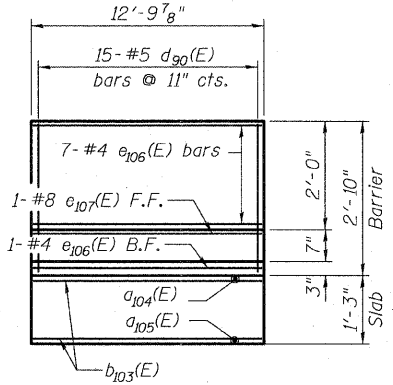
TYLIN INTERNATIONAL	DESIGNED - MRB	REVISIONS		SHEET NO. 33	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD	NAME	DATE		57	1414.2B	COOK	516	346	
	DRAWN - MRB				62 SHEETS	CONTRACT NO. 60J27				
	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

P:\602540\57-294\STRUCTURAL\I-57-OVER-RAMP-BX\Final-submittal-03-17-2010\Final-submittal-03-17-2010\0161252-60J27-033-E-APPR6.dgn 9:54:25 AM 3/18/2010

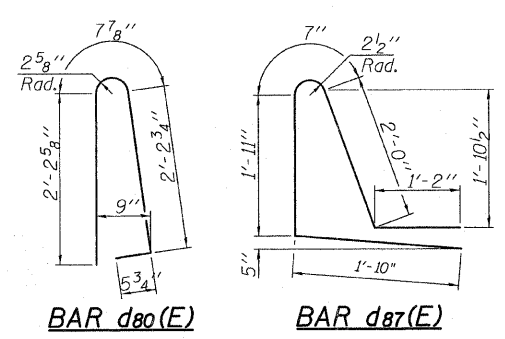
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF NORTH BARRIER

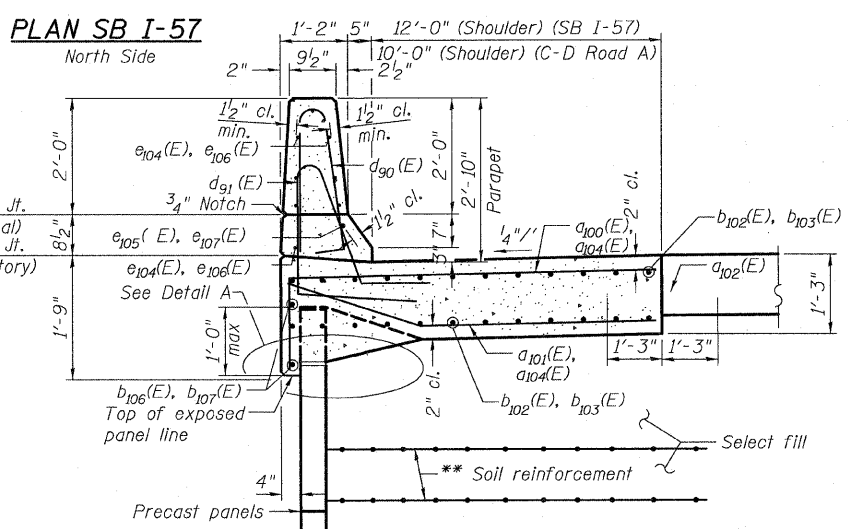
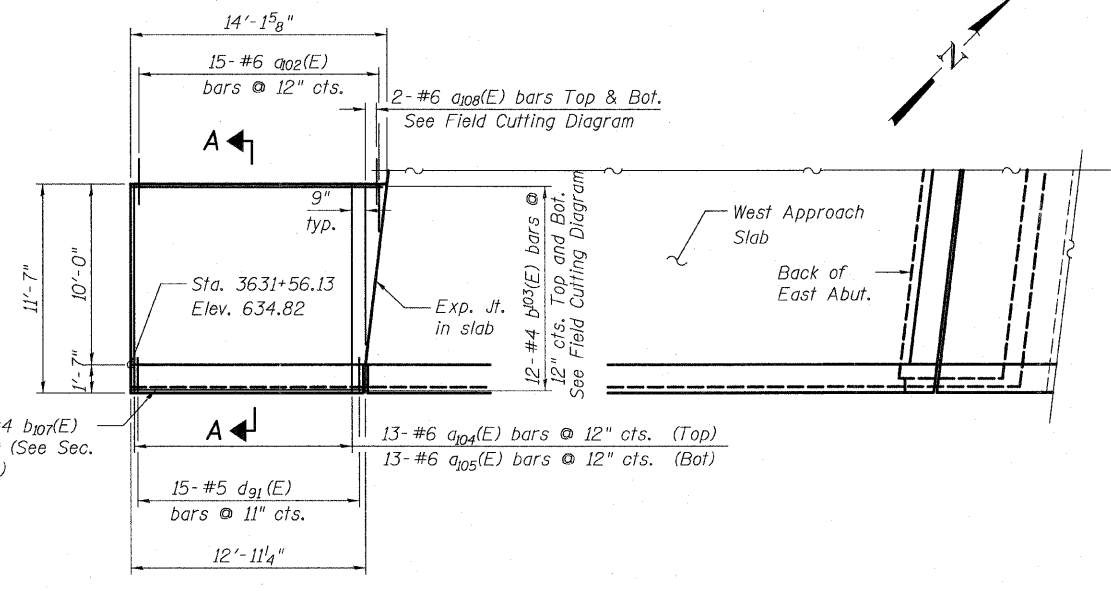
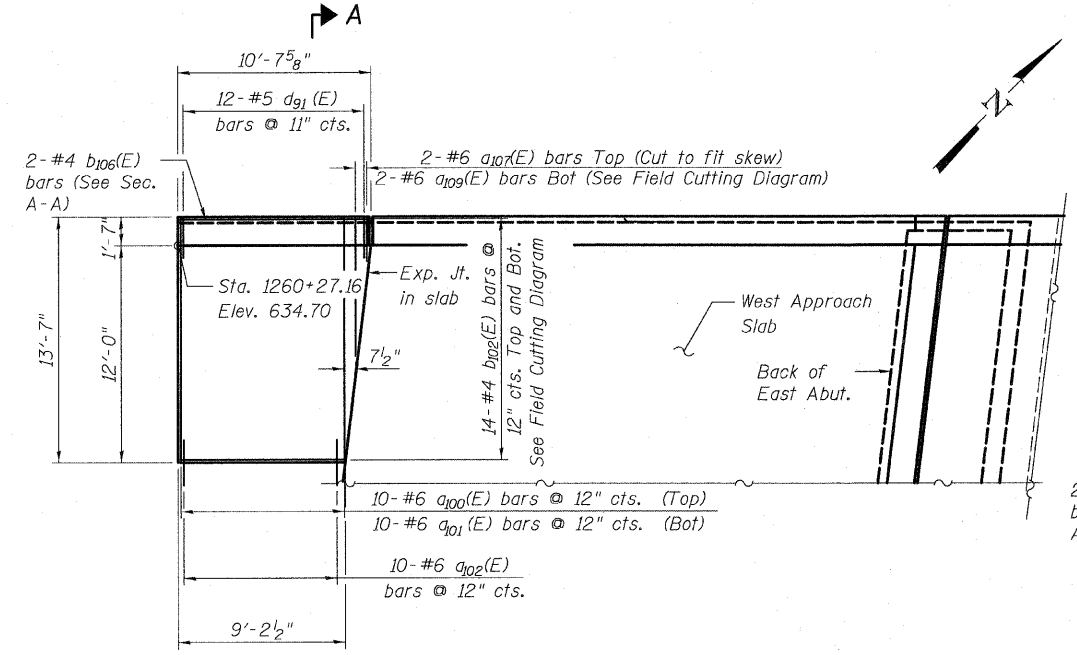


INSIDE ELEVATION OF SOUTH BARRIER



BILL OF MATERIAL

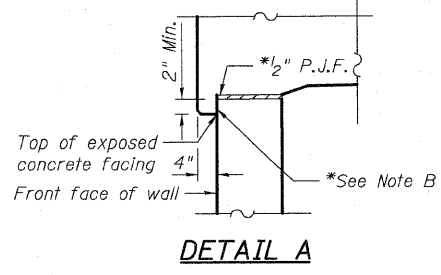
Bar	No.	Size	Length	Shape
a100(E)	10	#6	14'-8"	┌
a101(E)	10	#6	13'-3"	┌
a102(E)	25	#6	2'-6"	┌
a104(E)	13	#6	12'-8"	┌
a107(E)	13	#6	11'-3"	┌
a107(E)	2	#6	9'-0"	┌
a108(E)	4	#6	11'-2"	┌
a109(E)	2	#6	9'-11"	┌
b102(E)	28	#4	19'-3"	┌
b103(E)	24	#4	26'-6"	┌
b106(E)	2	#4	10'-3"	┌
b107(E)	2	#4	12'-7"	┌
d80(E)	27	#5	5'-7"	┌
d87(E)	27	#5	7'-6"	┌
e104(E)	8	#4	10'-3"	┌
e105(E)	1	#8	10'-3"	┌
e106(E)	8	#4	12'-6"	┌
e107(E)	1	#8	12'-6"	┌
Concrete Superstructure			Cu. Yds.	16.8
Reinforced Bars, Epoxy Coated			Pound	2,480



SECTION A-A

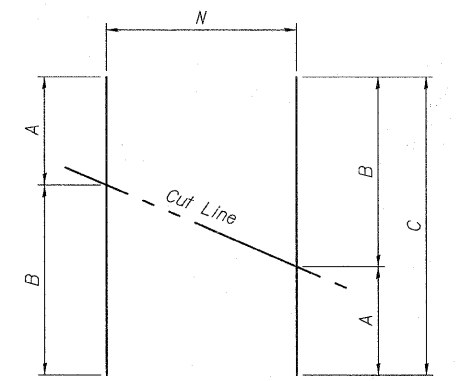
PLAN C-D ROAD A South Side

*Cost included with Concrete Superstructure.

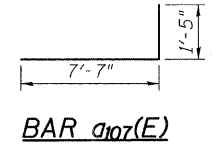


DETAIL A

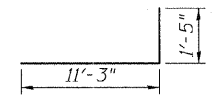
Note B:
*Bond breaker membrane on top and front of fascia wall.



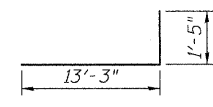
FIELD CUTTING DIAGRAM



BAR a107(E)



BAR a104(E)



BAR a100(E)

Bar	N	A	B	C
a108(E)	2	2'-5"	8'-9"	11'-2"
a109(E)	1	2'-4"	7'-7"	9'-11"
b102(E)	14	8'-11"	10'-4"	19'-3"
b103(E)	12	12'-8"	13'-10"	26'-6"

Order bars full length. Cut as shown and use remainder of bars in opposite face

WEST ANCHORAGE SLAB DETAILS
S.N. 016-1252

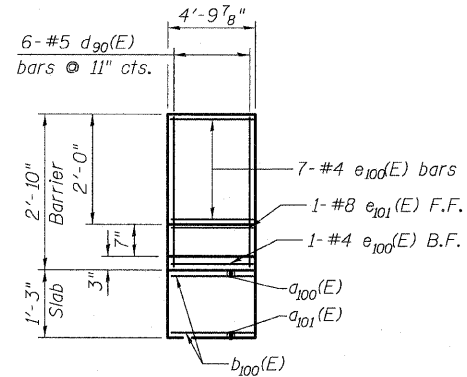
TYLIN INTERNATIONAL

DESIGNED -	DY	REVISIONS	DATE
CHECKED -	AD,LS	NAME	DATE
DRAWN -	DY,EI		
CHECKED -	LS,SP,PDF		
DATE -	03/18/10		

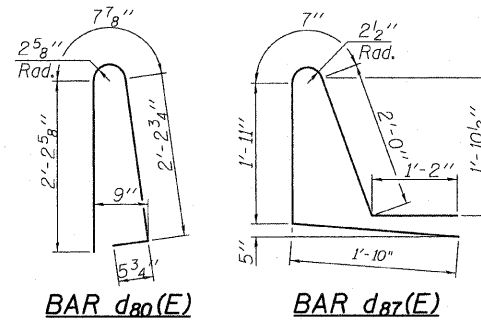
SHEET NO. 34	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 347
62 SHEETS	FED. ROAD DIST. NO. 1 ILLINOIS		CONTRACT NO. 60J27		
FED. AID PROJECT					

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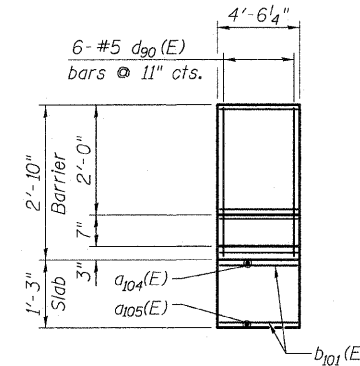
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF NORTH BARRIER



BAR d80(E) BAR d87(E)

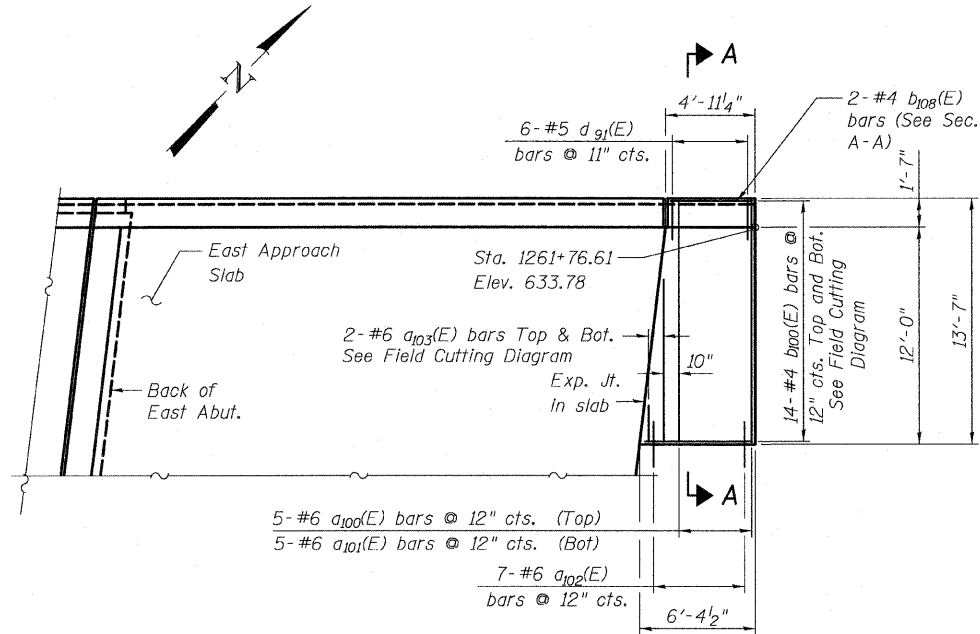


INSIDE ELEVATION OF SOUTH BARRIER

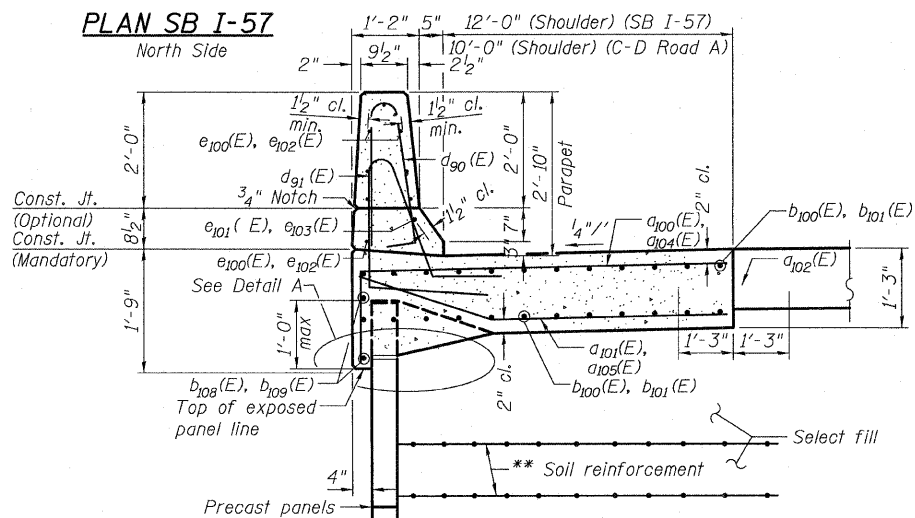
(See Sheet 36 of 62 for additional details)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a100(E)	5	#6	14'-8"	┌
a101(E)	5	#6	13'-3"	┌
a102(E)	11	#6	2'-6"	┌
a103(E)	4	#6	10'-11"	┌
a104(E)	4	#6	12'-8"	┌
a105(E)	4	#6	11'-3"	┌
a106(E)	2	#6	9'-3"	┌
a110(E)	2	#6	8'-0"	┌
b100(E)	28	#4	10'-9"	┌
b101(E)	24	#4	7'-6"	┌
b108(E)	2	#4	4'-7"	┌
b109(E)	2	#4	4'-3"	┌
d80(E)	12	#5	5'-7"	┌
d87(E)	12	#5	7'-6"	┌
e100(E)	8	#4	4'-5"	┌
e101(E)	1	#8	4'-5"	┌
e102(E)	8	#4	4'-3"	┌
e103(E)	1	#8	4'-3"	┌
Concrete Superstructure		Cu. Yds.	7.2	
Reinforced Bars, Epoxy Coated		Pound	1,080	

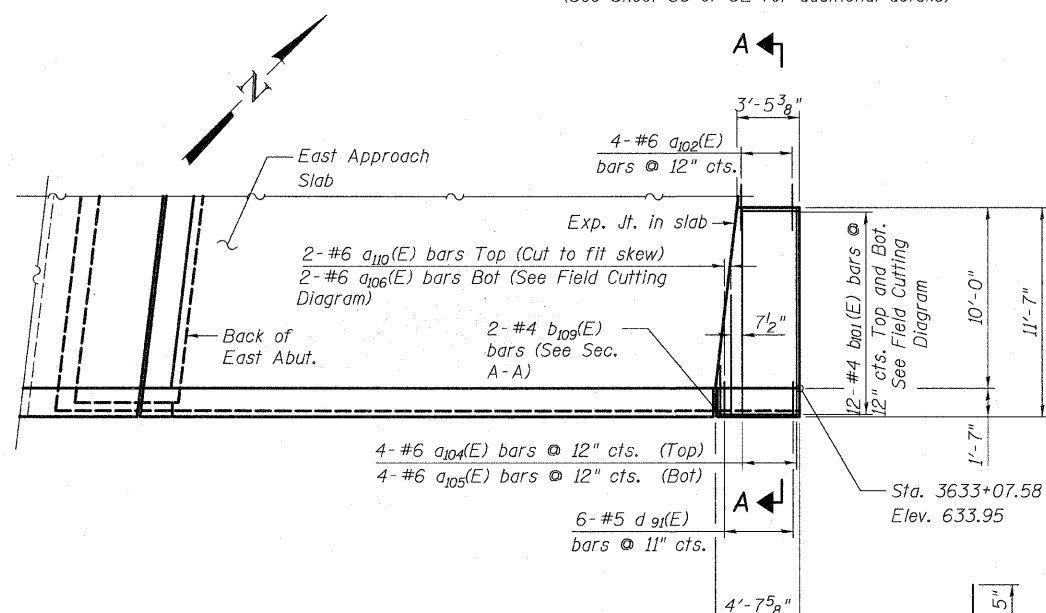


PLAN SB I-57



SECTION A-A

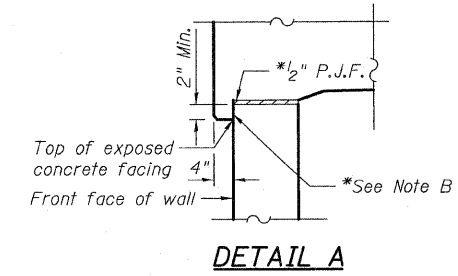
**The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.



PLAN C-D ROAD A

South Side

*Cost included with Concrete Superstructure.



DETAIL A

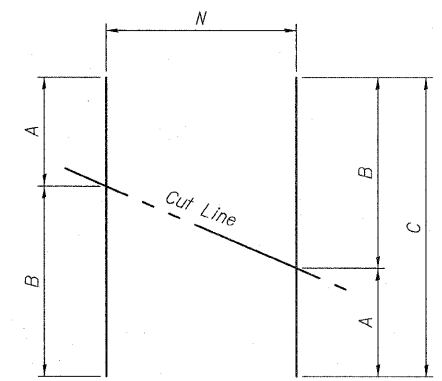
Note B:
*Bond breaker membrane on top and front of fascia wall.

BAR a110(E)

BAR a104(E)

BAR a104(E)

BAR a100(E)



FIELD CUTTING DIAGRAM

Bar	N	A	B	C
a103(E)	2	2'-0"	8'-11"	10'-11"
a106(E)	1	2'-8"	6'-7"	9'-3"
b100(E)	14	4'-8"	6'-1"	10'-9"
b101(E)	12	3'-2"	4'-4"	7'-6"

Order bars full length. Cut as shown and use remainder of bars in opposite face

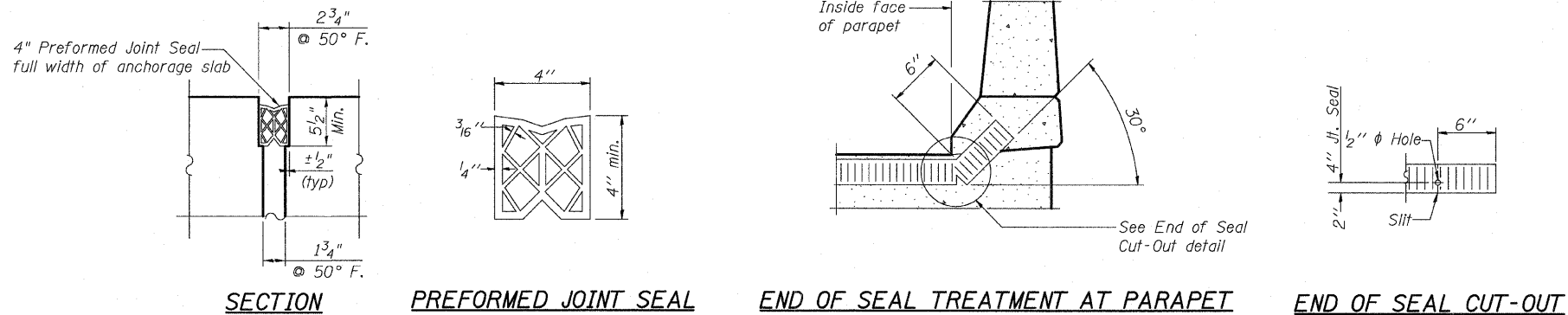
EAST ANCHORAGE SLAB DETAILS

S.N. 016-1252

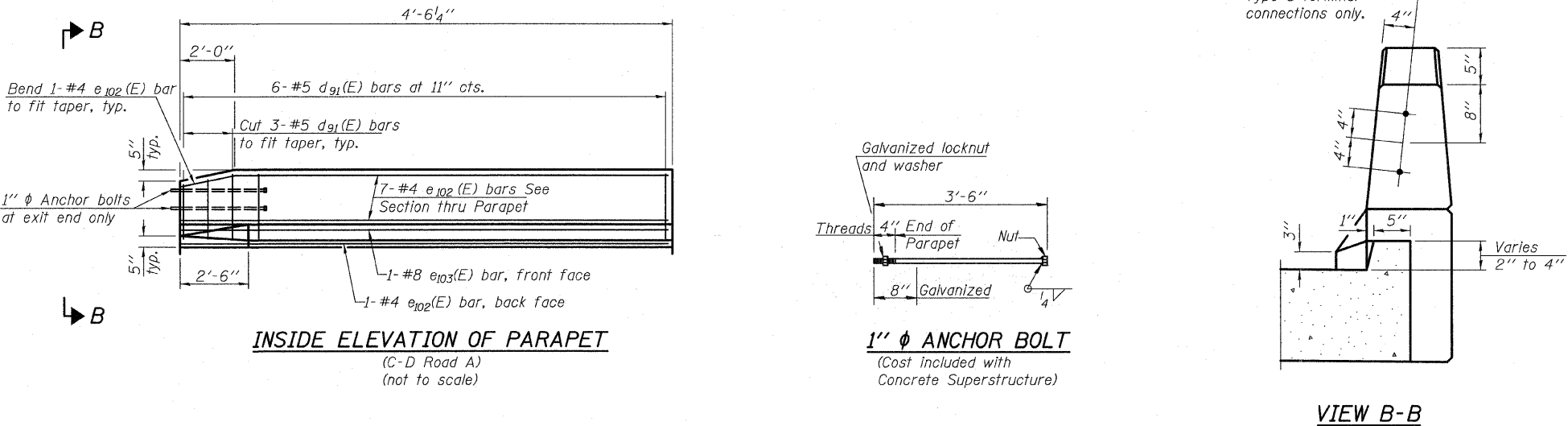
TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AD,LS	NAME	57	1414.2B	COOK	516	348
	DRAWN - DY,EI	DATE	62 SHEETS	CONTRACT NO. 60J27			
	CHECKED - LS,SP,PDF		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
DATE - 03/18/10							

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DETAIL - EXPANSION JOINT IN SLAB



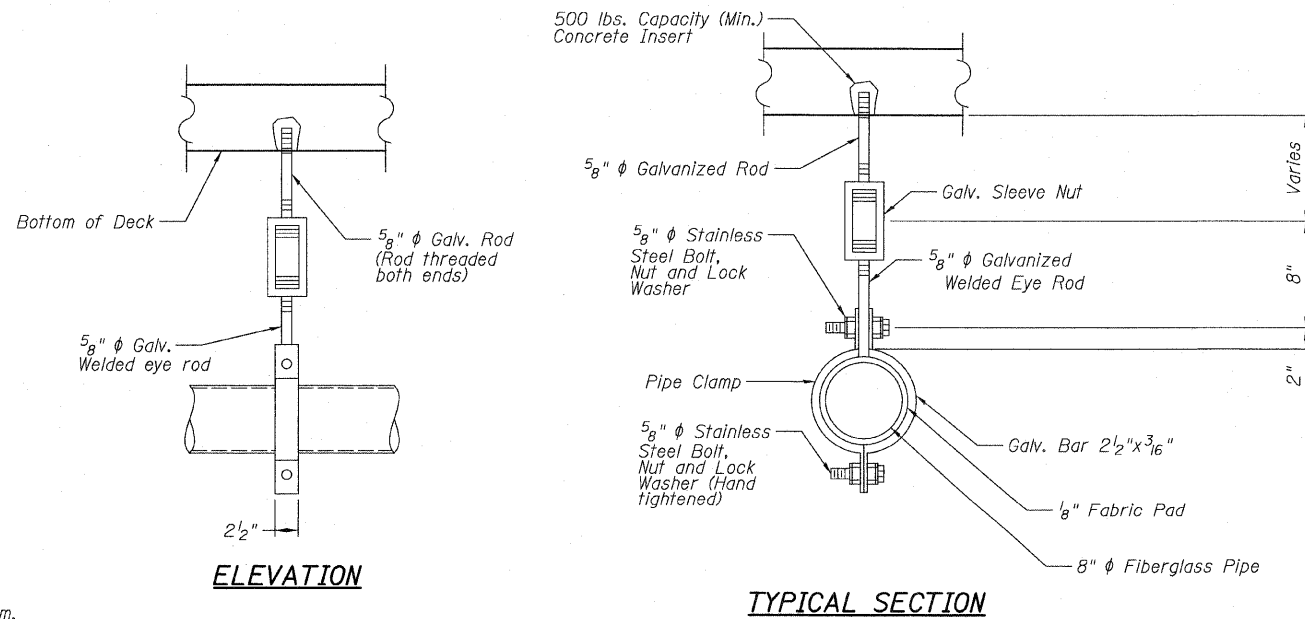
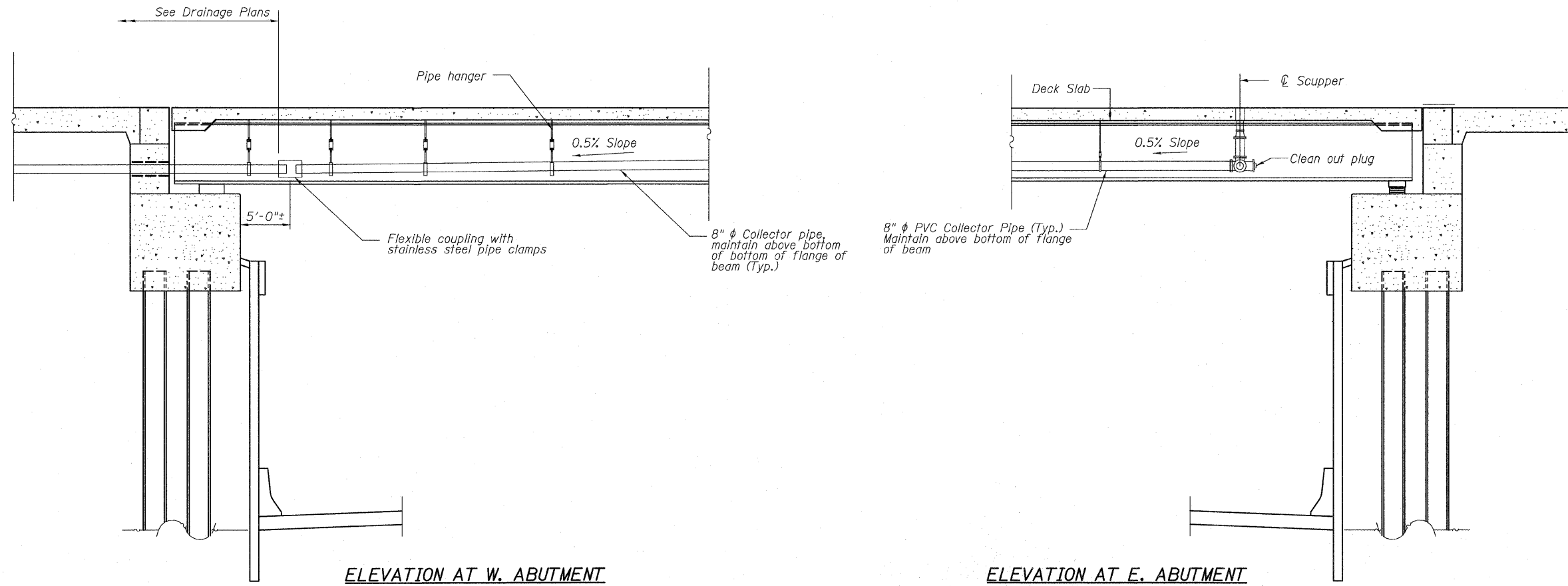
DETAIL - TYPE 5 TERMINAL CONNECTION
(Type 5 Terminals be installed in future contract)

ANCHORAGE SLAB DETAILS
S.N. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 36	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AD,LS	NAME	DATE		57	1414.2B	COOK	516	349	
	DRAWN - DY,EI				CONTRACT NO. 60J27					
	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTES:

1. See sheets 17 thru 19 for location of scuppers.
2. See special provisions for additional information.
3. Contractor to provide shop drawings for drainage system.

PIPE HANGER DETAIL

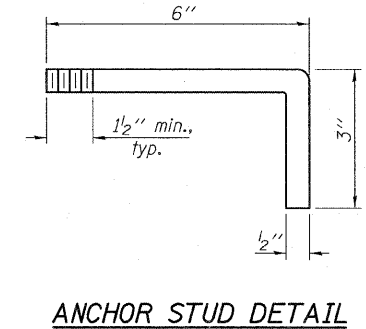
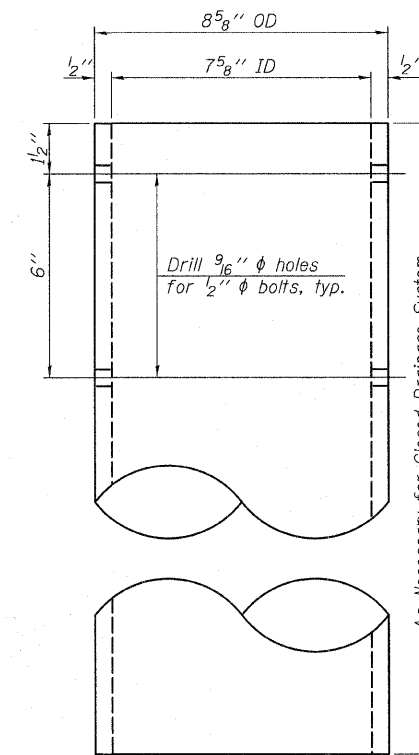
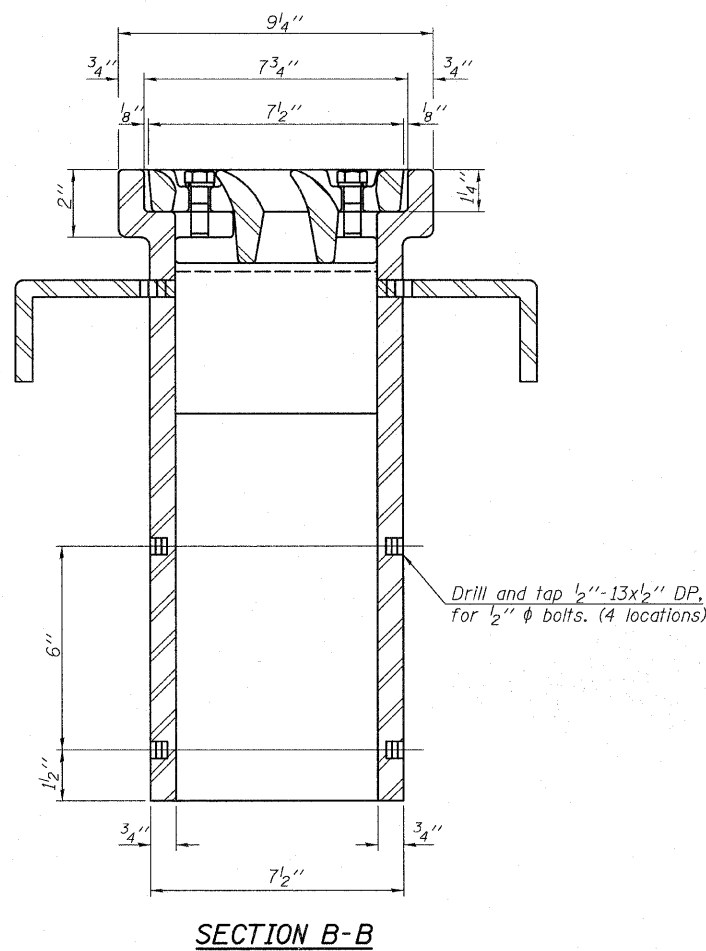
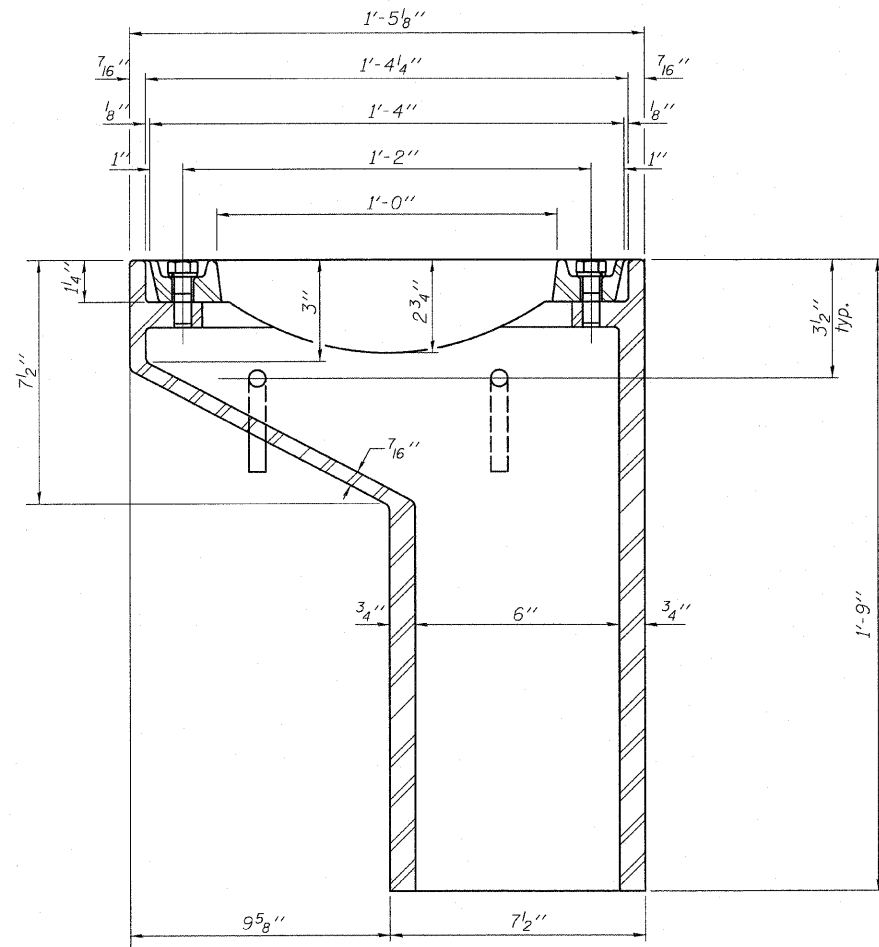
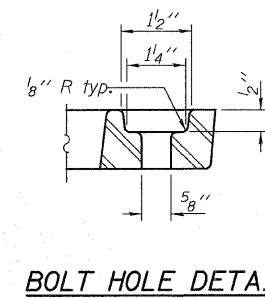
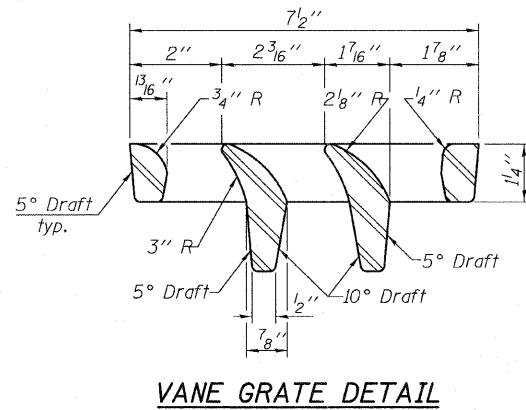
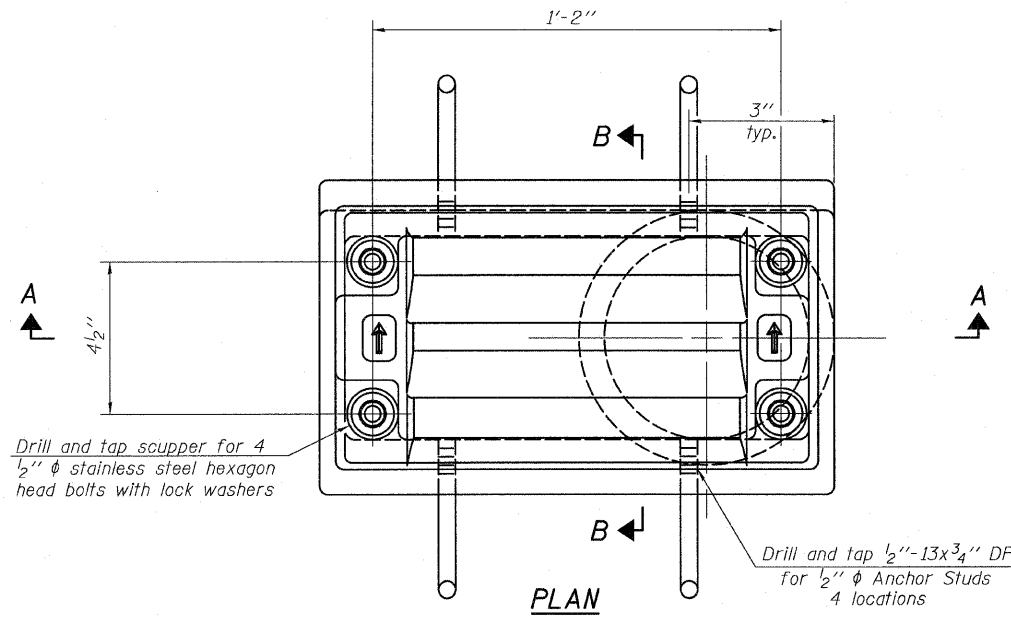
DRAINAGE DETAILS
S.N. 016-1252

TYLIN INTERNATIONAL

DESIGNED	-	DY	REVISIONS	
CHECKED	-	AD,LS	NAME	DATE
DRAWN	-	DY,EI		
CHECKED	-	LS,SP,PDF		
DATE	-	03/18/10		

SHEET NO. 37	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	350
62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	6

DRAINAGE SCUPPER, DS-11
STRUCTURE NO. 016-1252

DS-11 11-1-09

TYLIN INTERNATIONAL

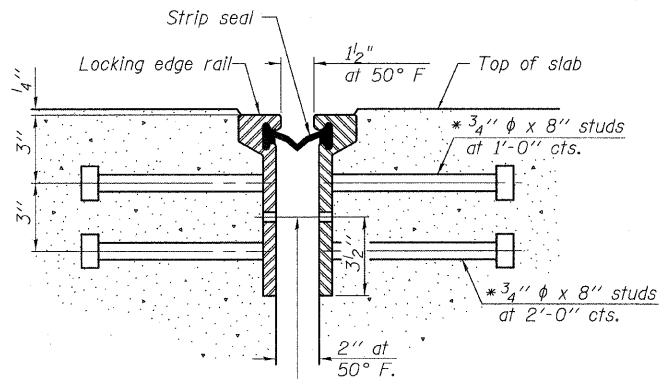
DESIGNED -	DY	REVISIONS	
CHECKED -	AD,LS	NAME	DATE
DRAWN -	DY,EI		
CHECKED -	LS,SP,PDF		
DATE -	03/18/10		

SHEET NO. 38	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				62 SHEETS	57
			CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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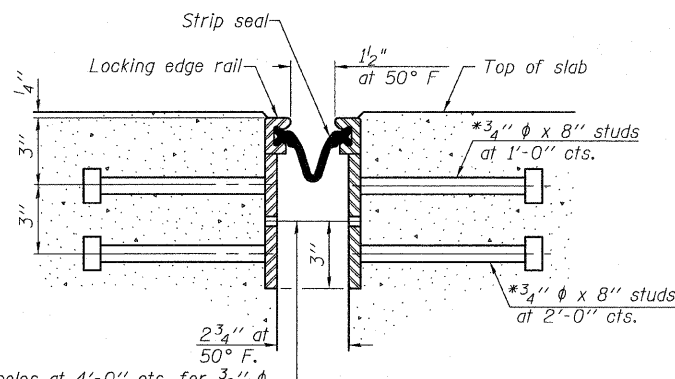
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



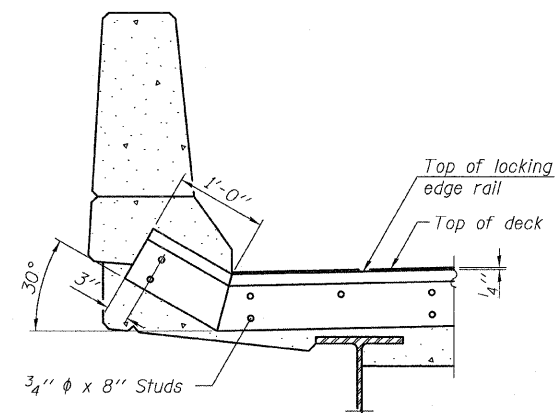
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU ROLLED RAIL JOINT



7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

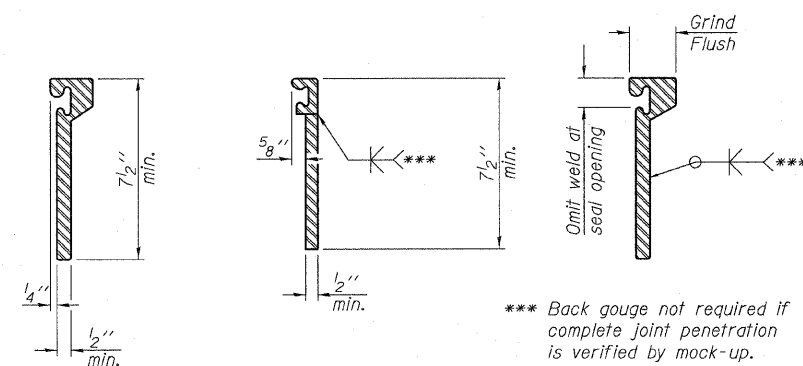
SECTION THRU WELDED RAIL JOINT



AT PARAPET
See Section A-A for end treatment of skews > 30°.

