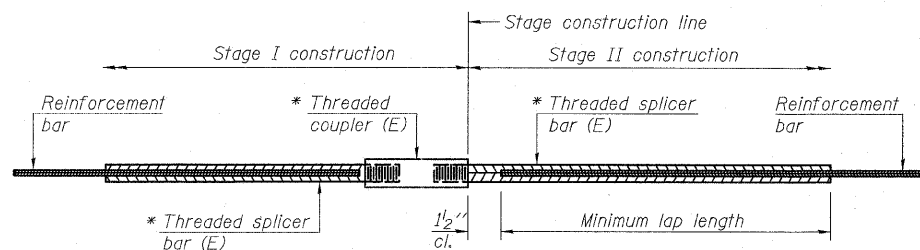


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

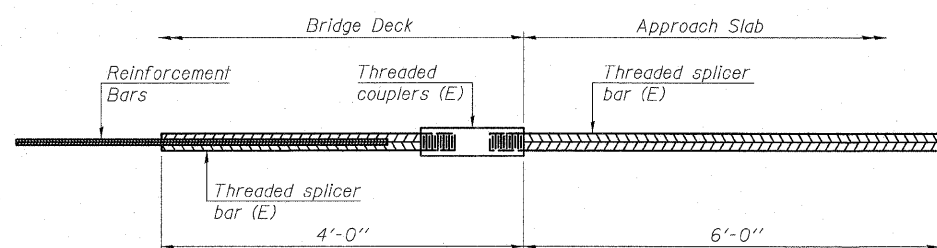
Bar size to be spliced	Minimum Lap Lengths			
	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

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 1/2" + thread length

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

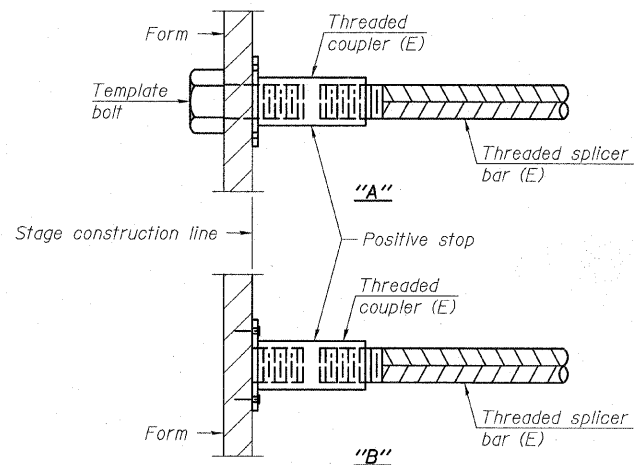
Location	Bar size	No. assemblies required	Table for minimum lap length
Pier 1	#8	16	4
Pier 1	#5	28	3
Pier 1	#7	18	3
Pier 2	#8	16	4
Pier 2	#5	28	3
Pier 2	#7	20	3



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

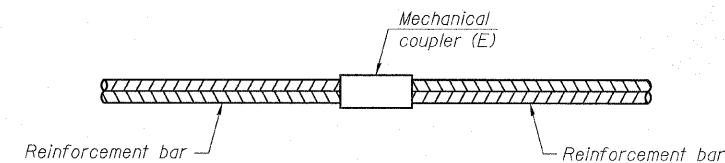
No. required =

BSD-1 11-1-09



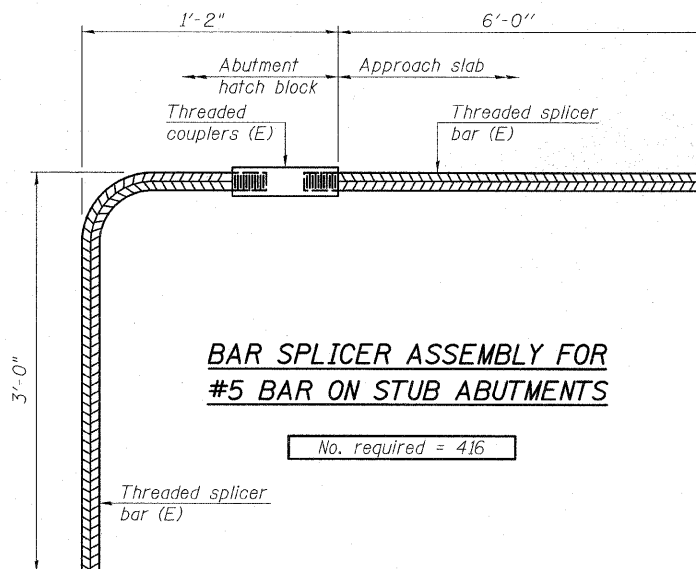
INSTALLATION AND SETTING METHODS

"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 11/3/2008

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 DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097

Station -

BORING NO. I57-I294 B-4

Station: 257+32

Offset: 128.5' Right

Ground Surface Elev. 614.3

Soil Description	Soil Properties				Depth (ft)	Soil Description	Soil Properties				
	D	B	U	M			D	B	U	M	
	(ft)	(6")	(tsf)	(%)		(ft)	(6")	(tsf)	(%)		
15.0" ASPHALT											
SANDY LOAM-loose (A-2)					593.3						
CLAY-gray-medium stiff (A-6) Wet											
CRUSHED STONE-loose to medium dense											
SILT-gray-dense to very dense (A-4)											
CLAY to CLAY LOAM-dark brown & gray-very loose (A-6) Fill											
SILTY LOAM-brown & gray-very loose (A-4) Apparent Fill											
SANDY LOAM-dark gray-loose (A-2) Apparent Fill											

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 2922) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

PAGE 2 of 2

SOIL BORING LOG

DATE 11/3/2008

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 DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097

Station -

BORING NO. I57-I294 B-4

Station: 257+32

Offset: 128.5' Right

Ground Surface Elev. 614.3

Soil Description	Soil Properties				Depth (ft)	Soil Description	Soil Properties				
	D	B	U	M			D	B	U	M	
	(ft)	(6")	(tsf)	(%)		(ft)	(6")	(tsf)	(%)		
SILTY LOAM with Fractured Rock-gray-very dense (A-4)					572.3						
SANDY LOAM with Fractured Rock-gray-very dense (A-2)											
FRACTURED ROCK-gray-very dense (A-1)											
Run 1 (-55.0' to -65.0') Silurian System Niagaran Series Dolomite Light gray to gray with horizontal bedding. Fine grained with some varving. Vertical fracture with numerous intersecting horizontal fractures from -56.5' to -57.8'. Horizontal fractures @ -58.1', -58.2', -58.4', -58.8', -59.4', -60.1', -60.5', -60.7', -60.9' & -61.5'. Highly fractured with numerous intersecting horizontal fractures from -61.8' to -63.5'.											

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 2922) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

PAGE 1 of 1

ROCK CORE LOG

DATE 11/3/2008

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

Station -

BORING NO. I57-I294 B-4

Station: 257+32

Offset: 128.5' Right

Ground Surface Elev. 614.3

Core Description	Depth (ft)	Core Diameter (in)	Top of Rock Elev. (ft)	Begin Core Elev. (ft)	Recovery (%)	Water Loss (%)	Strength (tsf)	Core	Remarks
								(#)	(min)
Run 1 (-55.0' to -65.0') Silurian System Niagaran Series Dolomite	559.3	2.0	561.3	559.3	96.0	43.0		1	Light gray to gray with horizontal bedding. Fine grained with some varving. Vertical fractures with numerous intersecting horizontal fractures from -56.5' to -57.8'. Horizontal fractures @ -58.1', -58.2', -58.4', -58.8', -59.4', -60.1', -60.5', -60.7', -60.9' & -61.5'. Highly fractured with numerous intersecting horizontal fractures from -61.8' to -63.5'.

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)


BORING LOGS 4
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS								
	CHECKED - SP.		NAME							DATE
	DRAWN - JMA									
	CHECKED - SP,PDF									
	DATE - 03/18/10									


SHEET NO. 60	F.A.I RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 305
68 SHEETS					
CONTRACT NO. 60J27					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG		PAGE 1 of 2	
		DATE 11/13/2008	
LOGGED BY MR		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	
STRUCT. NO. 016-1096 & 016-1097		HAMMER TYPE CME Automatic	
Station -			
BORING NO. I57-I294 B-5			
Station: 258+82			
Offset: 80.5' Left			
Ground Surface Elev. 614.9			
D E P T H (ft)	B L O W S (blows)	U C S T R E N G T H (tsf)	M O I S T U R E (%)
Surface Water Elev. n/a			
Stream Bed Elev. n/a			
Groundwater Elevation:			
First Encounter n/a			
Upon Completion n/a			
After Hrs. n/a			
12.0" ASPHALT, 24.0" CRUSHED STONE-dense			
611.9			
CLAY LOAM-brown & gray-hard (A-6) Fill			
604.4			
SILTY LOAM-dark brown & gray-medium dense (A-4)			
601.9			
SILTY CLAY LOAM-brown & gray-medium stiff (A-4/A-6) Wet			
589.4			
SAND-gray-loose (A-3)			
596.9			
SILTY LOAM-brown & gray-medium dense (A-4)			
604.4			

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


SOIL BORING LOG		PAGE 2 of 2	
		DATE 11/13/2008	
LOGGED BY MR		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	
STRUCT. NO. 016-1096 & 016-1097		HAMMER TYPE CME Automatic	
Station -			
BORING NO. I57-I294 B-5			
Station: 258+82			
Offset: 80.5' Left			
Ground Surface Elev. 614.9			
D E P T H (ft)	B L O W S (blows)	U C S T R E N G T H (tsf)	M O I S T U R E (%)
Surface Water Elev. n/a			
Stream Bed Elev. n/a			
Groundwater Elevation:			
First Encounter n/a			
Upon Completion n/a			
After Hrs. n/a			
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 567.9			
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			
604.4			
601.9			
589.4			
596.9			
604.4			

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

ROCK CORE LOG		PAGE 1 of 1	
		DATE 11/13/2008	
LOGGED BY MR		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-5		Top of Rock Elev. 573.9	
Station: 258+82		Begin Core Elev. 573.9	
Offset: 80.5' Left			
Ground Surface Elev. 614.9			
D E P T H (ft)	C O R E R U N (#)	R E C O V E R Y (%)	R O C K Q U A L I T Y (%)
Run 1 (-41.0' to -47.0') Silurian System Niagaran Series Dolomite		573.9	
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			
604.4			
601.9			
589.4			
596.9			
604.4			

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

	DESIGNED - JMA	REVISIONS		SHEET NO. 61	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					1414.2B	COOK	516	306	
					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



Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
606 Antiques Court, Naperville, IL 60563
(630) 256-2934

SOIL BORING LOG


PAGE 1 of 2
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 DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRICT. NO. 016-1096 & 016-1097
Station -
BORING NO. I57-I294 B-8
Station: 260+46
Offset: 67.5' Left
Ground Surface Elev. 635.1

DEPTH (ft)	BULGE (ft)	SHEAR PEN (tsf)	SPT (blows)	SPT (blows)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter Upon Completion	After Hrs.	DEPTH (ft)	BULGE (ft)	SHEAR PEN (tsf)	SPT (blows)	Failure Mode			
														UCS	FS	VS	NR
0					n/a	n/a				0				UCS	FS	VS	NR
18.0										18.0				UCS	FS	VS	NR
633.6																	
632.1																	
604.1																	
598.1																	

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 2930) The Unit Dry Weight (pcf) is noted in *italics* above moist (%)
NR-No Recovery



Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
606 Antiques Court, Naperville, IL 60563
(630) 256-2934

SOIL BORING LOG


PAGE 2 of 2
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 DRILLING METHOD Straight Flight Auger/Rotary HAMMER TYPE CME Automatic

STRICT. NO. 016-1096 & 016-1097
Station -
BORING NO. I57-I294 B-8
Station: 260+46
Offset: 67.5' Left
Ground Surface Elev. 635.1

DEPTH (ft)	BULGE (ft)	SHEAR PEN (tsf)	SPT (blows)	SPT (blows)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter Upon Completion	After Hrs.	DEPTH (ft)	BULGE (ft)	SHEAR PEN (tsf)	SPT (blows)	Failure Mode			
														UCS	FS	VS	NR
580.1										580.1				UCS	FS	VS	NR
577.6										577.6				UCS	FS	VS	NR

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 2930) The Unit Dry Weight (pcf) is noted in *italics* above moist (%)
NR-No Recovery



Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
606 Antiques Court, Naperville, IL 60563
(630) 256-2934

ROCK CORE LOG

PAGE 1 of 2
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

STRICT. NO. 016-1096 & 016-1097
Station -
BORING NO. I57-I294 B-8
Station: 260+46
Offset: 67.5' Left
Ground Surface Elev. 635.1

DEPTH (ft)	CORE	RECOVER (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)	CORRECTION (%)
569.6																		
561.6																		
577.6																		
604.1																		
598.1																		

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 2930) The Unit Dry Weight (pcf) is noted in *italics* above moist (%)
NR-No Recovery

TYLIN INTERNATIONAL

DESIGNED - JMA	REVISIONS	
CHECKED - SP,	NAME	DATE
DRAWN - JMA		
CHECKED - SP,PDF		
DATE - 03/18/10		

SHEET NO. 64	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
					68 SHEETS
			CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

**BORING LOGS 8
STRUCTURE NO. 016-1251**

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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

D E P T H (ft)	C O R E D I A M E T E R (in)	R E C O R D I N G M E T H O D (%)	R E C O R D I N G M E T H O D (%)	R E C O R D I N G M E T H O D (%)	S T R E N G T H (tsf)
569.6	2	97.5	95.6	n/a	948@ 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

D E P T H (ft)	B U L G E (in)	U N D E R R I D G E (in)	M O S T L I Q U I T Y (%)	S U R F A C E W A T E R E L E V A T I O N (ft)	S T R E N G T H (tsf)
634.8				n/a	
633.0				n/a	
604.0				n/a	
506"				n/a	
-40				n/a	

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)

Surface Water Elev. n/a

Stream Bed Elev. n/a

Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After Hrs. n/a

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) SF-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 T296) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NB-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

D E P T H (ft)	B U L G E (in)	U N D E R R I D G E (in)	M O S T L I Q U I T Y (%)	S U R F A C E W A T E R E L E V A T I O N (ft)	S T R E N G T H (tsf)
589.0				n/a	
566.0				n/a	
578.0				n/a	
576.0				n/a	
-80				n/a	

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

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

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'.

SANDY LOAM with Fractured Rock-
gray-very dense (A-2A-4)

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

Drillers Observation: Apparent Bedrock.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) SF-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 T296) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NB-No Recovery

BORING LOGS 9
STRUCTURE NO. 016-1251

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

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3/17/2010

Geo Services, Inc. Geotechnical, Environmental & Civil Engineering
805 Ashland Court, Naperville, Illinois 60563
(630) 255-2244

ROCK CORE LOG PAGE 1 of 1
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 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-9 Top of Rock Elev. 578.0
Station: 260+15 Begin Core Elev. 576.0
Offset: 6.0' Right
Ground Surface Elev. 636.0

D E P T H (ft)	C O R E Q U I R E D (in)	R E C O R D E D (%)	R E T U R N E D (%)	C O R E L E N G T H (ft)	S T R E N G T H (tsf)
576.0	1	98.0	47.0	na	859@ -61.2'

Run 1 (-60.0' to -70.0')
Silurian System Niaganan 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'.

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)

Geo Services, Inc. Geotechnical, Environmental & Civil Engineering
805 Ashland Court, Naperville, Illinois 60563
(630) 255-2244

SOIL BORING LOG PAGE 1 of 2
DATE 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 DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097
Station -
BORING NO. I57-I294 B-10
Station: 259+88
Offset: 71.0' Right
Ground Surface Elev. 635.4

D E P T H (ft)	B L O W S (#)	U N I F I E D (tsf)	M O S T L Y (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elevation: First Encounter (ft)	Upon Completion (ft)	After Hrs. (ft)	D B U M O P O S I S H S Q T	E L C O S I S H S Q T	D B U M O P O S I S H S Q T	D B U M O P O S I S H S Q T
633.9	13			na	na	na	na	na				
	3								111			
	6	3.5P	14						4.6B	17		
	3											
	3											
	5	4.3B	16						2.0P	17		
	6											
	6	4.5+P	14						2.1B	18		
	3											
	4											
	5	4.5+P	15						NP	13		
	4											
	5											
	5	2.25P	15									
	45											
	9											
	15	6	2.0P	21					NP	25		
	3											
	5											
	7	2.2B	18									
	3											
	5											
	3											
	5											
	20	6	5.0B	14					NP	12		

17.0" ASPHALT, 2.0" CRUSHED STONE

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

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

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

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelly Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM T296) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

Geo Services, Inc. Geotechnical, Environmental & Civil Engineering
805 Ashland Court, Naperville, Illinois 60563
(630) 255-2244

SOIL BORING LOG PAGE 2 of 2
DATE 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 DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097
Station -
BORING NO. I57-I294 B-10
Station: 259+88
Offset: 71.0' Right
Ground Surface Elev. 635.4

D E P T H (ft)	B L O W S (#)	U N I F I E D (tsf)	M O S T L Y (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elevation: First Encounter (ft)	Upon Completion (ft)	After Hrs. (ft)	D B U M O P O S I S H S Q T	E L C O S I S H S Q T	D B U M O P O S I S H S Q T	D B U M O P O S I S H S Q T
574.9	1			na	na	na	na	na				
	3											
	3											
	7	4.6B	17									
	3											
	6											
	7	2.0P	17									
	5											
	8											
	11	2.1B	18									
	7											
	11											
	30											
	506"											
	50	NP	11									
583.4	3											
	4											
	24											
	27											
	55	24	NP	10								
	24											
	27											
	42											
	504"											
	60	NP	9									

Run 1 (-60.5' to -70.0')
Silurian System Niaganan 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'.
Recovery = 98.9%
R.Q.D. = 88.4%
100.0% Water Loss

SILTY LOAM with Fractured Rock - gray - very dense (A-4)

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

SANDY LOAM with Fractured Rock - gray - dense to very dense (A-2)

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelly Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM T296) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

BORING LOGS 10
STRUCTURE NO. 016-1251

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS		SHEET NO. 66	F.A.I RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 311
	CHECKED - SP,	NAME	DATE						
	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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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 1

ROCK CORE LOG

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

D E P T H H S Q T	C O R E D I A M ET ER (in)	R E C O R D I N G M E T H O D (%)	R E C O R D I N G M E T H O D (%)	R E C O R D I N G M E T H O D (%)	S T R E N G T H (tsf)
574.9	1	98.9	88.4	100.0	60.5
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 -61.9', -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					
-65.5					
-70.5					

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 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. -

Station -

BORING NO. RMP B B-8

Station: 258+24

Offset: 85.0' Left

Ground Surface Elev. 614.1

D E P T H H S Q T	B U L G E S (ft)	U N D E R R I D G E (ft)	M O S T S I M I L A R I T Y (%)	S U R F A C E W A T E R E L E V A T I O N (ft)	S T R E N G T H (tsf)
				593.6	
10.0" ASPHALT, 26.0" CRUSHED STONE-medium dense					
17					100
9					25
611.1				591.1	
4					16
6					13
-5	6	4.0P	17		11
5			116	596"	
12					
15		6.9B	15		
586.1				586.1	
5					
8					
-10	8	4.0P+	19		
603.6					
3					
5					
5			23		
3					
2					
-15	2		28		
588.6					
2					
3					
6			26		
596.1					
3					
2					
-20	6	NP	22		
575.1				575.1	
43					
-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 (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 11/3/2008
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. -

Station -

BORING NO. RMP B B-8

Station: 258+24

Offset: 85.0' Left

Ground Surface Elev. 614.1

D E P T H H S Q T	B U L G E S (ft)	U N D E R R I D G E (ft)	M O S T S I M I L A R I T Y (%)	S U R F A C E W A T E R E L E V A T I O N (ft)	S T R E N G T H (tsf)
				593.6	
10.0" ASPHALT, 26.0" CRUSHED STONE-medium dense					
17					100
9					25
611.1				591.1	
4					16
6					13
-5	6	4.0P	17		11
5			116	596"	
12					
15		6.9B	15		
586.1				586.1	
5					
8					
-10	8	4.0P+	19		
603.6					
3					
5					
5			23		
3					
2					
-15	2		28		
588.6					
2					
3					
6			26		
596.1					
3					
2					
-20	6	NP	22		
575.1				575.1	
43					
-40	46	NP	14		

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 (ASTM D 1586) 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. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 312
	CHECKED - SP,	NAME	DATE						
	DRAWN - JMA								
	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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3/17/2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

 <p>Geo Services, Inc. Geotechnical, Environmental & Civil Engineering 800 Adams Street, Suite 200 Naperville, Illinois 60563 (630) 256-2500</p>		<p>ROCK CORE LOG</p>		<p>PAGE <u>1</u> of <u>1</u></p>	
				<p>DATE <u>11/3/2008</u></p>	
				<p>LOGGED BY <u>RJ</u></p>	
		<p>JOB NUMBER <u>P-91-186-08</u></p>		<p>GSI JOB No. <u>08015</u></p>	
<p>ROUTE <u>I-294 & I-57</u></p>		<p>DESCRIPTION <u>I-57 & I-294 Interchange Improvements (PTB 146, Item 1)</u></p>			
<p>SECTION <u>-</u></p>		<p>LOCATION <u>I-57/I-294 RAMP B Fly-Over Bridge</u></p>			
<p>COUNTY <u>Cook</u></p>		<p>CORING METHOD <u>Rotary Wash</u></p>			
<p>STRUCT. NO. <u>-</u></p>		<p>CORING BARREL TYPE & SIZE <u>NX Double Swivel-10 ft</u></p>			
<p>Station <u>-</u></p>		<p>Core Diameter <u>2.0 in</u></p>			
<p>BORING NO. <u>RMP B B-8</u></p>		<p>Top of Rock Elev. <u>575.1</u></p>			
<p>Station: <u>258+24</u></p>		<p>Begin Core Elev. <u>572.1</u></p>			
<p>Offset: <u>85.0' Left</u></p>					
<p>Ground Surface Elev. <u>614.1</u></p>					
		<p>RUN 1 (-42.0' to -51.0')</p>		<p>572.1</p>	
		<p>Silurian System Niagaran Series Dolomite</p>			
		<p>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'.</p>			
				<p>(ft) (#) (%) (%) (ft) (tsf)</p>	
				<p>1 98.4 87.2 n/a 1121@ -42.8'</p>	
				<p>-47</p>	
				<p>-52</p>	

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 12
STRUCTURE NO. 016-1251

<p>TYLIN INTERNATIONAL</p>	DESIGNED - JMA	REVISIONS			<p>SHEET NO. 68</p>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - SP,	NAME	DATE			57	1414.2B	COOK	516	313	
	DRAWN - JMA					68 SHEETS		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

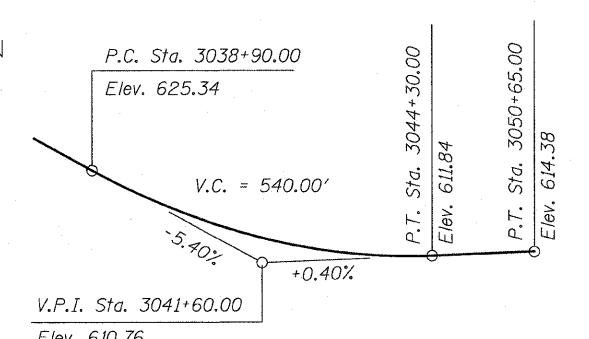
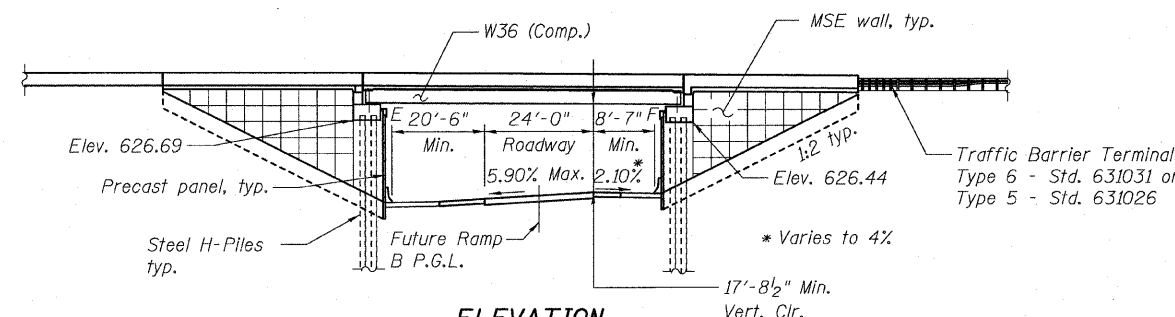
Bench Mark: Iron rod with yellow cap set 7'± off west side of N.B. I-294 shoulder at Sta. 400+00. Elev. 610.79

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

Salvage: None

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

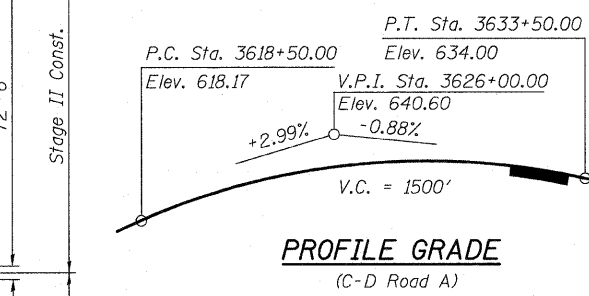
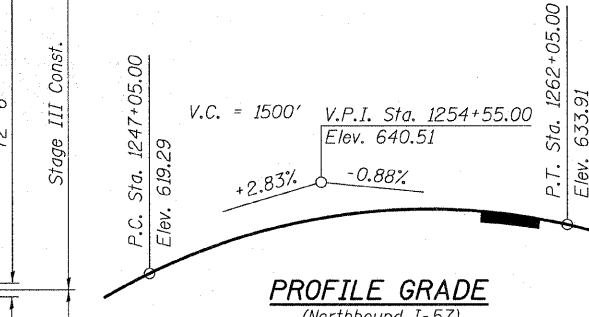
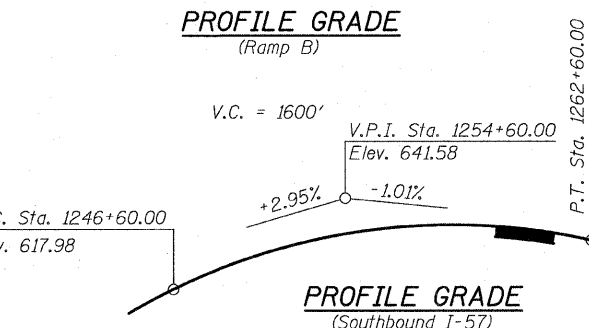
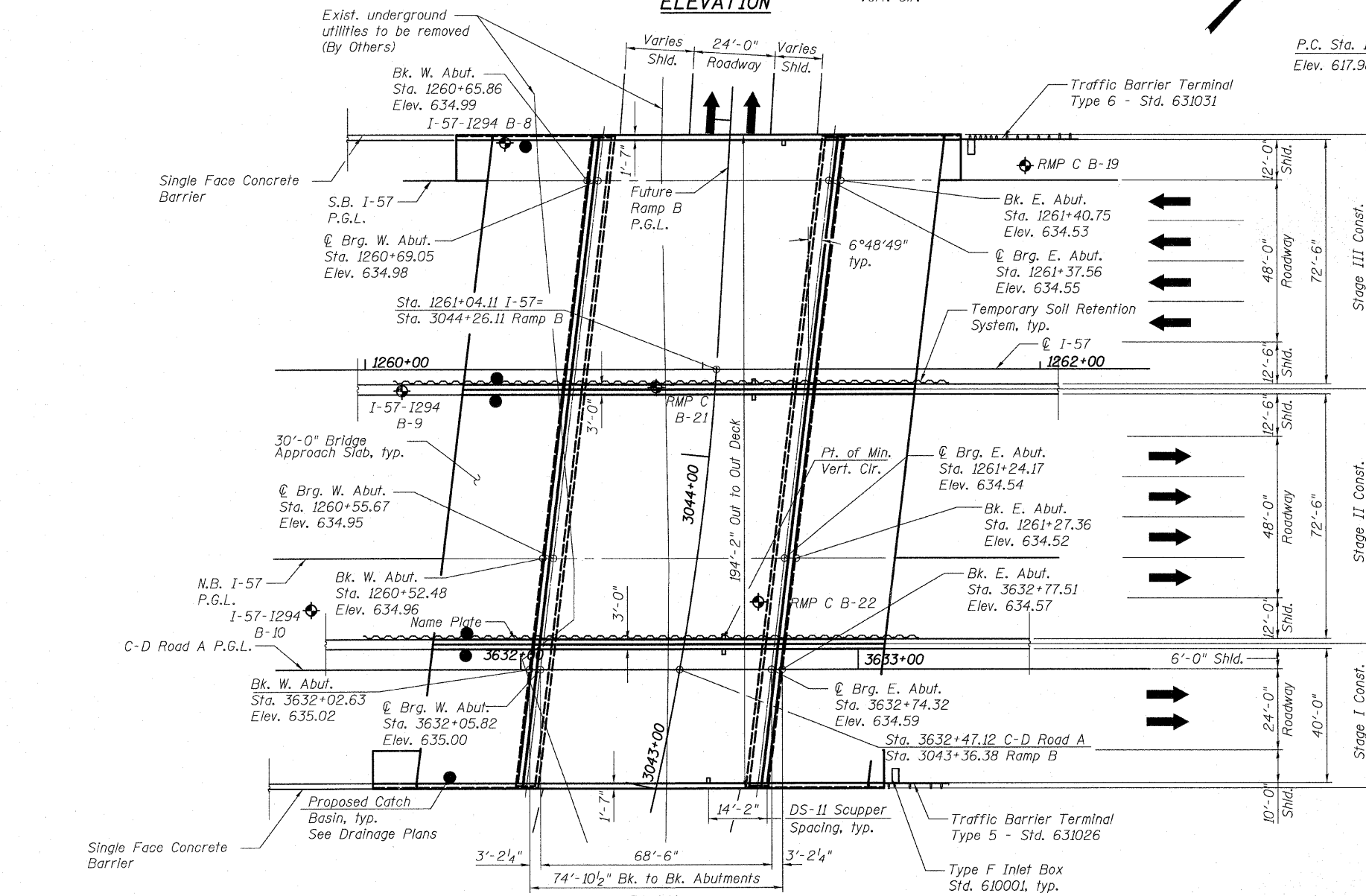
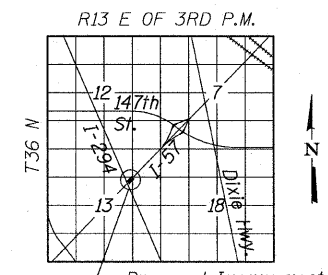
NAME PLATE
 See Std. 515001

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_D) = 0.065g
 Design Spectral Acceleration at 0.2 sec. (S_D) = 0.116g
 Soil Site Class = C



APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
 Spiros Pantazis, S.E. II Lic. No. 081-006448
 ENGINEER OF BRIDGES AND STRUCTURES



Signed *[Signature]*
 Spiros Pantazis, S.E. II Lic. No. 081-006448
 Expires 11-30-2010
 Date 3-18-10

GENERAL PLAN & ELEVATION
I-57 OVER RAMP B
F.A.I. RTE. 57 SEC. 1414.2B
COOK COUNTY
STATION 1261+04.11
STRUCTURE NO. 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. 1	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 314
62 SHEETS	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

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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
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51	West Mechanically Stabilized Earth Retaining Wall
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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

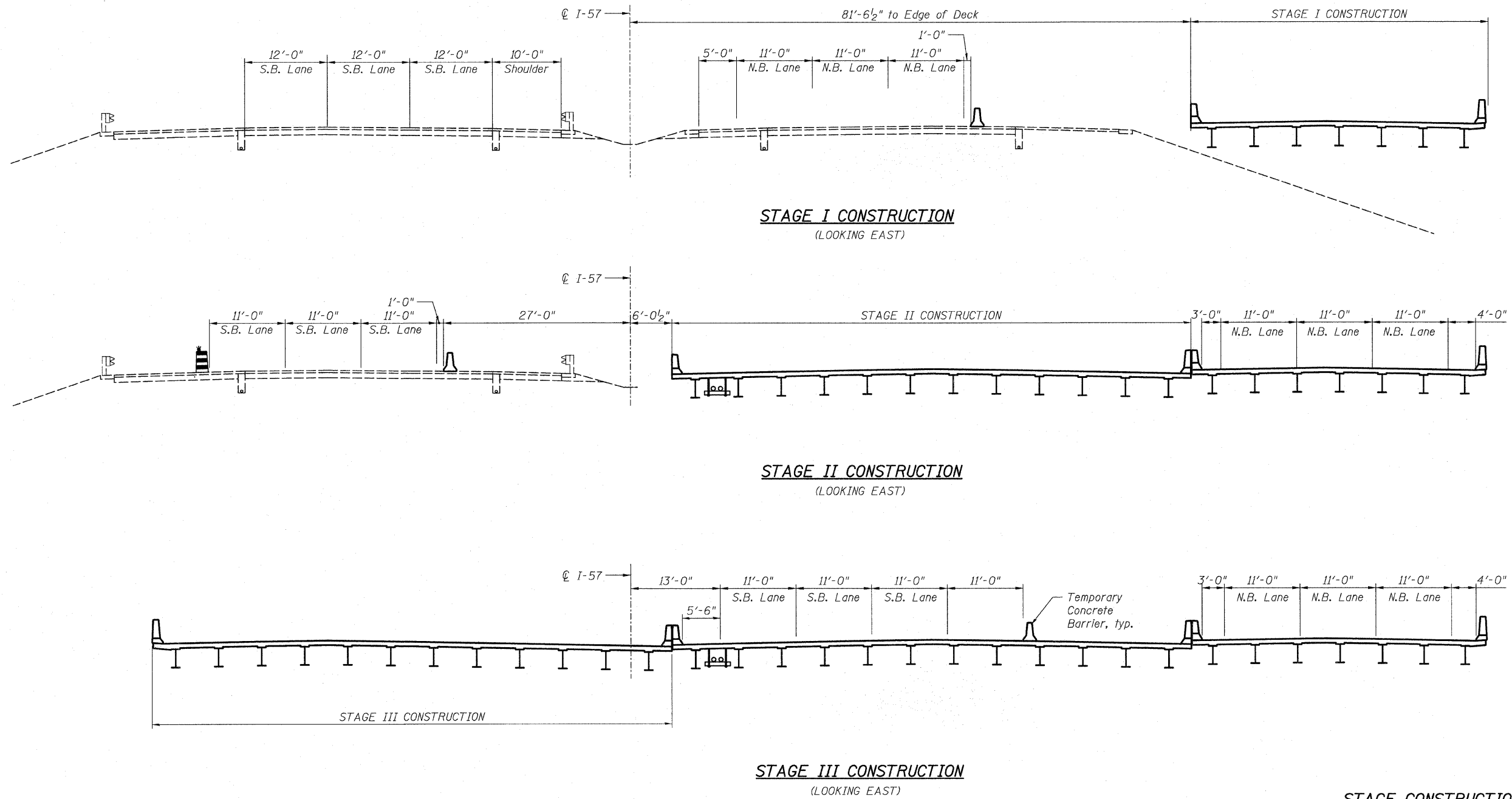
ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu Yd		8,020	8,020
Concrete Structures	Cu Yd		551.7	551.7
Concrete Superstructure	Cu Yd	1,051.8		1,051.8
Bridge Deck Grooving	Sq Yd	2,511		2,511
Protective Coat	Sq Yd	3,148		3,148
Furnishing and Erecting Structural Steel	L Sum	0.20		0.20
Stud Shear Connectors	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		3,927	3,927
Driving Piles	Foot		3,927	3,927
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**

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 2	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.						
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	DRAWN - DY,EI														CONTRACT NO. 60J27
	CHECKED - LS,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



STAGE CONSTRUCTION
STRUCTURE NO. 016-1252

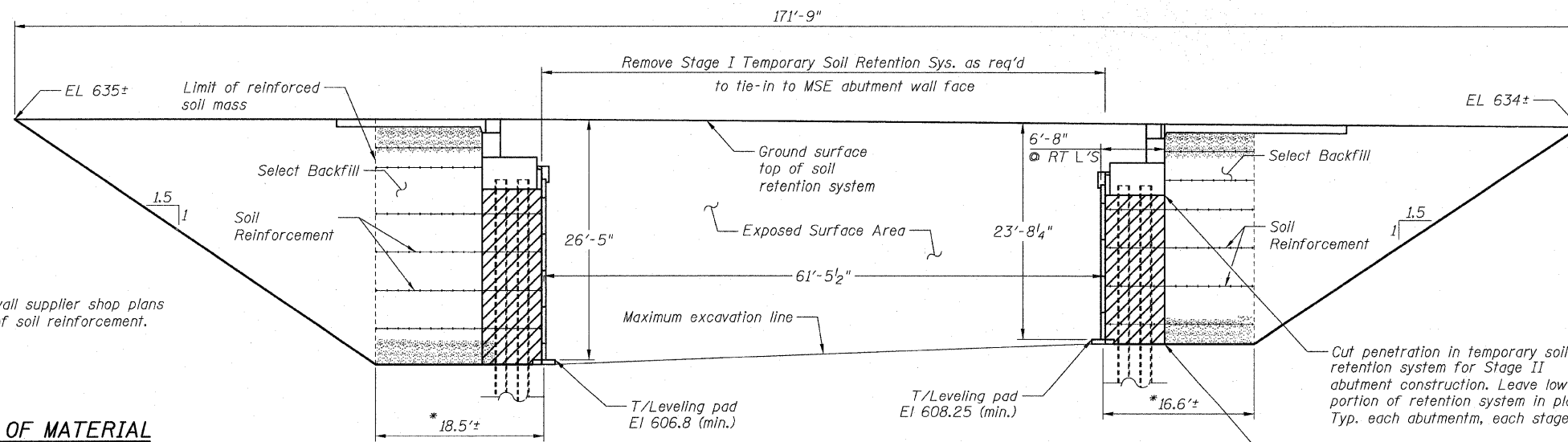
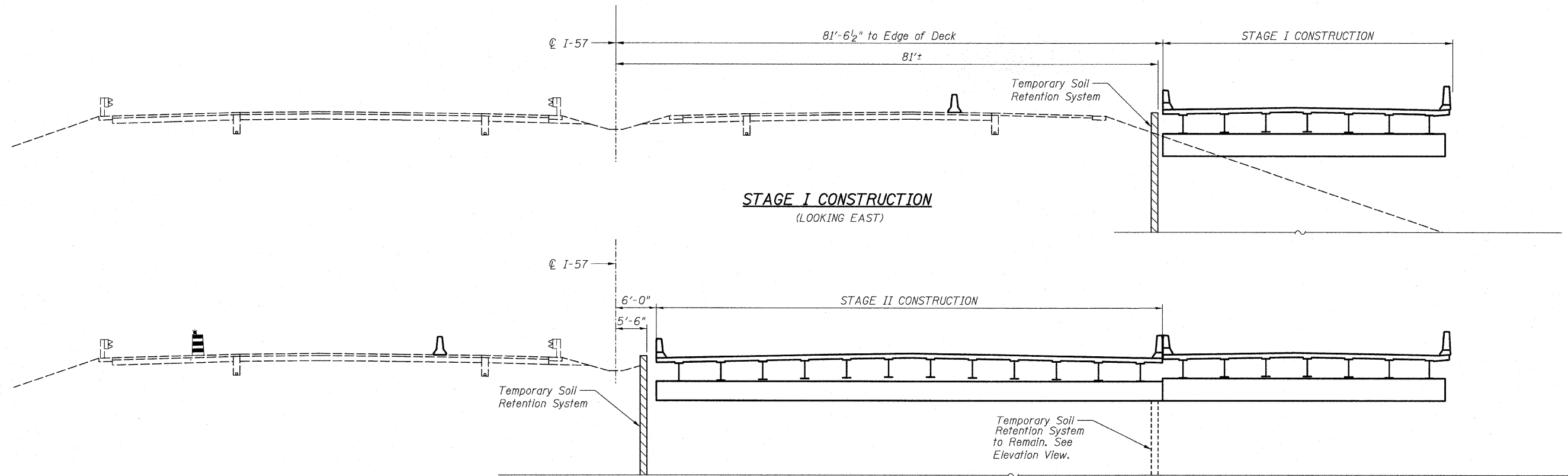
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CHECKED - LS,SP,PDF			
DATE - 03/18/10			

SHEET NO. 3 62 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	316
			CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



* 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.

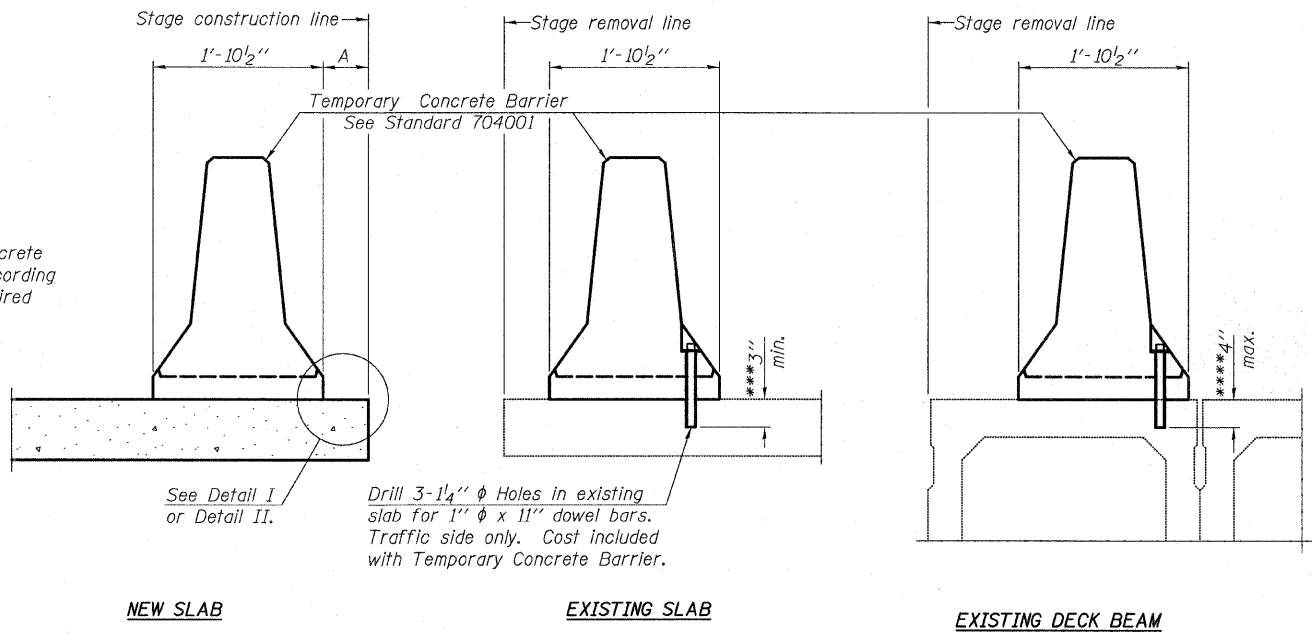
**TEMPORARY SOIL RETENTION SYSTEM
STRUCTURE NO. 016-1252**

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	CHECKED - AMD	NAME	DATE		57	1414.2B	COOK	516	317	
	DRAWN - MRB				62 SHEETS	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
DEPARTMENT OF TRANSPORTATION

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".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

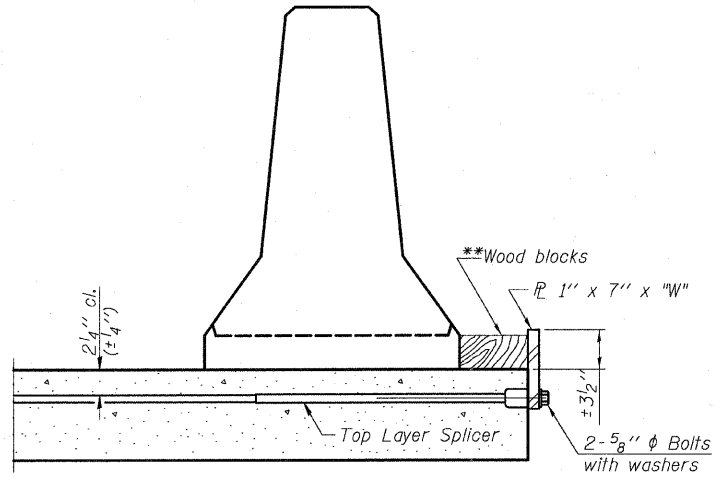
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate ϕ of each barrier panel.

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 ϕ of each barrier panel.

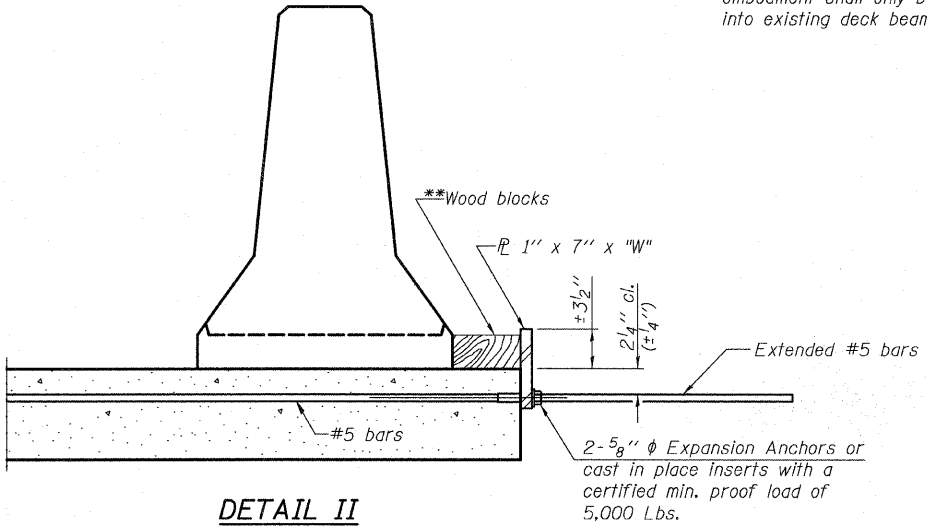
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** 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.

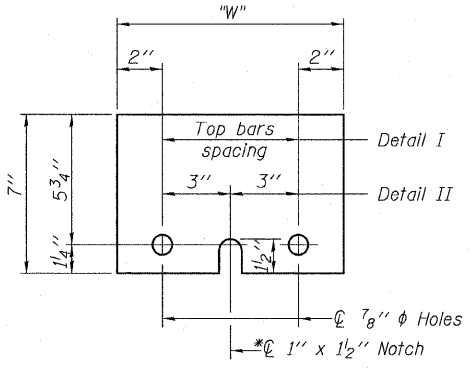
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



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"

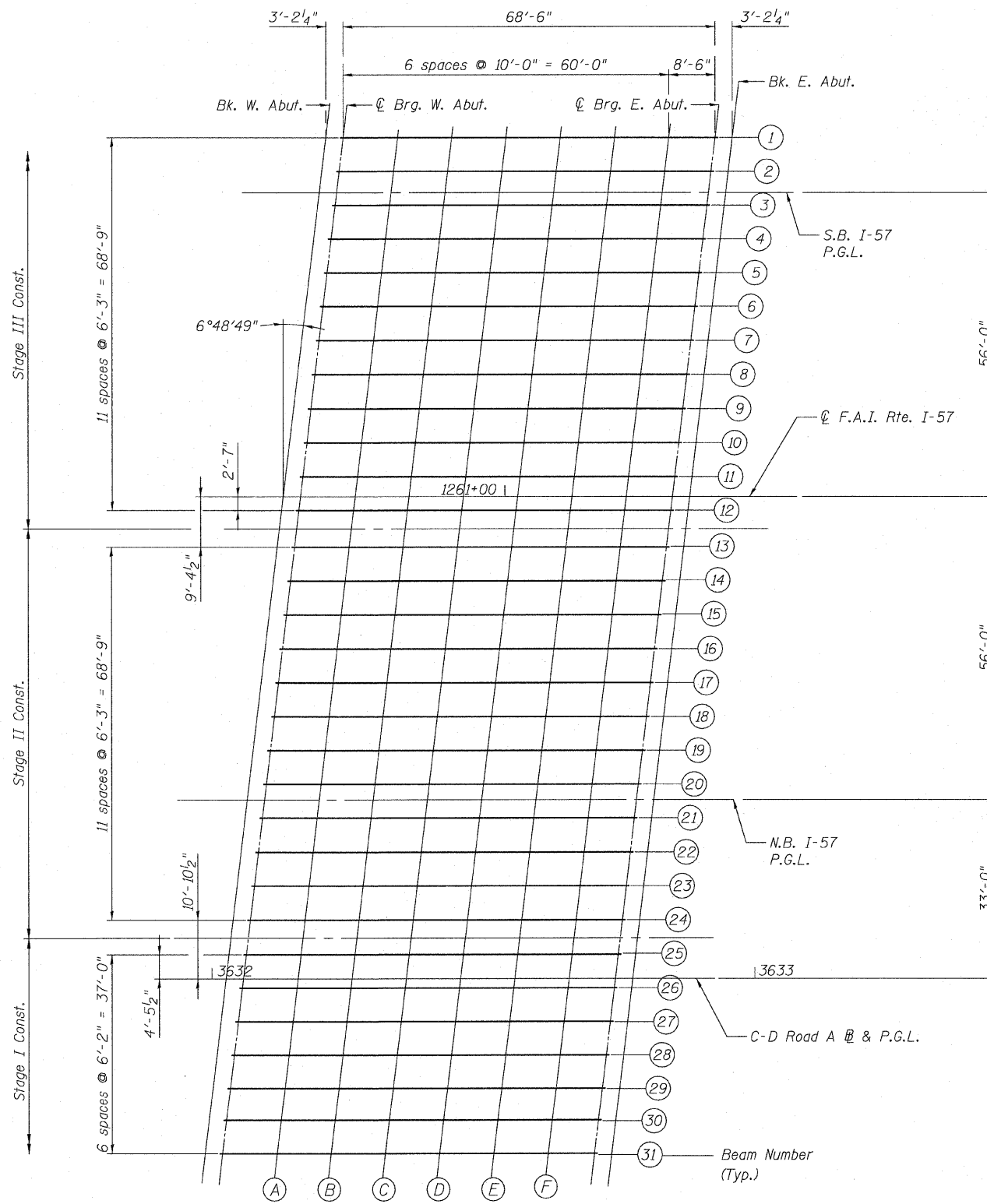
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**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 016-1252**

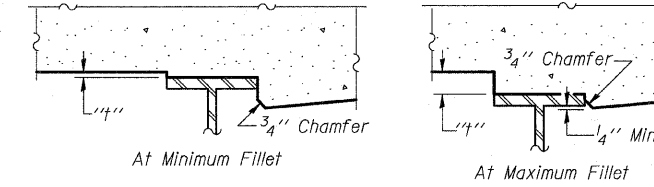
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	DATE - 03/18/10									
SHEET NO. 5										
62 SHEETS										
F.A.I. RTE. 57		SECTION 1414.2B		COUNTY COOK		TOTAL SHEETS 516		SHEET NO. 318		3/18/2010
CONTRACT NO. 60J27										
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT										

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

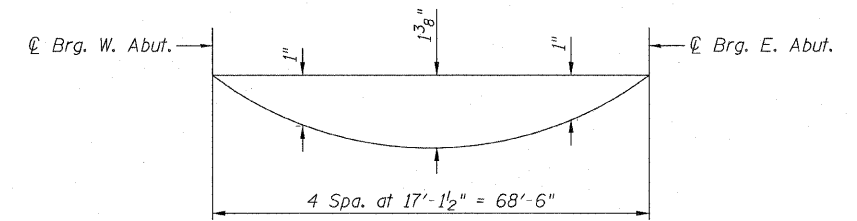


PLAN



To determine "f": 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 "f" 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

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DATE -	03/18/10		

SHEET NO. 6

62 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	319
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60J27	

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.							
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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

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DATE -	03/18/10		

SHEET NO. 8	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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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	
		NAME	DATE
CHECKED -	AD,LS		
DRAWN -	DY,EI		
CHECKED -	LS,SP,PDF		
DATE -	03/18/10		

SHEET NO. 9	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	322
62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.							
	CHECKED - AD,LS	NAME	DATE							62 SHEETS	57	1414.2B	COOK	516	323	
	DRAWN - DY,EI															CONTRACT NO. 60J27
	CHECKED - LS,SP,PDF															
	DATE - 03/18/10															

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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.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.						
	CHECKED - AD,LS	NAME	DATE							62 SHEETS	1414.2B	COOK	516	324	
	DRAWN - DY,EI														CONTRACT NO. 60J27
	CHECKED - LS,SP,PDF														
	DATE - 03/18/10														

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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 62 SHEETS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AD,LS	NAME	DATE		57	1414.2B	COOK	516	325	
	DRAWN - DY,ET				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

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

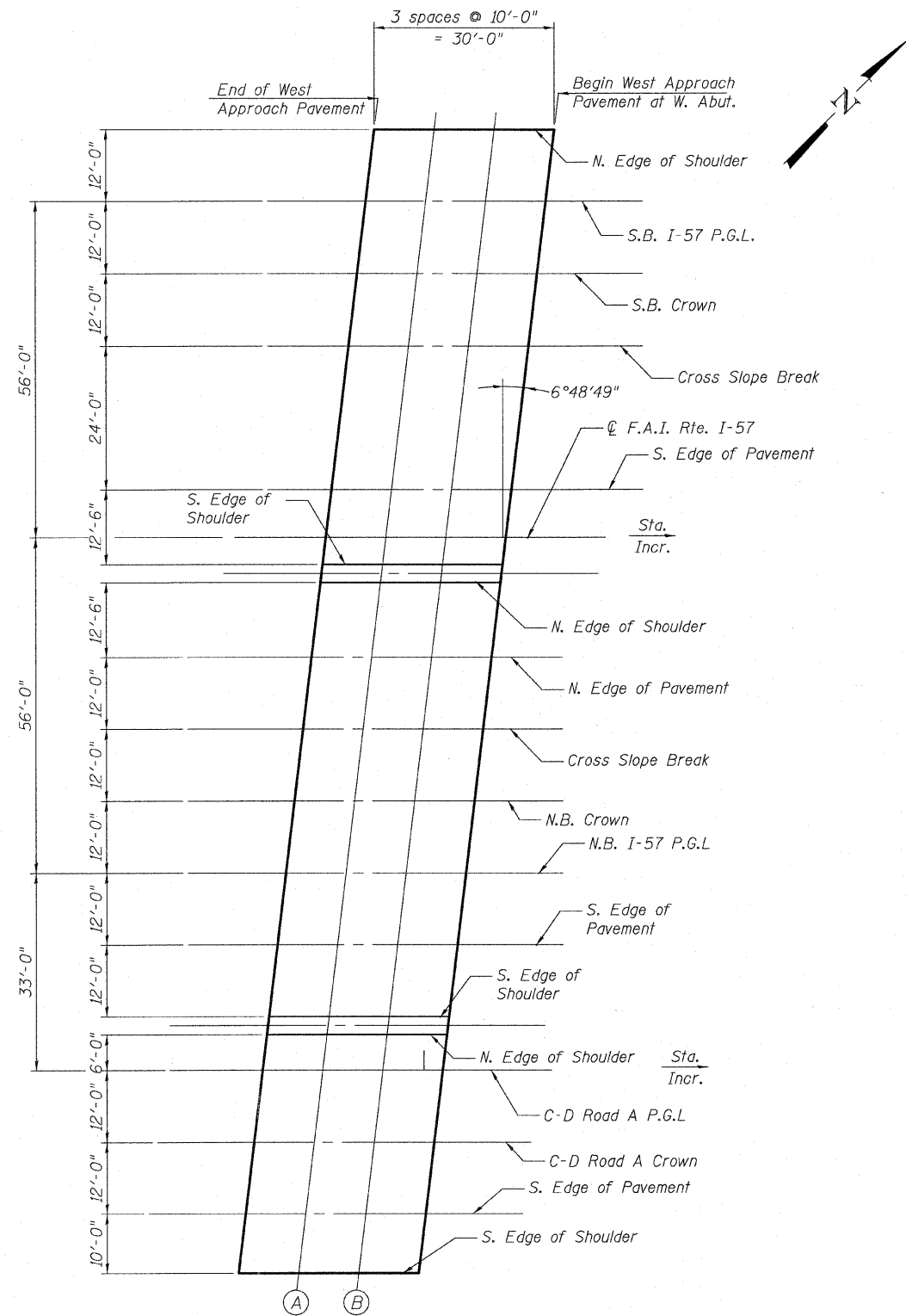
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	1260+29.13	60.50	634.41
A	1260+39.13	60.50	634.37
B	1260+49.13	60.50	634.32
Begin W. Appr. Pav't	1260+59.13	60.50	634.27

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

SHEET NO. 13 62 SHEETS	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 326
	CONTRACT NO. 60J27			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	

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

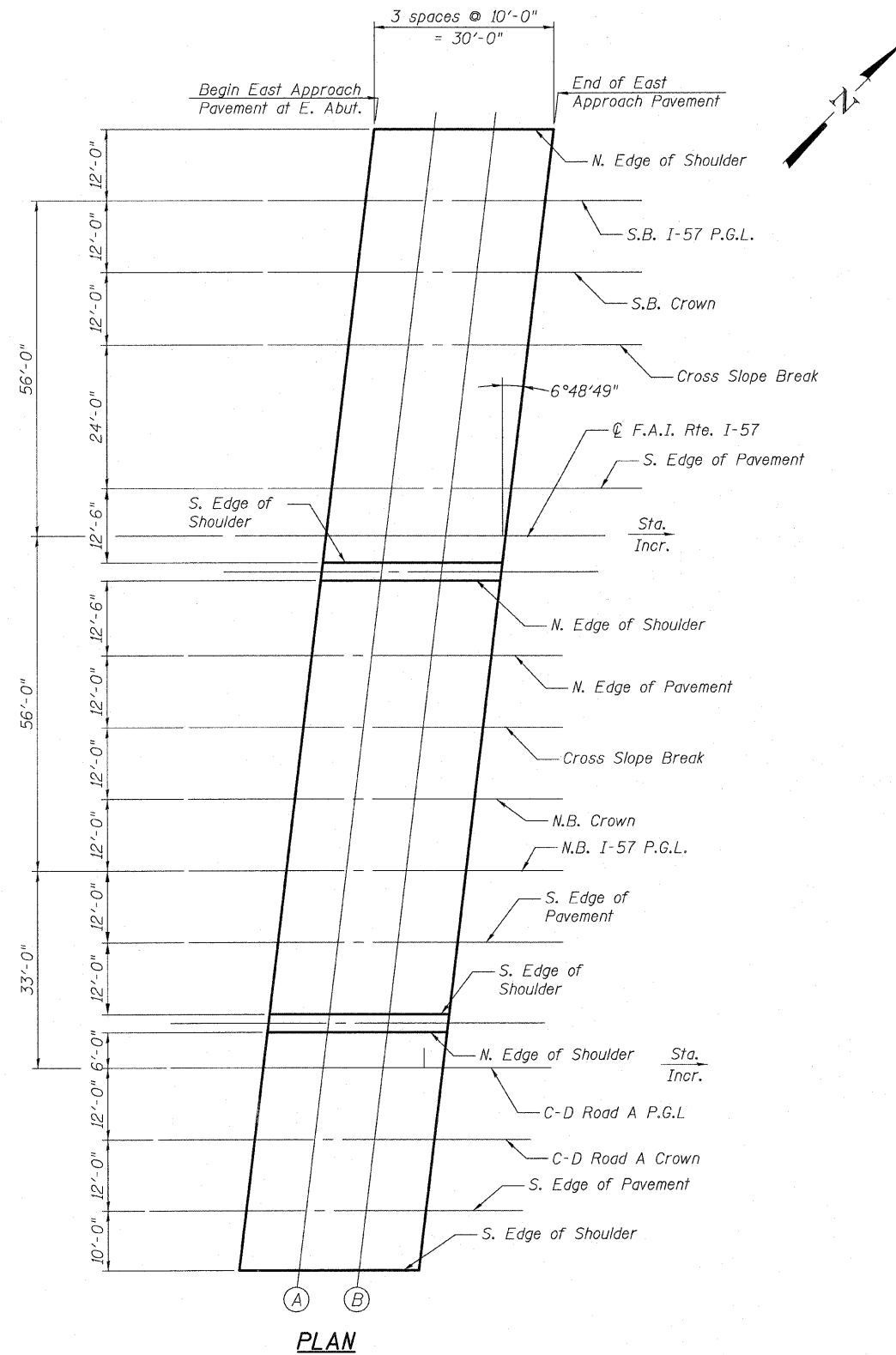
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	3631+69.07	34.00	634.96
A	3631+79.07	34.00	634.92
B	3631+89.07	34.00	634.87
Begin W. Appr. Pav't	3631+99.07	34.00	634.83

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

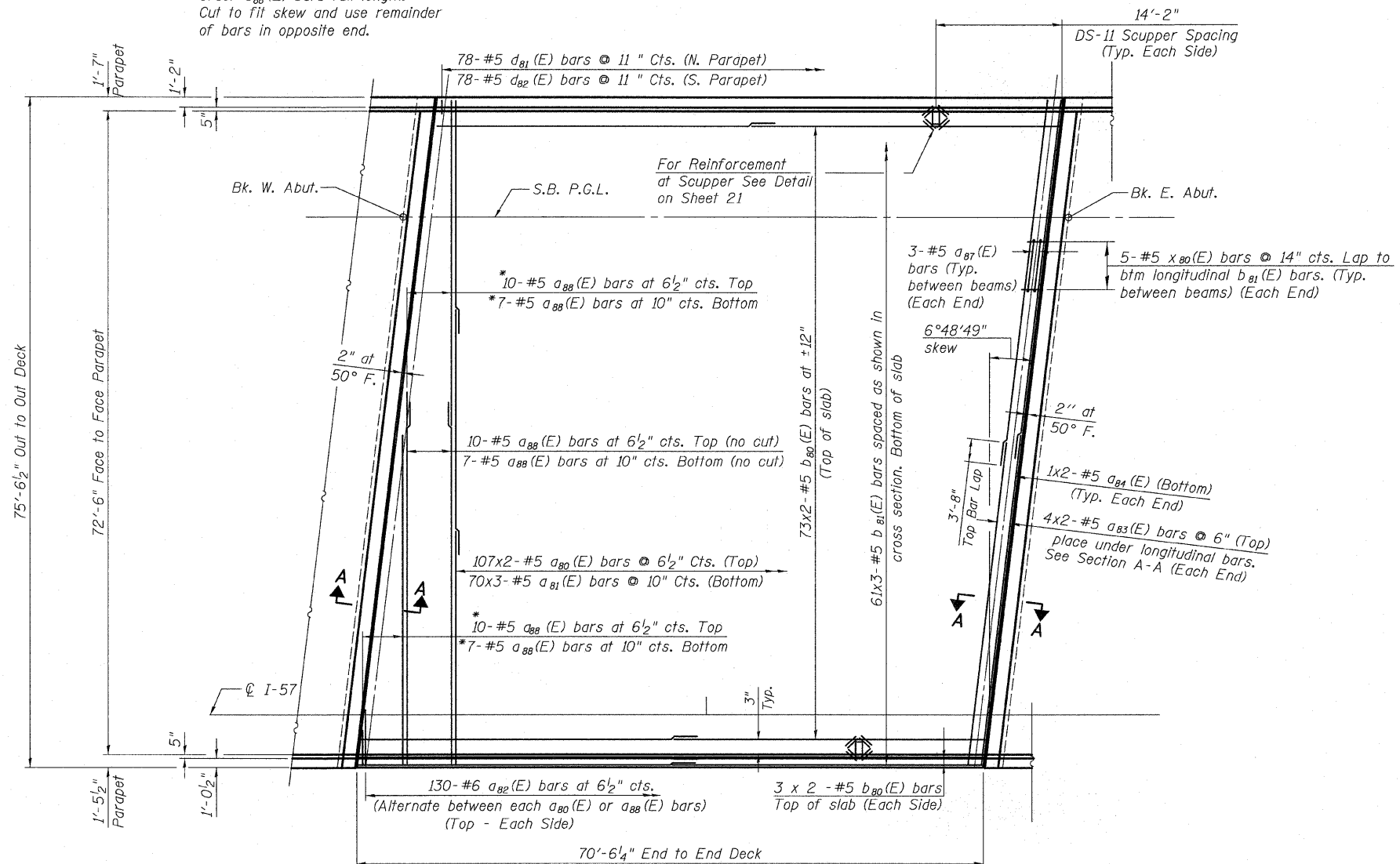
TOP OF EAST APPROACH SLAB ELEVATIONS - 2
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 16	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	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									

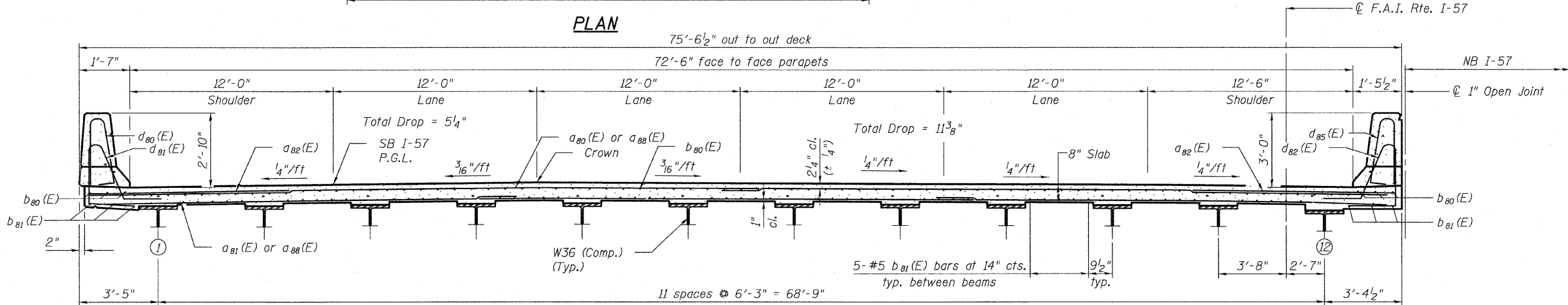
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Order $a_{88}(E)$ 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:
- 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.

