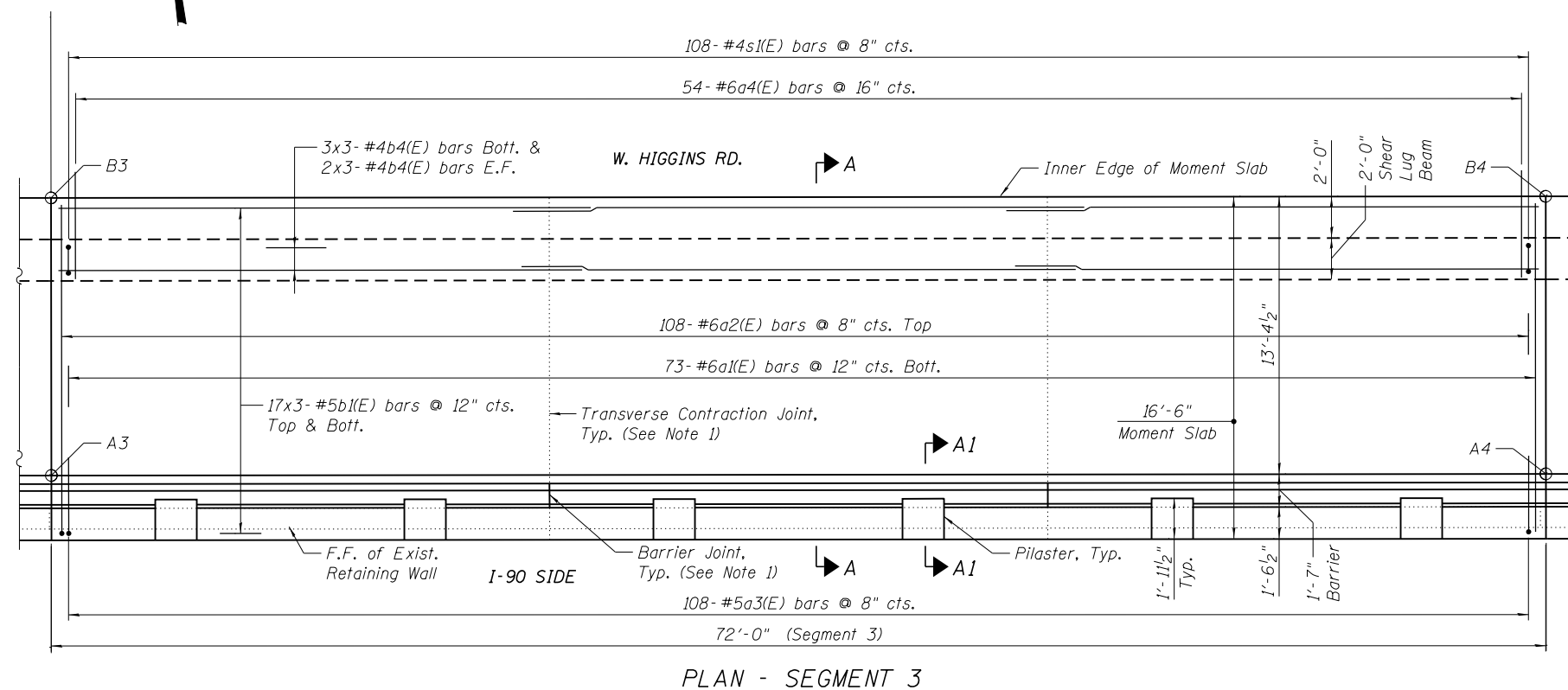


**Notes:**

1. For Barrier Joint & Transverse Contraction Joint details, see Sheet MS-14.
2. For Transverse Expansion Joint details, see Sheet MS-14.
3. Existing Retaining wall not shown for clarity.
4. Future Noise Abatement Panels not shown for clarity.
5. A1, B1, C1 etc. denote control points. See Sht. MS-3 for stations, offsets & elevations.
6. Bar indicated thus 17x3-#5 etc. indicates 17 lines of bars with 3 lengths per line.
7. For Bar List, see Sht. MS-15.
8. For locations and invert elevations of proposed & existing Catch basins, see drainage plans.
9. For Sections A-A & A1-A1, see Sht. MS-11. For Sections B-B & C-C, see Sht. MS-12. For Sections D-D & E-E, see Sht. MS-13. For Section L-L, see Sht. MS-14.
10. E.F. denotes Each Face  
I.F. denotes Inside Face  
O.F. denotes Outside Face