TYPICAL END TREATMENTS

Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.
The manufacturer's recommended installation methods shall be followed.
The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.
The expansion joint shall not be continuous across the open joint that separates each bound of traffic. Each Abutment location will have individual expansion joints for C-D Road A, NB I-57 and SB I-57 with end treatments at each parapet as shown on this sheet.

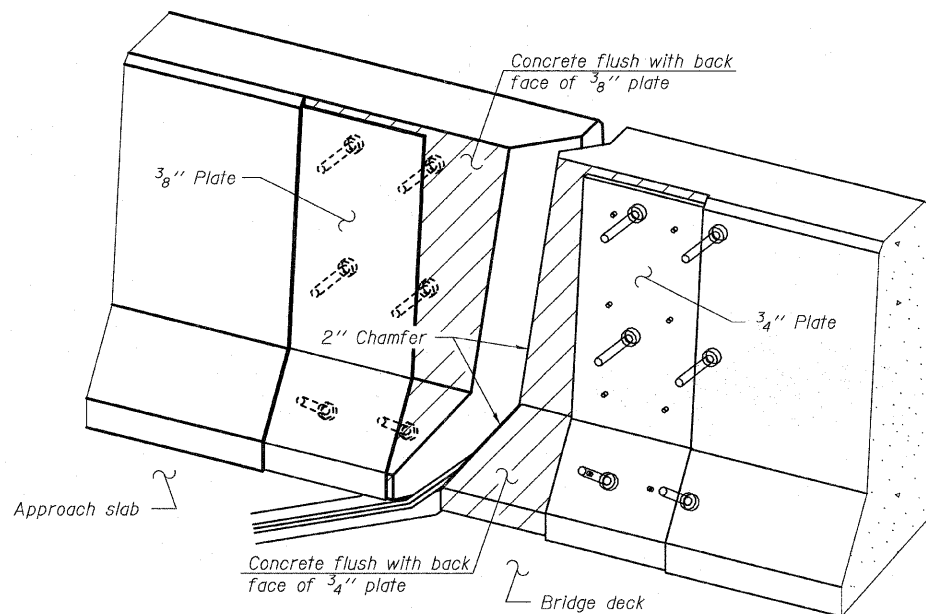


ROLLED EXTRUDED RAIL

WELDED RAIL

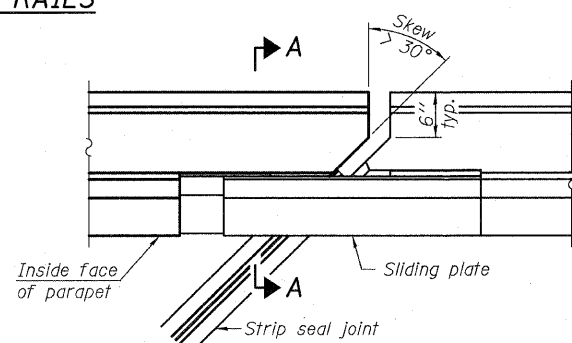
LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.
Rolled rail shown, welded rail similar.

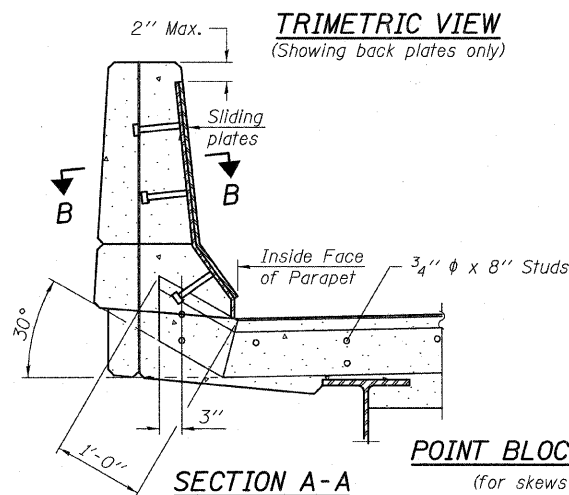


TRIMETRIC VIEW
(Showing back plates only)

LOCKING EDGE RAILS

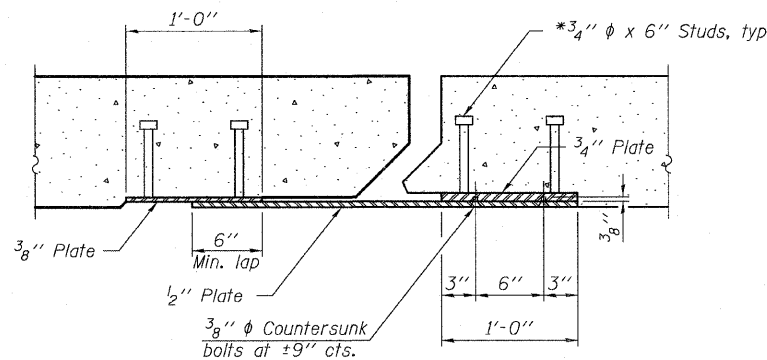


PLAN



SECTION A-A

POINT BLOCK DETAILS
(for skews > 30°)



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	385.0

**PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 016-1252**

TYLIN INTERNATIONAL

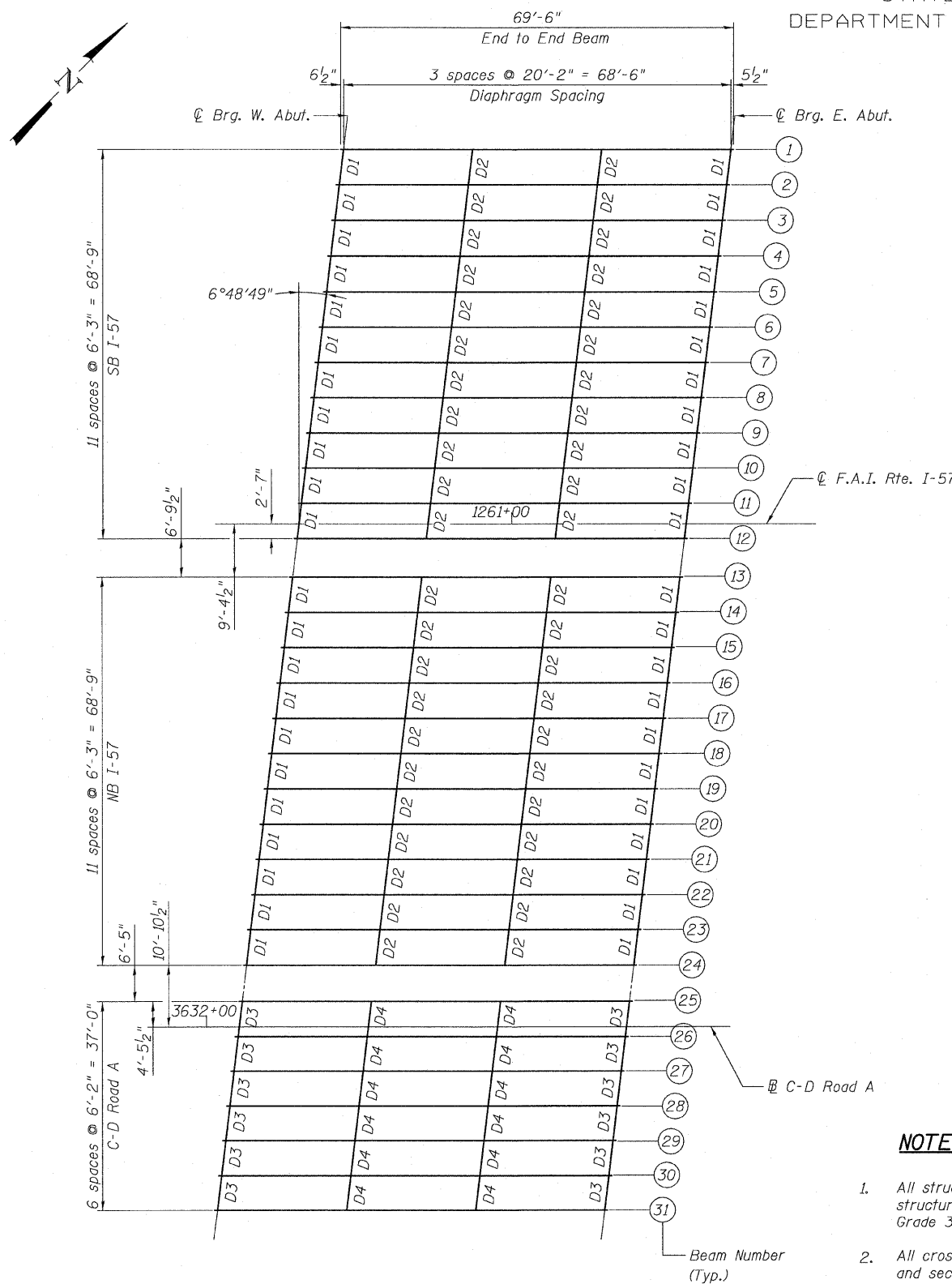
EJ-SSJ 11-1-09

DESIGNED	DY	REVISIONS	
CHECKED	AD,LS	NAME	DATE
DRAWN	DY,EI		
CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO. 39	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 352
62 SHEETS	FED. ROAD DIST. NO. 1 ILLINOIS		CONTRACT NO. 60J27		
FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

INTERIOR BEAM REACTION TABLE

	Abutment
R _{DC1}	(k) 28.5
R _{DC2}	(k) 4.4
R _{DW}	(k) 10.6
R _{ℓ + IM}	(k) 73.1
R _{Total}	(k) 116.6

(Controlling case are beams over C-D Road A)

TOP OF BEAM ELEVATIONS
For Fabrication Only.

Beam	℄ Brg. W. Abut	℄ Brg. E. Abut
1	634.04	633.61
2	634.17	633.75
3	634.30	633.87
4	634.40	633.98
5	634.40	633.98
6	634.32	633.90
7	634.21	633.79
8	634.08	633.66
9	633.95	633.54
10	633.83	633.41
11	633.70	633.29
12	633.58	633.16
13	633.72	633.30
14	633.86	633.45
15	634.00	633.58
16	634.13	633.72
17	634.25	633.84
18	634.36	633.95
19	634.36	633.95
20	634.27	633.86
21	634.16	633.75
22	634.03	633.63
23	633.91	633.50
24	633.78	633.38
25	634.19	633.78
26	634.31	633.90
27	634.41	634.00
28	634.41	634.00
29	634.33	633.93
30	634.25	633.85
31	634.12	633.72

INTERIOR BEAM MOMENT TABLE

	0.5 Sp.
I _s	(in ⁴) 9,040
I _c (n)	(in ⁴) 22,430
I _c (3n)	(in ⁴) 16,488
S _s	(in ³) 504
S _c (n)	(in ³) 715
S _c (3n)	(in ³) 647
DC1	(k/ft) 0.809
M _{DC1}	(k) 475
DC2	(k/ft) 0.128
M _{DC2}	(k) 75
DW	(k/ft) 0.308
M _{DW}	(k) 181
M _{ℓ + IM}	(k) 922
M _u (Strength I)	(k) 2,573
φ _r M _n	(k) 3,614
f _s DC1	(ksi) 11.3
f _s DC2	(ksi) 1.4
f _s DW	(ksi) 3.4
f _s 1.3(ℓ+IM)	(ksi) 20.1
f _s (Service II)	(ksi) 35.8
V _r	(k) 23.3

(Controlling case are beams over C-D Road A)

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

I_c(n), S_c(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads (in⁴ and in³).

I_c(3n), S_c(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in⁴ and in³).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{ℓ + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M (Strength I): Factored design moment (kip-ft.).
1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{ℓ + IM}

φ_rM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

φ_rM_{nc}: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).

f_s (Service II): Sum of stresses as computed from the moments below (ksi).
M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{ℓ + IM}

V_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

NOTES

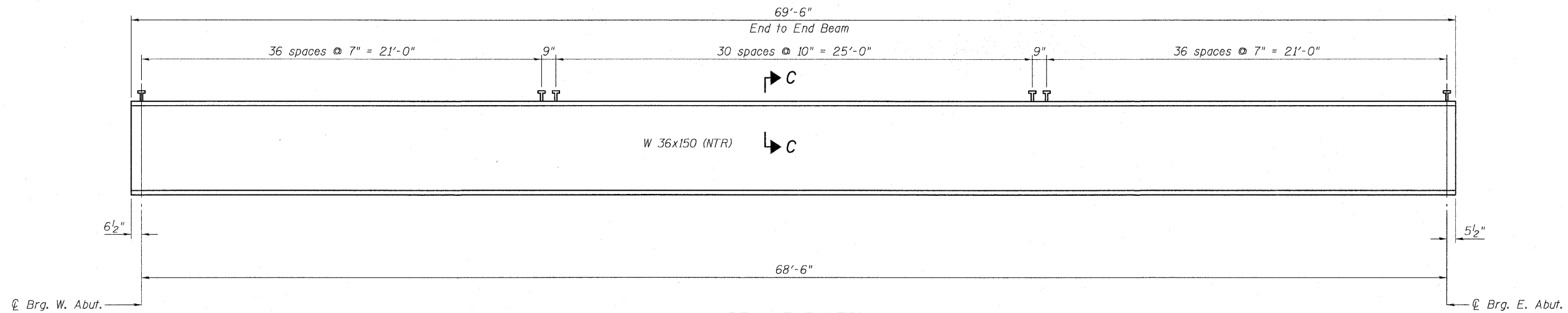
- All structural steel for beams shall be AASHTO M 270 Grade 50. All other structural steel shall conform to the requirements of AASHTO M270, Grade 36.
- All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

FRAMING PLAN
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 40	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 353
	CHECKED - AD,LS	NAME	DATE						
	DRAWN - DY,EI								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
				62 SHEETS	CONTRACT NO. 60J27				
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

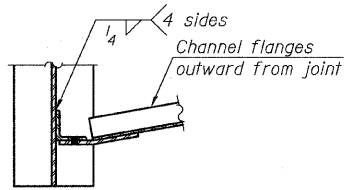
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

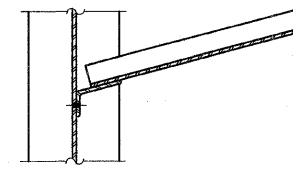


BEAM ELEVATION

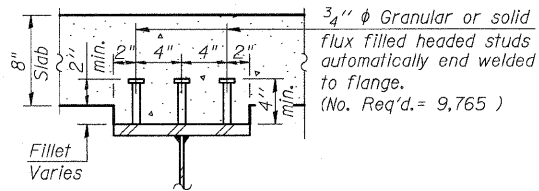
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



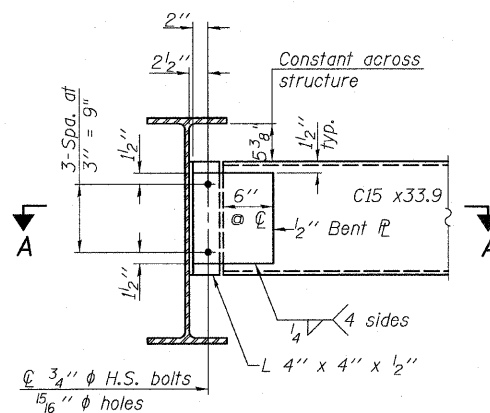
SECTION A-A



SECTION B-B

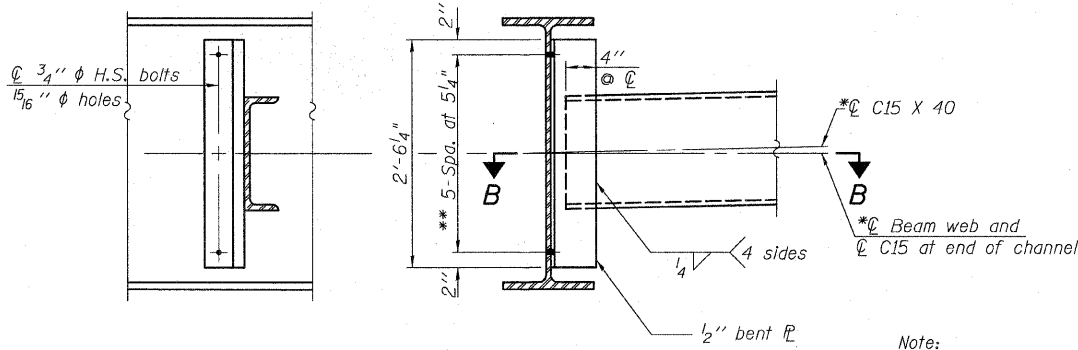


SECTION C-C



END DIAPHRAGM D1,D3

(44 - D1 required)
(12 - D3 required)
Note:
Two hardened washers required for each set of oversized holes.



INTERIOR DIAPHRAGM D2,D4

(44 - D2 required)
(12 - D4 required)

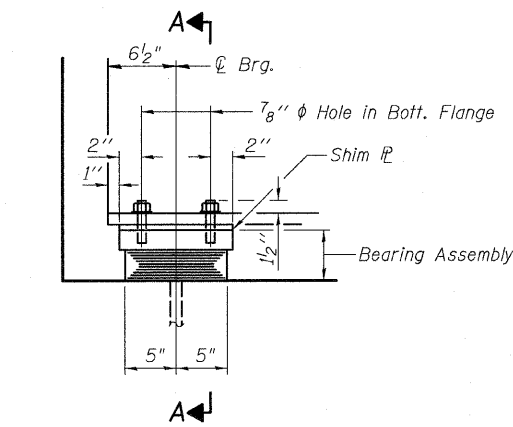
Note:
Two hardened washers required for each set of oversized holes.
*Alternate channels (C15 X 50) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
The alternate, if utilized, shall be provided at no additional cost to the Department.
**3/4" HS bolts, 5/16" holes

STRUCTURAL STEEL DETAILS
SN. 016-1252

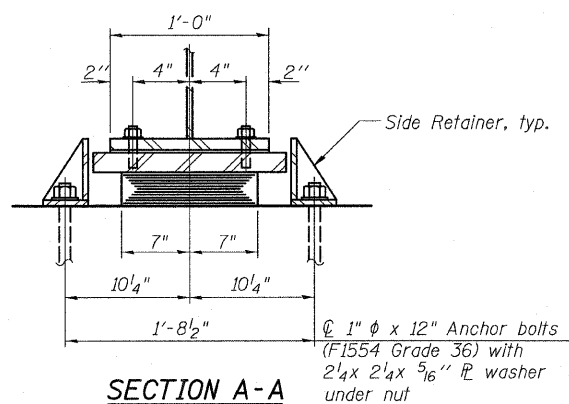
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	DRAWN - DY,EI				CONTRACT NO. 60J27					
	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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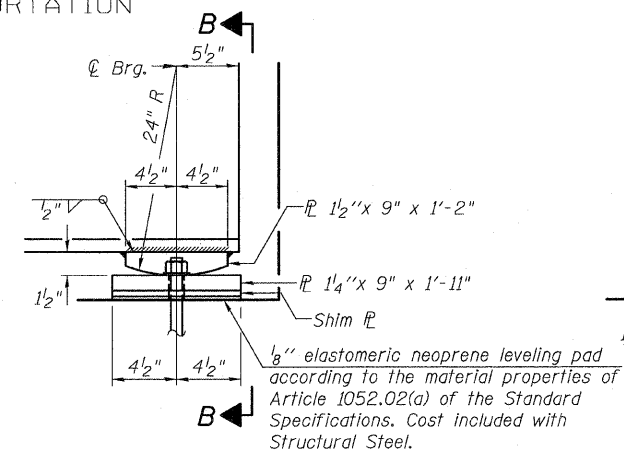
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



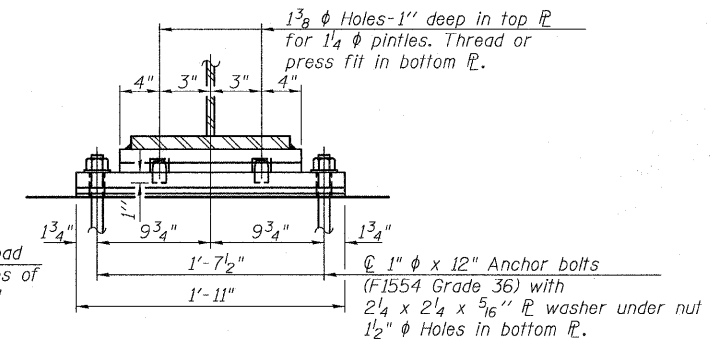
ELEVATION AT W. ABUT.



SECTION A-A

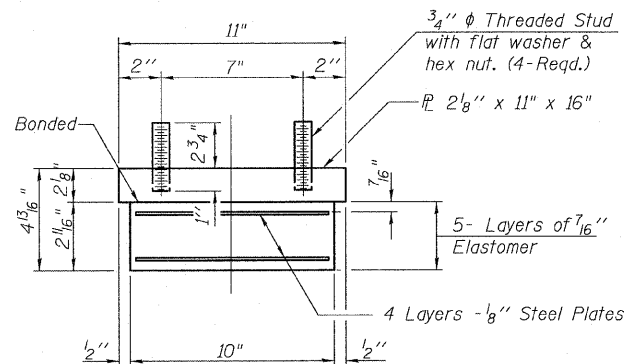


ELEVATION AT E. ABUT.



SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.

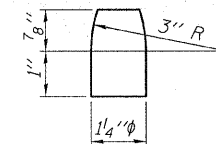


BEARING ASSEMBLY

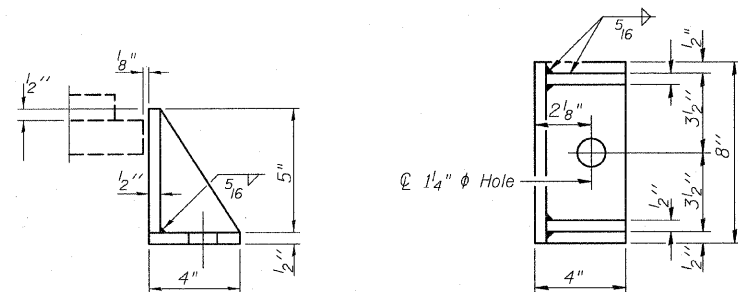
Note:
Shim plates shall not be placed under Bearing Assembly.

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

FIXED BEARING



PINTLE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	31
Anchor Bolts, 1"	Each	124

**BEARING DETAILS
STRUCTURE NO. 016-1252**

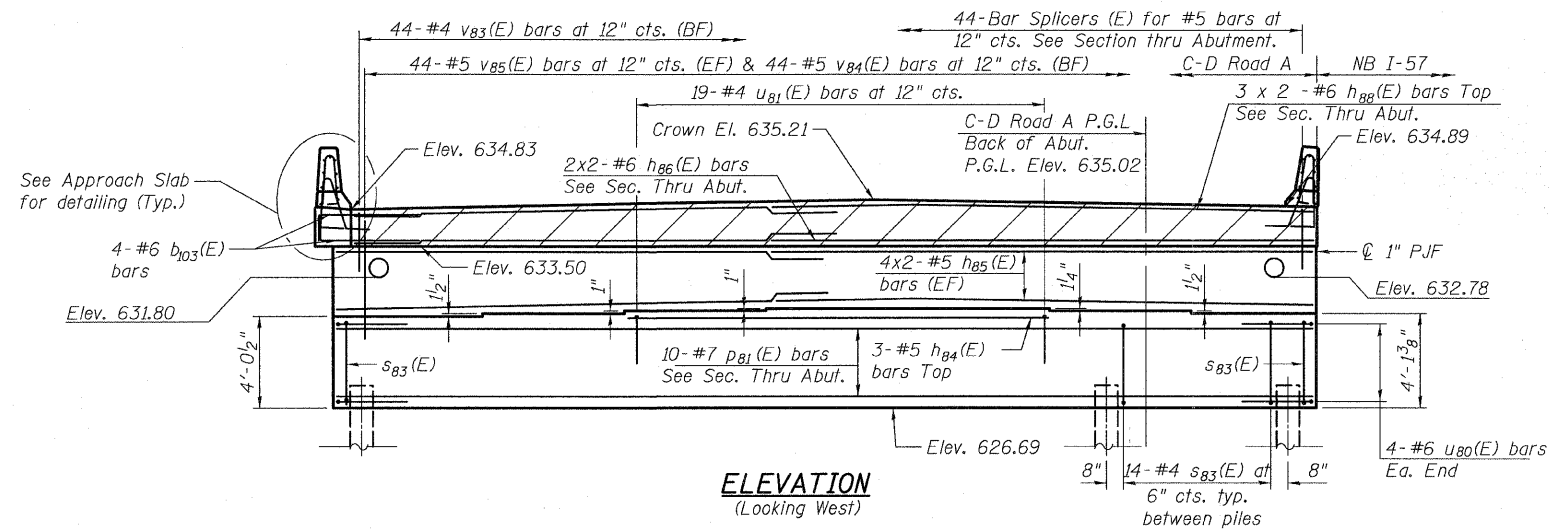
I-2E-1

11-1-09

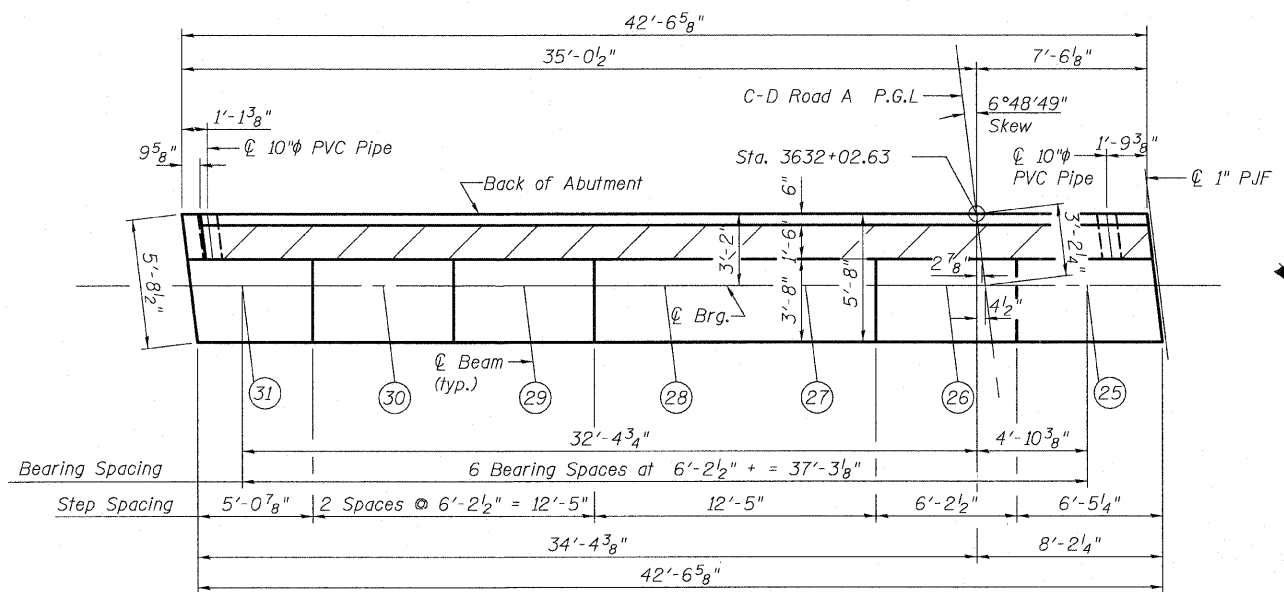
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	DRAWN - DY,EI							CONTRACT NO. 60J27	
	CHECKED - LS,SP,PDF							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
	DATE - 03/18/10								

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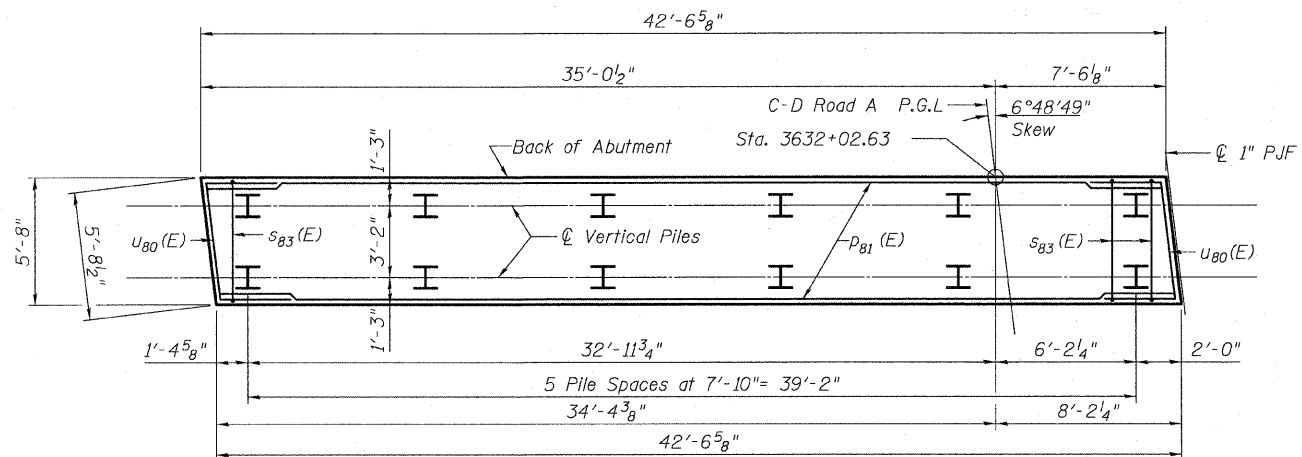
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
(Looking West)



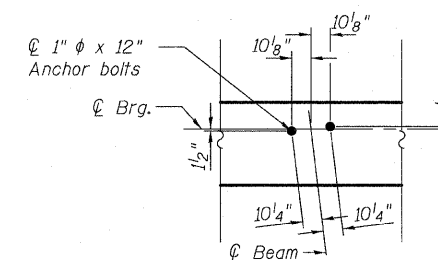
TOP VIEW



PLAN-PILE CAP

**BRIDGE SEAT
ELEVATIONS**

Beam	Seat Elevation
25	630.80
26	630.92
27	631.02
28	631.02
29	630.94
30	630.86
31	630.73



**ANCHOR BOLT
LAYOUT**

NOTES:

See Sheet 46 of 62 for abutment section, pile data and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Bars indicated thus 20 x 3- #7 etc. indicates 20 lines of bars with 3 lengths per line.
All edges shall have standard 3/4" chamfers except as noted.
Piles shall be driven prior to placement of the reinforced select fill and coated with coal tar epoxy from the bottom of the select fill to 1" above the base of the abutment. The cost of the coal tar epoxy coating shall be included with the cost of the Furnishing Piles.

**MINIMUM BAR
LAPS**

Bar	Lap	Notes
#4	2'-7"	
#5	3'-3"	
#6	3'-10"	
#6	4'-5" (Top)	for h88(E)
#7	5'-2"	
#7	5'-10" (Top)	

WEST ABUTMENT - 1
S.N. 016-1252

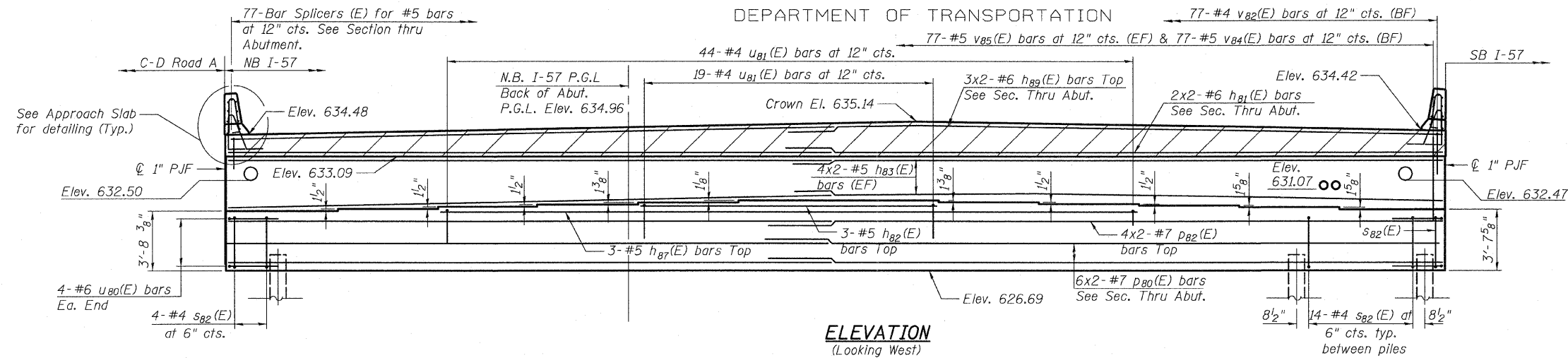
TYLIN INTERNATIONAL

DESIGNED	REVISIONS
- DY	NAME
CHECKED - AD,LS	DATE
DRAWN - DY,EI	
CHECKED - LS,SP,PDF	
DATE - 03/18/10	

SHEET NO.	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
43	57	1414.2B	COOK	516	356
62 SHEETS			CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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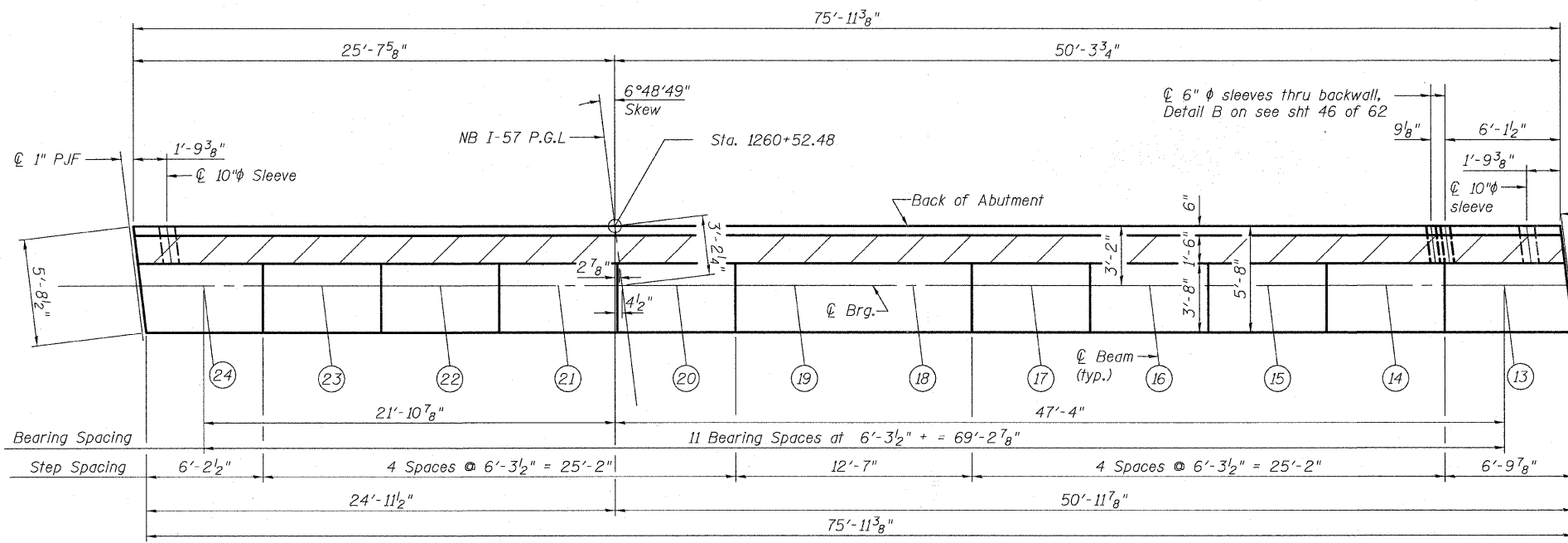
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



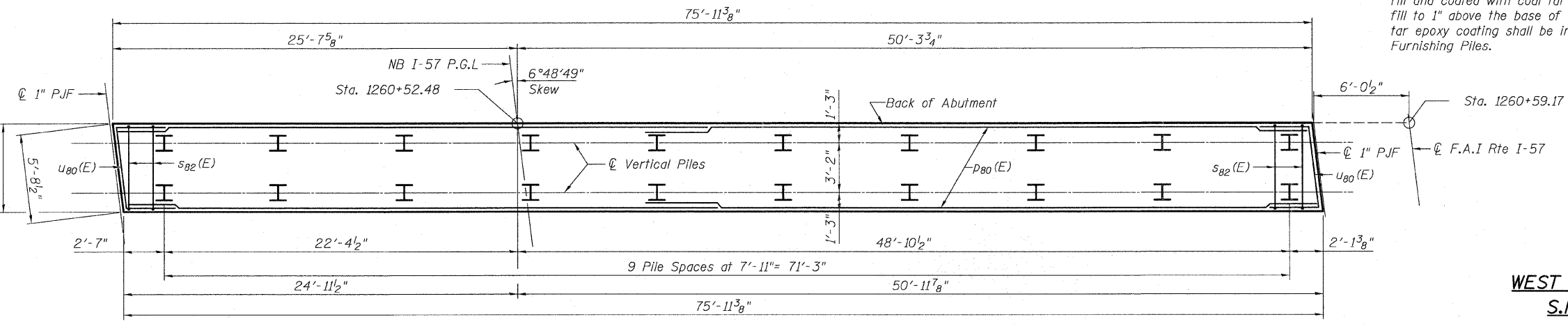
ELEVATION
(Looking West)

**BRIDGE SEAT
ELEVATIONS**

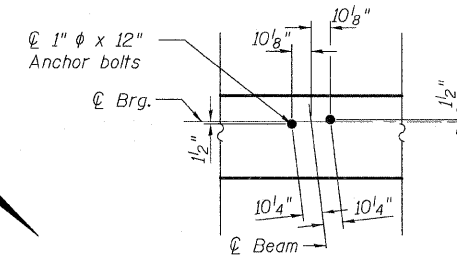
Beam	Seat Elevation
13	630.33
14	630.47
15	630.61
16	630.74
17	630.86
18	630.97
19	630.97
20	630.88
21	630.77
22	630.65
23	630.52
24	630.39



TOP VIEW



PLAN-PILE CAP



**ANCHOR BOLT
LAYOUT**

NOTES:

See Sheet 46 of 62 for abutment section, pile data and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Four steps monolithically with cap.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Bars indicated thus 20 x 3- #7 etc. indicates 20 lines of bars with 3 lengths per line.
All edges shall have standard 3/4\"/>

**MINIMUM BAR
LAPS**

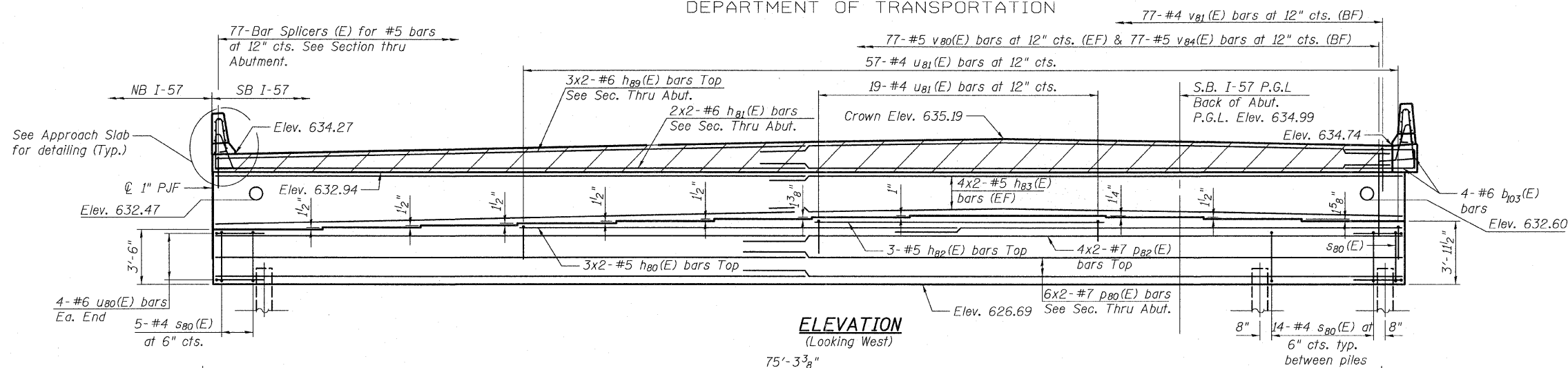
Bar	Lap	Notes
#4	2'-7"	
#5	3'-3"	
#6	3'-10"	
#6	4'-5" (Top)	for h89(E)
#7	5'-2"	
#7	5'-10" (Top)	for p82(E)