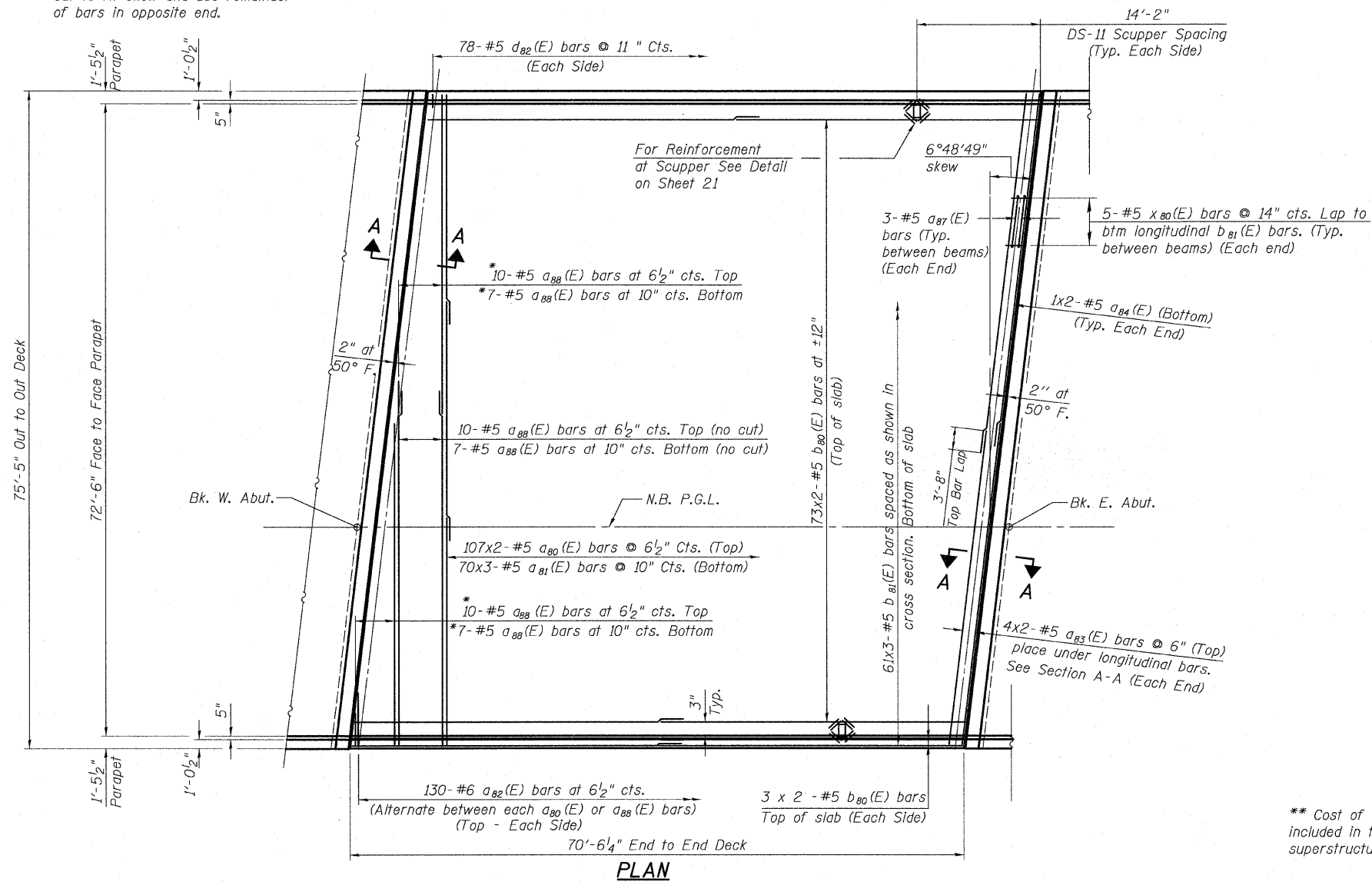
SUPERSTRUCTURE - SB I-57
SN. 016-1252

<p>TYLIN INTERNATIONAL</p>	DESIGNED - DY	REVISIONS		<p>SHEET NO. 17</p> <p>62 SHEETS</p>	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

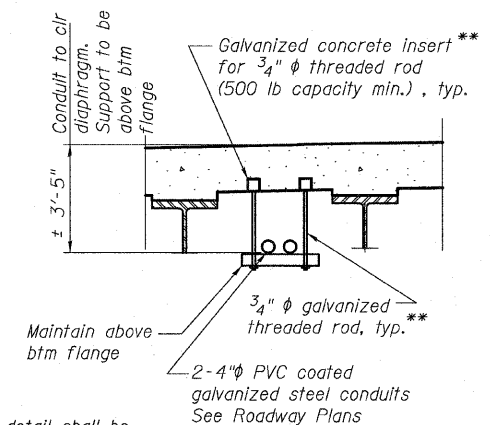
*Order $a_{88}(E)$ bars full length.
Cut to fit skew and use remainder
of bars in opposite end.



MINIMUM BAR LAPS

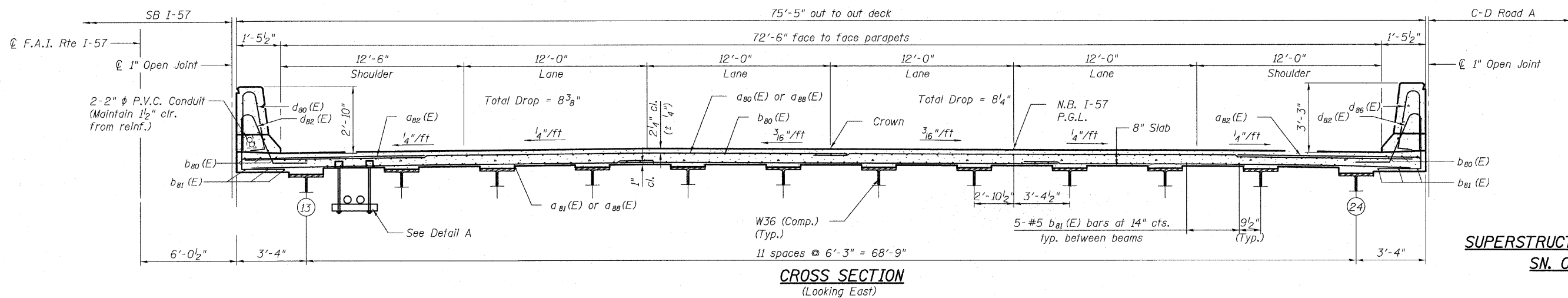
Bar	Lap
#5	3'-3"
#5	3'-8" (Top)

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)



CROSS SECTION
(Looking East)

SUPERSTRUCTURE - NB I-57
SN. 016-1252

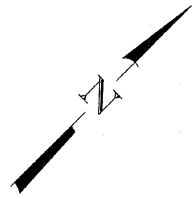
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CHECKED	LS,SP,PDF		
DATE	03/18/10		

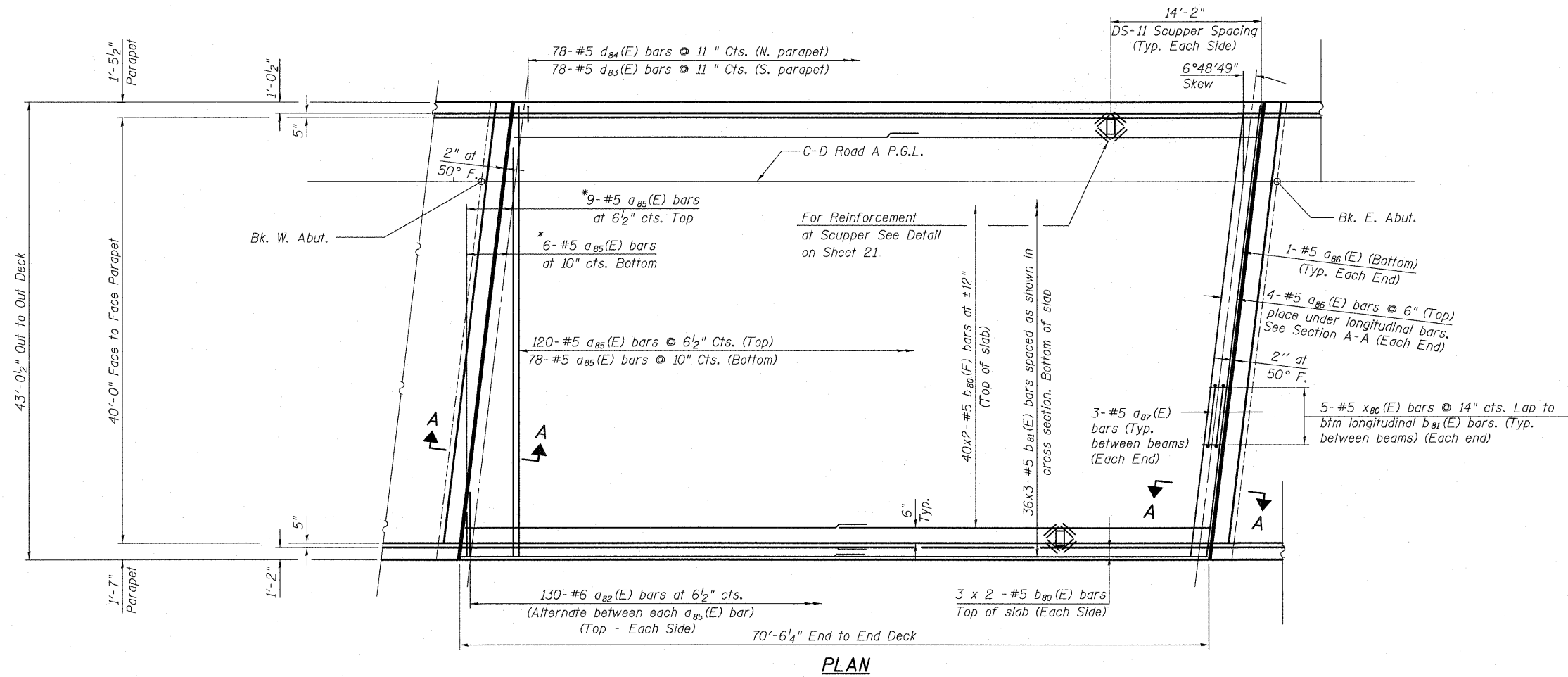
SHEET NO. 18
62 SHEETS

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

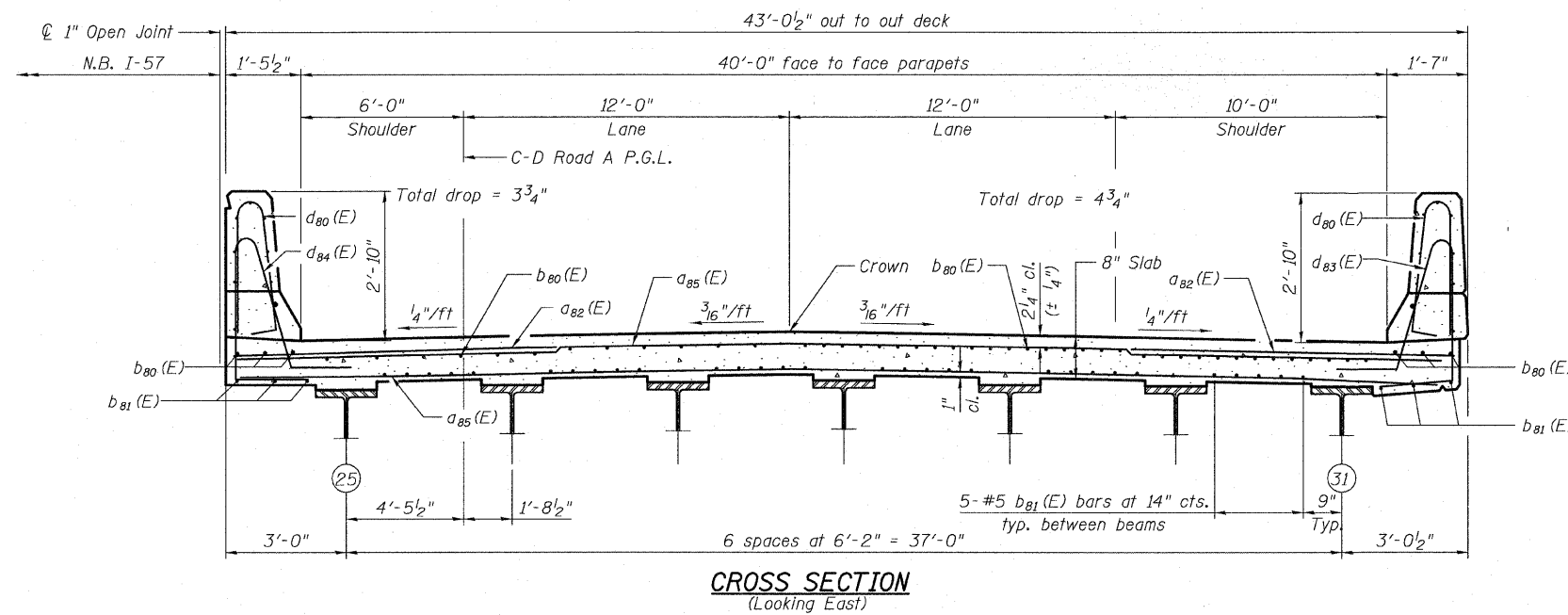


* Order $a_{85}(E)$ bars full length.
Cut to fit skew and use remainder
of bars in opposite end.



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

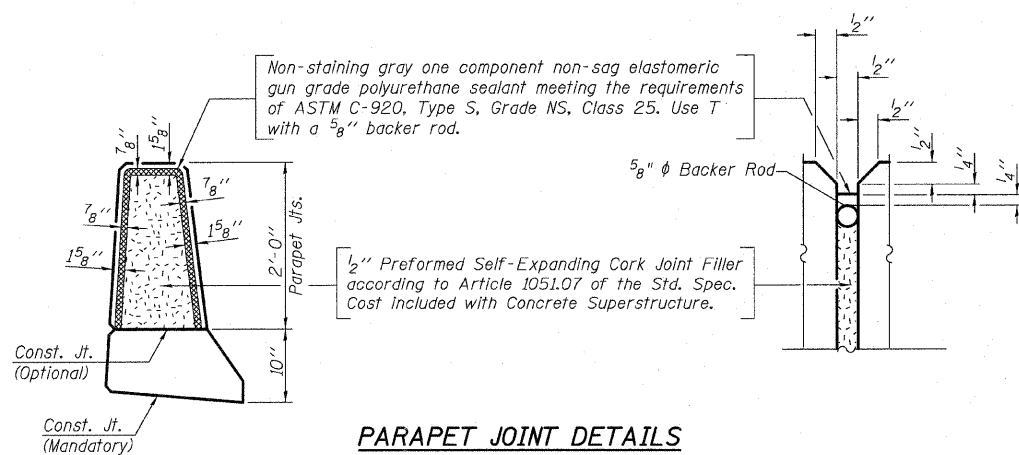
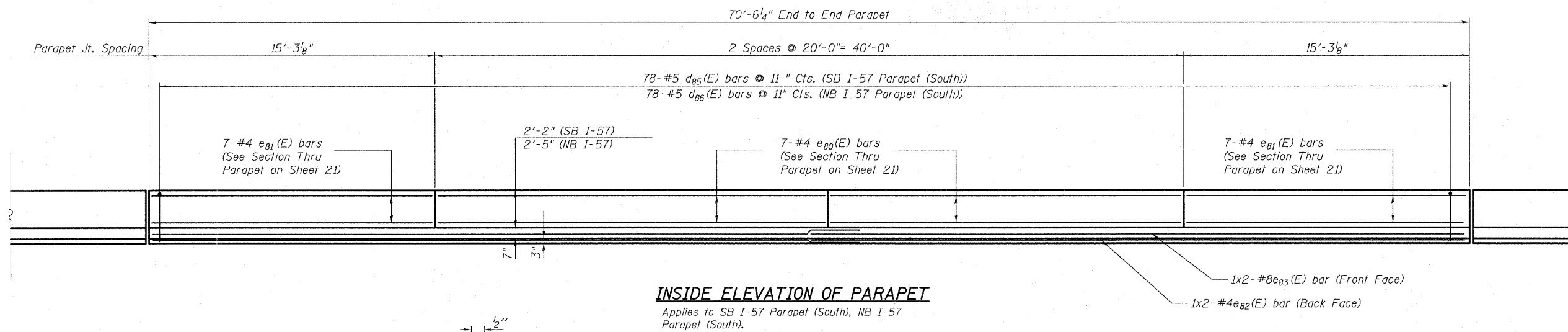
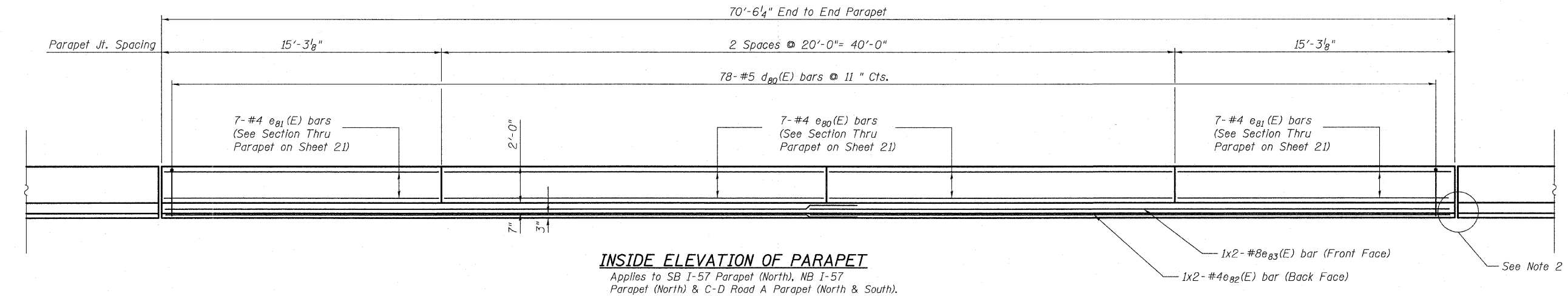
DESIGNED -	DY	REVISIONS	
		NAME	DATE
CHECKED -	AD,LS		
DRAWN -	DY,EI		
CHECKED -	LS,SP,PDF		
DATE -	03/18/10		

SHEET NO. 19
62 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	332
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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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.

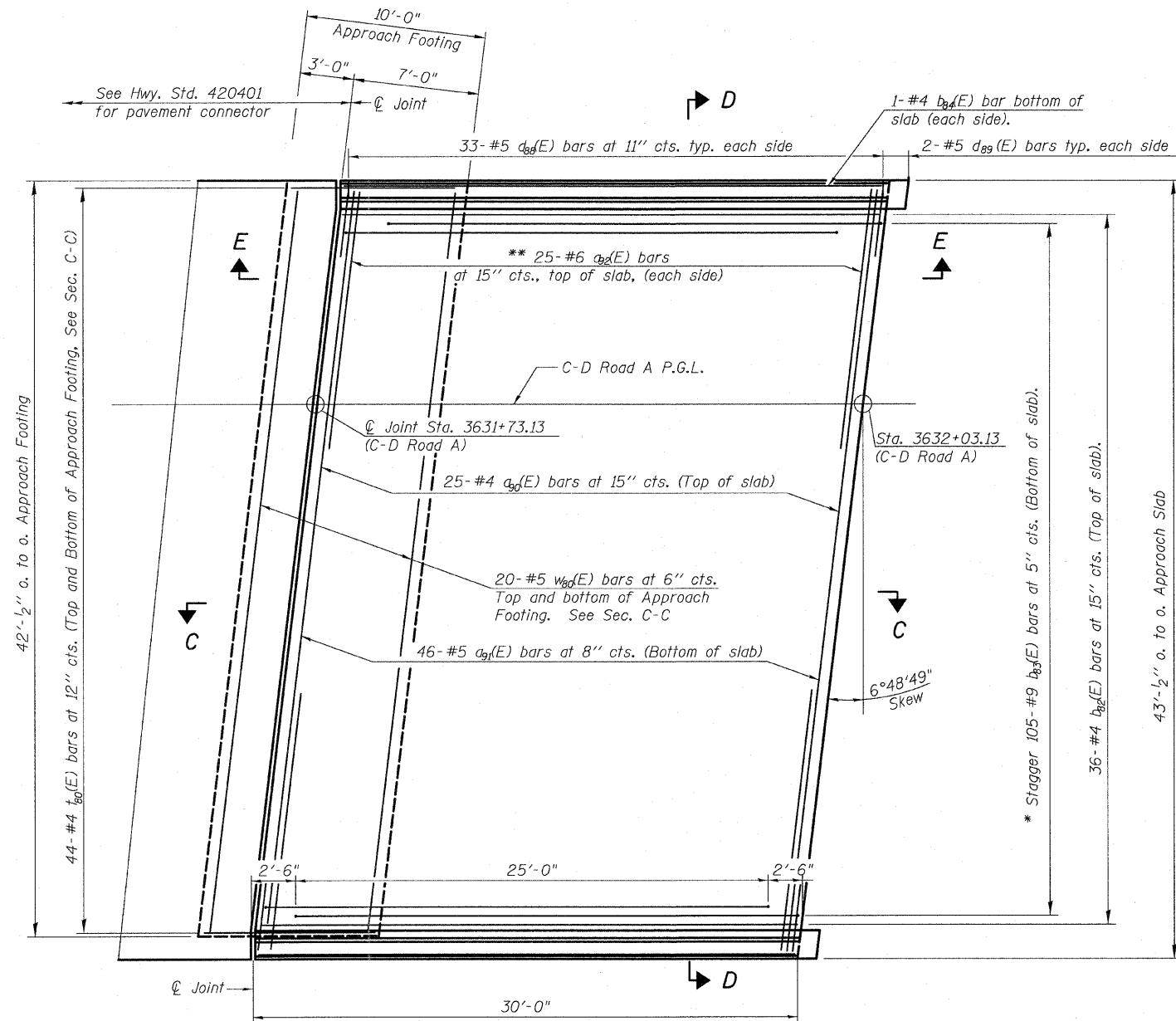
PARAPET ELEVATIONS
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 20	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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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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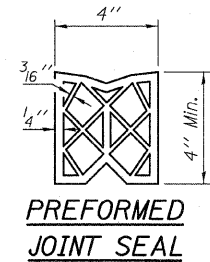
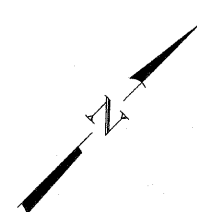
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 23 of 62 for Sections C-C & D-D and View E-E.
 $a_3(E)$ and $a_1(E)$ bar spacings measured along \varnothing Rdwy.

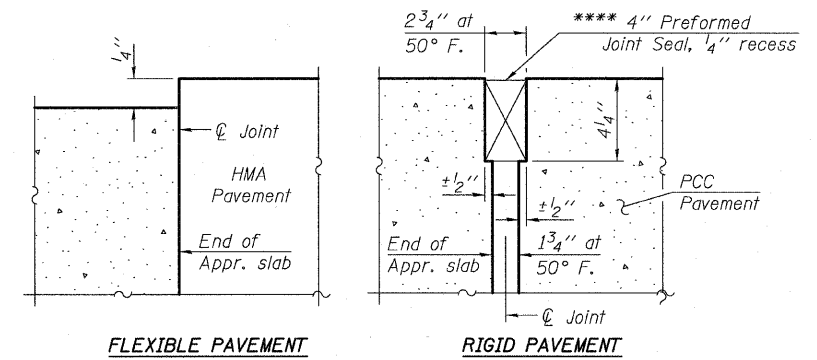


PLAN

* Tilt #9 $b_3(E)$ bars as required to maintain clearance.
** Space between $a_3(E)$ bars, typ. each parapet.



**** Cost included with Concrete Superstructure.



MINIMUM BAR LAPS

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

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

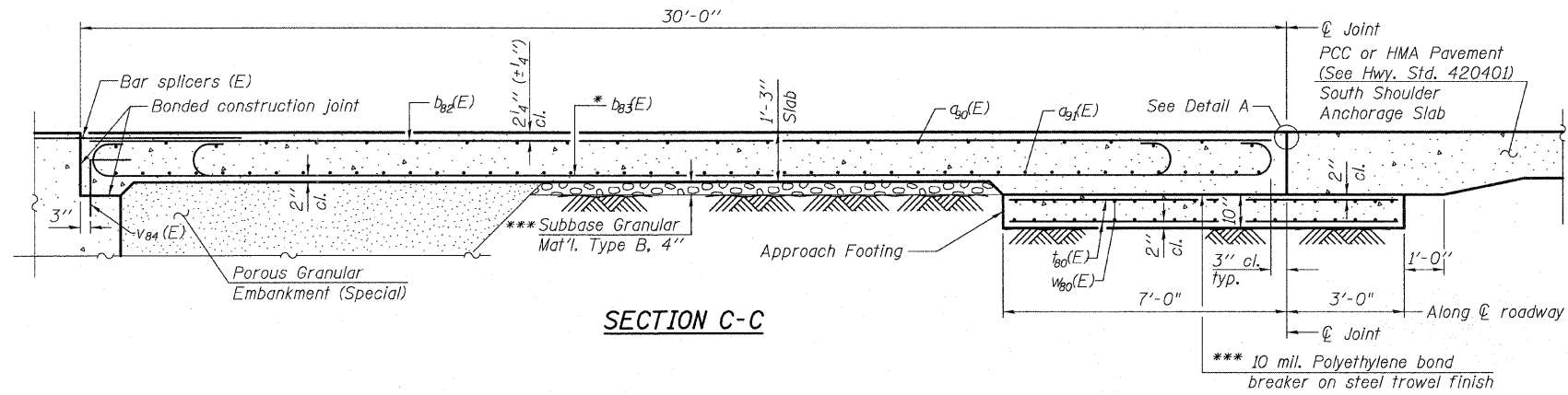
TYLIN INTERNATIONAL

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

SHEET NO. 22 62 SHEETS	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 335
	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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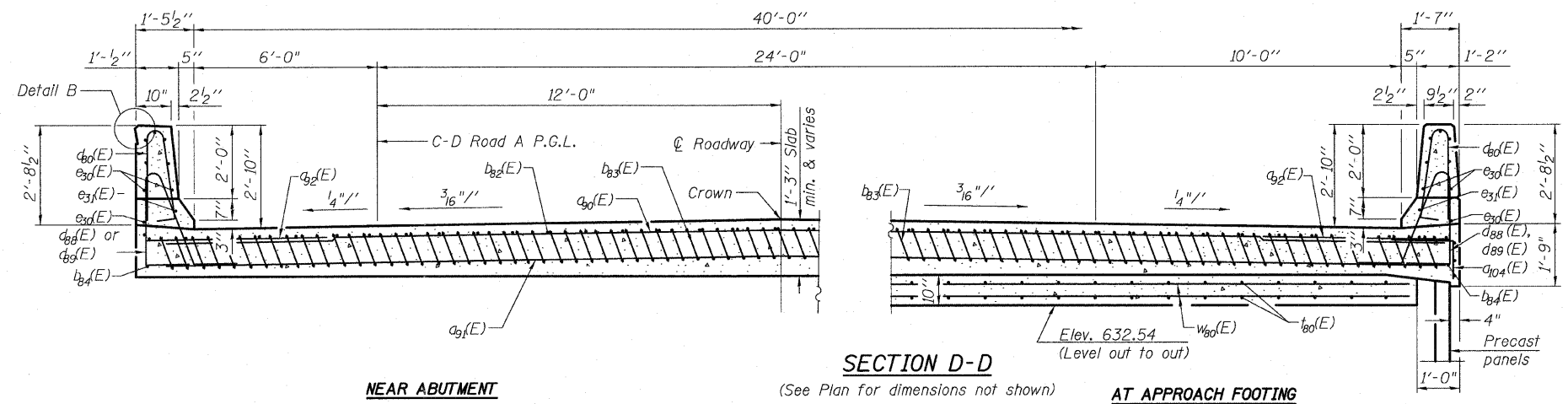
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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 $v_{84}(E)$ bar details, see sheet 46 of 62.
The approach footing maximum applied service bearing pressure (O_{max}) = 2.0 ksf.
For bar splicer details, see sheet 55 of 62.
Cost of excavation for approach footing included with Concrete Structures.

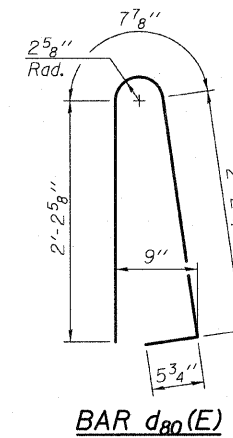
The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 62.



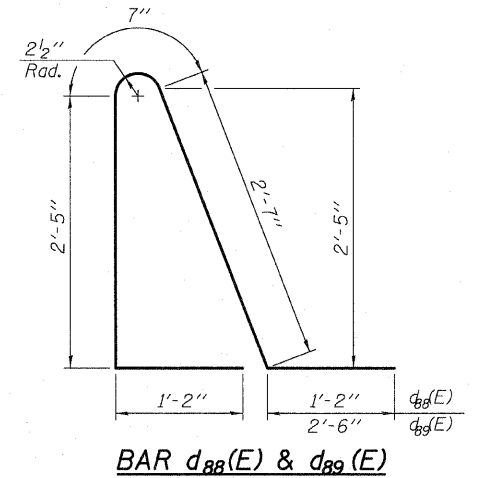
NEAR ABUTMENT

SECTION D-D
(See Plan for dimensions not shown)

AT APPROACH FOOTING



BAR $d_{80}(E)$



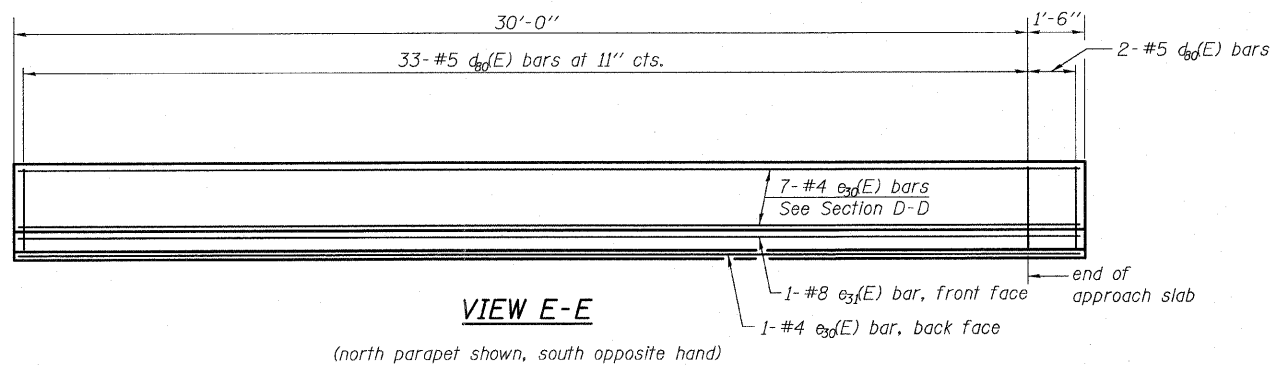
BAR $d_{88}(E)$ & $d_{89}(E)$

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"	—
$c_{88}(E)$	70	#5	5'-7"	—
$c_{89}(E)$	66	#5	7'-11"	—
$c_{90}(E)$	4	#5	9'-3"	—
$e_{30}(E)$	16	#4	31'-2"	—
$e_{31}(E)$	2	#8	31'-2"	—
$f_{80}(E)$	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	

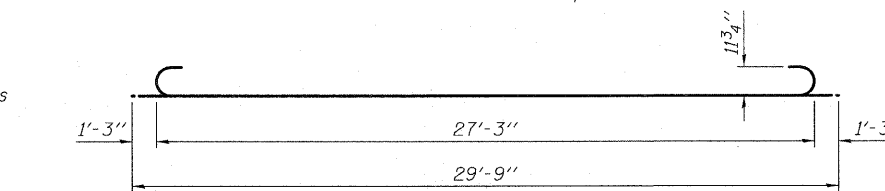
(1.) 2,370 pounds billed in Substructure
Total in Total Bill of Material on sheet 2 of 62.

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

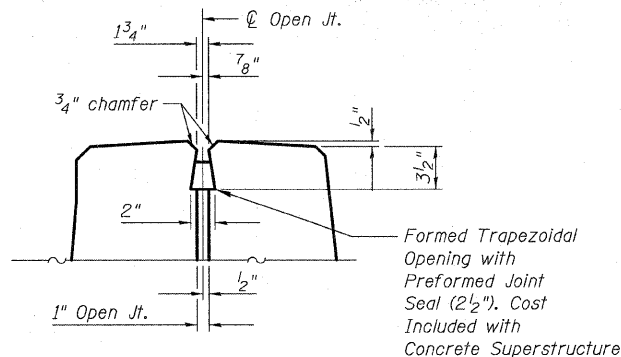


VIEW E-E

(north parapet shown, south opposite hand)



BAR $b_{33}(E)$



DETAIL B

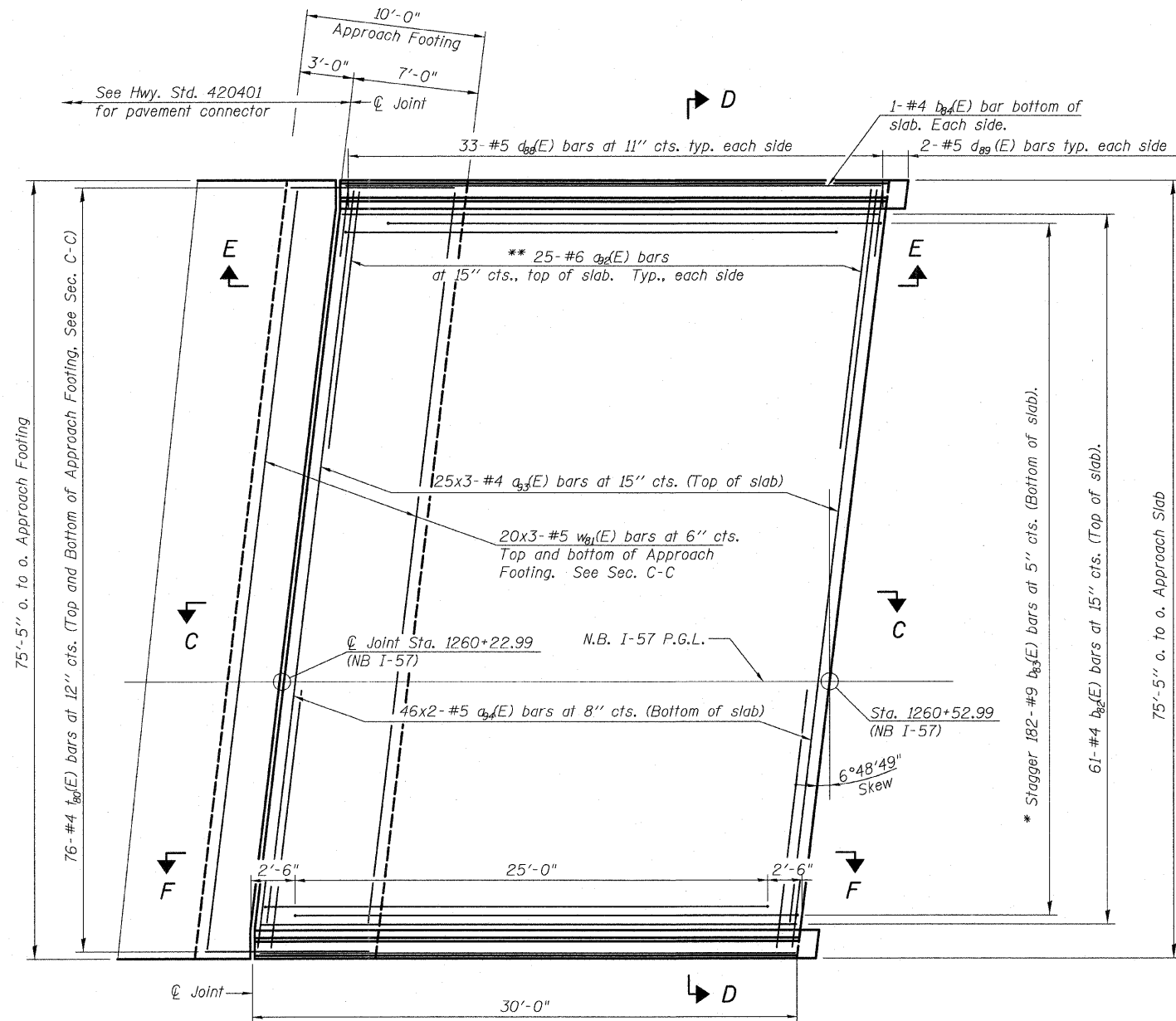
* Tilt #9 $b_{33}(E)$ bars as required to maintain clearance.
*** Cost included with Concrete Superstructure.

TYLIN INTERNATIONAL	DESIGNED - MRB	REVISIONS		SHEET NO. 23	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD	NAME	DATE		57	1414.2B	COOK	516	336	
	DRAWN - MRB				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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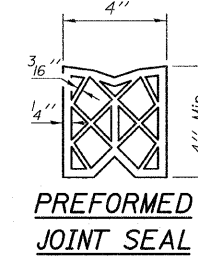
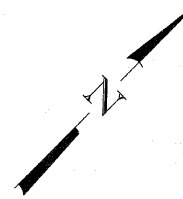
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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 \varnothing Rdwy.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with three lengths per line.

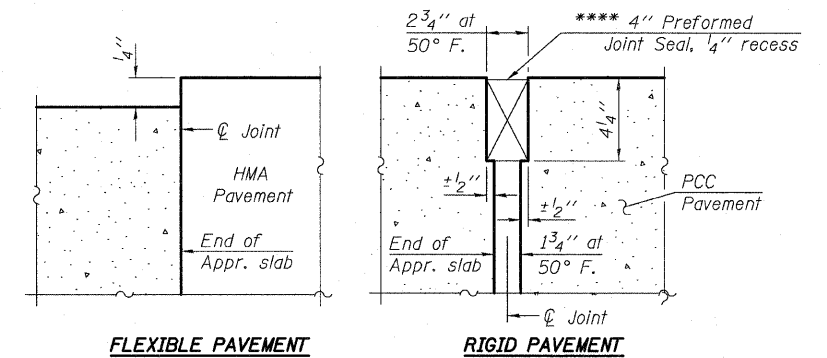


PLAN

* Tilt #9 $b_{83}(E)$ 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**

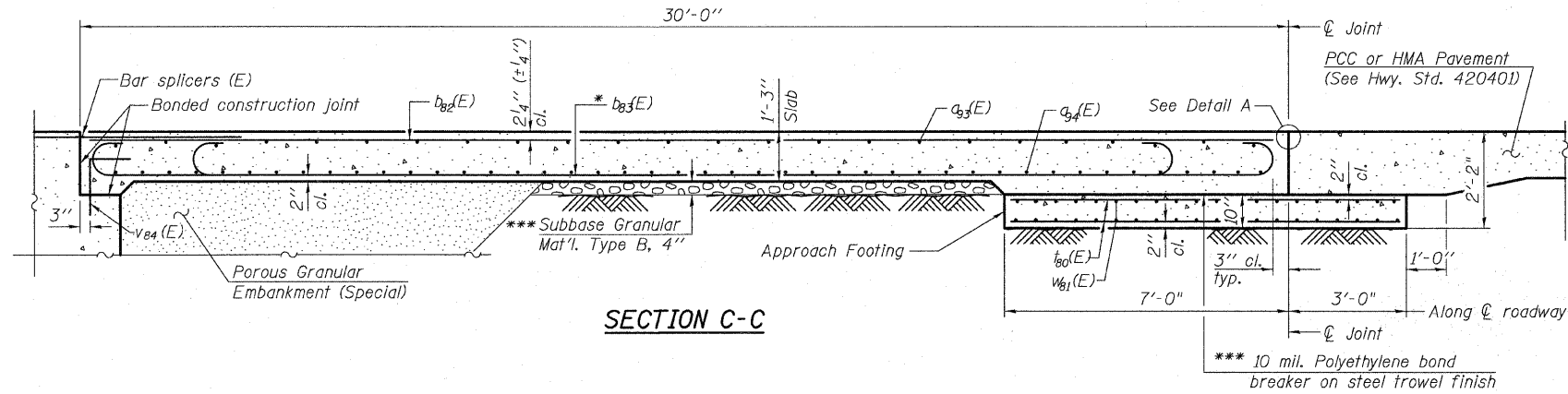
TYLIN INTERNATIONAL

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

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

P:\602540157-2941\STRUCTURAL\I-57 OVER RAMP BY\Final submittal_03-17-2010\Final submittal_03-17-2010\Final submittal_03-17-2010\0161252-60J27-024-W_APPR3.dgn 9:54:10 AM 3/18/2010

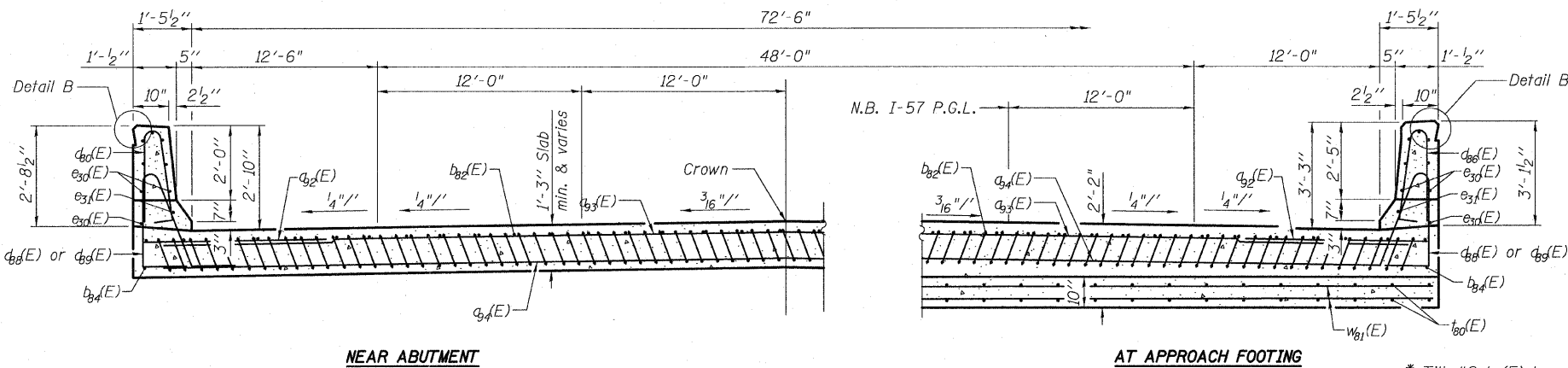
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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 (O_{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.

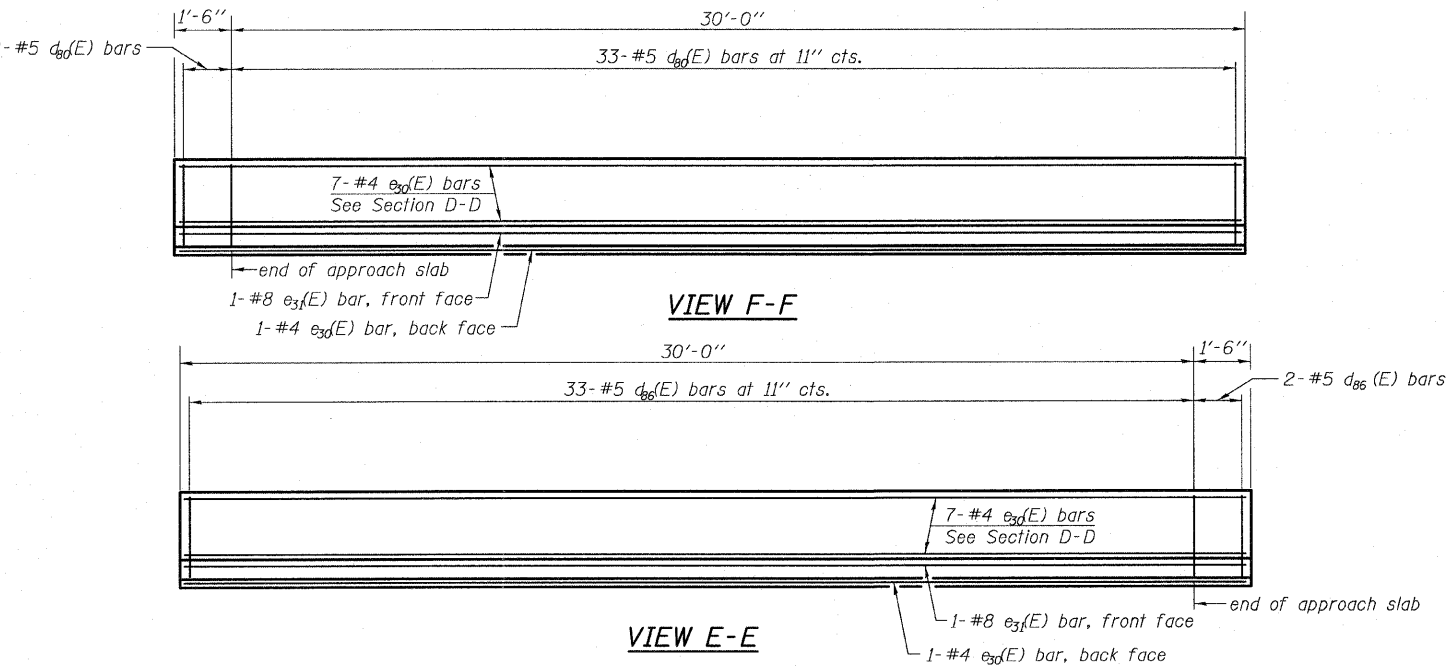


NEAR ABUTMENT

SECTION D-D

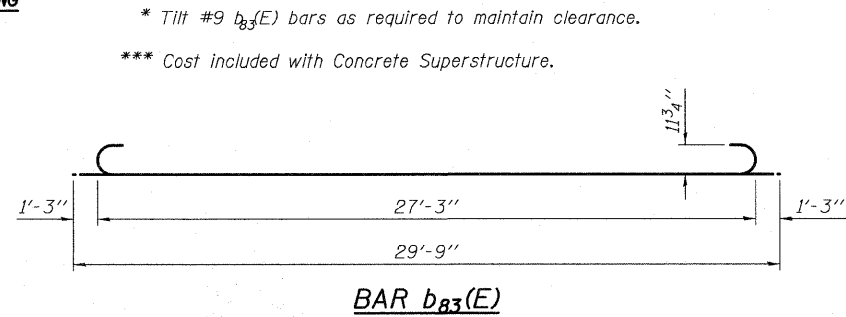
(See Plan for dimensions not shown)

AT APPROACH FOOTING

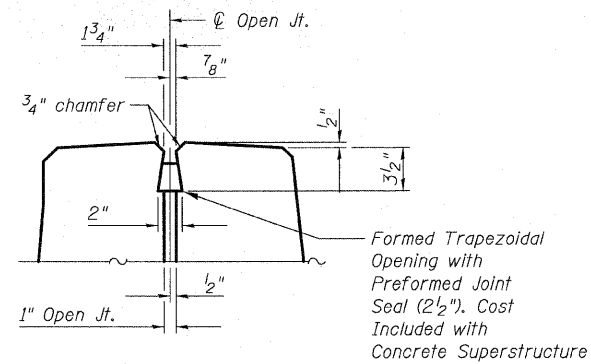


VIEW F-F

VIEW E-E

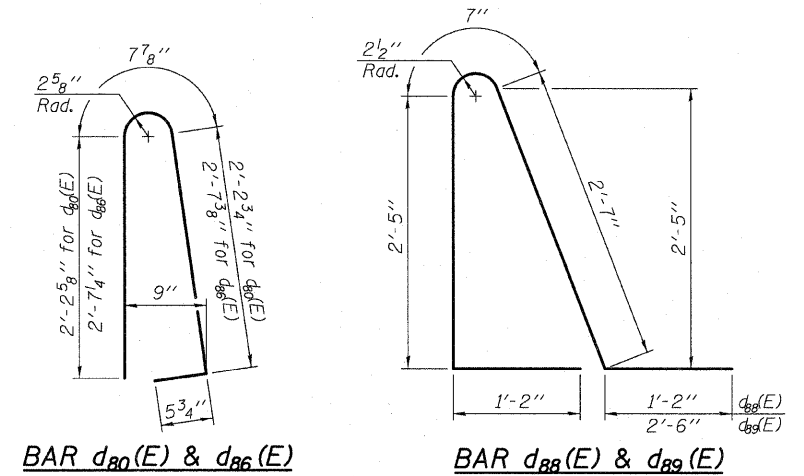


BAR $b_{33}(E)$



DETAIL B

* Tilt #9 $b_{33}(E)$ 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
$a_{32}(E)$	50	#6	6'-6"	—
$a_{33}(E)$	75	#4	27'-3"	—
$a_{34}(E)$	92	#5	39'-6"	—
$b_{32}(E)$	61	#4	29'-8"	—
$b_{33}(E)$	182	#9	29'-9"	—
$b_{34}(E)$	2	#4	31'-2"	—
$c_{30}(E)$	35	#5	5'-7"	—
$c_{31}(E)$	66	#5	7'-11"	—
$c_{32}(E)$	4	#5	9'-3"	—
$c_{33}(E)$	35	#5	6'-4"	—
$e_{30}(E)$	16	#4	31'-2"	—
$e_{31}(E)$	2	#8	31'-2"	—
$f_{30}(E)$	152	#4	9'-9"	—
$w_{81}(E)$	120	#5	27'-5"	—
Concrete Superstructure		Cu. Yd.	111.5	
Concrete Structures		Cu. Yd.	23.5	
(1.) 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.

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

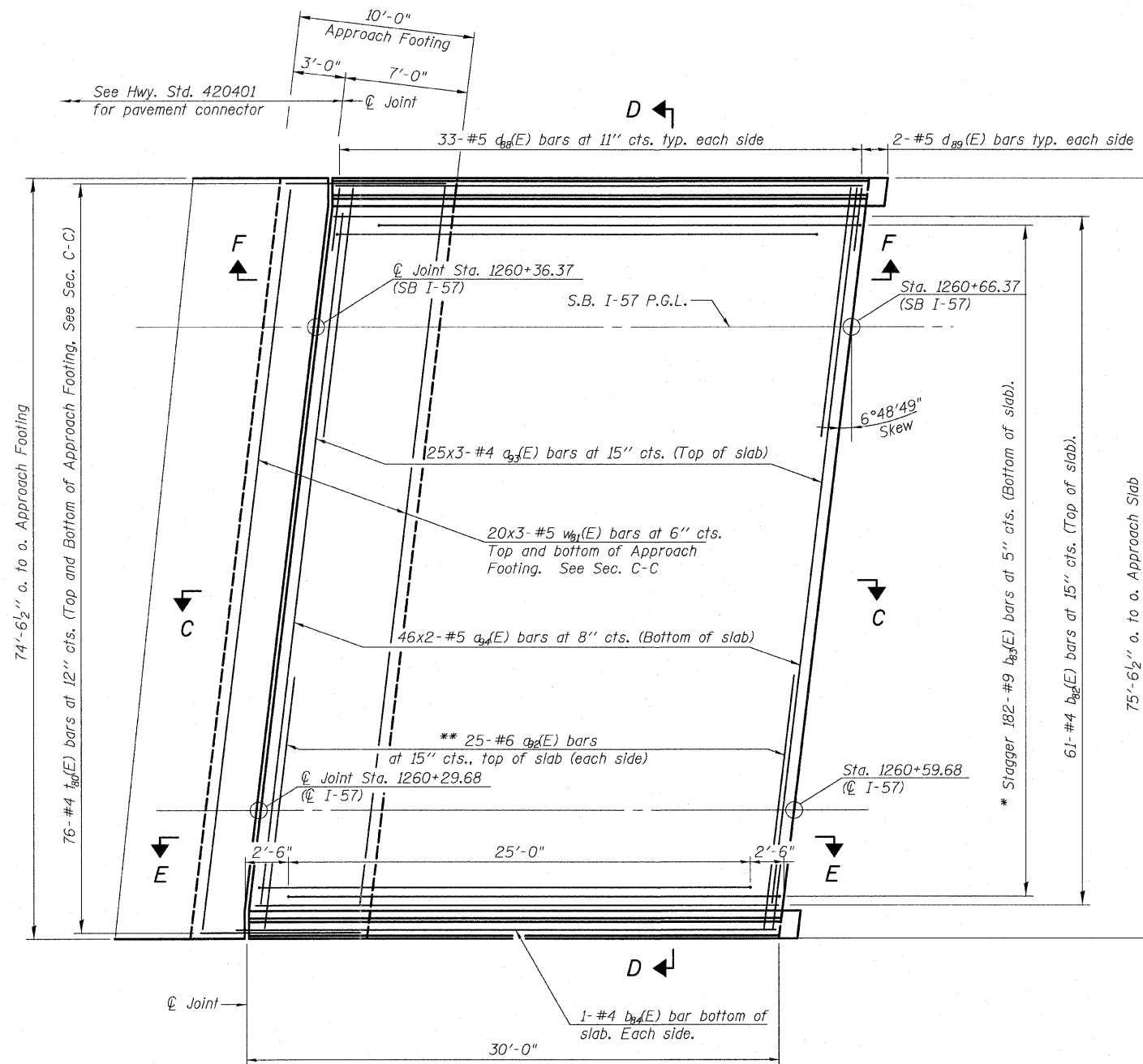
TYLIN INTERNATIONAL

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

SHEET NO. 25	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
62 SHEETS	57	1414.2B	COOK	516	338
		068-1414.2-C.F.			
		FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	

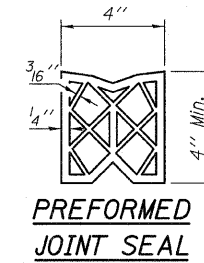
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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 \varnothing Rdwy.
Bars indicated thus 20x3-#5 etc indicates 20 lines of bars with three lengths per line.

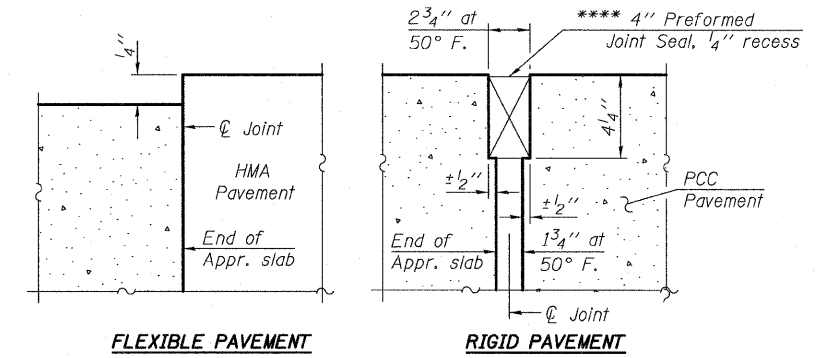


PLAN

* Tilt #9 b₉₃(E) bars as required to maintain clearance.
** Space between a₉₃(E) bars, typ. each parapet.



**** Cost included with Concrete Superstructure.



MINIMUM BAR LAPS

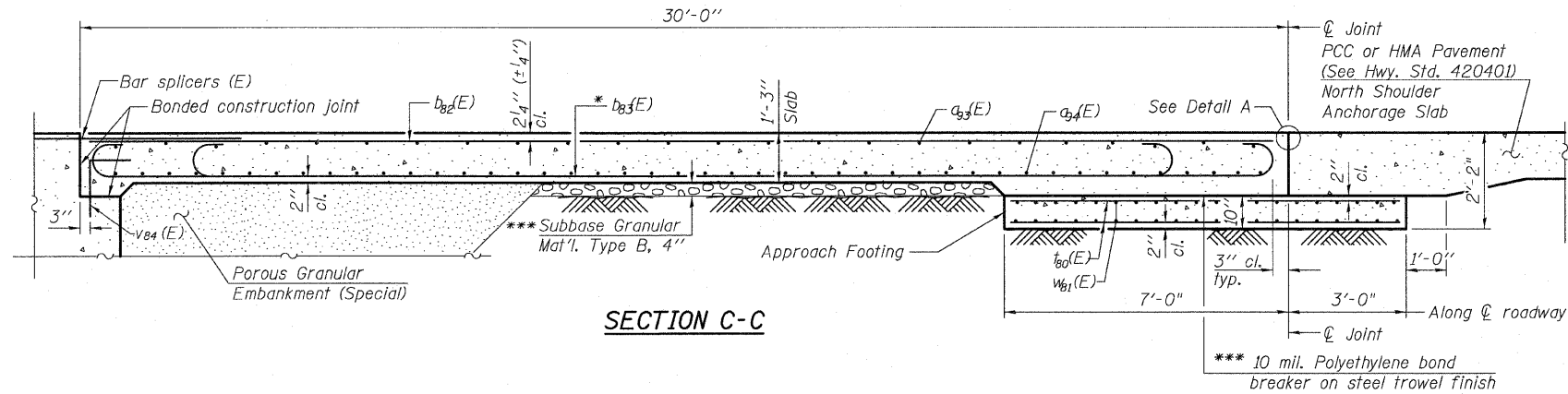
#4 Bar 2'-11"
#5 Bar 3'-3"

**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				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

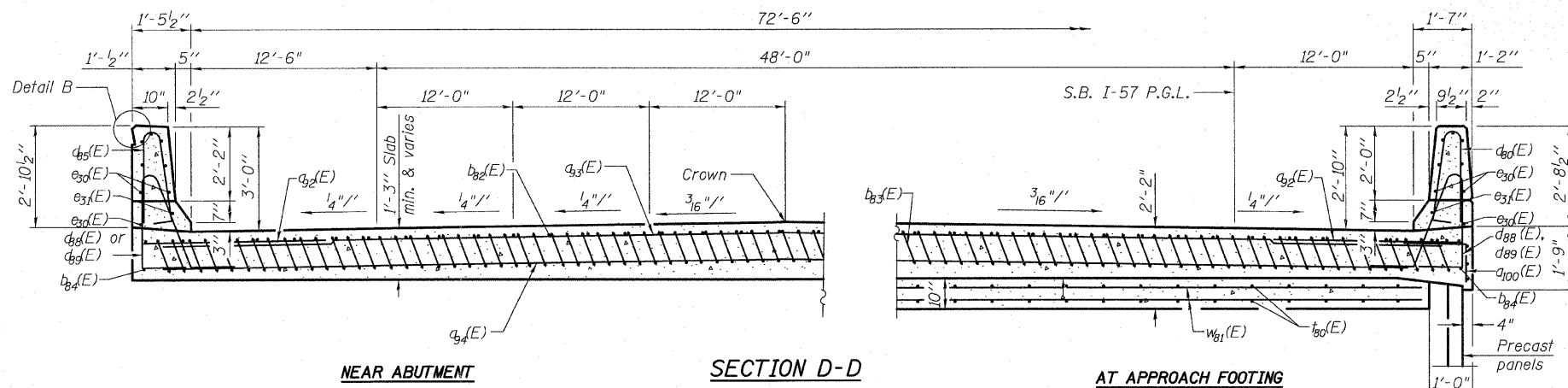


SECTION C-C

Notes:

See sheet 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.