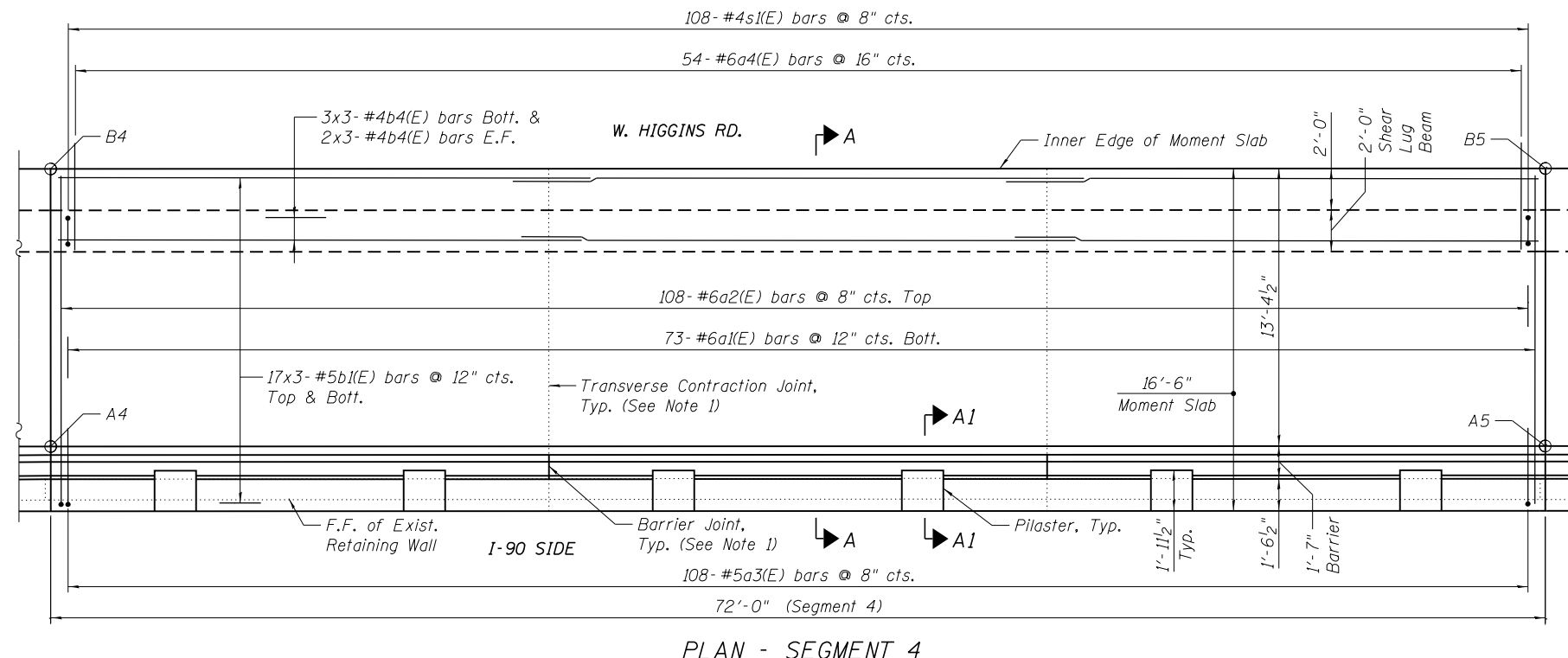