**WEST ABUTMENT - 2
S.N. 016-1252**

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 44	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

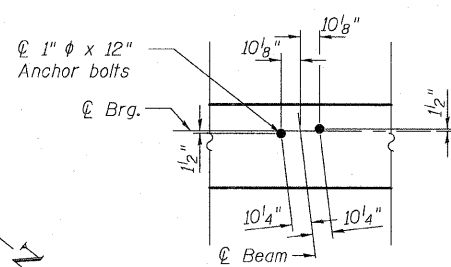
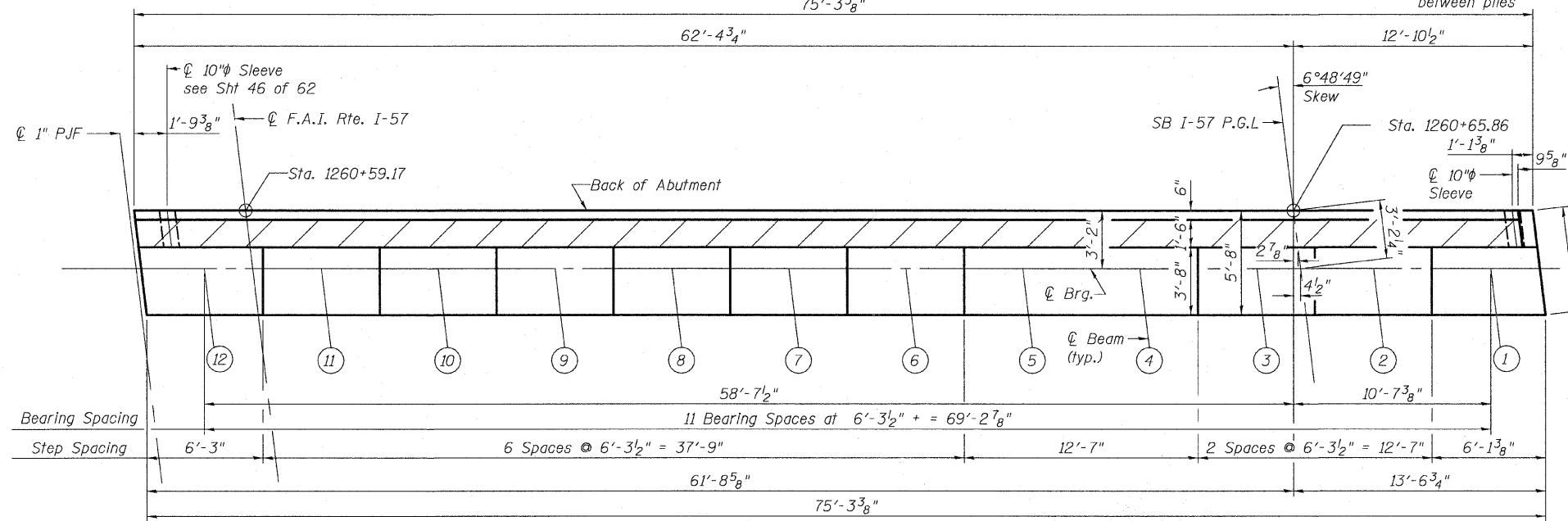
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



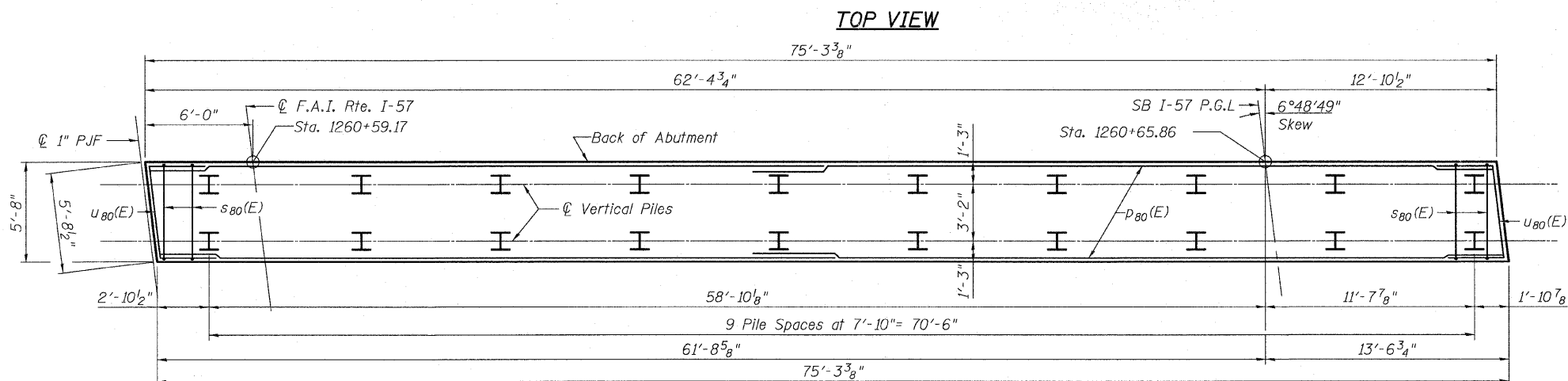
**BRIDGE SEAT
ELEVATIONS**

Beam	Seat Elevation
1	630.65
2	630.79
3	630.91
4	631.01
5	631.01
6	630.93
7	630.82
8	630.69
9	630.57
10	630.44
11	630.31
12	630.19



**ANCHOR BOLT
LAYOUT**

NOTES:
See Sheet 46 of 62 for abutment section, pile data and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Piers monolithically with cap.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Bars indicated thus 20 x 3- #7 etc. indicates 20 lines of bars with 3 lengths per line.
All edges shall have standard 3/4\"/>



**MINIMUM BAR
LAPS**

Bar	Lap	Notes
#4	2'-7"	
#5	3'-3"	
#6	3'-10"	
#6	4'-5" (Top)	for h89(E)
#7	5'-2"	
#7	5'-10" (Top)	for p82(E)

**WEST ABUTMENT - 3
S.N. 016-1252**

TYLIN INTERNATIONAL

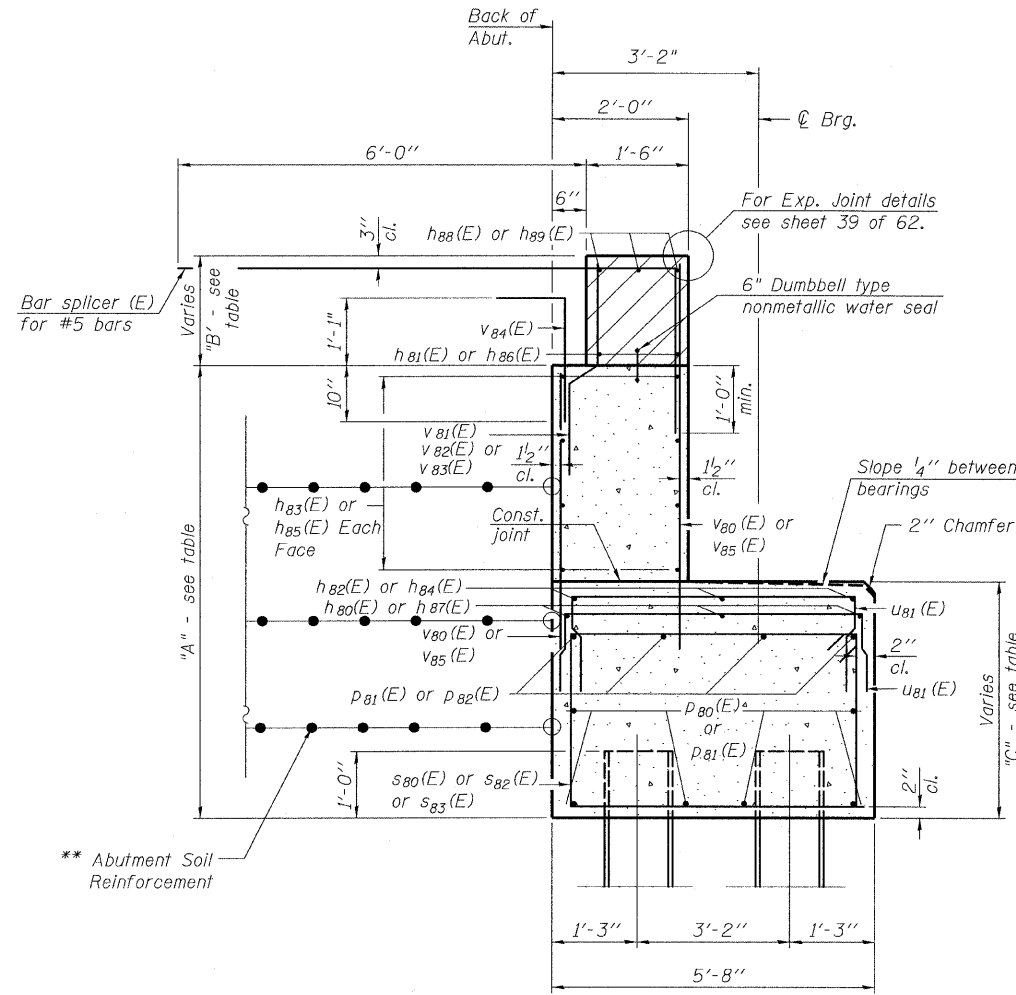
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CHECKED	AD,LS	NAME	DATE
DRAWN	DY,EI		
CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO. 45 62 SHEETS	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 358
	FED. ROAD DIST. NO. 1 ILLINOIS			CONTRACT NO. 60J27	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

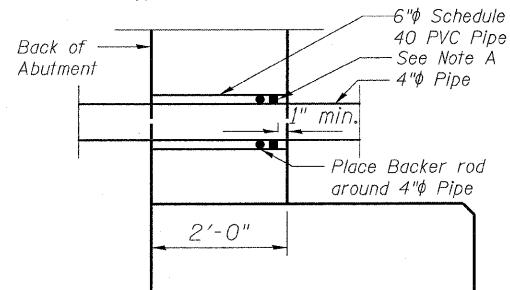
WEST ABUTMENT
BILL OF MATERIAL



SEC. THRU ABUT.

Note A:
Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25 rod.

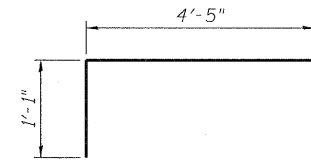
** The M.S.E. wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 2 kips/ft. Contractor shall coordinate abutment construction with construction of MSE retaining wall.



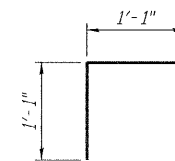
DETAIL B

Shown for 6" pipe.
Use 10" Schedule 40 PVC pipe for 8" drainage pipe.

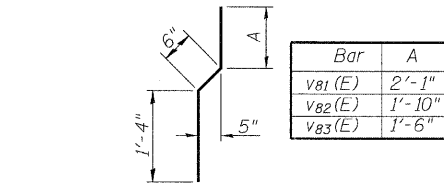
Note: Backer Rod, 6" PVC Pipe & sealant shall be included in the cost of Concrete Structures.



BAR b103 (E)



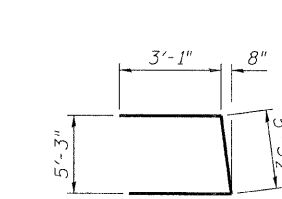
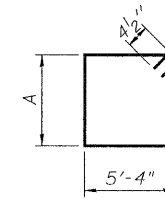
BAR v84 (E)



BAR v81 (E), v82 (E) & v83 (E)

Bar	A
s80 (E)	3'-2"
s82 (E)	3'-5"
s83 (E)	3'-9"

BARS s80 (E), s82 (E) & s83 (E) BAR u80 (E)



BARS u81 (E)

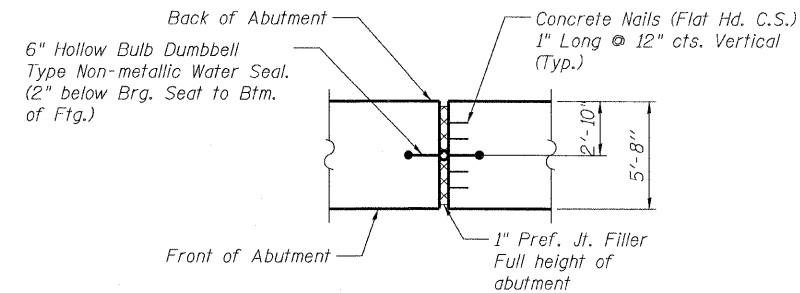
Location	A	B	C
C-D Road A	6'-9 ³ / ₄ "	1'-4" to 1'-8 ¹ / ₂ "	4'-0 ⁵ / ₈ " to 4'-4"
NB I-57	6'-4 ³ / ₄ "	1'-4" to 2'-0 ⁵ / ₈ "	3'-7 ⁵ / ₈ " to 4'-3 ³ / ₈ "
SB I-57	6'-3"	1'-4" to 2'-3"	3'-6" to 4'-4"

Bar	No.	Size	Length	Shape
b103 (E)	8	#6	6'-4"	Γ
h80 (E)	6	#5	29'-9"	—
h81 (E)	8	#6	39'-9"	—
h82 (E)	6	#5	18'-6"	—
h83 (E)	32	#5	39'-10"	—
h84 (E)	3	#5	18'-2"	—
h85 (E)	16	#5	22'-9"	—
h86 (E)	4	#6	22'-8"	—
h87 (E)	3	#5	43'-7"	—
h88 (E)	6	#6	23'-9"	—
h89 (E)	12	#6	40'-1"	—
p80 (E)	24	#7	40'-6"	—
p81 (E)	10	#7	42'-3"	—
p82 (E)	16	#7	40'-10"	—
s80 (E)	132	#4	17'-9"	□
s82 (E)	131	#4	18'-3"	□
s83 (E)	72	#4	18'-11"	□
u80 (E)	24	#6	8'-5"	U
u81 (E)	158	#4	7'-4"	U
v80 (E)	154	#5	5'-9"	—
v81 (E)	77	#4	3'-11"	—
v82 (E)	77	#4	3'-8"	—
v83 (E)	44	#4	3'-4"	—
v84 (E)	198	#5	3'-10"	—
v85 (E)	242	#5	5'-11"	—
Structure Excavation		Cu. Yd.	4,010	
Concrete Structures		Cu. Yd.	206.1	
Reinforcement Bars, Epoxy Coated		Pound	16,870	
Furnishing Steel Piles, HP12x53		Foot	2,040	⚠
Pile Shoes		Each	52	
Driving Piles		Foot	2,040	⚠
Test Pile Steel HP12x53		Each	1	
Concrete Sealer		Sq. Ft.	1,650	

For details of Bar Splicers, see sheet 55 of 62.
For details of piles, see sheet 56 of 62.

PILE DATA

Type: HP12x53 with Piles Shoes
Nominal Required Bearing: 219 kips
Factored Resistance Available: 230 kips
Est. Length: 39.7 ft
No. Production Piles: 51
No. Test Piles: 1



SECTION A-A

Cost of Water Seal included in the cost of Concrete Structures.

WEST ABUTMENT DETAILS
S.N. 016-1252

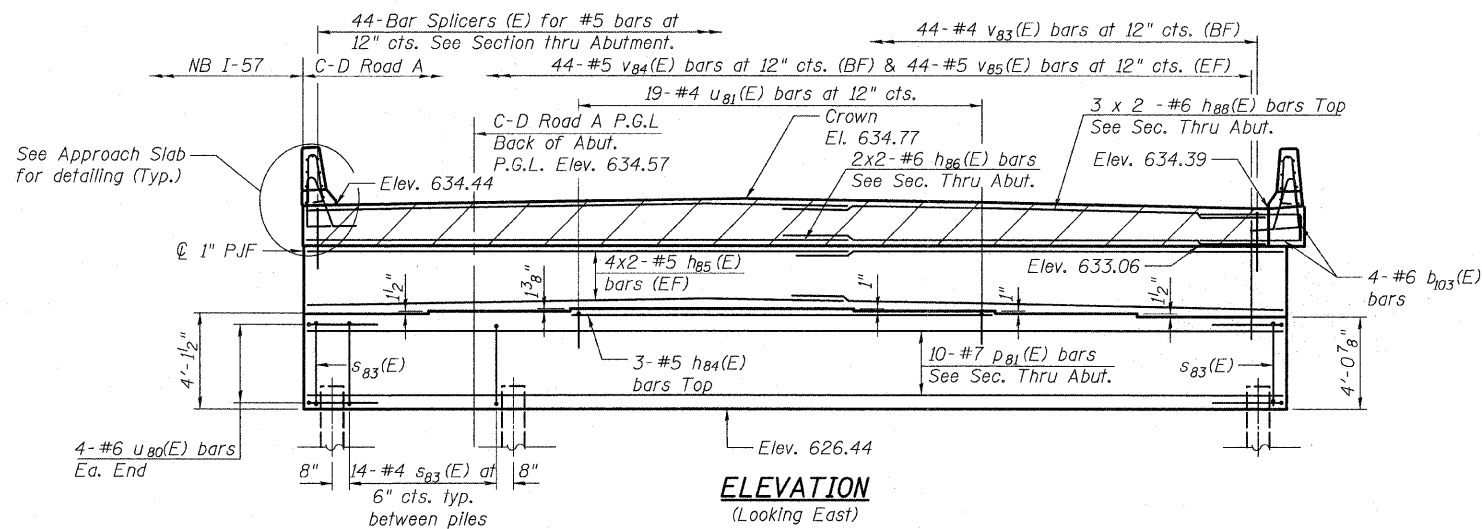
TYLIN INTERNATIONAL

DESIGNED -	DY	REVISIONS	
CHECKED -	AD,LS	NAME	DATE
DRAWN -	DY,EI		
CHECKED -	LS,SP,PDF		
DATE -	03/18/10	Δ REVISED	05/24/10

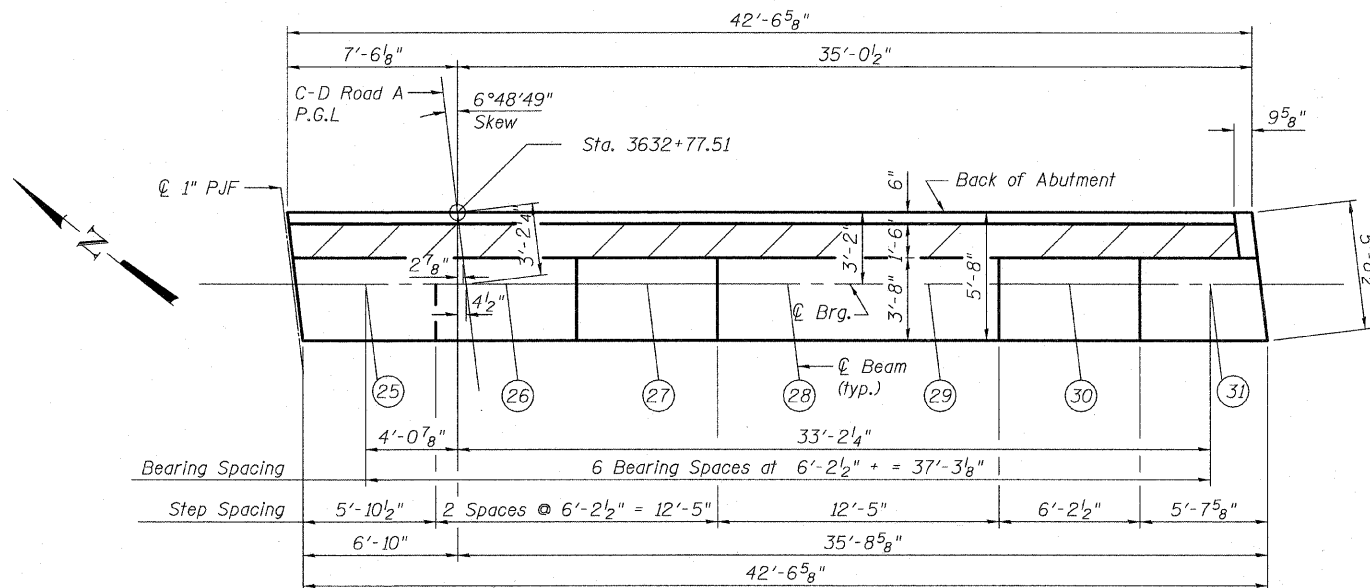
SHEET NO. 46	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
62 SHEETS	57	141A.2B	COOK	516	359
			CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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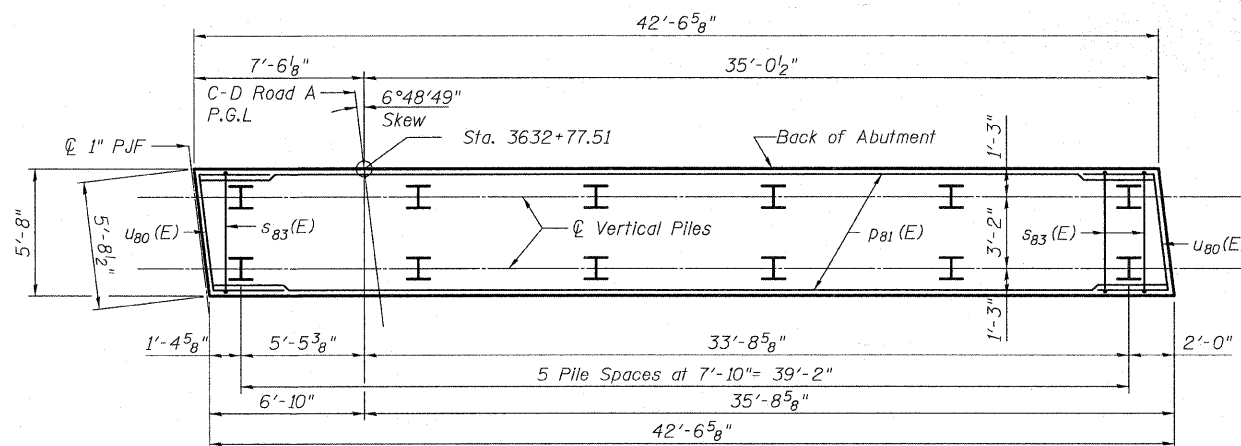
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
(Looking East)



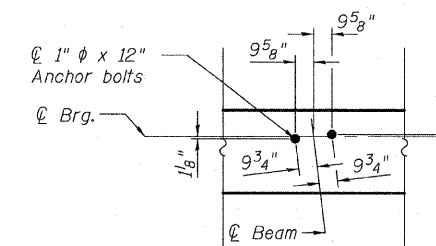
TOP VIEW



PLAN-PILE CAP

**BRIDGE SEAT
ELEVATIONS**

Beam	Seat Elevation
25	630.56
26	630.68
27	630.79
28	630.79
29	630.71
30	630.63
31	630.51



**ANCHOR BOLT
LAYOUT**

NOTES:

See Sheet 50 of 62 for abutment section, pile data and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Bars indicated thus 20 x 3- #7 etc. indicates 20 lines of bars with 3 lengths per line.
All edges shall have standard 3/4" chamfers except as noted.
Piles shall be driven prior to placement of the reinforced select fill and coated with coal tar epoxy from the bottom of the select fill to 1" above the base of the abutment. The cost of the coal tar epoxy coating shall be included with the cost of the Furnishing Piles.

**MINIMUM BAR
LAPS**

Bar	Lap	Notes
#4	2'-7"	
#5	3'-3"	
#6	3'-10"	
#6	4'-5" (Top)	for h88(E)
#7	5'-2"	
#7	5'-10" (Top)	

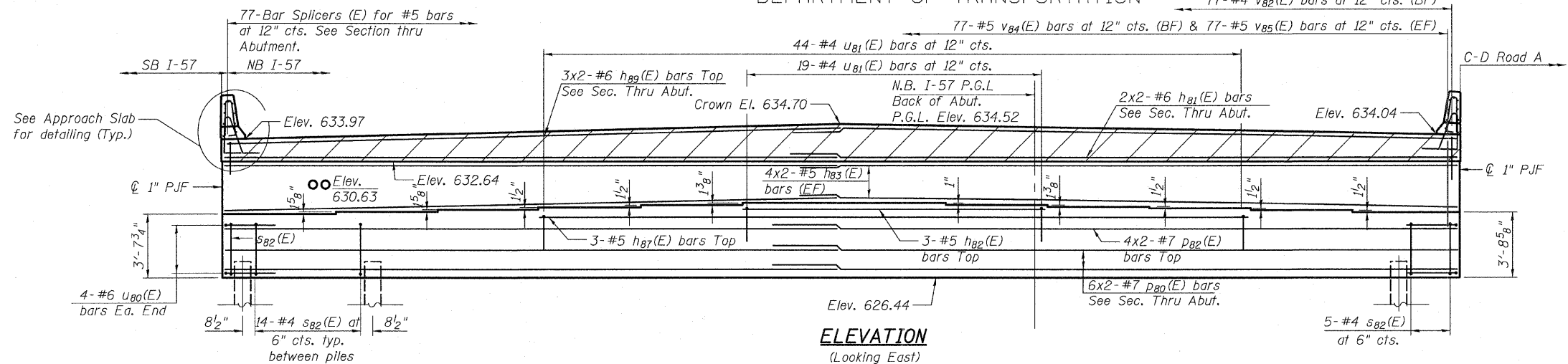
**EAST ABUTMENT - 1
S.N. 016-1252**

TYLIN INTERNATIONAL

DESIGNED	DY	REVISIONS	
CHECKED	AD,LS	NAME	DATE
DRAWN	DY,EI		
CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO. 47	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	360
62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

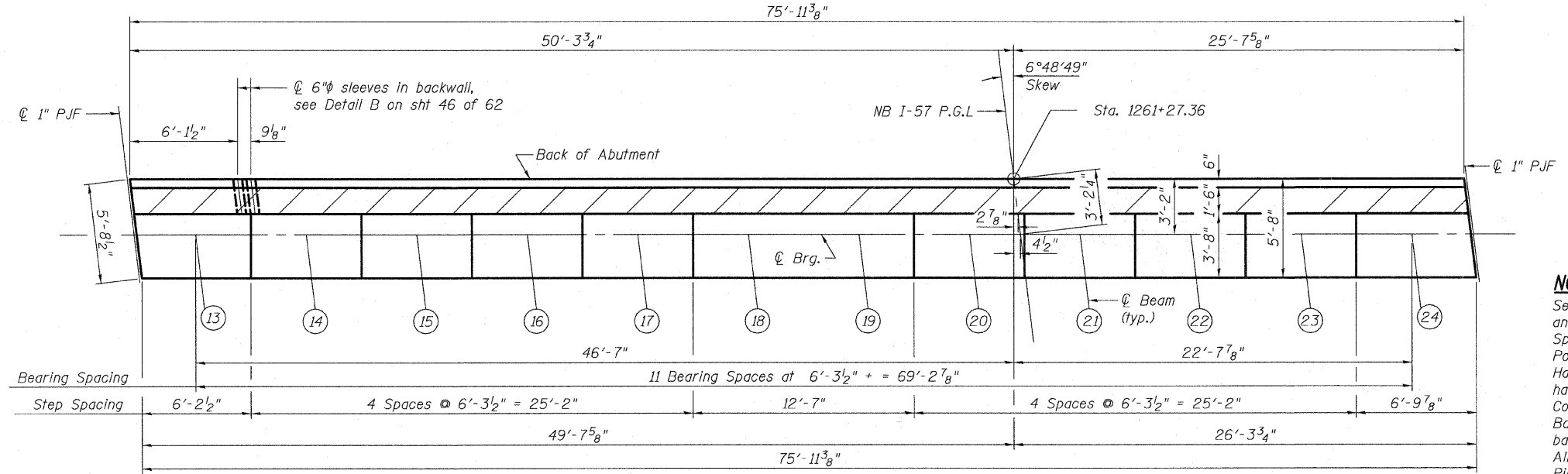
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



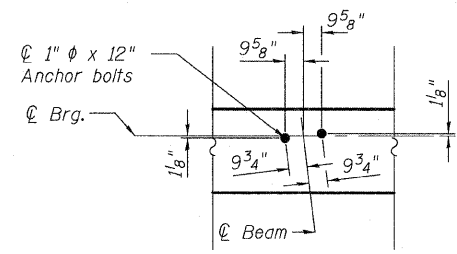
ELEVATION
(Looking East)

**BRIDGE SEAT
ELEVATIONS**

Beam	Seat Elevation
13	630.09
14	630.23
15	630.37
16	630.50
17	630.62
18	630.73
19	630.73
20	630.65
21	630.54
22	630.41
23	630.29
24	630.16

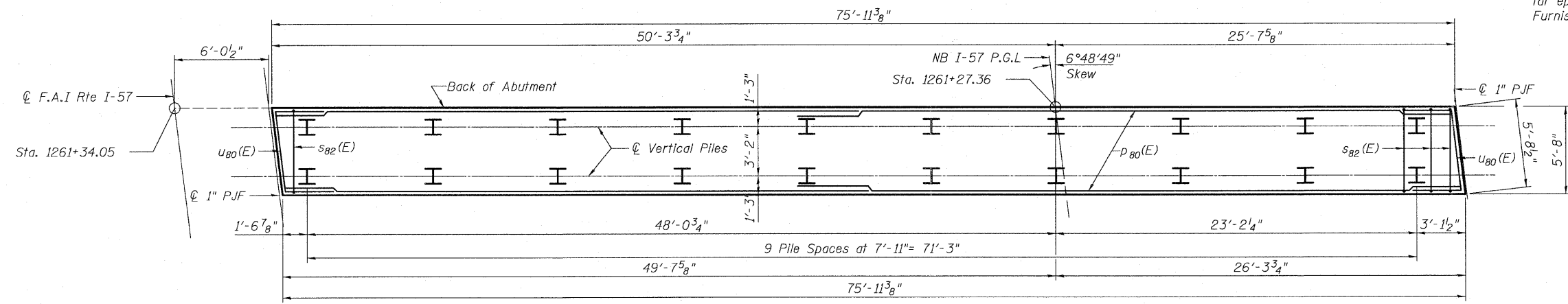


TOP VIEW



**ANCHOR BOLT
LAYOUT**

NOTES:
See Sheet 50 of 62 for abutment section, pile data and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Bars indicated thus 20 x 3- #7 etc. indicates 20 lines of bars with 3 lengths per line.
All edges shall have standard 3/4\"/>



PLAN-PILE CAP

**MINIMUM BAR
LAPS**

Bar	Lap	Notes
#4	2'-7"	
#5	3'-3"	
#6	3'-10"	
#6	4'-5" (Top)	for h ₈₉ (E)
#7	5'-2"	
#7	5'-10" (Top)	for p ₈₂ (E)

**EAST ABUTMENT - 2
S.N. 016-1252**

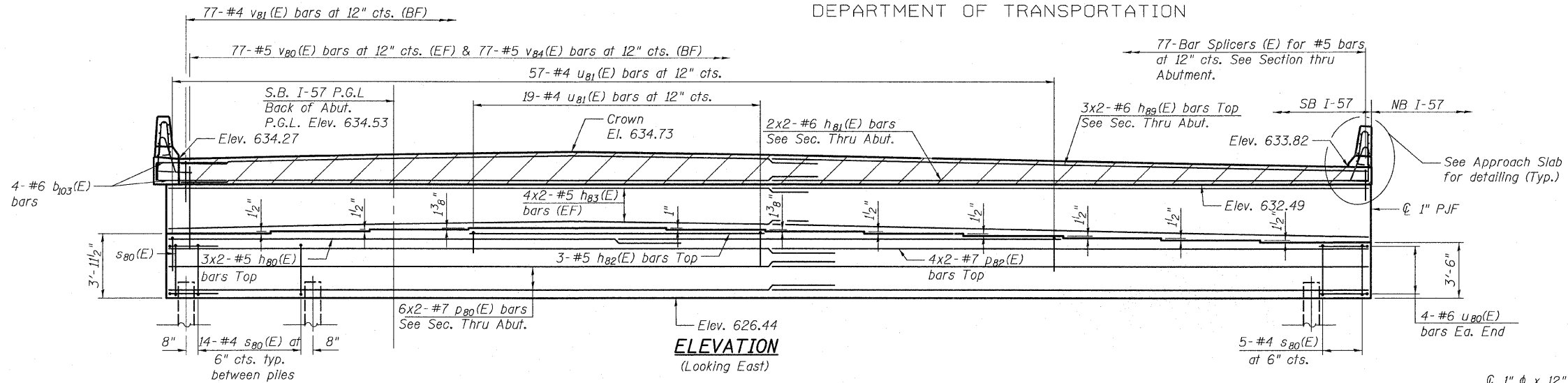
TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 48	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS	SHEET NO.
	CHECKED - AD,LS	NAME	DATE					516	361
	DRAWN - DY,EI							CONTRACT NO. 60J27	
	CHECKED - LS,SP,PDF							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
	DATE - 03/18/10								

P:\1602540\57-294\STRUCTURAL\I-57-OVER-RAMP-B\Final\submital_03-17-2010\Final\submital_03-17-2010\0161252-60J27-048-E-ABUT_NB.dgn 3/18/2010 9:54:50 AM

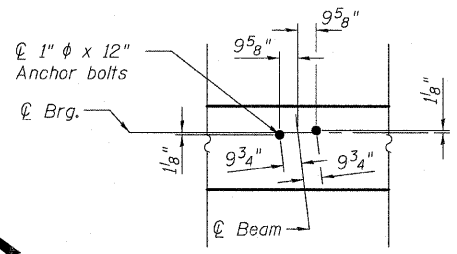
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**BRIDGE SEAT
ELEVATIONS**

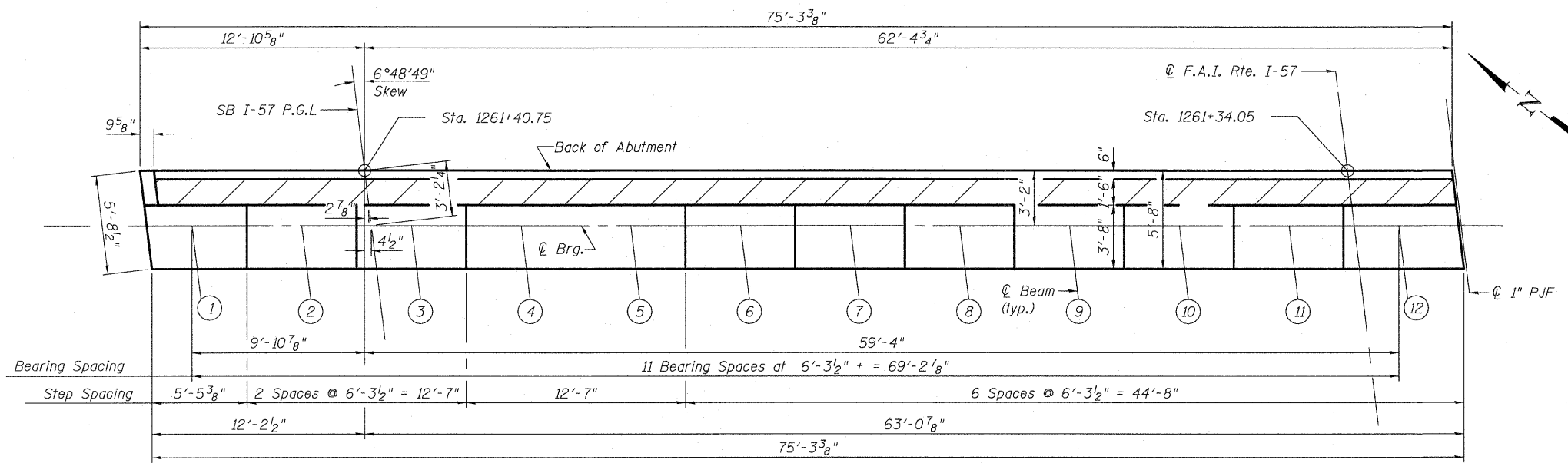
Beam	Seat Elevation
1	630.40
2	630.53
3	630.65
4	630.76
5	630.76
6	630.68
7	630.57
8	630.44
9	630.32
10	630.19
11	630.07
12	629.94



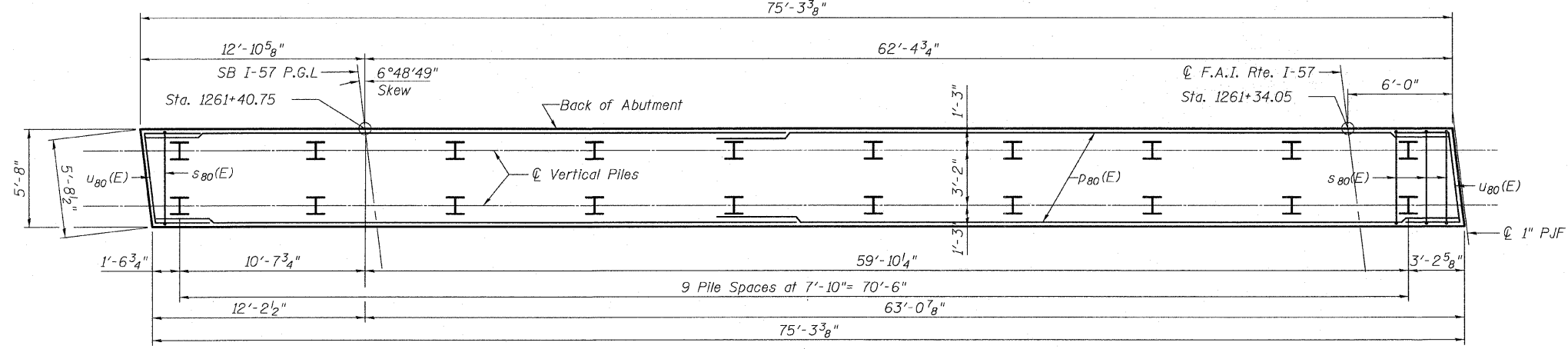
ELEVATION
(Looking East)



**ANCHOR BOLT
LAYOUT**



TOP VIEW



PLAN-PILE CAP

NOTES:

See Sheet 50 of 62 for abutment section, pile data and Bill of Material.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
Bars indicated thus 20 x 3- #7 etc. indicates 20 lines of bars with 3 lengths per line.
All edges shall have standard 3/4\"/>

**MINIMUM BAR
LAPS**

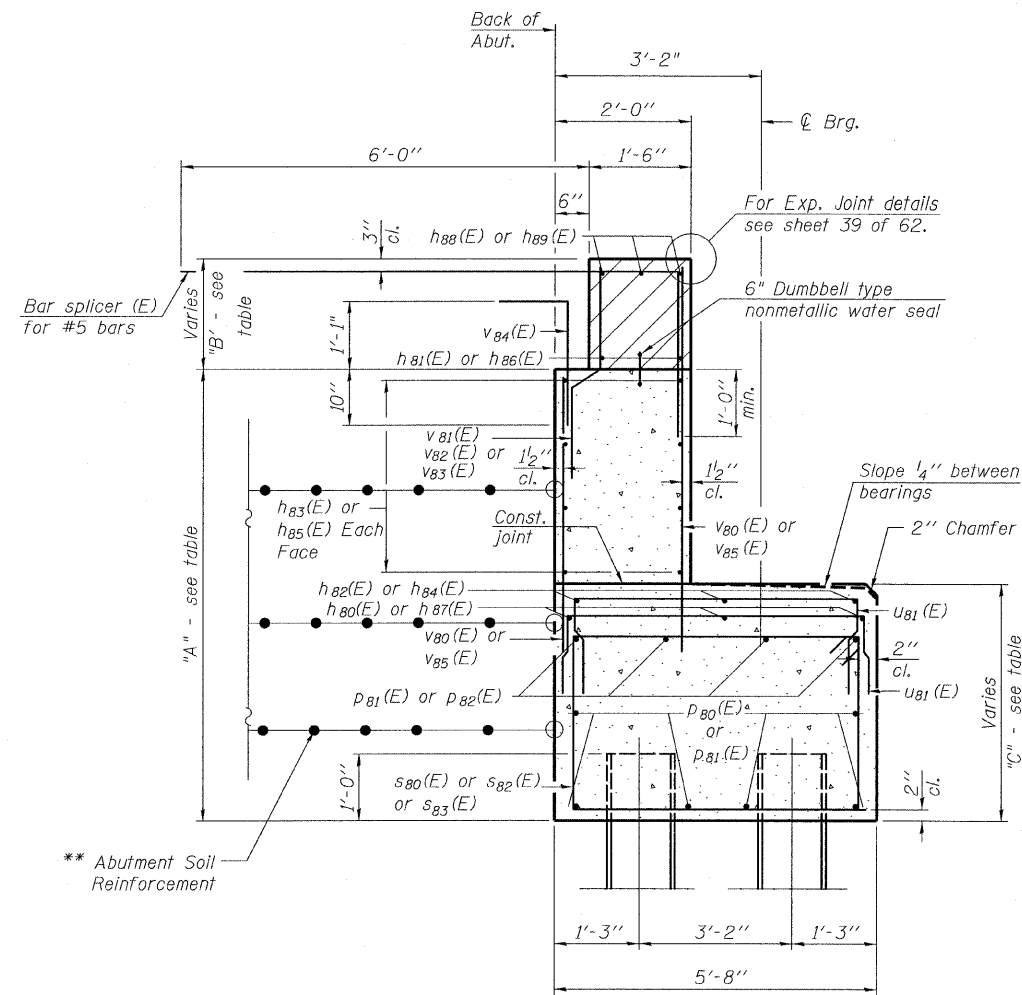
Bar	Lap	Notes
#4	2'-7"	
#5	3'-3"	
#6	3'-10"	
#6	4'-5" (Top)	for h89(E)
#7	5'-2"	
#7	5'-10" (Top)	for p82(E)

**EAST ABUTMENT - 3
S.N. 016-1252**

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 49	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AD,LS	NAME	DATE		57	1414.2B	COOK	516	362	
	DRAWN - DY,EI				62 SHEETS	CONTRACT NO. 60J27				
	CHECKED - LS,SP,PDF					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/18/10									

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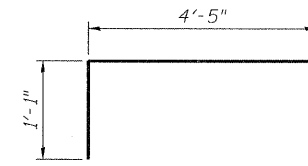
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



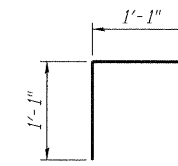
SEC. THRU ABUT.