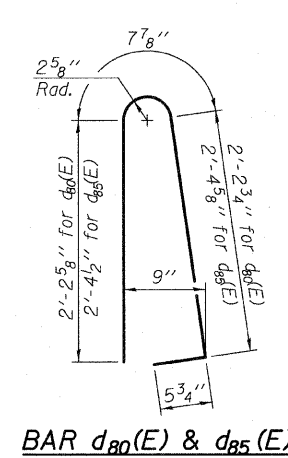


NEAR ABUTMENT

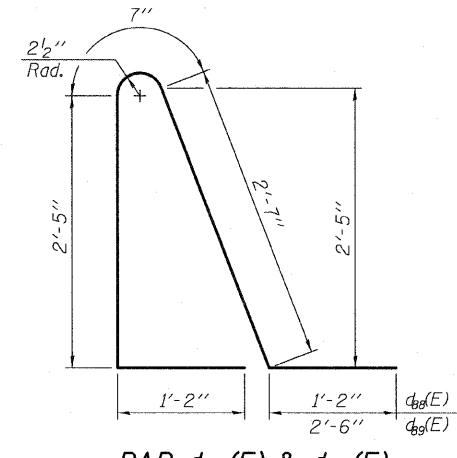
SECTION D-D

(See Plan for dimensions not shown)

AT APPROACH FOOTING



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

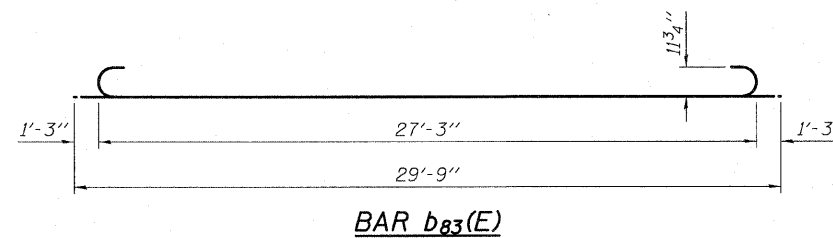


BAR $d_{88}(E)$ & $d_{89}(E)$

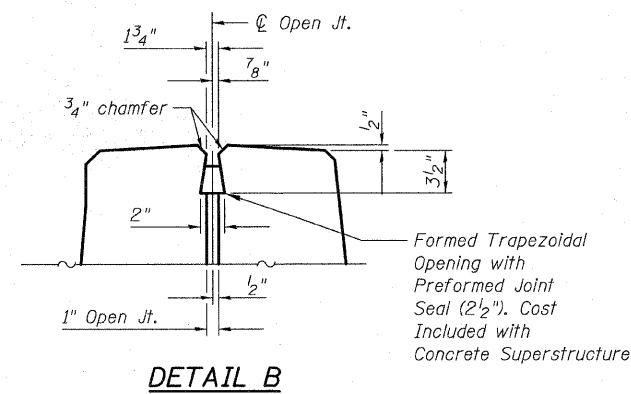
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_{33}(E)$	75	#4	27'-3"	—
$a_{34}(E)$	92	#5	39'-6"	—
$a_{35}(E)$	50	#6	6'-6"	—
$b_{82}(E)$	61	#4	29'-8"	—
$b_{83}(E)$	182	#9	29'-9"	—
$b_{84}(E)$	2	#4	31'-2"	—
$d_{80}(E)$	35	#5	5'-7"	U
$d_{85}(E)$	66	#5	7'-11"	U
$d_{88}(E)$	4	#5	9'-3"	U
$d_{89}(E)$	35	#5	5'-11"	U
$e_{33}(E)$	16	#4	31'-2"	—
$e_{37}(E)$	2	#8	31'-2"	—
$f_{80}(E)$	152	#4	9'-9"	—
$w_{81}(E)$	120	#5	27'-5"	—
Concrete Superstructure			Cu. Yd.	111.6
Concrete Structures			Cu. Yd.	23.5
Reinforcement Bars, Epoxy Coated			Pound	31,240

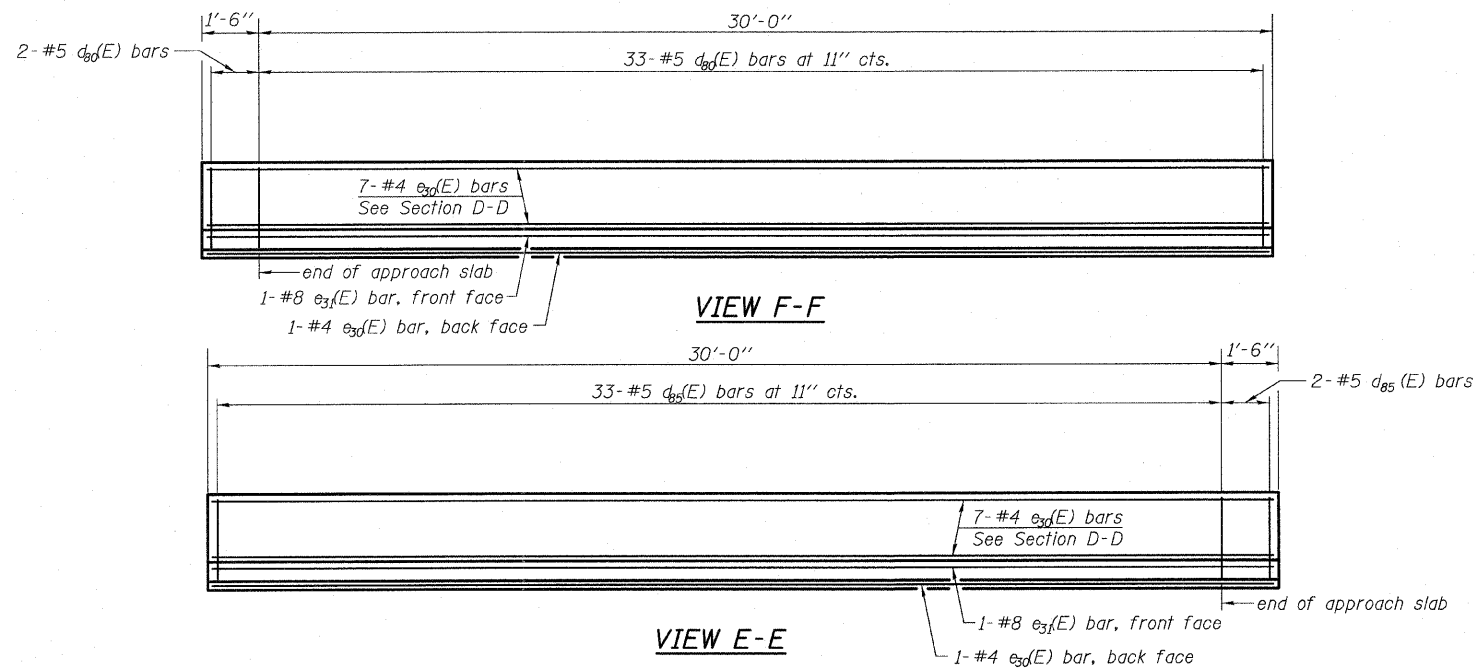
(1.) 4,420 pounds billed in Substructure
Total in Total Bill of Material on sheet 2 of 62.



BAR $b_{83}(E)$



DETAIL B



VIEW F-F

VIEW E-E

WEST APPROACH SLAB SB I-57 - 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. 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					

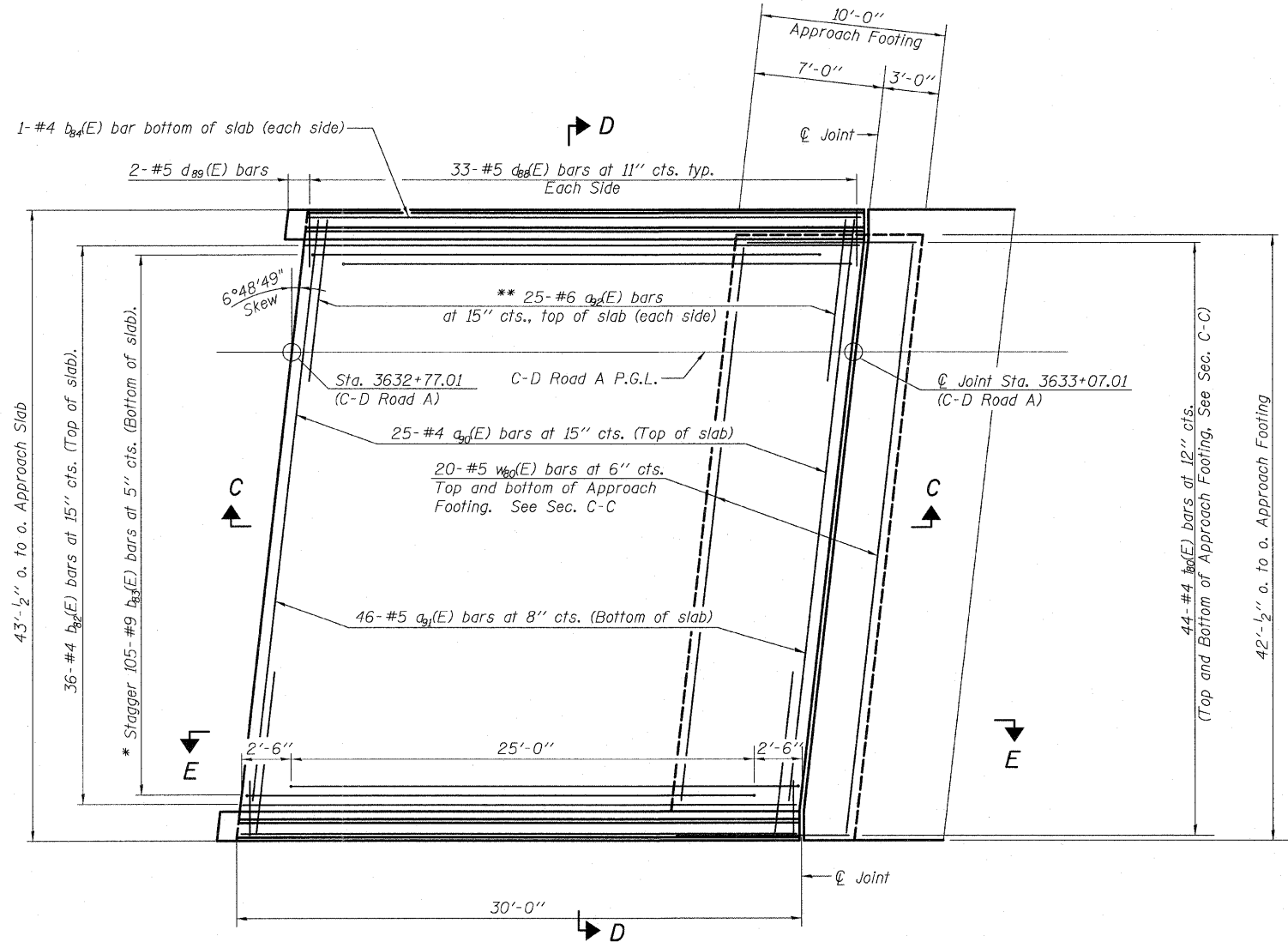
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 29 of 62 for Sections C-C & D-D and Views E-E and F-F.
 $a_{9d}(E)$ and $a_{9l}(E)$ bar spacings measured along ϕ Rdwy.

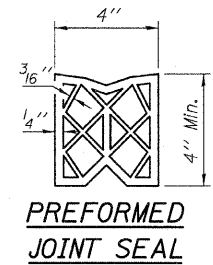
9:54:17 AM

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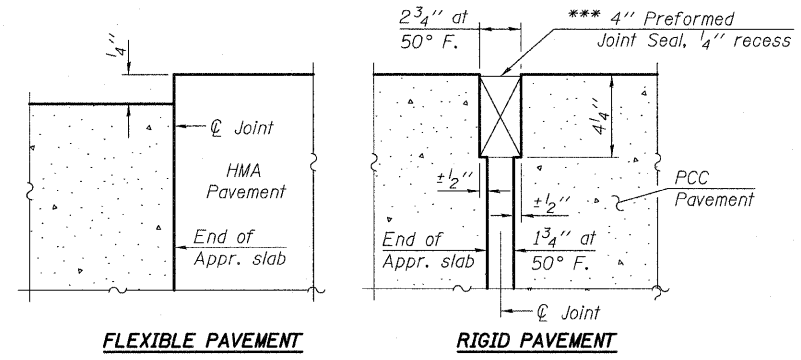
PLAN

* Tilt #9 $a_{9l}(E)$ 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"

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					

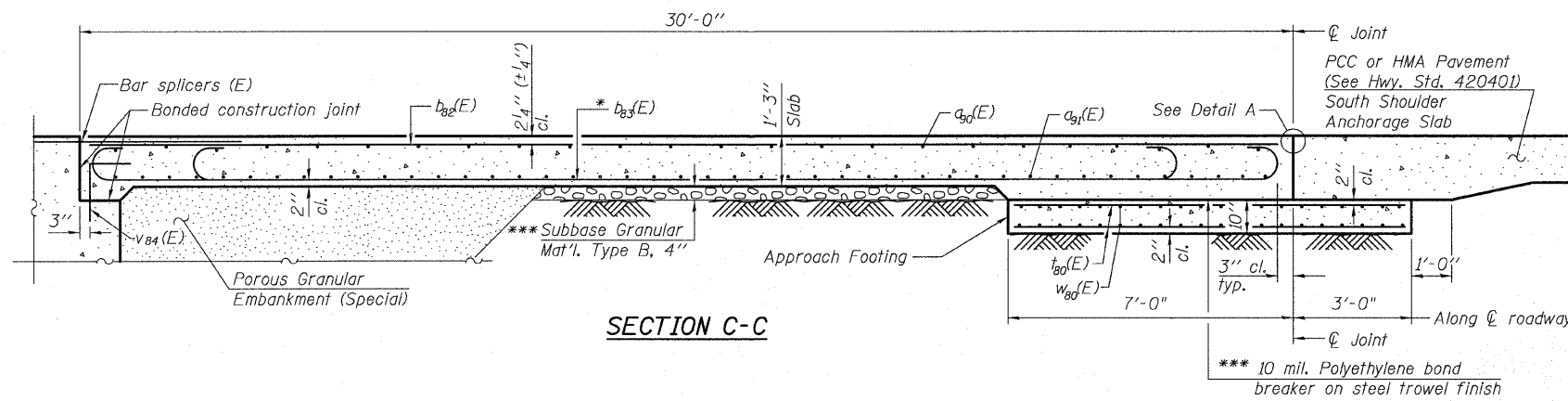
3/18/2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

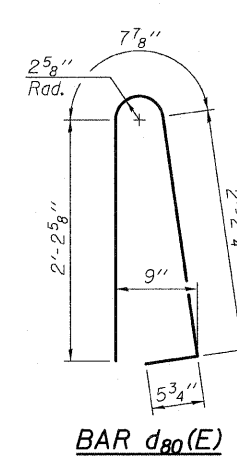
Notes:

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 $v_{84}(E)$ 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.

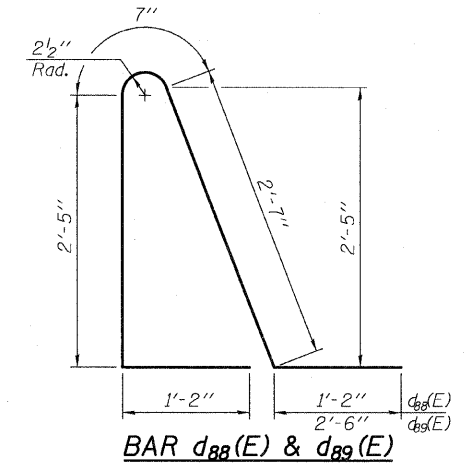
The quantity for Bridge Deck Grooving & Protective Coat for approach slab is included with the quantities on sheet 2 of 62.



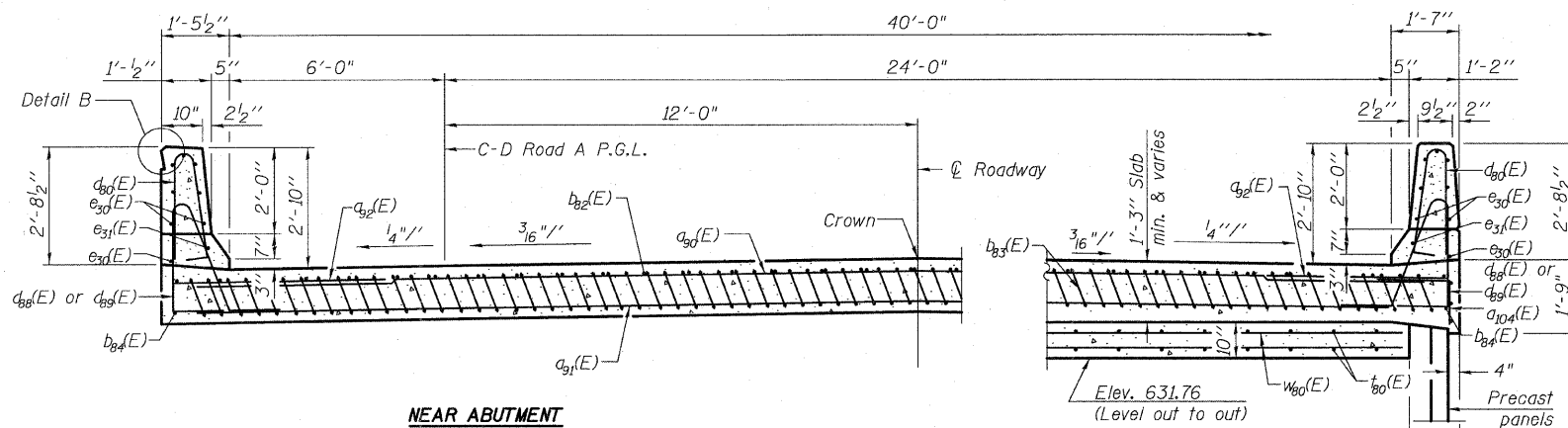
SECTION C-C



BAR $d_{80}(E)$



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



NEAR ABUTMENT

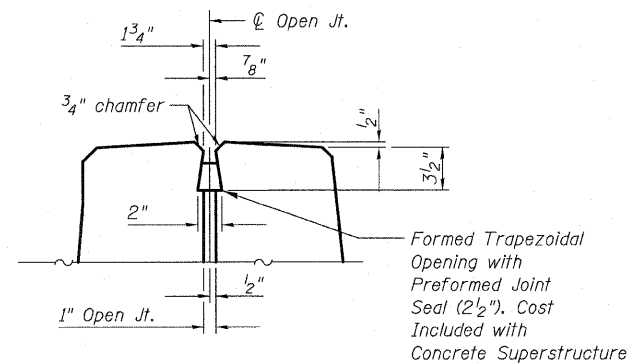
SECTION D-D

(See Plan for dimensions not shown)

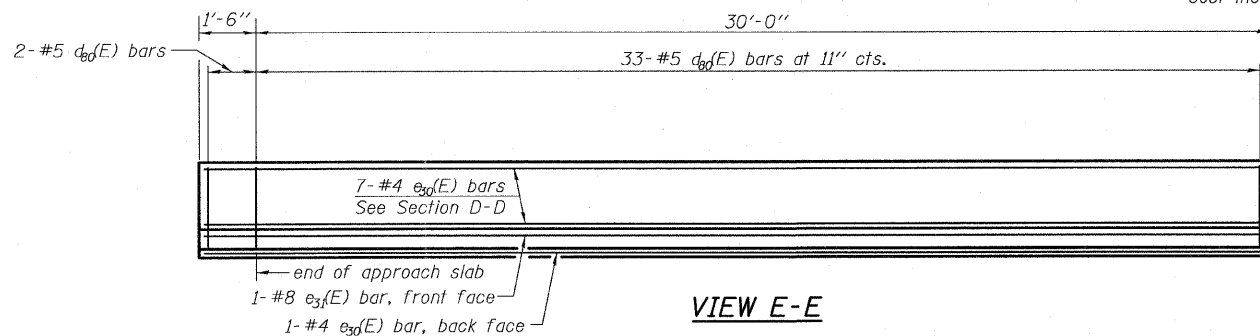
AT APPROACH FOOTING

* Tilt #9 $b_{83}(E)$ bars as required to maintain clearance.

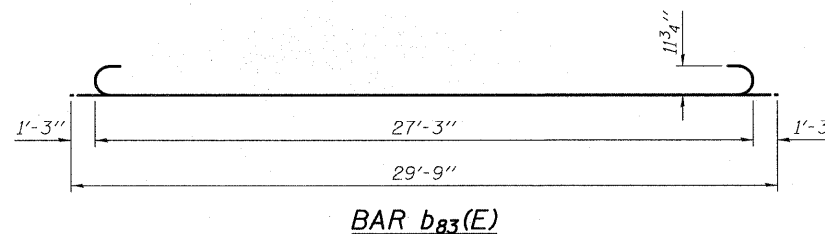
*** Cost included with Concrete Superstructure.



DETAIL B



VIEW E-E



BAR $b_{83}(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_{90}(E)$	25	#4	43'-0"	—
$a_{91}(E)$	46	#5	43'-0"	—
$a_{92}(E)$	50	#6	6'-6"	—
$b_{82}(E)$	36	#4	29'-8"	—
$b_{83}(E)$	105	#9	29'-9"	—
$b_{84}(E)$	2	#4	31'-2"	—
$d_{80}(E)$	70	#5	5'-7"	U
$d_{88}(E)$	66	#5	7'-11"	U
$d_{89}(E)$	4	#5	9'-3"	U
$e_{30}(E)$	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.

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

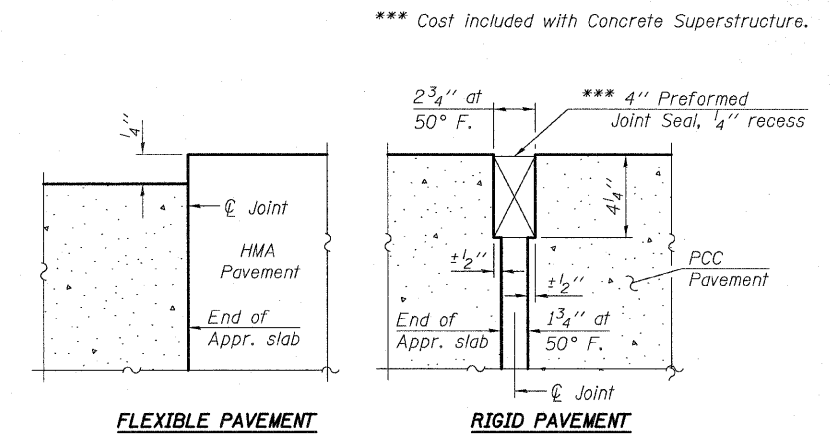
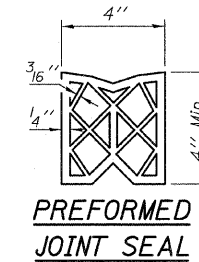
TYLIN INTERNATIONAL

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

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

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.
 $a_{93}(E)$ 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.

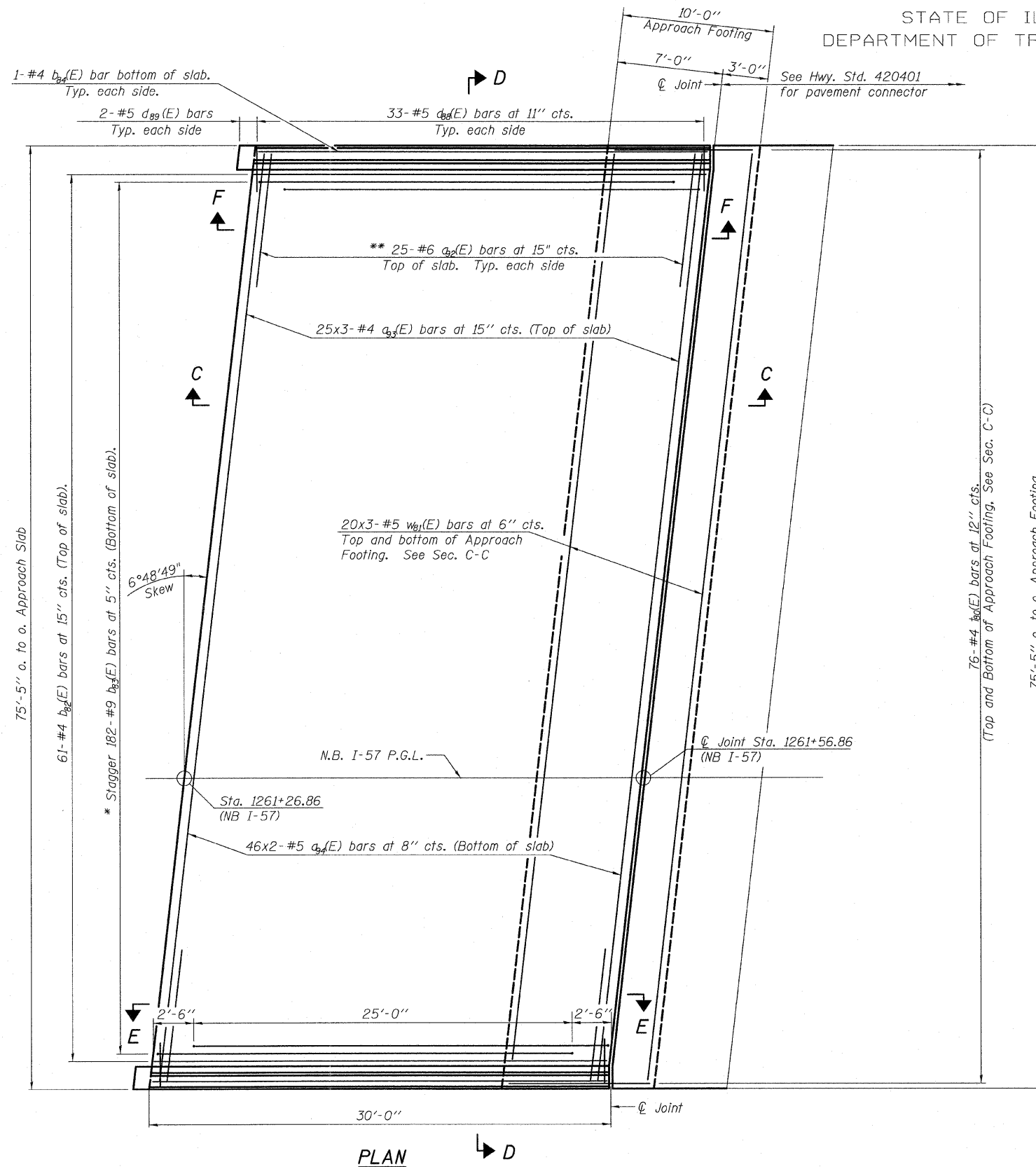


DETAIL A

MINIMUM BAR LAPS

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

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



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

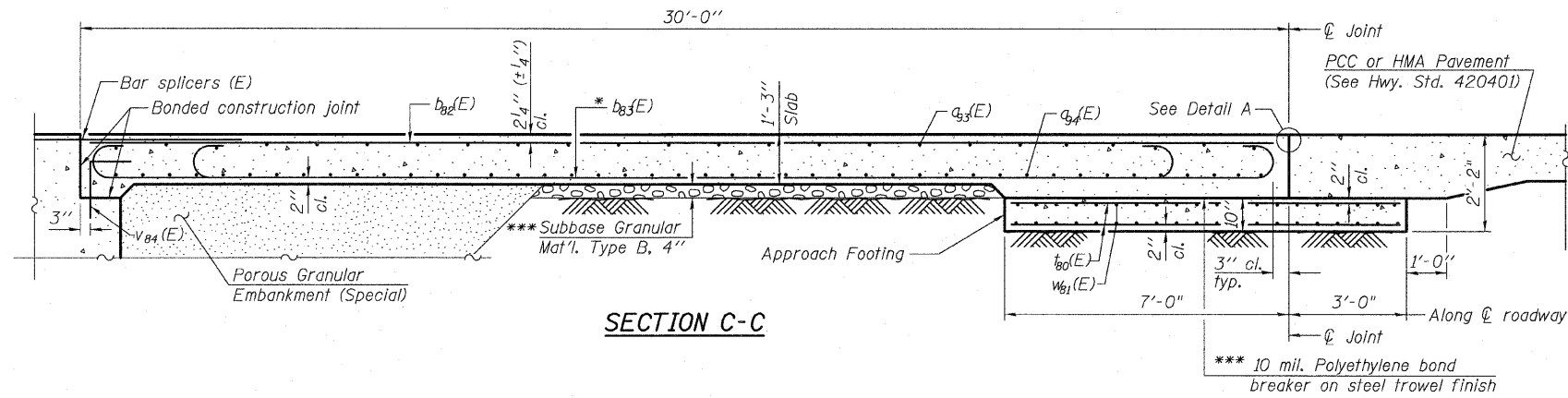
TYLIN INTERNATIONAL

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

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

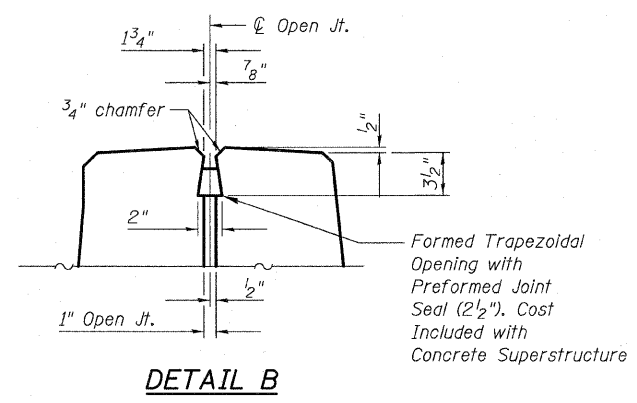
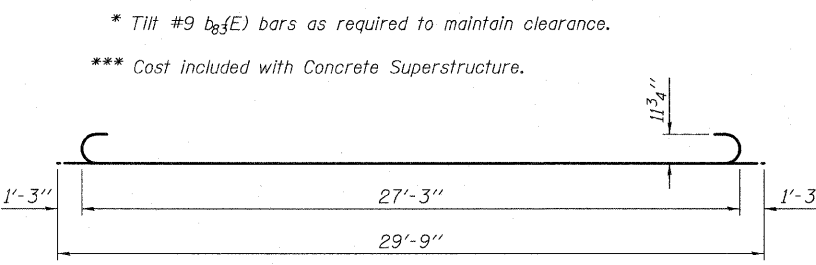
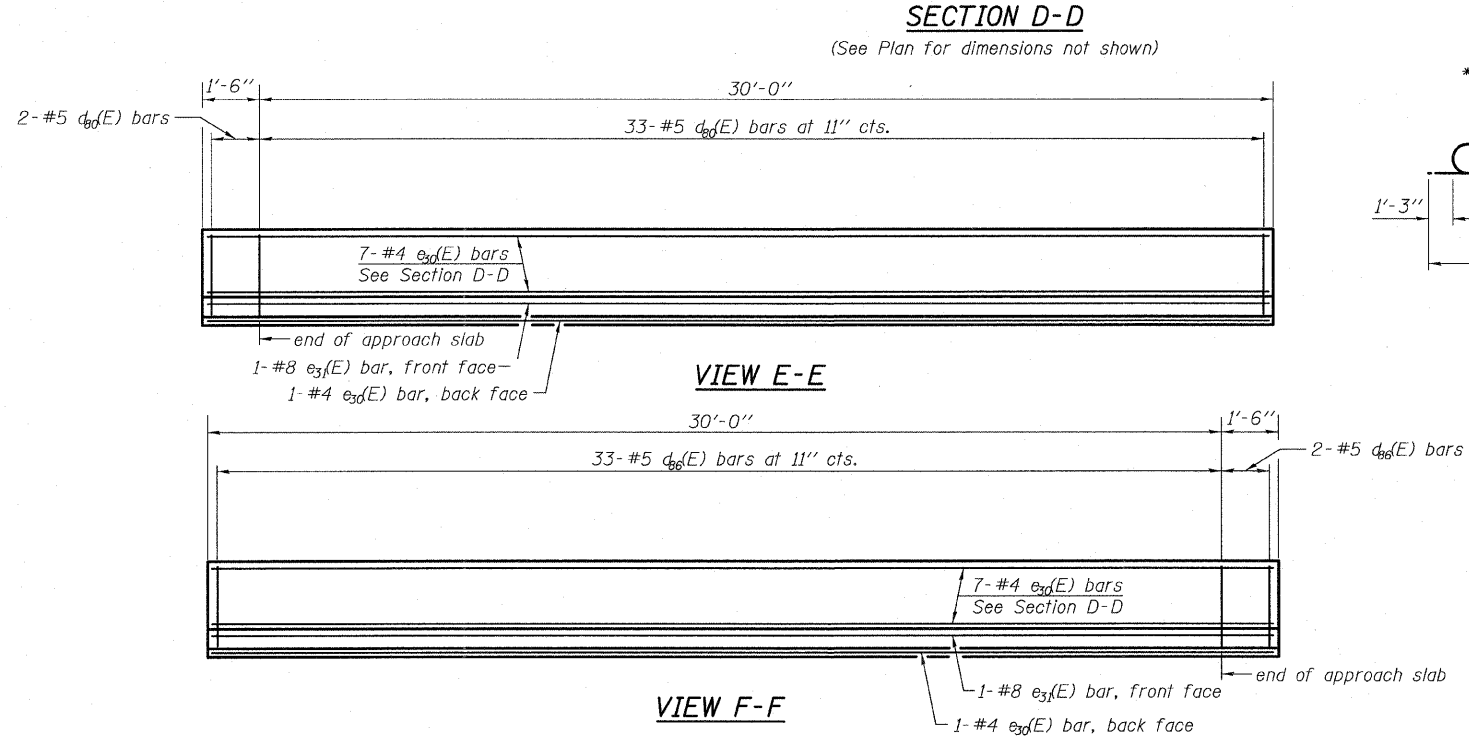
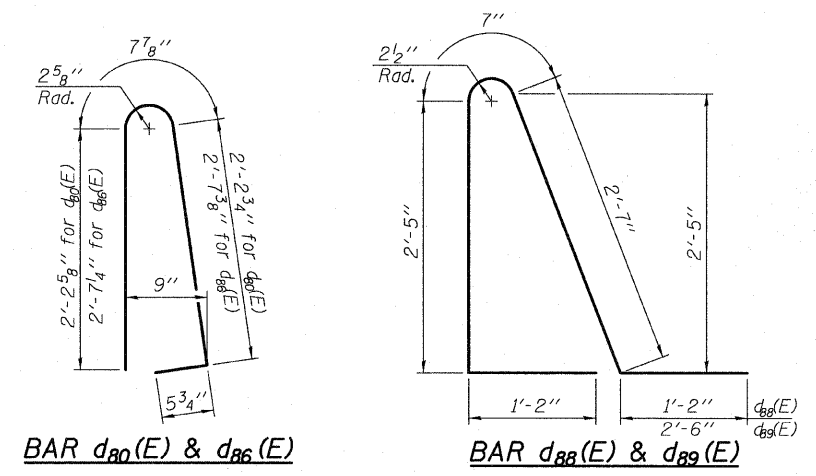
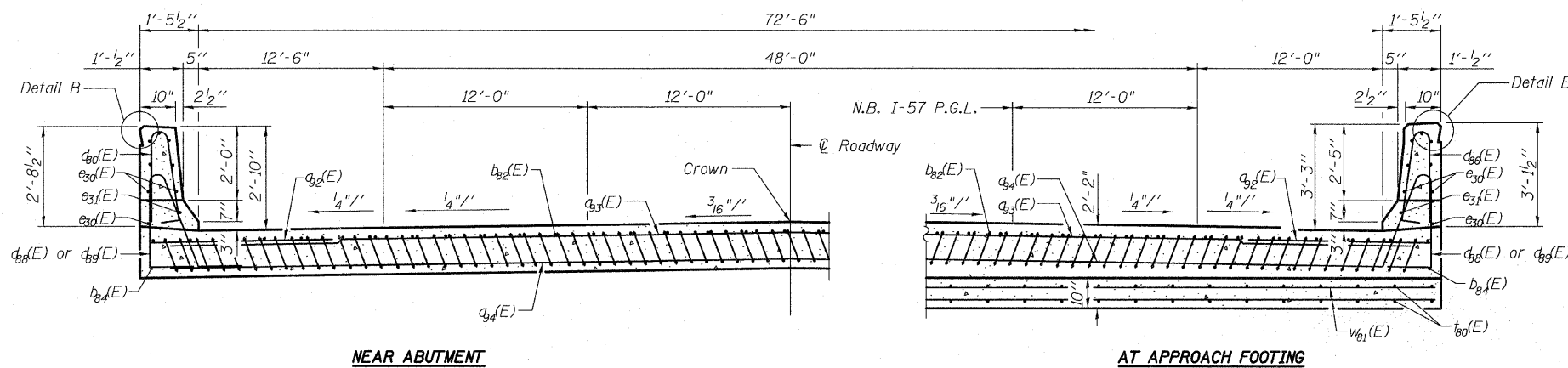
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Notes:
See sheet 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.



Bar	No.	Size	Length	Shape
$d_{80}(E)$	50	#6	6'-6"	—
$d_{83}(E)$	75	#4	27'-3"	—
$d_{84}(E)$	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"	—
$d_{80}(E)$	35	#5	5'-7"	—
$d_{86}(E)$	66	#5	7'-11"	—
$d_{89}(E)$	4	#5	9'-3"	—
$d_{88}(E)$	35	#5	6'-4"	—
$e_{30}(E)$	16	#4	31'-2"	—
$e_{31}(E)$	2	#8	31'-2"	—
$w_{81}(E)$	152	#4	9'-9"	—
$w_{81}(E)$	120	#5	27'-5"	—
Concrete Superstructure		Cu. Yd.	111.5	
Concrete Structures		Cu. Yd.	23.5	
(1.) 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.

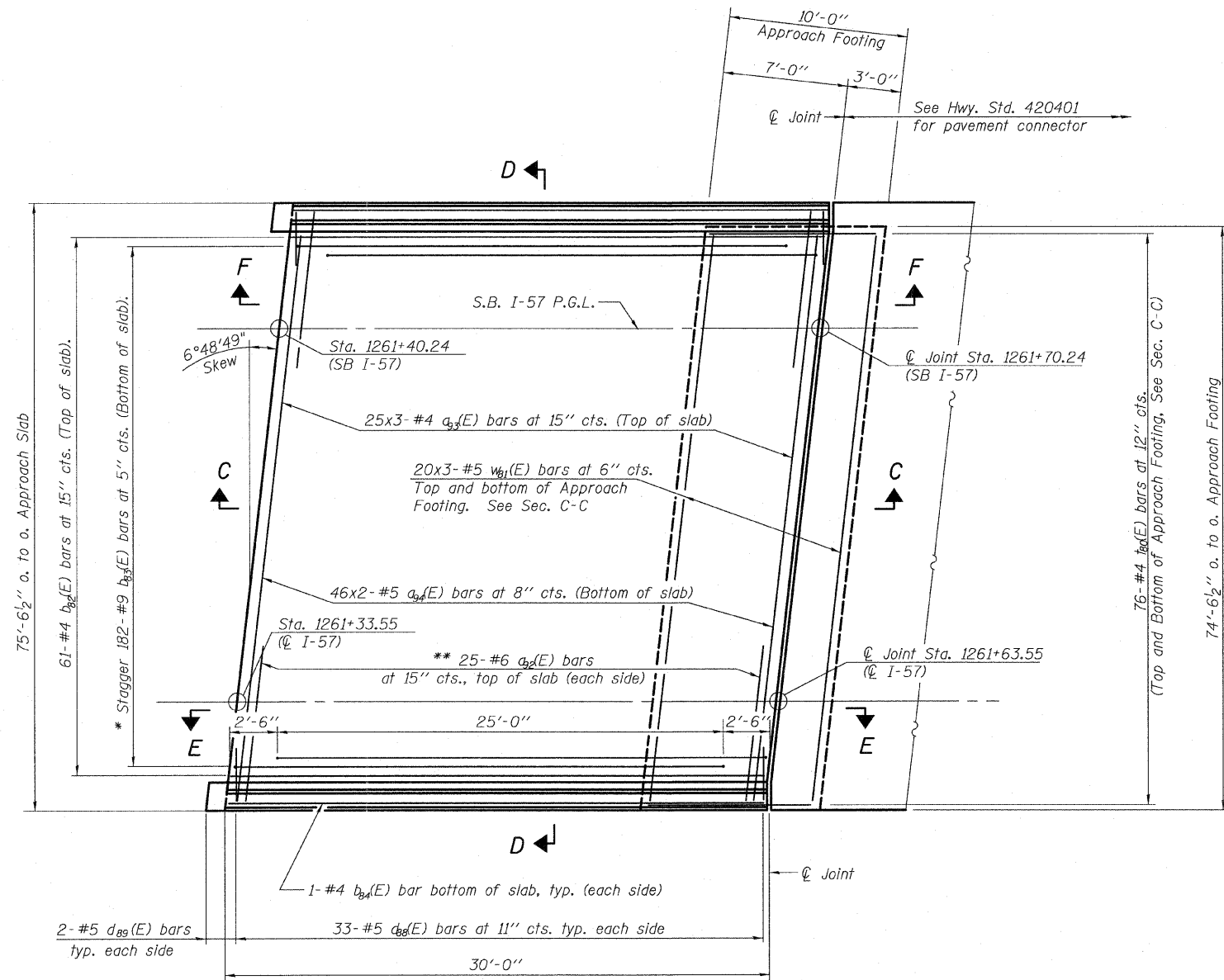
EAST APPROACH SLAB NB I-57 - 2
STRUCTURE NO. 016-1252

TYLIN INTERNATIONAL	DESIGNED - MRB	REVISIONS		SHEET NO. 31	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD	NAME	DATE		57	1414.2B	COOK	516	344	
	DRAWN - MRB				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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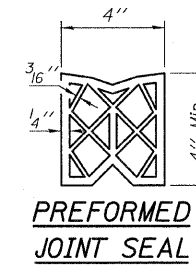
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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 C.Rdwy.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with three lengths per line.

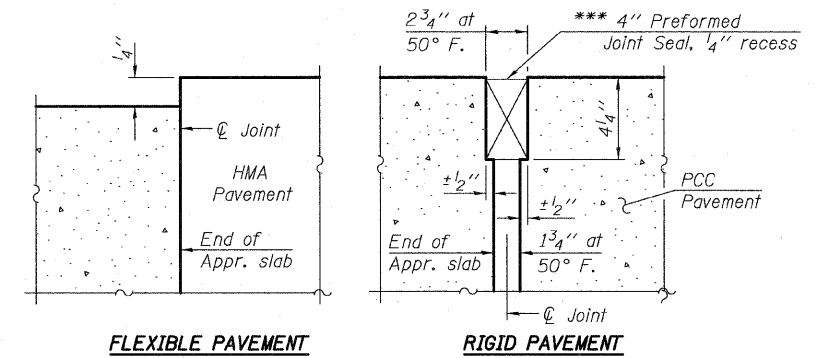


PLAN

* 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"

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

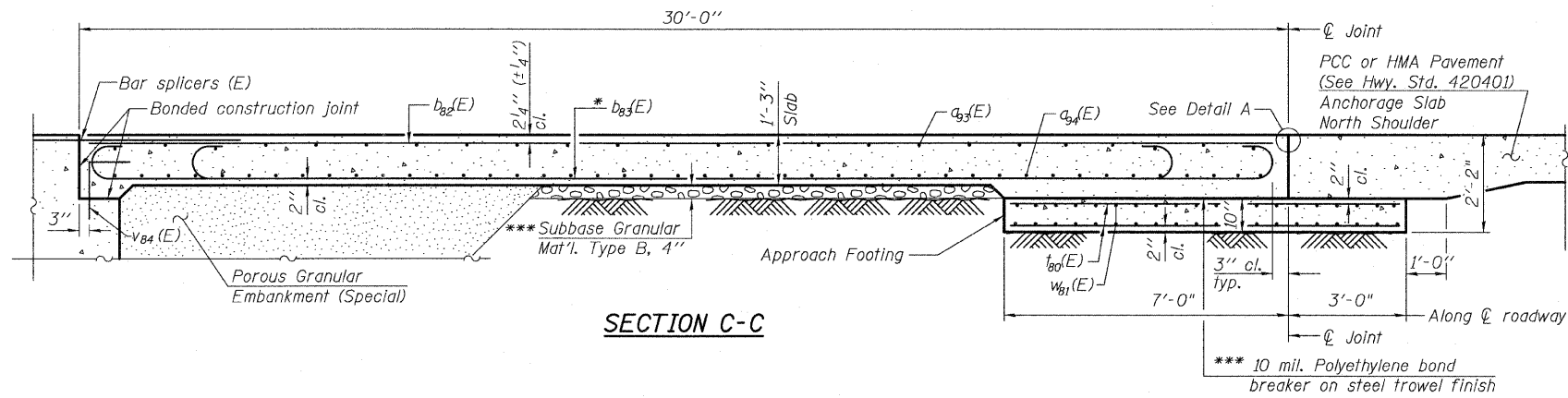
TYLIN INTERNATIONAL

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.
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62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

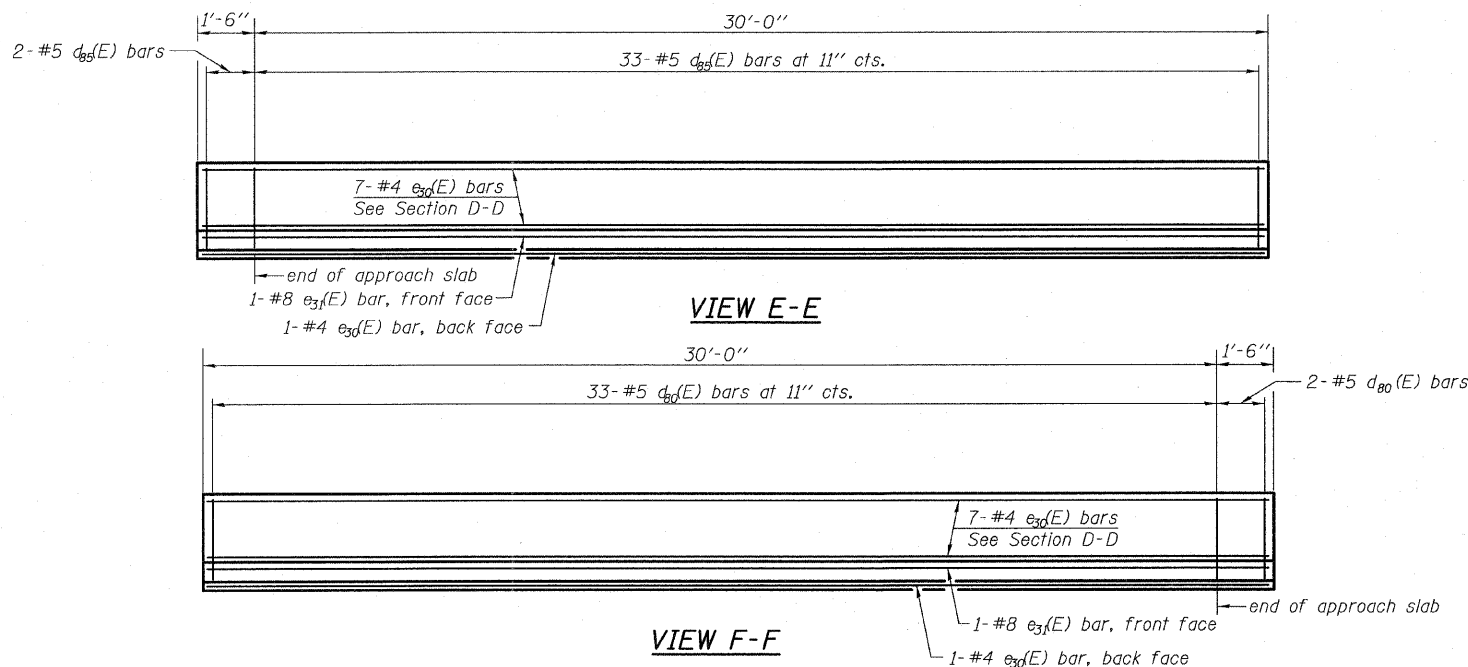
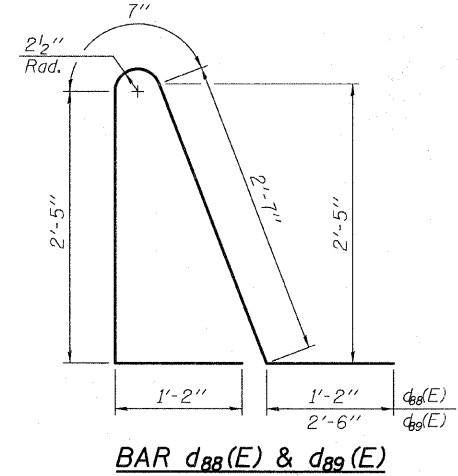
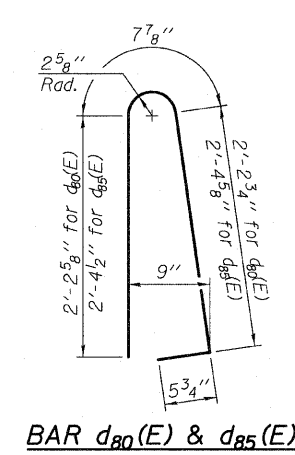
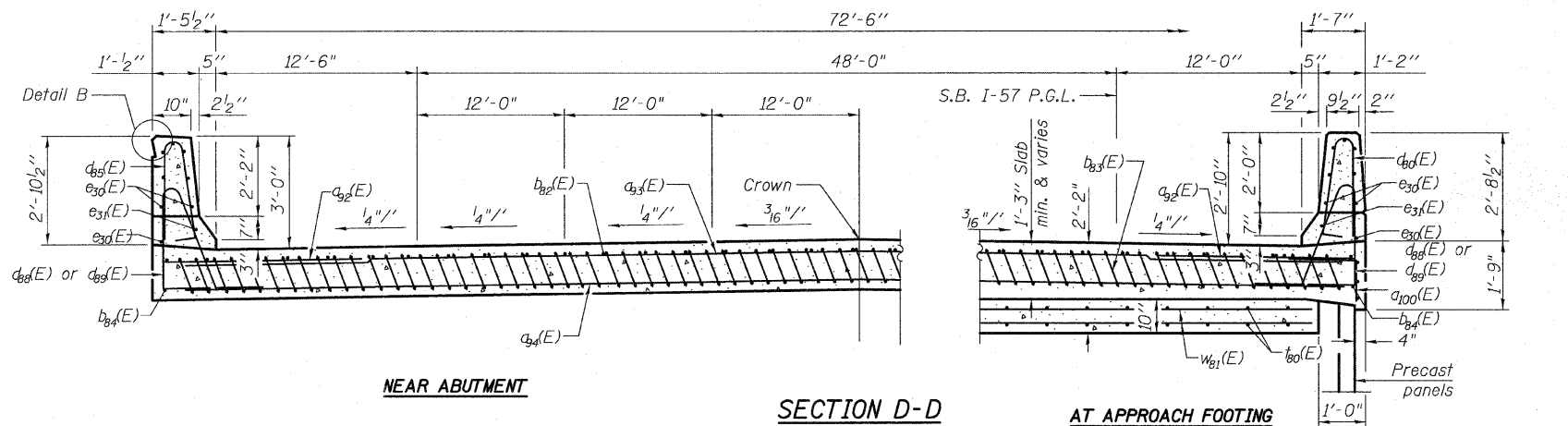
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

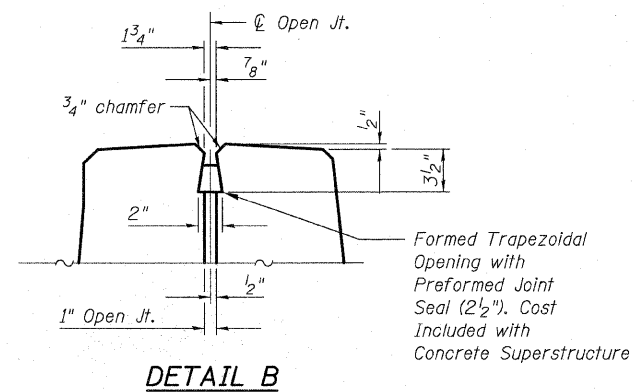
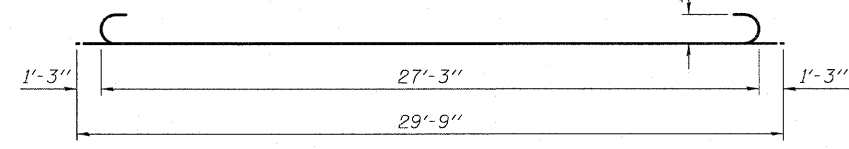


Notes:
See sheet 32 of 62 for Detail A.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For $v_{84}(E)$ bar details, see sheet 50 of 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.



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



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_{33}(E)$	75	#4	27'-3"	—
$a_{44}(E)$	92	#5	39'-6"	—
$a_{22}(E)$	50	#6	6'-6"	—
$b_{82}(E)$	61	#4	29'-8"	—
$b_{83}(E)$	182	#9	29'-9"	—
$b_{84}(E)$	2	#4	31'-2"	—
$c_{80}(E)$	35	#5	5'-7"	—
$c_{81}(E)$	66	#5	7'-11"	—
$c_{82}(E)$	4	#5	9'-3"	—
$c_{83}(E)$	35	#5	5'-11"	—
$e_{30}(E)$	16	#4	31'-2"	—
$e_{31}(E)$	2	#8	31'-2"	—
$f_{80}(E)$	152	#4	9'-9"	—
$w_{61}(E)$	120	#5	27'-5"	—
Concrete Superstructure		Cu. Yd.	111.6	
Concrete Structures		Cu. Yd.	23.5	
(1.) Reinforcement Bars, Epoxy Coated		Pound	31,240	

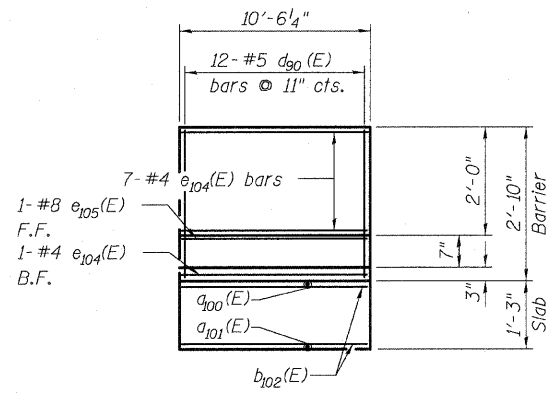
(1.) 4,420 pounds billed in Substructure
Total in Total Bill of Material on sheet 2 of 62.

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

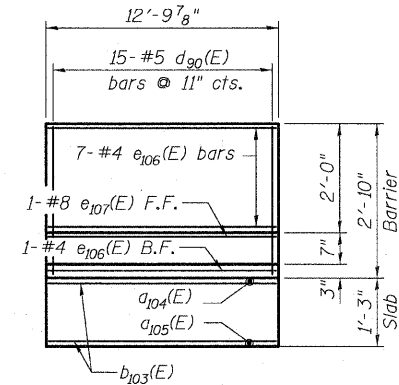
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	CHECKED - AMD	NAME	DATE						
	DRAWN - MRB								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
						CONTRACT NO. 60J27			
						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

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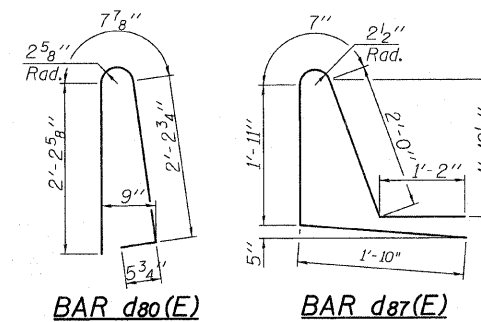
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF NORTH BARRIER

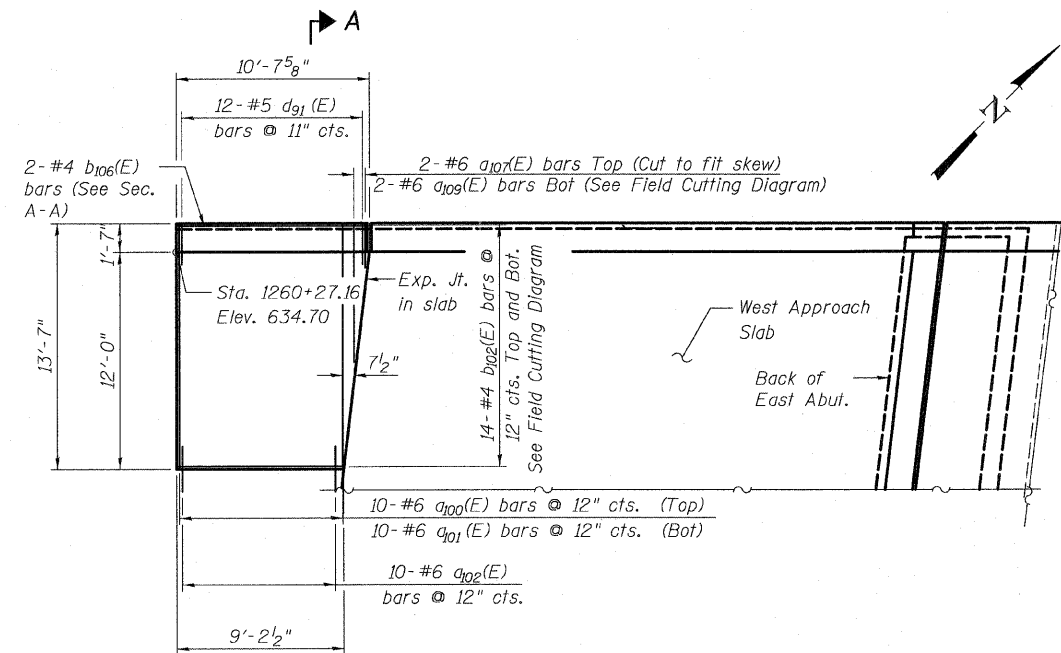


INSIDE ELEVATION OF SOUTH BARRIER

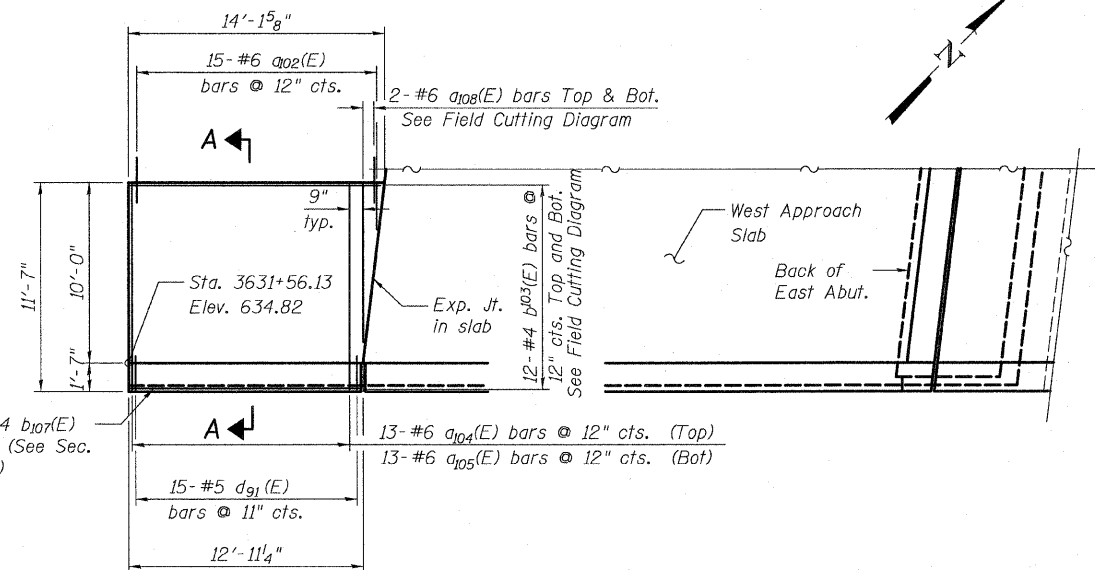


BILL OF MATERIAL

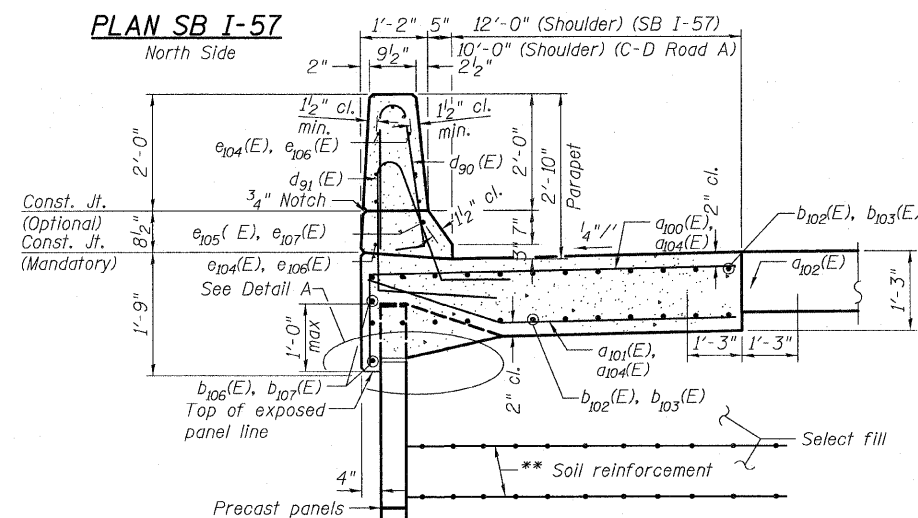
Bar	No.	Size	Length	Shape	
a100(E)	10	#6	14'-8"	┌	
a101(E)	10	#6	13'-3"	┌	
a102(E)	25	#6	2'-6"	┌	
a104(E)	13	#6	12'-8"	┌	
a105(E)	13	#6	11'-3"	┌	
a107(E)	2	#6	9'-0"	┌	
a108(E)	4	#6	11'-2"	┌	
a109(E)	2	#6	9'-11"	┌	
b102(E)	28	#4	19'-3"	┌	
b103(E)	24	#4	26'-6"	┌	
b106(E)	2	#4	10'-3"	┌	
b107(E)	2	#4	12'-7"	┌	
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



PLAN SB I-57 North Side

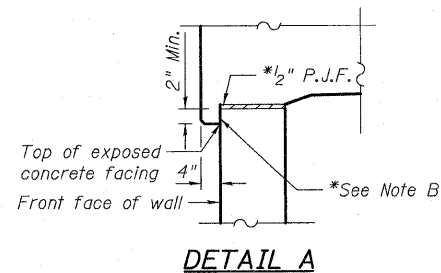


PLAN C-D ROAD A South Side

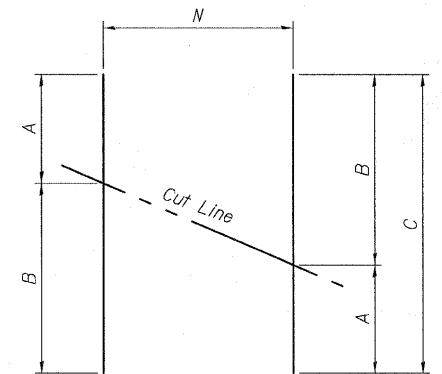


SECTION A-A

*Cost included with Concrete Superstructure.