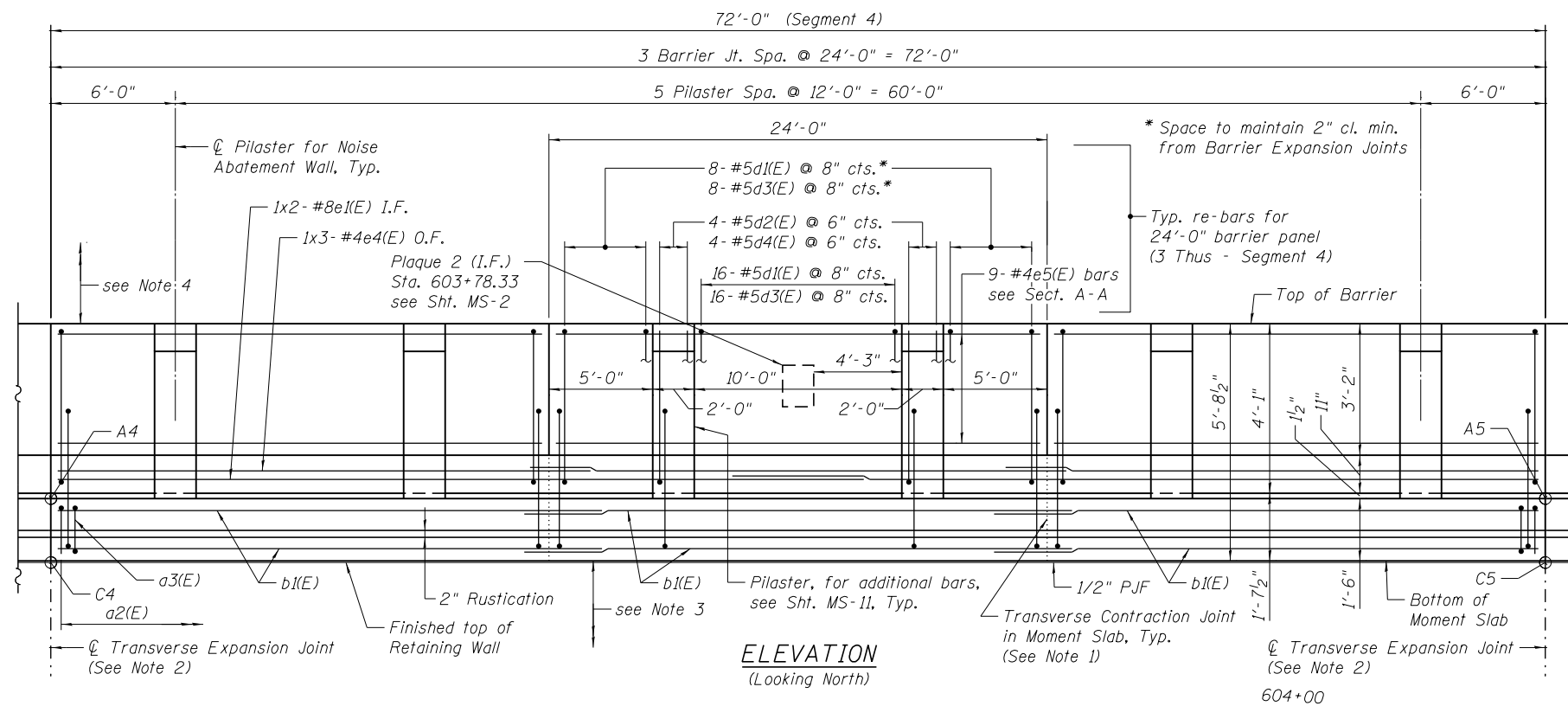