** The M.S.E. wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 2 kips/ft. Contractor shall coordinate abutment construction with construction of MSE retaining wall.

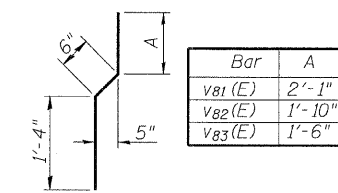
Location	A	B	C
C-D Road A	6'-7 1/2"	1'-4" to 1'-8 1/2"	4'-0 3/4" to 4'-4 1/8"
NB I-57	6'-2 3/8"	1'-4" to 2'-0 3/4"	3'-7 5/8" to 4'-3 1/2"
SB I-57	6'-0 5/8"	1'-4" to 2'-2 7/8"	3'-6" to 4'-3 7/8"



BAR b₁₀₃(E)



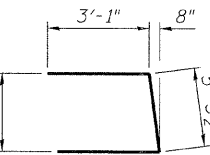
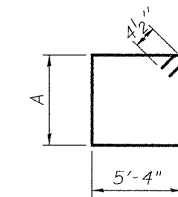
BAR v₈₄(E)



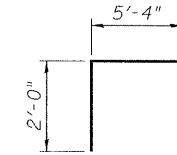
BAR v₈₁(E), v₈₂(E) & v₈₃(E)

Bar	A
s ₈₀ (E)	3'-2"
s ₈₂ (E)	3'-5"
s ₈₃ (E)	3'-9"

BARS s₈₀(E), s₈₂(E) & s₈₃(E)



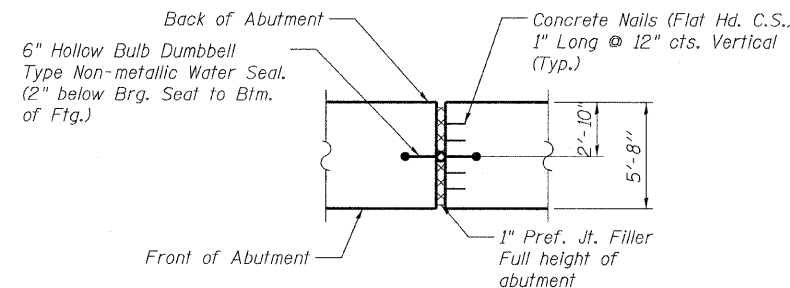
BAR u₈₀(E)



BARS u₈₁(E)

PILE DATA

Type: HP12x53 with Pile Shoes
Nominal Required Bearing: 419 kips
Factored Resistance Available: 230 kips
Est. Length: 33 ft
No. Production Piles: 51
No. Test Piles: 1



SEC. THRU 1" EXP. JT. FILLER

Cost of Water Seal included in the cost of Concrete Structures.

**EAST ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
b ₁₀₃ (E)	8	#6	6'-4"	Γ
h ₈₀ (E)	6	#5	29'-9"	—
h ₈₁ (E)	8	#6	39'-9"	—
h ₈₂ (E)	6	#5	18'-6"	—
h ₈₃ (E)	32	#5	39'-10"	—
h ₈₄ (E)	3	#5	18'-2"	—
h ₈₅ (E)	16	#5	22'-9"	—
h ₈₆ (E)	4	#6	22'-8"	—
h ₈₇ (E)	3	#5	43'-7"	—
h ₈₈ (E)	6	#6	23'-9"	—
h ₈₉ (E)	12	#6	40'-1"	—
p ₈₀ (E)	24	#7	40'-6"	—
p ₈₁ (E)	10	#7	42'-3"	—
p ₈₂ (E)	16	#7	40'-10"	—
s ₈₀ (E)	132	#4	17'-9"	□
s ₈₂ (E)	132	#4	18'-3"	□
s ₈₃ (E)	72	#4	18'-11"	□
u ₈₀ (E)	24	#6	8'-5"	—
u ₈₁ (E)	158	#4	7'-4"	—
v ₈₀ (E)	154	#5	5'-9"	—
v ₈₁ (E)	77	#4	3'-11"	—
v ₈₂ (E)	77	#4	3'-8"	—
v ₈₃ (E)	44	#4	3'-4"	—
v ₈₄ (E)	198	#5	3'-10"	Γ
v ₈₅ (E)	242	#5	5'-11"	—
Structure Excavation		Cu. Yd.	4,010	
Concrete Structures		Cu. Yd.	203.4	
Reinforcement Bars, Epoxy Coated		Pound	16,880	
Furnishing Steel Piles, HP12x53		Foot	1,734	⚠
Pile Shoes		Each	52	
Driving Piles		Foot	1,734	⚠
Test Pile, HP12x53		Each	1	
Concrete Sealer		Sq. Ft.	1,610	

For details of Bar Splicers, see sheet 55 of 62.
For details of piles, see sheet 56 of 62.

**EAST ABUTMENT DETAILS
S.N. 016-1252**

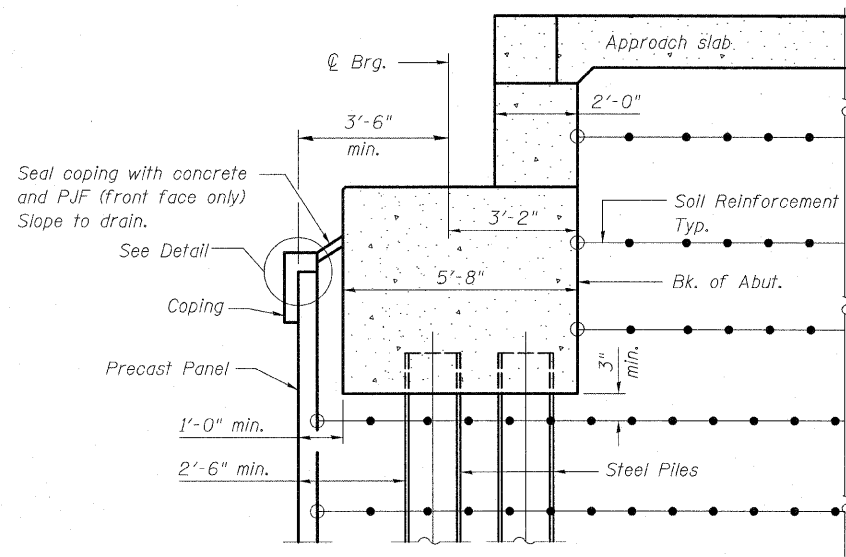
TYLIN INTERNATIONAL

DESIGNED -	DY	REVISIONS	
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DRAWN -	DY,EI		
CHECKED -	LS,SP,PDF		
DATE -	03/18/10	Δ REVISED	05/24/10

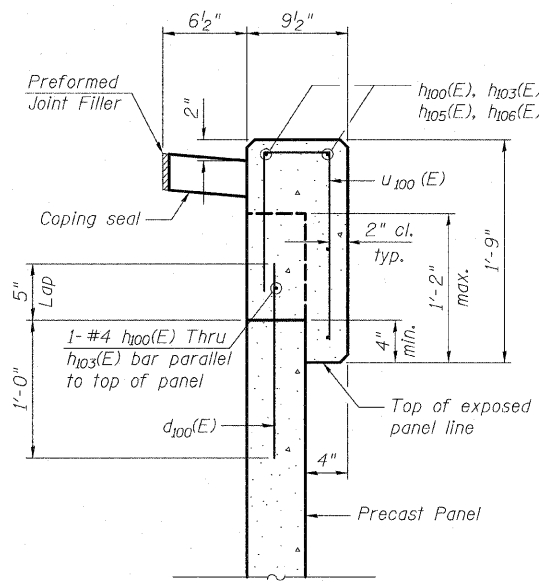
SHEET NO. 50	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
62 SHEETS	57	1414.2B	COOK	516	363
CONTRACT NO. 60J27					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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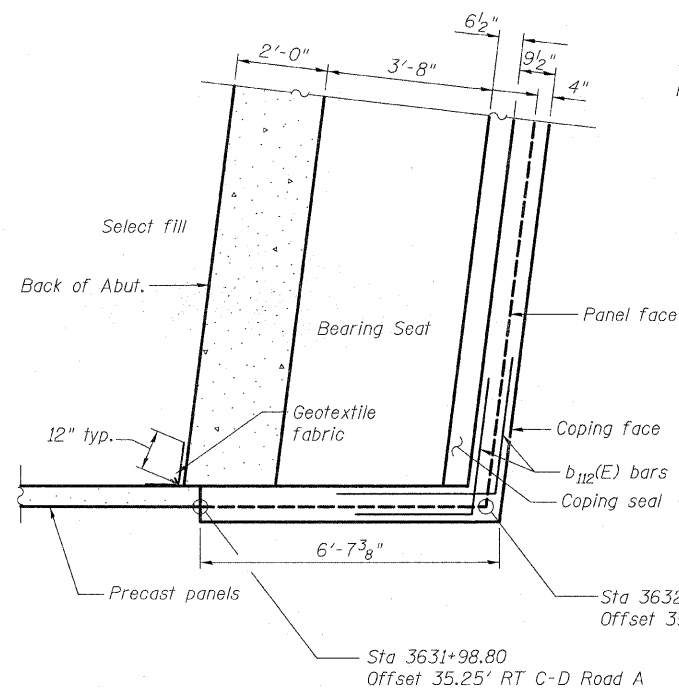
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



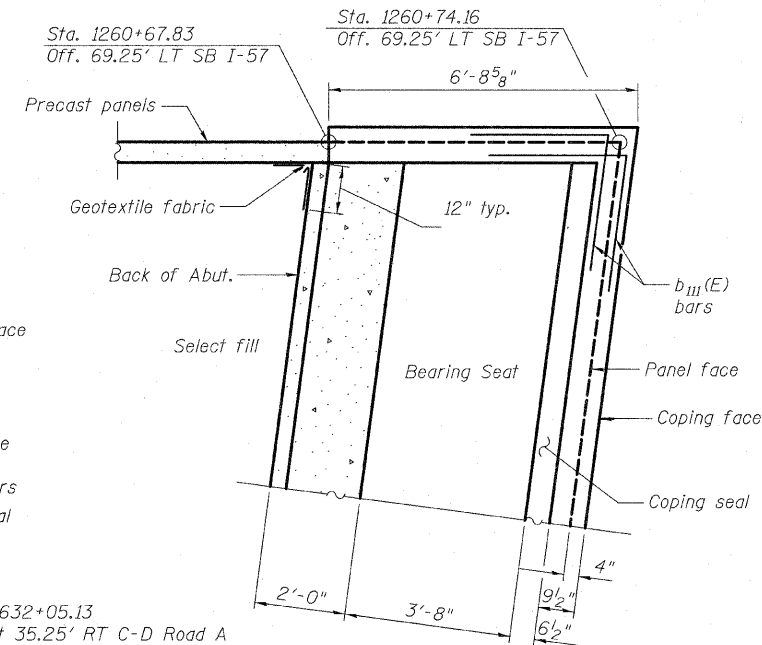
SECTION THRU WEST ABUTMENT
(Horiz. dim. @ Rt. L's)



DETAIL



PLAN AT ABUTMENT - SOUTH END



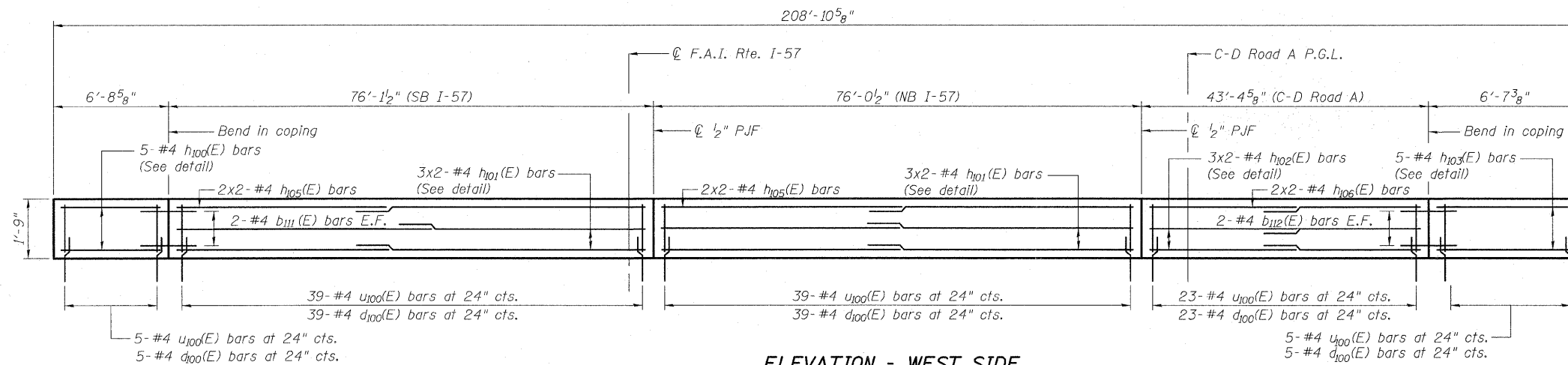
PLAN AT ABUTMENT - NORTH END

MINIMUM BAR LAPS

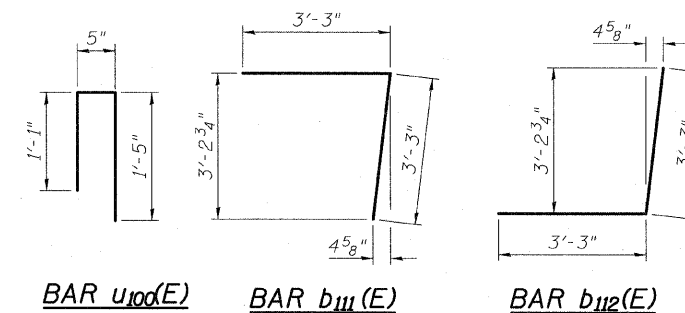
Bar	Lap
#4	2'-7"
#4	2'-11" (Top)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b _{III} (E)	4	#4	6'-6"	U
b _{II2} (E)	4	#4	6'-6"	U
d ₁₀₀ (E)	111	#4	1'-5"	—
h ₁₀₀ (E)	5	#4	6'-5"	—
h ₁₀₁ (E)	12	#4	39'-2"	—
h ₁₀₂ (E)	6	#4	22'-9"	—
h ₁₀₃ (E)	5	#4	6'-4"	—
h ₁₀₅ (E)	8	#4	39'-4"	—
h ₁₀₆ (E)	4	#4	23'-0"	—
U ₁₀₀ (E)	111	#4	2'-11"	U
Concrete Structures		Cu. Yd.	10.7	
Reinforcement Bars, Epoxy Coated		Pound	1,080	



ELEVATION - WEST SIDE
(Looking East)

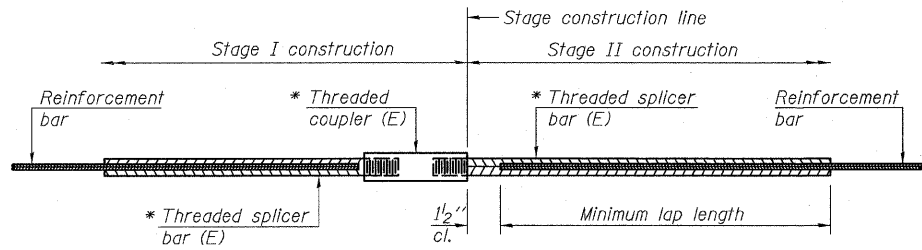


**WEST MECHANICALLY STABILIZED
EARTH RETAINING WALL - DETAILS
STRUCTURE NO. 016-1252**

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 52	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 365
	CHECKED - AD,LS	NAME	DATE						
	DRAWN - DY,EI								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
				62 SHEETS	CONTRACT NO. 60J27				
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

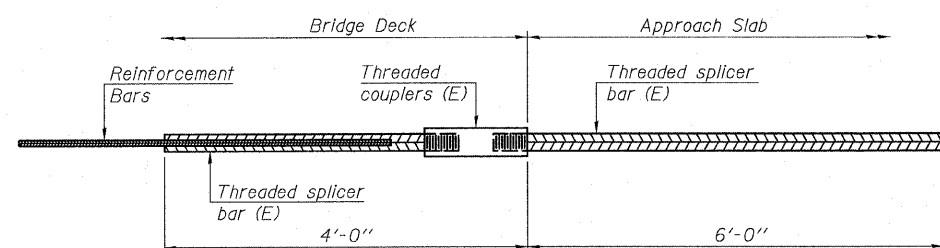
Minimum Lap Lengths				
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length + 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length

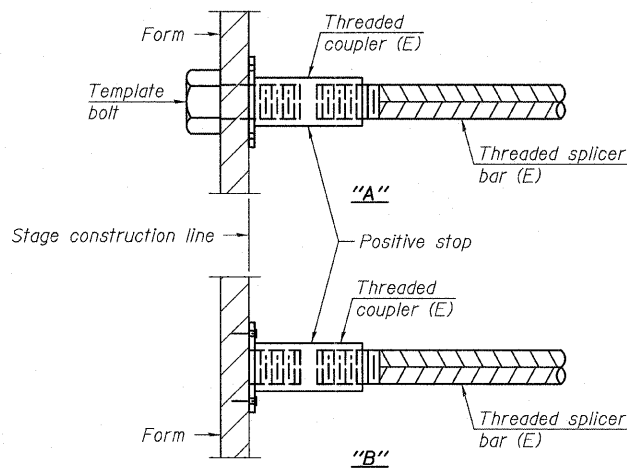


BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 0

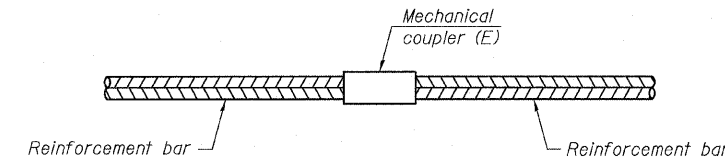
BSD-1

11-1-09



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

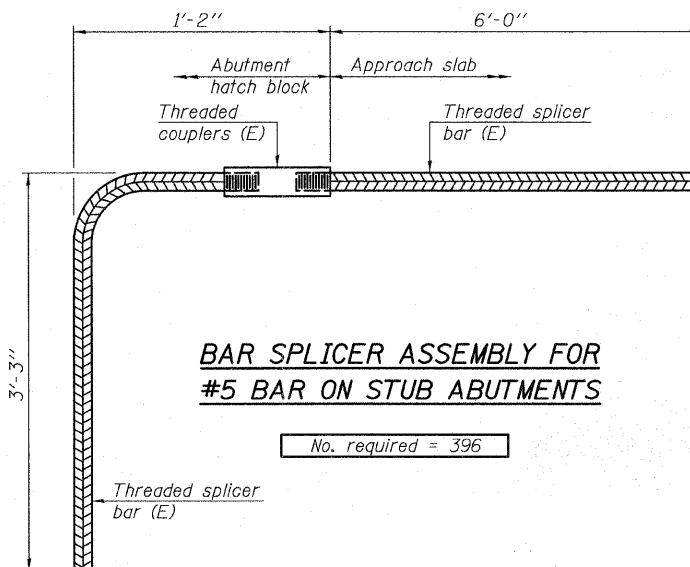


STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See special provision for Mechanical Splicers.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 396

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO.**

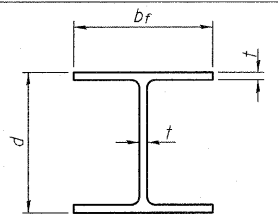
TYLIN INTERNATIONAL

DESIGNED	DY	REVISIONS	
CHECKED	AD,LS	NAME	DATE
DRAWN	DY,EI		
CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO. 55	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	368
62 SHEETS	CONTRACT NO. 60J27				
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

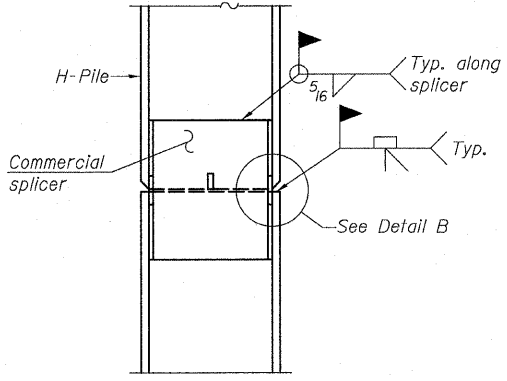
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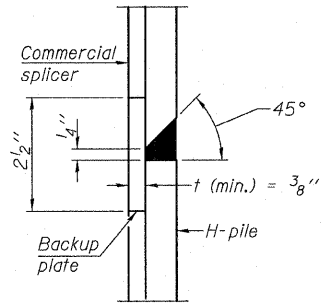


STEEL PILE TABLE

Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

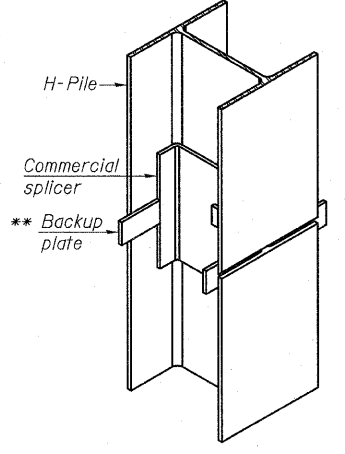


ELEVATION

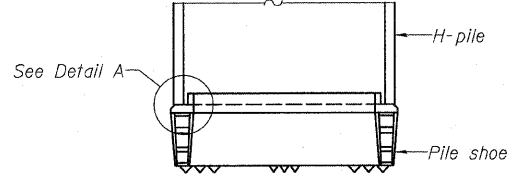


DETAIL "B"

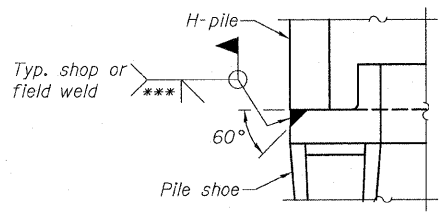
WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW

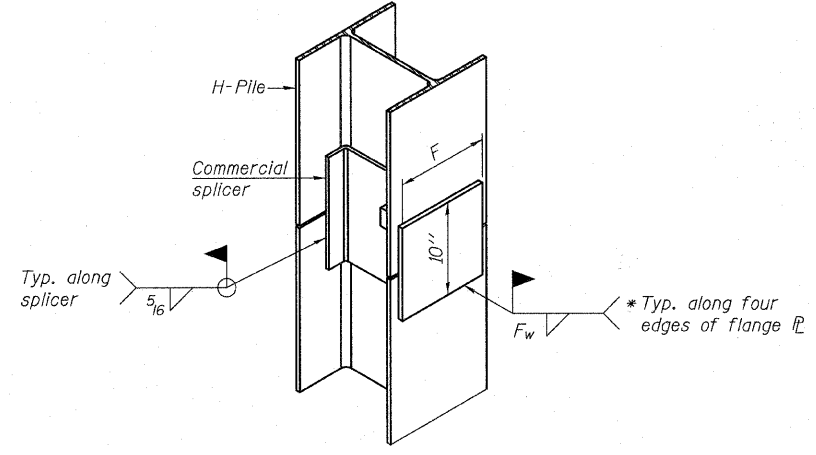


ELEVATION



DETAIL A

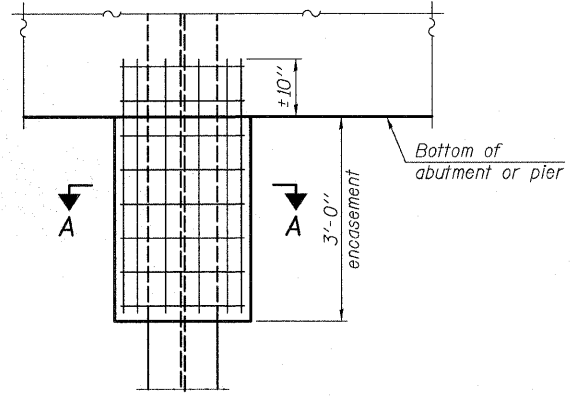
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

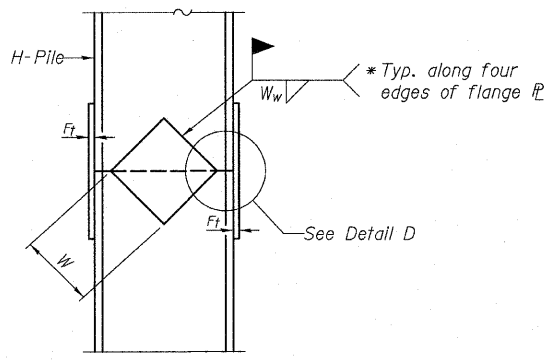
WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

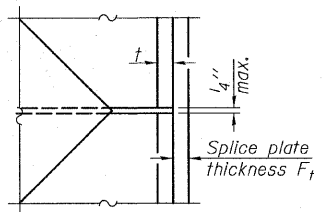


ELEVATION

PILE ENCASEMENT

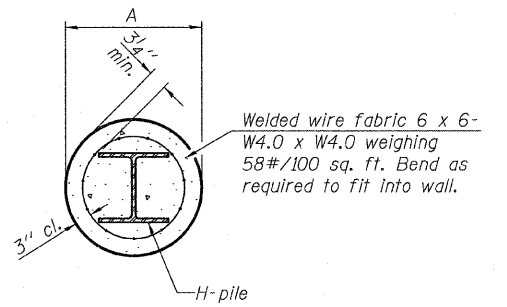


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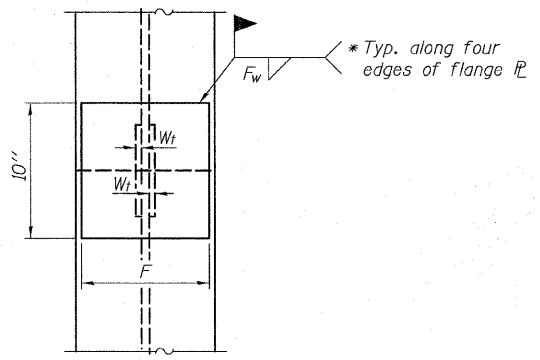
DETAIL D

WELDED PLATE FIELD SPLICE



SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.



END VIEW

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

**HP PILE DETAILS
STRUCTURE NO.**

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP 11-1-09
TYLIN INTERNATIONAL

DESIGNED - DY	REVISIONS	
CHECKED - AD,LS	NAME	DATE
DRAWN - DY,EI		
CHECKED - LS,SP,PDF		
DATE - 03/18/10		

SHEET NO. 56	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	369
62 SHEETS	CONTRACT NO. 60J27				
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

P:\60254057-2941\STRUCTURAL\1-57 OVER RAMP.B\Final submittal_03-17-2010\Final submittal_03-17-2010\0161252-60J27-056-HP_PILE.DTL.dgn 9:55:04 AM 3/18/2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 2

SOIL BORING LOG

DATE 9/19/2008

LOGGED BY DR

GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57 Over I-294

COUNTY Cook DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097

Station -

BORING NO. I57-I294 B-8

Station: 260+46

Offset: 67.5' Left

Ground Surface Elev. 635.1

D E P T H S (ft)	B L O W S (6")	U C S (tsf)	M O I S T (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After	Hrs.	D E P T H S (ft)	B L O W S (6")	U C S (tsf)	M O I S T (%)	Description		
															Soil Type	Notes	
				n/a	n/a											18.0" ASPHALT	
																CRUSHED STONE with Clay-very dense (Fill)	
																CLAY-brown & gray-very stiff to hard (A-6) Fill	
																CLAY-brown & gray-very stiff to hard (A-6) Fill	
																SILTY LOAM to LOAM-dark brown & gray-medium dense (A-4)	
																SANDY LOAM with Fractured Rock-gray-dense to very dense (A-2/A-4)	

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

PAGE 2 of 2

SOIL BORING LOG

DATE 9/19/2008

LOGGED BY DR

GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57 Over I-294

COUNTY Cook DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097

Station -

BORING NO. I57-I294 B-8

Station: 260+46

Offset: 67.5' Left

Ground Surface Elev. 635.1

D E P T H S (ft)	B L O W S (6")	U C S (tsf)	M O I S T (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After	Hrs.	D E P T H S (ft)	B L O W S (6")	U C S (tsf)	M O I S T (%)	Description		
															Soil Type	Notes	
																SANDY LOAM with Fractured Rock-gray-dense to very dense (A-2/A-4)	
																Run 1	
																Run 2	
																Run 1	

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 LOGS 1
S.N. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 57	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AD,LS	NAME	DATE		57	1414.2B	COOK	516	370	
	DRAWN - DY,EI				CONTRACT NO. 60J27					
	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 2

SOIL BORING LOG

DATE 924-10222008

LOGGED BY MD

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57A-294 Ramp C Fly-Over Bridge

COUNTY Cook DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. XXX
Station -

BORING NO. **RMP C B-19**
Station: 1262+00 (I-57)
Offset: 60.5' Left
Ground Surface Elev. 634.3

D E P T H (ft)	B L O W S (blows)	U N I T S (tsf)	M O D E (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After _____ Hrs.	D E P T H (ft)	B L O W S (blows)	U N I T S (tsf)	M O D E (%)
0				n/a	n/a		n/a	n/a		0			
28										4			108
8										7			
4	NP	1								10	4.7B		21
631.3													
3										5			107
4										7			
-5	6	5.2B	18							-25	9	4.9B	19
3										5			103
5										7			
7	5.5B	19								9	2.8B		23
3										5			104
5										5			
-10	6	3.2B	19							-30	6	3.1B	21
5													108
6													
6	3.0B	20											
601.3													
4										5			
6										6			
-15	7	3.5P	20							-35	18	NP	10
4													
5													
7	3.9B	19											
4													
6										37			
6										504"			
-20	8	5.0B	20							-40		NP	12

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

PAGE 2 of 2

SOIL BORING LOG

DATE 924-10222008

LOGGED BY MD

JOB NUMBER P-91-186-08 GSI JOB No. 08015

ROUTE I-294 & I-57 DESCRIPTION I-57 & I-294 Interchange Improvements (PTB 146, Item 1)

SECTION - LOCATION I-57A-294 Ramp C Fly-Over Bridge

COUNTY Cook DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. XXX
Station -

BORING NO. **RMP C B-19**
Station: 1262+00 (I-57)
Offset: 60.5' Left
Ground Surface Elev. 634.3

D E P T H (ft)	B L O W S (blows)	U N I T S (tsf)	M O D E (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After _____ Hrs.	D E P T H (ft)	B L O W S (blows)	U N I T S (tsf)	M O D E (%)
0				n/a	n/a		n/a	n/a		0			
28										4			108
8										7			
4	NP	1								10	4.7B		21
631.3													
3										5			107
4										7			
-5	6	5.2B	18							-25	9	4.9B	19
3										5			103
5										7			
7	5.5B	19								9	2.8B		23
3										5			104
5										5			
-10	6	3.2B	19							-30	6	3.1B	21
5													108
6													
6	3.0B	20											
601.3													
4										5			
6										6			
-15	7	3.5P	20							-35	18	NP	10
4													
5													
7	3.9B	19											
4													
6										37			
6										504"			
-20	8	5.0B	20							-40		NP	12

SILTY LOAM with Fractured Rock-
gray-very dense (A-4) 573.9
Drillers Observation: Apparent Bedrock 573.8

RUN 1 (-61.5' to -71.5')
Silurian System Niagaran Series Dolomite

Light gray mottled gray with horizontal bedding. Fine grained with some varving.
Horizontal fractures @ -62.0', -62.1', -64.2', -65.3', -65.4', -65.7', -66.2', -66.5', -67.0', -67.3', -67.5' & -68.2'. Vertical fracture with intersecting horizontal fractures from -69.7' to -71.0'.

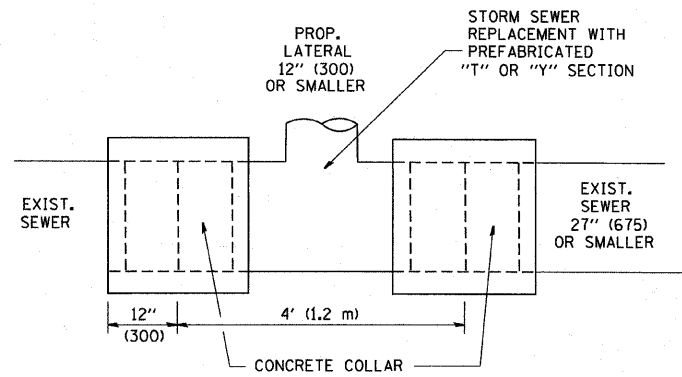
Recovery = 97.0%
R.Q.D. = 65.0%

End Of Boring @ -71.5'
Straight Flight Augers To -10.0'
Rotary Drilling To Completion
CME Automatic Hammer
10.0' of 4.0" Casing Used
61.5' of 3.0" Casing Used

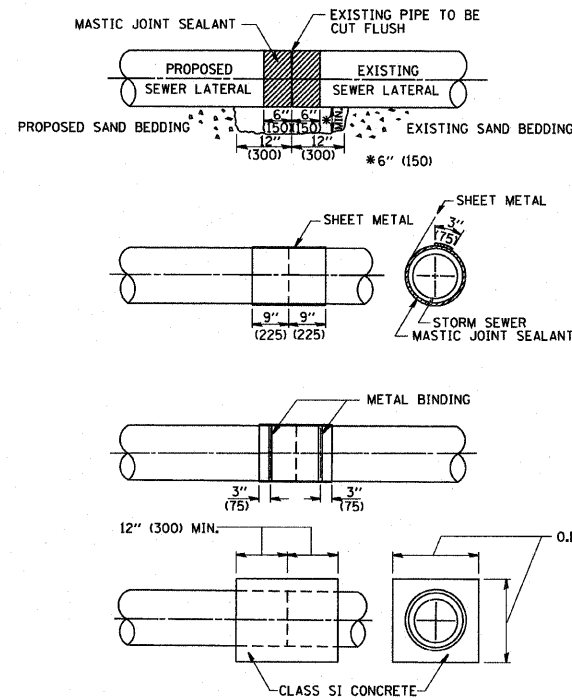
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)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

BORING LOGS 4
S.N. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 60	F.A.I RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 373
	CHECKED - AD,LS	NAME	DATE						
	DRAWN - DY,EI								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
				62 SHEETS	CONTRACT NO. 60J27				
				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



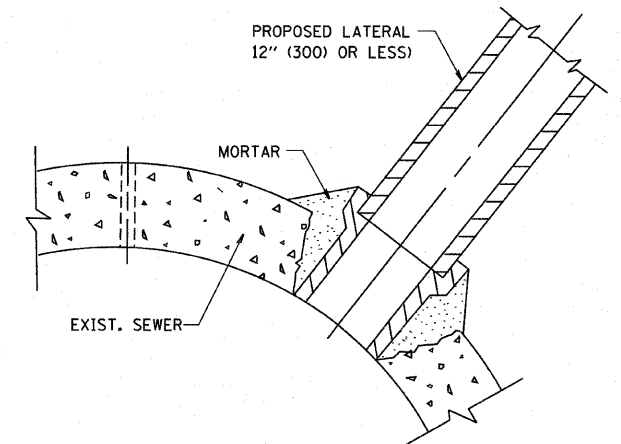
DETAIL "A"
LATERAL CONNECTION TO EXISTING SEWER
OF 27" (675) OR SMALLER



DETAIL "B"
CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12" x 6" (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"
PROPOSED LATERAL
CONNECTION TO EXISTING SEWER
OF 30" (750) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

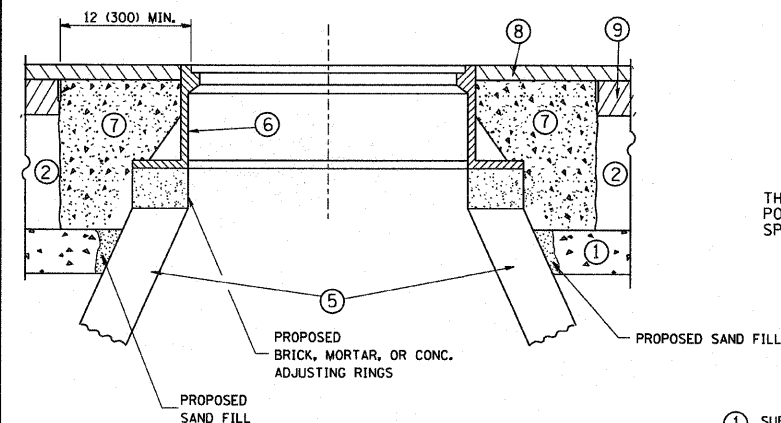
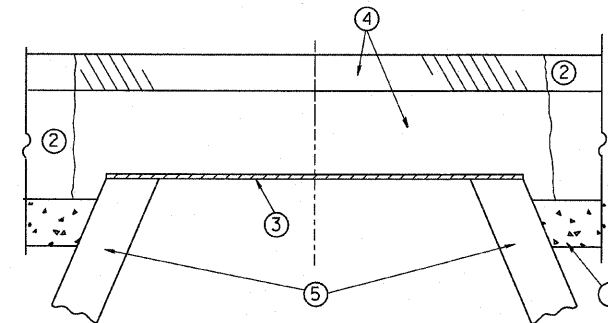
REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

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

FILE NAME = W:\distatd\22x34\bd07.dgn	USER NAME = gaglianob	DESIGNED - M. DE YONG	REVISED - M. DE YONG 05-08-92	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER		F.A.L. RTE. 57	SECTION 1414.2B	COUNTY Cook	TOTAL SHEETS 516	SHEET NO. 376	
PLOT SCALE = 50.000' / IN.	CHECKED - DATE	REVISOR - DATE	REVISOR - DATE		SCALE: NONE	SHEET NO. 1 OF 1	SHEETS	STA.	TO STA.	CONTRACT NO. 60127		
PLOT DATE = 1/4/2008	DATE	DATE	DATE		BD500-01 (BD-7)							
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT												



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS S1 CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

LEGEND

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS S1 CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL"
NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

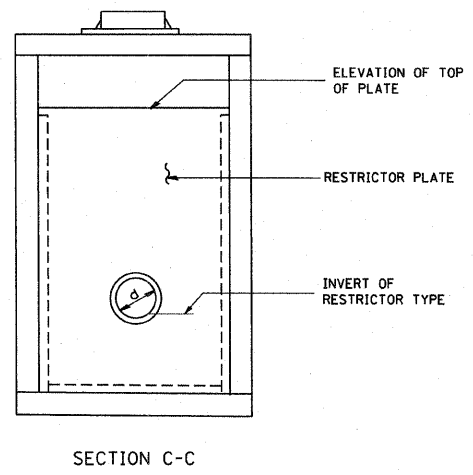
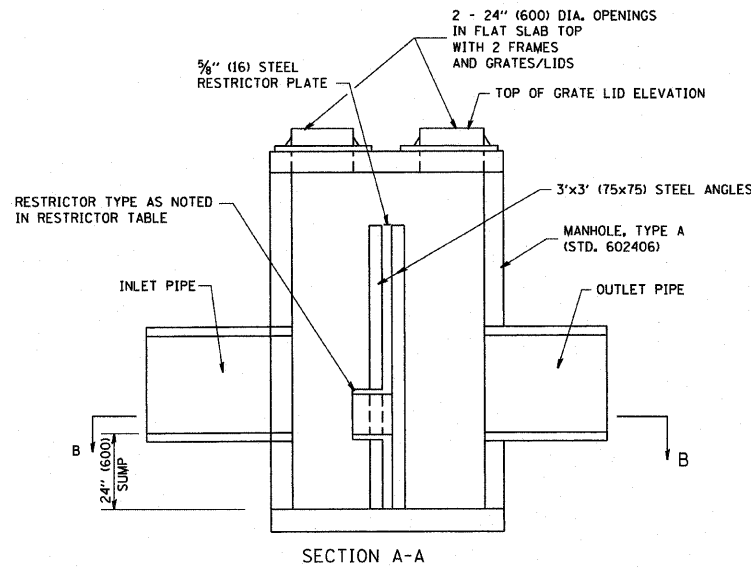
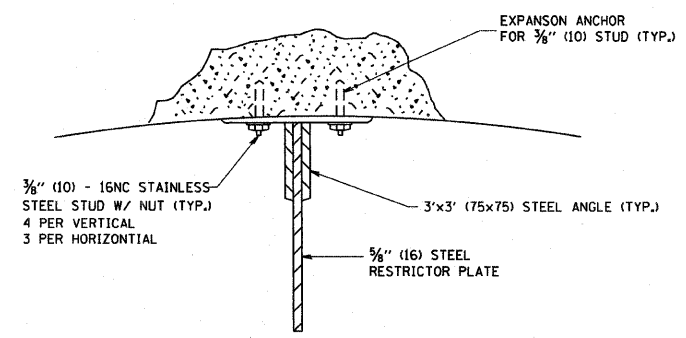
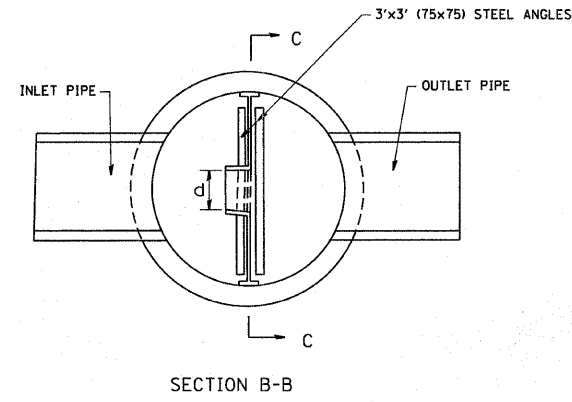
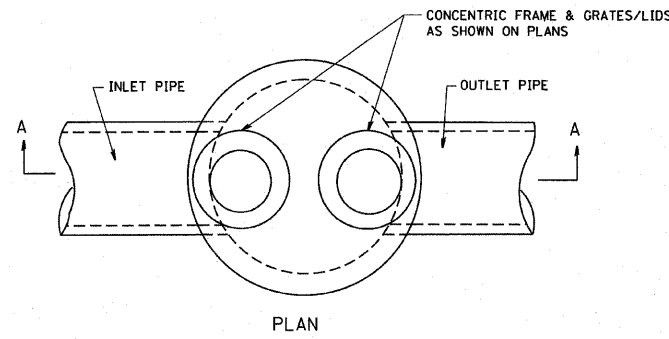
DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