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
a106(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	NAME	DATE
CHECKED -	AD,LS			
DRAWN -	DY,EI			
CHECKED -	LS,SP,PDF			
DATE -	03/18/10			

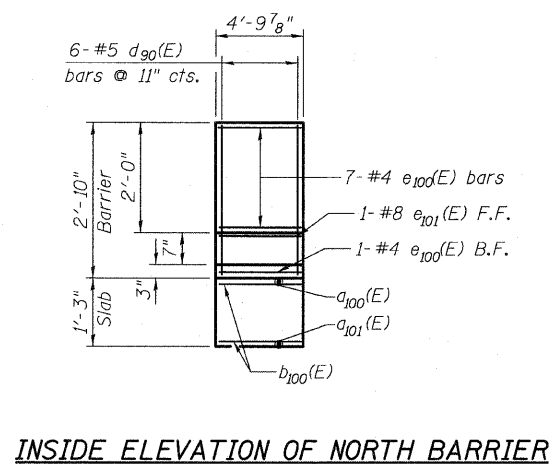
SHEET NO. 34

62 SHEETS

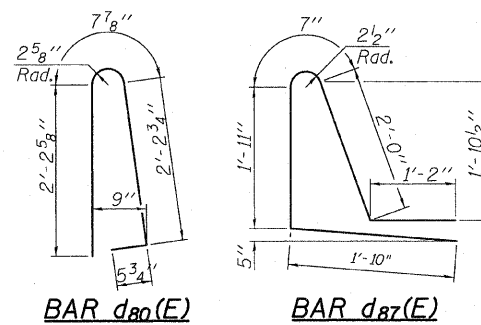
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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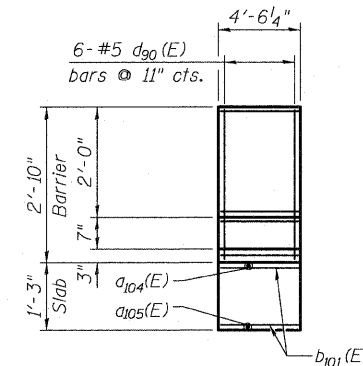
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



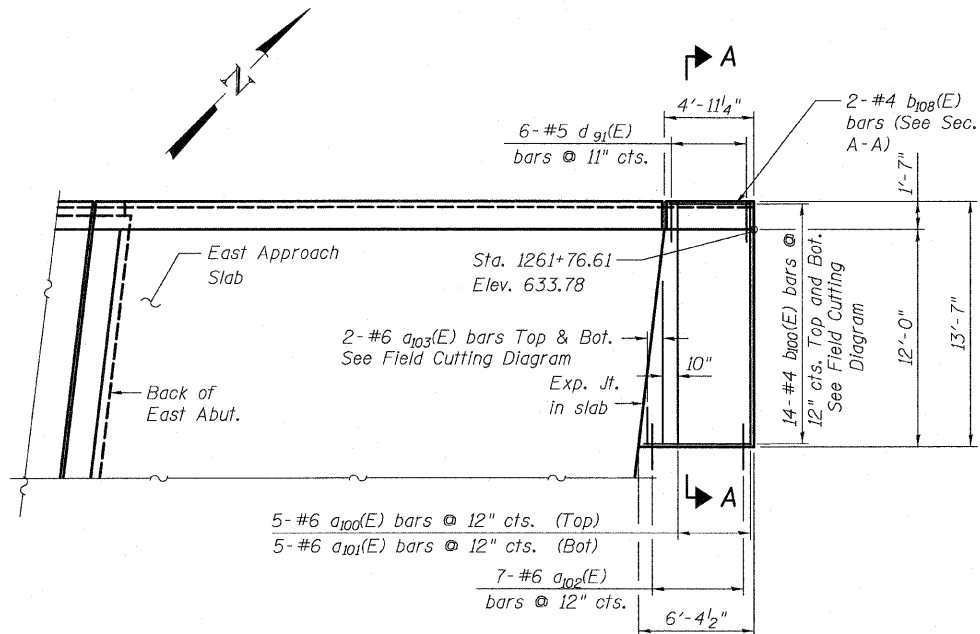
INSIDE ELEVATION OF NORTH BARRIER



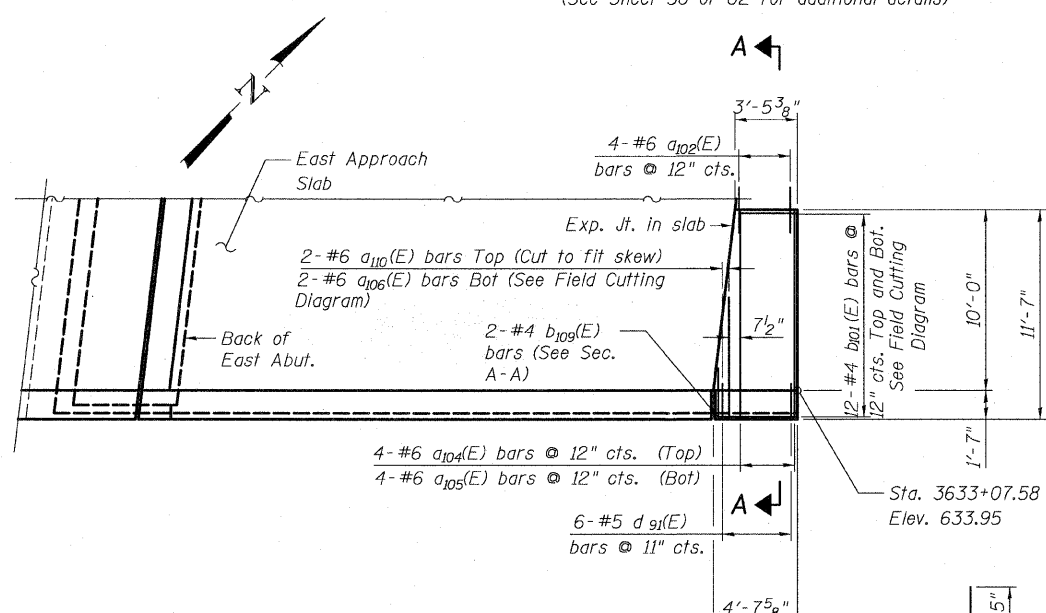
BAR d80(E) BAR d87(E)



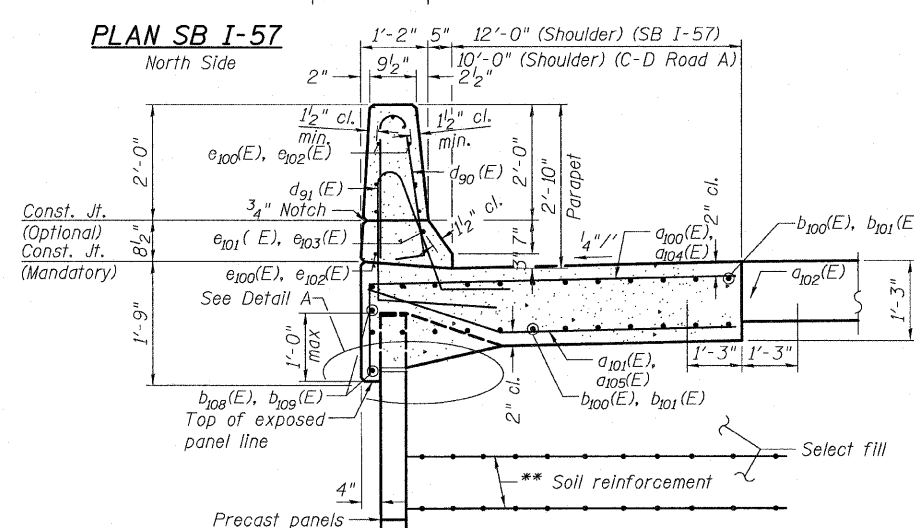
INSIDE ELEVATION OF SOUTH BARRIER
(See Sheet 36 of 62 for additional details)



PLAN SB I-57

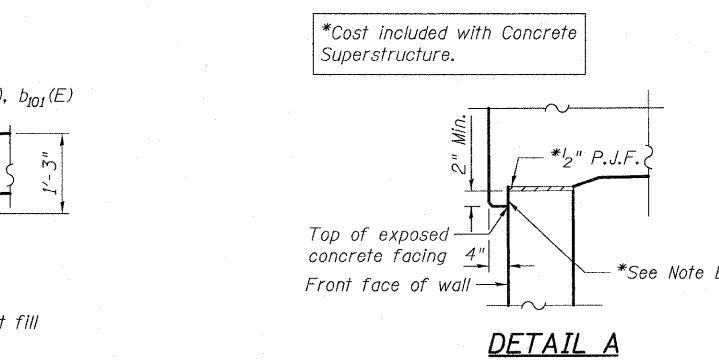


PLAN C-D ROAD A
South Side



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.

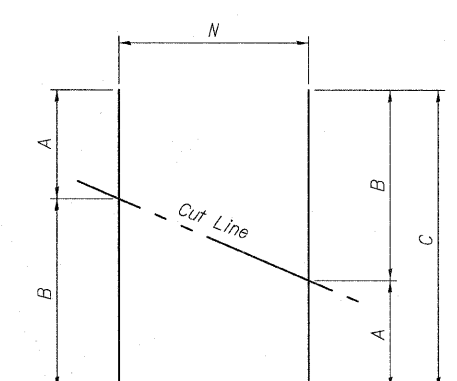


DETAIL A

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

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



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"

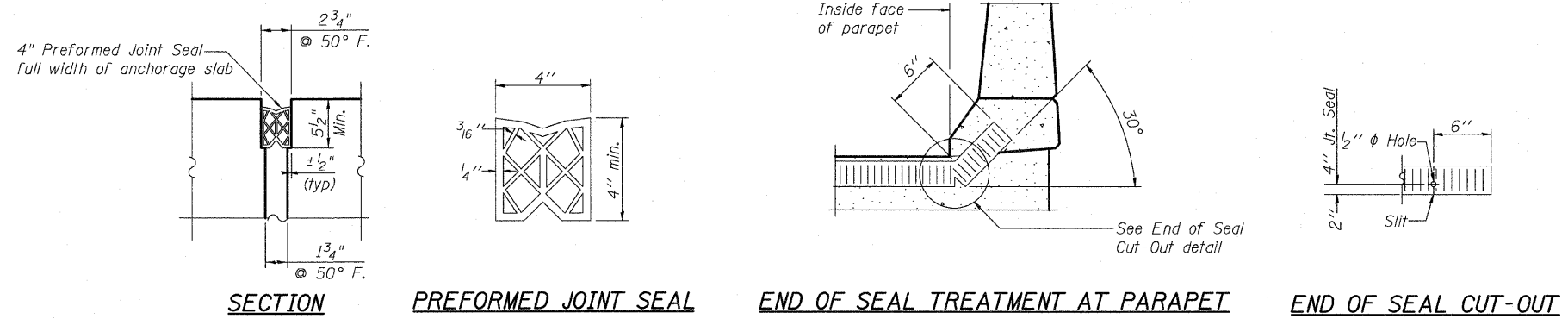
Order bars full length. Cut as shown and use remainder of bars in opposite face

EAST ANCHORAGE SLAB DETAILS
S.N. 016-1252

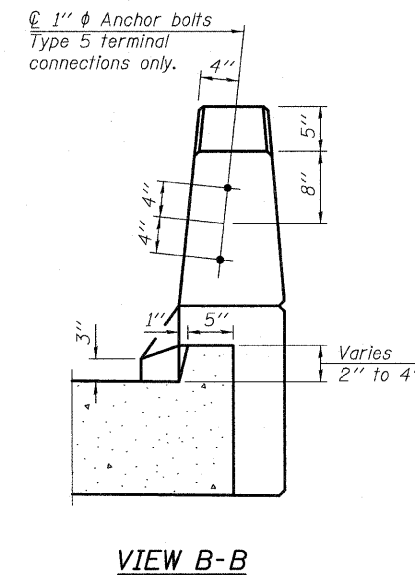
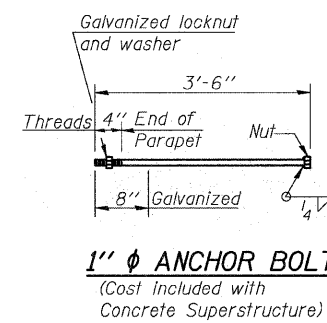
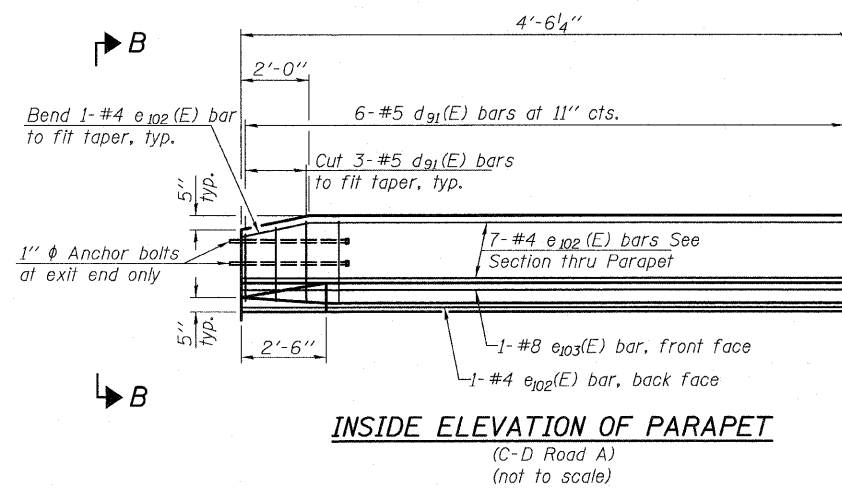
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	DRAWN - DY,EI				CONTRACT NO. 60J27					
	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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

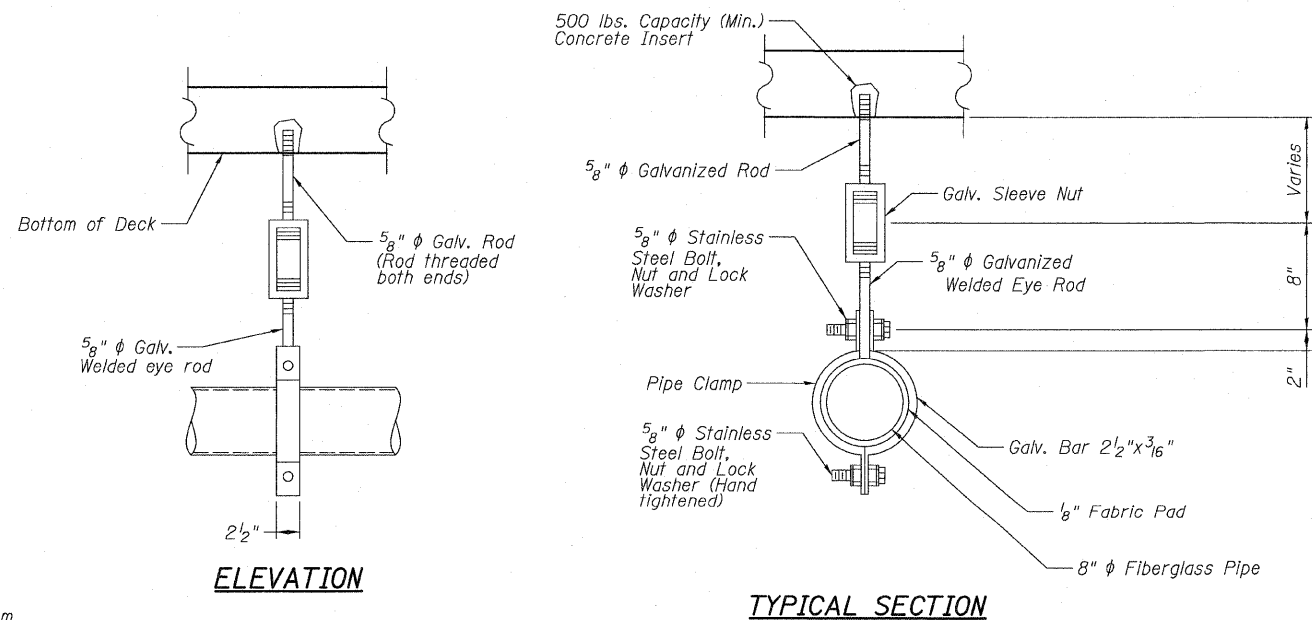
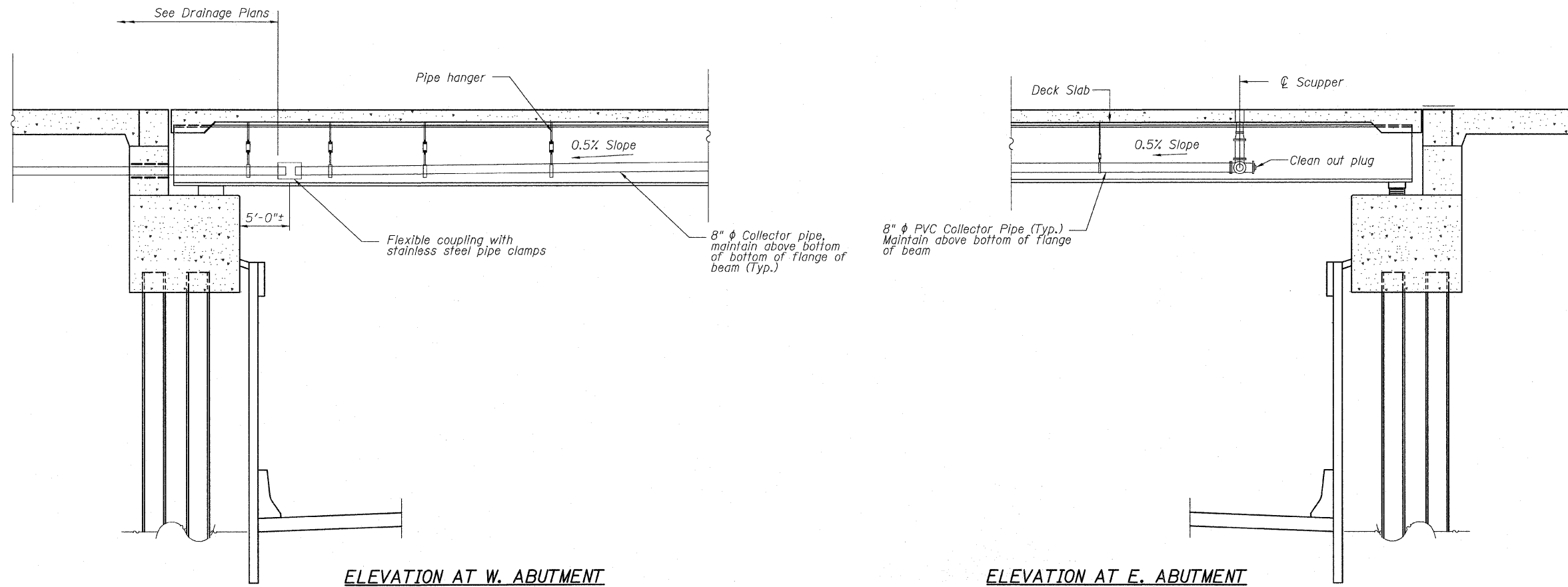
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		NAME	DATE
CHECKED - AD,LS			
DRAWN - DY,EI			
CHECKED - LS,SP,PDF			
DATE - 03/18/10			

SHEET NO. 36
62 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	349
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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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

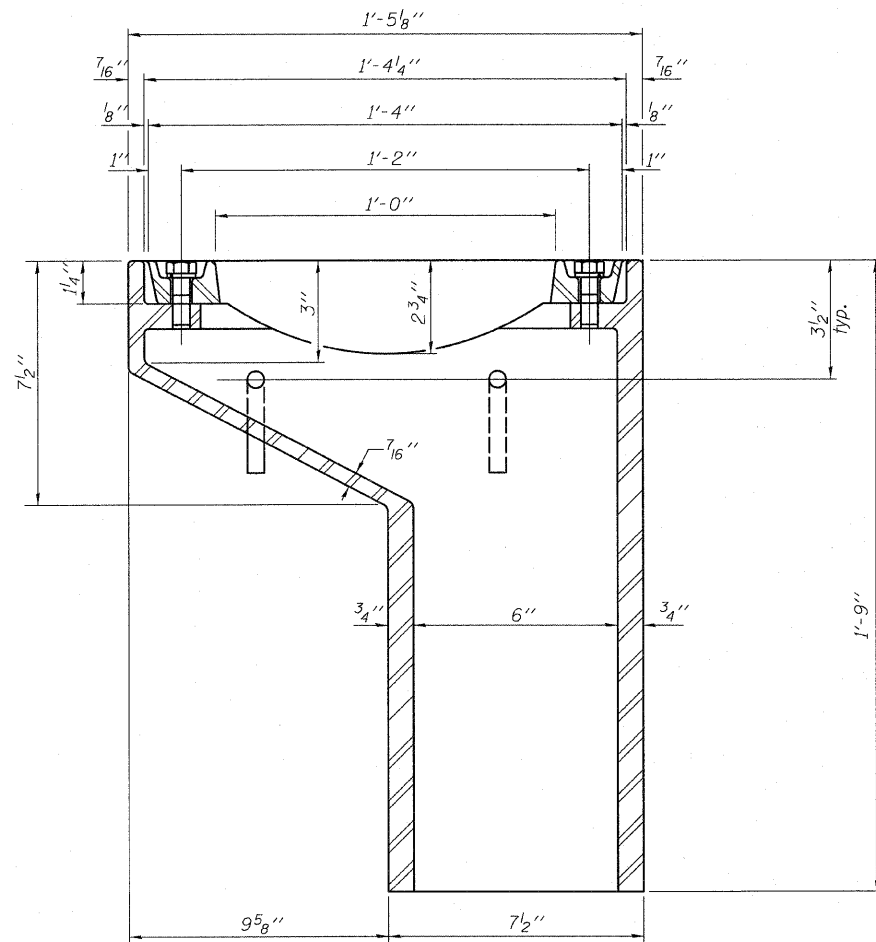
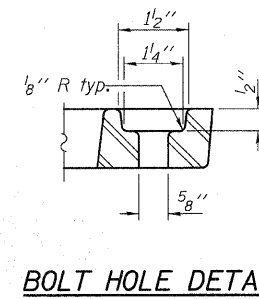
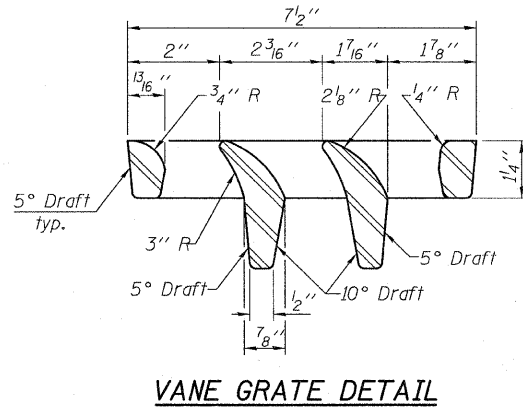
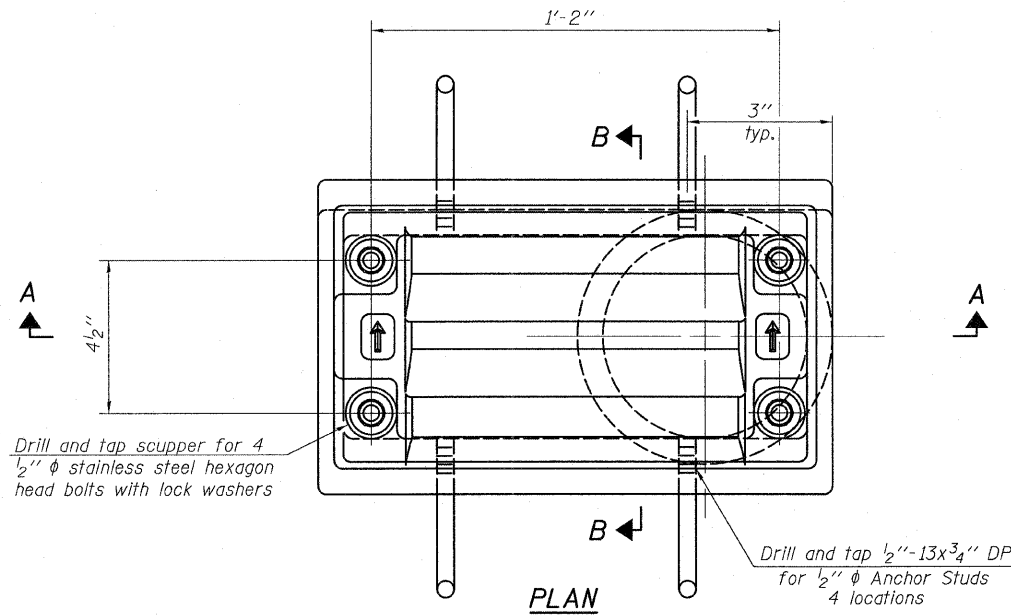
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		NAME	DATE
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DATE - 03/18/10			

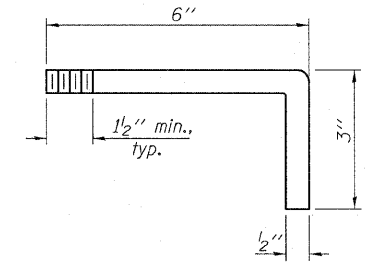
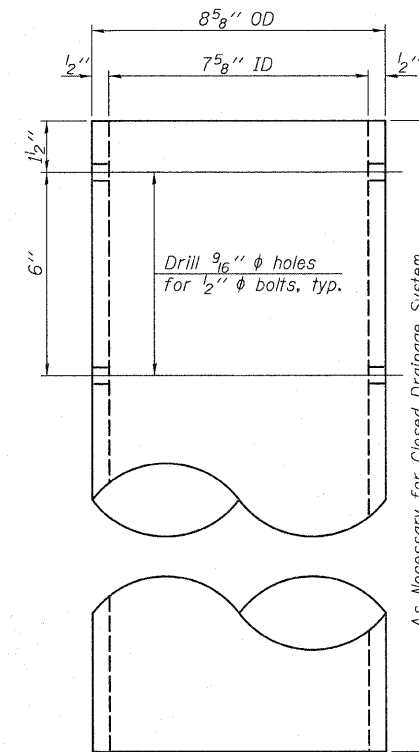
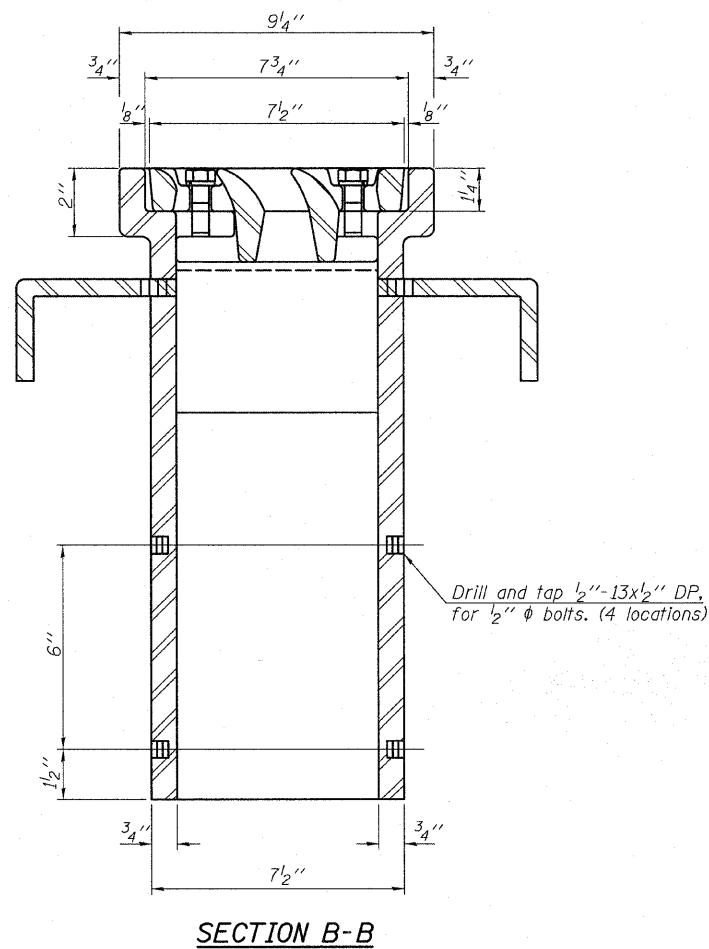
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62 SHEETS	CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



See sheet 20 of 62 for scupper location relative to parapet.



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-II.

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-II	Each	6

**DRAINAGE SCUPPER, DS-II
STRUCTURE NO. 016-1252**

DS-11 11-1-09

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DATE - 03/18/10	

REVISIONS

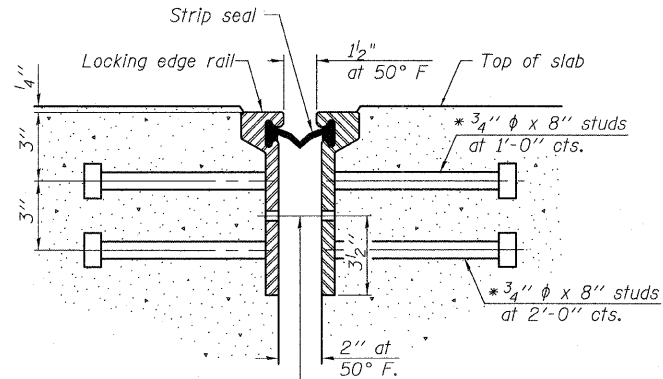
NAME	DATE

SHEET NO. 38
62 SHEETS

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

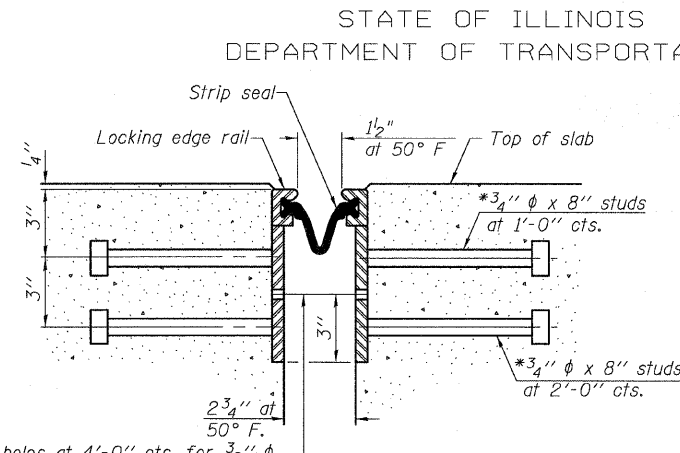
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* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



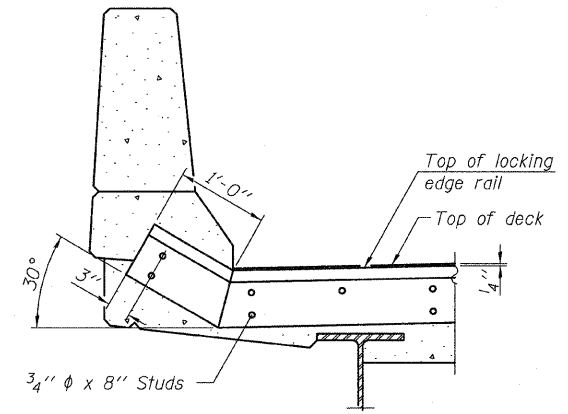
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

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.

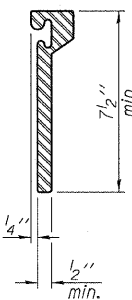
SECTION THRU WELDED RAIL JOINT



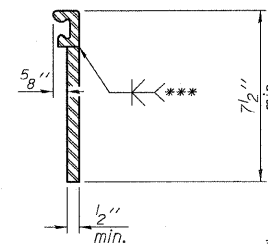
AT PARAPET
See Section A-A for end treatment of skews > 30°.

TYPICAL END TREATMENTS

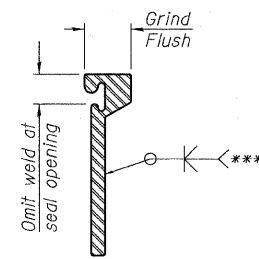
Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement 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



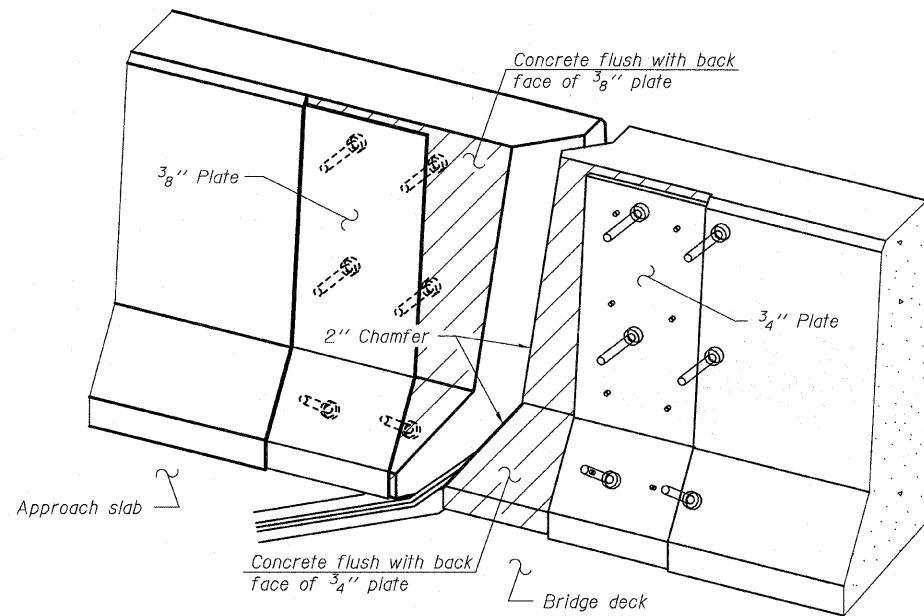
WELDED RAIL



*** Back gouge not required if complete joint penetration is verified by mock-up.

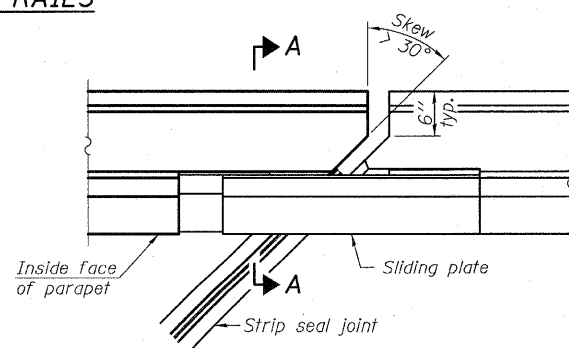
LOCKING EDGE RAIL SPLICE

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

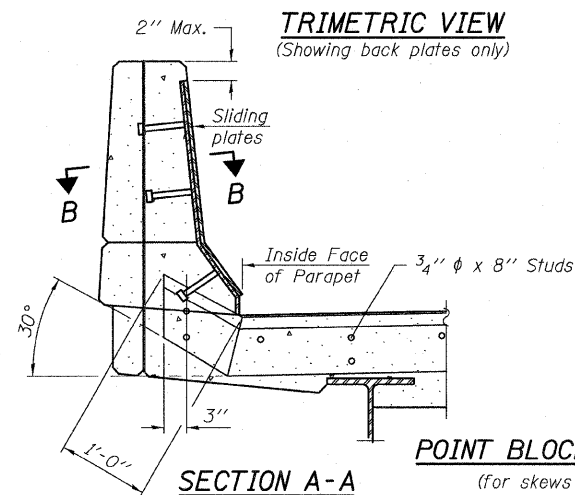


TRIMETRIC VIEW
(Showing back plates only)

LOCKING EDGE RAILS

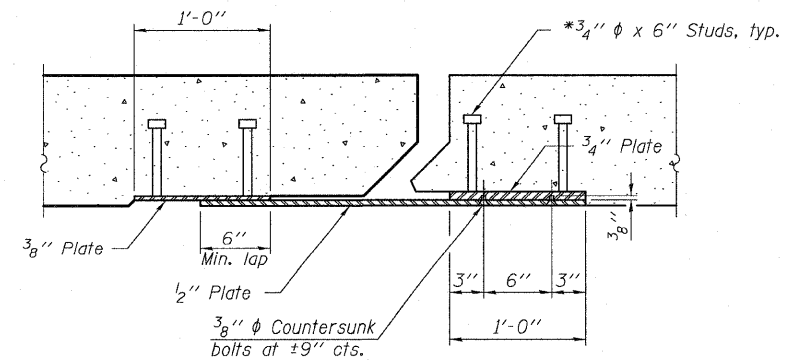


PLAN



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

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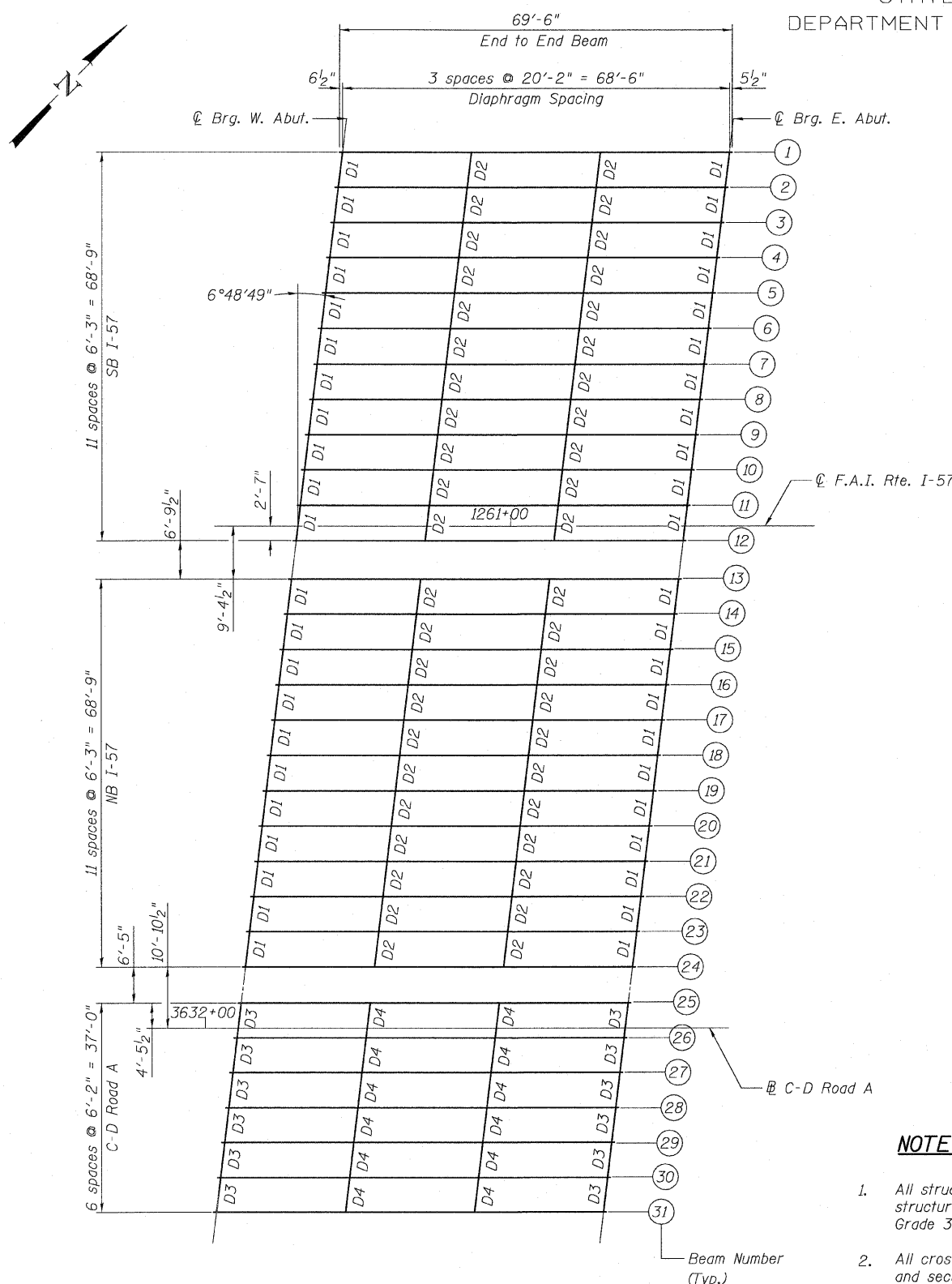
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DESIGNED	DY	REVISIONS	NAME	DATE
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CHECKED	LS,SP,PDF			
DATE	03/18/10			

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

	Abutment
R_{DC1}	(k) 28.5
R_{DC2}	(k) 4.4
R_{DW}	(k) 10.6
$R_{\xi + IM}$	(k) 73.1
R_{Total}	(k) 116.6

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

		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
$M_{\xi + IM}$	(k)	922
M_u (Strength I)	(k)	2,573
$\phi_f M_n$	(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($\xi + IM$)	(ksi)	20.1
f_s (Service II)	(ksi)	35.8
V_r	(k)	23.3

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

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

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.

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.).

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

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

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$\phi_f M_{nc}$: 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).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{\xi + IM}$

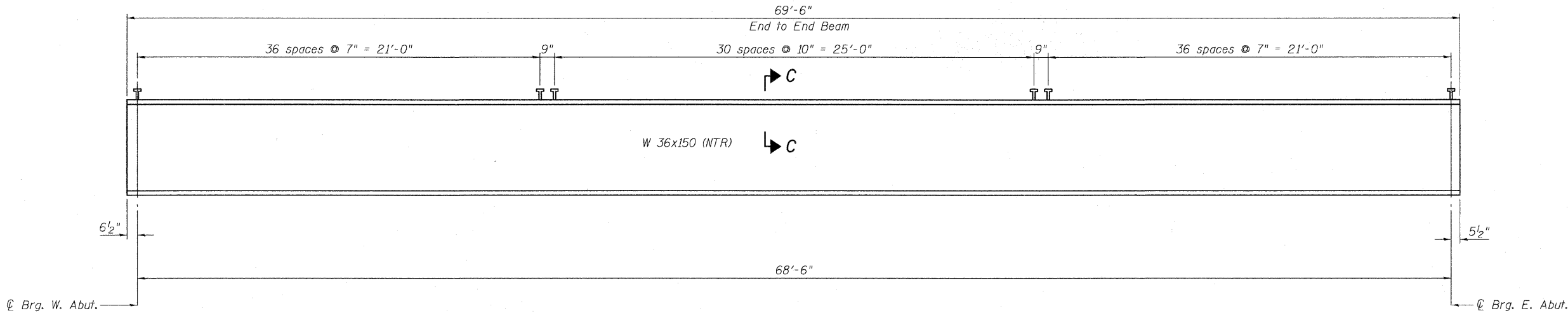
V_r : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

FRAMING PLAN
SN. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 40 62 SHEETS	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									

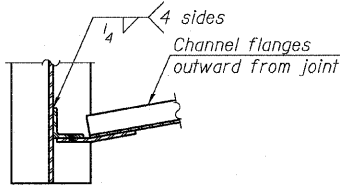
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

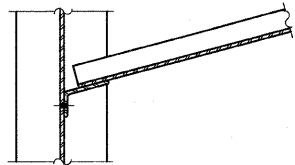


BEAM ELEVATION

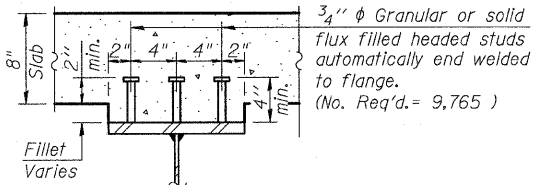
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



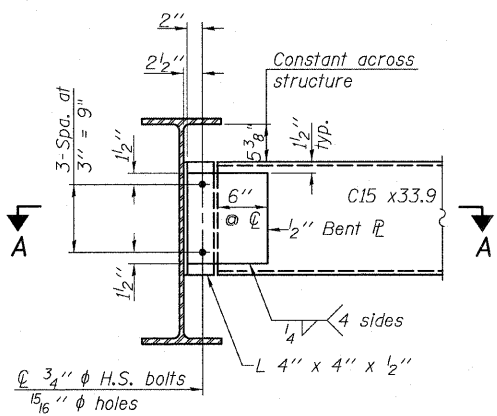
SECTION A-A



SECTION B-B



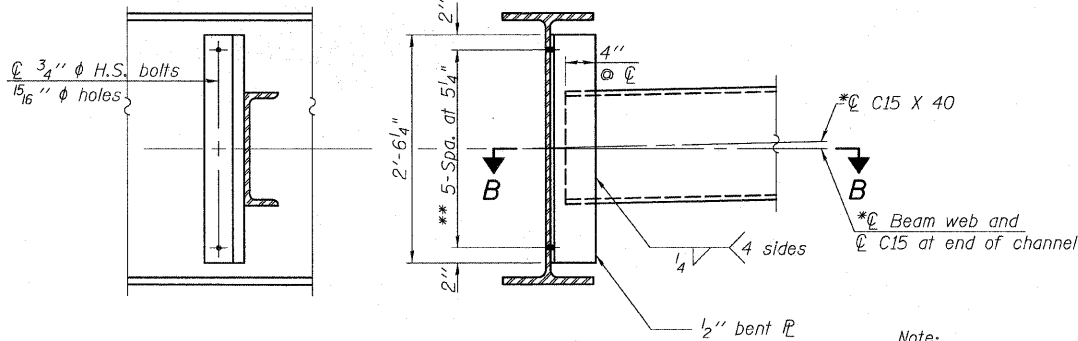
SECTION C-C



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, 1 5/16" holes

**STRUCTURAL STEEL DETAILS
SN. 016-1252**

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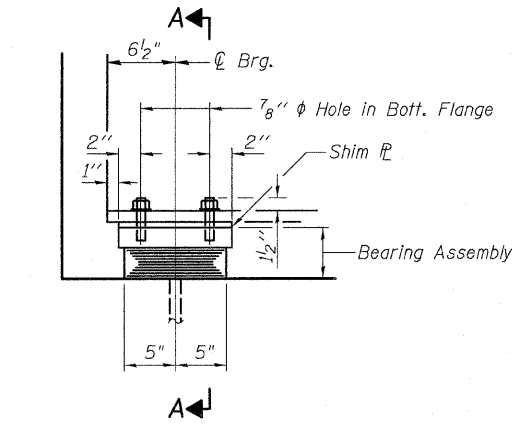
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DATE - 03/18/10

REVISIONS	
NAME	DATE

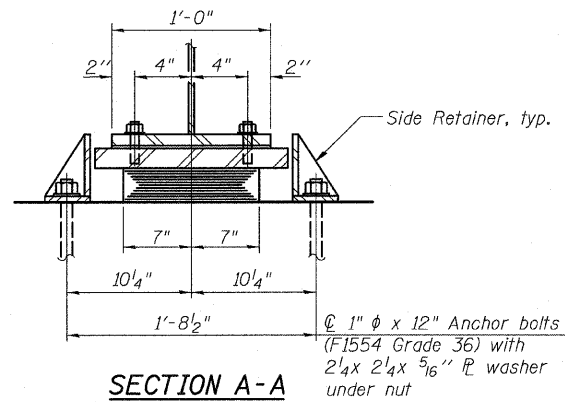
SHEET NO. 41
62 SHEETS

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FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

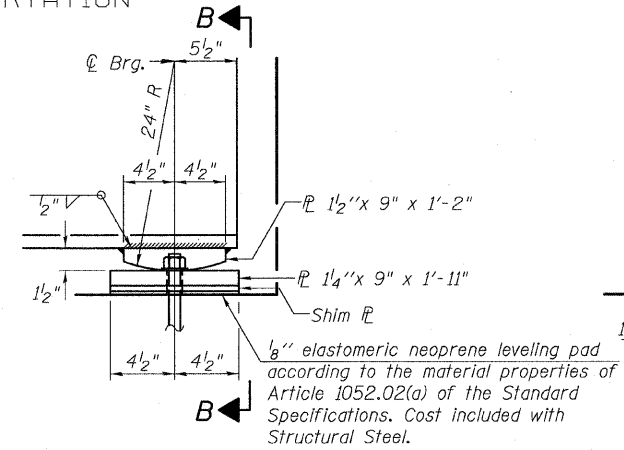
STATE OF ILLINOIS
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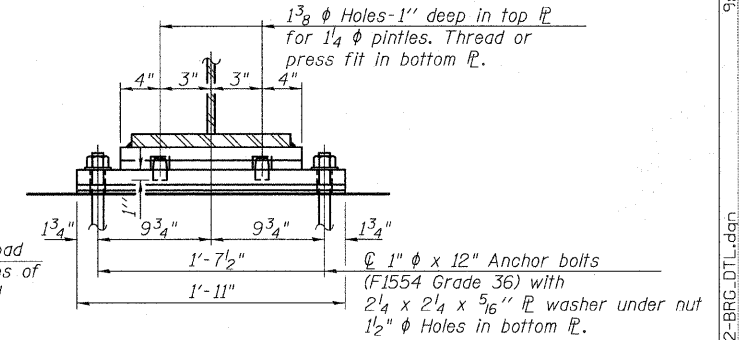
ELEVATION AT W. ABUT.



SECTION A-A

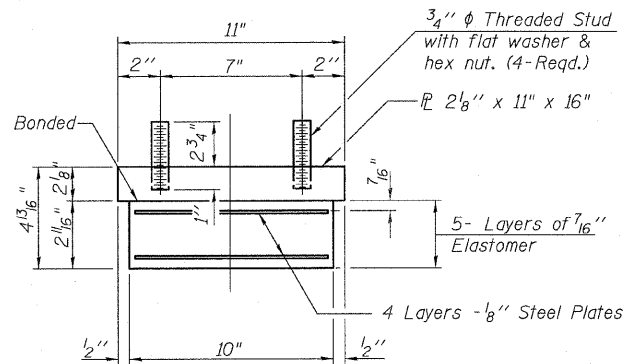


ELEVATION AT E. ABUT.



SECTION B-B

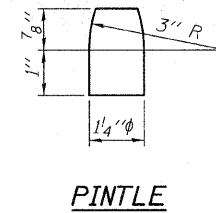
TYPE I ELASTOMERIC EXP. BRG.



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.



PINTLE

FIXED BEARING

BILL OF MATERIAL

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

BEARING DETAILS
STRUCTURE NO. 016-1252

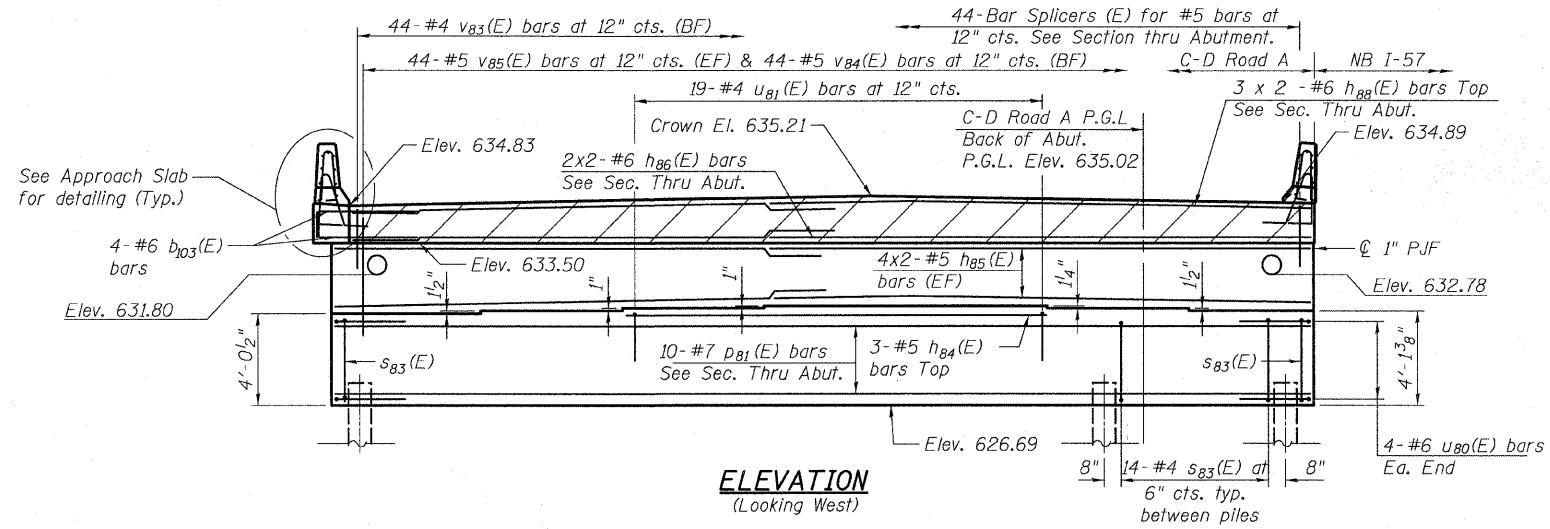
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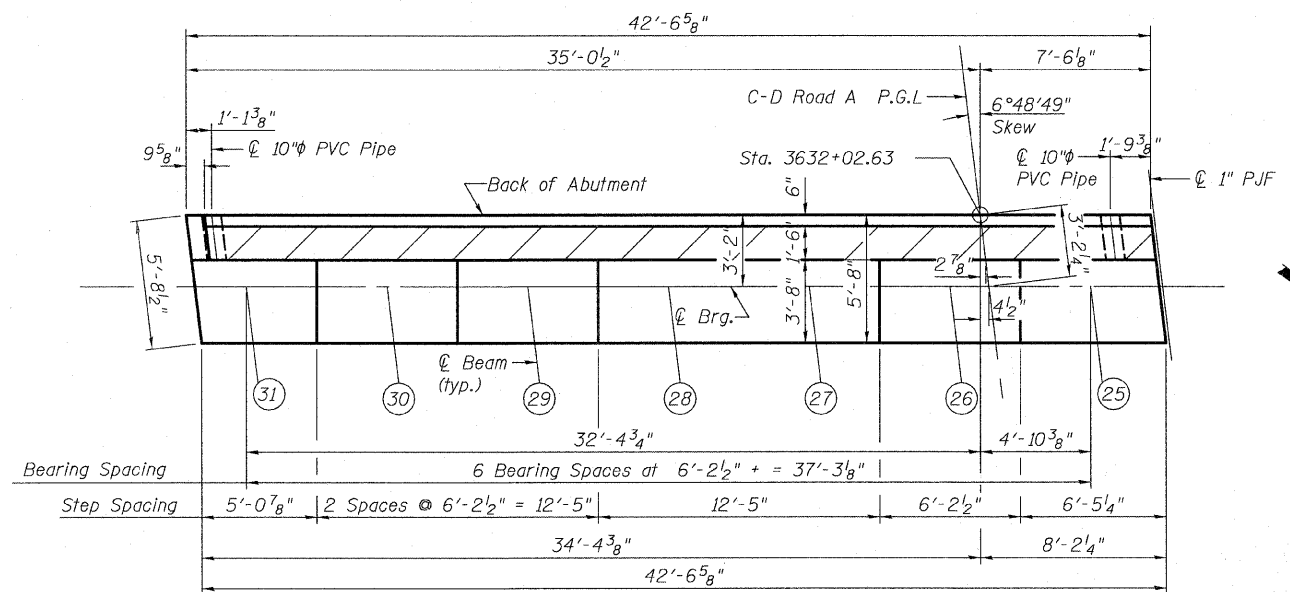
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	CHECKED - LS,SP,PDF							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
	DATE - 03/18/10								

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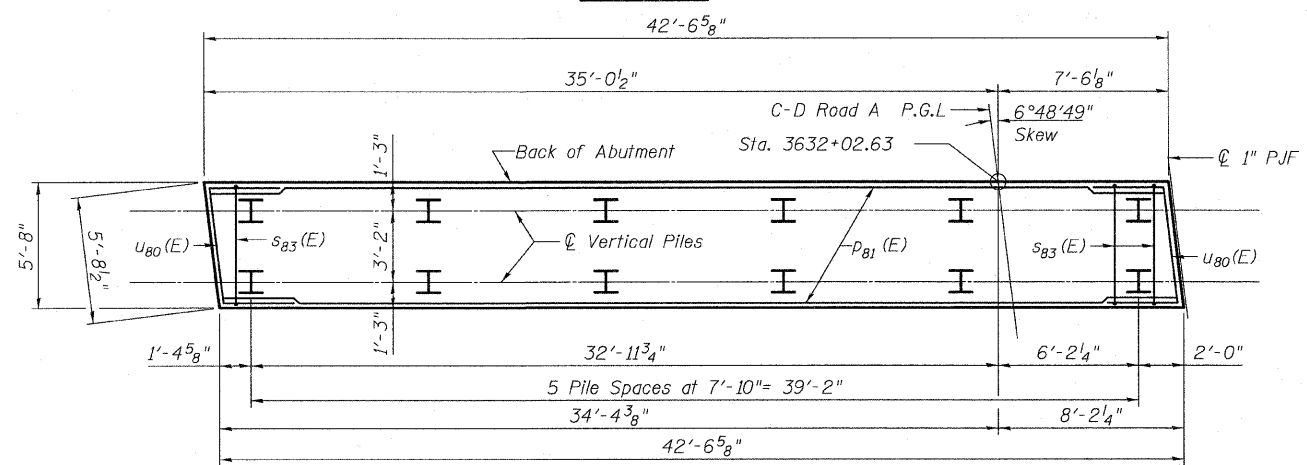
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
(Looking West)



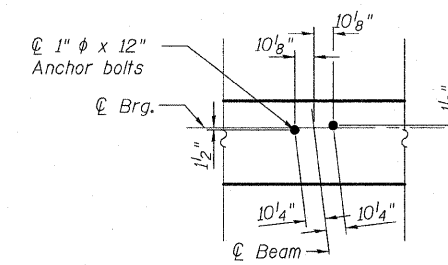
TOP VIEW



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\"/>

**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**

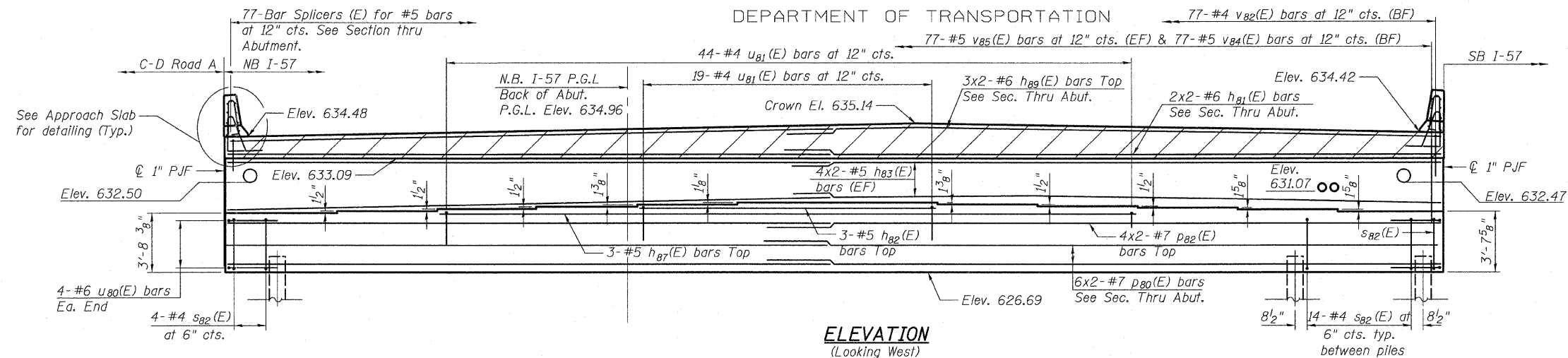
TYLIN INTERNATIONAL

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

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

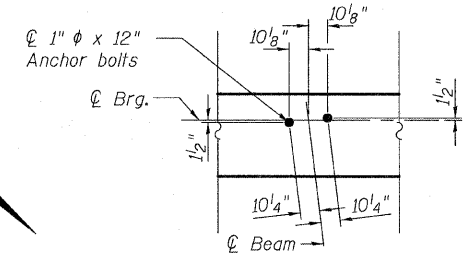
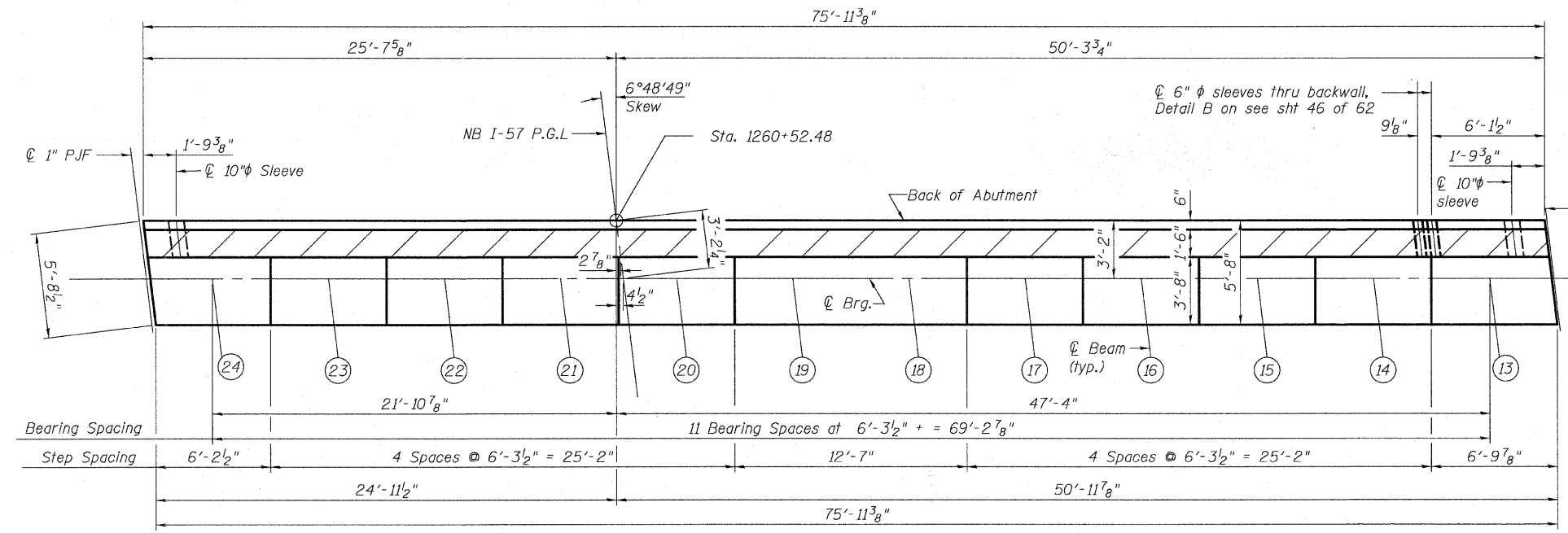
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



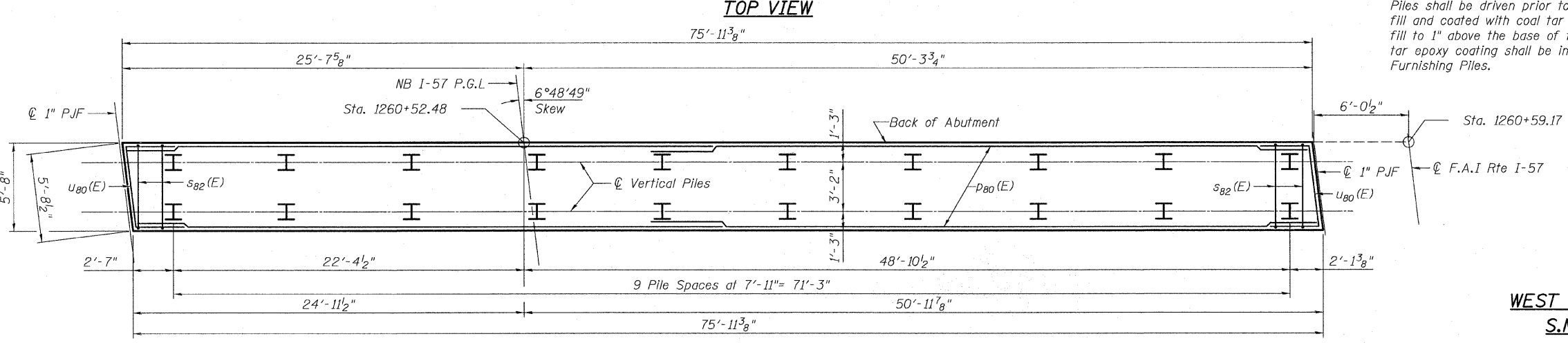
**BRIDGE SEAT
ELEVATIONS**

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



**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\"/>



**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)

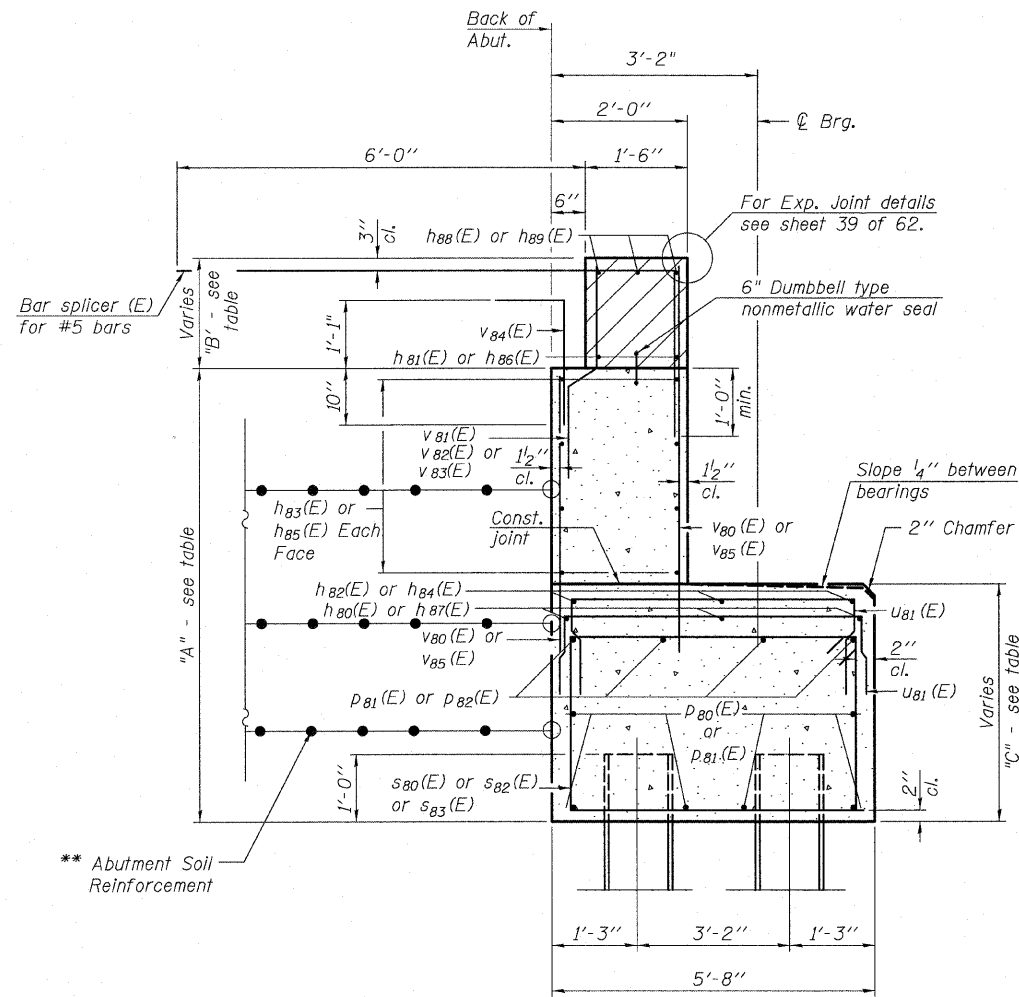
**WEST ABUTMENT - 2
S.N. 016-1252**

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 44	F.A.I RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 357
	CHECKED - AD,LS	NAME	DATE						
	DRAWN - DY,EI								
	CHECKED - LS,SP,PDF								
	DATE - 03/18/10								
					62 SHEETS				
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

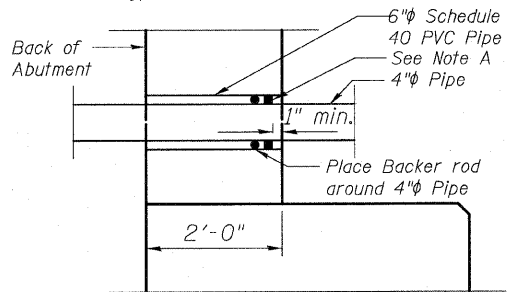
WEST ABUTMENT
BILL OF MATERIAL



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.