**Minimum Bar Lap**

- #4 = 2'-11"
- #5 = 3'-9"
- #6 = 3'-10"
- #8 = 6'-4"

USER NAME = #USER#	DESIGNED STD	REVISED
CHECKED KK	REVISED	
PLOT SCALE = #SCALE#	DRAWN FD	REVISED
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	201
S.N. 016-2293		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



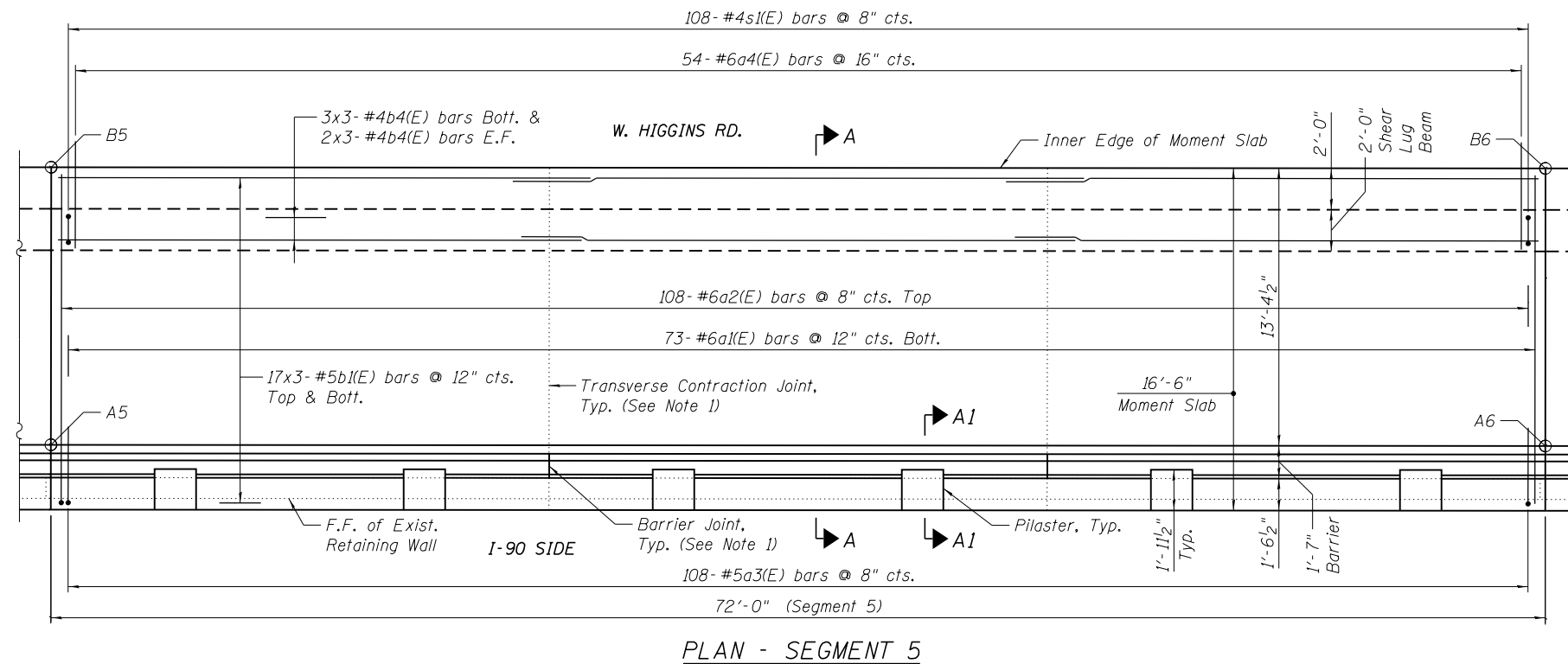
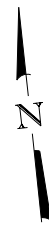
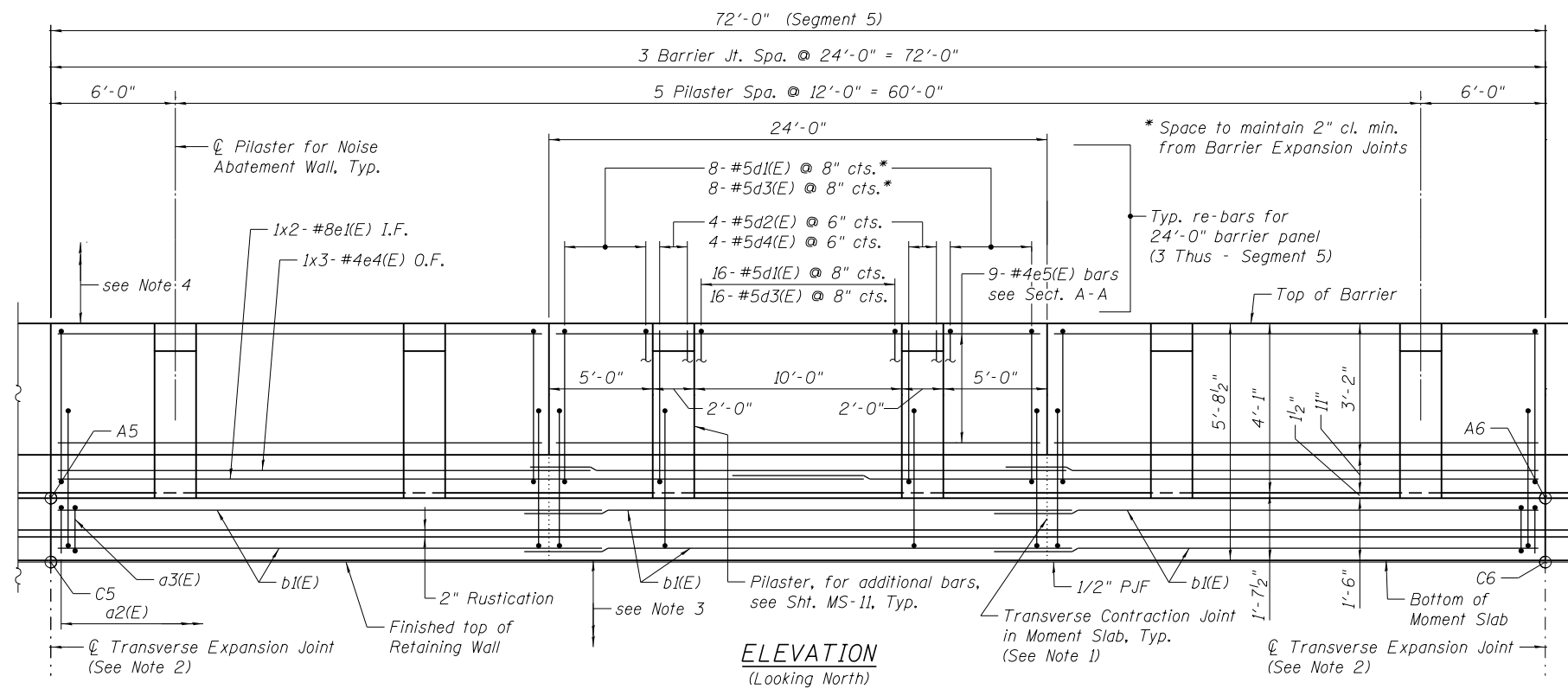
**Minimum Bar Lap**