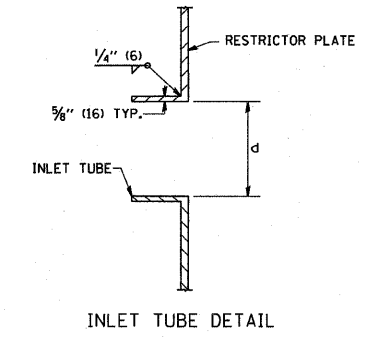
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		DRAWN - -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - -	REVISED - R. WIEDEMAN 05-14-04
	PLOT DATE = 1/4/2008	DATE - 10-25-94	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

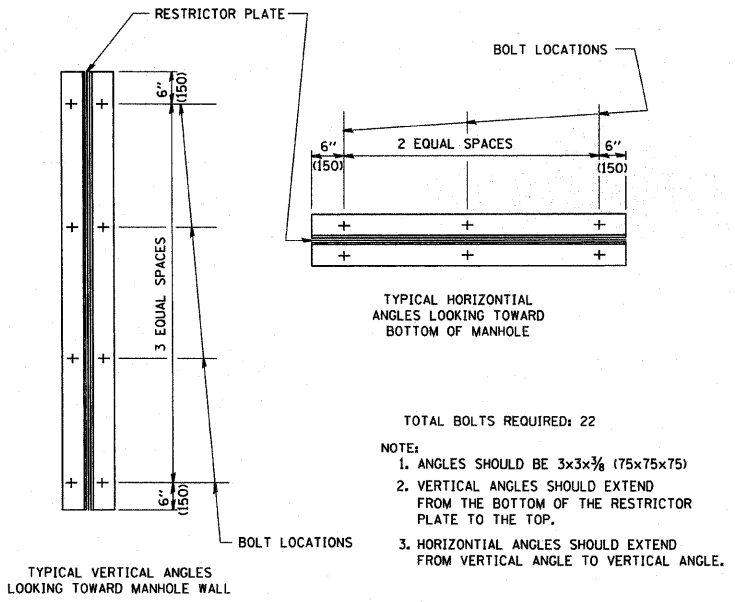
DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	ST.	1414.2B	COOK	516	377
STA.	TO STA.	BD600-03 (BD-8)		CONTRACT NO. 60527		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						



- NOTES:
- ALL STEEL ANGLES AND PLATES TO BE GALVANIZED AFTER FABRICATION.
 - ALL RESTRICTOR PLATES, ANGLES AND HARDWARE TO BE INCLUDED IN THE COST OF THE MANHOLE.
 - BASIS OF PAYMENT: "MANHOLES, TYPE A, 6 FT. (1.8 m)-DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE" EACH



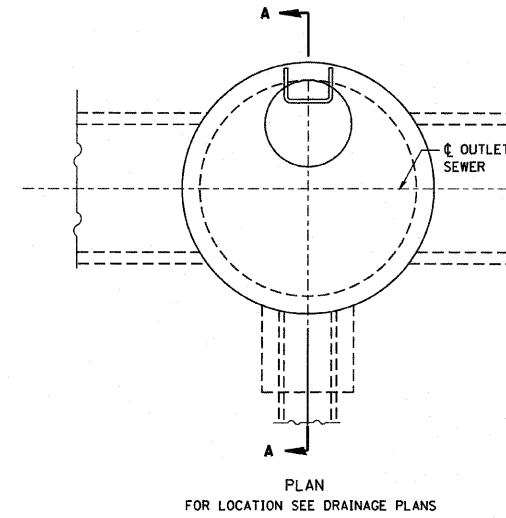
STATION	MANHOLE DIAMETER	FRAME AND GRATE	RESTRICTOR TYPE	INSIDE RESTRICTOR TYPE DIAMETER in. (mm) (d)	INVERT OF RESTRICTOR TYPE	ELEVATION OF TOP OF PLATE OVERFLOW



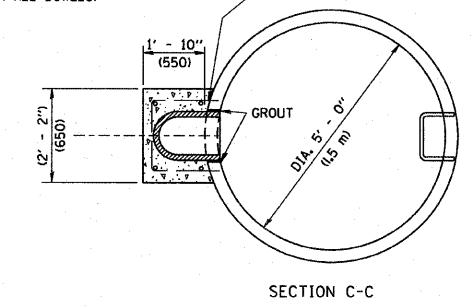
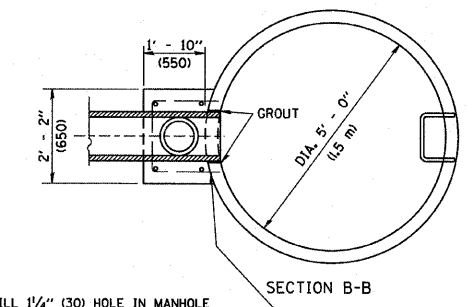
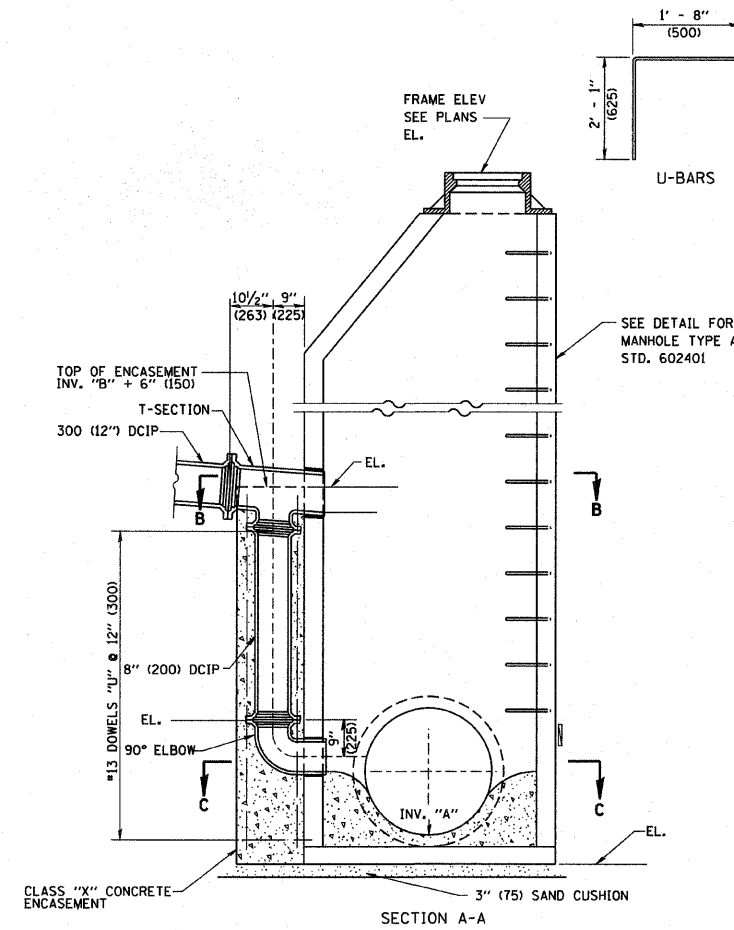
RESTRICTOR TYPE					
1	2	3	4	5	6
RE-ENTRANT TUBE	SHARP EDGED	SQUARE EDGED	RE-ENTRANT TUBE	SQUARE EDGED	ROUNDED
LENGTH: 1/2 TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-1/2 DIA.	LENGTH: 2-1/2 DIA.	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES

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



ENCASEMENT DETAILS			
DROP M.H. LOCATION STA., OFFSET			
INV. "A"			
INLET PIPE			
INV. "B"			
INV. "C"			
A			
B			
"V" BAR LENGTH			
NO. OF "U" BARS			
REINF. BARS			
CLASS "SI" CONC. CUBIC METER (CU. YD.)			



- TYPE A1-1 MANHOLE WITH 1 DROP AND DEPTH UP TO 10' (3 m)
 TYPE A1-2 " " " " " " FROM 10' TO 15' (3 m TO 1.5 m)
 TYPE A1-3 " " " " " " FROM 15' TO 20' (1.5 m TO 6 m)
 TYPE A1-4 " " " " " " OVER 20' (6 m)
- TYPE A2-1 MANHOLE WITH 2 DROPS AND DEPTH UP TO 10' (3 m)
 TYPE A2-2 " " " " " " FROM 10' TO 15' (3 m TO 1.5 m)
 TYPE A2-3 " " " " " " FROM 15' TO 20' (1.5 m TO 6 m)
 TYPE A2-4 " " " " " " OVER 20' (6 m)

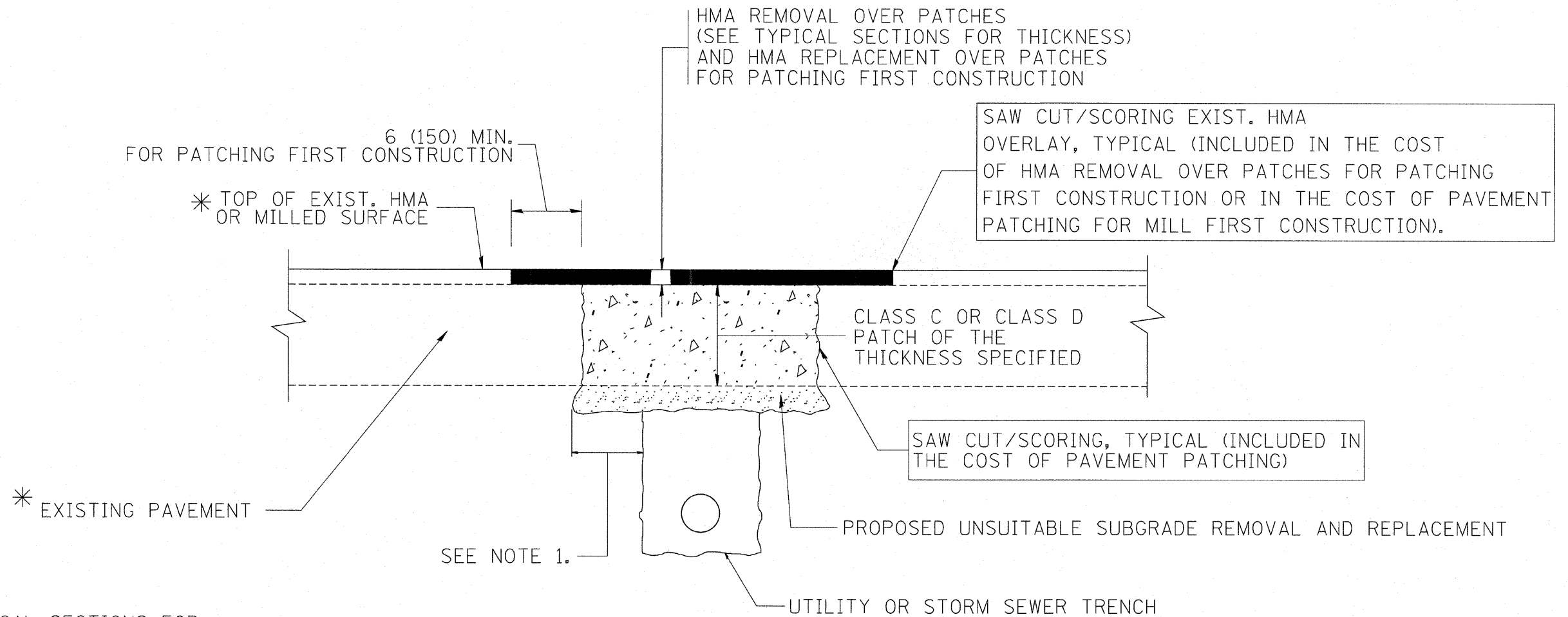
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME = W:\data\22x34\bd16.dgn	USER NAME = geglinoht	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE - 10-18-02	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DROP MANHOLE DETAILS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
87	1414.2B	COOK	516	379
BD600-05 (BD-16)		CONTRACT NO. 6037		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

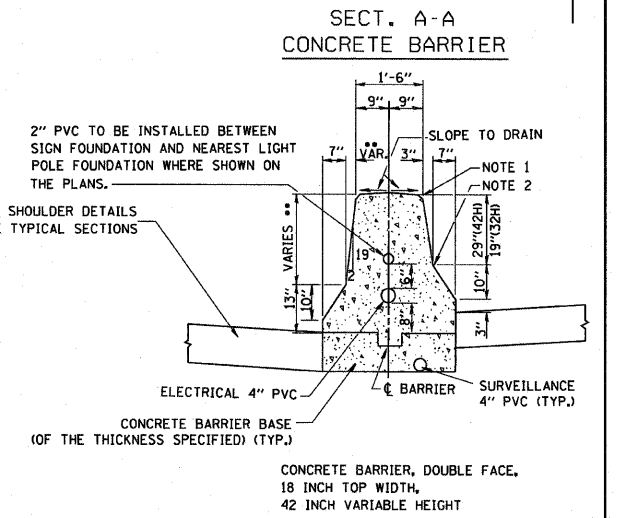
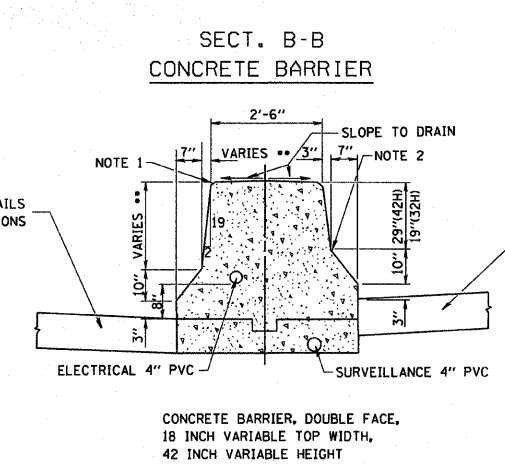
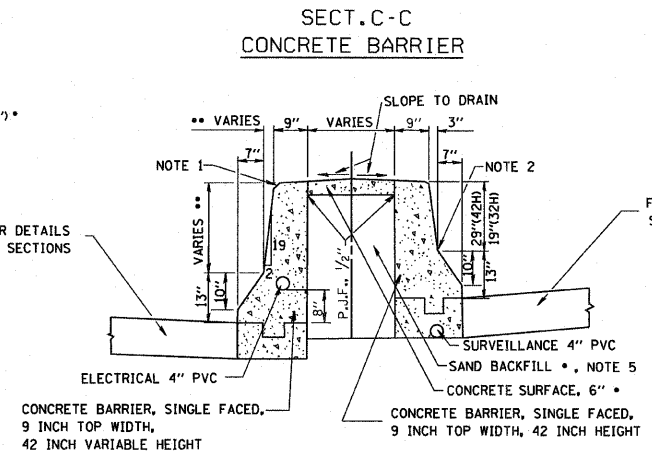
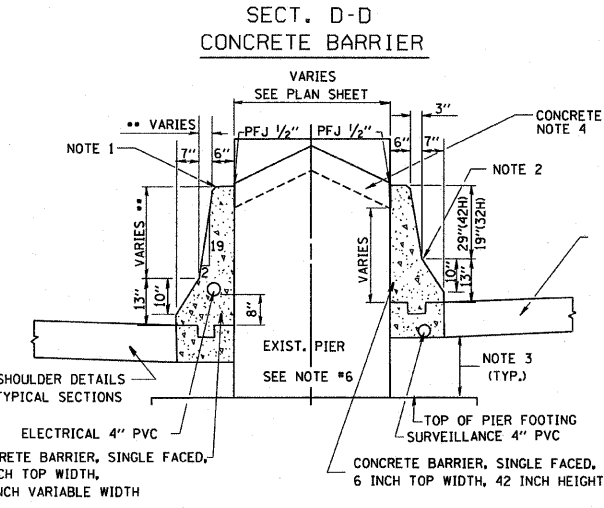
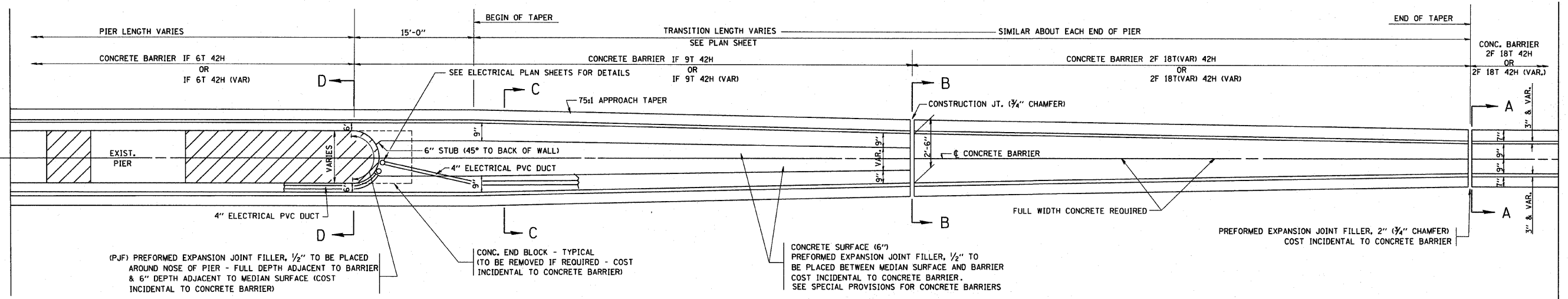
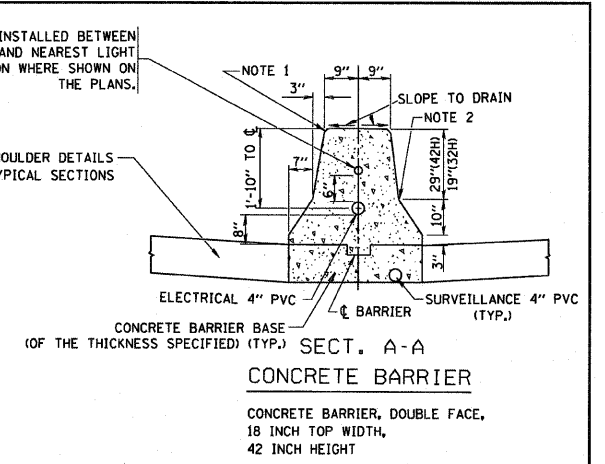
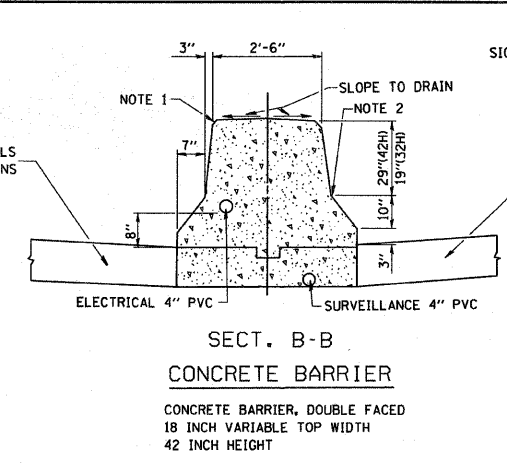
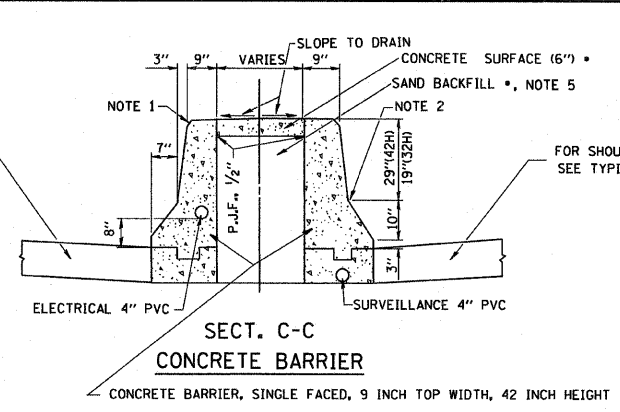
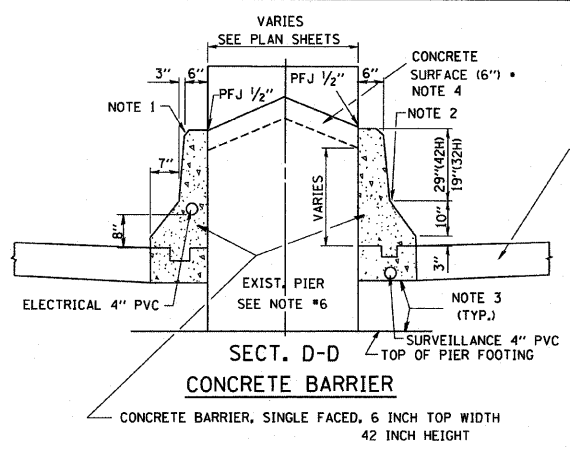
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = c:\projects\distatd22x34\bd22.dgn	USER NAME = bawerdl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. BORO 01-01-07		51	1414.2B	COOK	516	380			
		PLOT SCALE = 50.000' / IN.	REVISED - R. BORO 09-04-07		BD400-04 (BD-22)			CONTRACT NO. 60327				
		PLOT DATE = 10/27/2008	REVISED - K. ENG 10-27-08		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

TANGENT CONDITION

PLAN VIEW OF CONCRETE BARRIER TRANSITION

(SUPER ELEVATION CONDITION)



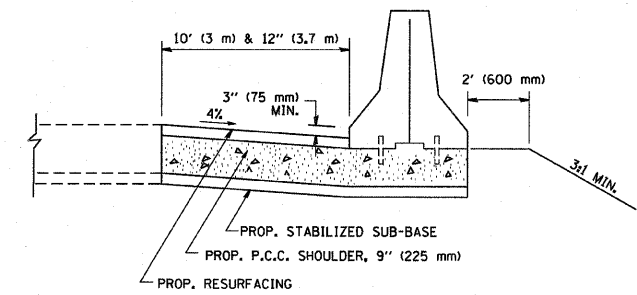
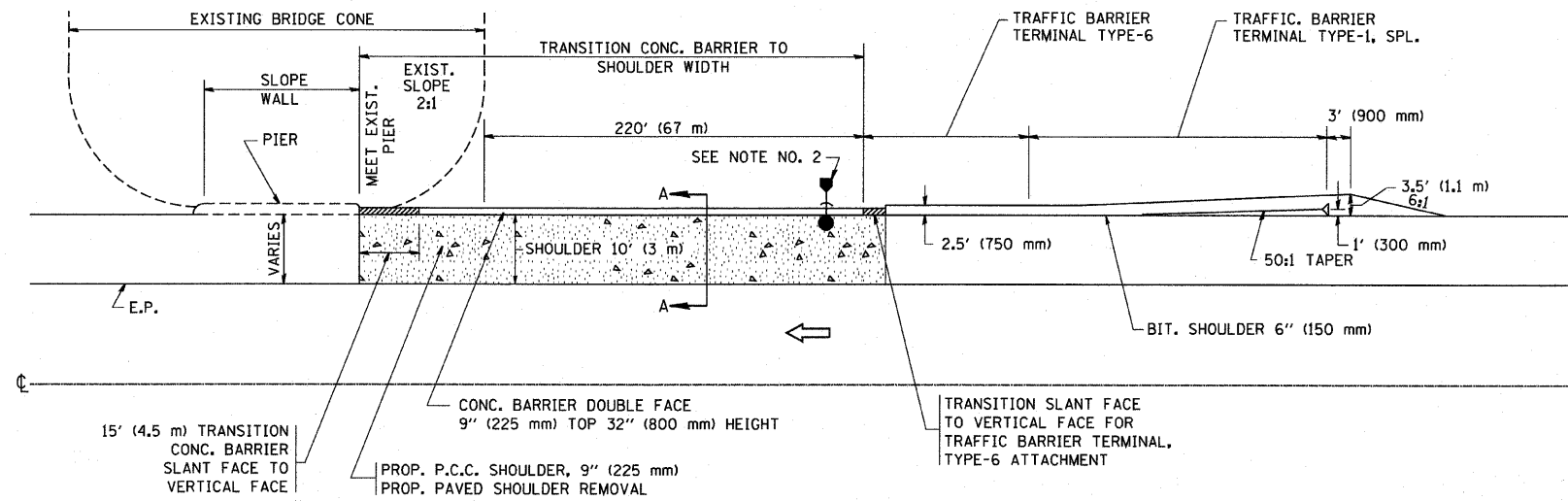
GENERAL NOTES - FOR UNDERDRAIN DETAILS SEE TYPICAL SECTIONS
 - PREFORMED JOINT FILLER SHALL BE INCIDENTAL TO THE CONCRETE BARRIER OF THE TYPE INVOLVED.
 - FOR KEYWAY (F) DIMENSIONS, SEE TYPICAL SECTIONS
 - CONCRETE BARRIER BASE PAY ITEM IS TO BE INCLUDED IF THE BARRIER IS CONSTRUCTED MONOLITHIC OR JOINTED TO BASE. IF JOINTED CONTRACTORS WILL HAVE THE OPTION OF USING A KEYWAY OR TIE BARS AT O.C.

NOTE 1 - 3/4" CHAMFER OR 1" RADIUS (OPTIONAL)
 NOTE 2 - 10" RADIUS (OPTIONAL)
 NOTE 3 - EXTEND BOTTOM OF BARRIER TO FOOTING ONLY WHEN DEPTH IS 6" OR LESS, OTHERWISE MAINTAIN SAME DEPTH AS BOTTOM OF SHOULDER

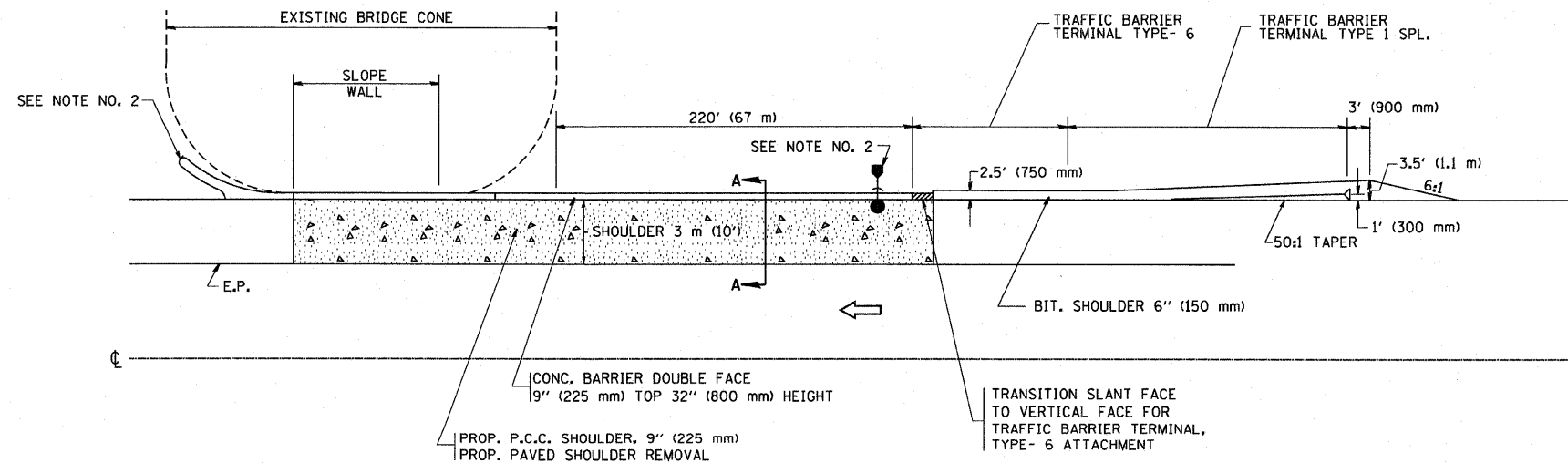
NOTE 4 - PIER FILLER MATERIAL TO BE CONCRETE IF MINIMUM 6" THICKNESS WILL BE MAINTAINED. IF 6" THICKNESS CANNOT BE MAINTAINED USE ASPHALT FILLER MATERIAL AS DIRECTED BY THE ENGINEER.
 NOTE 5 - SAND BACKFILL AND CONCRETE SURFACE WILL BE REQUIRED. FILLING WITH CONCRETE WILL NOT BE ALLOWED.
 NOTE 6 - IF PIER IS NEW CONSTRUCTION BARRIER WALL MAY BE MONOLITHIC

** MAINTAIN SLOPE OF FACE AS SHOWN ON DETAIL. HEIGHT AND WIDTH OF BARRIER INCREASE WHERE A DIFFERENCE IN MEDIAN EDGE-OF-PAVEMENT GRADE ELEVATION EXISTS.
 • COST OF SAND BACKFILL, CONCRETE SURFACE (6"), AND PIER FILLER MATERIAL WILL NOT BE INCIDENTAL.

FILE NAME = M:\dststd\22x34\bd27.dgn	USER NAME = geglianobt	DESIGNED - FORD	REVISED - FORD 12-06-88	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE BARRIER TRANSITION & GENERAL DETAILS, CONCRETE BARRIER BASE			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	57	1414.25	COOK	516	381
		CHECKED -	REVISED -						BD-27				CONTRACT NO. 60327
		DATE - 09-09-88	REVISED -						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



CONC. BARRIER ADJACENT TO SLOPE WALL WITH PIER (DITCH SECTION)



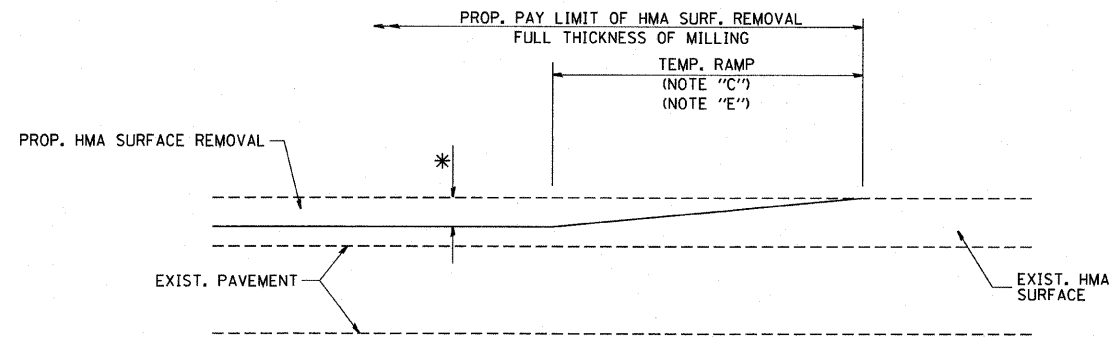
CONC. BARRIER ADJACENT TO SLOPE WALL WITHOUT PIER (DITCH SECTION)

NOTE:

1. SEE STATE STANDARD 630201 FOR STABILIZATION FOR GUARDRAIL.
- *2. THE GUTTER OUTLET AND CATCH BASIN LOCATION IS DEPENDENT ON DIRECTION OF FLOW.
3. USE CONC. BARRIER SINGLE FACE IF CLEARANCE BETWEEN PIER AND SHOULDER IS LESS THAN 27" (685 mm).
4. SEE STATE STANDARD 637001 FOR CONCRETE BARRIER.

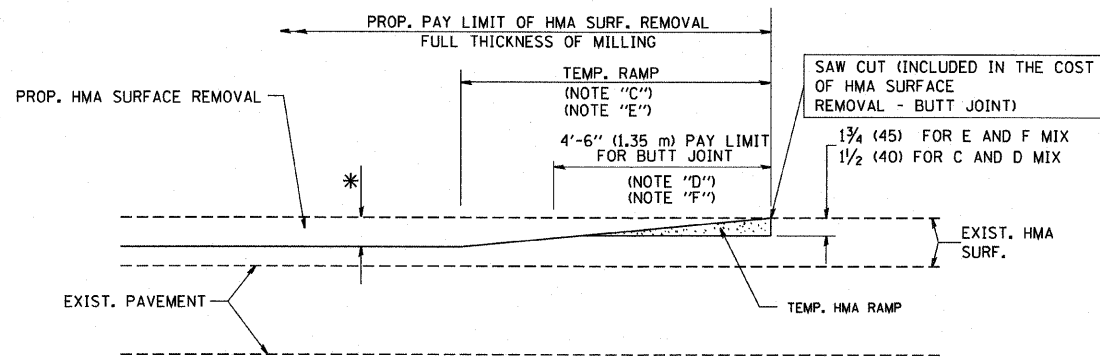
- * CATCH BASIN TYPE C, TYPE 24 FRAME AND GRATE
- * STORM SEWERS, 12" (300 mm)
- * END SECTIONS, 12" (300 mm)

FILE NAME = W:\distsd\22x34\bd29.dgn	USER NAME = geglennob	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE BARRIER PIER AND SLOPE WALL PROTECTION DETAIL		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	57	1414.25	Cook	516	382
		CHECKED -	REVISED -				TO STA.	BD600-08 (BD29)		CONTRACT NO. 60327		
		DATE - 10-18-02	REVISED -					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



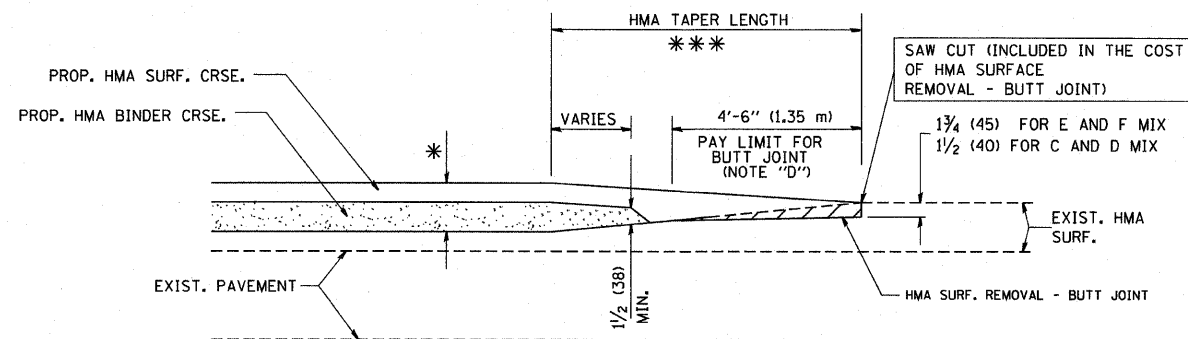
MILLED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1



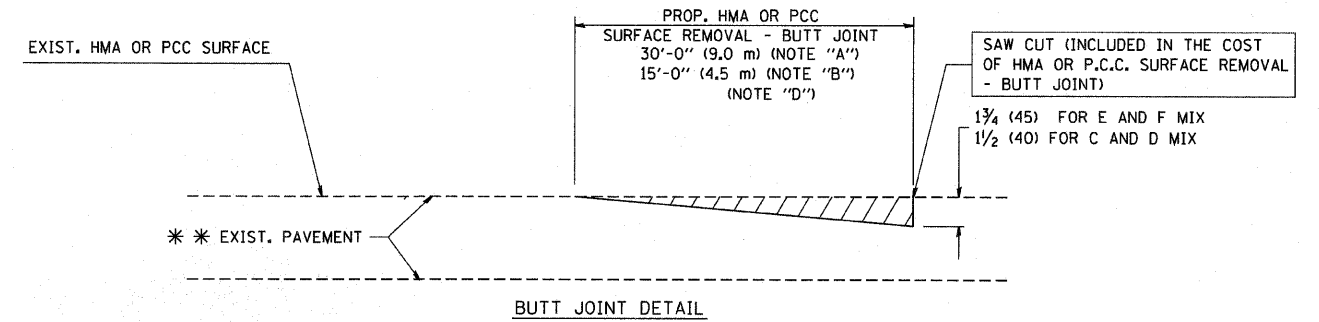
HMA CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 2
TYPICAL TEMPORARY RAMP

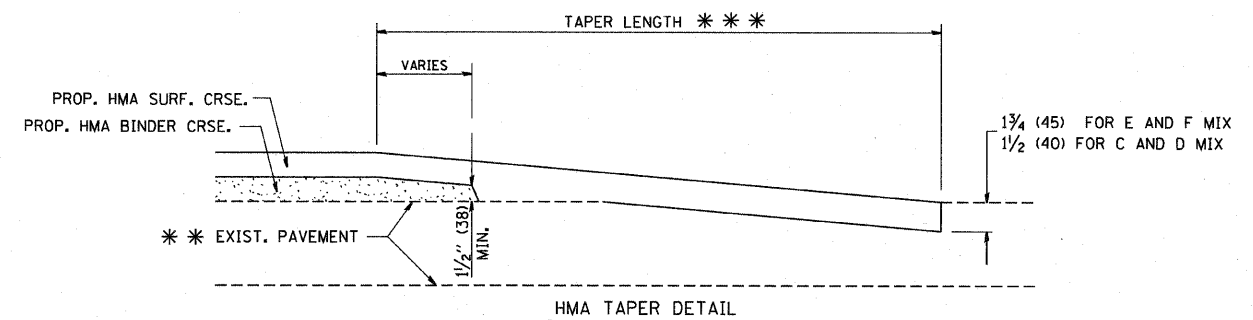


BUTT JOINT AND HMA TAPER

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.

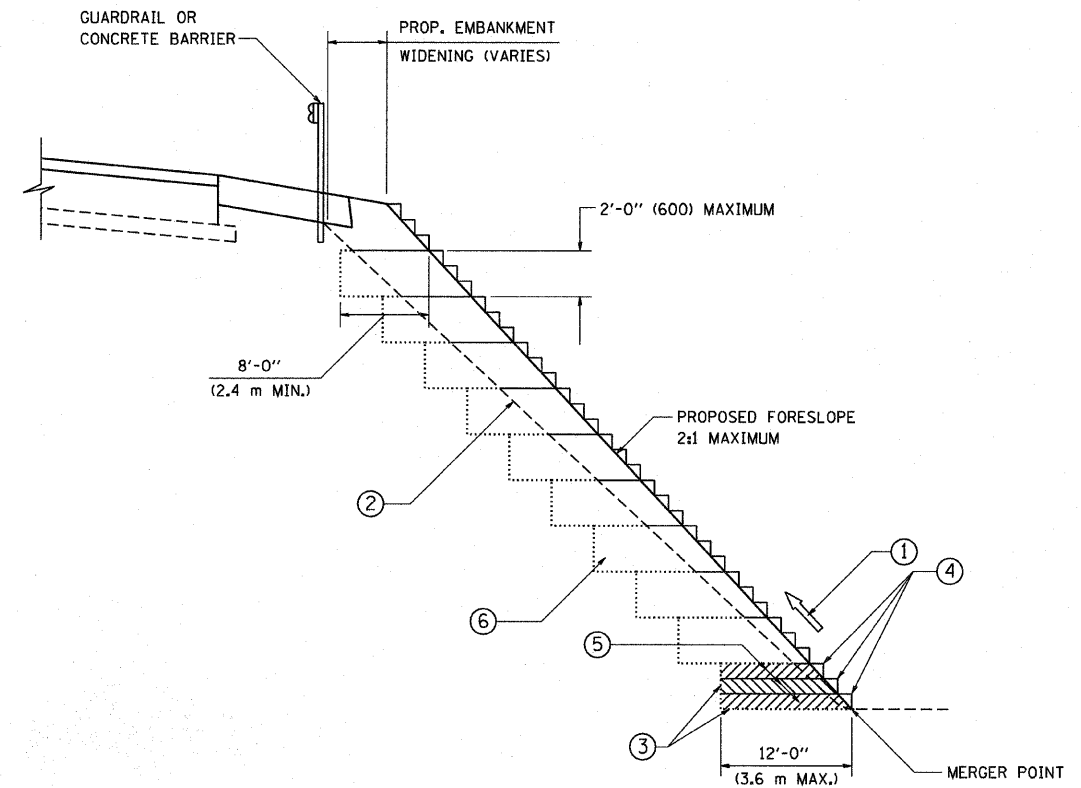
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		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50,0000 ' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA.	TO STA.
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BUTT JOINT AND
HMA TAPER DETAILS

F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
51	1414.2B	COOK	516	383
BD400-05 BD32		CONTRACT NO. 60387		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



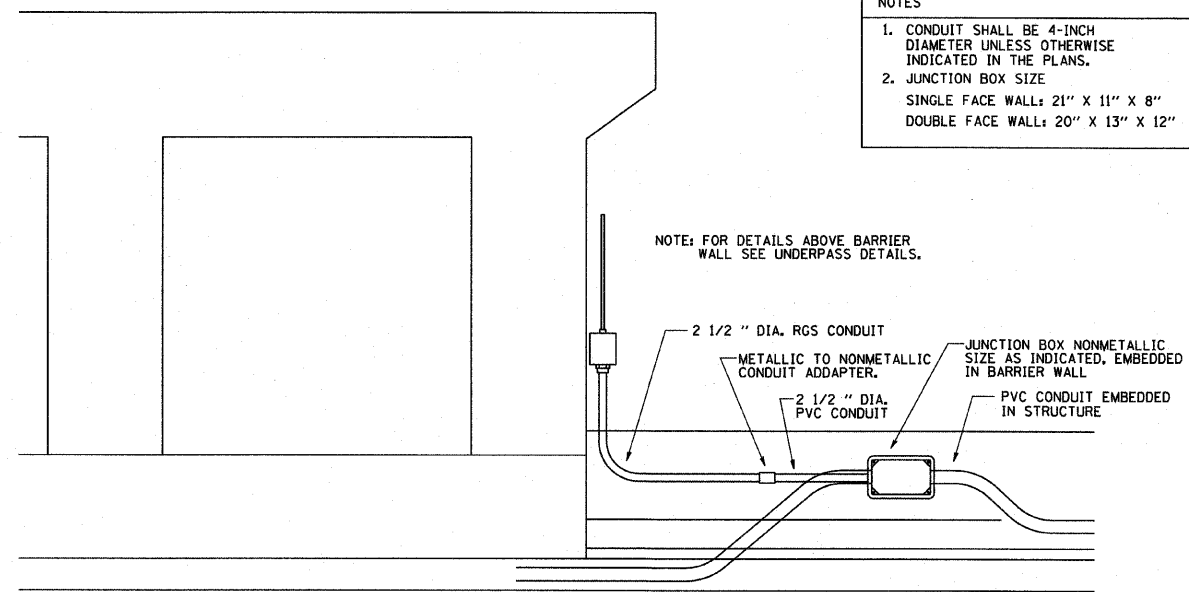
**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

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.