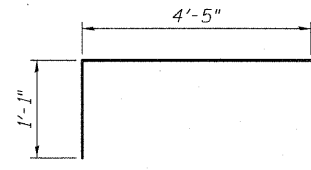
** The M.S.E. wall supplier shall
design the abutment soil reinforcement
to resist a horizontal force of 2 kips/ft.
Contractor shall coordinate abutment
construction with construction of MSE
retaining wall.



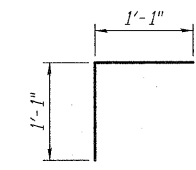
DETAIL B

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

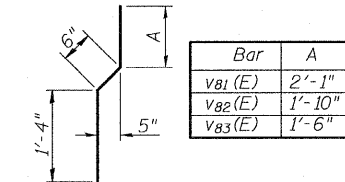
Note: Backer Rod, 6" PVC Pipe & sealant shall be
included in the cost of Concrete Structures.



BAR b103(E)



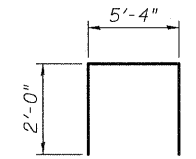
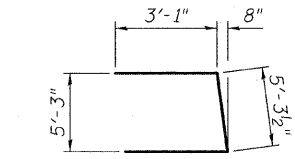
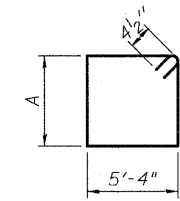
BAR v84(E)



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)

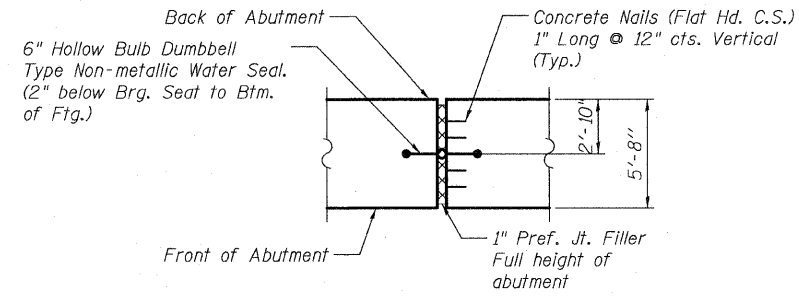
Location	A	B	C
C-D Road A	6'-9 ³ / ₄ "	1'-4" to 1'-8 ¹ / ₂ "	4'-0 ⁵ / ₈ " to 4'-4"
NB I-57	6'-4 ³ / ₄ "	1'-4" to 2'-0 ⁵ / ₈ "	3'-7 ⁵ / ₈ " to 4'-3 ³ / ₈ "
SB I-57	6'-3"	1'-4" to 2'-3"	3'-6" to 4'-4"

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"	▭
u81(E)	158	#4	7'-4"	▭
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"	Γ
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	2,091
Pile Shoes			Each	52
Driving Piles			Foot	2,091
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: 300 kips
Factored Resistance Available: 150 kips
Est. Length: 41 ft
No. Production Piles: 51
No. Test Piles: 1



SECTION A-A

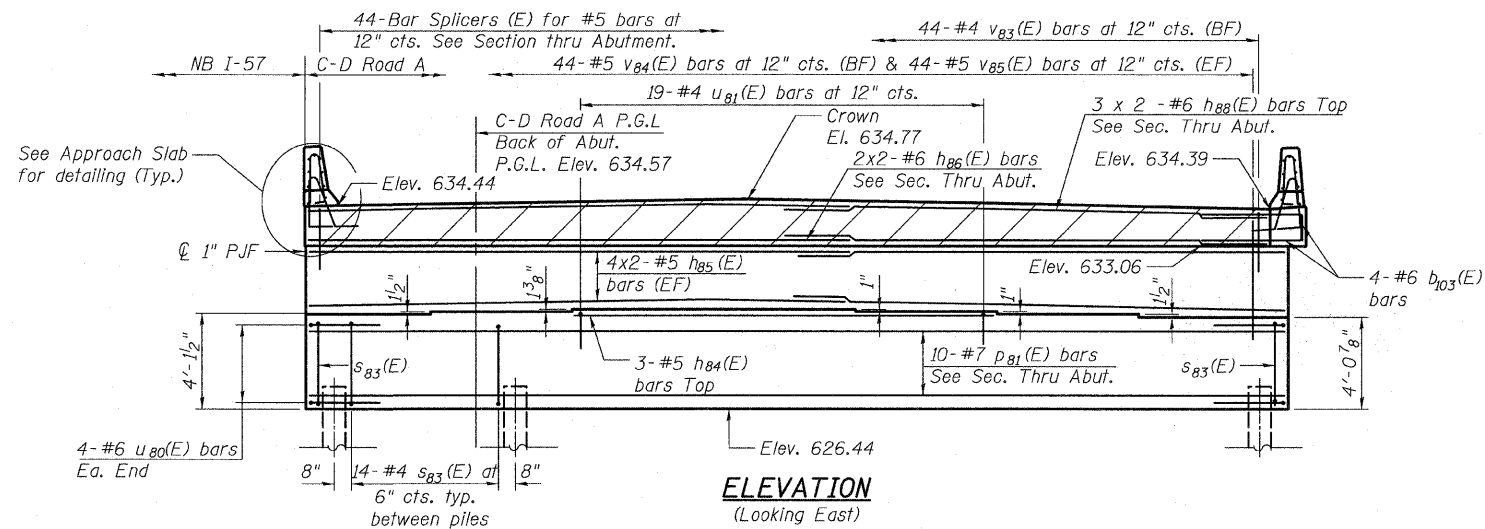
Cost of Water Seal included in the cost of Concrete Structures.

WEST ABUTMENT DETAILS
S.N. 016-1252

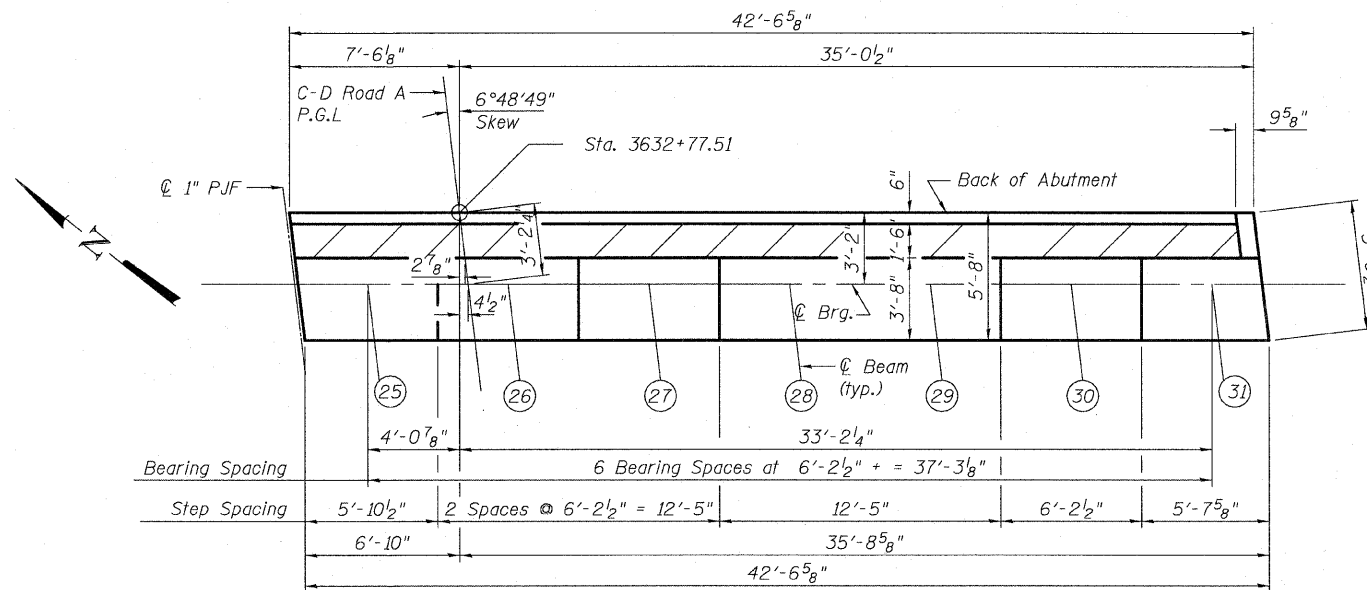
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	CHECKED - AD,LS	NAME	DATE		57	1414.2B	COOK	516	359	
	DRAWN - DY,EI				62 SHEETS	CONTRACT NO. 60J27				
	CHECKED - LS,SP,PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									

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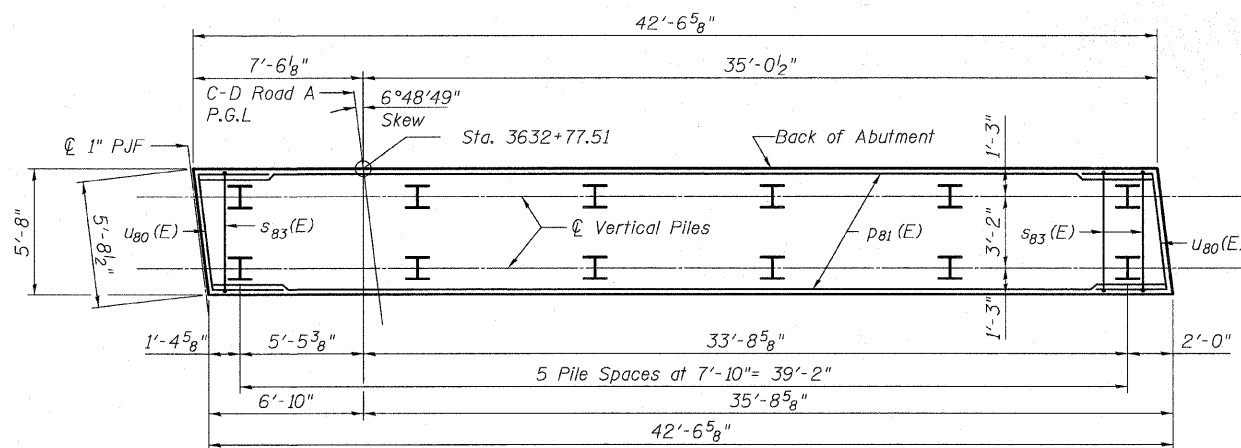
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
(Looking East)



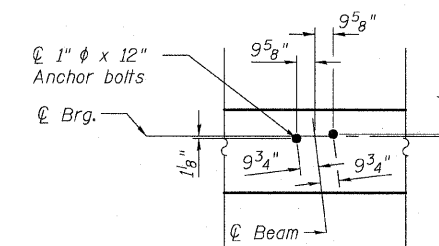
TOP VIEW



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\"/>

**MINIMUM BAR
LAPS**

Bar	Lap	Notes
#4	2'-7"	
#5	3'-3"	
#6	3'-10"	
#6	4'-5" (Top)	for h ₈₈ (E)
#7	5'-2"	
#7	5'-10" (Top)	

EAST ABUTMENT - 1
S.N. 016-1252

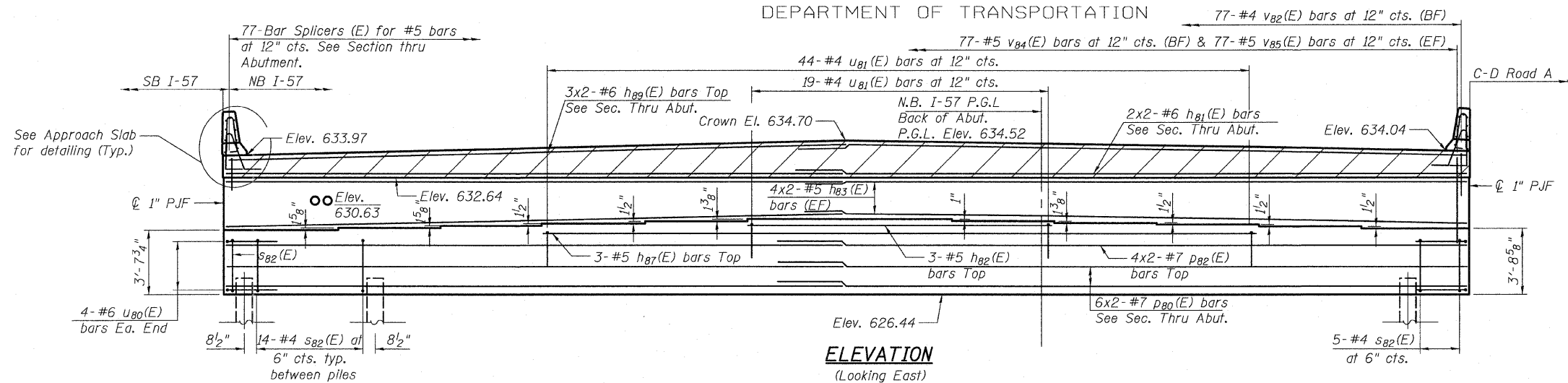
TYLIN INTERNATIONAL

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					

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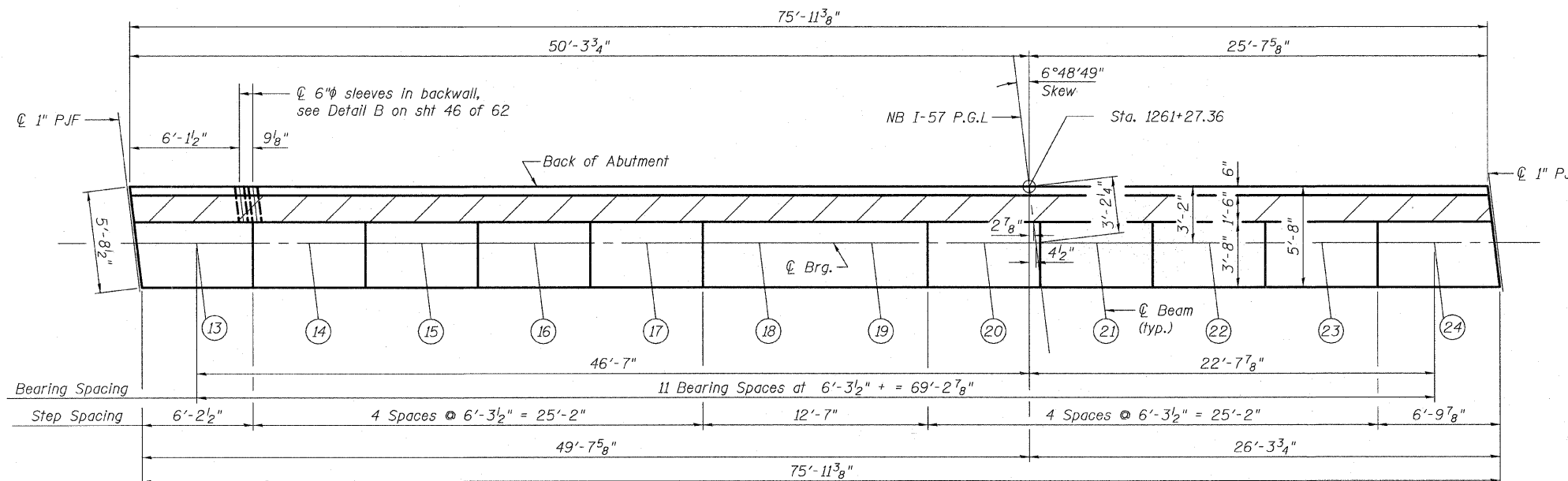
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



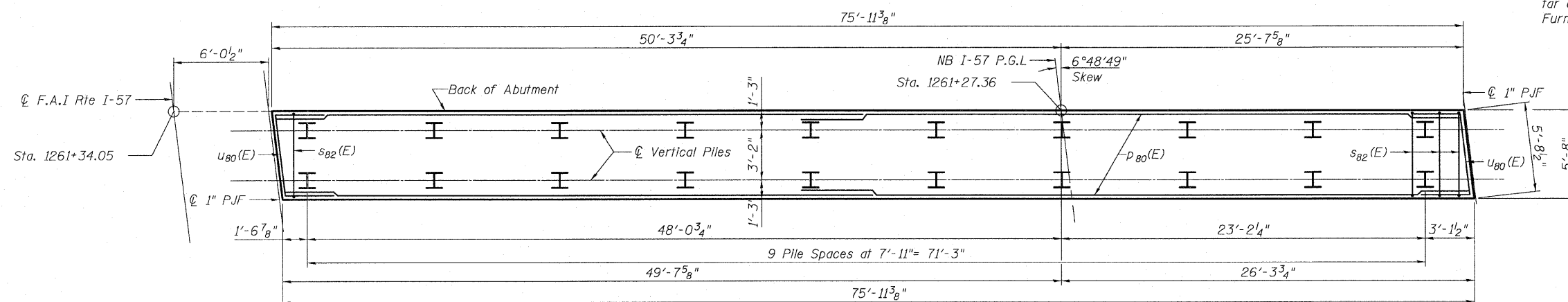
**BRIDGE SEAT
ELEVATIONS**

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

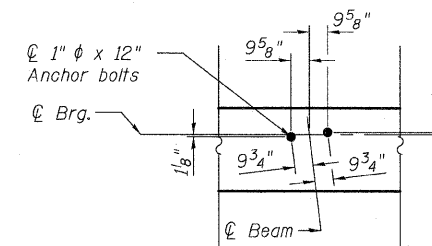
ELEVATION
(Looking East)



TOP VIEW



PLAN-PILE CAP



**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 h ₈₉ (E)
#7	5'-2"	
#7	5'-10" (Top)	for p ₈₂ (E)

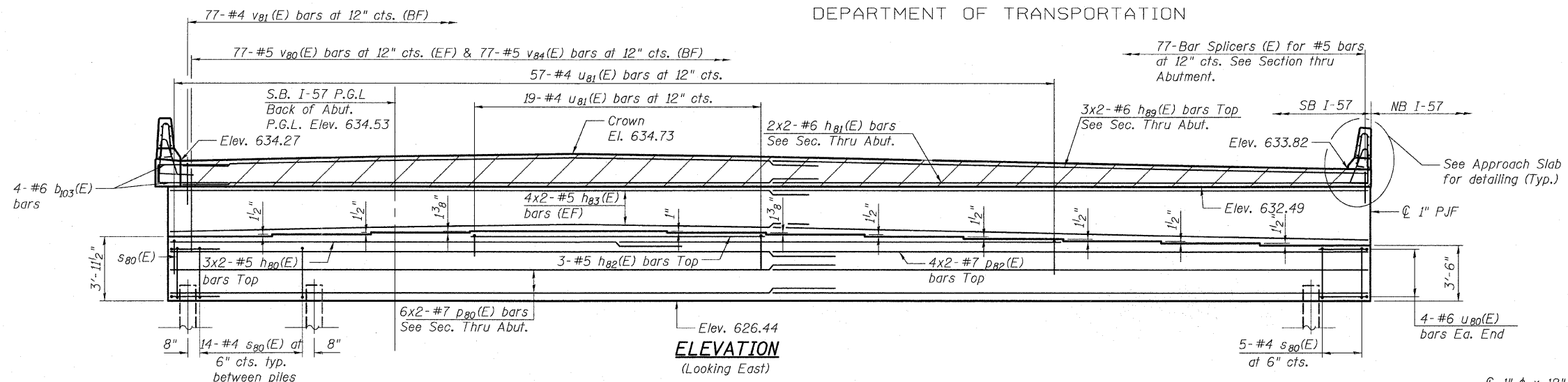
**EAST ABUTMENT - 2
S.N. 016-1252**

TYLIN INTERNATIONAL

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

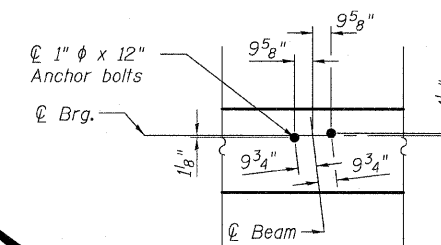
SHEET NO. 48 62 SHEETS	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS 516	SHEET NO. 361
	FED. ROAD DIST. NO. 1 ILLINOIS		CONTRACT NO. 60J27		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



**BRIDGE SEAT
ELEVATIONS**

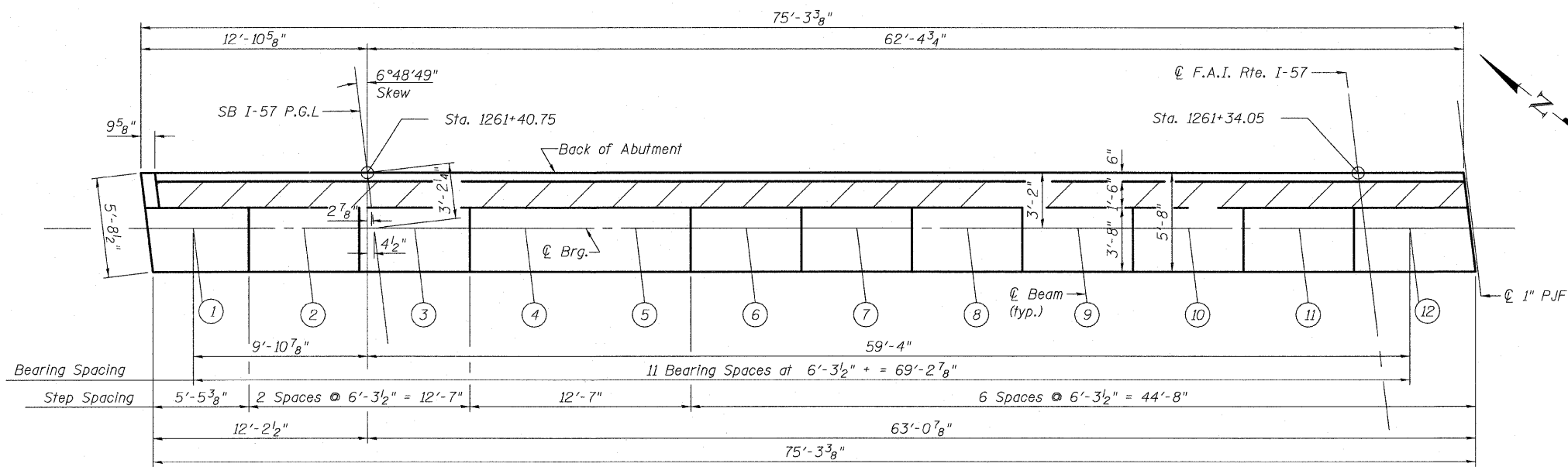
Beam	Seat Elevation
1	630.40
2	630.53
3	630.65
4	630.76
5	630.76
6	630.68
7	630.57
8	630.44
9	630.32
10	630.19
11	630.07
12	629.94



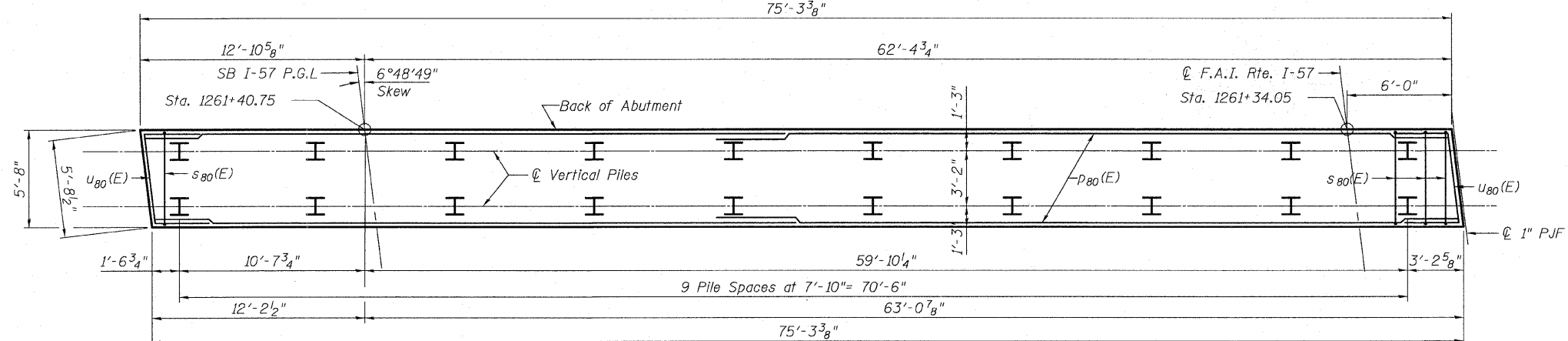
**ANCHOR BOLT
LAYOUT**

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.



TOP VIEW



PLAN-PILE CAP

**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**

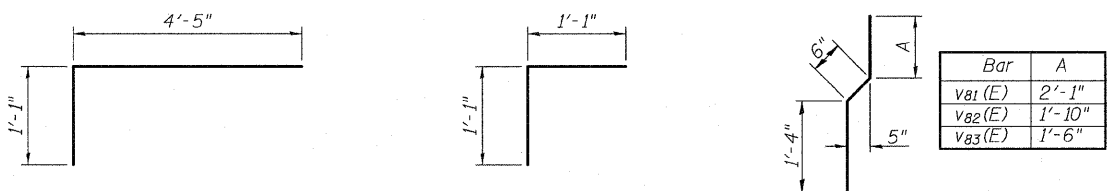
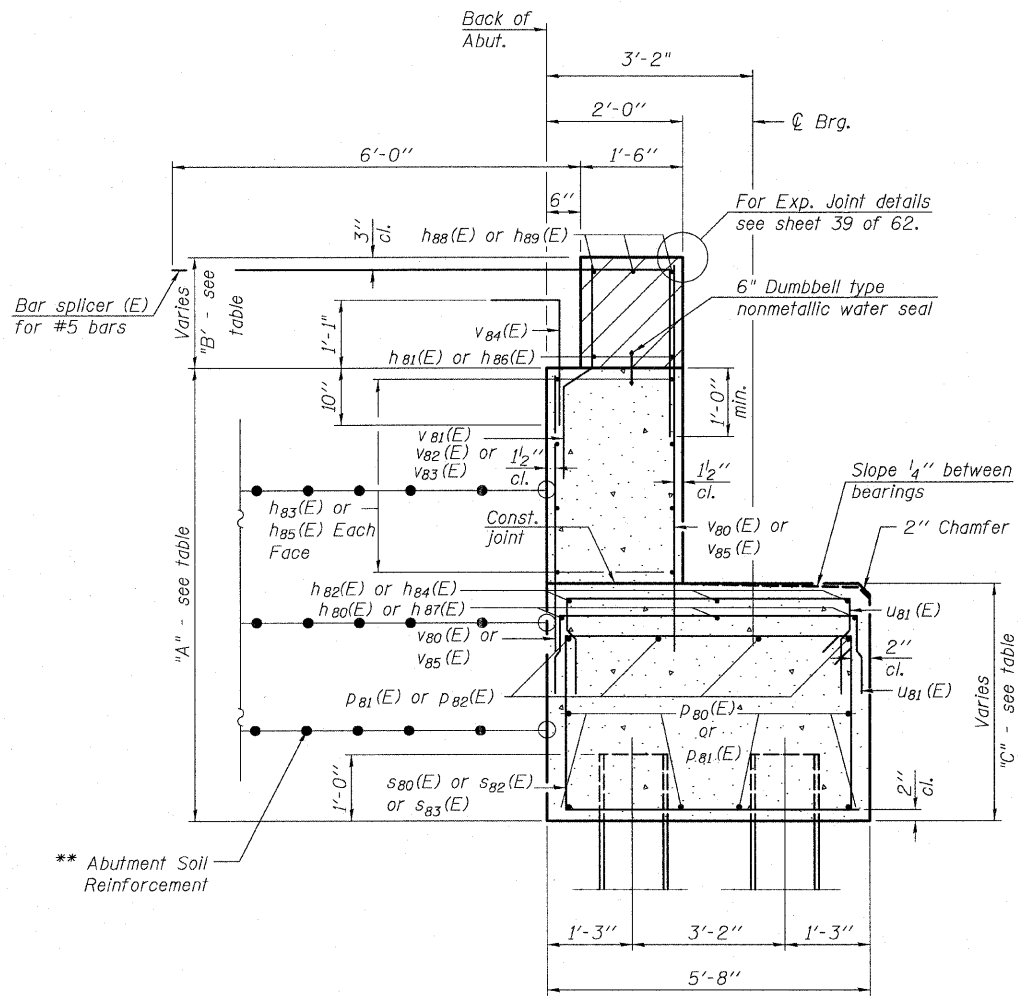
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	CHECKED - AD,LS	NAME	DATE			57				
	DRAWN - DY,EI									
	CHECKED - LS,SP,PDF									
	DATE - 03/18/10									
						62 SHEETS		CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT										

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**EAST ABUTMENT
BILL OF MATERIAL**

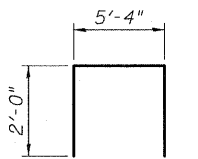
Bar	No.	Size	Length	Shape
b ₁₀₃ (E)	8	#6	6'-4"	Γ
h ₈₀ (E)	6	#5	29'-9"	—
h ₈₁ (E)	8	#6	39'-9"	—
h ₈₂ (E)	6	#5	18'-6"	—
h ₈₃ (E)	32	#5	39'-10"	—
h ₈₄ (E)	3	#5	18'-2"	—
h ₈₅ (E)	16	#5	22'-9"	—
h ₈₆ (E)	4	#6	22'-8"	—
h ₈₇ (E)	3	#5	43'-7"	—
h ₈₈ (E)	6	#6	23'-9"	—
h ₈₉ (E)	12	#6	40'-1"	—
p ₈₀ (E)	24	#7	40'-6"	—
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"	—
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	1,836
Pile Shoes			Each	52
Driving Piles			Foot	1,836
Test Pile, HP12x53			Each	1
Concrete Sealer			Sq. Ft.	1,610



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)

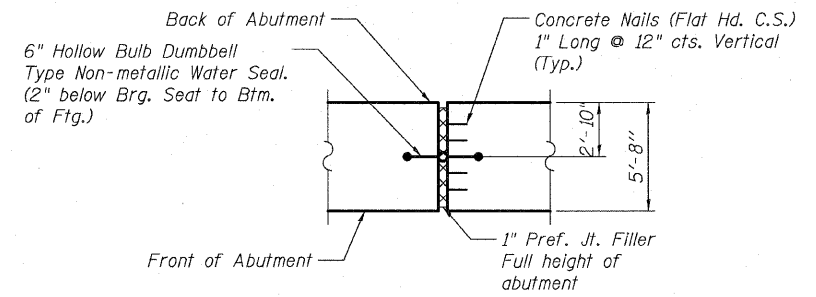
PILE DATA

Type: HP12x53 with Pile Shoes
Nominal Required Bearing: 300 kips
Factored Resistance Available: 150 kips
Est. Length: 36 ft
No. Production Piles: 51
No. Test Piles: 1

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"



SEC. THRU 1" EXP. JT. FILLER

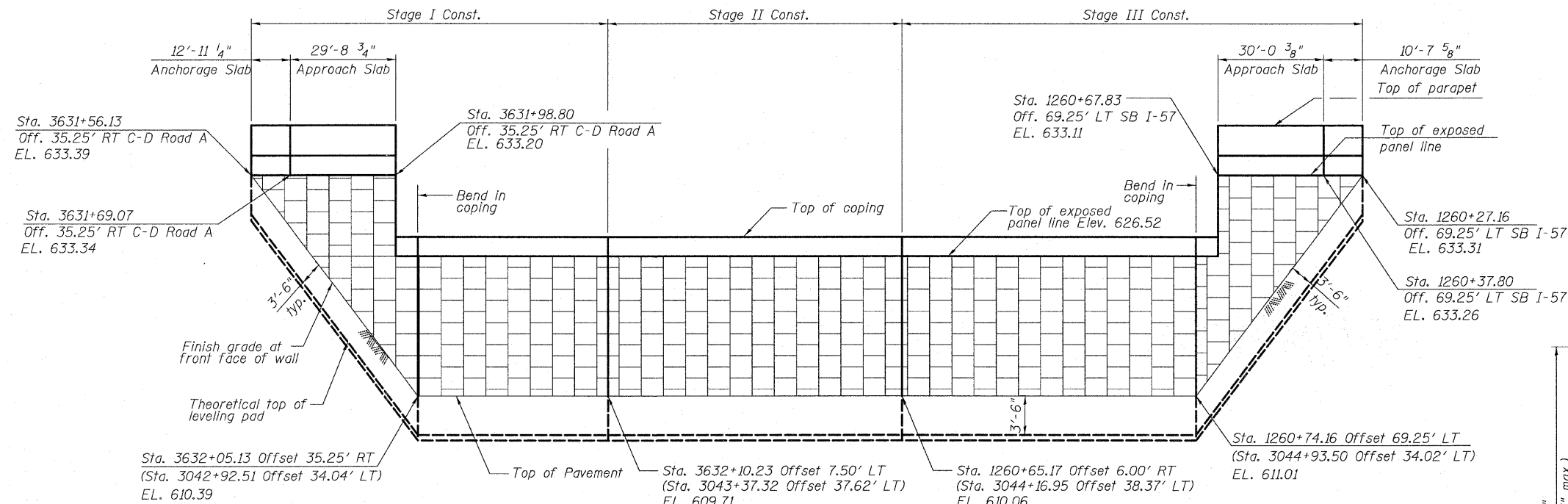
Cost of Water Seal included in the cost of Concrete Structures.

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

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 50	F.A.I. RTE. 57	SECTION 1414.2B	COUNTY COOK	TOTAL SHEETS	SHEET NO.
	CHECKED - AD,LS	NAME	DATE					516	363
	DRAWN - DY,EI							CONTRACT NO. 60J27	
	CHECKED - LS,SP,PDF							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
	DATE - 03/18/10								

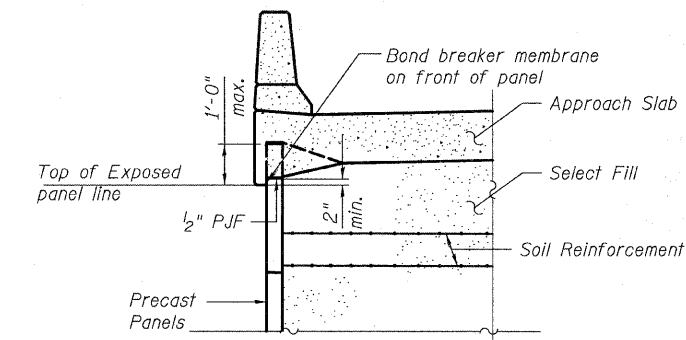
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



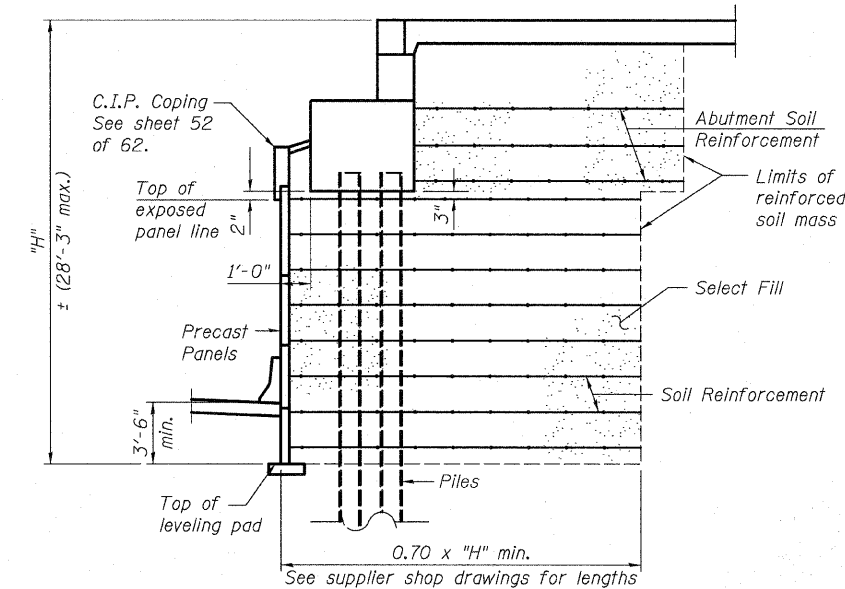
WEST ABUTMENT WALL

Developed elevation along front face



SECTION THRU BARRIER

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



SECTION THRU ABUTMENT

NOTES

The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 2.0 kips/ft of abutment.

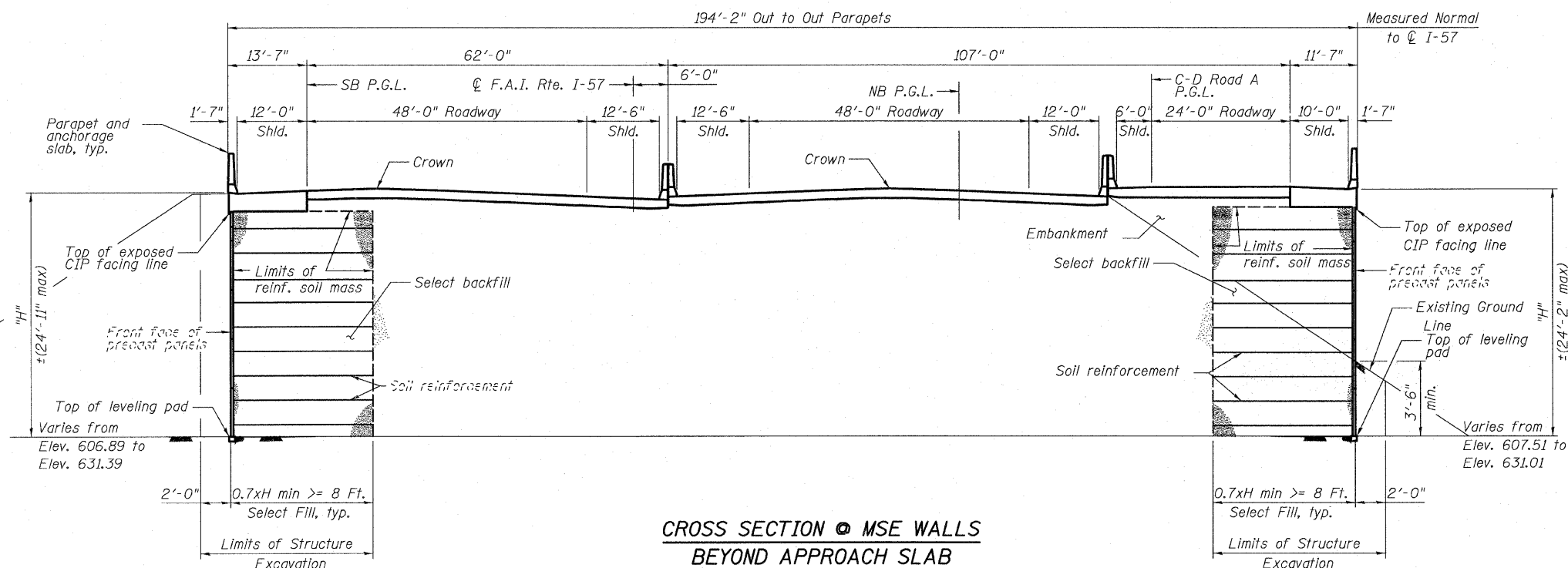
Piles shall be driven prior to placement of the reinforced select fill and coated with coal tar epoxy from the bottom of the select fill to 1' above the base of the abutment. The cost of the coal tar epoxy coating shall be included with the cost of the Furnishing Piles.

See Special Provision for Mechanically Stabilized Earth Retaining Wall design and construction requirements.

Offsets are to Front Face of precast panels.

For coping details, see sheet 52 of 62.

For anchorage slab details, see sheet 34 of 62.



**CROSS SECTION @ MSE WALLS
BEYOND APPROACH SLAB**

Looking East

**WEST MECHANICALLY STABILIZED
EARTH RETAINING WALL
S.N. 016-1252**

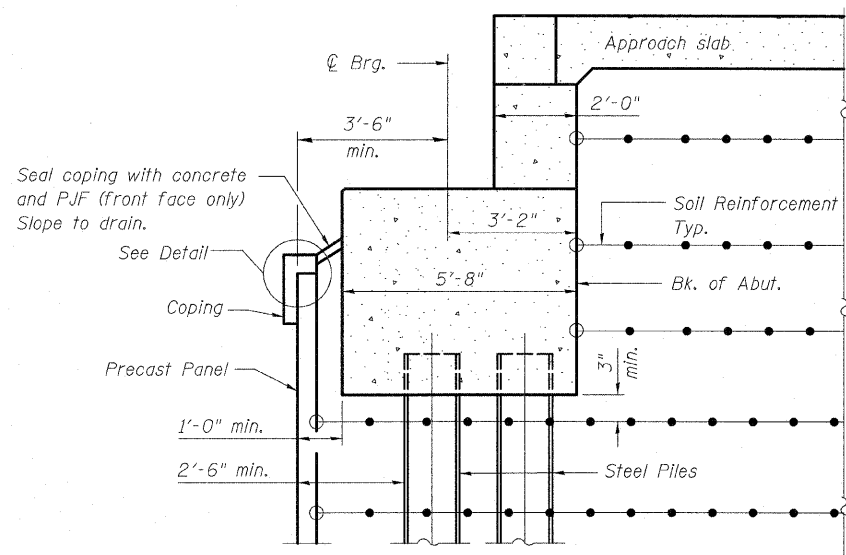
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DATE	03/18/10		

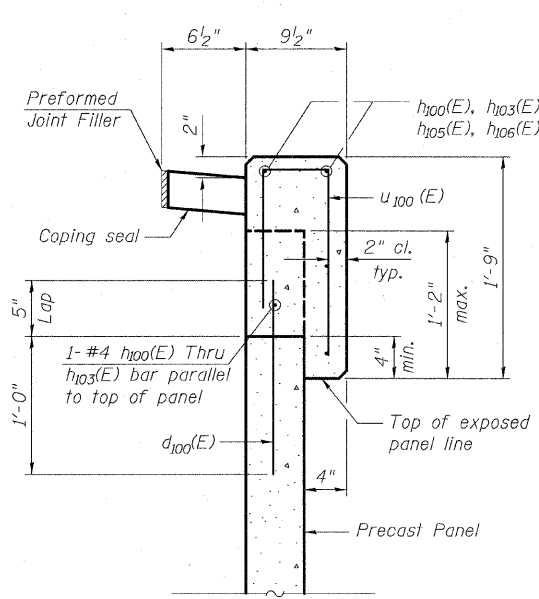
SHEET NO. 51 62 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	364
			CONTRACT NO. 60J27		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

P:\602540\57-294\STRUCTURAL\I-57 OVER RAMP.BX.dwg 03-17-2010 10:01:25 AM 9:54:55 AM

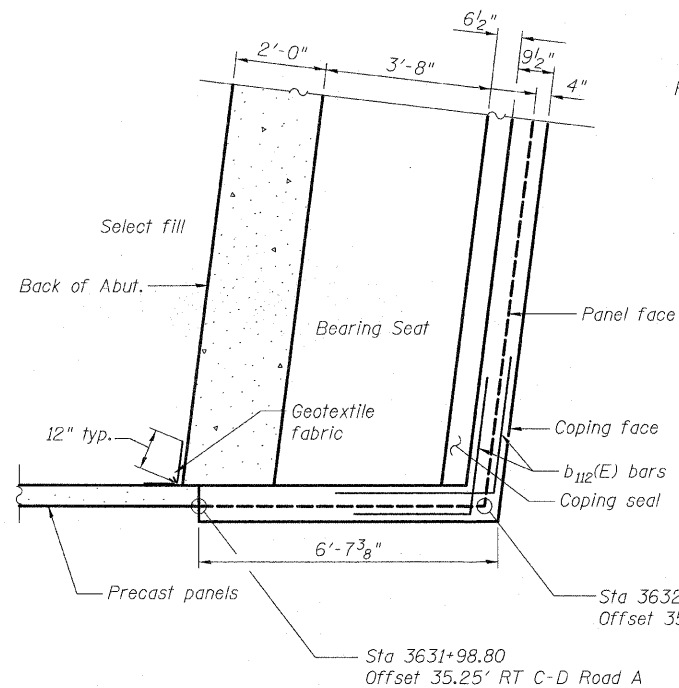
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



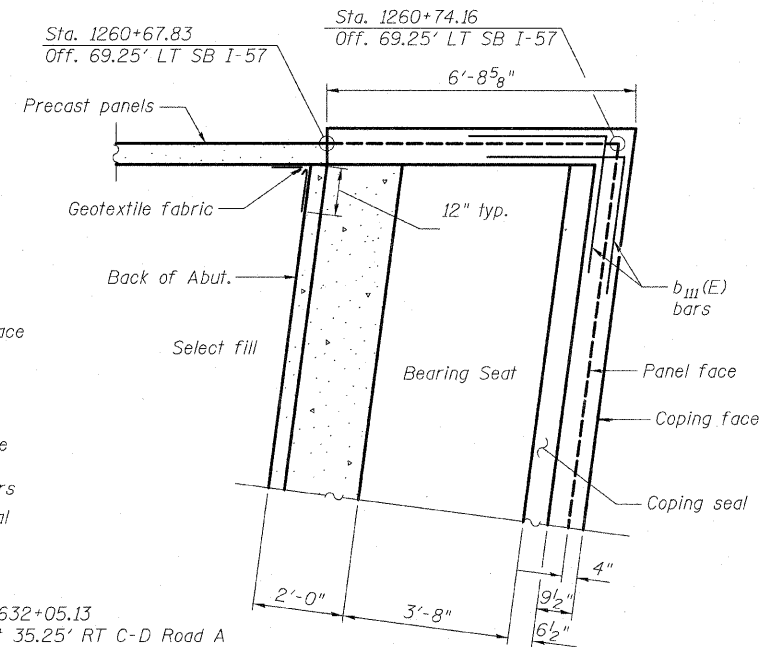
SECTION THRU WEST ABUTMENT
(Horiz. dim. @ Rt. L's)



DETAIL



PLAN AT ABUTMENT - SOUTH END



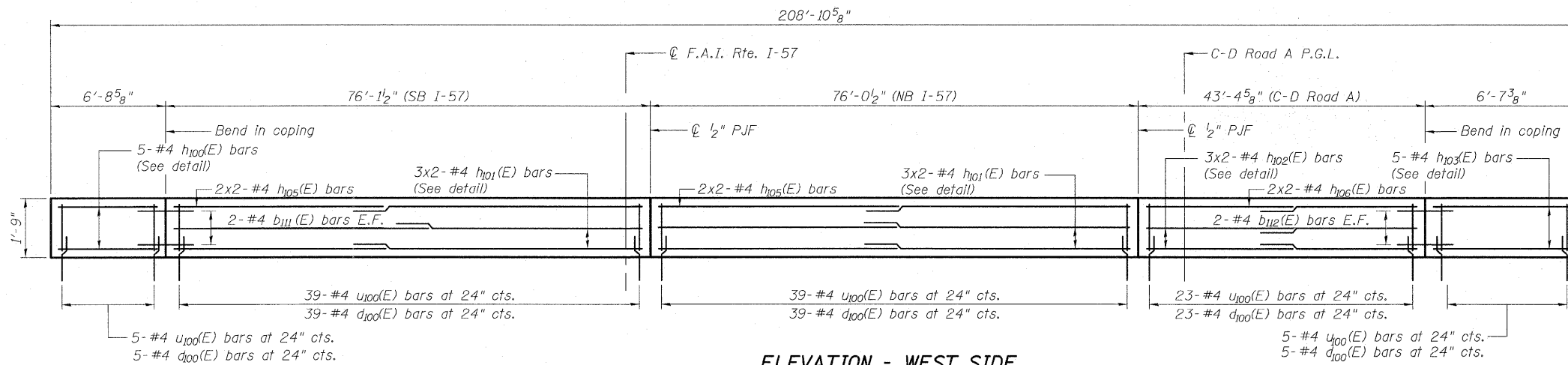
PLAN AT ABUTMENT - NORTH END

MINIMUM BAR LAPS

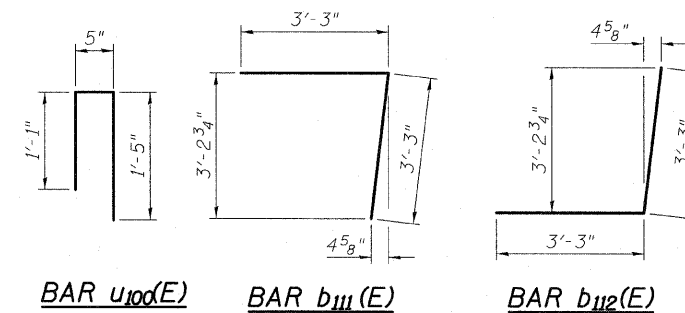
Bar	Lap
#4	2'-7"
#4	2'-11" (Top)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b ₁₁₁ (E)	4	#4	6'-6"	U
b ₁₁₂ (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)



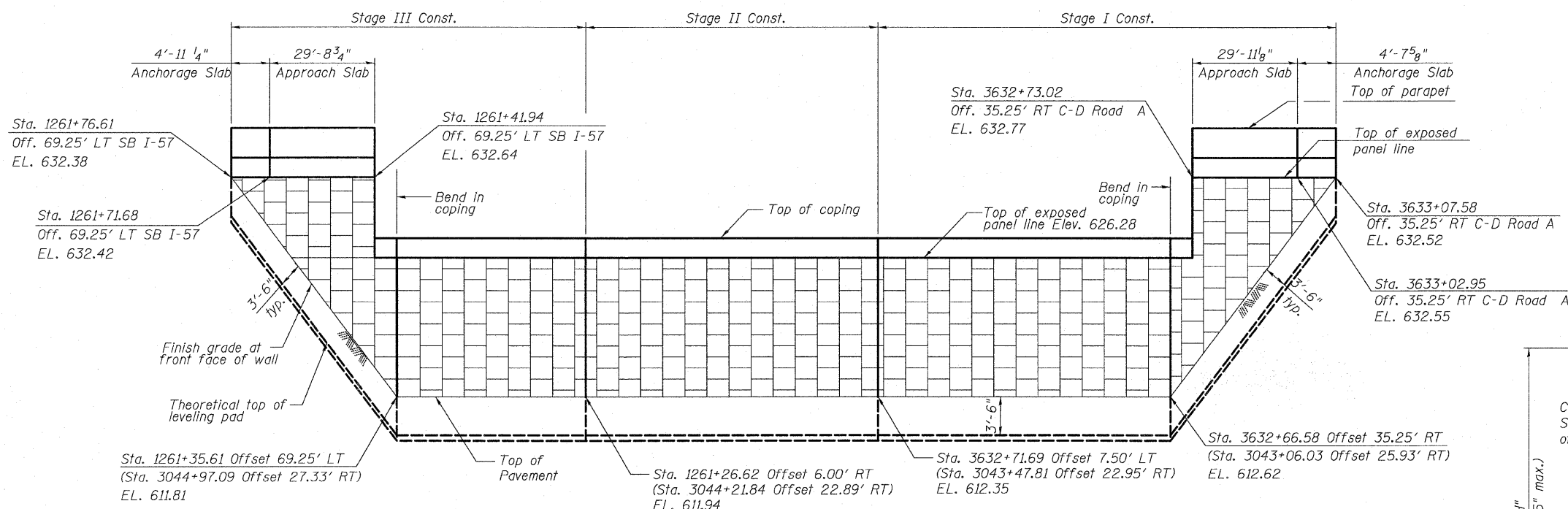
BAR U₁₀₀(E) BAR b₁₁₁(E) BAR b₁₁₂(E)

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

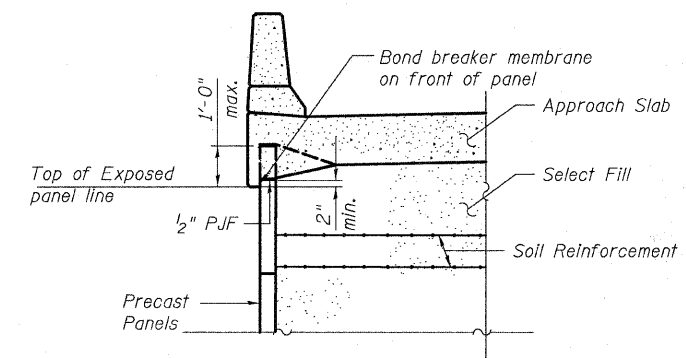
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	DRAWN - DY,EI							CONTRACT NO. 60J27	
	CHECKED - LS,SP,PDF							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
	DATE - 03/18/10								

P:\602548(57-294)\STRUCTURAL\I-57 OVER RAMP.BX.dwg, 03/17/2010 09:52:51, 60J27-052, MSE_WALL.DTL.dwg, 10:57:55 AM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

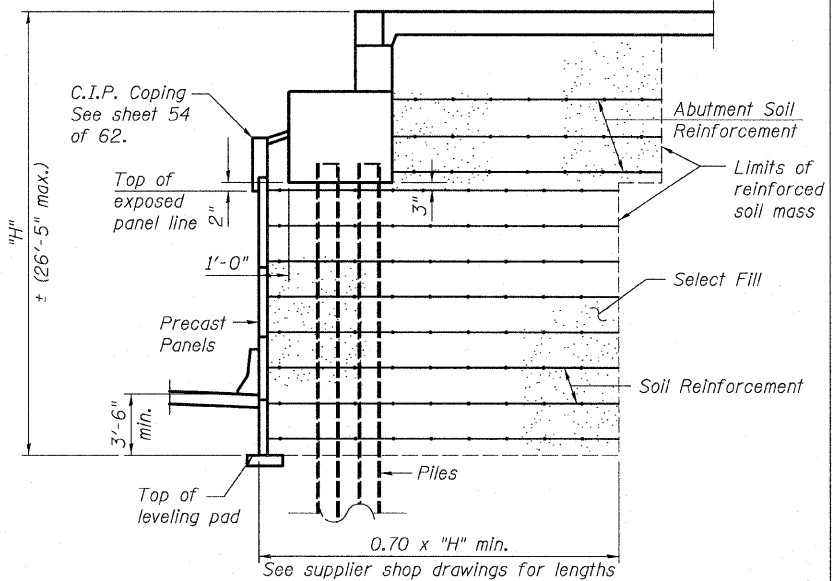


EAST ABUTMENT WALL
Developed elevation along front face



SECTION THRU BARRIER

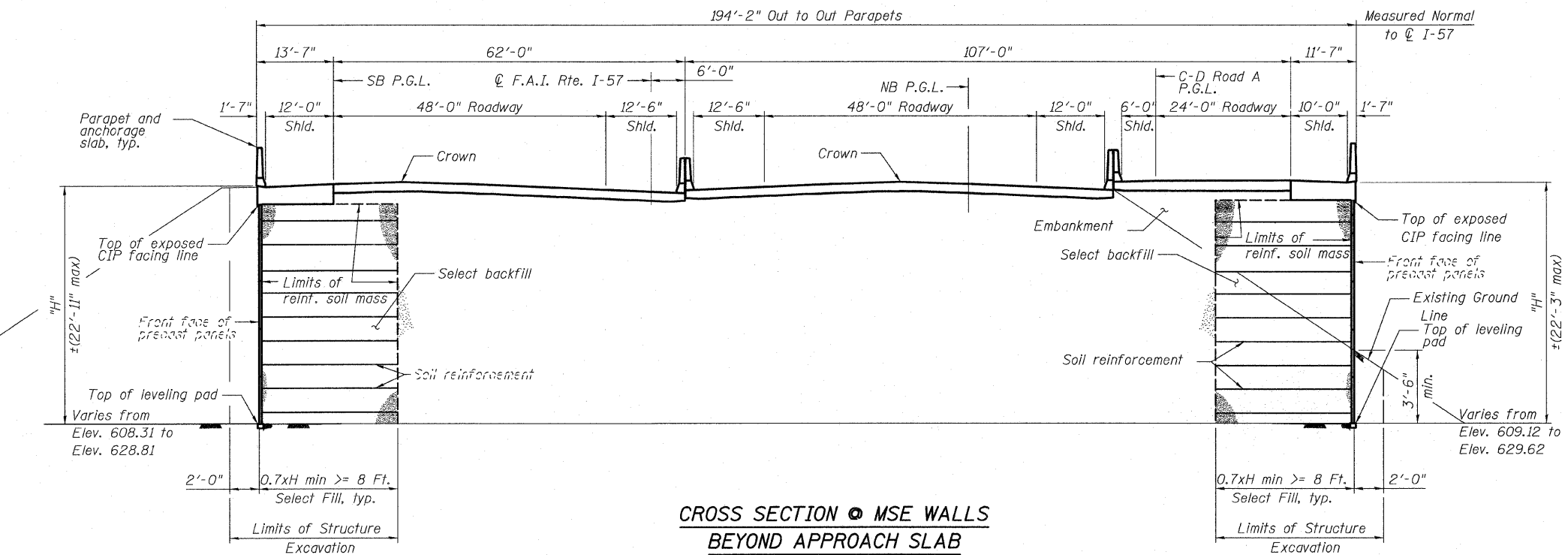
The M.S.E. wall supplier's internal stability design shall account for the slabs bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft of wall.



SECTION THRU ABUTMENT

NOTES

- The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 2.0 kips/ft of abutment.
- 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.
- See Special Provision for Mechanically Stabilized Earth Retaining Wall design and construction requirements.
- Offsets are to Front Face of precast panels.
- For coping details, see sheet 54 of 62.
- For anchorage slab details, see sheet 35 of 62.