#4	= 2'-11"
#5	= 3'-9"
#6	= 3'-10"
#8	= 6'-4"

**Note:**  
For Notes, see Sht. MS-7.

USER NAME = #USER#	DESIGNED STD	REVISED
CHECKED KK	REVISIONS	
PLOT SCALE = #SCALE#	DRAWN FD	REVISED
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	202
S.N. 016-2293		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



**Minimum Bar Lap**

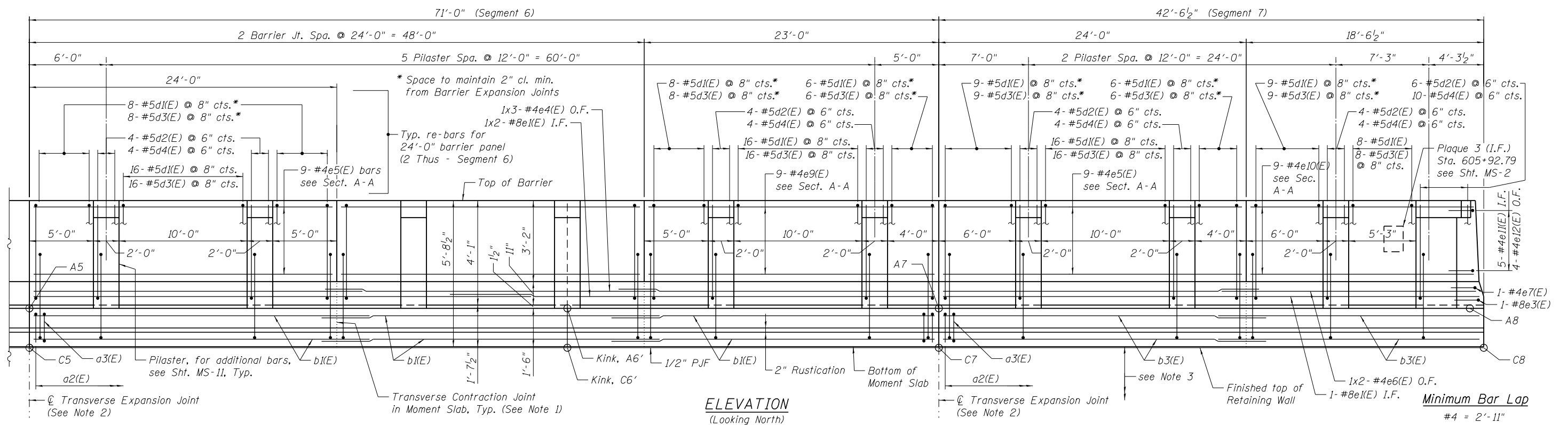
- #4 = 2'-11"
- #5 = 3'-9"
- #6 = 3'-10"
- #8 = 6'-4"

**Note:**

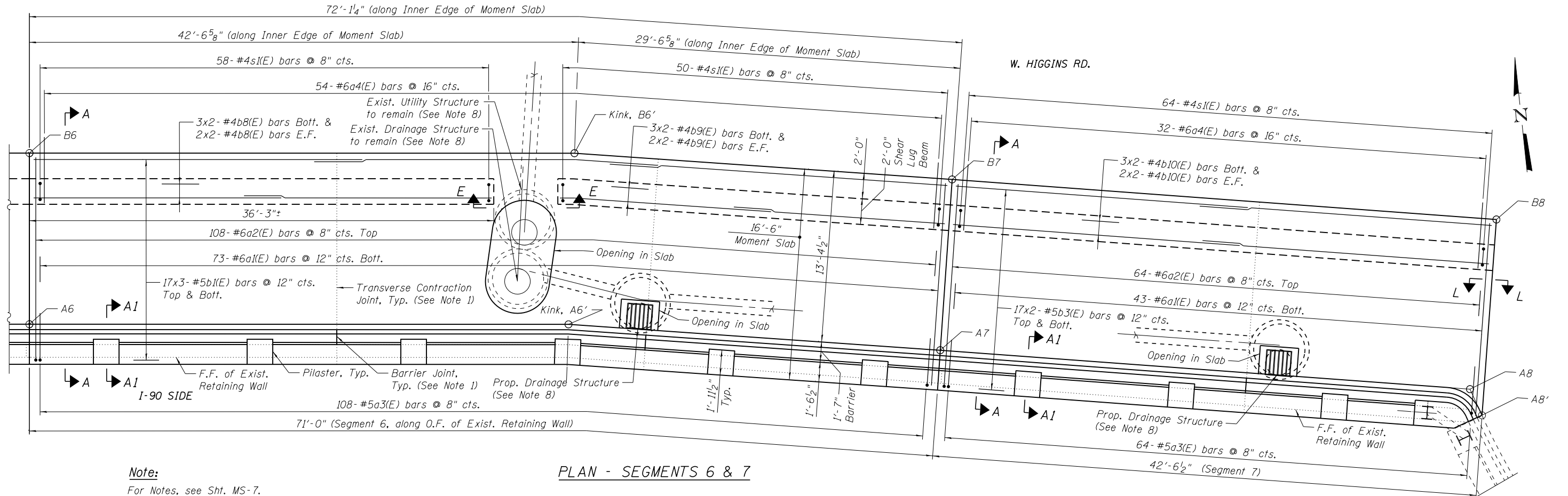
For Notes, see Sht. MS-7.