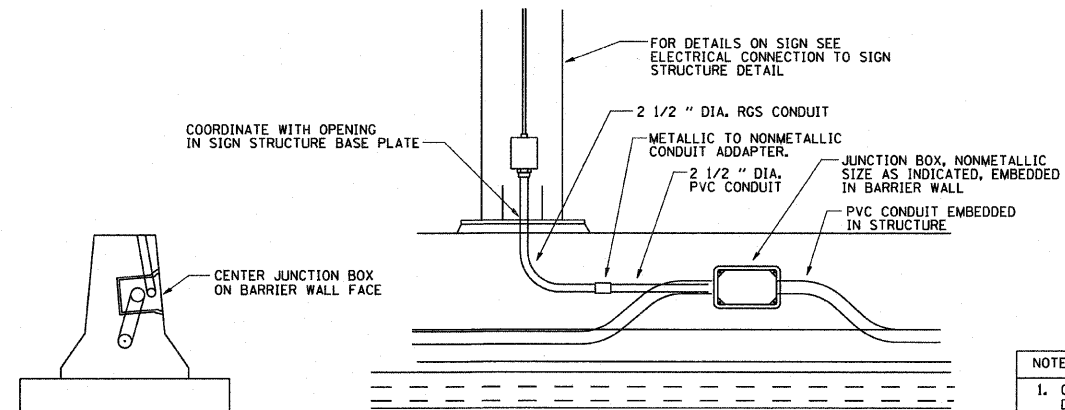
FILE NAME = M:\diststd\22x34\bd51.dgn	USER NAME = geglrenobt	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BENCHING DETAIL FOR EMBANKMENT WIDENING		F.A.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 50.0000' / IN.	CHECKED - S.E.B.	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	67	1414.25	COOK	516 384
	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -							BD-51		CONTRACT NO. 60127
											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"

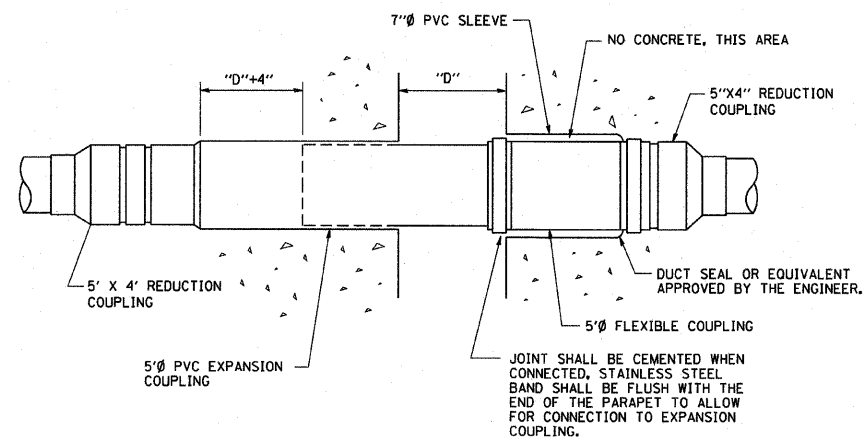
NOTE: FOR DETAILS ABOVE BARRIER WALL SEE UNDERPASS DETAILS.

ED - BWD
 ELECTRIC CONNECTION TO UNDERPASS LIGHTING

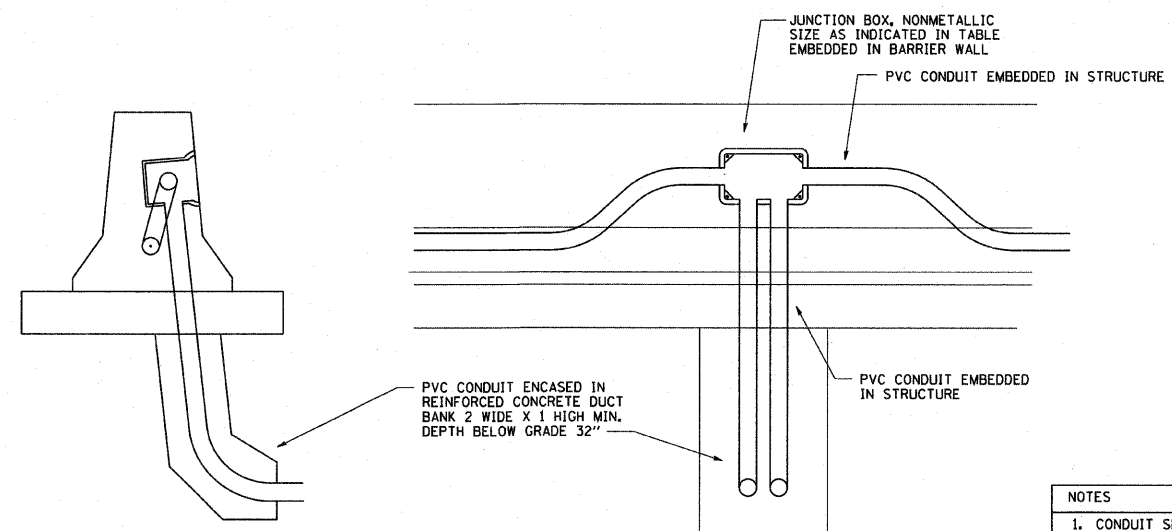


NOTES
 1. CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
 2. JUNCTION BOX SIZE
 SINGLE FACE WALL: 21" X 11" X 8"
 DOUBLE FACE WALL: 20" X 13" X 12"

ED - SGN
 JUNCTION BOX EMBEDDED IN BARRIER WALL FOR SIGN LIGHTING



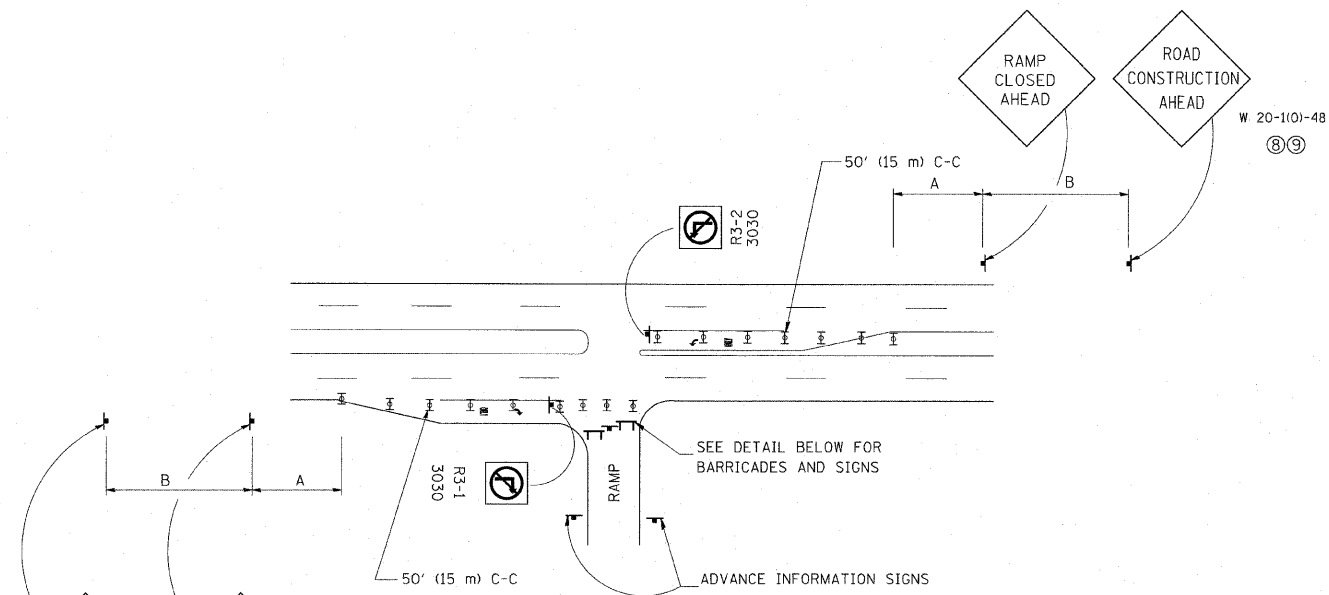
INSTALLATION OF CONDUIT
 IN BRIDGE PARAPET EXPANSION JOINT
 (N.T.S.)



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			F.A. 1/4	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000' / IN.	DRAWN -	REVISED -		J BOX EMBEDDED IN BARRIER WALL - INSTALLATION OF CONDUIT IN BRIDGE PARAPET EXPANSION JOINT - ELECTRIC CONNECTION TO UNDERPASS LIGHTING			51	1414.2B	COOK	516	384A
	PLOT DATE = 2/5/2009	CHECKED -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.			BE-703		CONTRACT NO. 60127		
		DATE = 01-20-2009	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							

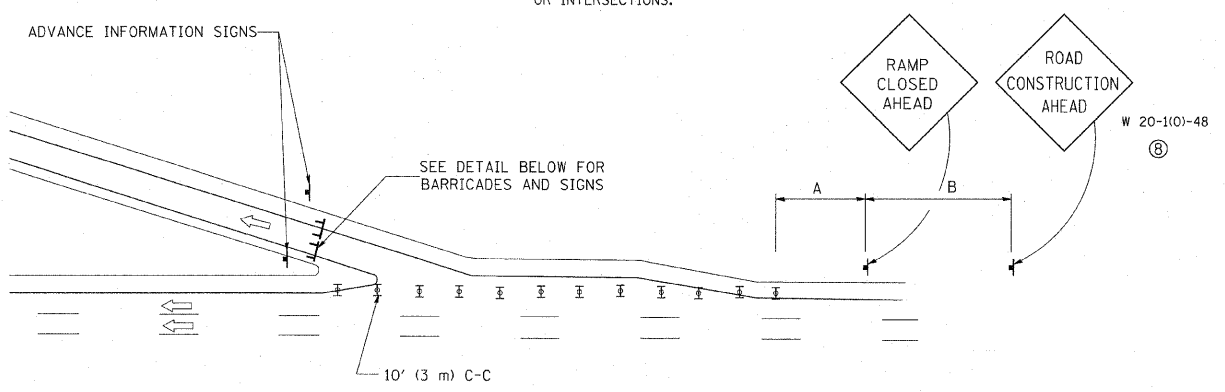
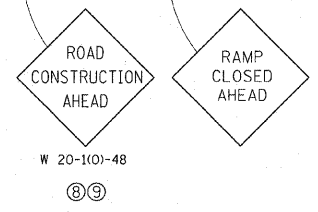


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

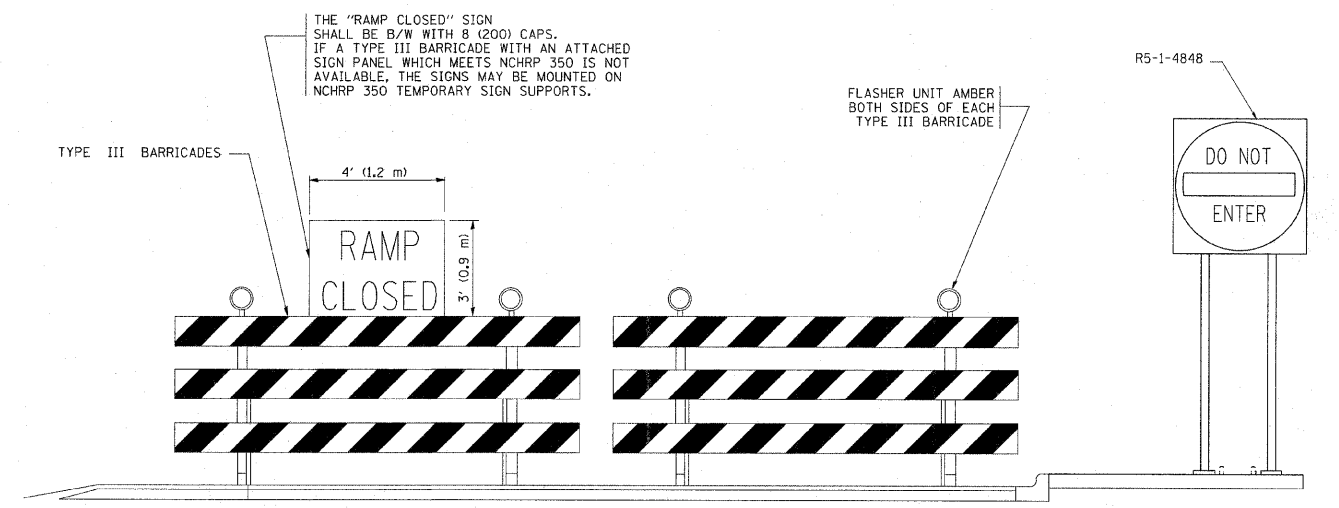
FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL ≥45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	150' (45 m)	150' (45 m)

DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.

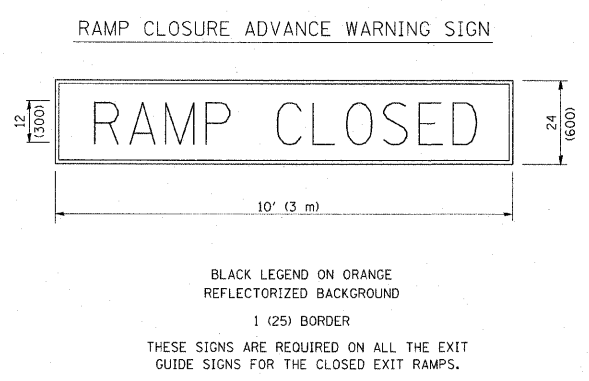


EXIT RAMP CLOSURE

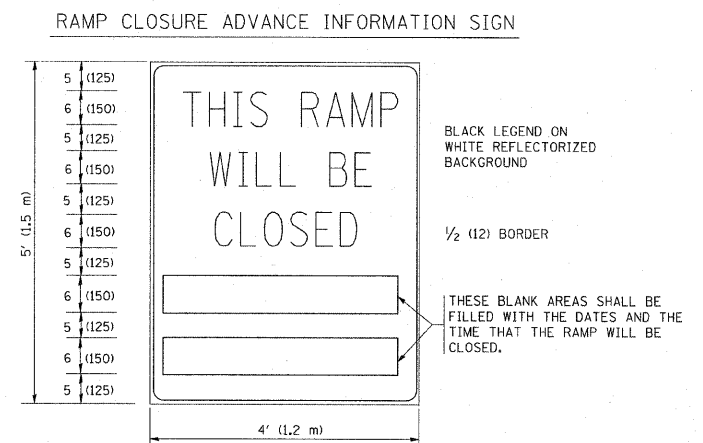
- SYMBOLS**
- ⊥ TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
 - ⊥ TYPE III BARRICADE WITH FLASHING LIGHT



DETAIL FOR REQUIRED BARRICADES & SIGNS



BLACK LEGEND ON ORANGE REFLECTORIZED BACKGROUND
1 (25) BORDER
THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR THE CLOSED EXIT RAMPS.



THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

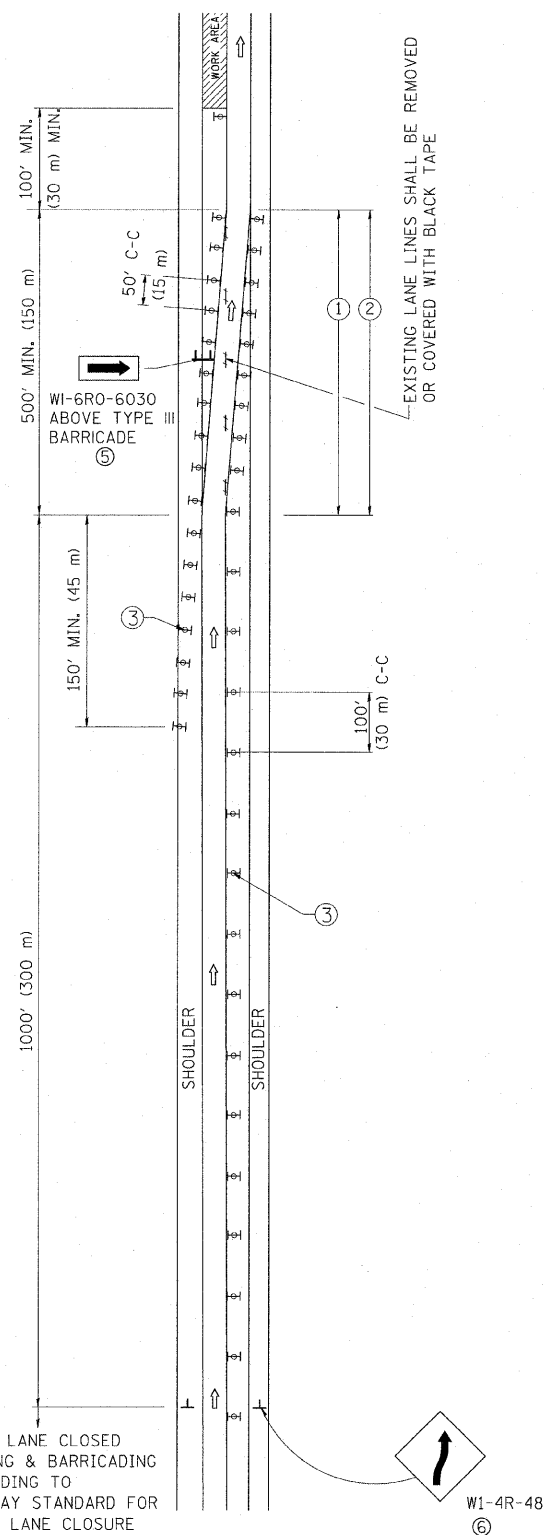
GENERAL NOTES:

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED TWENTY-FOUR (24) HOURS IN LENGTH.
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED ON CLOSURES LESS THAN 24 HOURS IN DURATION.

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

FILE NAME - W:\dist\td\22x34\tc08.dgn	USER NAME - lsgp	DESIGNED - DWS	REVISED - DWS/JAF 12-02	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FREWAY ENTRANCE AND EXIST RAMP CLOSURE DETAILS	F.A.T. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 385
PLOT SCALE = 50,000' / IN.	CHECKED -	DATE - 02-83	REVISED - JAF 02-06	REVISED - SPB 01-07	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 60321	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

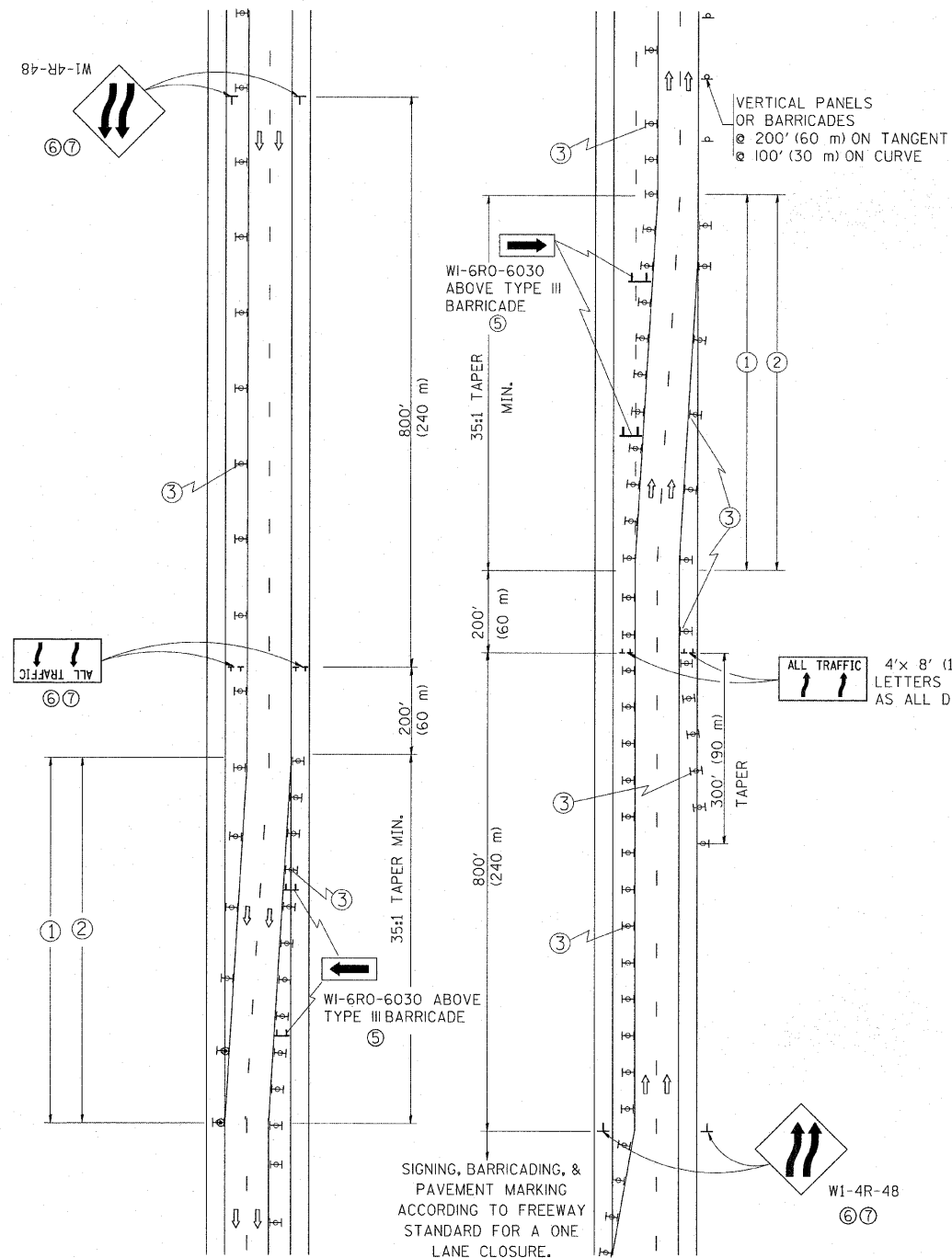
SINGLE LANE WEAVE



RIGHT LANE CLOSED
SIGNING & BARRICADING
ACCORDING TO
FREEWAY STANDARD FOR
A ONE LANE CLOSURE

W1-4R-48
⑥

MULTI-LANE WEAVE



VERTICAL PANELS
OR BARRICADES
@ 200' (60 m) ON TANGENT
@ 100' (30 m) ON CURVE

ALL TRAFFIC 4' x 8' (1.2 m x 2.4 m); 1 (25) BORDER; 10 (250) CAPITAL
LETTERS BACKGROUND SHEETING SHALL BE THE SAME
AS ALL DIAMOND SHAPED CONSTRUCTION SIGNS.

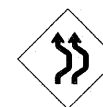
W1-4R-48
⑥ ⑦

GENERAL NOTES

- ① EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 24 HOURS IN DURATION.
- ② CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- ③ PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ④ ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ⑤ IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON NCHRP 350 TEMPORARY SIGN SUPPORTS. TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- ⑥ WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'x8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- ⑦ THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

SYMBOLS

- ↑ DIRECTION OF TRAFFIC
- ▨ WORK AREA
- ┆ SIGN ON PORTABLE OR PERMANENT SUPPORT
- ⊞ TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT



W24-1-48
⑦

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN

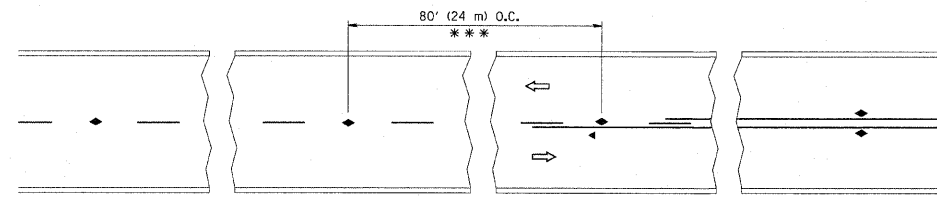
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		DRAWN -	REVISED - JAF 02-06
	PLOT SCALE = 5/8" = 1' / IN.	CHECKED -	REVISED - SPB 01-07
	PLOT DATE = 1/26/2010	DATE - 02-87	REVISED - SPB 12-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR
FREEWAY SINGLE & MULTI-LANE WEAVE

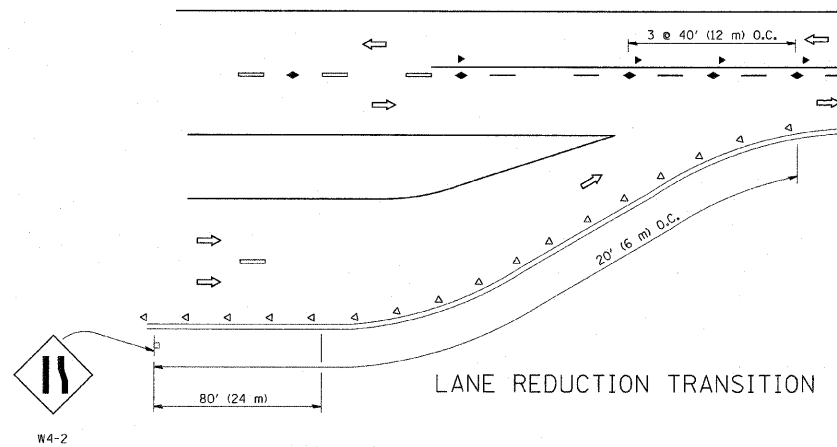
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.E. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
67	1414.2B	COOK	516	386
TC-09			CONTRACT NO. 60321	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

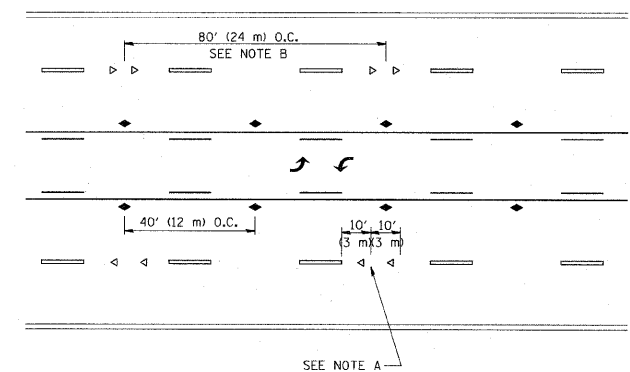


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

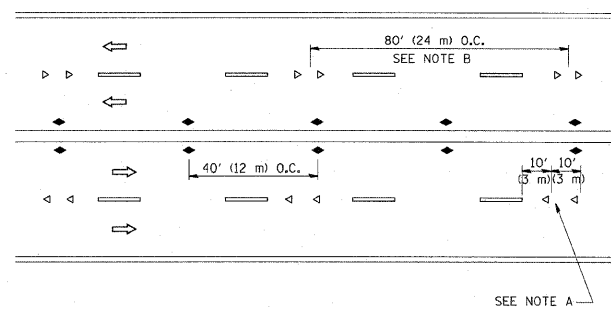
TWO-LANE/TWO-WAY



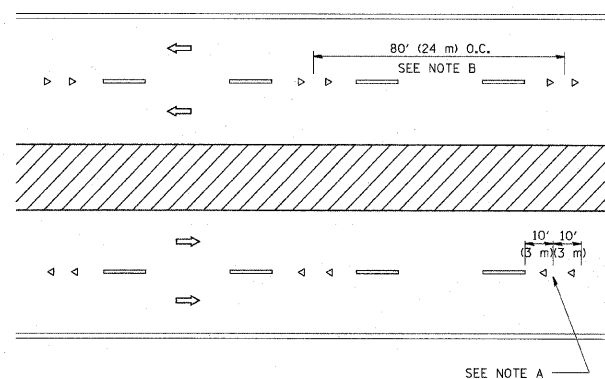
LANE REDUCTION TRANSITION



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

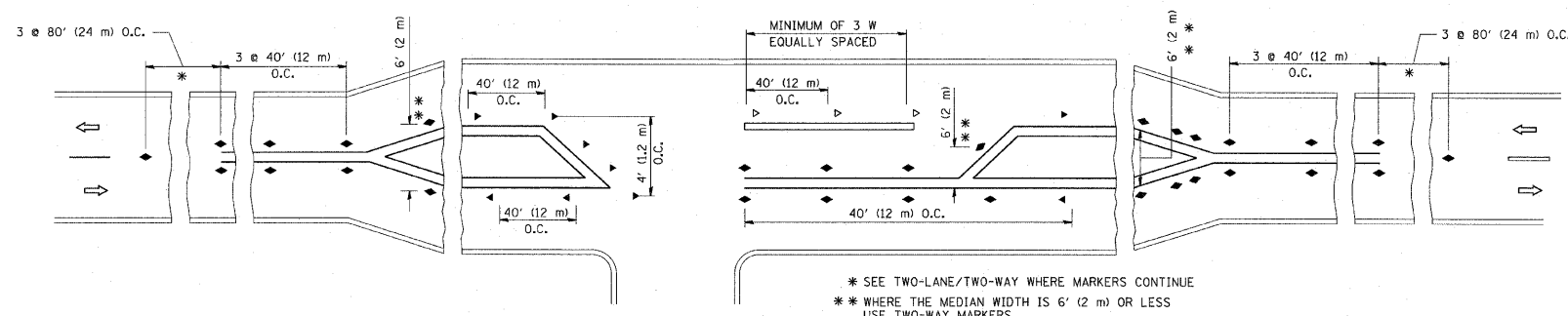
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◀ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

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 SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

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

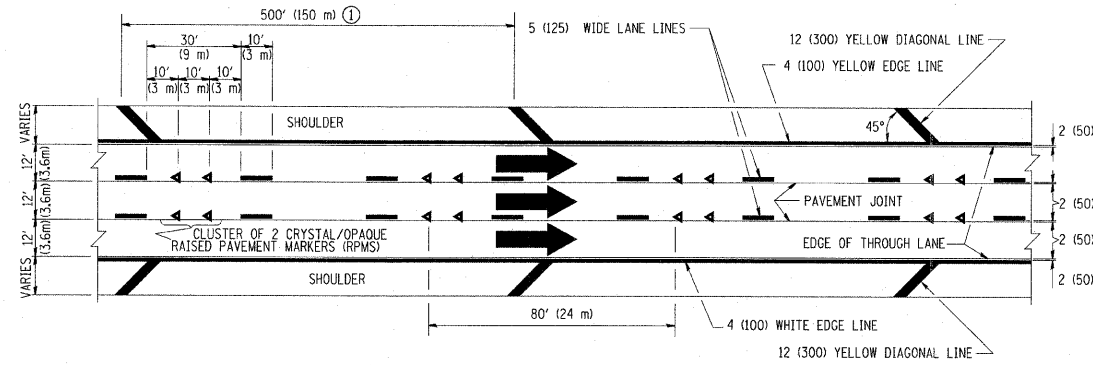
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = drivekosgn	DESIGNED -	REVISED - T. RAMMACHER 09-19-94
c:\pe_work\pwidot\drivekosgn\d0108315\td01.dgn		DRAWN -	REVISED - T. RAMMACHER 03-12-99
		CHECKED -	REVISED - T. RAMMACHER 01-06-00
		DATE -	REVISED - C. JUCIUS 09-09-09

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS			
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

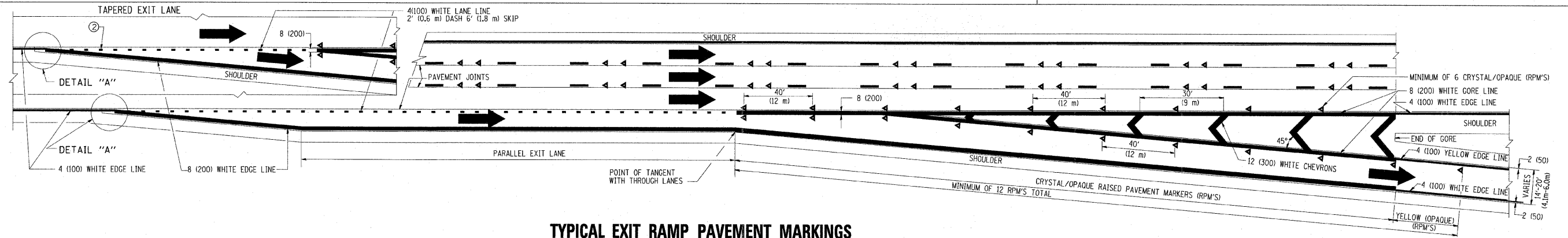
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	387
TC-11			CONTRACT NO. 60327	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



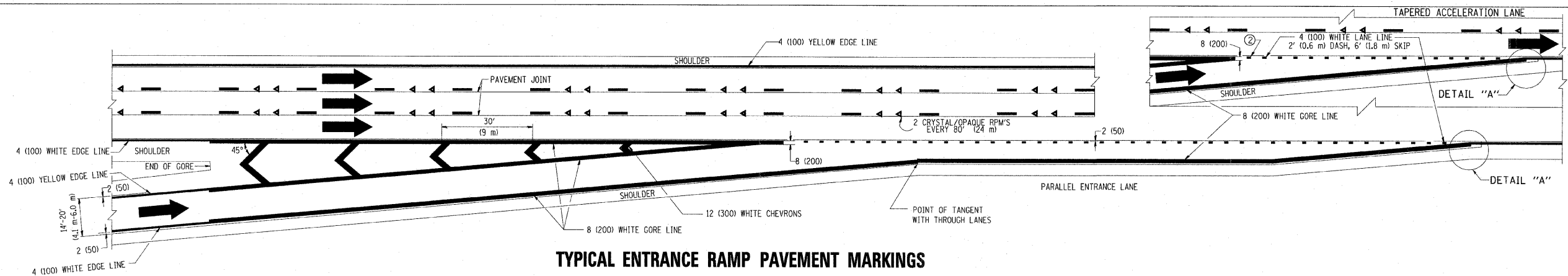
TYPICAL EDGE LINES & LANE LINES

PAVEMENT MARKING MATERIALS

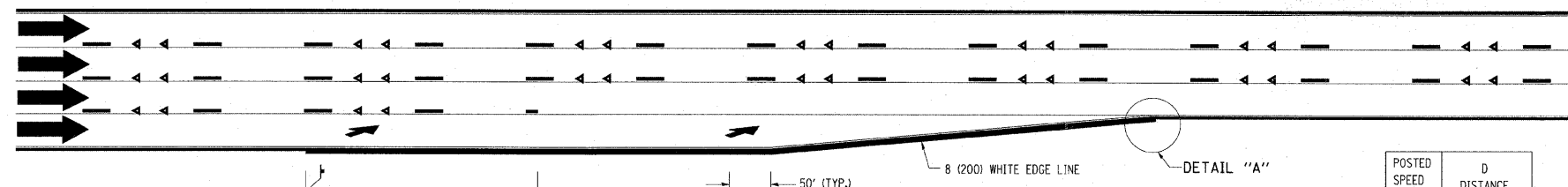
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES ON BITUMINOUS PAVEMENT.
3. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS ON PCC.



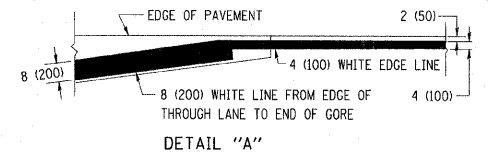
TYPICAL EXIT RAMP PAVEMENT MARKINGS



TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS



LANE REDUCTION PAVEMENT MARKINGS



NOTES:

- ① THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH. THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH.
- ② 4" (2' DASH, 6' SKIP) MARKING ON TAPERED ENTRANCE AND EXIT RAMP SHALL BE OMITTED ON TANGENT SECTIONS.

POSTED SPEED LIMIT	D DISTANCE
45 MPH	750' (230 m)
55 MPH	950' (290 m)
65 MPH	1200' (365 m)

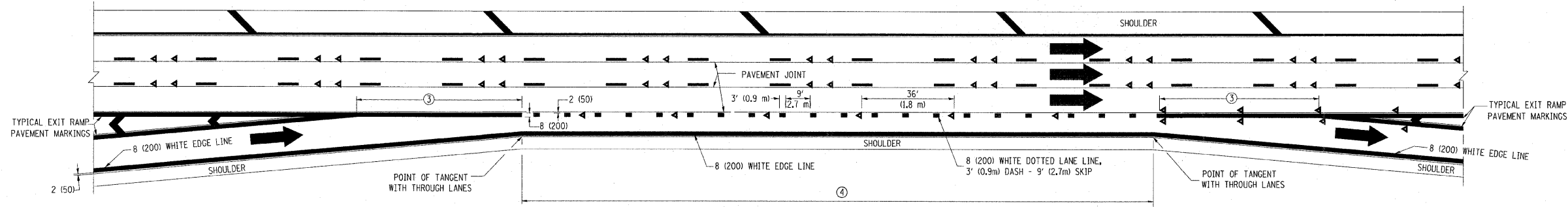
FILE NAME =	USER NAME = leyso	DESIGNED - D.W.S.	REVISED - D.W.S. 07-96
DRAWN -	CHECKED -	DATE - 01-90	REVISED - J.A.F. 02-06
PLOT SCALE = 50.000' / IN.		REVISED - S.P.B. 01-07	
PLOT DATE = 1/22/2010		REVISED - S.P.B. 01-10	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

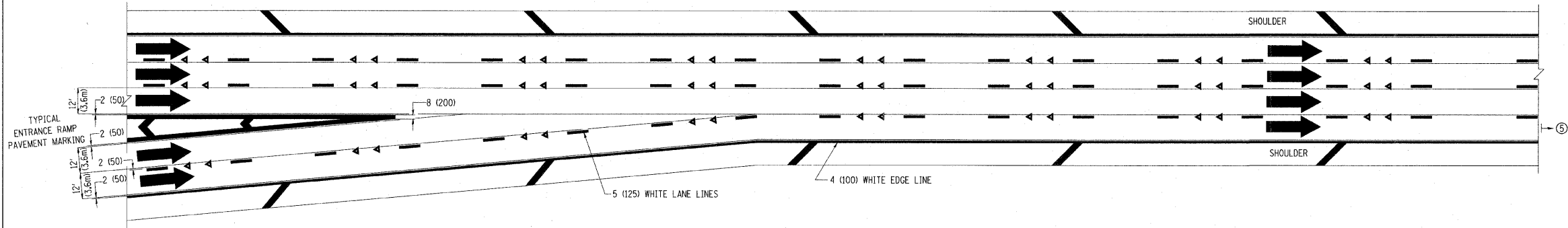
**MULTI-LANE FREEWAY
PAVEMENT MARKING DETAILS**

SCALE: NONE SHEET NO. 1 OF 2 SHEETS STA. TO STA.

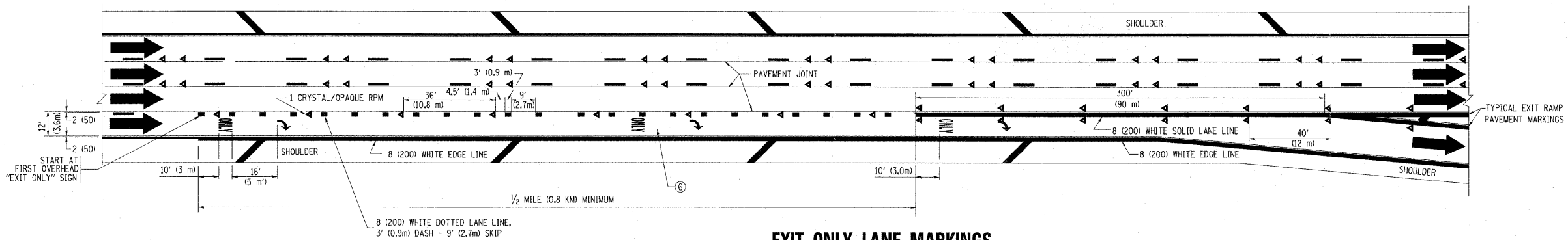
F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-12			CONTRACT NO. 60327	
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				



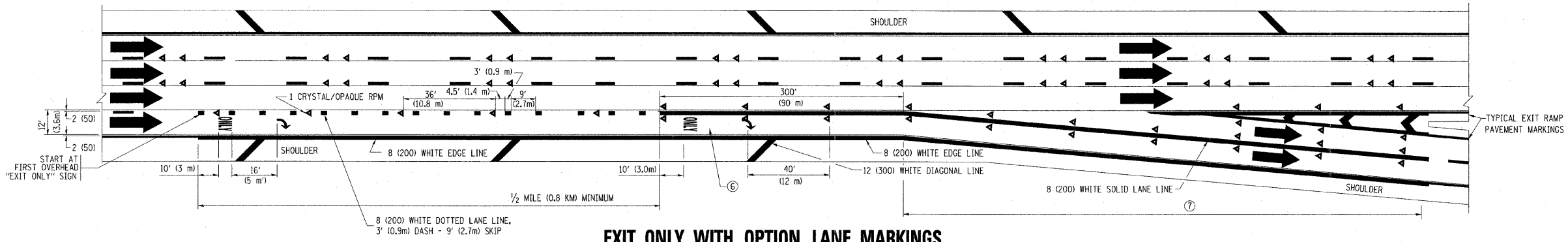
AUXILIARY LANE MARKINGS



TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS



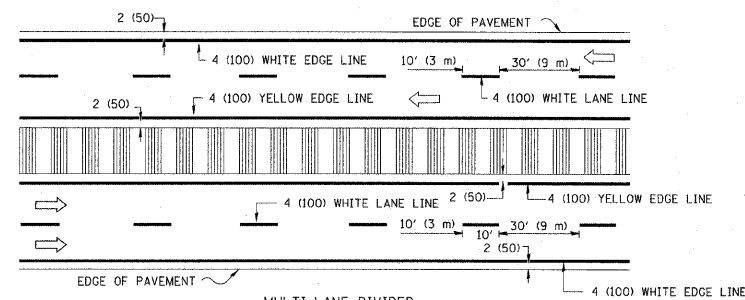
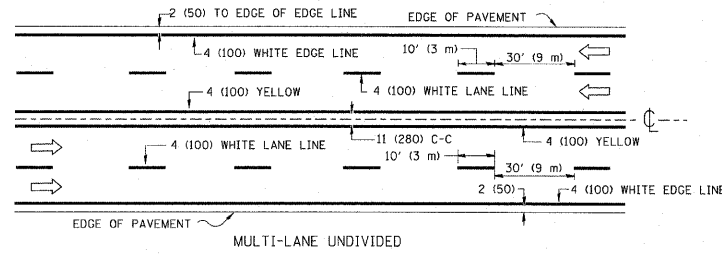
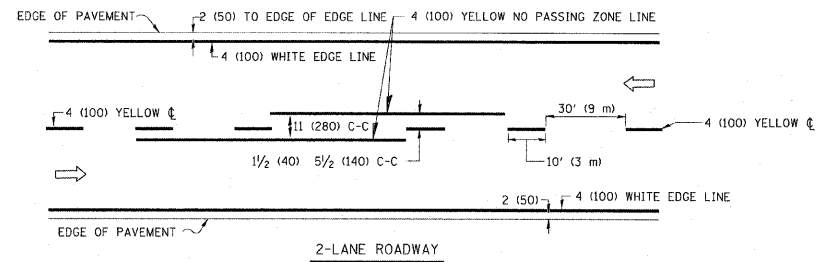
EXIT ONLY LANE MARKINGS



EXIT ONLY WITH OPTION LANE MARKINGS

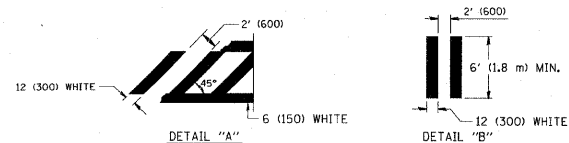
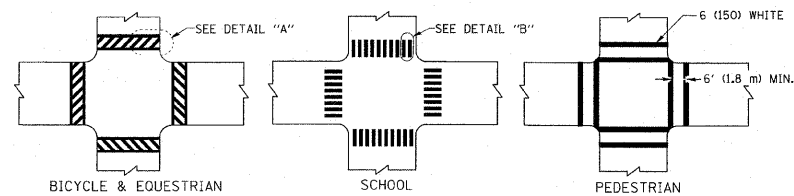
- NOTES**
- ③ OMIT WHEN LENGTH OF AUXILIARY LANE IS LESS THAN 500' (150 m).
 - ④ 8-INCH WIDE DOTTED LANE LINE MARKINGS SHALL BE USED WHEN THE LENGTH OF THE AUXILIARY LANE IS 2 MILES OR LESS.
 - ⑤ FOR TWO-LANE ENTRANCE RAMP, IF RIGHT LANE ENDS, USE TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS.
 - ⑥ ONLY AND ARROWS EQUALLY SPACED, 500' (150 m) MAXIMUM SPACING. FULL SIZE LETTERS AND ARROW SHALL BE USED.
 - ⑦ CONTINUE 8" SOLID LANE LINE THROUGH EXIT TO END OF PAVED GORE.