**CROSS SECTION @ MSE WALLS
BEYOND APPROACH SLAB**
Looking East

**EAST MECHANICALLY STABILIZED
EARTH RETAINING WALL**
S.N. 016-1252

TYLIN INTERNATIONAL

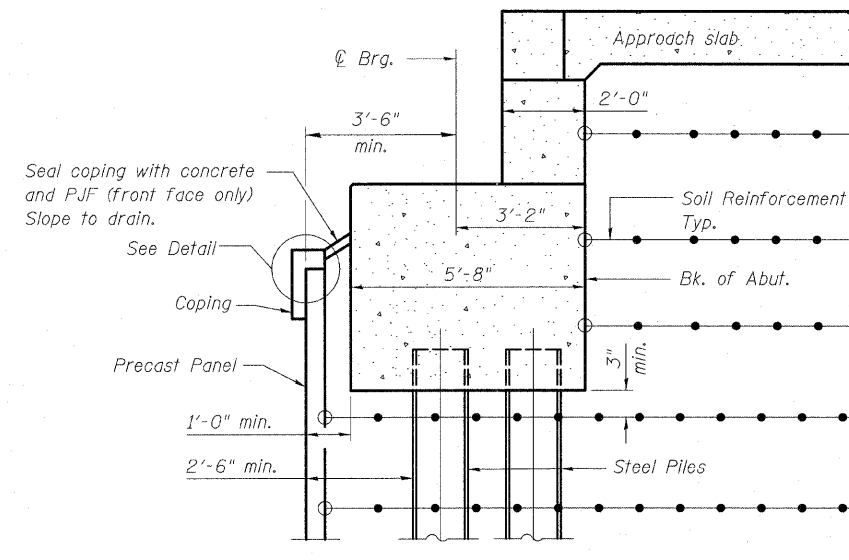
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DRAWN -	DY,EI		
CHECKED -	LS,SP,PDF		
DATE -	03/18/10		

SHEET NO. 53
62 SHEETS

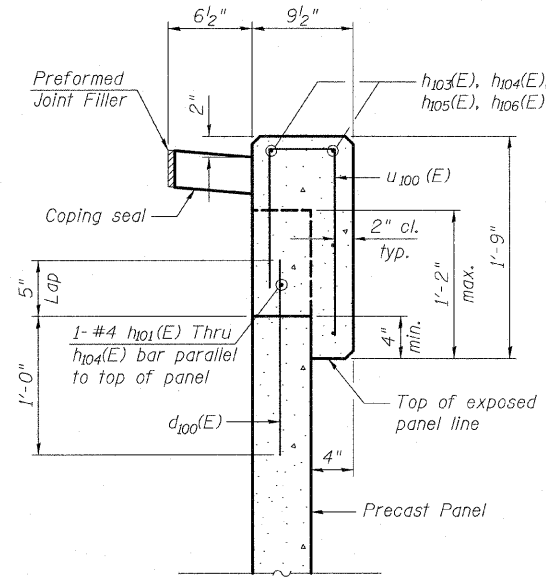
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	366
CONTRACT NO. 60J27				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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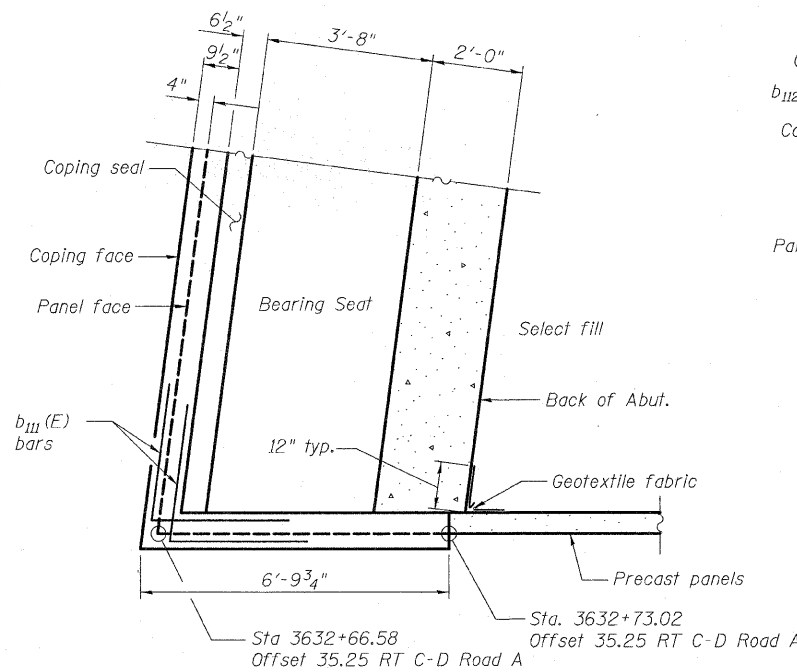
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



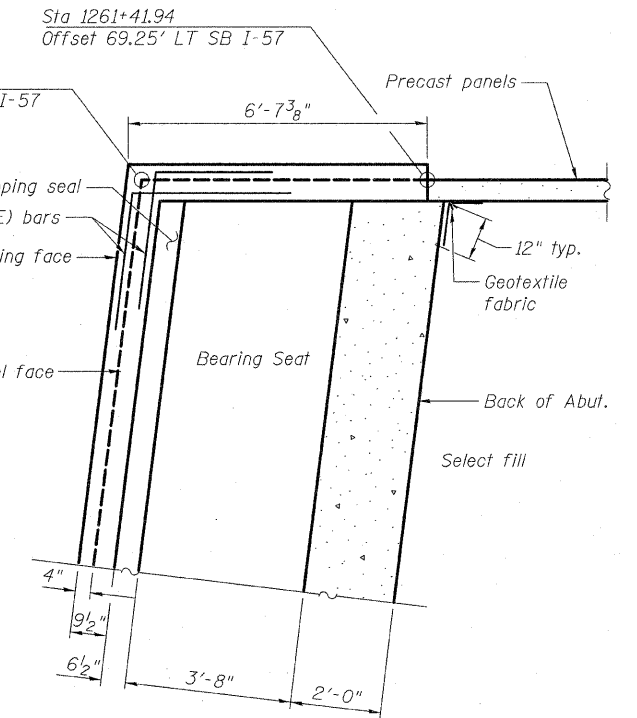
SECTION THRU EAST ABUTMENT
(Horiz. dim. @ Rt. L's)



DETAIL



PLAN AT ABUTMENT - SOUTH END



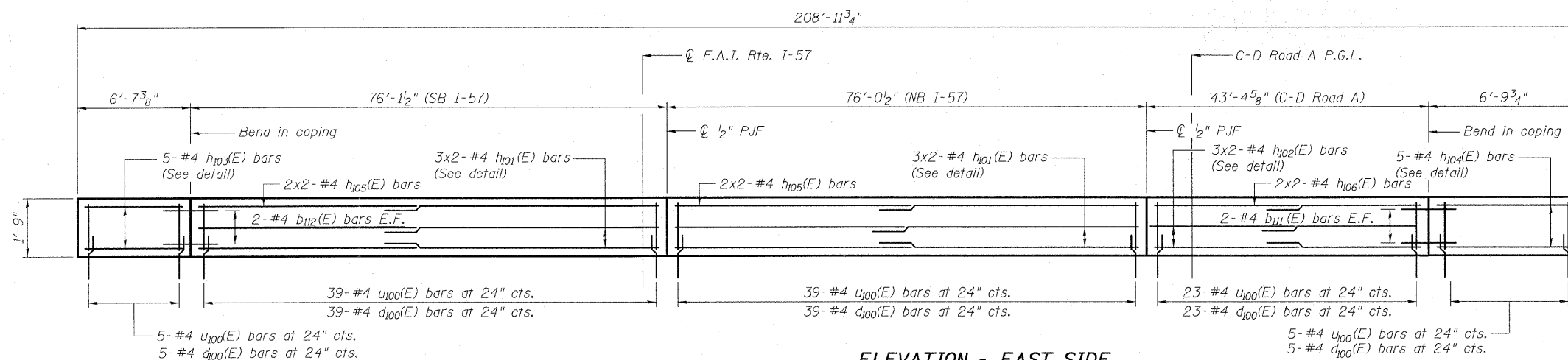
PLAN AT ABUTMENT - NORTH END

MINIMUM BAR LAPS

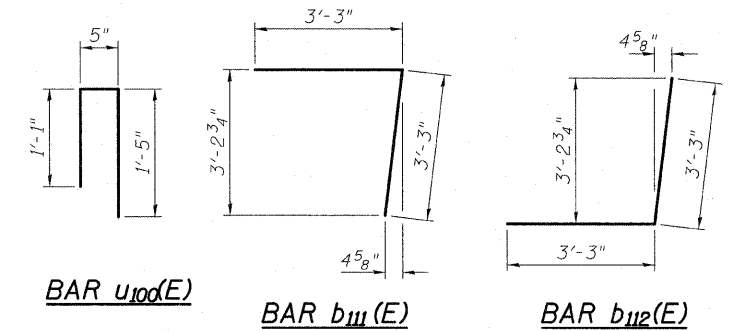
Bar	Lap
#4	2'-7"
#4	2'-11" (Top)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b111(E)	4	#4	6'-6"	
b112(E)	4	#4	6'-6"	
d100(E)	111	#4	1'-5"	
h101(E)	12	#4	39'-2"	
h102(E)	6	#4	22'-10"	
h103(E)	5	#4	6'-4"	
h104(E)	5	#4	6'-6"	
h105(E)	8	#4	39'-4"	
h106(E)	4	#4	23'-0"	
u100(E)	111	#4	2'-11"	
Concrete Structures		Cu. Yd.	10.7	
Reinforcement Bars, Epoxy Coated		Pound	1,080	



ELEVATION - EAST SIDE
(Looking East)



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

TYLIN INTERNATIONAL

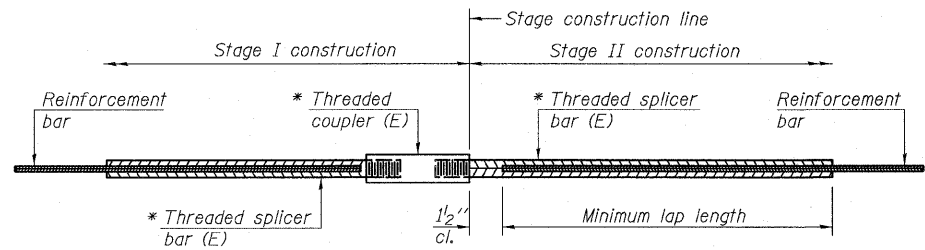
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CHECKED	LS,SP,PDF		
DATE	03/18/10		

SHEET NO. 54

62 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	367
FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT
CONTRACT NO. 60J27				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

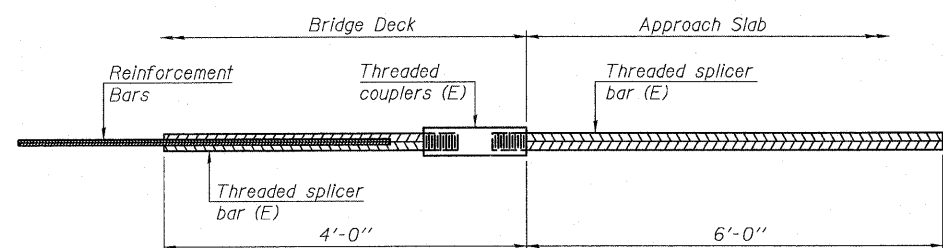
Bar size to be spliced	Minimum Lap Lengths			
	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

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

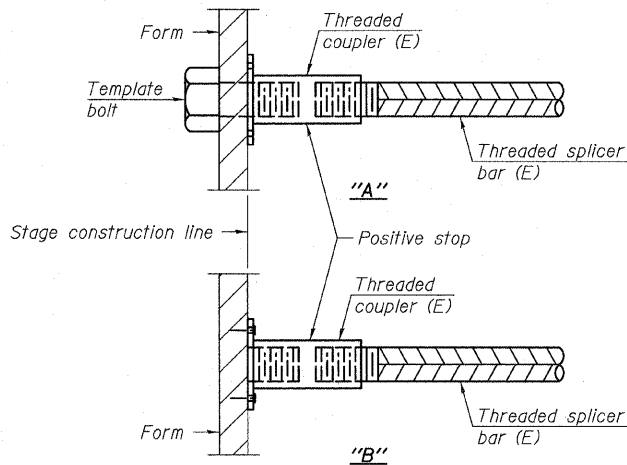


BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 0

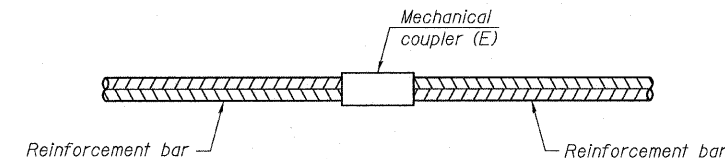
BSD-1

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.

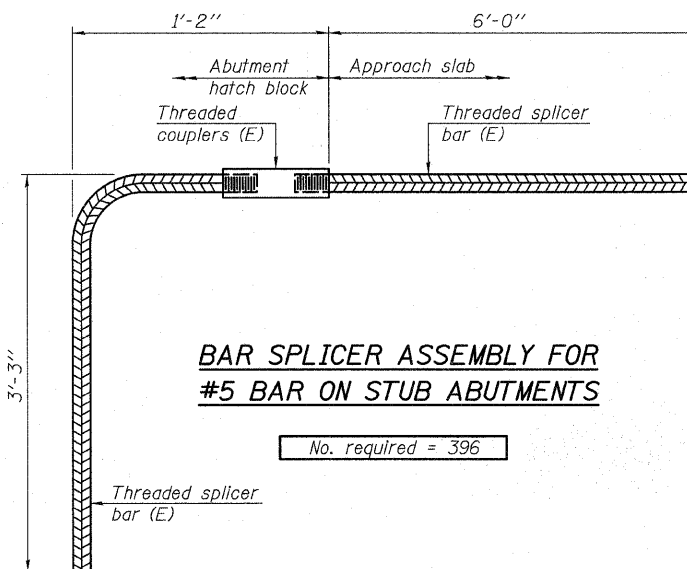


STANDARD MECHANICAL SPLICER

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

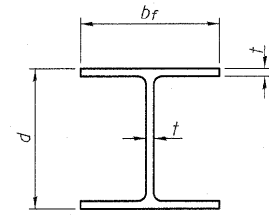
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SHEET NO. 55
62 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

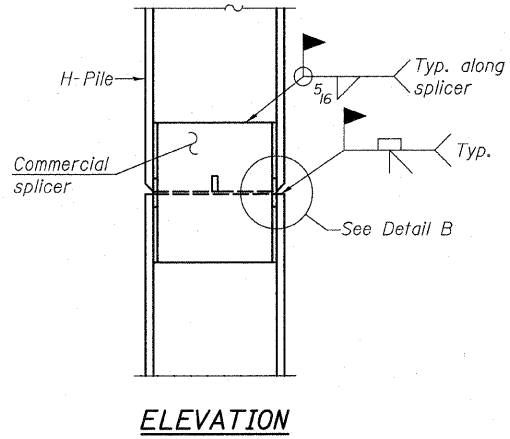
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

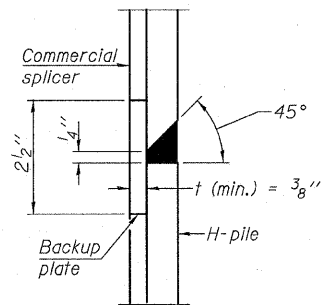


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 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 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"

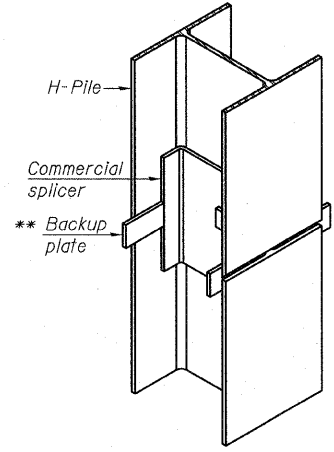


ELEVATION

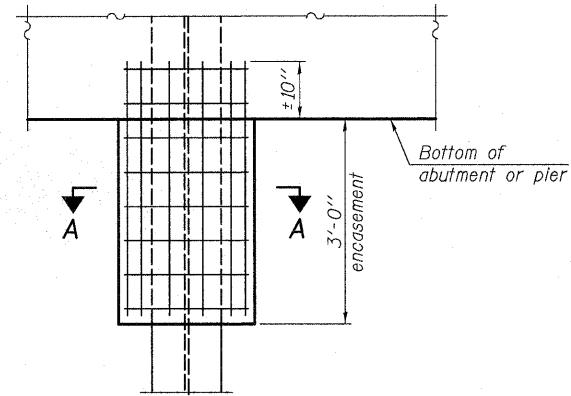


DETAIL "B"

WELDED COMMERCIAL SPLICE

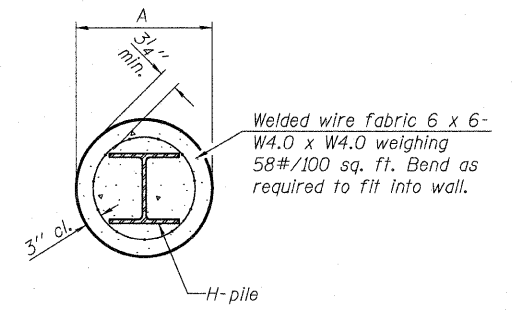


ISOMETRIC VIEW



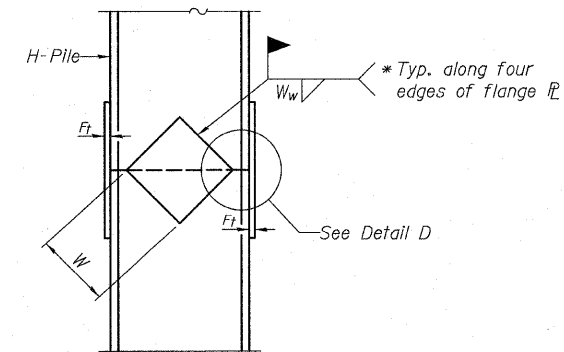
ELEVATION

PILE ENCASEMENT

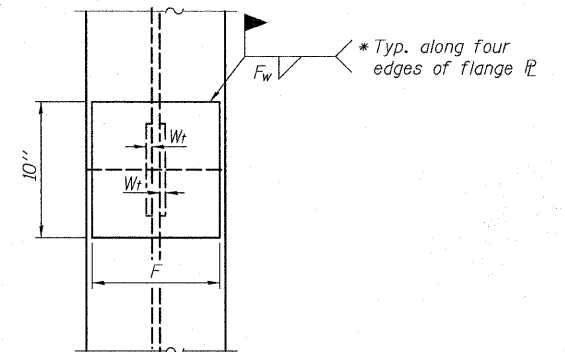


Note:
Forms for encasement may be omitted when soil conditions permit.

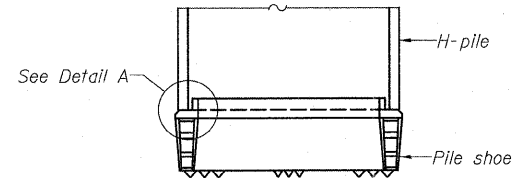
SECTION A-A



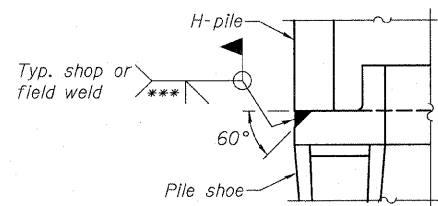
ELEVATION



END VIEW

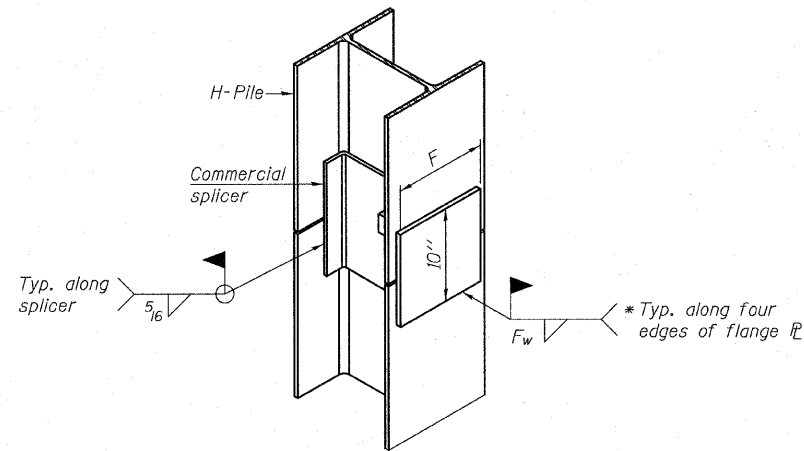


ELEVATION



DETAIL A

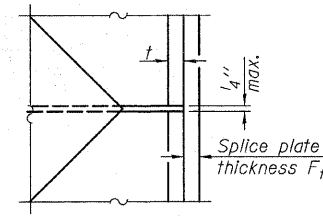
H-PILE SHOE ATTACHMENT



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.).



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
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"	1/2"	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"	1/2"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/2"	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

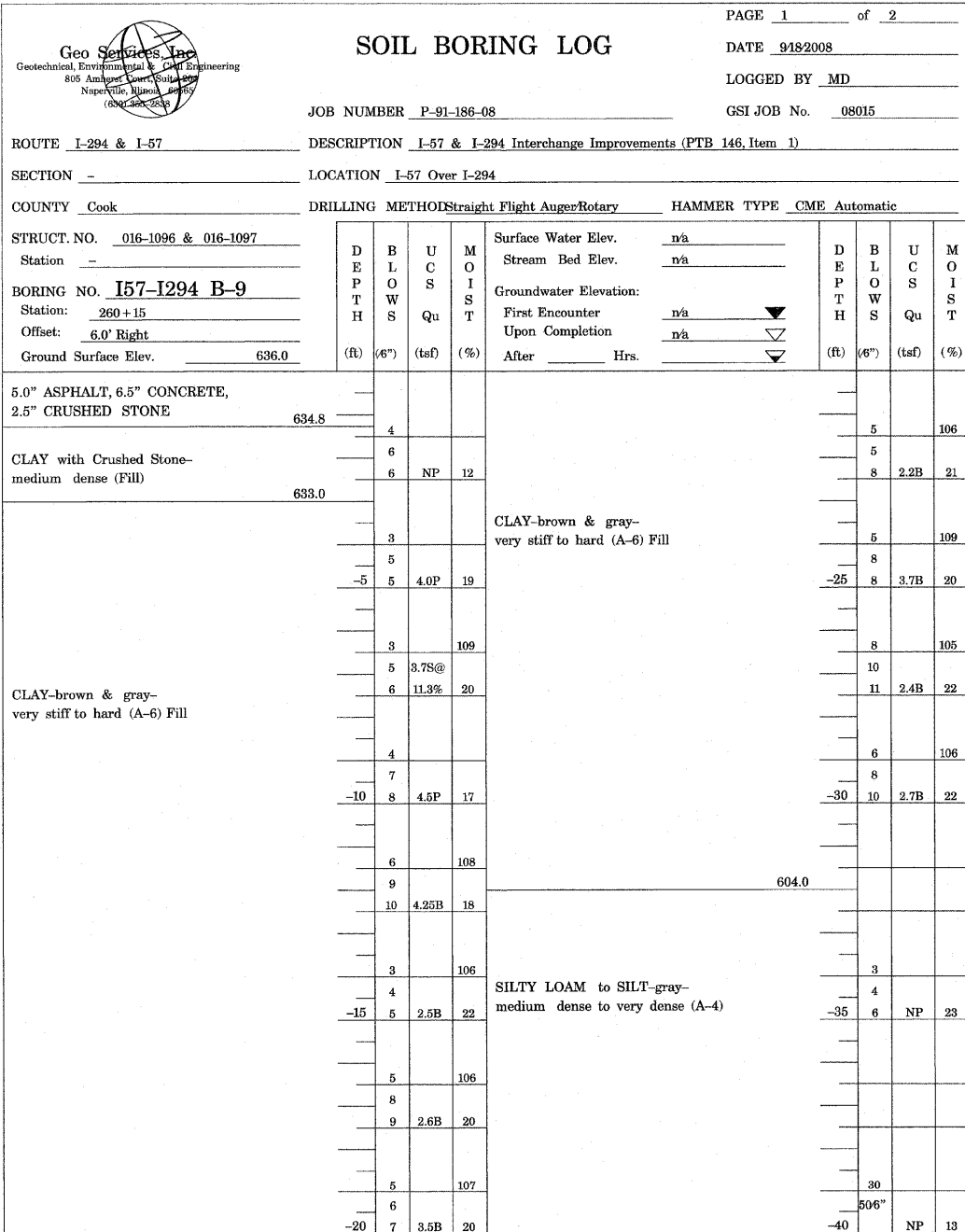
TYLIN INTERNATIONAL

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

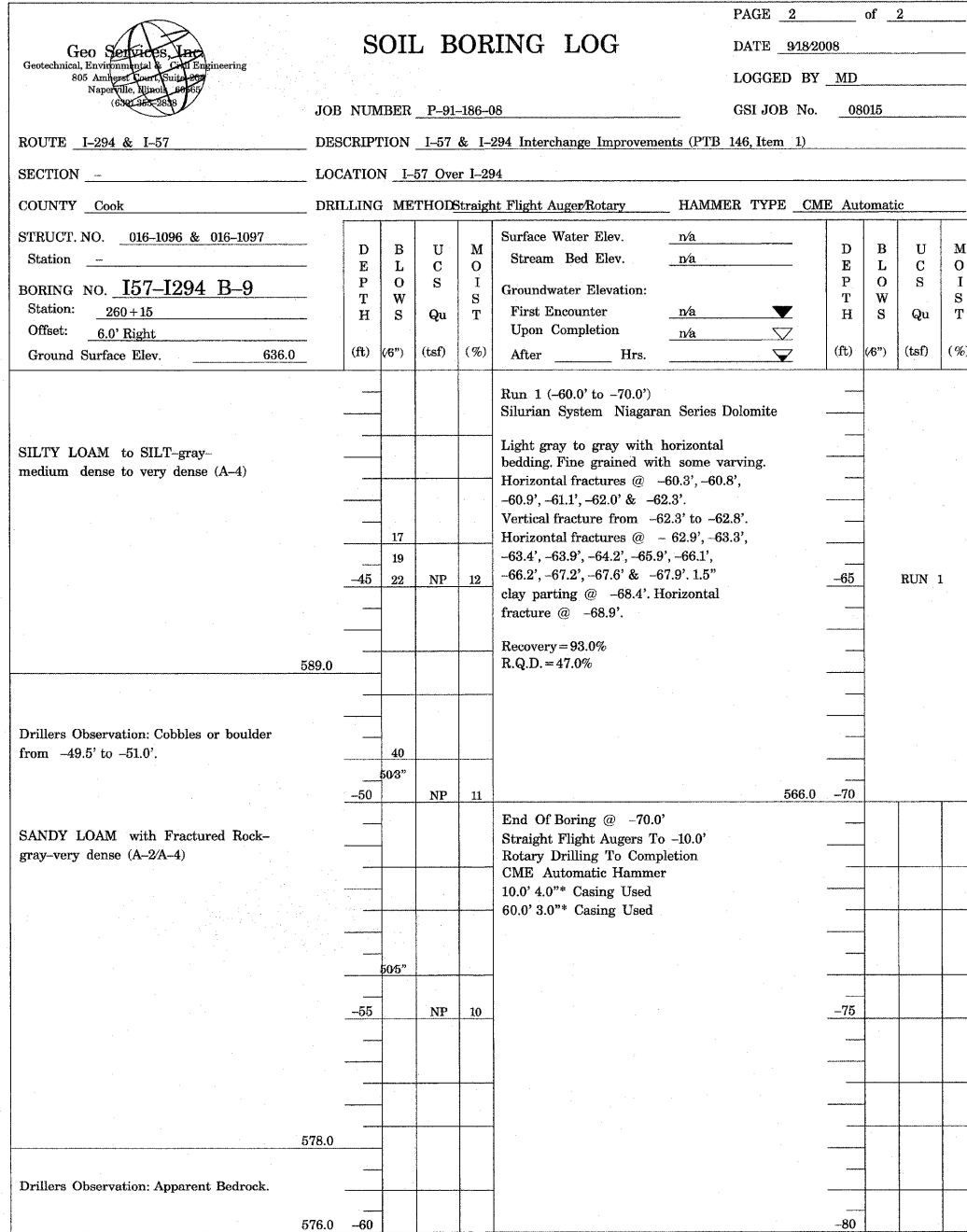
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CONTRACT NO. 60J27					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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



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 2
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. 58 62 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Ambler Court, Suite 100
Naperville, Illinois 60563
(630) 249-2838

PAGE 1 of 2
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 DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097 Station -

BORING NO. I57-I294 B-10
Station: 259+88
Offset: 71.0' Right
Ground Surface Elev. 635.4

DEPTH (ft)	B (in)	U (tsf)	M (%)	Surface Water Elev.		DEPTH (ft)	B (in)	U (tsf)	M (%)
				(ft)	(in)				
3				n/a		3			111
6	3.5P	14		n/a		7	4.6B	17	
3			113			3			
3						6			
-5	5 4.3B	16				-25	7 2.0P	17	
6						5			108
6						8			
6	4.5+P	14			607.4	11	2.1B	18	
3						7			
4						11			
-10	5 4.5+P	15				-30	13 NP	13	
4									
5									
5	2.25P	15							
45						3			
9						4			
-15	6 2.0P	21				-35	6 NP	25	
3			110						
5									
7	2.2B	18							
3			114						11
5						20			NP
-20	6 5.0B	14			595.4	-40	21 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

SOIL BORING LOG

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Ambler Court, Suite 100
Naperville, Illinois 60563
(630) 249-2838

PAGE 2 of 2
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 DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 016-1096 & 016-1097 Station -

BORING NO. I57-I294 B-10
Station: 259+88
Offset: 71.0' Right
Ground Surface Elev. 635.4

DEPTH (ft)	B (in)	U (tsf)	M (%)	Surface Water Elev.		DEPTH (ft)	B (in)	U (tsf)	M (%)
				(ft)	(in)				
...continued 574.9									
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'.									
506" RUN 1									
-45 NP 9 Recovery = 98.9% R.Q.D. = 88.4%									
100.0% Water Loss									
565.4 -70									
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									
583.4									
SANDY LOAM with Fractured Rock - gray-dense to very dense (A-2)									
24									
27									
-55 24 NP 10 -75									
42									
504" -80									
-60 NP 9									

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 3
S.N. 016-1252**

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 59	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AD,LS	NAME	DATE		57	1414.2B	COOK	516	372	
	DRAWN - DY, EI				CONTRACT NO. 60J27					
	CHECKED - LS, SP, PDF				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/18/10									
					62 SHEETS					

P:\602540(57-294)\STRUCTURAL\I-57 OVER RAMP B\Final\submit\03-17-2010\Final\submit\03-17-2010\0161252-60J27-059-BORING3.dgn 9:55:11 AM 3/18/2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 2

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Ambler Court, Suite 400
Naperville, Illinois 60563
(630) 266-8336

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-57-I-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	B	U	M	Surface Water Elev.	D	B	U	M										
	P	L	C	O		P	L	C	O										
	T	W	S	S		T	W	S	S										
	H	S	Qu	T		H	S	Qu	T										
	(ft)	(6")	(tsf)	(%)		(ft)	(6")	(tsf)	(%)										
11.0" ASPHALT, 3.0" CRUSHED STONE					n/a														
633.1							4												108
CRUSHED ASPHALT & STONE-medium dense (Fill)		8					7												
631.3		4	NP	1			10	4.7B											21
		3					5												107
CLAY-brown & gray-very stiff to hard (A-6) Fill		4					7												
631.3		-5	6	5.2B	18		-25	9	4.9B										19
		3					5												107
CLAY-brown & gray-very stiff to hard (A-6) Fill		5					7												
631.3		7	5.5B	19			9	2.8B	23										
		3					5												103
		5					7												
631.3		7	5.5B	19			9	2.8B	23										
		5					5												104
		5					5												
631.3		-10	6	3.2B	19		-30	6	3.1B	21									
		5																	108
		6																	
631.3		6	3.0B	20															
		4					5												
		6					6												
631.3		-15	7	3.5P	20		-35	18	NP	10									
		4																	111
		5																	
631.3		7	3.9B	19															
		4					37												110
		6					504"												
631.3		-20	8	5.0B	20		-40		NP	12									

PAGE 2 of 2

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Ambler Court, Suite 400
Naperville, Illinois 60563
(630) 266-8336

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-57-I-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	B	U	M	Surface Water Elev.	D	B	U	M										
	P	L	C	O		P	L	C	O										
	T	W	S	S		T	W	S	S										
	H	S	Qu	T		H	S	Qu	T										
	(ft)	(6")	(tsf)	(%)		(ft)	(6")	(tsf)	(%)										
SILTY LOAM with Fractured Rock-gray-very dense (A-4)					n/a														
573.9																			
Drillers Observation: Apparent Bedrock																			573.8
RUN 1 (-61.5' to -71.5') Silurian System Niagara Series Dolomite																			
							28												
SILTY LOAM with Fractured Rock-gray-very dense (A-4)							504"												
573.9							-45		NP	10									
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'.																			
573.9																			
Recovery = 97.0% R.Q.D. = 65.0%																			
573.9																			
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																			
573.9																			
573.9																			
573.9																			
573.9																			
573.9																			
573.9																			
573.9																			

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

SHEET NO. 60	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	57	1414.2B	COOK	516	373
62 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 10/21/2008
LOGGED BY DR
GSI JOB No. 08015

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Ashmun Street
Naperville, Illinois 60563
(630) 228-2538

JOB NUMBER P-91-186-08

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

SECTION - LOCATION I-57-I-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-21**
Station: 1260+91 (I-57)
Offset: 5.0' Right
Ground Surface Elev. 634.7

D E P T H (ft)	B L O W (6")	U S Q u (tsf)	M O S T (%)	Surface Water Elev. n/a	Stream Bed Elev. n/a	Groundwater Elevation: First Encounter n/a Upon Completion n/a After Hrs. n/a	D E P T H (ft)	B L O W (6")	U S Q u (tsf)	M O S T (%)
13.0" ASPHALT 633.6										
	3						6			107
	4						8			
	5	3.0P	15				9	3.2B		21
CLAY-brown & gray-very stiff to hard (A-6) Fill										
	2						4			104
	3						5	3.0S@		
	8	2.5P	19				-25	8	14.1%	21
CLAY-brown & gray-very stiff to hard (A-6) Fill										
	4						4			105
	4	2.6S@					5			
	8	14.1%	20				8	6.0B		19
	4						5			105
	6						6			
	-10	4.5+P	20				-30	7	3.3B	20
602.7										
	4						4			109
	7						5			
	10	1.5P	27				8			19
SILTY LOAM-gray-medium dense (A-4)										
	4						4			109
	8						5			
	-15	10	4.1B	19			-35	10	NP	25
	3						5			107
	5						7	3.4B		21
597.7										
	5						5			112
	5						5			
	-20	8	4.3B	19			-40	39	4.5+P	9

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 10/21/2008
LOGGED BY DR
GSI JOB No. 08015

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Ashmun Street
Naperville, Illinois 60563
(630) 228-2538

JOB NUMBER P-91-186-08

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

SECTION - LOCATION I-57-I-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-21**
Station: 1260+91 (I-57)
Offset: 5.0' Right
Ground Surface Elev. 634.7

D E P T H (ft)	B L O W (6")	U S Q u (tsf)	M O S T (%)	Surface Water Elev. n/a	Stream Bed Elev. n/a	Groundwater Elevation: First Encounter n/a Upon Completion n/a After Hrs. n/a	D E P T H (ft)	B L O W (6")	U S Q u (tsf)	M O S T (%)
CLAY LOAM-gray-hard (A-6)										
	6						6			107
	8						8			
	9	3.2B	21				9	3.2B		21
CLAY-brown & gray-very stiff to hard (A-6) Fill										
	4						4			104
	5	3.0S@					5			
	8	14.1%	21				-25	8	14.1%	21
CLAY-brown & gray-very stiff to hard (A-6) Fill										
	4						4			105
	4	2.6S@					5			
	8	14.1%	20				8	6.0B		19
	4						5			105
	6						6			
	-10	4.5+P	20				-30	7	3.3B	20
602.7										
	4						4			109
	7						5			
	10	1.5P	27				8			19
SILTY LOAM with Fractured Rock-gray-very dense (A-4)										
	4						4			109
	8						5			
	-15	10	4.1B	19			-35	10	NP	25
	3						5			107
	5						7	3.4B		21
597.7										
	5						5			112
	5						5			
	-20	8	4.3B	19			-40	39	4.5+P	9

CLAY LOAM-gray-hard (A-6) 592.7

SILTY LOAM with Fractured Rock-gray-very dense (A-4) 566.2

Drillers Observation: Apparent Bedrock 576.2

RUN 1 (-58.5' to -68.5')
Silurian System Niagaran Series Dolomite

Light gray mottled gray with horizontal bedding. Fine grained with some varving. Horizontal fractures @ -60.0, -60.3, -62.25, -62.6', -62.7, -63.4', -63.6 & -64.0'. Vertical with intersecting horizontal fractures from -64.0' to -64.7'. Horizontal fractures @ -65.0', -65.7' & -66.2'. Vertical fracture with intersecting horizontal fractures from -66.6' to -67.4'. Horizontal fracture @ -67.8'.

Recovery = 96.0%
R.Q.D. = 68.75%

End Of Boring @ -68.5'
Straight Flight Augers To -10.0'
Rotary Drilling To Completion
CME Automatic Hammer
10.0' of 4.0" Casing Used
58.5' of 3.0" Casing Used

576.7

576.2

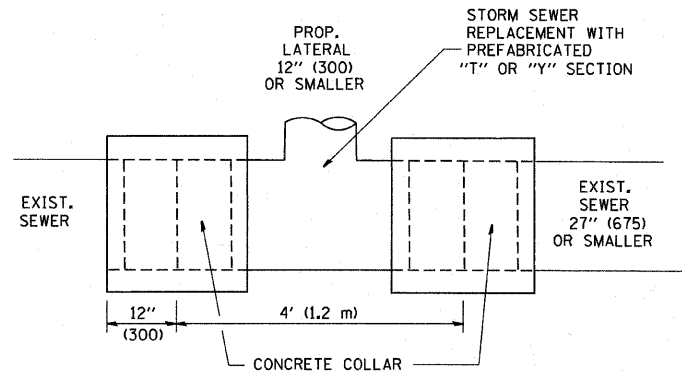
RUN 1

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

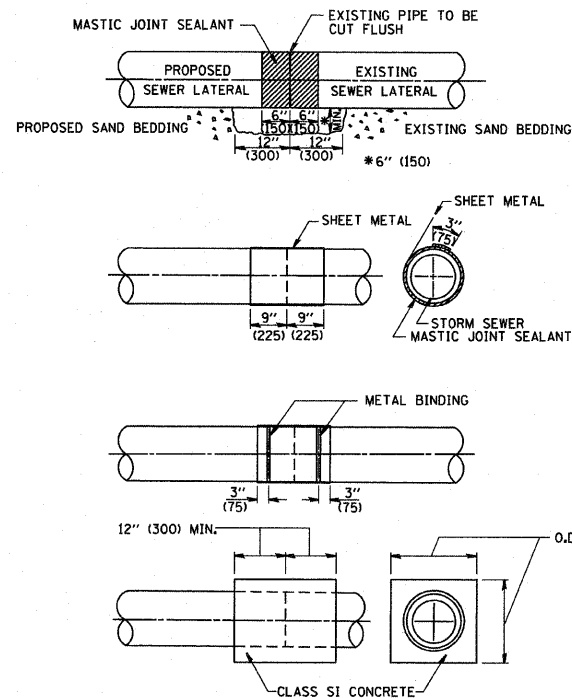
BORING LOGS 5
S.N. 016-1252

TYLIN INTERNATIONAL	DESIGNED - DY	REVISIONS		SHEET NO. 61	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AD,LS	NAME	DATE		57	1414.2B	COOK	516	374	
	DRAWN - DY,EI				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 B\Final submittal_03-17-2010\Final submittal_03172010\0161252-60J27-061-BORING 5.dgn 9:55:15 AM



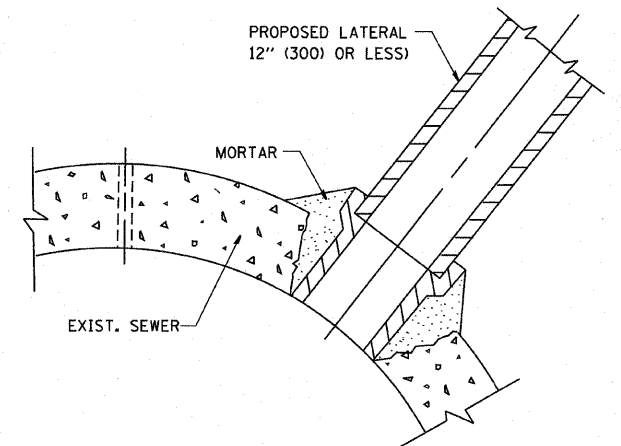
DETAIL "A"
LATERAL CONNECTION TO EXISTING SEWER
OF 27" (675) OR SMALLER



DETAIL "B"
CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

- CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
- APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
- BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12' x 6' (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
- 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.
- WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
- LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
- PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
- WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OZZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
- 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.

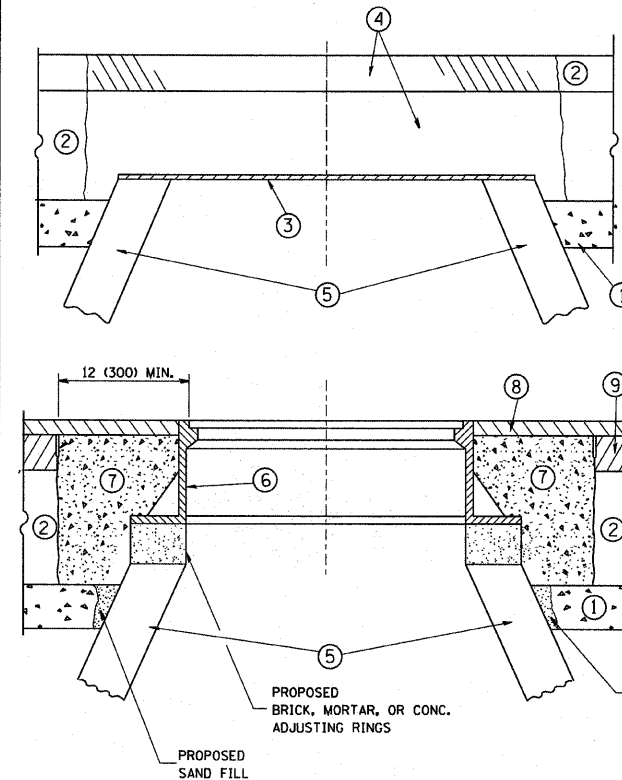
REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

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:\diststd\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. & R.T.E. 57	SECTION 1414.2B	COUNTY Cook	TOTAL SHEETS 516	SHEET NO. 376	
PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - R. SHAH 09-09-94	REVISED - R. SHAH 10-25-94		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	BD500-01 (BD-7) CONTRACT NO. 60127				
PLOT DATE = 1/4/2008	DATE - 07-25-90	REVISED - R. SHAH 06-12-96			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:

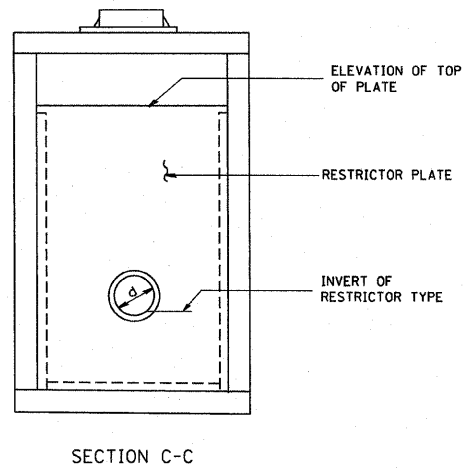
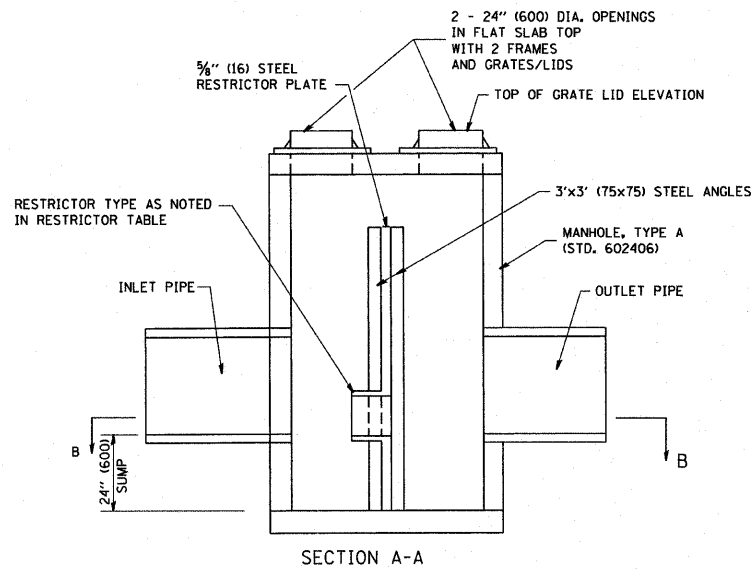
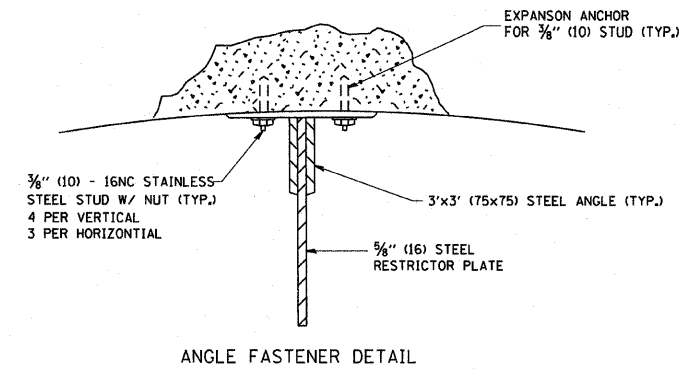
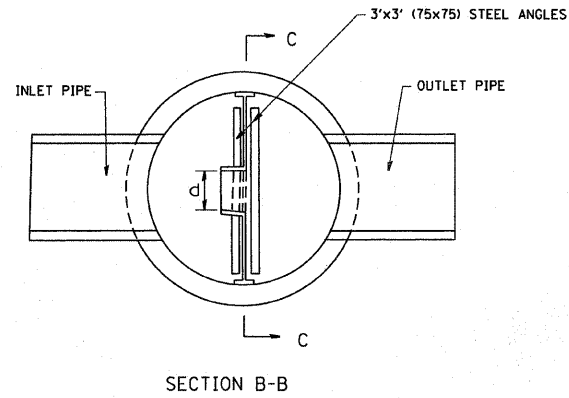
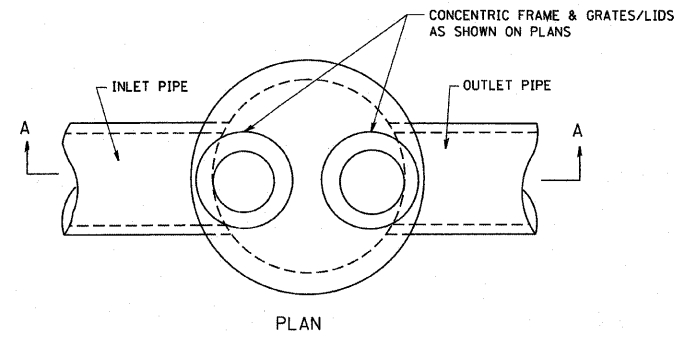
THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

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

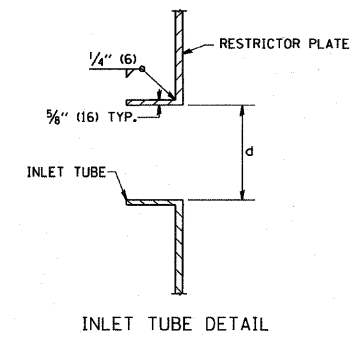
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME = W:\diststd\22x34\bd88.dgn	USER NAME = geglrenobt	DESIGNED - R. SHAH	REVISED - R. SHAH 03-10-95	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING				F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - A. ABBAS 03-21-97		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	67	1414.2B	COCK	516	377
		PLOT SCALE = 50.0000' / IN.	CHECKED -		REVISED - R. WIEDEMAN 05-14-04					BD600-03 (BD-8)			
		PLOT DATE = 1/4/2008	DATE - 10-25-94		REVISED - R. BORO 01-01-07					CONTRACT NO. 60527			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT													

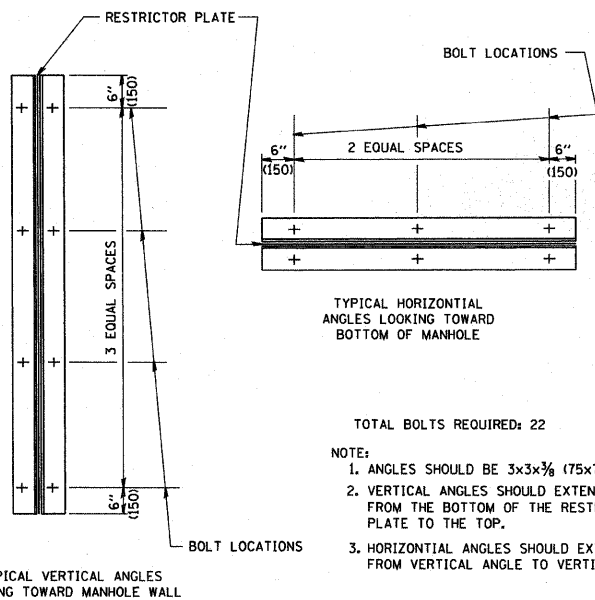


NOTES:

1. ALL STEEL ANGLES AND PLATES TO BE GALVANIZED AFTER FABRICATION.
2. ALL RESTRICTOR PLATES, ANGLES AND HARDWARE TO BE INCLUDED IN THE COST OF THE MANHOLE.
3. 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



- TOTAL BOLTS REQUIRED: 22
- NOTE:
1. ANGLES SHOULD BE 3x3x $\frac{3}{8}$ (75x75x75)
 2. VERTICAL ANGLES SHOULD EXTEND FROM THE BOTTOM OF THE RESTRICTOR PLATE TO THE TOP.
 3. HORIZONTAL ANGLES SHOULD EXTEND FROM VERTICAL ANGLE TO VERTICAL ANGLE.

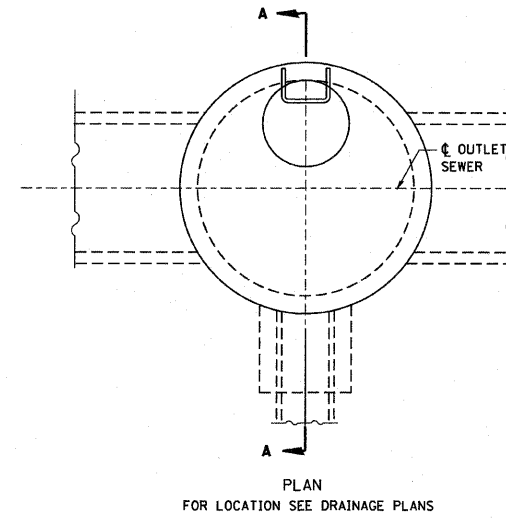
STEEL ANGLE BOLTING DETAILS

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

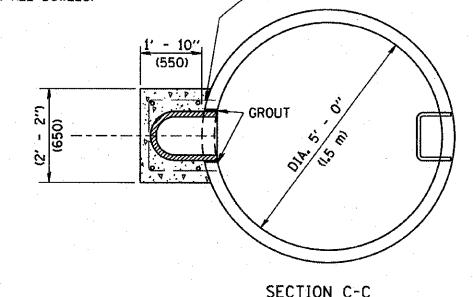
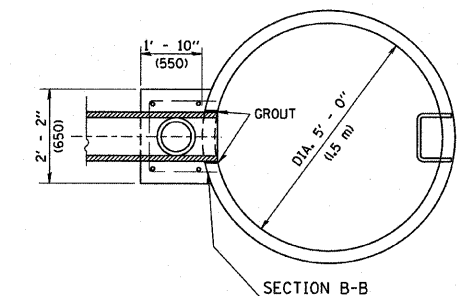
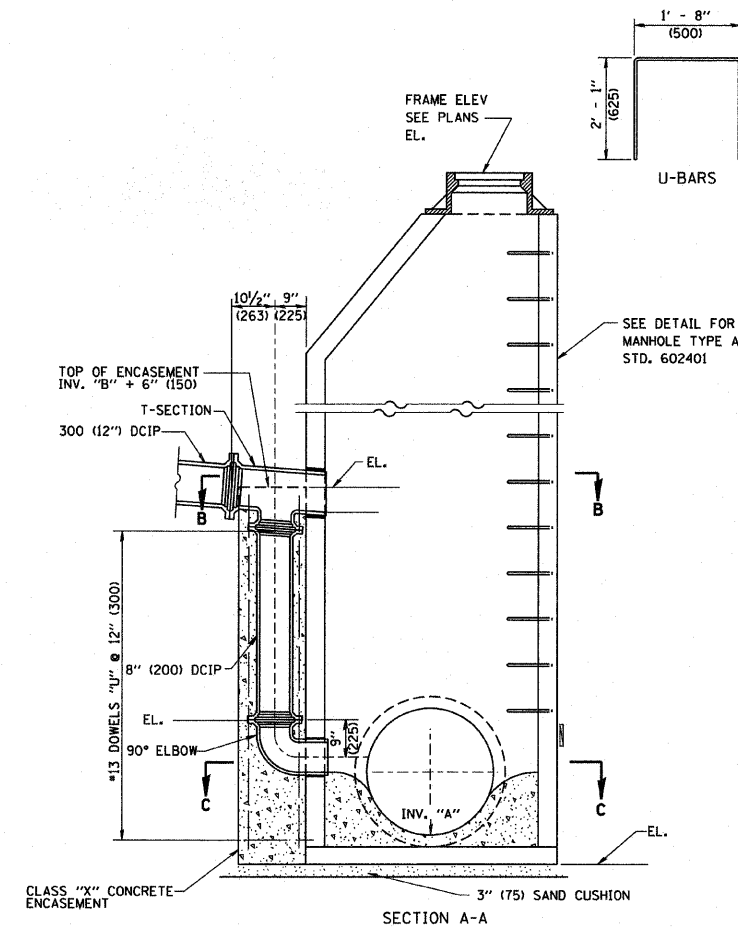
VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES

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

FILE NAME = W:\diststd\22x34\bd12.dgn	USER NAME = geglianob	DESIGNED - R. SHAH	REVISED - R. SHAH 10-25-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MANHOLE WITH RESTRICTOR PLATE	F.A.S. RTE. 51	SECTION 1414.2B	COUNTY Cook	TOTAL SHEETS 516	SHEET NO. 378
	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED - E. GOMEZ 08-28-00			BD600-04	(BD-12)	CONTRACT NO. 60527		
	PLOT DATE = 1/4/2008	DATE - 09-09-94	REVISED - M. GOMEZ 01-08-01			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
			REVISED -							



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

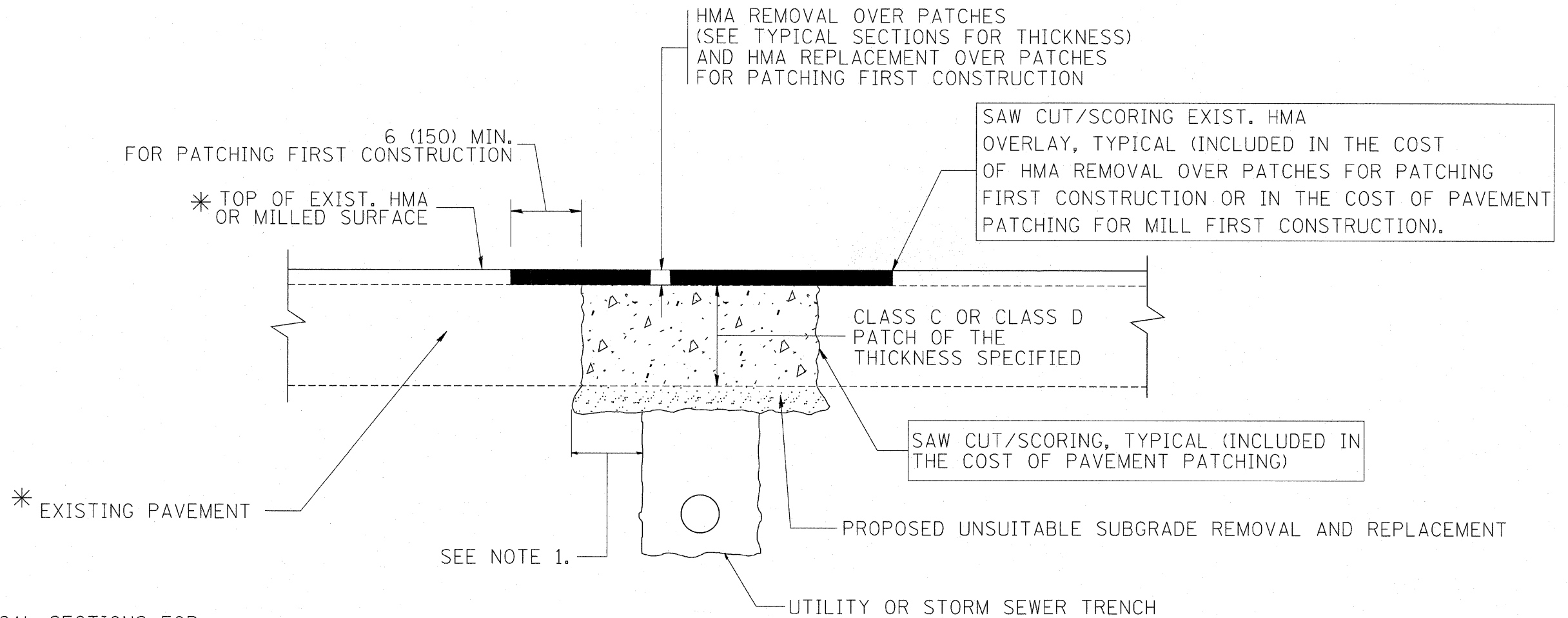
FILE NAME = W:\distatd\22x34\bd16.dgn	USER NAME = geglanoht	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE - 10-18-02	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DROP MANHOLE DETAILS

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

F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	379
BD600-05 (BD-16)		CONTRACT NO. 60327		
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)

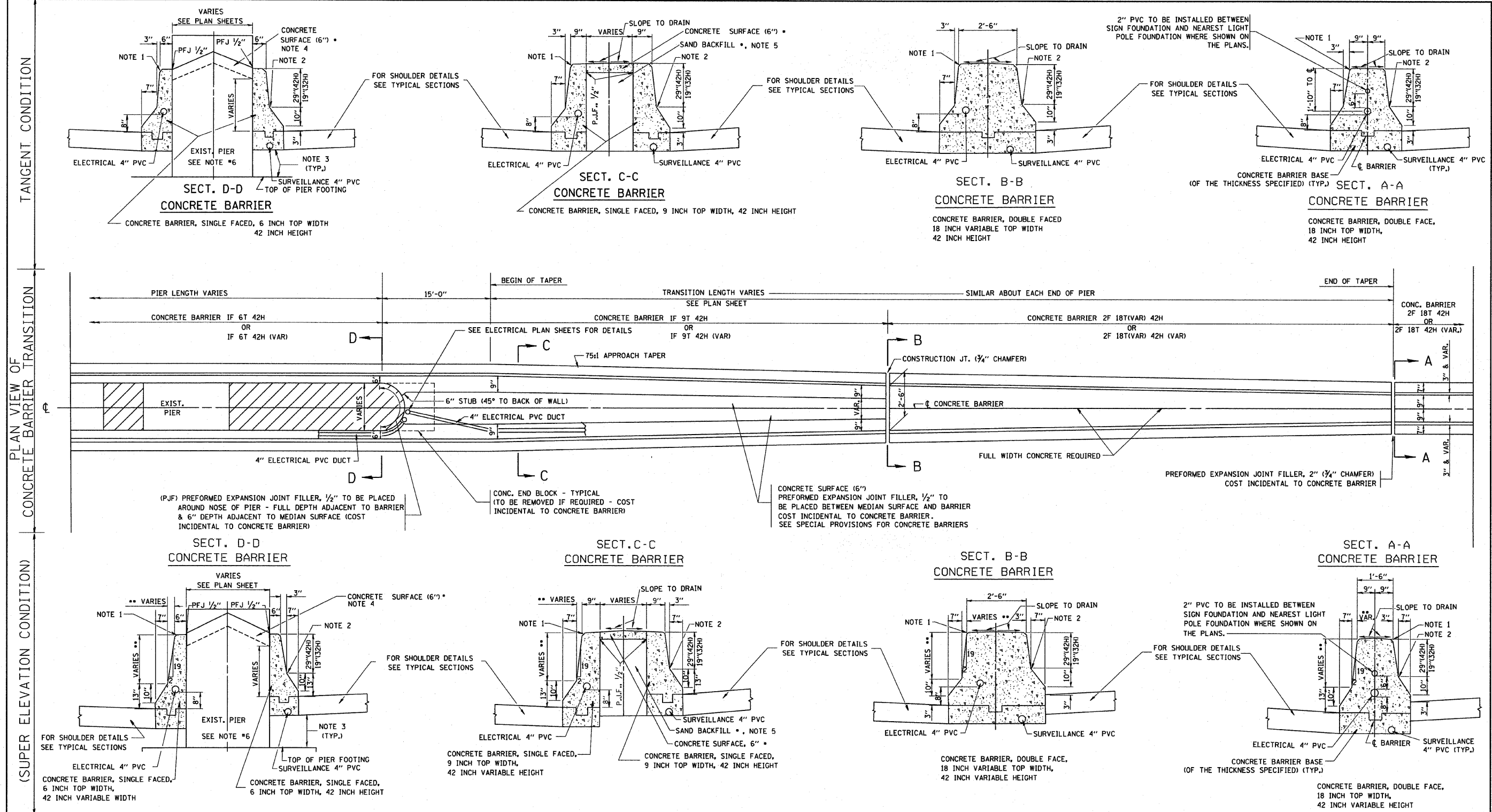
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

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\distd22x34\bd22.dgn	USER NAME = bauerdl	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			67	1414.2B	COOK	516	380
		CHECKED -	REVISED - R. BORO 09-04-07			BD400-04 (BD-22)		CONTRACT NO. 60127		
		DATE - 10-25-94	REVISED - K. ENG 10-27-08			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	



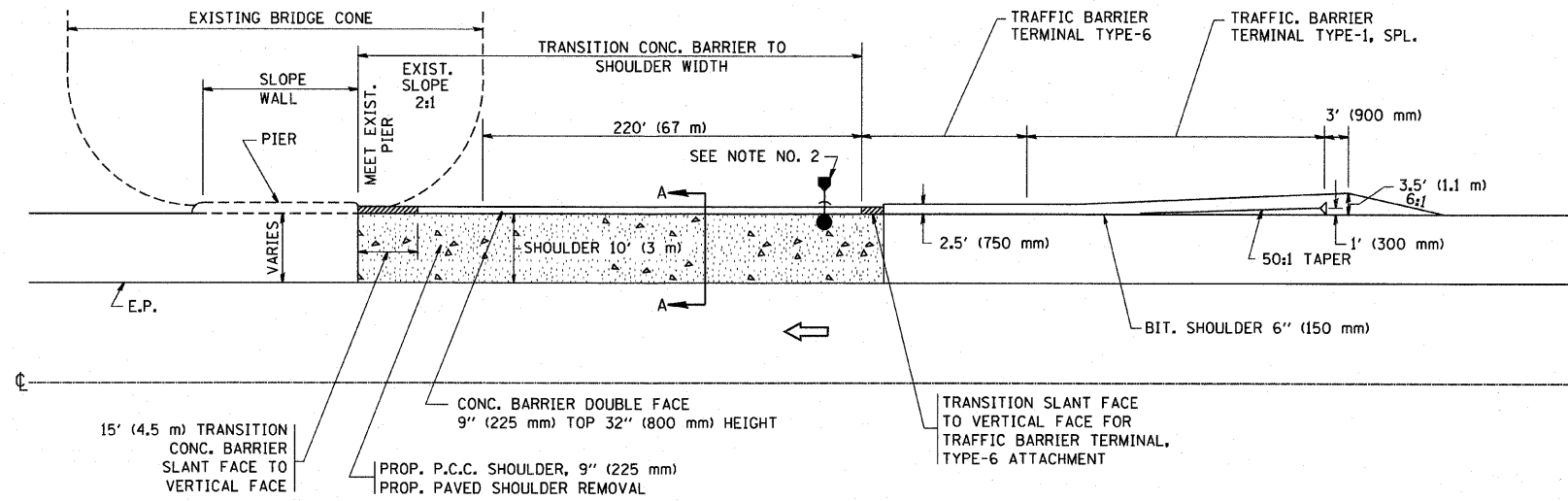
GENERAL NOTES - FOR UNDERDRAIN DETAILS SEE TYPICAL SECTIONS
 - PREFORMED JOINT FILLER SHALL BE INCIDENTAL TO THE CONCRETE BARRIER OF THE TYPE INVOLVED.
 - FOR KEYWAY (F) DIMENSIONS, SEE TYPICAL SECTIONS
 - CONCRETE BARRIER BASE PAY ITEM IS TO BE INCLUDED IF THE BARRIER IS CONSTRUCTED MONOLITHIC OR JOINTED 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

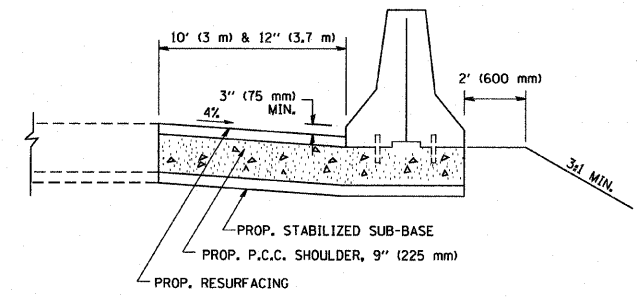
NOTE 4 - PIER FILLER MATERIAL TO BE CONCRETE IF MINIMUM 6" THICKNESS WILL BE MAINTAINED. IF 6" THICKNESS CANNOT BE MAINTAINED USE ASPHALT FILLER MATERIAL AS DIRECTED BY THE ENGINEER.
NOTE 5 - SAND BACKFILL AND CONCRETE SURFACE WILL BE REQUIRED. FILLING WITH CONCRETE WILL NOT BE ALLOWED.
NOTE 6 - IF PIER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

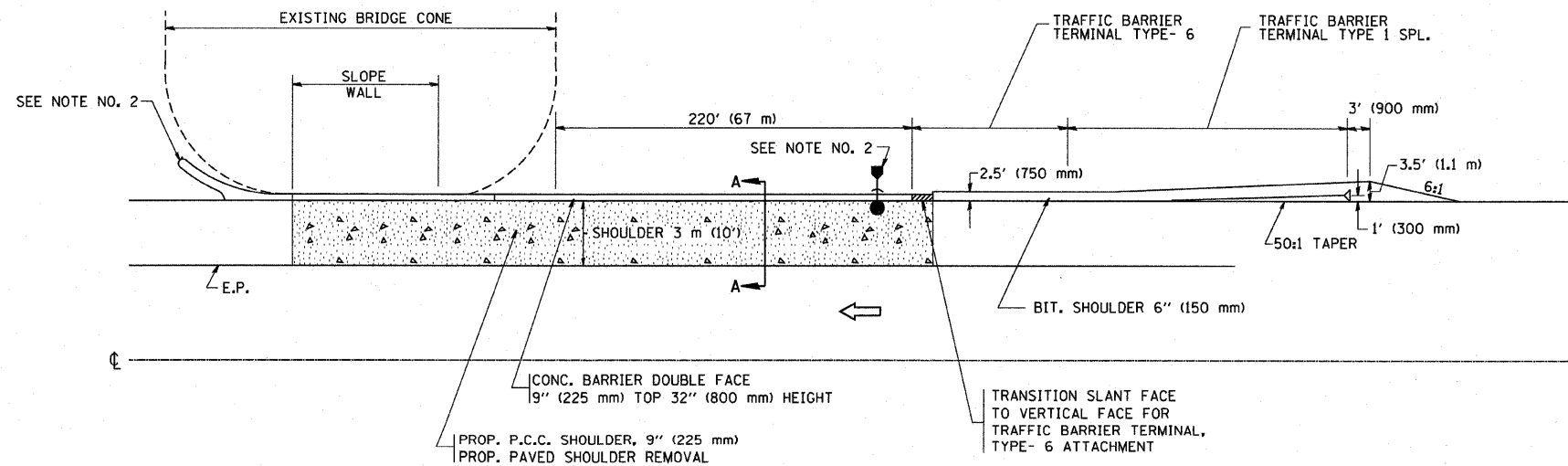
FILE NAME = M:\dststd\22x34\bd27.dgn	USER NAME = geglianobt	DESIGNED - FORD	REVISED - FORD 12-06-88	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE BARRIER TRANSITION & GENERAL DETAILS, CONCRETE BARRIER BASE		F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 50,0000 ' / IN.	CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	57	1414.2B	COOK	516	381
	PLOT DATE = 1/4/2008	DATE - 09-09-88	REVISED -		TO STA.			BD-27		CONTRACT NO. 60327		
							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



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



SECTION A-A



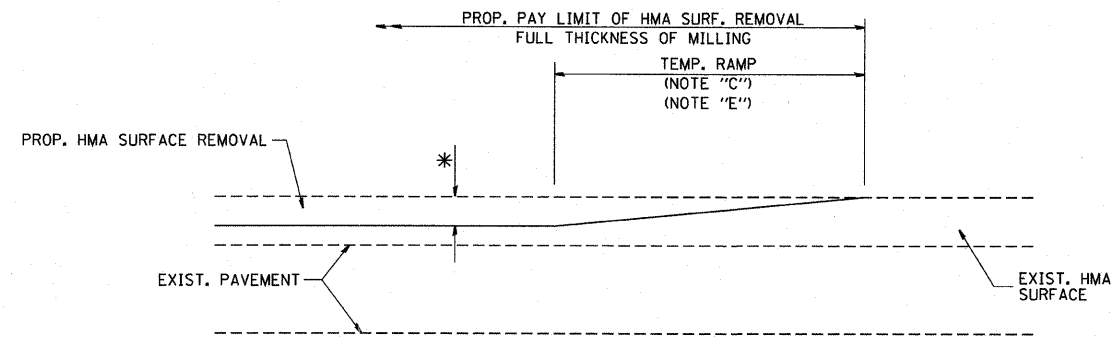
CONC. BARRIER ADJACENT TO SLOPE WALL WITHOUT PIER (DITCH SECTION)

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.

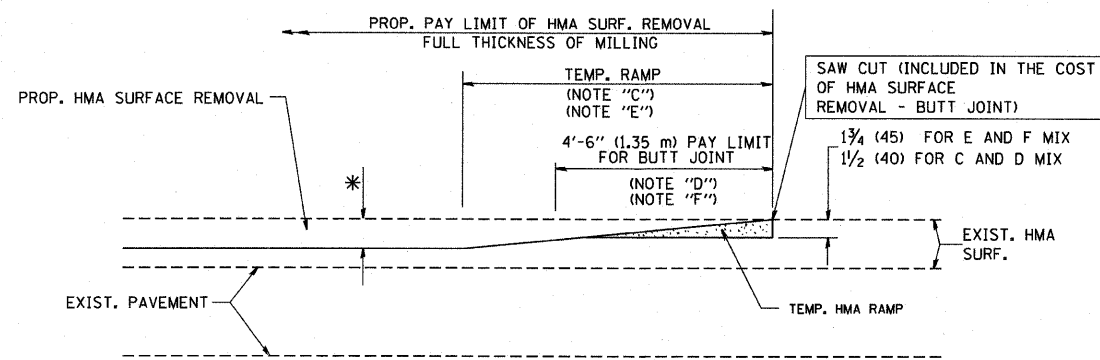
- * CATCH BASIN TYPE C, TYPE 24 FRAME AND GRATE
- * STORM SEWERS, 12" (300 mm)
- * END SECTIONS, 12" (300 mm)

FILE NAME = W:\distatd\22x34\bd29.dgn	USER NAME = geglianobt	DESIGNED - DRAWN -	REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE BARRIER PIER AND SLOPE WALL PROTECTION DETAIL		F.A. # RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT SCALE = 50.0000' / IN.	CHECKED -	DATE - 10-18-02	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	BD600-08 (BD29)	COOK	516	382
PLOT DATE = 1/4/2008												
							CONTRACT NO. 60327					
							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



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

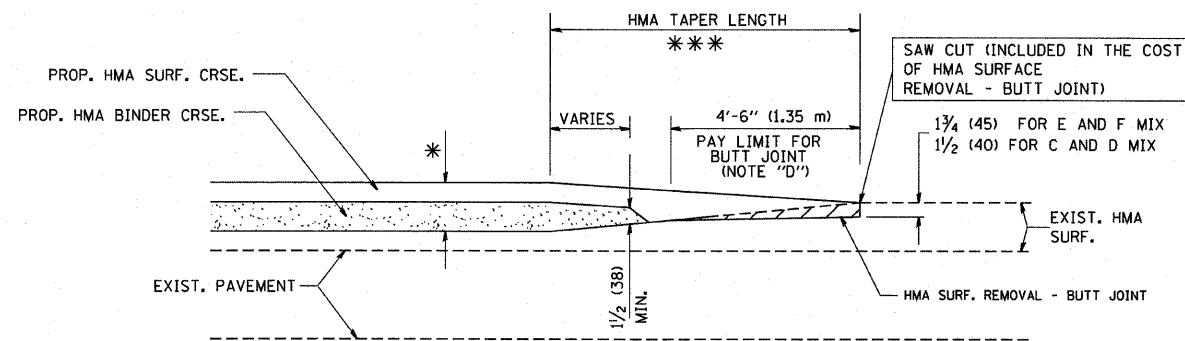
OPTION 1



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

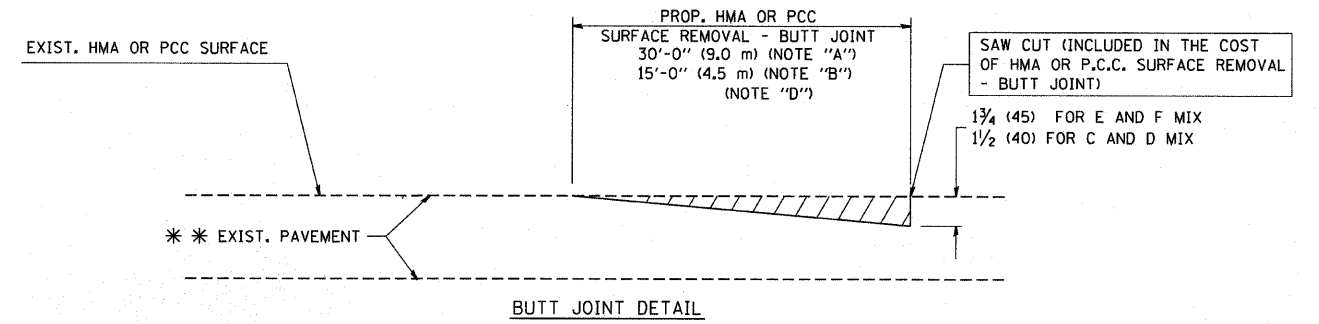
OPTION 2

TYPICAL TEMPORARY RAMP

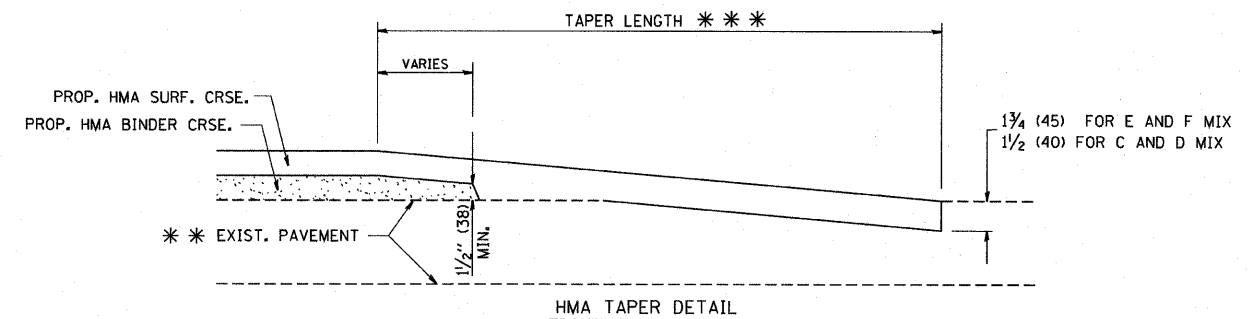


BUTT JOINT AND
HMA TAPER

**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".

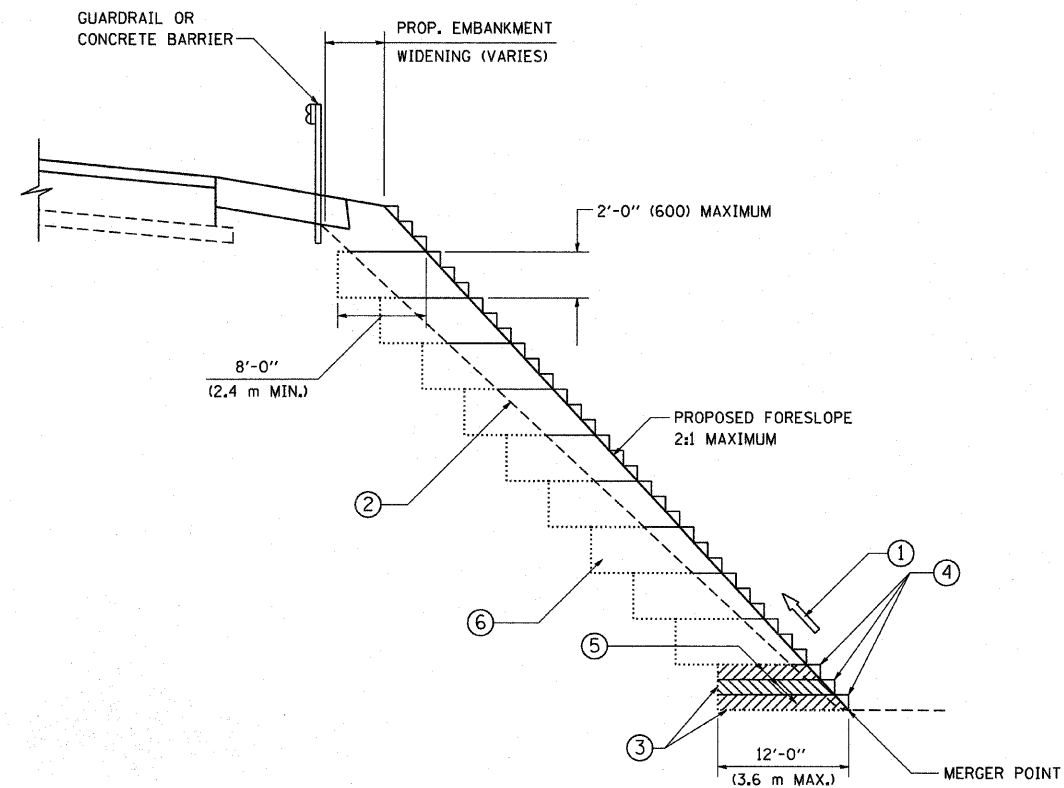
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME - W:\distatd\22x34\bd32.dgn	USER NAME - gegjanobt	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
		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**

BUTT JOINT AND HMA TAPER DETAILS		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	57	1414.2B	COOK	516	383
STA.	TO STA.	BD400-05 BD32		CONTRACT NO. 60387		

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT



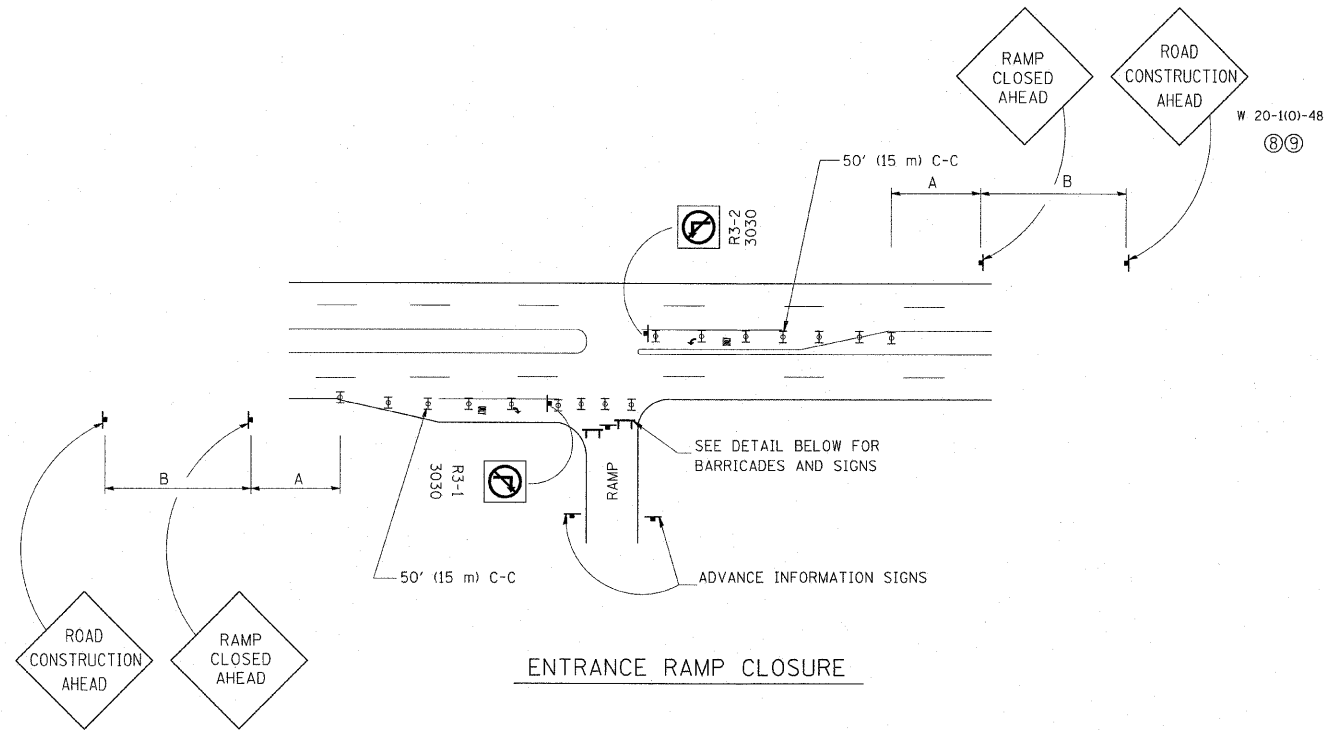
**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

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 - W:\diststd\22x34\bd51.dgn	USER NAME = gegljanobt	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.	DRAWN - CADD	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	57	1414.25	COOK	516 384
	PLOT DATE = 1/4/2008	CHECKED - S.E.B.	REVISED -									
		DATE - 06-16-04	REVISED -									
							BD-51		CONTRACT NO. 60127			
							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



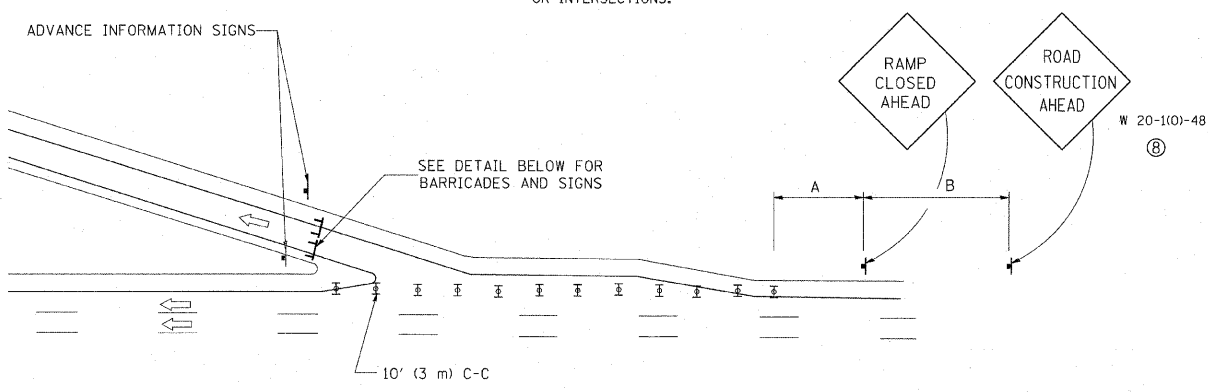
ENTRANCE RAMP CLOSURE

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)

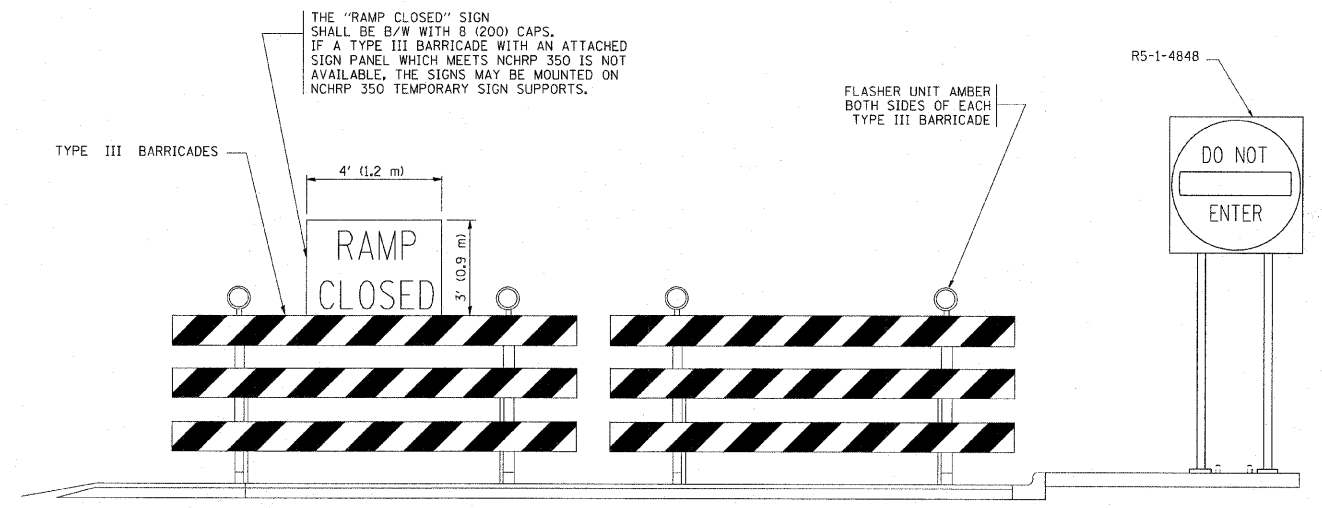
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.

W 20-110-48 (8)9

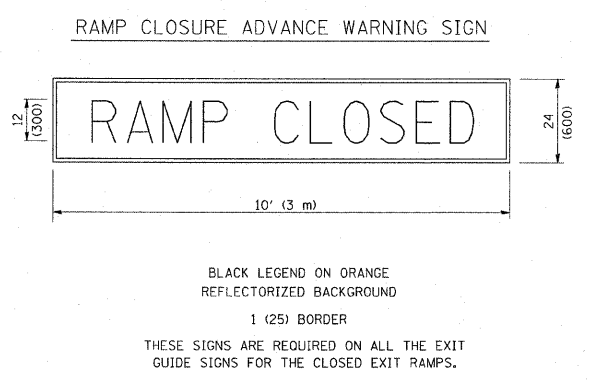


EXIT RAMP CLOSURE

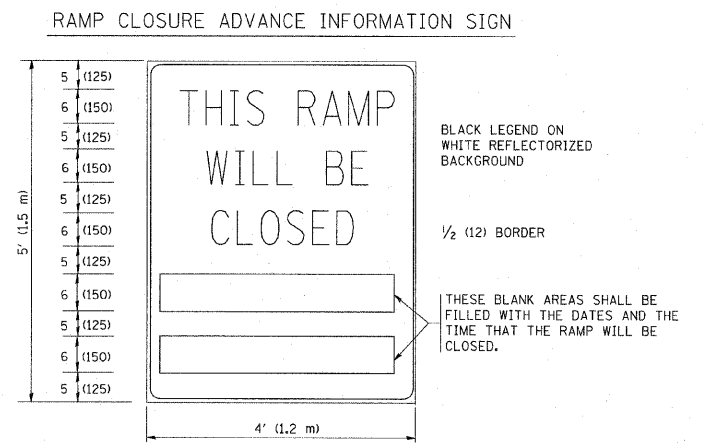
- SYMBOLS**
- ⊥ TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
 - ⊥ TYPE III BARRICADE WITH FLASHING LIGHT



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.



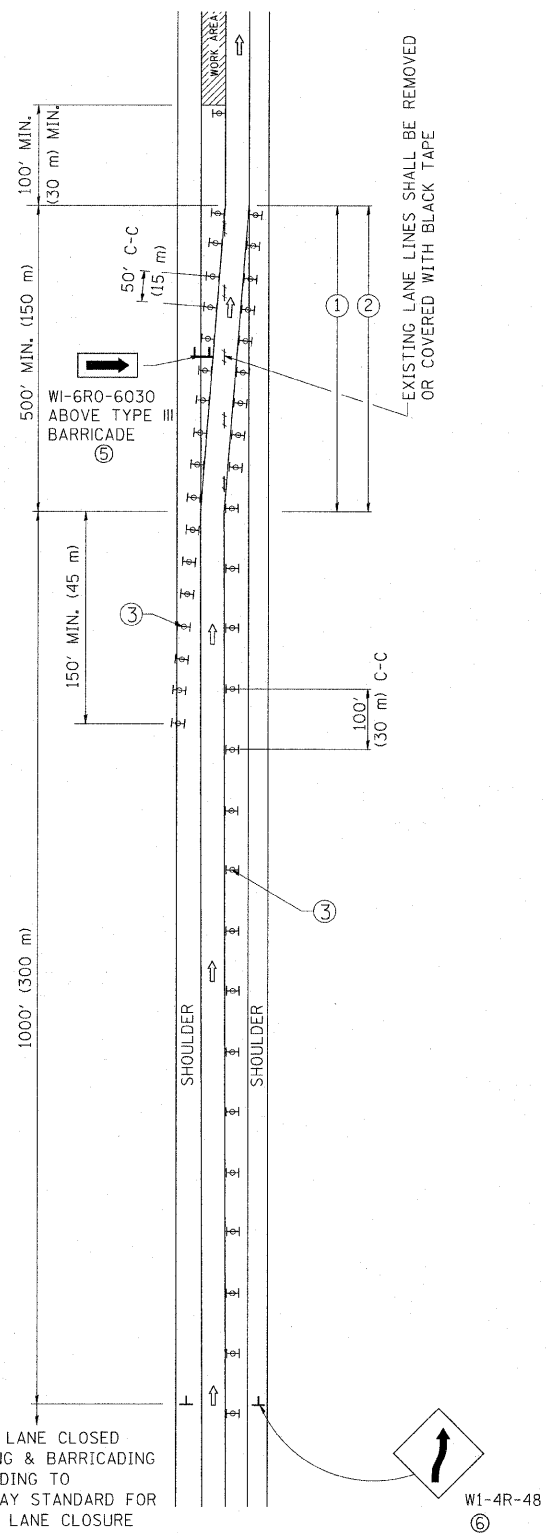
THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

GENERAL NOTES:

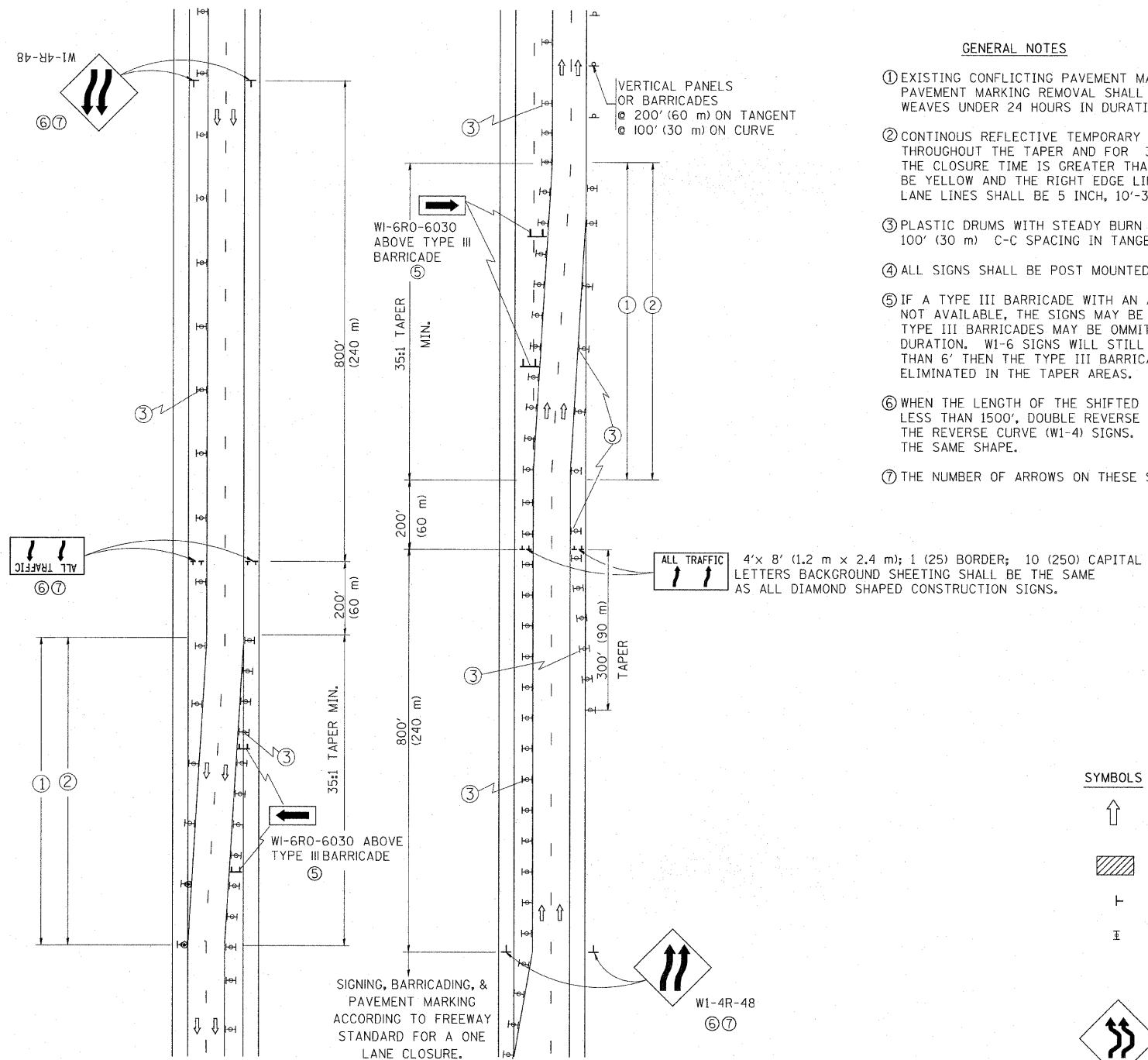
- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES.
- ④ ALL ROUTE MARKERS 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 ALREADY 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.

SINGLE LANE WEAVE



MULTI-LANE WEAVE

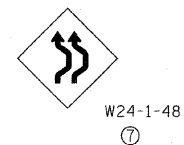


GENERAL NOTES

- EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 24 HOURS IN DURATION.
- 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.
- PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- 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.
- 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.
- THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

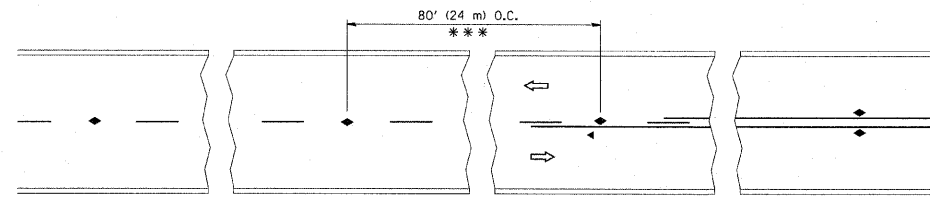
SYMBOLS

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



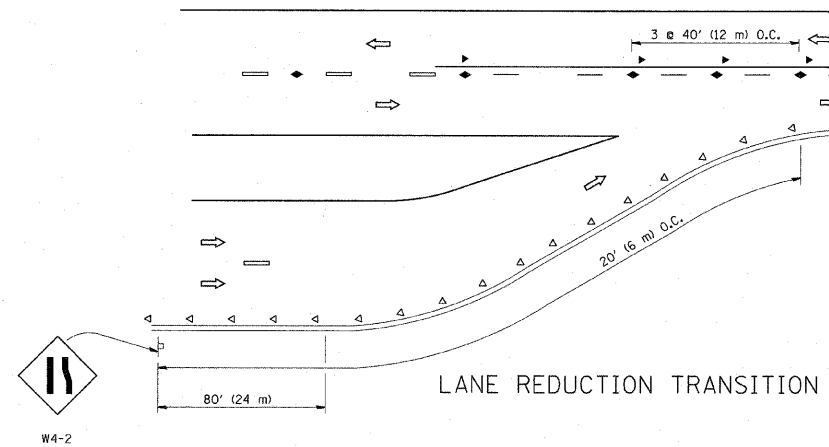
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME = W:\data\td\22x34\td09.dgn	USER NAME = leyso	DESIGNED - DWS	REVISED - JAF 01-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE			F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED - JAF 02-06		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	57	1414.2B	COOK	516	386
		CHECKED -	REVISED - SPB 01-07					TC-09		CONTRACT NO. 60521			
		DATE - 02-87	REVISED - SPB 12-09					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

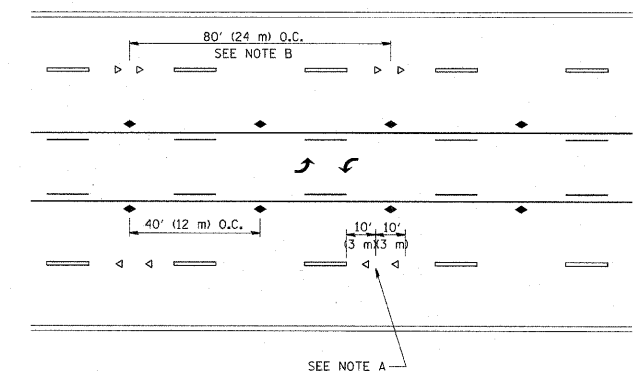


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

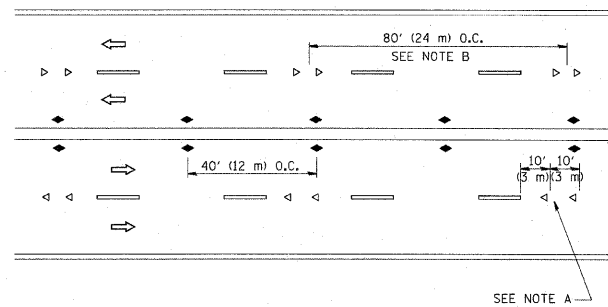
TWO-LANE/TWO-WAY



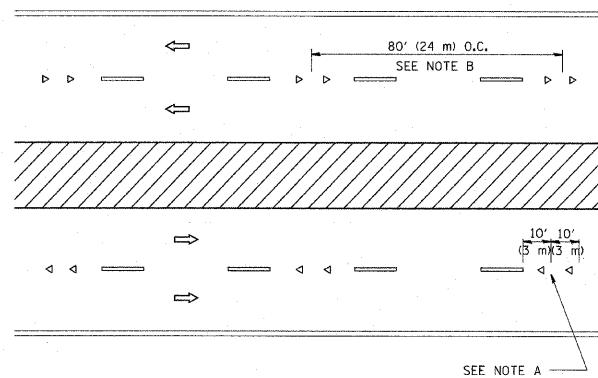
LANE REDUCTION TRANSITION



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.

LANE MARKER NOTES

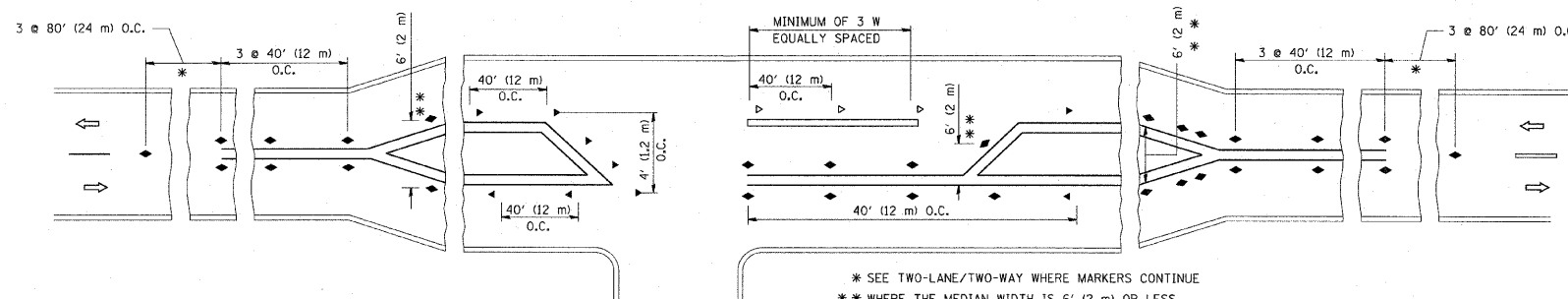
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

SYMBOLS

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

DESIGN NOTES

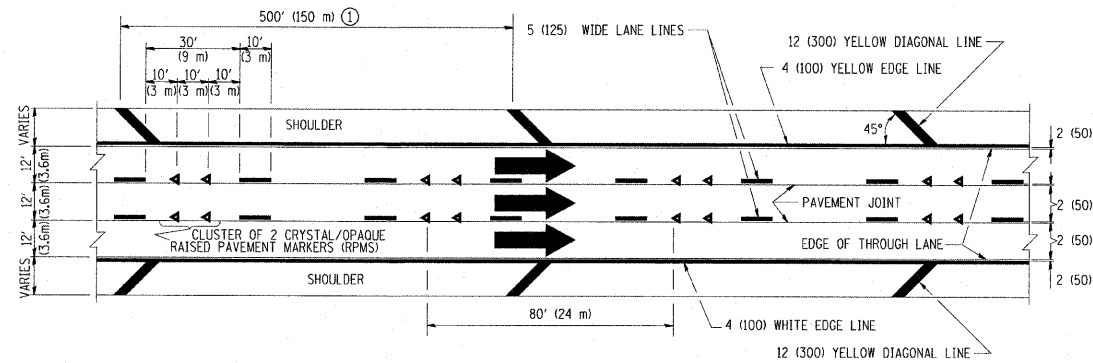
1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD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



LEFT TURN

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

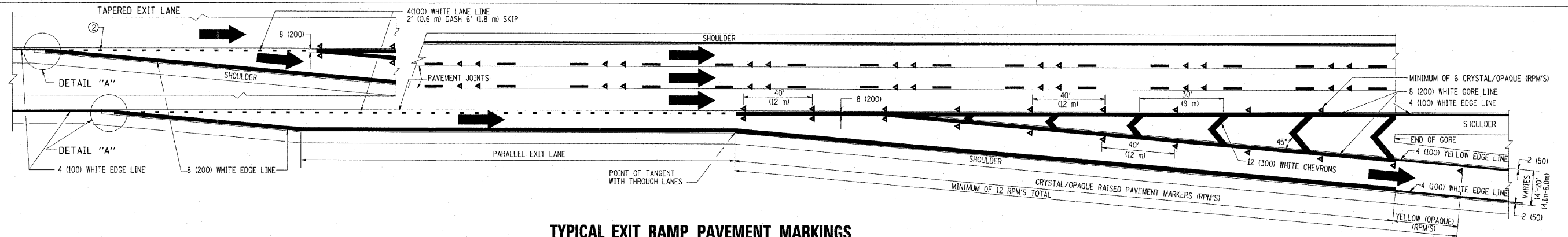
FILE NAME =	USER NAME = drivakosgn	DESIGNED -	REVISED - T. RAMMACHER 09-19-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)	F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwwork\pwwork\drivakosgn\d0108315\td01.dgn	DRAWN -	REVISED - T. RAMMACHER 03-12-99	57			1414.2B	COOK	5/6	387	
PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00	TC-11			CONTRACT NO. 6027				
PLOT DATE = 9/9/2009	DATE -	REVISED - C. JUCIUS 09-09-09	SCALE: NONE			SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	



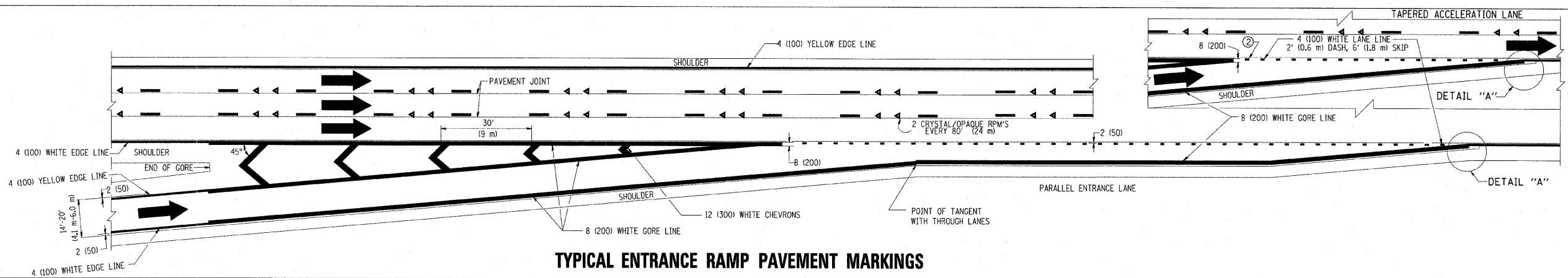
TYPICAL EDGE LINES & LANE LINES

PAVEMENT MARKING MATERIALS

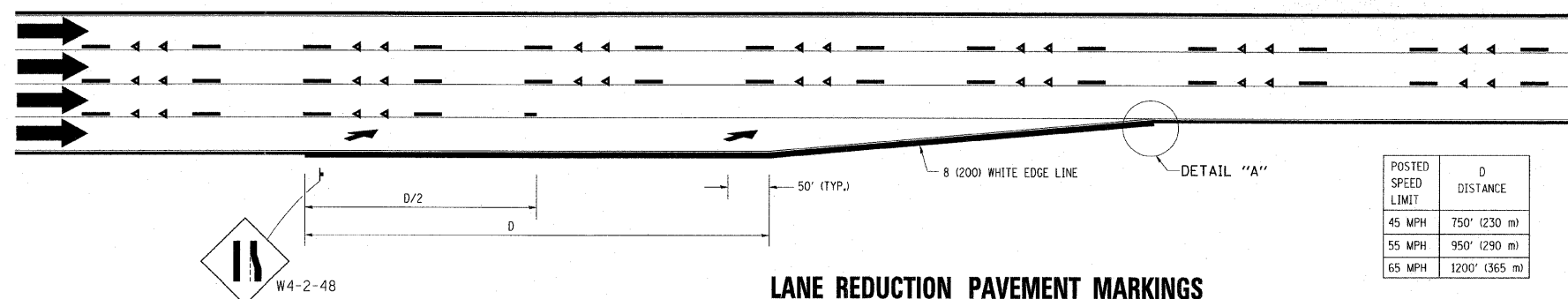
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES ON BITUMINOUS PAVEMENT.
3. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS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



TYPICAL EXIT RAMP PAVEMENT MARKINGS

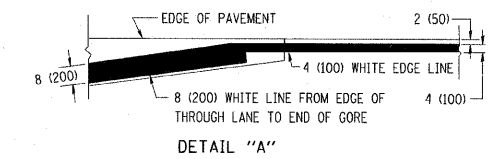


TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS

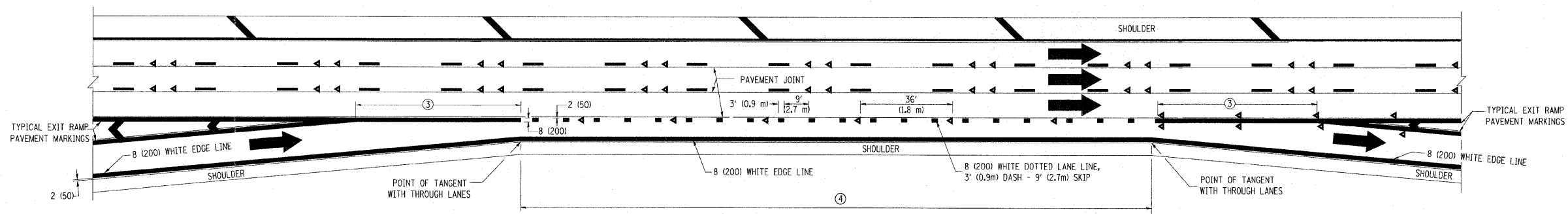


LANE REDUCTION PAVEMENT MARKINGS

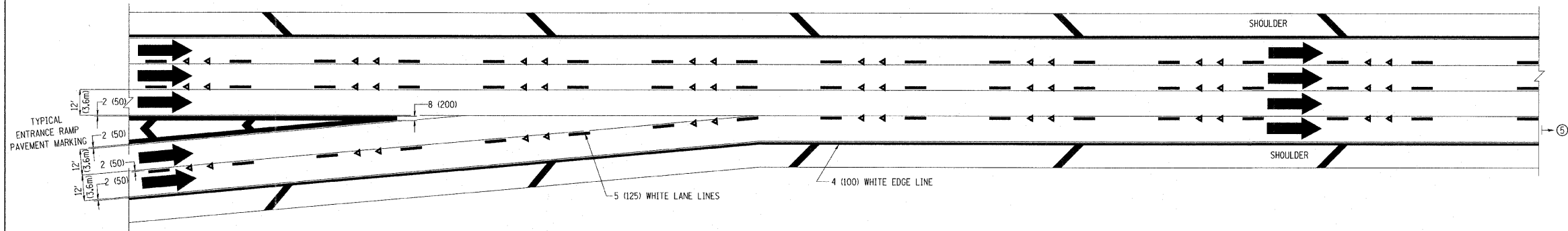
POSTED SPEED LIMIT	D DISTANCE
45 MPH	750' (230 m)
55 MPH	950' (290 m)
65 MPH	1200' (365 m)



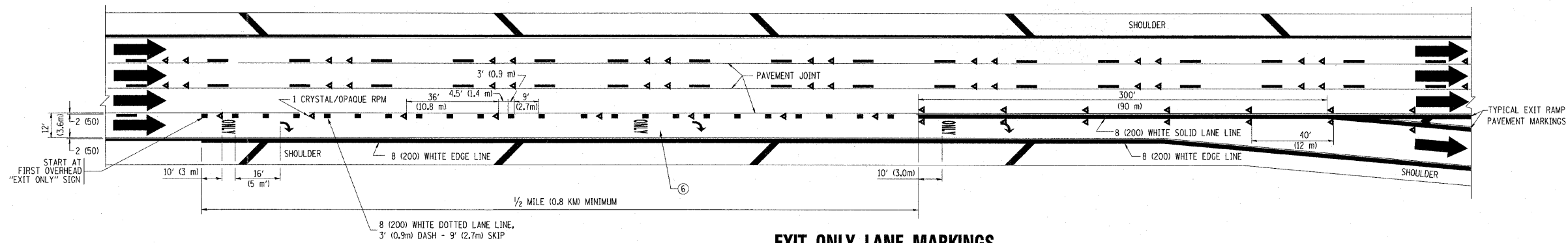
- NOTES:**
- ① THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH. THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH.
 - ② 4" (2' DASH, 6' SKIP) MARKING ON TAPERED ENTRANCE AND EXIT RAMP SHALL BE OMITTED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



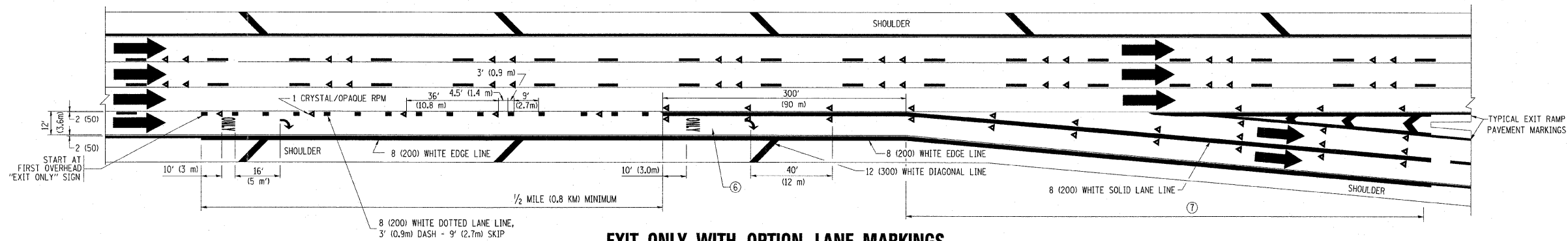
AUXILIARY LANE MARKINGS



TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS



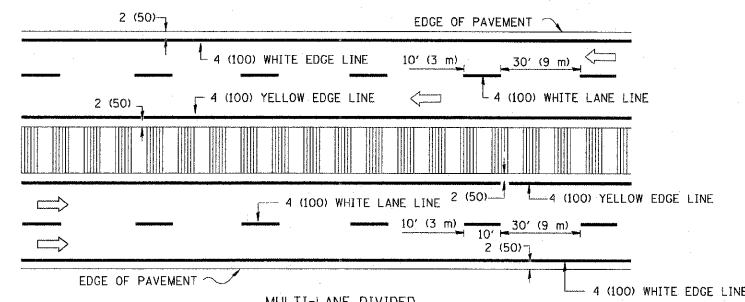
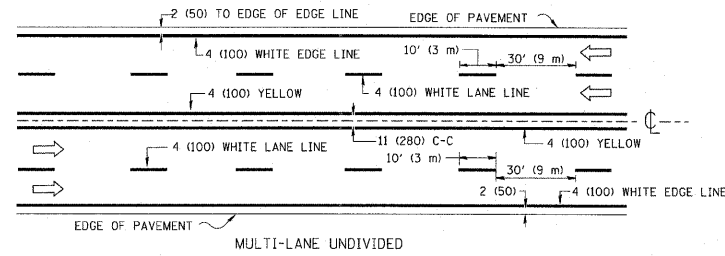
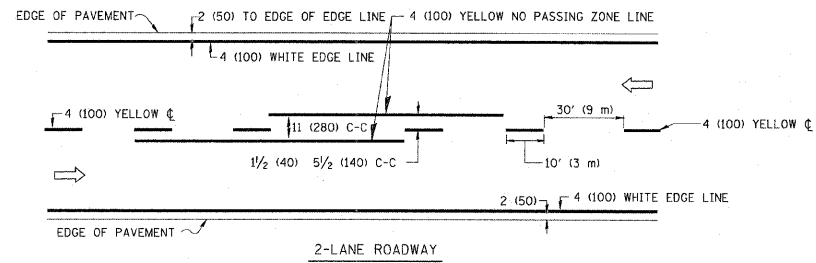
EXIT ONLY LANE MARKINGS



EXIT ONLY WITH OPTION LANE MARKINGS

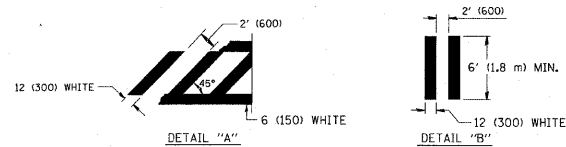
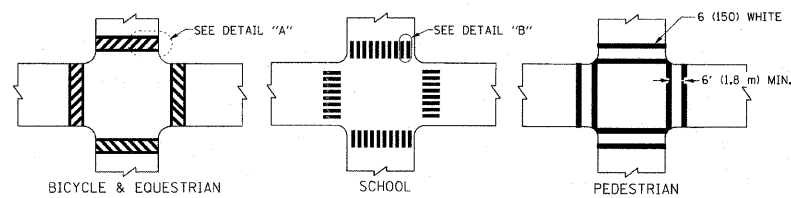
- NOTES**
- ③ OMIT WHEN LENGTH OF AUXILIARY LANE IS LESS THAN 500' (150 m).
 - ④ 8-INCH WIDE DOTTED LANE LINE MARKINGS SHALL BE USED WHEN THE LENGTH OF THE AUXILIARY LANE IS 2 MILES OR LESS.
 - ⑤ FOR TWO-LANE ENTRANCE RAMP, IF RIGHT LANE ENDS, USE TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS.
 - ⑥ ONLY AND 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 = lryso	DESIGNED - D.W.S.	REVISED - D.W.S. 07-96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS		F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwork\PWIDOT\LEYS\4\0108315\12.dwg		DRAWN -	REVISED - J.A.F. 02-06		SCALE: NONE	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	57	1414.26	COOK	516 399
		CHECKED -	REVISED - S.P.B. 01-07						TC-12			
		DATE - 01-90	REVISED - S.P.B. 01-10						CONTRACT NO. 60127			
								FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

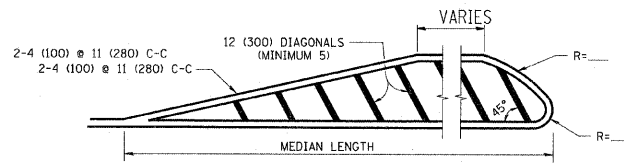
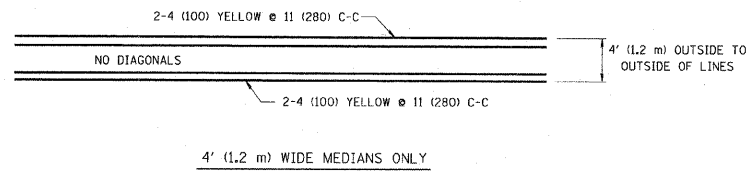


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

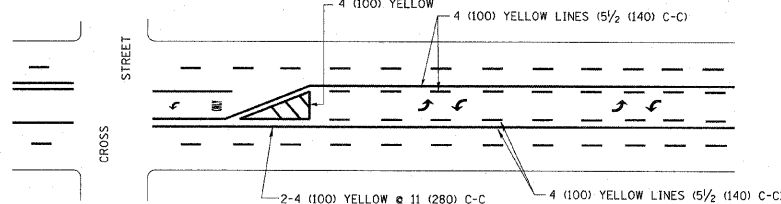


TYPICAL CROSSWALK MARKING

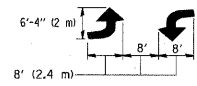


FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

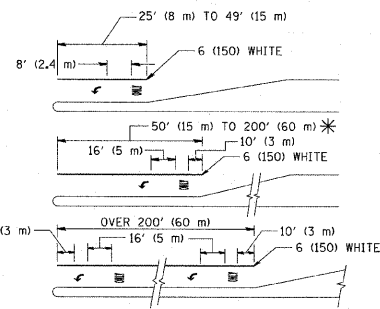


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

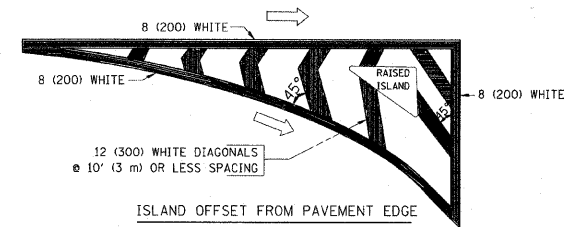


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

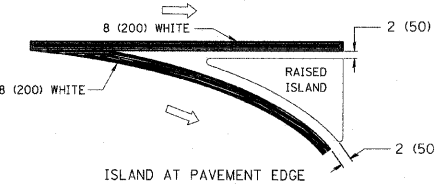
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 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	5/2 (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; 5/2 (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) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 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 = drvakosgn	DESIGNED - EVERS	REVISED - T. RAMMACHER 10-27-94
cs:\pwwork\pudot\drvakosgn\d0188315\to3.dgn		DRAWN -	REVISED - C. JUCIUS 09-09-09
	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

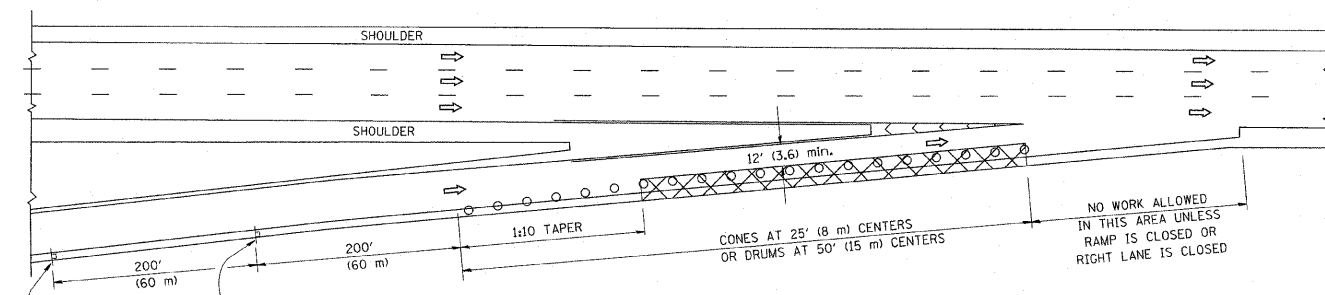
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

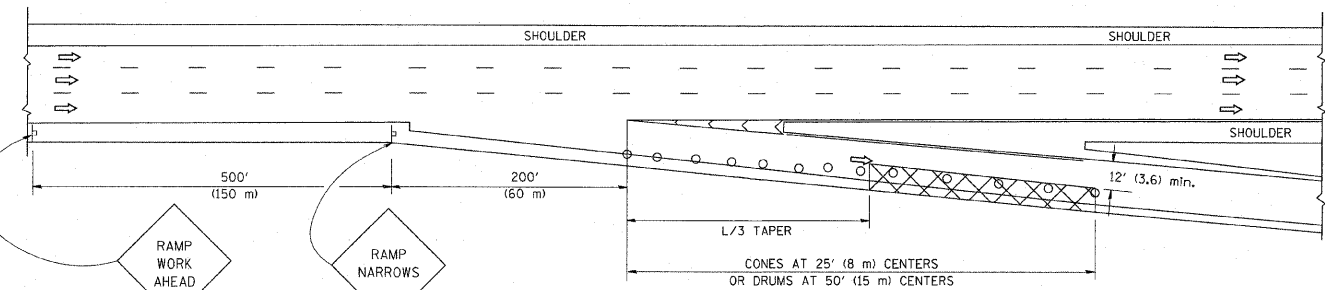
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	Cook	516	390
TC-13			CONTRACT NO. 60527	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

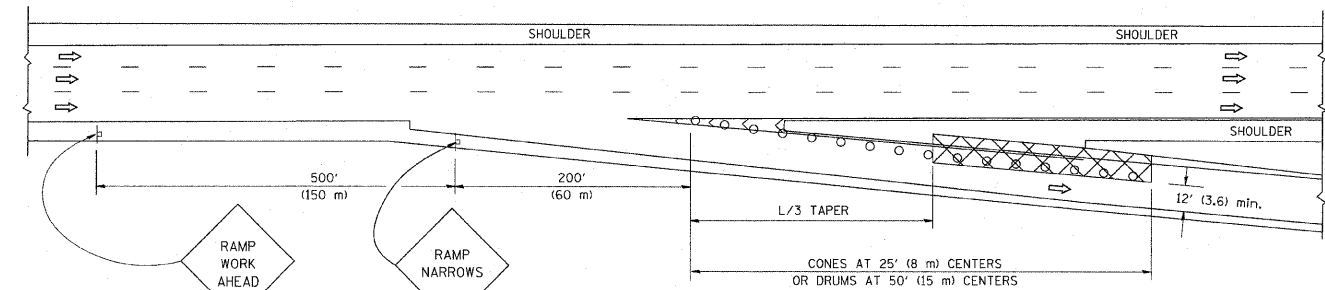
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

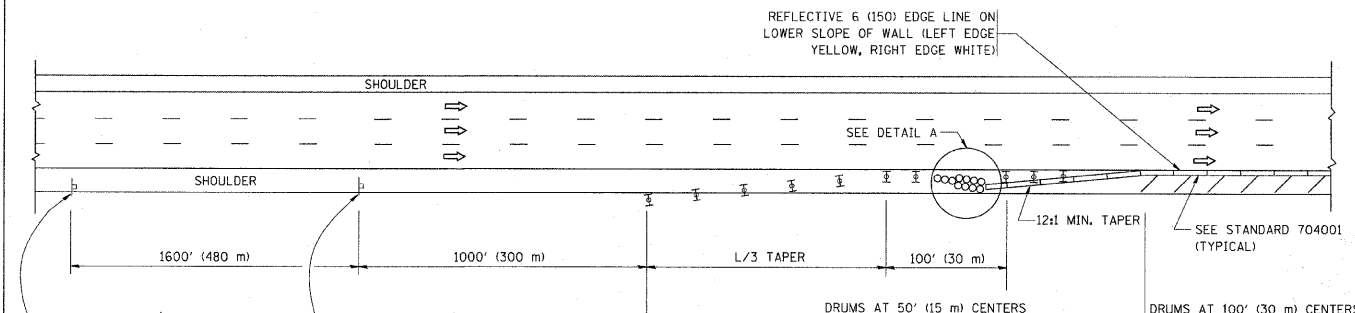
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

GENERAL NOTES

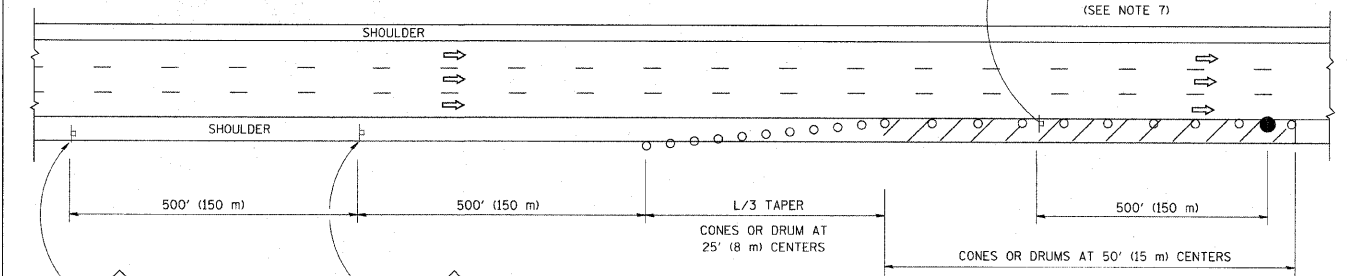
1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC ENGLISH
	$L=0.65(W)(S)$ $L=(W)(S)$
	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.
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 ACTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.