FILE NAME =	USER NAME = lsgno	DESIGNED - D.W.S.	REVISED - D.W.S. 07-96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
es:\pwwork\pww\DOT\LEYSAN\0180315\ct12.dgn		DRAWN -	REVISED - J.A.F. 02-06		SCALE: NONE	SHEET NO. 2 OF 2 SHEETS	STA.	57	1414.2B	COOK	516	389
		CHECKED -	REVISED - S.P.B. 01-07				TO STA.	TC-12				
		DATE - 01-90	REVISED - S.P.B. 01-10					CONTRACT NO. 60327				
							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

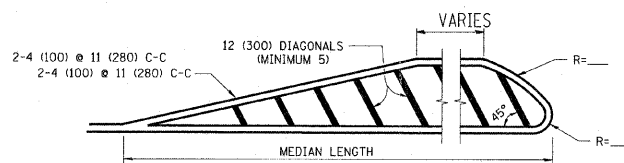
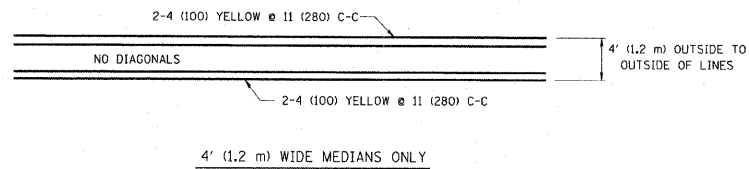


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

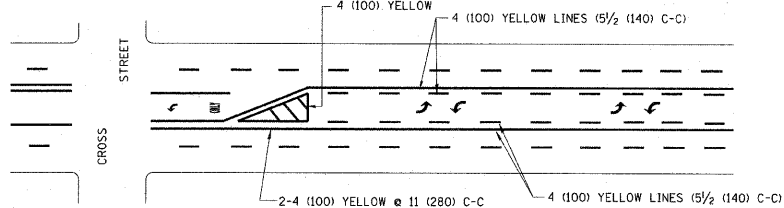


TYPICAL CROSSWALK MARKING

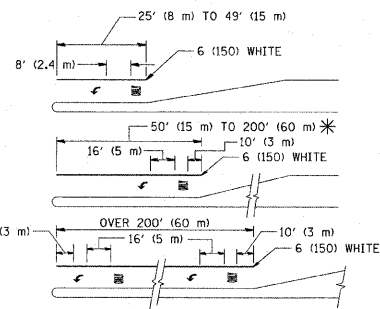


FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C (30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

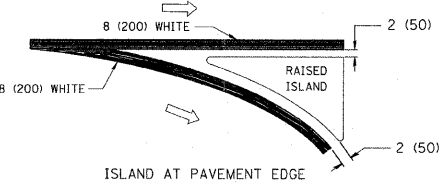
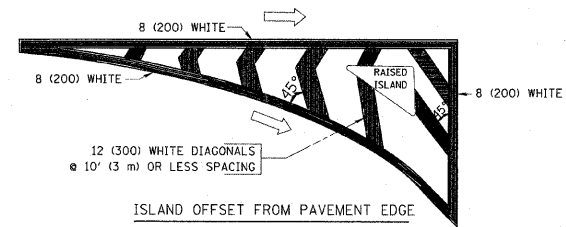


TYPICAL PAINTED MEDIAN MARKING



* 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 TURN LANE MARKING



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 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2 (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 @ 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; 5 1/2 (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 @ 6 (150) 12 (300) @ 45° 12 (300) @ 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 @ 4 (100) WITH 12 (300) DIAGONALS @ 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 @ 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 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) @ 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 =	USER NAME = drivakosgn	DESIGNED - EVERS	REVISED - T. RAMMACHER 10-27-94
DRAWN -	CHECKED -	DATE - 03-19-90	REVISED - C. JUCIUS 09-09-09
PLOT SCALE = 50,000' / IN.			
PLOT DATE = 9/9/2009			

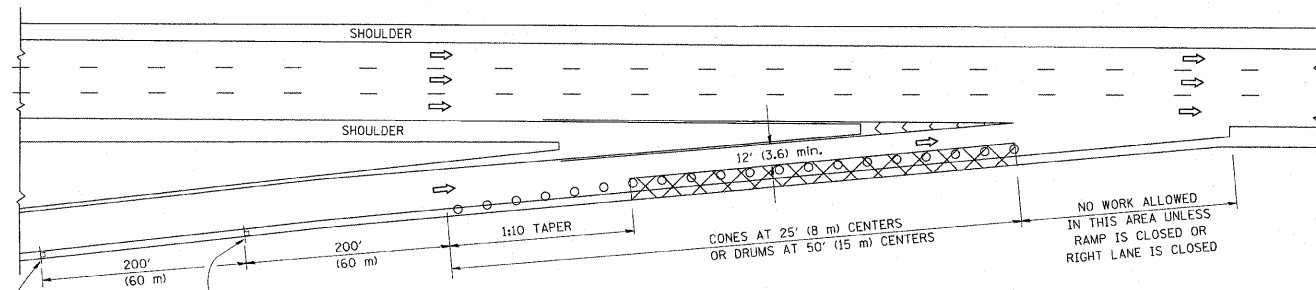
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

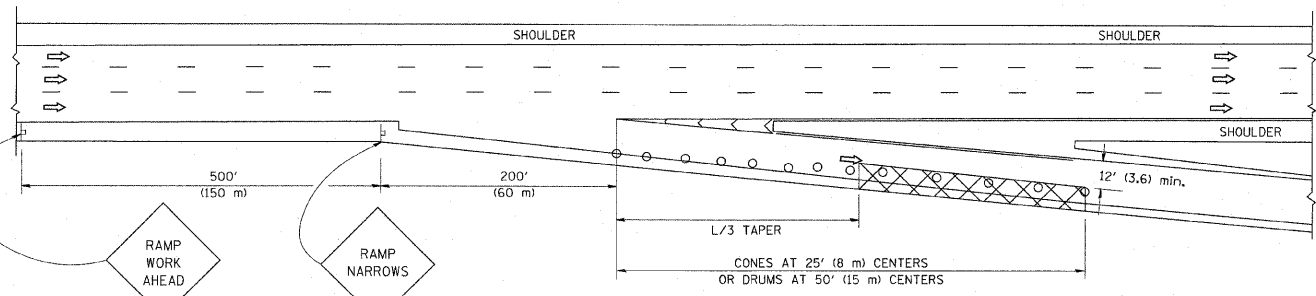
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	390
TC-13			CONTRACT NO. 60327	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

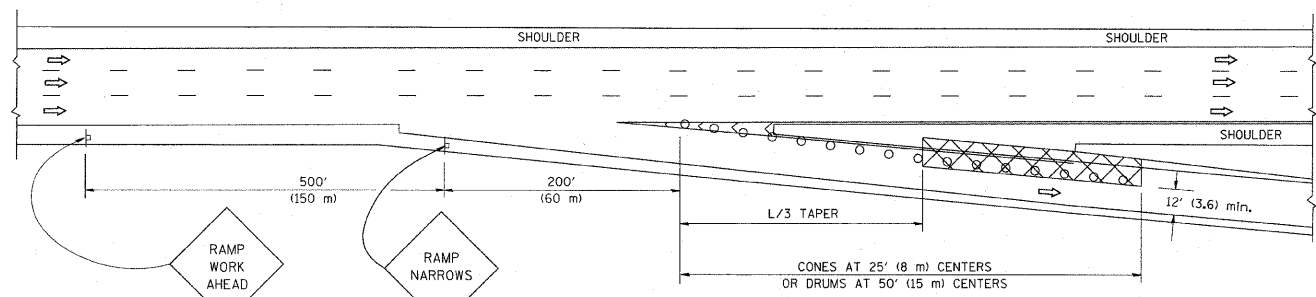
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

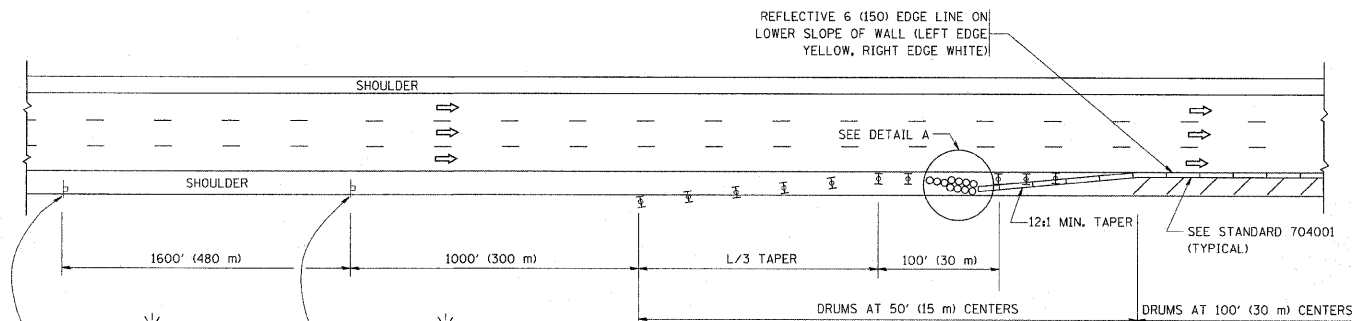
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

GENERAL NOTES

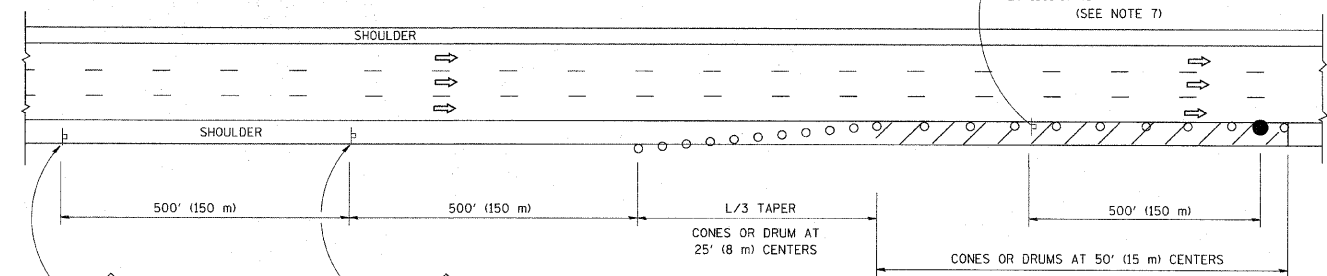
1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC ENGLISH L=0.65(W/S) L=(WXS)
W = WIDTH OF OFFSET IN FEET (METERS)	
S = NORMAL POSTED SPEED MPH (KM/H)	
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

SHOULDER CLOSURE DETAILS

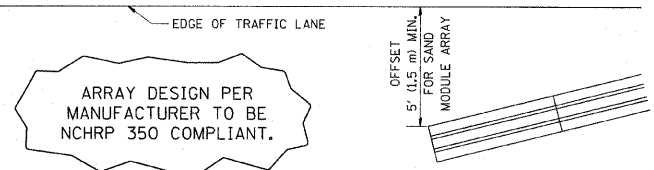


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRUCH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



DETAIL "A"
IMPACT ATTENUATOR, TEMPORARY
(SEE NOTE 5)

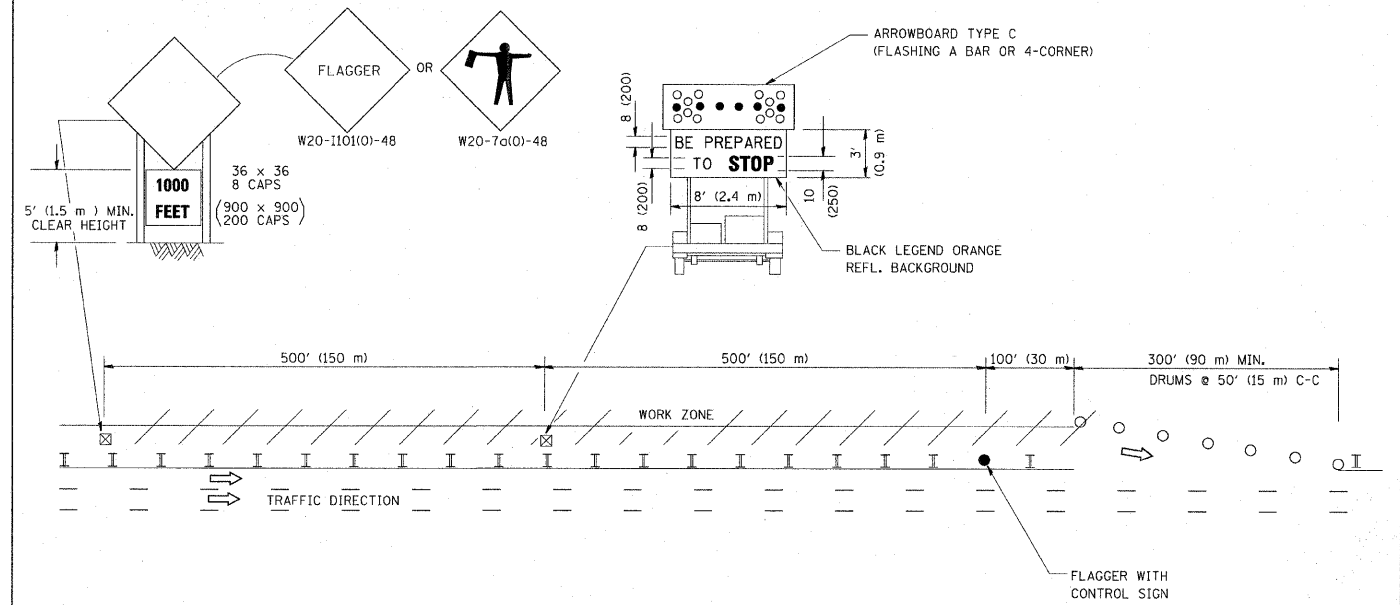
5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
 - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
 - b. THE WORK AVTIVITY REQUIRES FREQUENT ENCRUCHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.

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

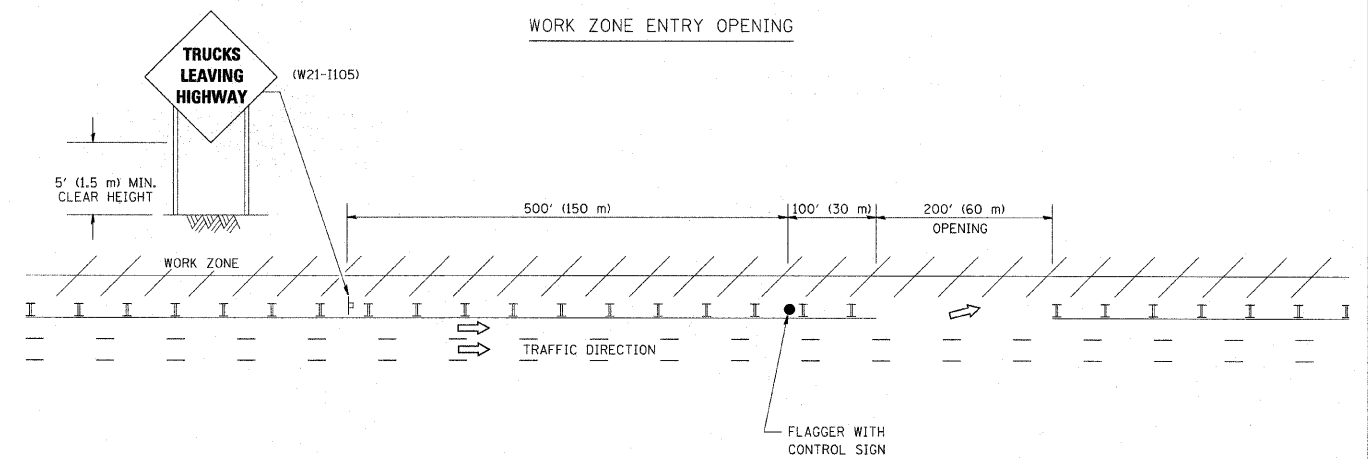
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SCALE: NONE					SHEET NO. 1 OF 1 SHEETS		STA. TO STA.		FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT		

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. THE ARROWBOARD, THE FLAGGER AHEAD SIGN AND THE TRUCKS LEAVING HIGHWAY SIGN SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE EXIT OPENINGS SHOULD BE A MINIMUM OF ONE HALF MILE APART.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

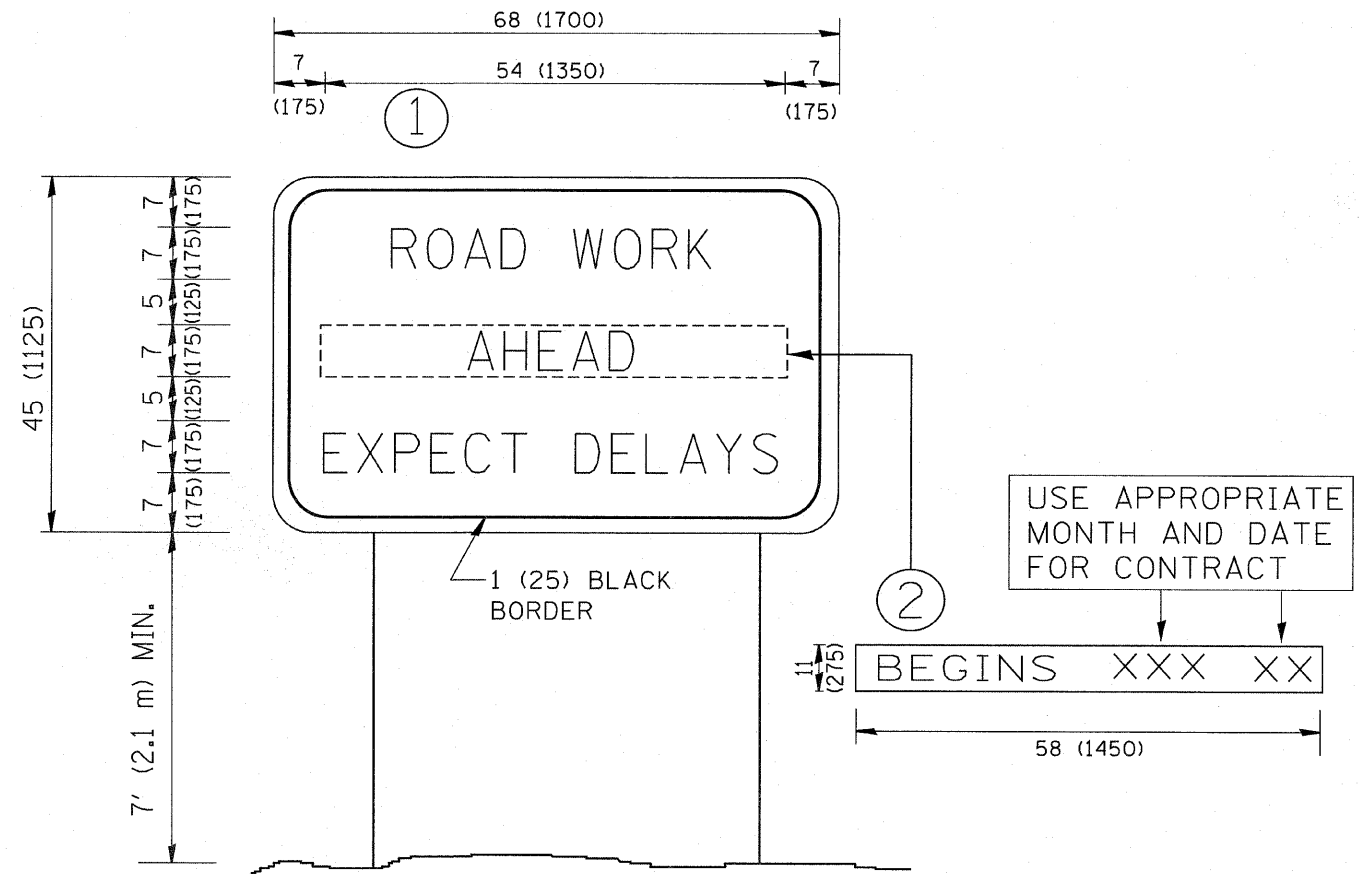
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		DRAWN -	REVISED - J.A.F. 02-06
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - S.P.B. 01-07
	PLOT DATE = 1/26/2010	DATE -	REVISED - S.P.B. 12-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING FOR FLAGGING OPERATIONS
AT WORK ZONE OPENINGS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
67	1414.2B	COOK	516	392
TC-18			CONTRACT NO. 60327	
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.

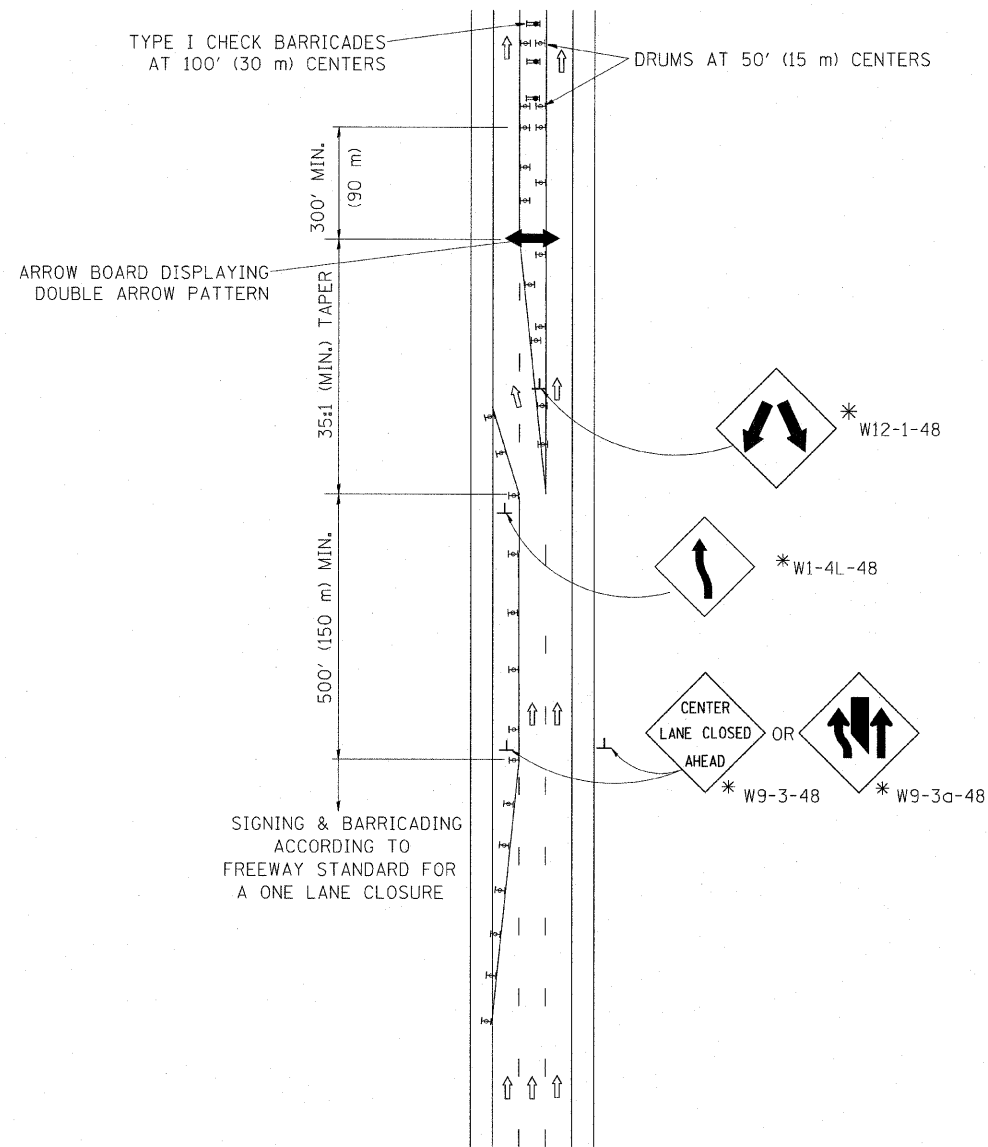
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	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

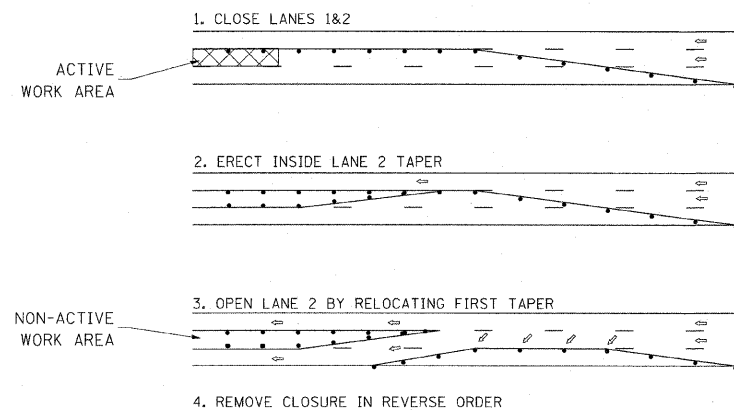
ARTERIAL ROAD INFORMATION SIGN	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	393
TC-22			CONTRACT NO. 60327	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

CENTER LANE CLOSURE



INSTALLATION SEQUENCE

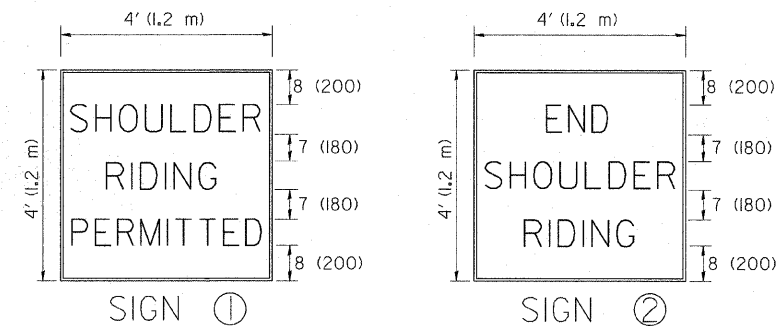
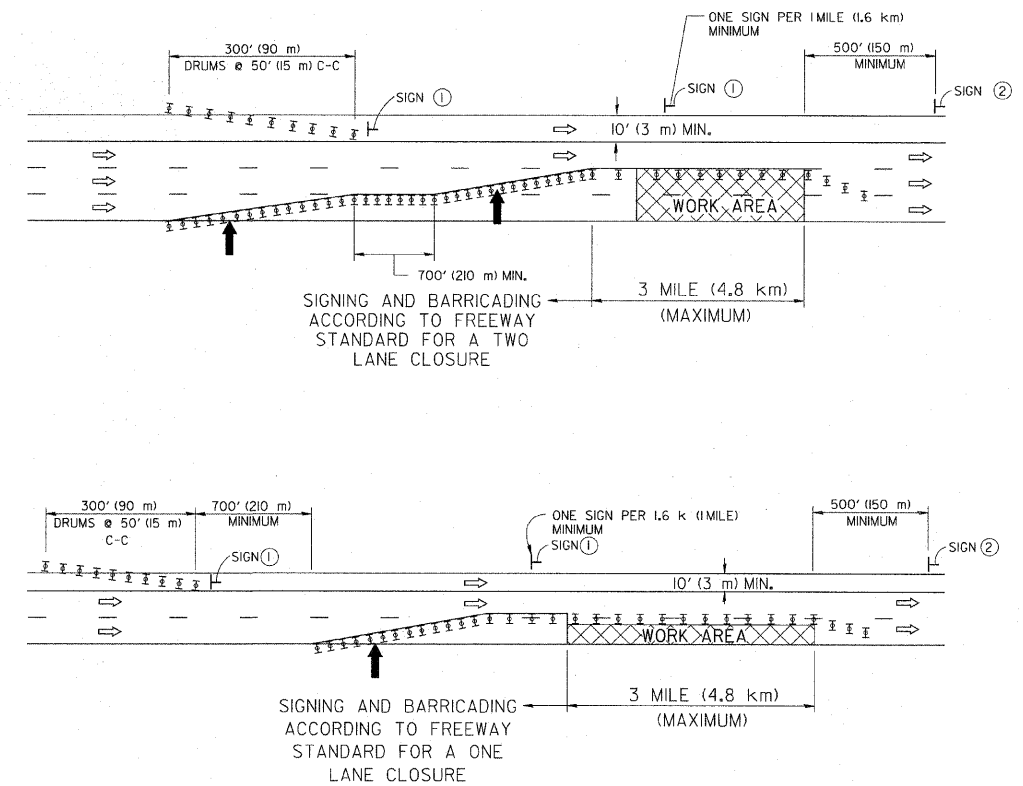


NOTES

1. DRUMS WITH STEADY BURN LIGHTS SHALL BE USED AT 50' (15 m) CENTERS ON ALL TAPERS AND TANGENTS IN ADVANCE OF WORK AREA.
2. CLOSURE SHALL BE USED ONLY FOR OPERATIONS LASTING 72 HOURS OR LESS.
3. CENTER LANE CLOSURE CONFIGURATION IS NOT TO BE USED WITH WORKERS PRESENT.

SHOULDER LANE

NOTE: CLOSURE SHALL BE USED ONLY FOR OPERATIONS LASTING 72 HOURS OR LESS.



SYMBOLS

- ↑ DIRECTION OF TRAFFIC
- ➔ ARROWBOARD
- ▣ ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT *
- ⊥ TYPE II BARRICADE, OR DRUM WITH MONO-DIRECTIONAL STEADY BURN LIGHT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

* ALL SIGNS SHALL BE MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).

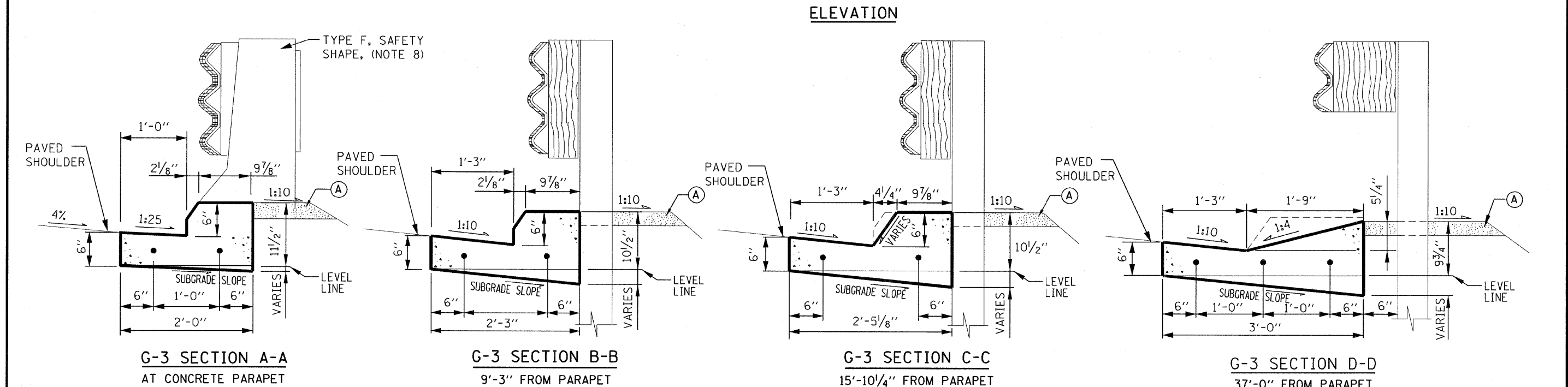
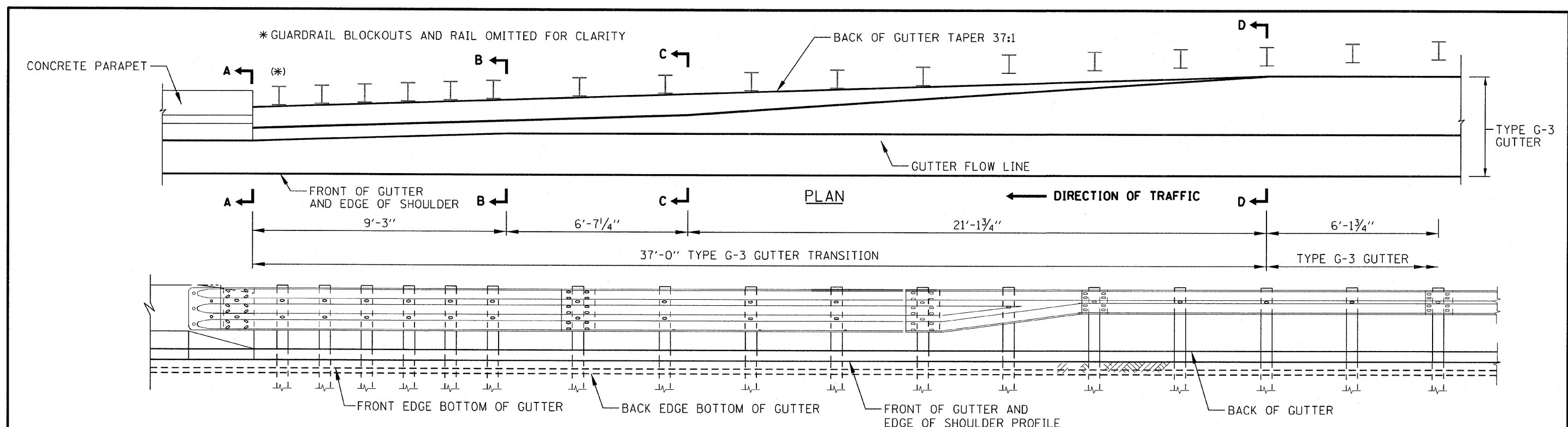
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		DRAWN -	REVISED - S.P.B. 01-07
	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED - S.P.B. 12-09
	PLOT DATE = 1/26/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY
CENTER LANE CLOSURE SHOULDER LANE

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

F.A.I. RTE. 57	SECTION 1414.2b	COUNTY Cook	TOTAL SHEETS 516	SHEET NO. 394
TC-25			CONTRACT NO. 60322	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



- GUTTER TRANSITION NOTES:**
1. Slope to match adjacent shoulder slope (typically 4%).
 2. The Type G-3 gutter transition shall be paid for per foot for concrete gutter Type G-3.
 3. Provide 1" expansion joint with preformed joint filler between transition section and wingwall or barrier wall.
 4. Installation on curved wingwalls similar.
 5. For details of anchor installation Type T6 see Tollway Standard C9 (Traffic Barrier Terminal, Type T6).
 6. Gutter transitions shall be constructed to fit the standard location of the anchor installation Type T6.
 7. All slopes are expressed as units of vertical displacement to units of horizontal displacement (V:H).
 8. Gutter section at barrier wall to match vertical profile of safety shape.
 9. Gutter reinforcement steel #4 epoxy coated rebar.

LEGEND

(A) Aggregate Shoulders Special, Type C

APPROVED.....
Paul Kovacs
 CHIEF ENGINEER DATE 6-1-2009...

TYPE G-3 GUTTER TRANSITION AT TRAFFIC BARRIER TERMINAL, TYPE T6

DATE	REVISIONS
6-1-2009	MODIFIED BARRIER TERMINAL DETAILS REVISED NOTES
3-1-2010	REVISED G-2/G-3 GUTTER TRANSITION DETAILS, REVISED NOTES

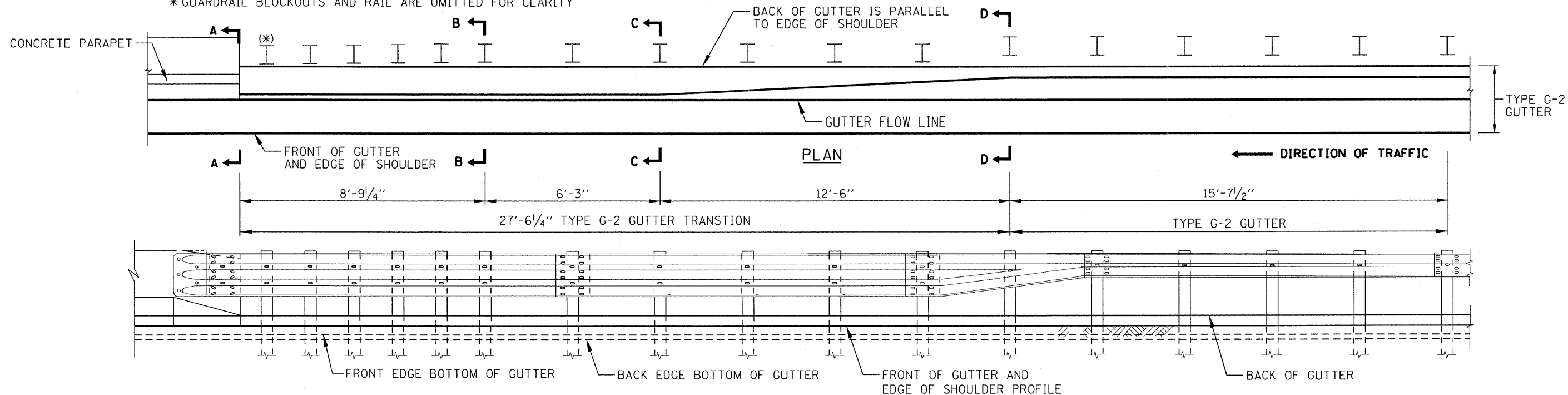
SHEET 1 OF 2

Illinois Tollway
Open Roads for a Faster Future

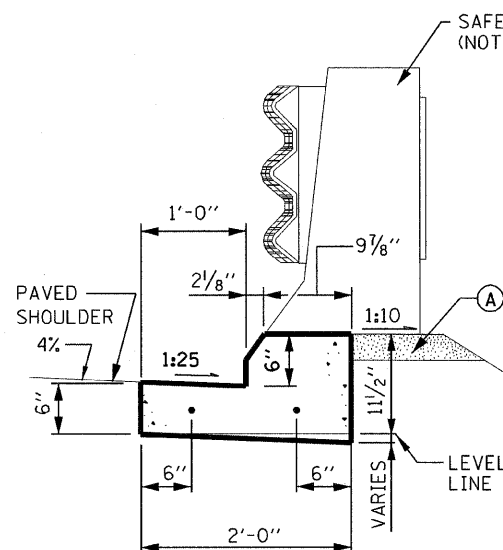
TYPE G-2/G-3 GUTTER
 TRANSITION AT TRAFFIC
 BARRIER TERMINAL, TYPE T6

STANDARD B3-01

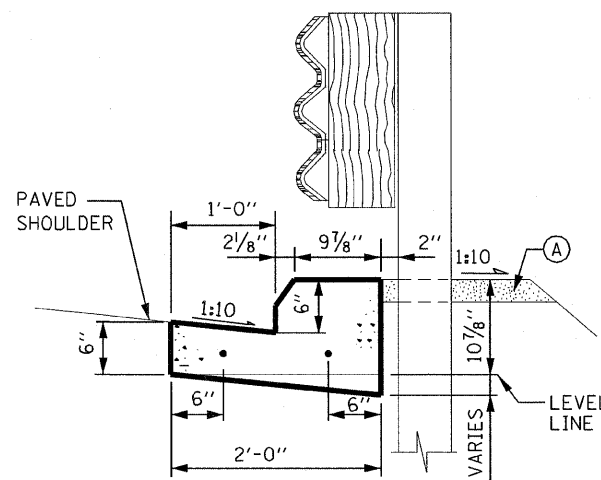
* GUARDRAIL BLOCKOUTS AND RAIL ARE OMITTED FOR CLARITY



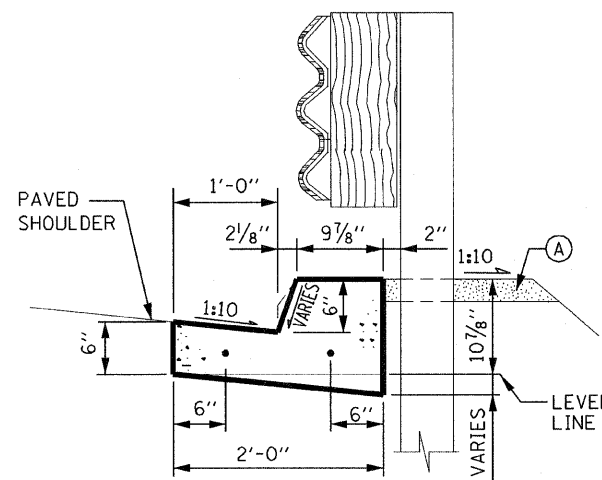
ELEVATION



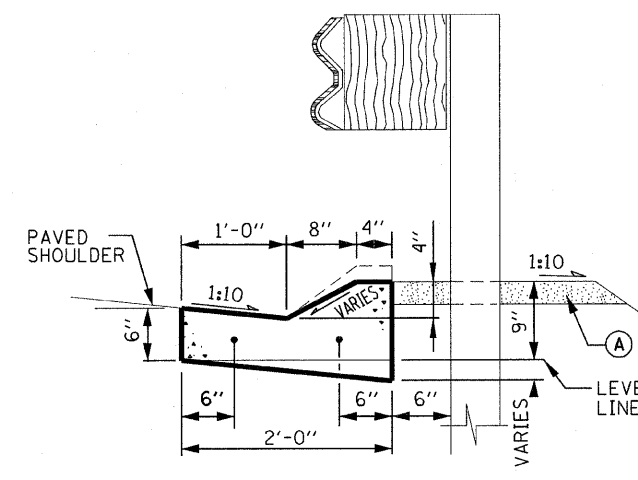
**G-2 SECTION A-A
AT CONCRETE PARAPET**



**G-2 SECTION B-B
8'-9 1/4" FROM PARAPET**



**G-2 SECTION C-C
15'-0 1/4" FROM PARAPET**



**G-2 SECTION D-D
27'-6 1/4" FROM PARAPET**

NOTES:

1. SEE SHEET 1 OF THIS SERIES FOR GENERAL NOTES.
2. THE TYPE G-2 GUTTER TRANSITION SHALL BE PAID PER FOOT FOR CONCRETE GUTTER TYPE G-2.