SHOULDER CLOSURE DETAILS

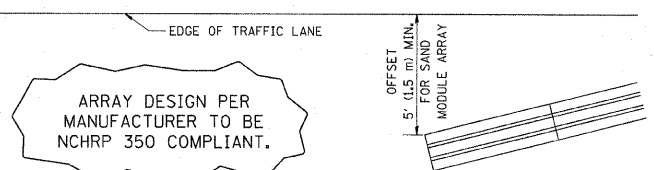


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

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



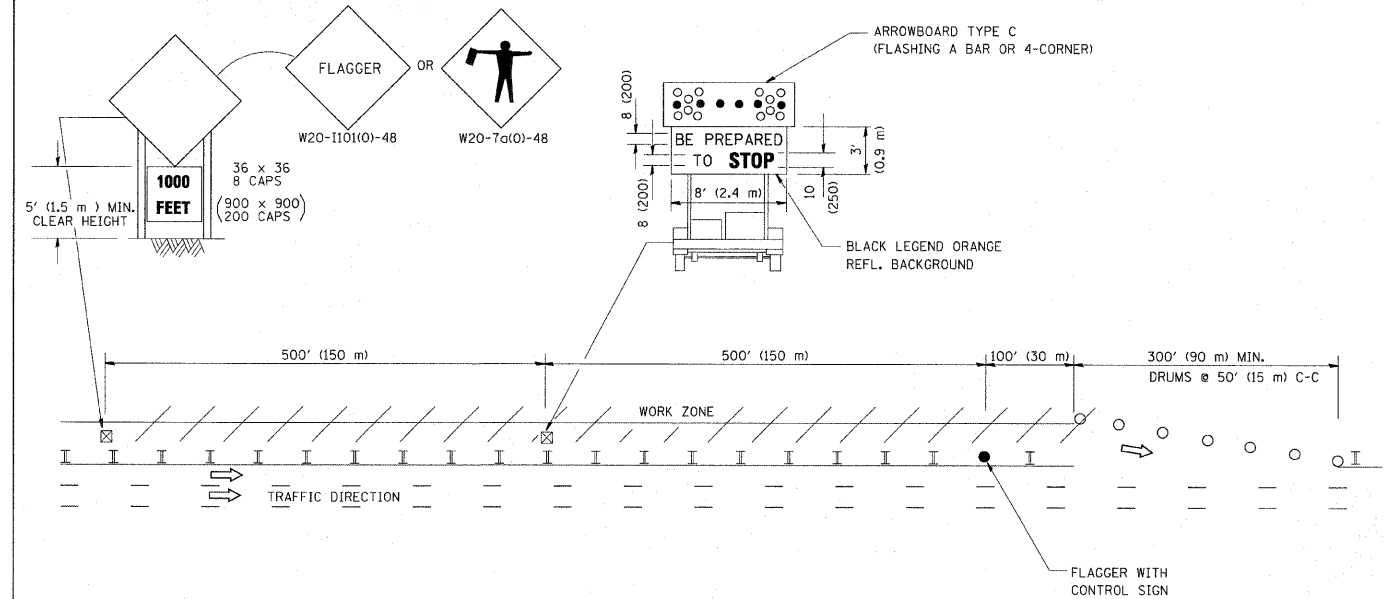
DETAIL "A"
 IMPACT ATTENUATOR, TEMPORARY
 (SEE NOTE 5)

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

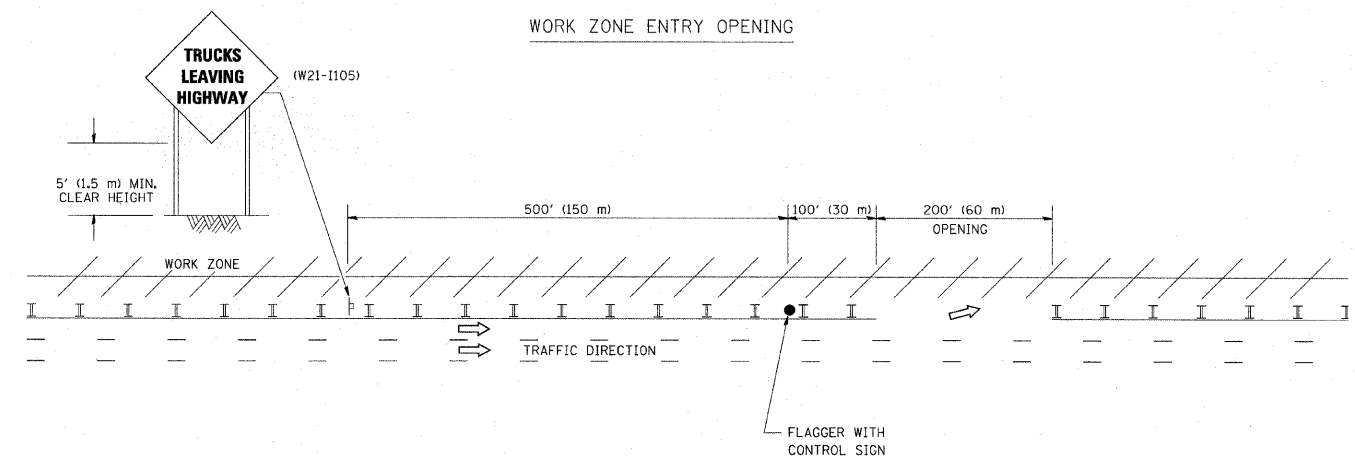
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PLOT SCALE = 58.8000' / IN.		CHECKED -	REVISED - J.A.F. 12-06		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.		CONTRACT NO. 60327		
PLOT DATE = 1/26/2010		DATE - 11-96	REVISED - S.P.B. 01-07				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
			REVISED - S.P.B. 12-09								

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

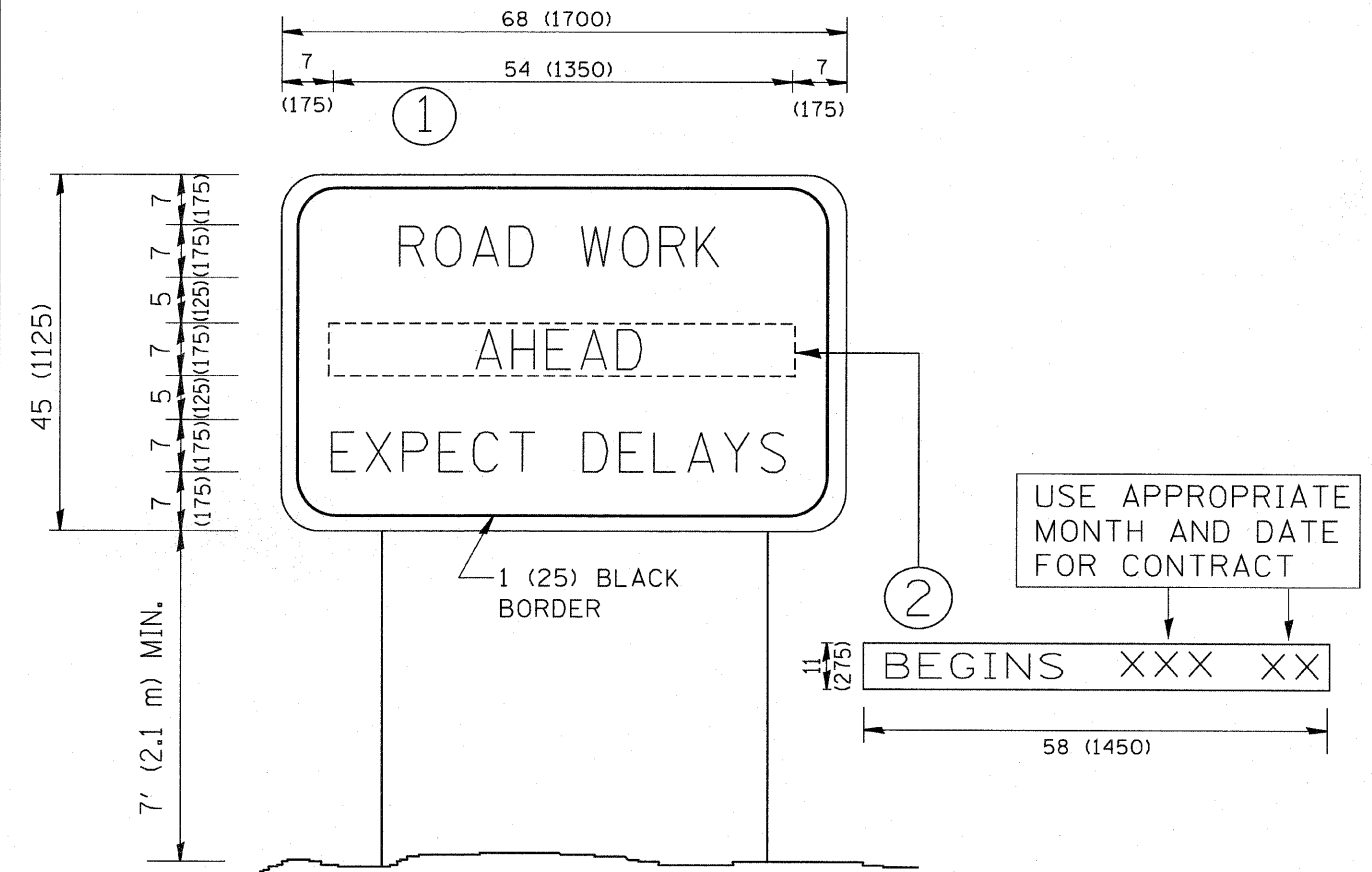
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		DRAWN -	REVISED - J.A.F. 02-06
		CHECKED -	REVISED - S.P.B. 01-07
		DATE -	REVISED - S.P.B. 12-09

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. 57	SECTION 1414.2B	COUNTY Cook	TOTAL SHEETS 516	SHEET NO. 392
TC-18		CONTRACT NO. 60327		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



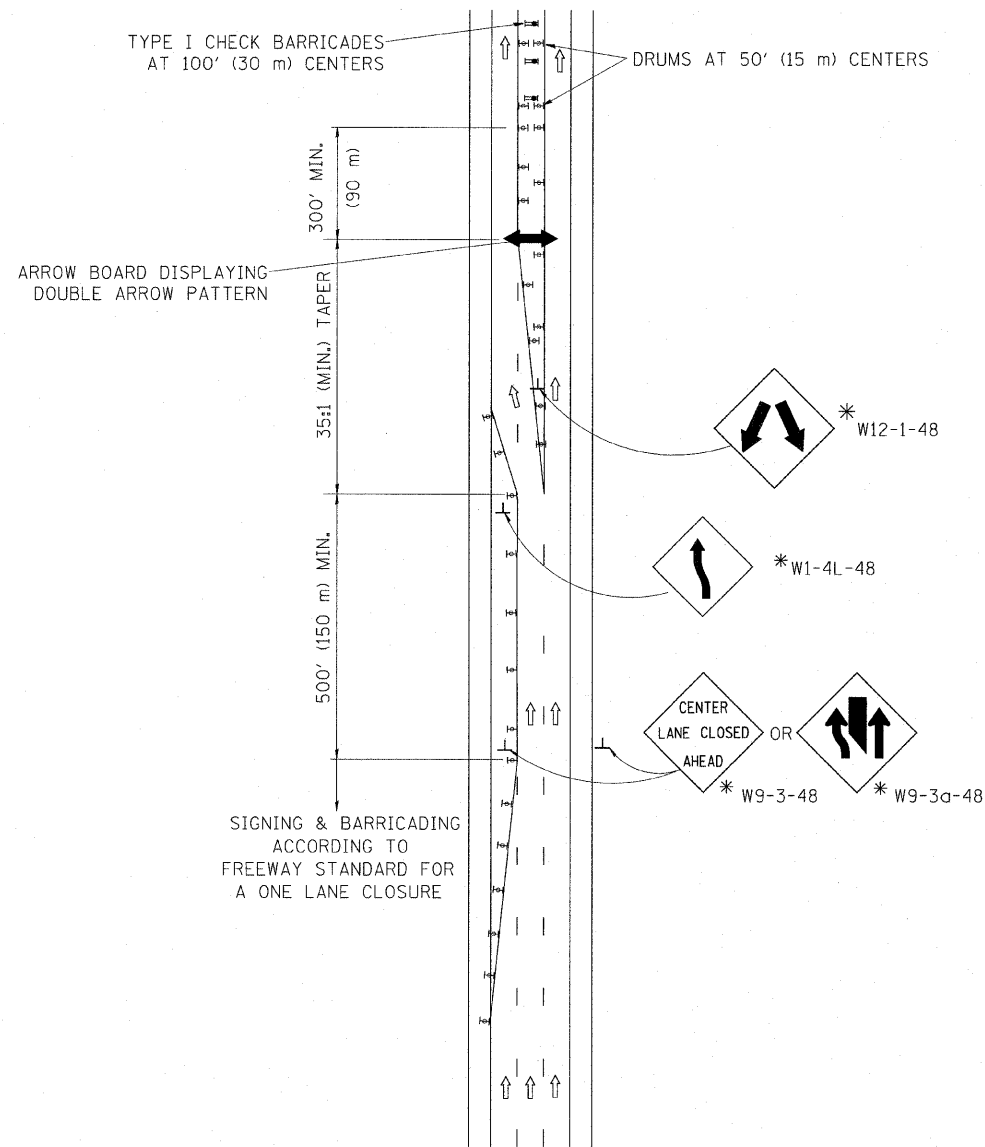
NOTES:

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.

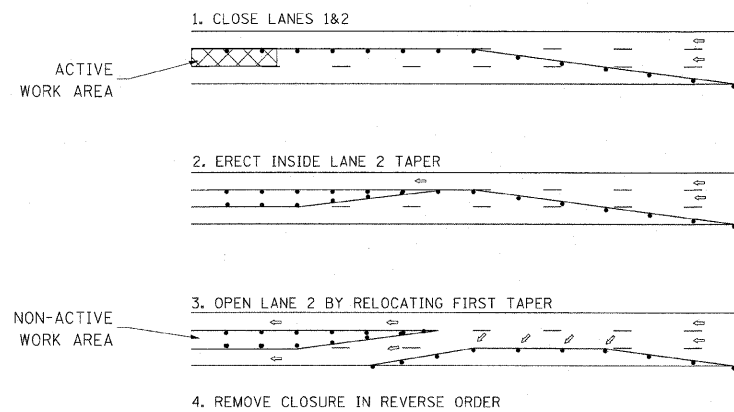
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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		DRAWN -	REVISED - R. MIRS 12-11-97		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	57	1111.2B	COOK	516	393
		PLOT SCALE = 50,000' / IN.	REVISED - T. RAMMACHER 02-02-99						TC-22		CONTRACT NO. 60327		
		PLOT DATE = 1/4/2008	REVISED - C. JUCIUS 01-31-07						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

CENTER LANE CLOSURE



INSTALLATION SEQUENCE

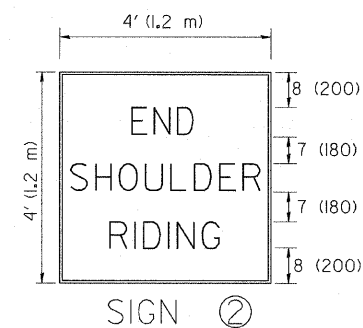
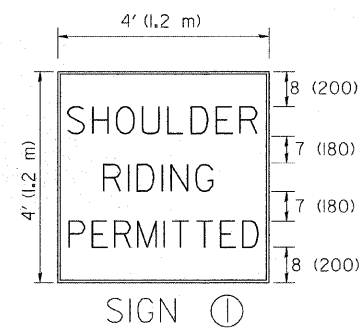
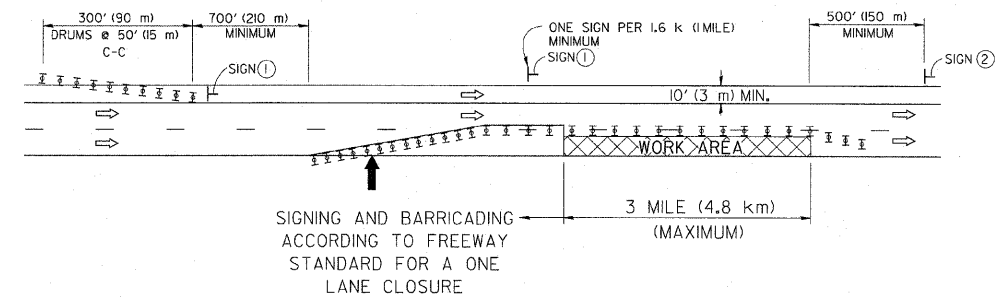
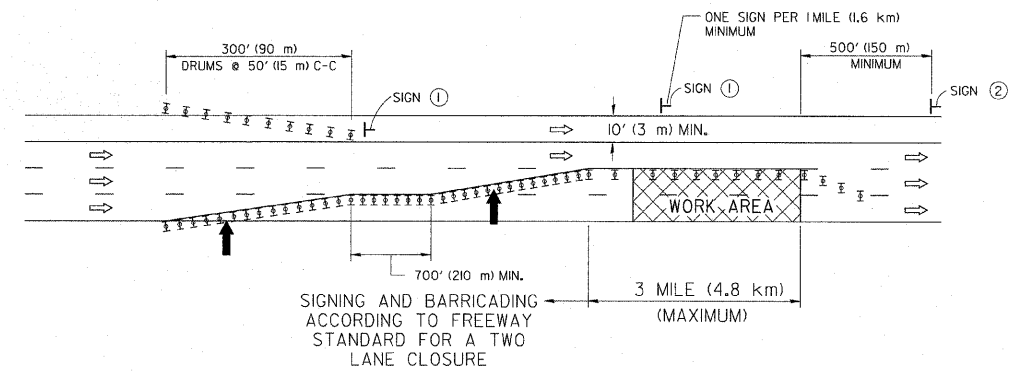


NOTES

- DRUMS WITH STEADY BURN LIGHTS SHALL BE USED AT 50' (15 m) CENTERS ON ALL TAPERS AND TANGENTS IN ADVANCE OF WORK AREA.
- CLOSURE SHALL BE USED ONLY FOR OPERATIONS LASTING 72 HOURS OR LESS.
- 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.



6 (150) SERIES 'C' LEGEND
BLACK LEGEND
WHITE REFLECT. BACKGROUND
1 (25) BORDER

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).

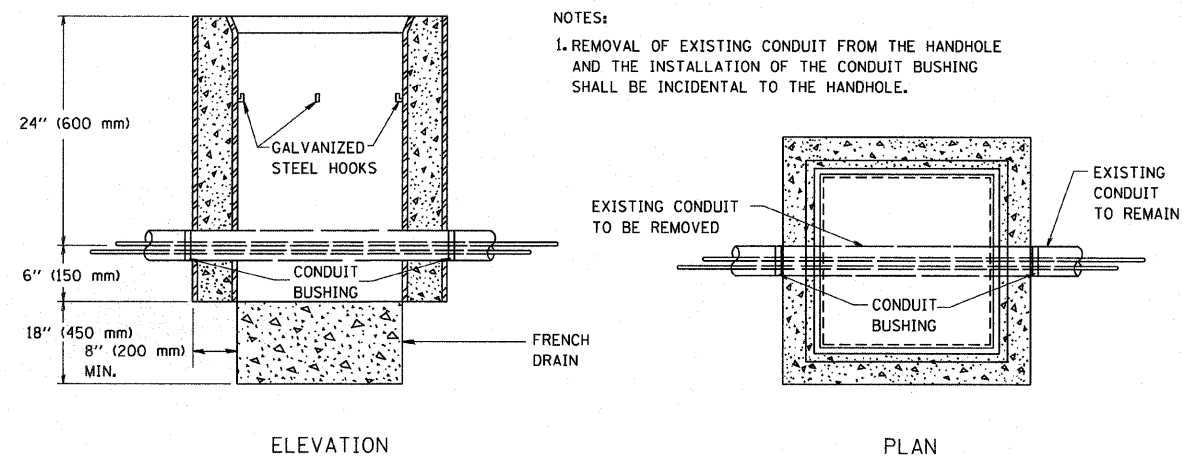
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W:\disto\22x34\to25.dgn		DRAWN -	REVISED - S.P.B. 01-07
		CHECKED -	REVISED - S.P.B. 12-09
		DATE -	REVISED -

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.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	1414.2B	COOK	516	394
TC-25			CONTRACT NO. 60327	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

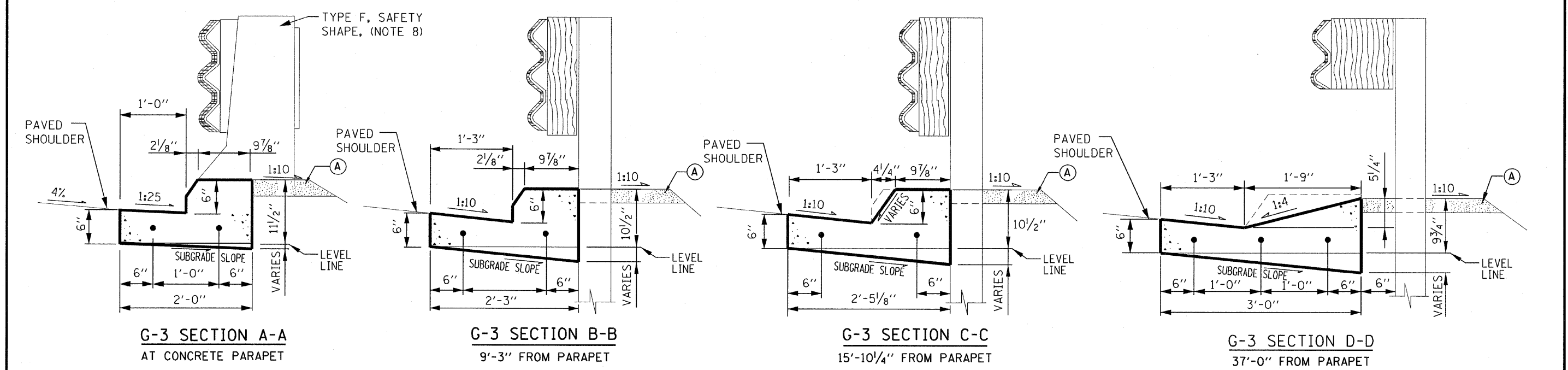
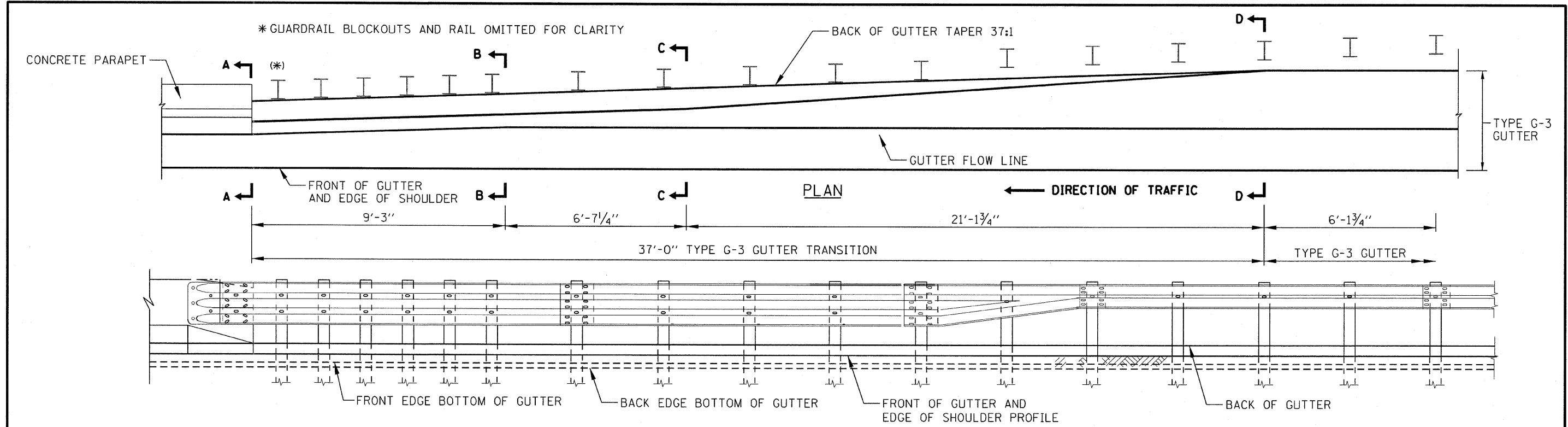
HANDHOLE TO INTERCEPT EXISTING CONDUIT

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	395
TS-03		CONTRACT NO. 60327		
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 EXPOXY COATED REBAR.

LEGEND

(A) AGGREGATE SHOULDERS SPECIAL, TYPE C

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

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

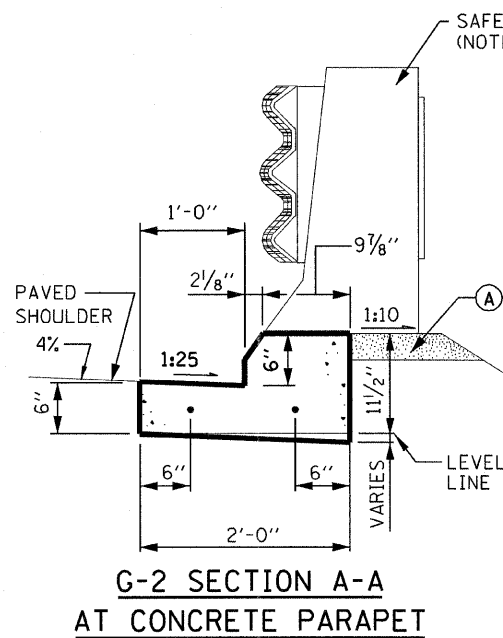
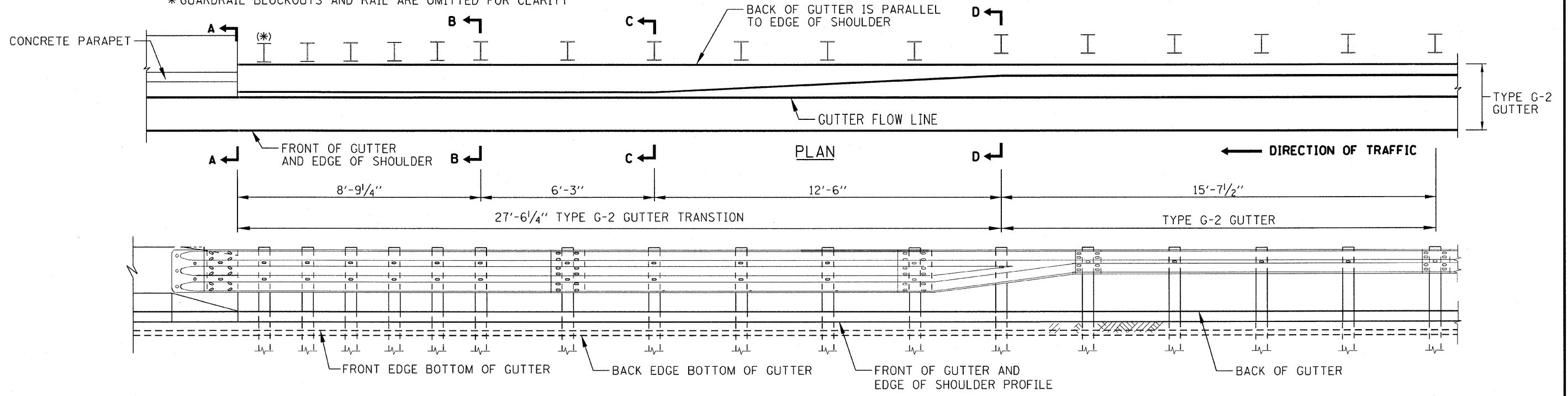
SHEET 1 OF 2

Illinois Tollway
Open Roads for a Faster Future

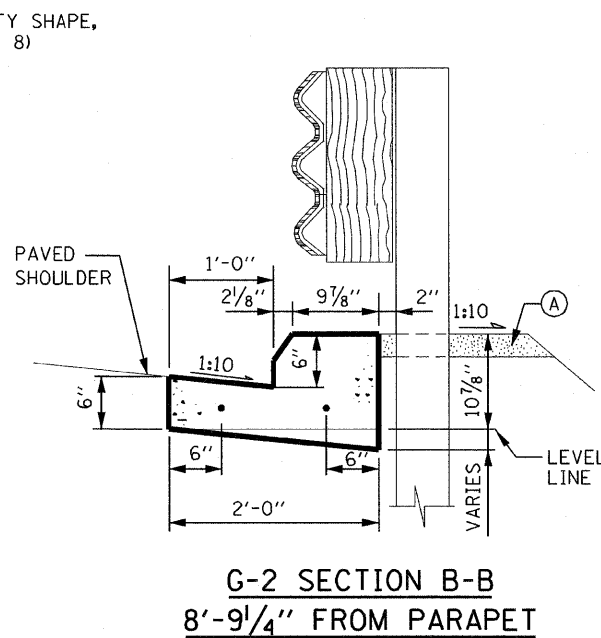
TYPE G-2/G-3 GUTTER
 TRANSITION AT TRAFFIC
 BARRIER TERMINAL, TYPE T6

STANDARD B3-01

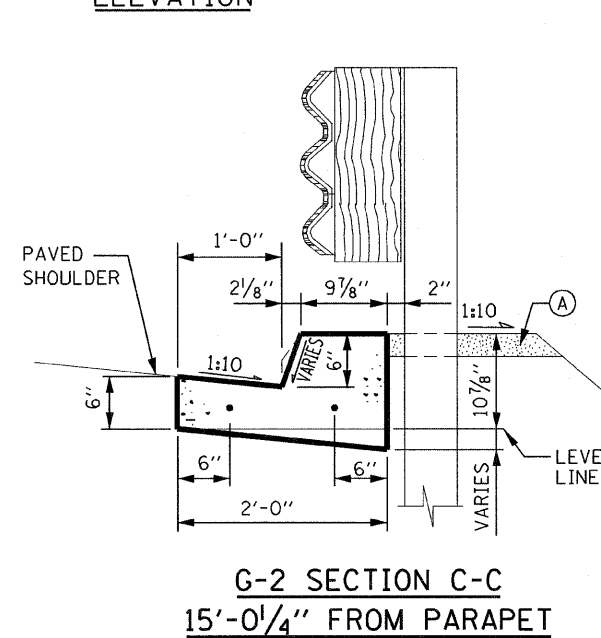
* GUARDRAIL BLOCKOUTS AND RAIL ARE OMITTED FOR CLARITY



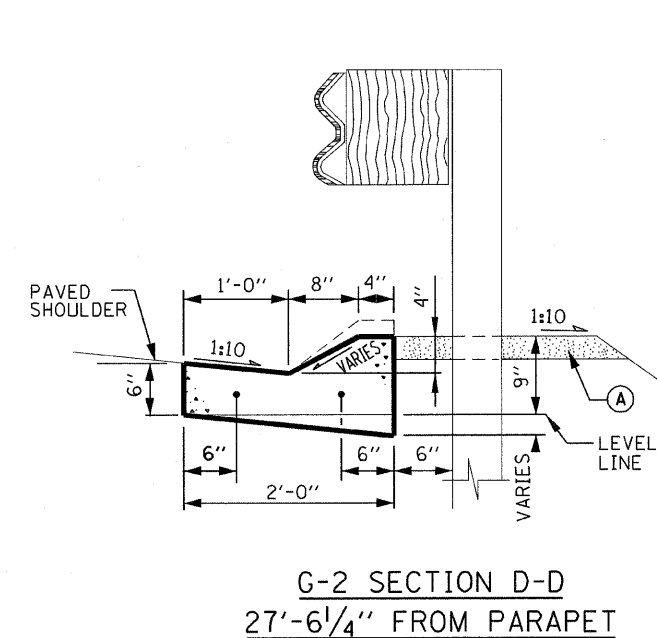
G-2 SECTION A-A
AT CONCRETE PARAPET



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:

- SEE SHEET 1 OF THIS SERIES FOR GENERAL NOTES.
- 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

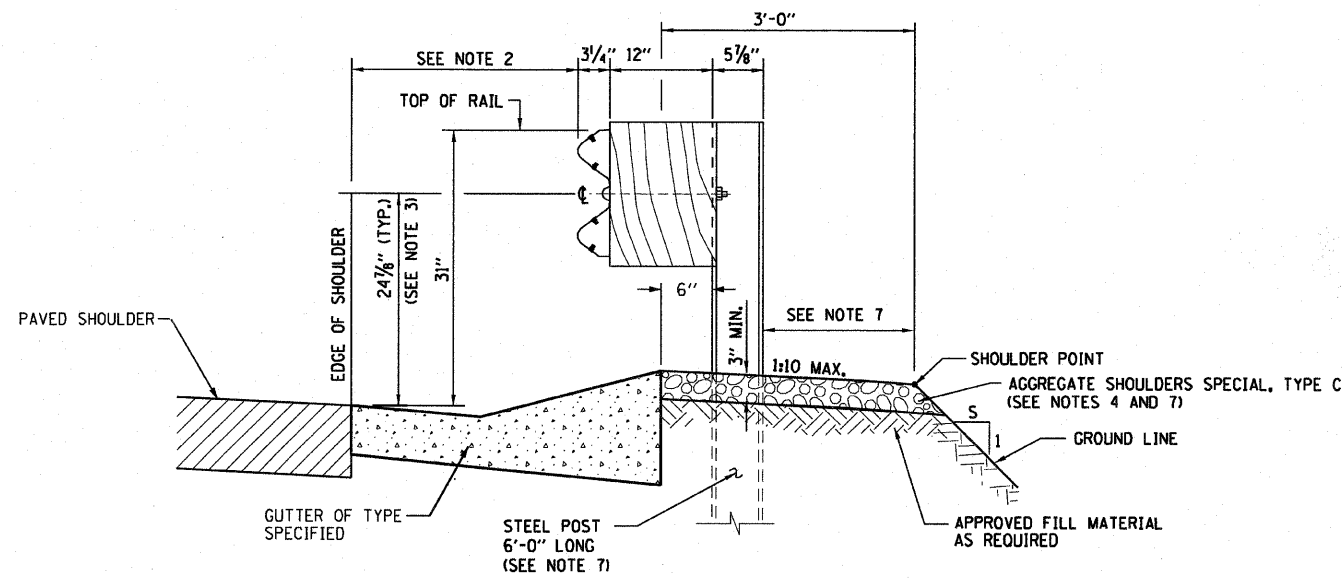


TYPE G-2/G-3 GUTTER
TRANSITION AT TRAFFIC
BARRIER TERMINAL, TYPE T6

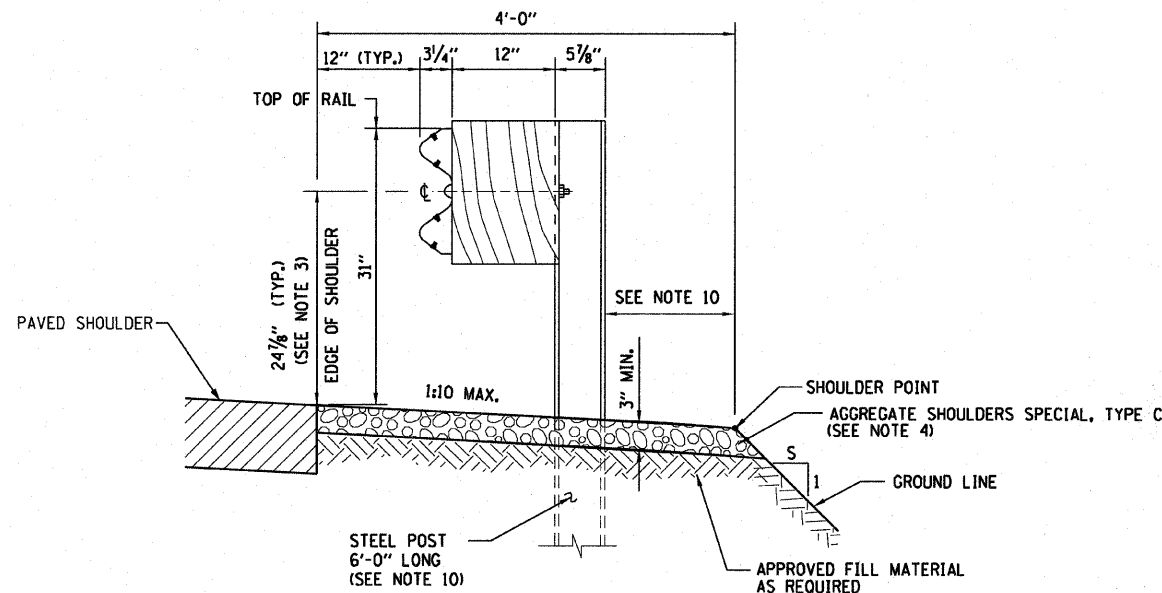
STANDARD B3-01

395B of 516

APPROVED.....
DATE 5-1-2009...



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 G-2, G-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 7/8" 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

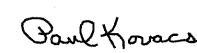


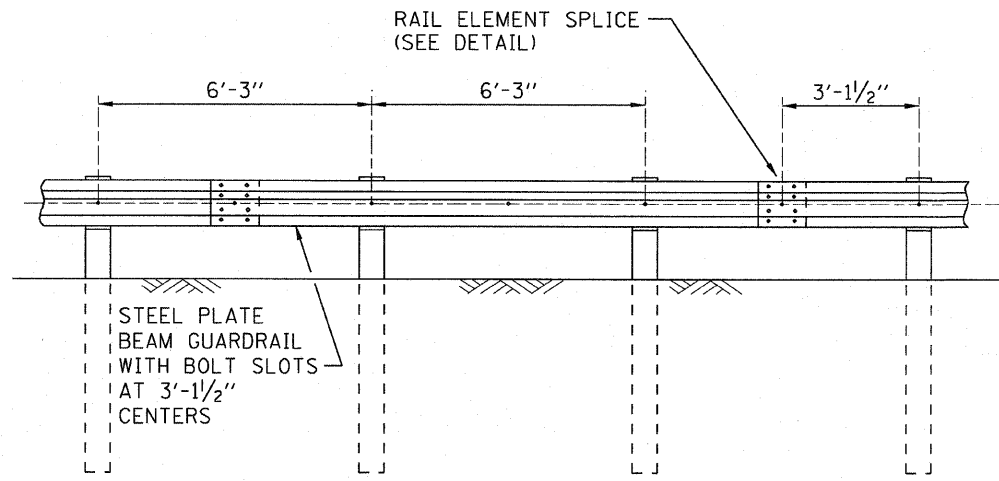
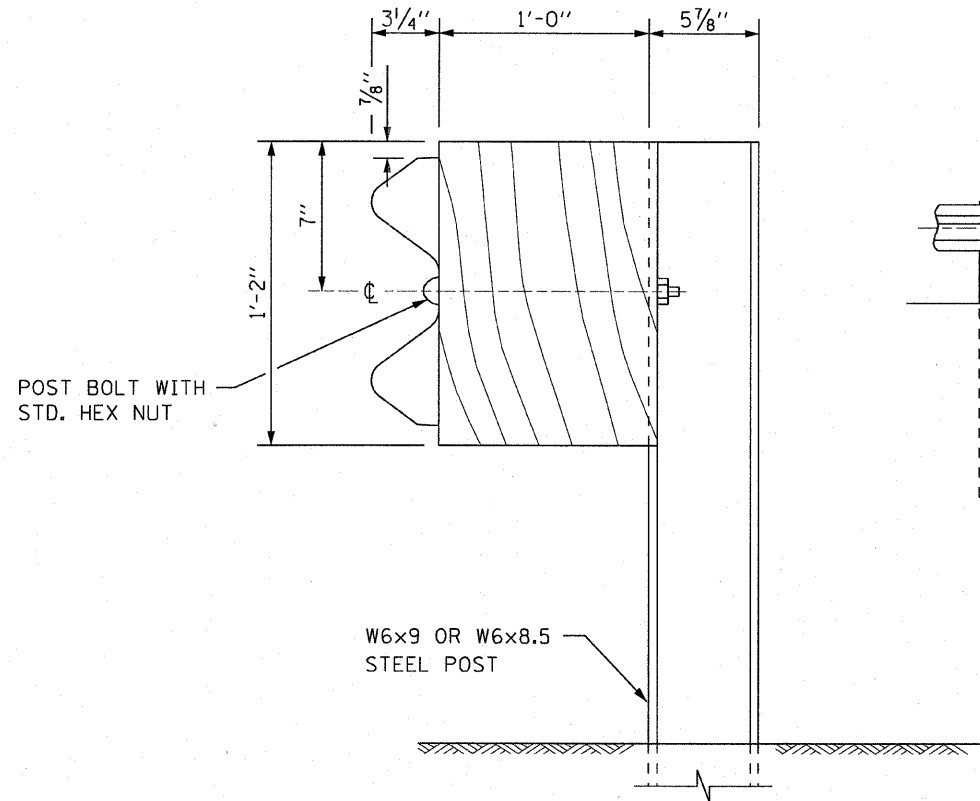
GALVANIZED STEEL PLATE
BEAM GUARDRAIL

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

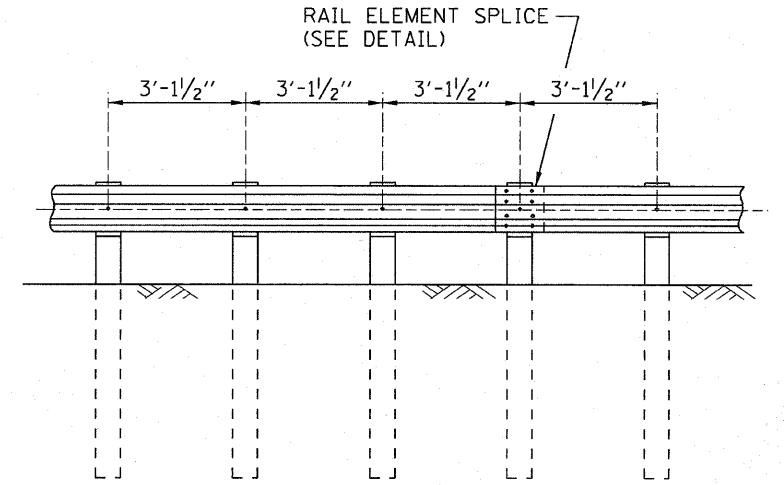
APPROVED.....

 CHIEF ENGINEER DATE 7-1-2009



ELEVATION

TYPE A

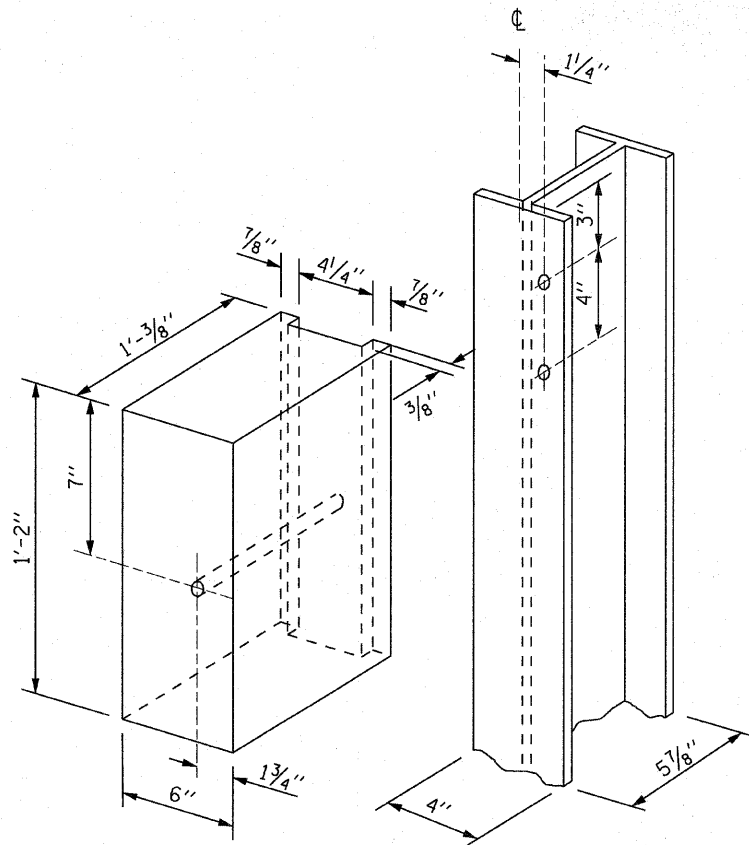
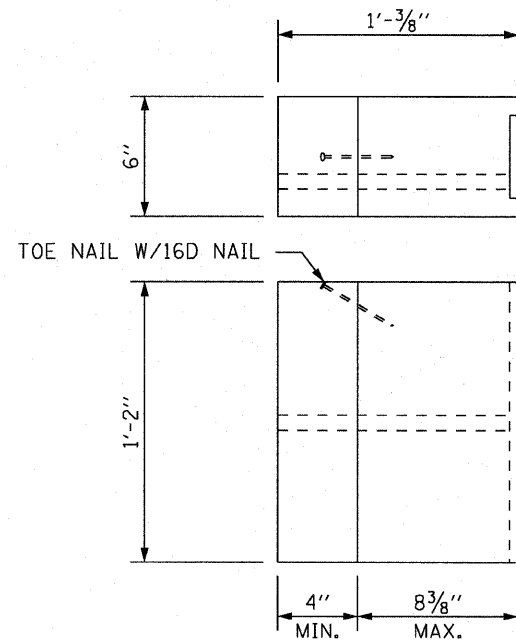
6'-3" TYPICAL POST SPACING



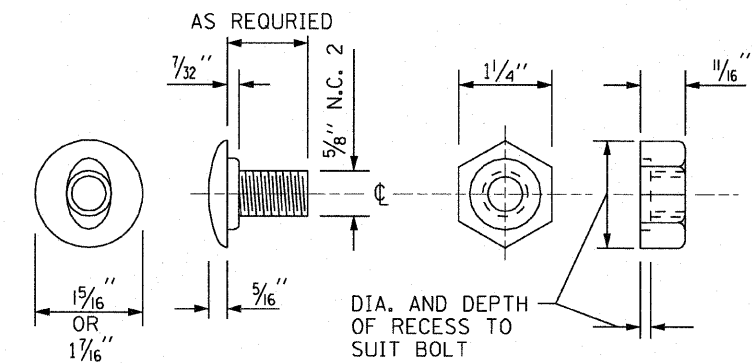
ELEVATION

TYPE B

3'-1 1/2" CLOSED POST SPACING



NOTE: ALL HOLES 3/4" DIA.



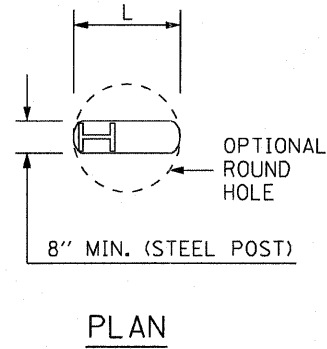
Illinois Tollway
Open Roads for a Faster Future

GALVANIZED STEEL PLATE
BEAM GUARDRAIL

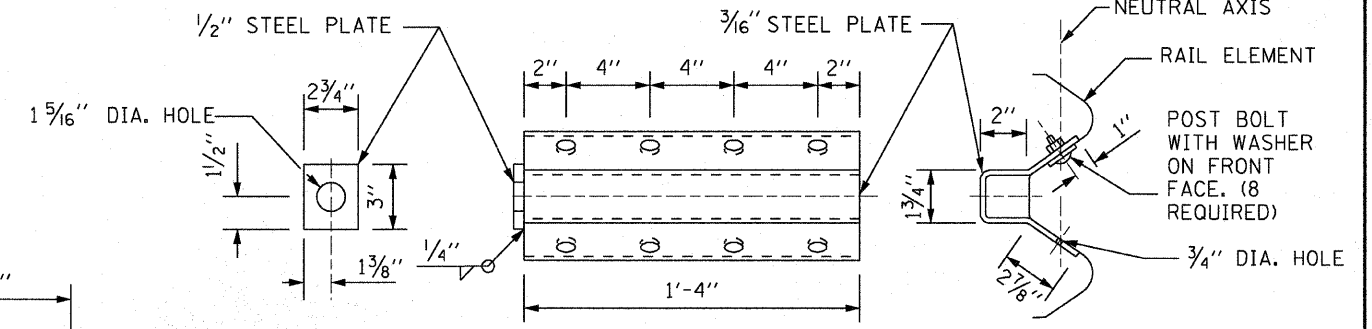
STANDARD C1-03

397 OF 516

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

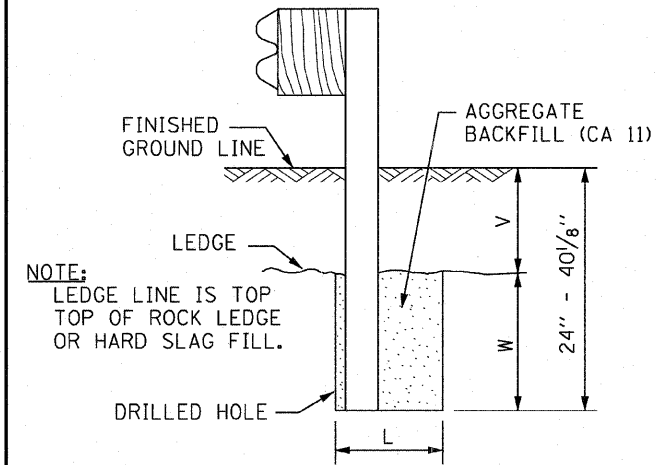


V	W	L	
		STEEL POST	WOOD POST
0 - 16 ¹ / ₈ "	24"	21"	23"
> 16 ¹ / ₈ " - 28 ¹ / ₈ "	12"	8"	10"
> 28 ¹ / ₈ " - 40 ¹ / ₈ "	12" - 0	8"	10"



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

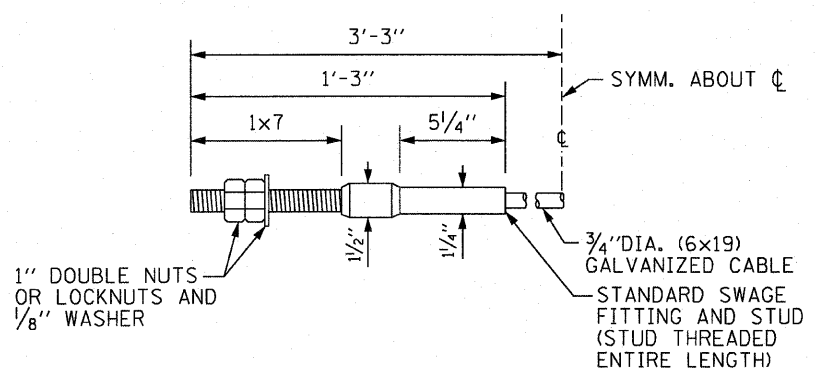
ANCHOR PLATE T DETAILS



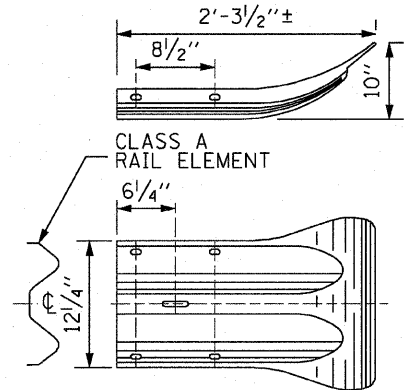
NOTE:
LEDGE LINE IS TOP TOP OF ROCK LEDGE OR HARD SLAG FILL.

ELEVATION

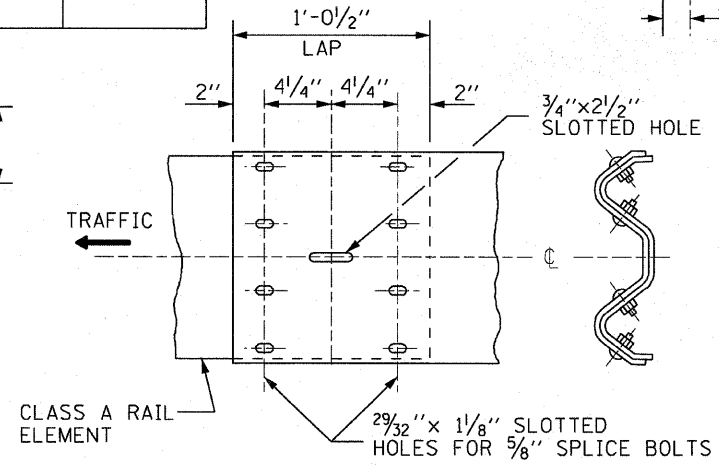
FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED



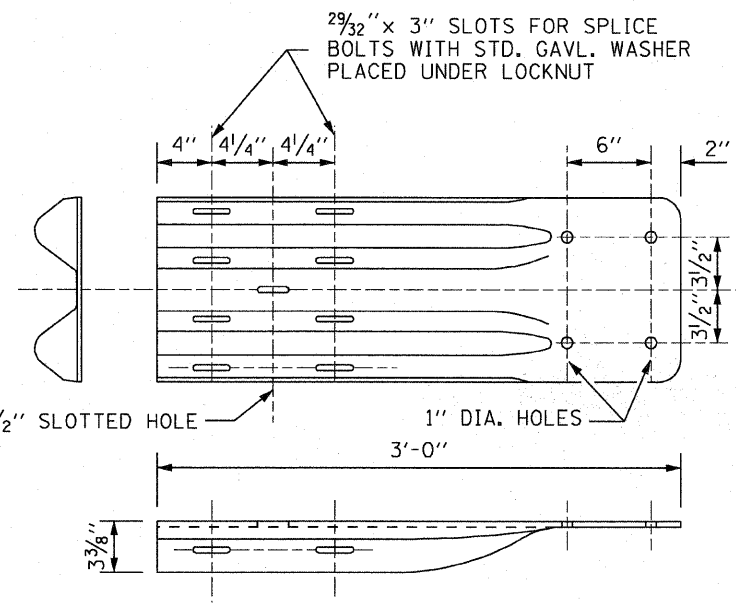
CABLE ASSEMBLY
(40,000 LBS.) MIN. BREAKING STRENGTH)
TIGHTEN TO TAUT TENSION.



END SECTION



RAIL ELEMENT SPLICE



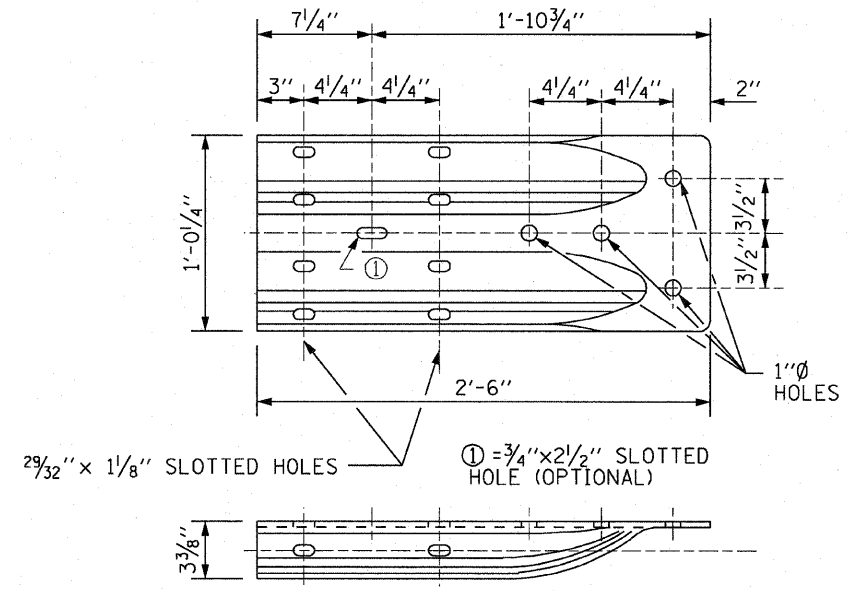
NOTE:

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



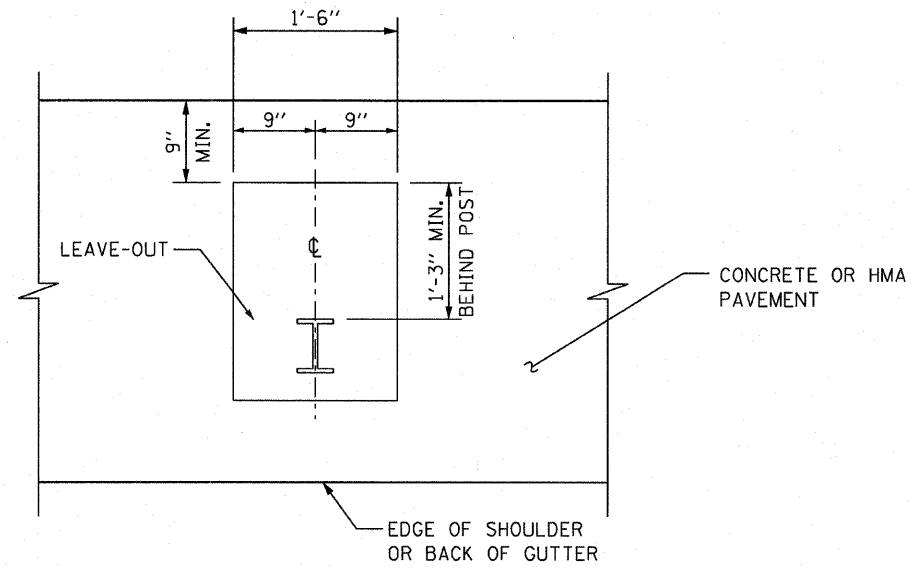
ALTERNATE END SHOE

Illinois Tollway
Open Roads for a Faster Future

GALVANIZED STEEL PLATE
BEAM GUARDRAIL

STANDARD C1-03

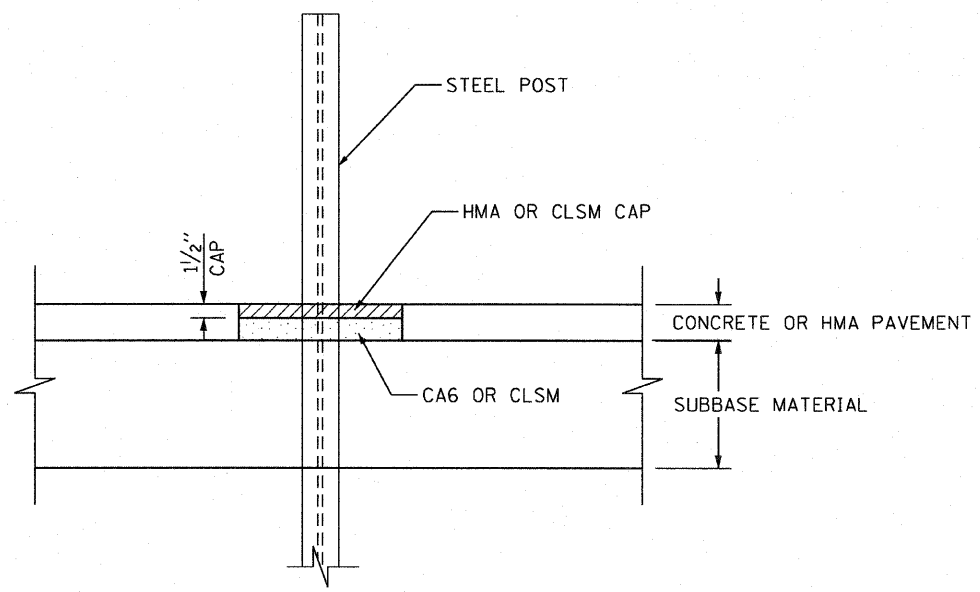
Paul Kovacs
APPROVED..... CHIEF ENGINEER..... DATE 7-1-2009



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.



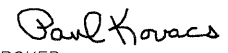
ELEVATION

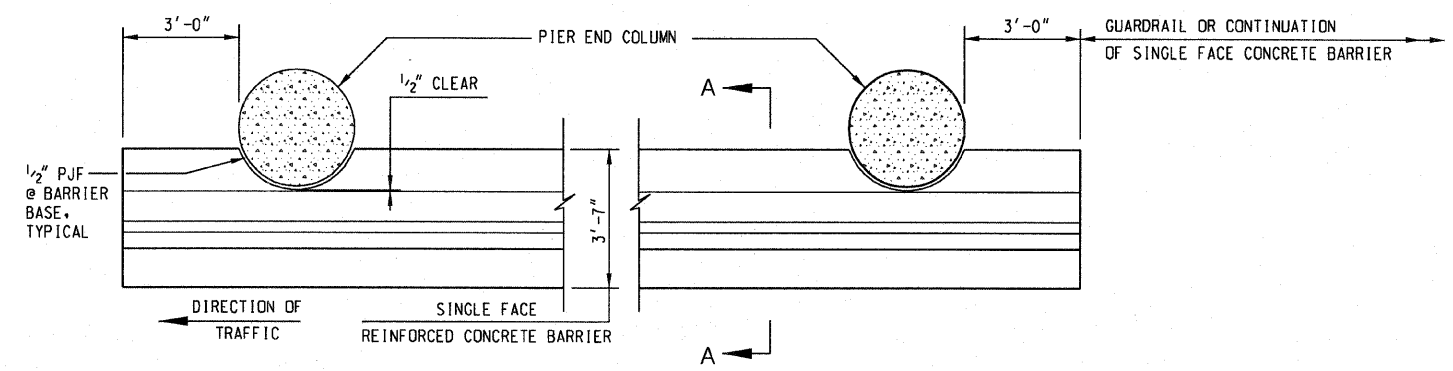
LEAVE-OUTS



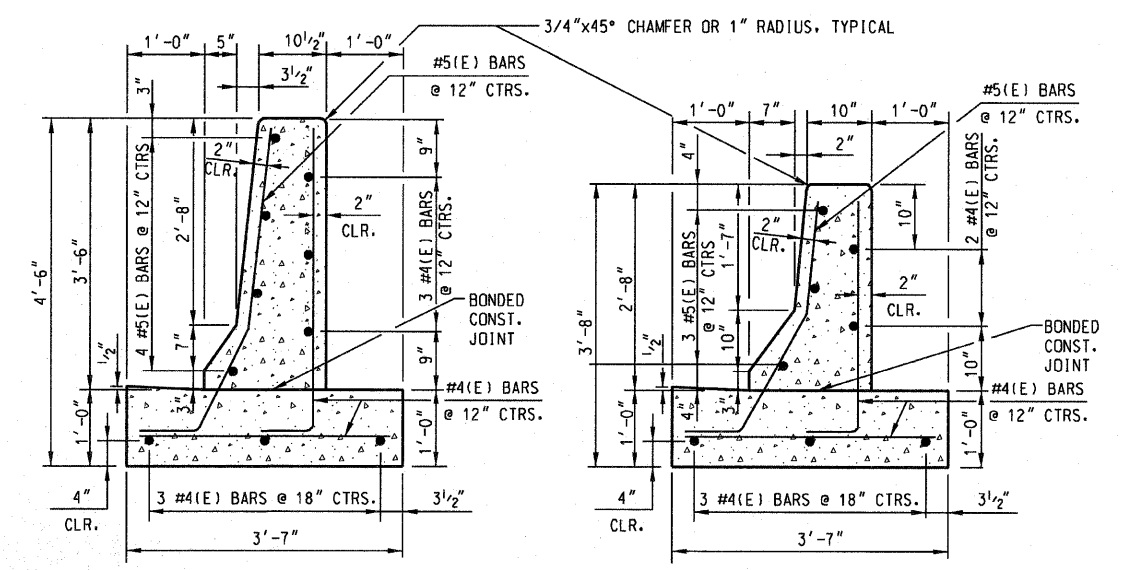
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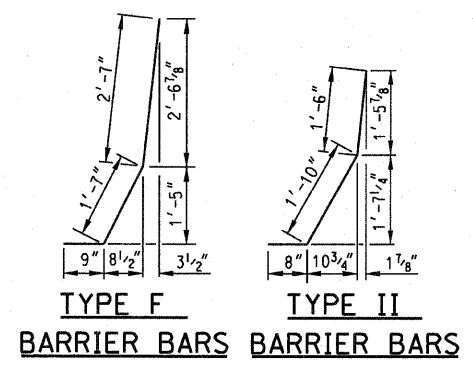
PLAN OF OUTSIDE SHOULDER PIER PROTECTION



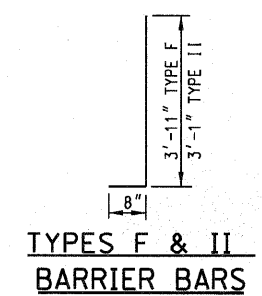
TYPE F BARRIER

TYPE II BARRIER

SECTION A-A



TYPE F BARRIER BARS **TYPE II BARRIER BARS**



TYPES F & II BARRIER BARS
DOWEL BAR BENDING DIAGRAMS

NOTES:

1. TOP SHOULDER EDGE OF BARRIER BASE GUTTER SHALL MATCH THE TOP OF SHOULDER ELEVATION.
2. 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.
3. 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.
4. REINFORCING BARS SHALL MEET THE REQUIREMENTS OF AASHTO M31 (ASTM A615), GRADE 60, AND SHALL CONFORM TO SECTION 508 OF THE STANDARD SPECIFICATIONS.
5. REINFORCING BARS DESIGNATED "E" SHALL BE EPOXY COATED.
6. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
7. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
8. 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