SHEET 2 OF 2

LEGEND

- (A) AGGREGATE SHOULDERS SPECIAL, TYPE C

TYPE G-2 GUTTER TRANSITION AT TRAFFIC BARRIER TERMINAL, TYPE T6

Illinois Tollway
Open Roads for a Faster Future

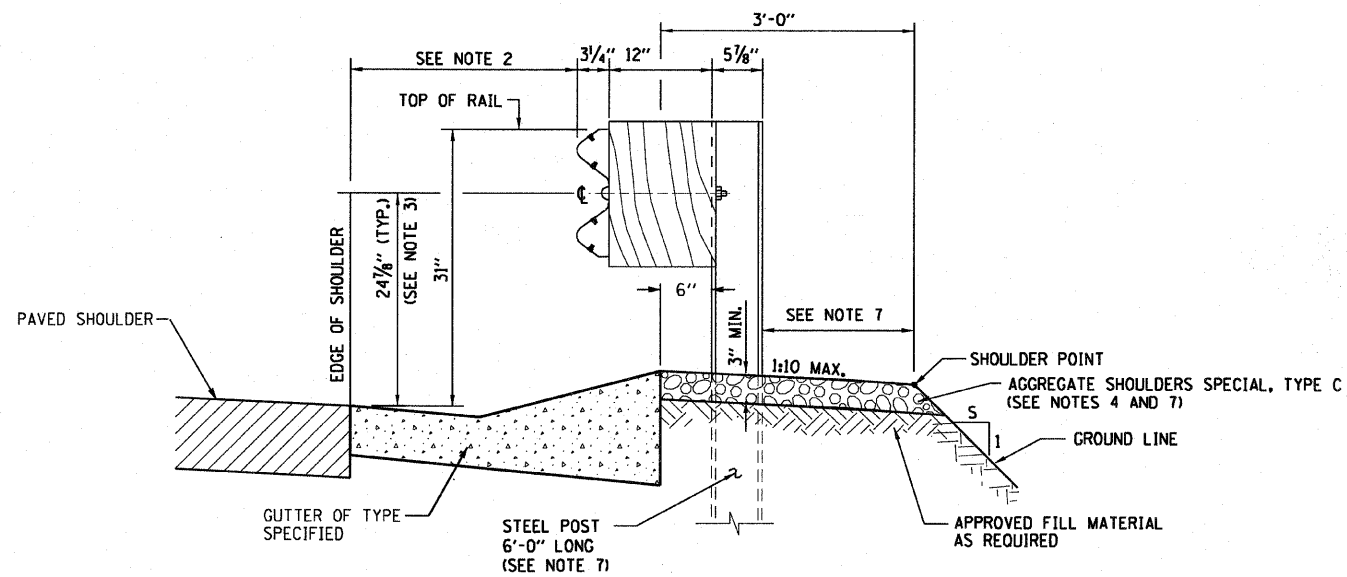
TYPE G-2/G-3 GUTTER
TRANSITION AT TRAFFIC
BARRIER TERMINAL, TYPE T6

STANDARD B3-01

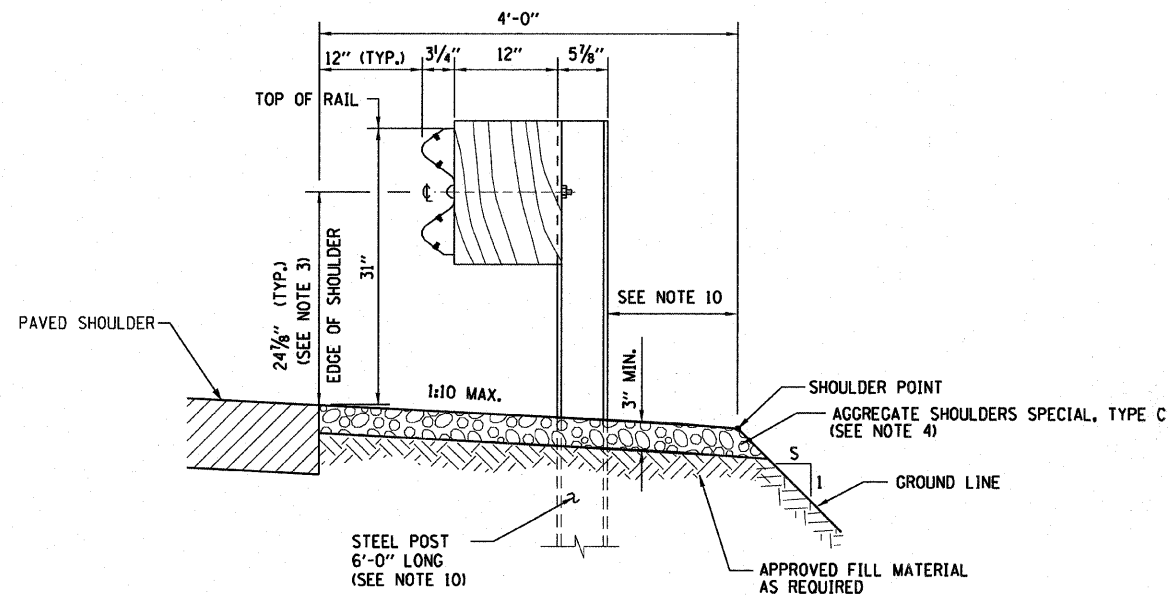
395B of 516

Paul Kovacs

APPROVED..... CHIEF ENGINEER..... DATE 6-1-2009...



SECTION WITH GUTTER



SECTION WITHOUT GUTTER

GUARDRAIL INSTALLATION DETAILS

NOTES:

1. 1' OFFSET FROM EDGE OF PAVED SHOULDER TO FACE OF RAIL IS TYPICAL FOR ALL INSTALLATIONS EXCEPT AS OTHERWISE DETAILED IN THE PLAN DRAWINGS.
2. WHERE GUTTERS SUCH AS TYPE C-2, C-3 ARE REQUIRED IN FRONT OF THE GUARDRAIL, THE POSTS SHALL BE LOCATED 6" BEHIND THE GUTTER, OR AS OTHERWISE DETAILED IN THE PLANS. THE OFFSET FROM THE EDGE OF SHOULDER TO THE FACE OF THE GUARDRAIL SHALL BE AS SHOWN ON STANDARD B28.
3. THE 24 1/8" TYPICAL RAIL HEIGHT IS MEASURED FROM EXISTING SURFACE 1' IN FRONT OF RAIL, OR FROM EDGE OF SHOULDER/EDGE OF GUTTER WHEN EDGE IS MORE THAN 1' IN FRONT OF RAIL TO CENTER OF RAIL.
4. AGGREGATE SHOULDERS SPECIAL, TYPE C SHALL COMPLY WITH THE REQUIREMENTS OF THE TOLLWAY RECURRING SPECIAL PROVISION. WHERE GUTTER IS PROPOSED WITH GUARDRAIL, A 3" MINIMUM THICKNESS OF AGGREGATE SHOULDERS SPECIAL, TYPE C SHALL BE PLACED BEHIND CURB. FOR GUARDRAIL WITHOUT CURB & GUTTER, AGGREGATE SHOULDER, OF THE SAME THICKNESS SHALL BE PLACED FROM THE EDGE OF PAVED SHOULDER SLOPING AWAY TO A 3" MIN. THICKNESS.
5. AGGREGATE SHOULDERS SPECIAL, TYPE C SHALL EXTEND A MINIMUM OF 1' BEHIND POST OR GUARDRAIL, WHICHEVER IS FURTHER, EXCEPT AS DETAILED ELSEWHERE IN THE PLANS.
6. PLASTIC BLOCK-OUTS SHALL NOT BE ALLOWED AS A SUBSTITUTE FOR WOOD BLOCK-OUTS ON NEW INSTALLATIONS.
7. WHEN S ≤ 3 AND 3'-0" MIN. AGGREGATE SHOULDER CANNOT BE MET, THE POST LENGTH SHALL BE 9'-0" AND THE MIN. AGGREGATE SHOULDER SHALL BE 1'-0" MEASURED DISTANCE BEHIND POST TO THE SHOULDER POINT.
8. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENTS (V:H).
9. UNDER NO CIRCUMSTANCES SHALL AN EXISTING GUARDRAIL, THAT WAS DESIGNED USING A PREVIOUS STANDARD, BE EXTENDED, ATTACHED TO OR MODIFIED IN ANYWAY FROM ITS ORIGINAL DESIGN. IF ANY MODIFICATION IS REQUIRED AND A PROPER BARRIER WARRANT HAS BEEN COMPLETED, THE ENTIRE BARRIER INSTALLATION SHALL BE COMPLETELY REMOVED AND REPLACED WITH A NEW SYSTEM THAT CONFORMS TO THE CURRENT STANDARD.
10. WHEN S ≤ 3 AGGREGATE SHOULDER CAN NOT BE MET, THE POST LENGTH SHALL BE 9'-0" AND THE MINIMUM AGGREGATE SHOULDER DIMENSION SHALL BE 1'-0" MEASURED DISTANCE BEHIND POST TO THE SHOULDER POINT.
11. THE GUARDRAIL SYSTEM HAS BEEN PERFORMANCE-TESTED FOR CRASHWORTHINESS UNDER PROCEDURES DEFINED IN THE NATIONAL COOPERATIVE HIGHWAY PROGRAM (NCHRP) REPORT 350. NO MODIFICATION TO THIS STANDARD DRAWING SHALL BE PERMITTED.
12. GUARDRAIL POSTS SHALL NOT BE INSTALLED IN CONCRETE OR HMA PAVEMENT. WHEN NECESSARY USE LEAVE-OUT DETAIL ON SHEET 4 OF 4 OF THIS SERIES.
13. GUARDRAIL POSTS SHALL NOT BE ATTACHED TO ANY STRUCTURE.

SHEET 1 OF 4



GALVANIZED STEEL PLATE
BEAM GUARDRAIL

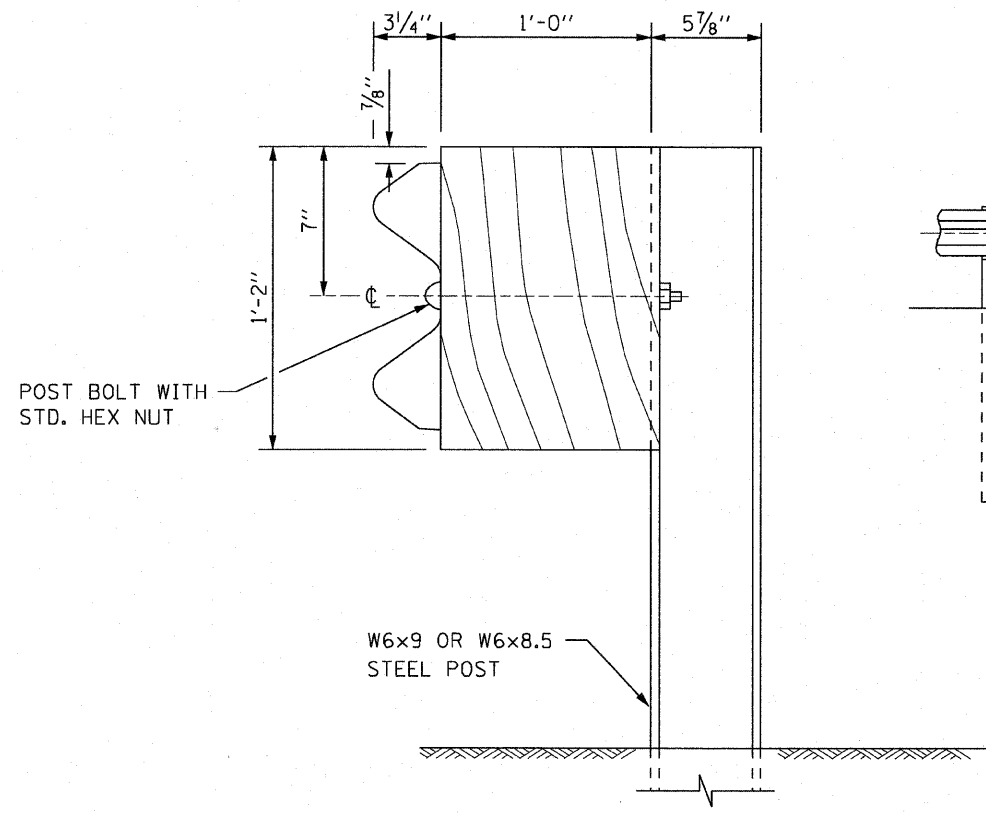
STANDARD C1-03

396 OF 516

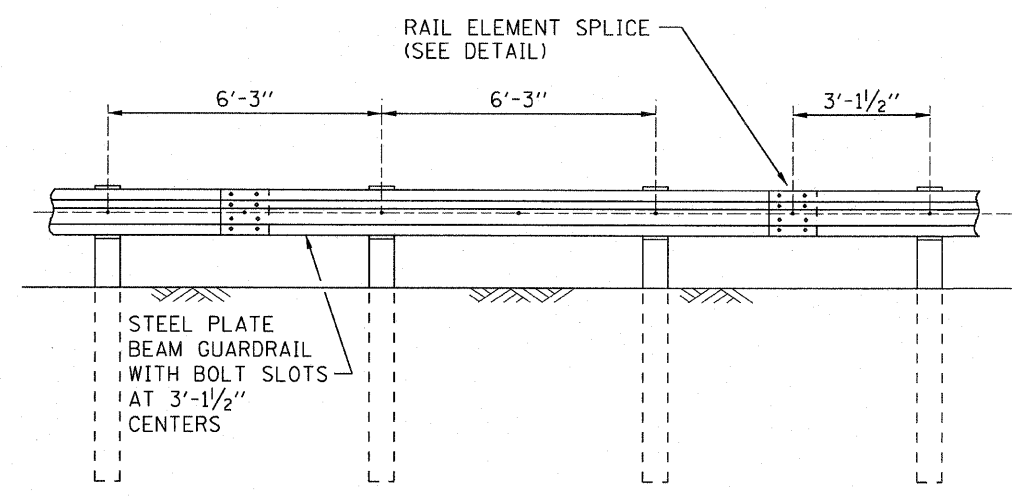
REVISIONS	
7-1-2009	REVISED DIMENSIONS, NOTES AND ADDED DETAILS
3-1-2010	REVISED AGGREGATE SHOULDER DIMENSIONS AND NOTES ADDED GUARDRAIL POST LEAVE-OUTS

APPROVED.....

 CHIEF ENGINEER DATE 7-1-2009



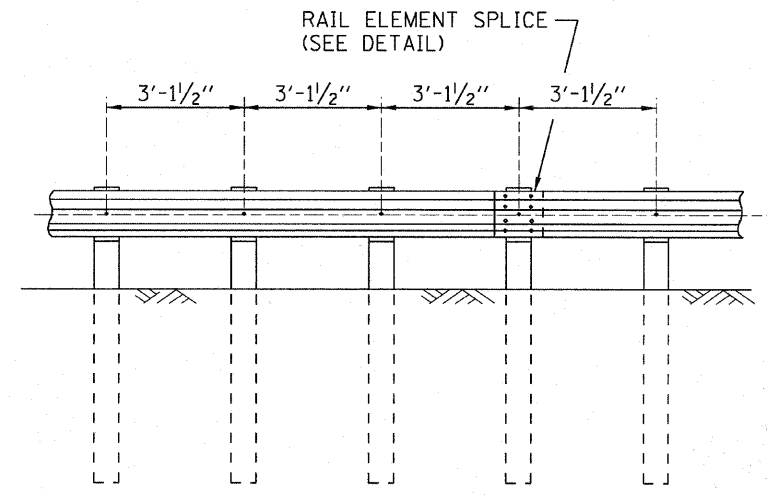
STEEL POST CONSTRUCTION



ELEVATION

TYPE A

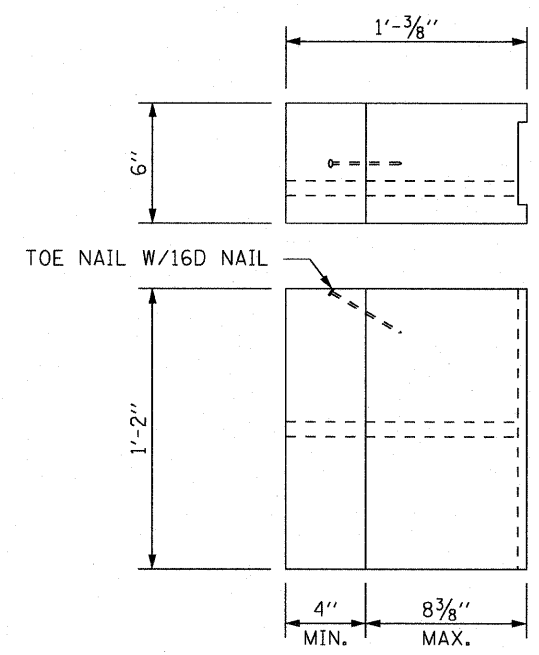
6'-3" TYPICAL POST SPACING



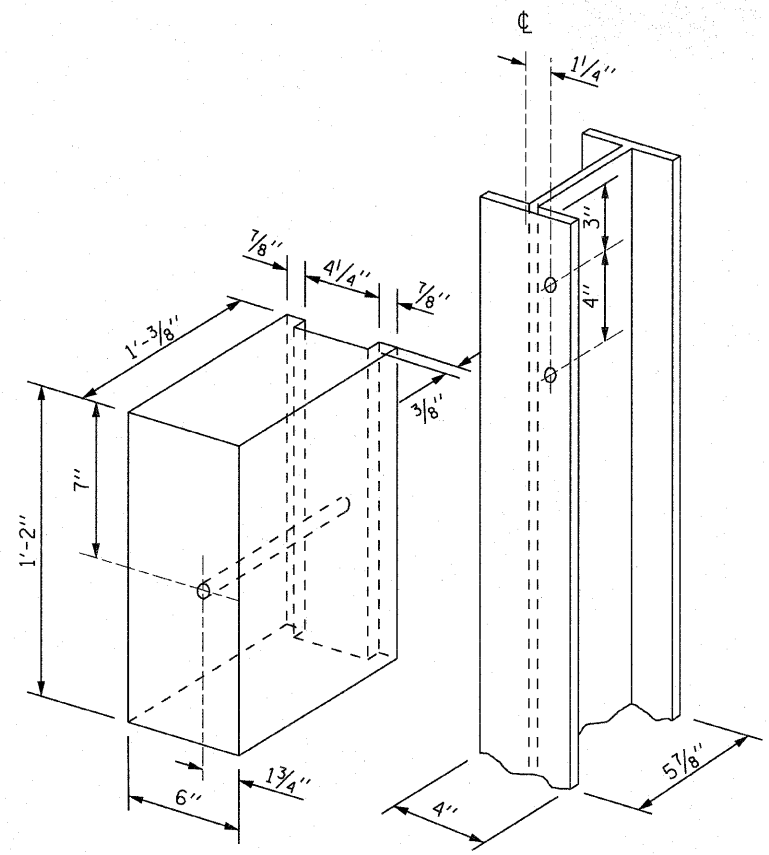
ELEVATION

TYPE B

3'-1 1/2" CLOSED POST SPACING

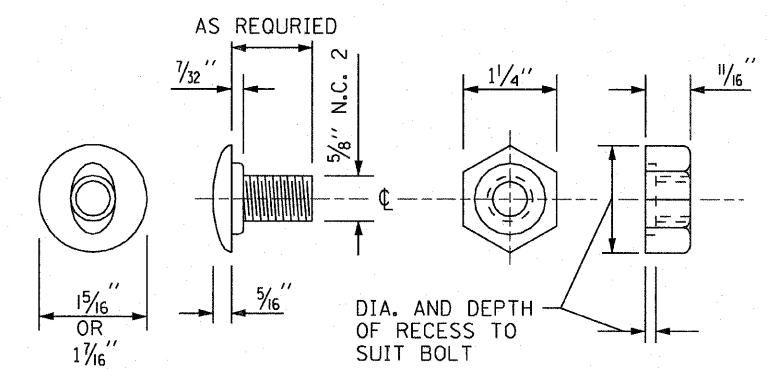


TWO-PIECE WOOD BLOCKOUT OPTION

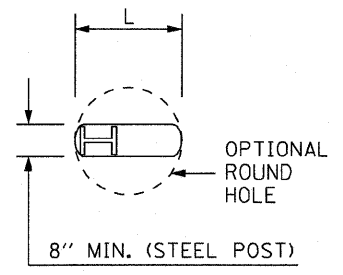


NOTE: ALL HOLES 3/4" DIA.

WOOD BLOCK-OUT AND STEEL POST DETAILS

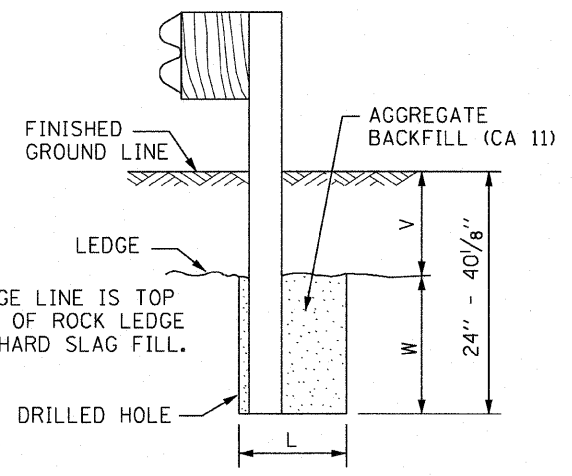


POST OR SPLICE BOLT & NUT



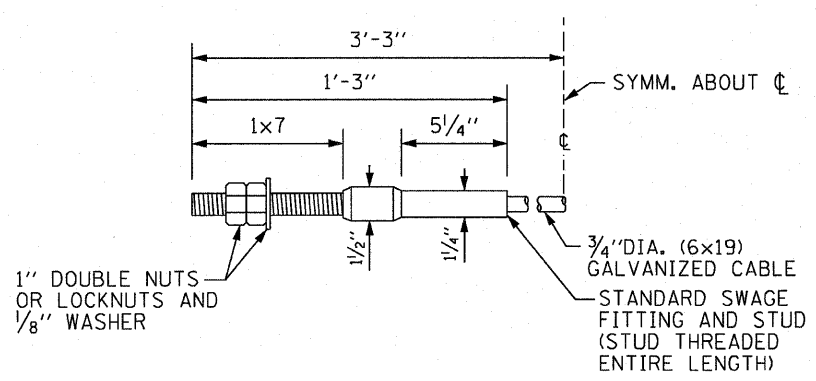
PLAN

V	W	L	
		STEEL POST	WOOD POST
0 - 16 ¹ / ₈ "	24"	21"	23"
> 16 ¹ / ₈ " - 28 ¹ / ₈ "	12"	8"	10"
> 28 ¹ / ₈ " - 40 ¹ / ₈ "	12" - 0	8"	10"



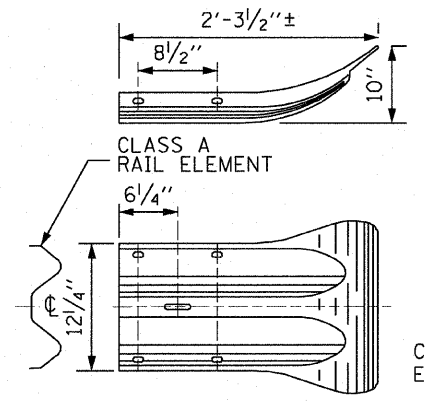
ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

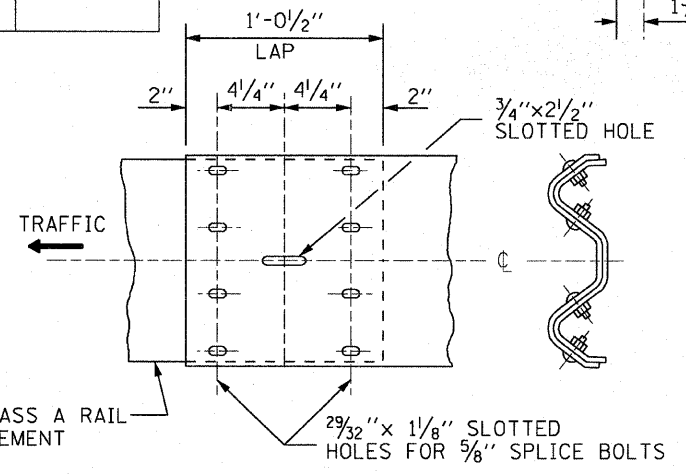


CABLE ASSEMBLY

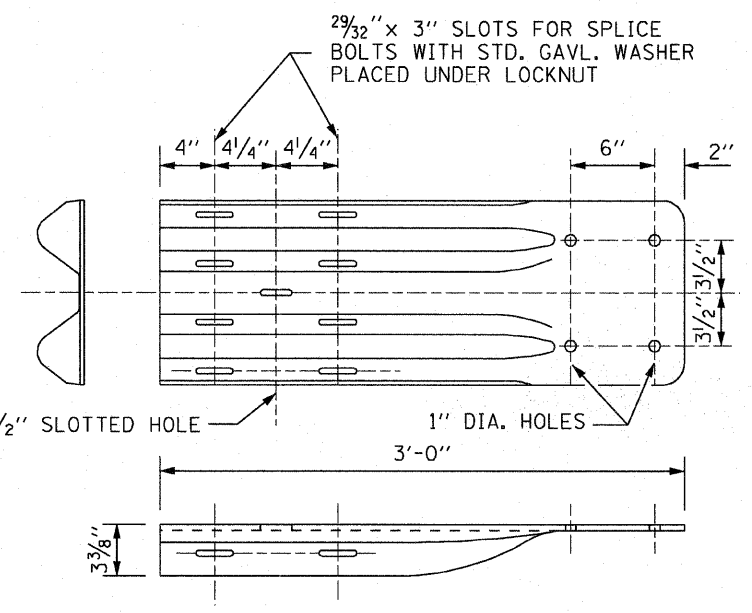
(40,000 LBS.) MIN. BREAKING STRENGTH
TIGHTEN TO TAUT TENSION.



END SECTION



RAIL ELEMENT SPLICE



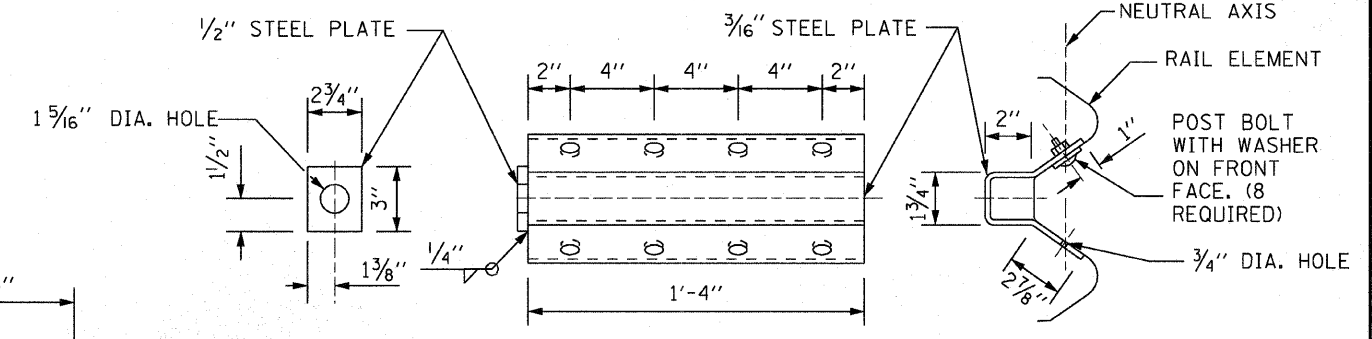
NOTE:

WHEN END SHOE IS ATTACHED TO A BRIDGE PARAPET WHICH HAS AN EXPANSION JOINT, THE BOLTS SHALL BE PROVIDED WITH A LOCKNUT OR DOUBLE NUT AND SHALL BE TIGHTENED ONLY TO A POINT THAT WILL ALLOW GUARDRAIL MOVEMENT.

THE STANDARD END SHOE SHALL BE ATTACHED TO THE CONCRETE WITH PRE-DRILLED OR SELF-DRILLING ANCHOR BOLTS. THE ANCHOR CONE SHALL BE SET FLUSH WITH THE SURFACE OF THE CONCRETE.

EXTERNALLY THREADED STUDS PROTRUDING FROM THE SURFACE OF THE CONCRETE WILL NOT BE PERMITTED.

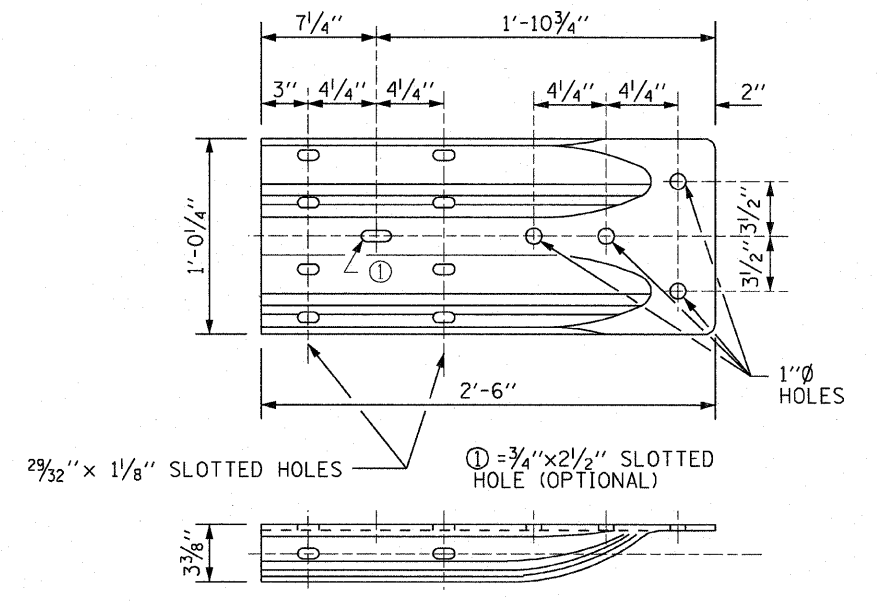
END SHOE



NOTE:

ANCHOR PLATE T SHALL BE USED TO ATTACH CABLE ASSEMBLY TO GUARDRAIL WHEN REQUIRED ON TRAFFIC BARRIER TERMINALS.

ANCHOR PLATE T DETAILS



ALTERNATE END SHOE

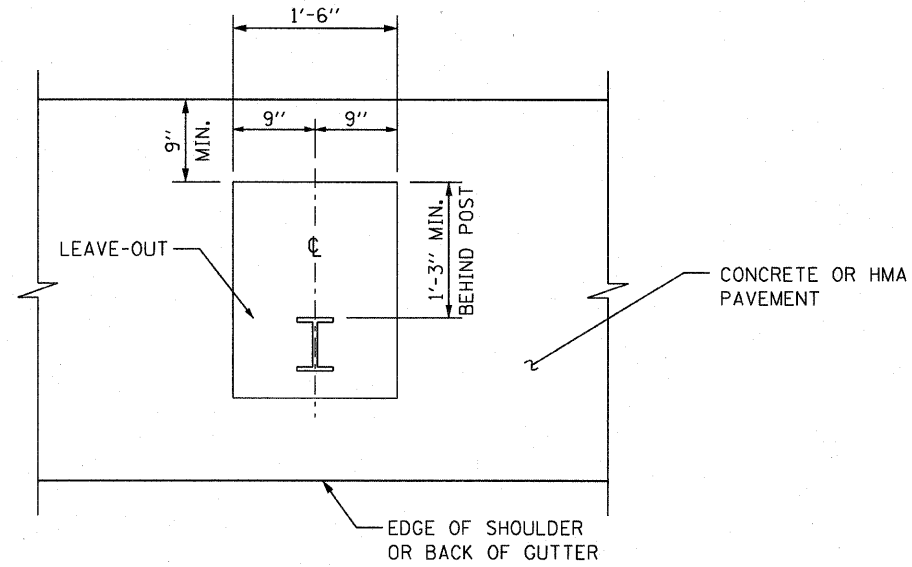
Paul Kovacs
APPROVED..... CHIEF ENGINEER..... DATE 7-1-2009.

Illinois Tollway
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GALVANIZED STEEL PLATE
BEAM GUARDRAIL

STANDARD C1-03

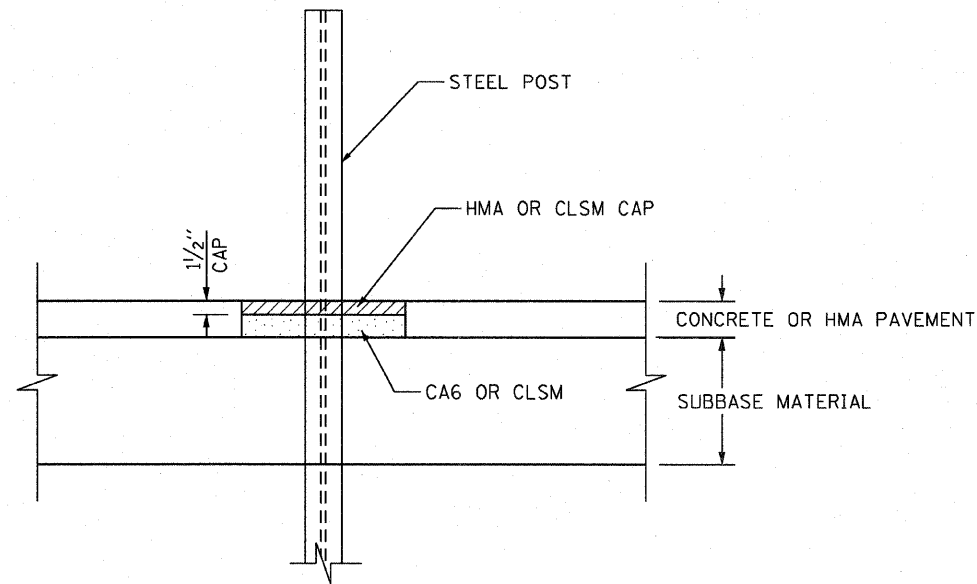
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PLAN

NOTES:

1. CAP SHALL BE HMA WHEN PAVEMENT TYPE IS HMA.
2. CAP SHALL BE CONTROLLED LOW STRENGTH MATERIAL (CLSM) WHEN PAVEMENT TYPE IS CONCRETE.
3. CAP SHALL BE INSTALLED TO MATCH THE PAVEMENT CROSS SLOPE.



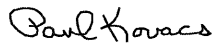
ELEVATION

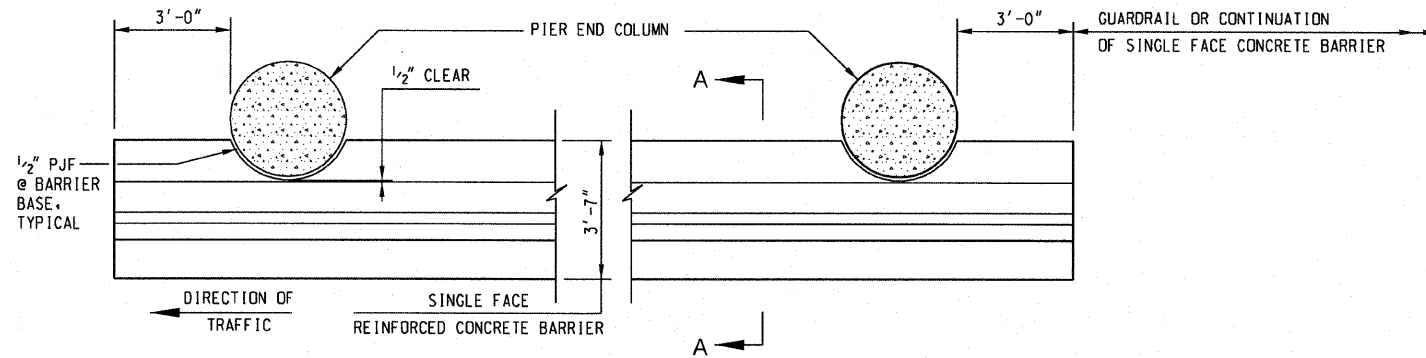
LEAVE-OUTS



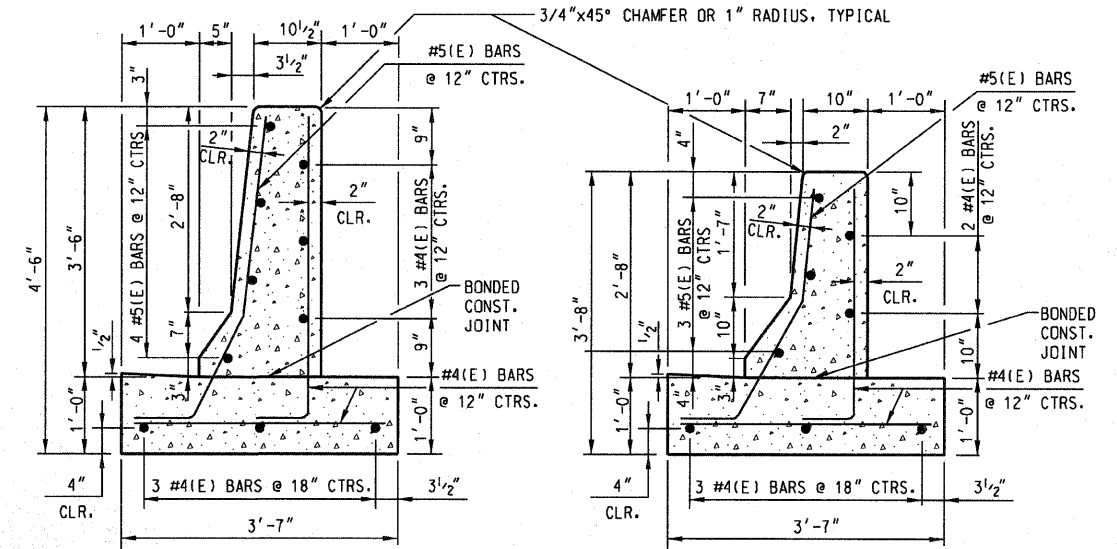
GALVANIZED STEEL PLATE
BEAM GUARDRAIL

STANDARD C1-03


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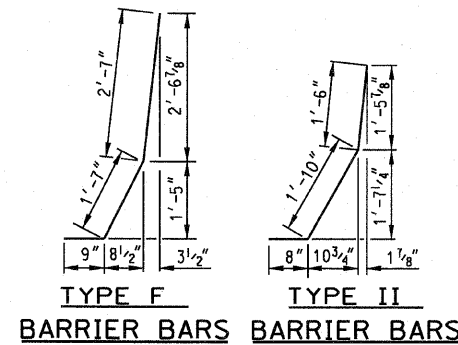
PLAN OF OUTSIDE SHOULDER PIER PROTECTION



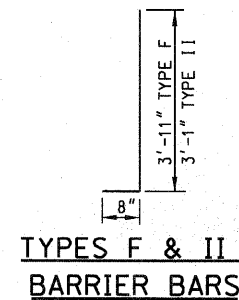
TYPE F BARRIER

TYPE II BARRIER

SECTION A-A



TYPE F BARRIER BARS TYPE II BARRIER BARS



TYPES F & II BARRIER BARS DOWEL BAR BENDING DIAGRAMS

NOTES:

- TOP SHOULDER EDGE OF BARRIER BASE GUTTER SHALL MATCH THE TOP OF SHOULDER ELEVATION.
- 1" DEEP CONTRACTION JOINTS SHALL BE CONSTRUCTED IN BOTH THE REINFORCED CONCRETE BARRIER WALL AND BASE. CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM JOINT SPACING SHALL BE 30 FEET.
- THE FORMING OF CONTRACTION JOINTS SHALL BE DONE WITH AN APPROVED FINISHING TOOL AT THE DISCRETION OF THE ENGINEER SUBJECT TO THE SATISFACTORY CONTROL OF CRACKING. THE SAWING OF CONTRACTION JOINTS IN THE BARRIER WALL SHALL NOT BE PERMITTED.
- REINFORCING BARS SHALL MEET THE REQUIREMENTS OF AASHTO M31 (ASTM A615), GRADE 60, AND SHALL CONFORM TO SECTION 508 OF THE STANDARD SPECIFICATIONS.
- REINFORCING BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
- REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
- TYPE F BARRIER SHALL BE USED WITH ALL NEW CONSTRUCTION, OR RECONSTRUCTION OF EXISTING BARRIERS.



DATE	REVISIONS
7-1-2009	REVISED NOTES

SINGLE FACE REINFORCED CONCRETE BARRIER

STANDARD C3-01

APPROVED *Paul Kovacs* CHIEF ENGINEER DATE 7-1-2009