USER NAME = #USER#	DESIGNED STD	REVISED
CHECKED KK	REVISED	
PLOT SCALE = #SCALE#	DRAWN FD	REVISED
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	203
S.N. 016-2293		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



**ELEVATION**  
(Looking North)

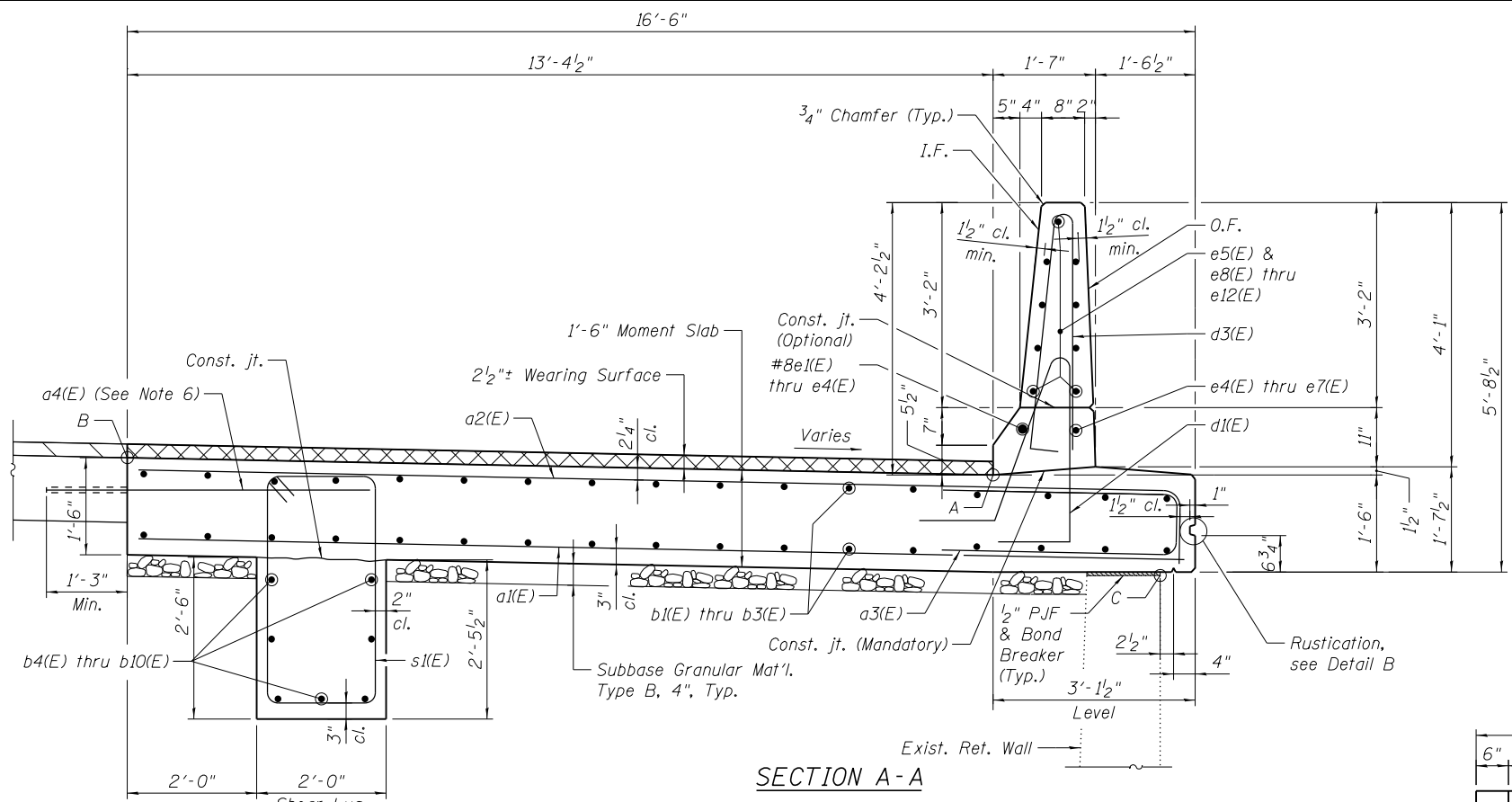


**PLAN - SEGMENTS 6 & 7**

**Note:**  
For Notes, see Sht. MS-7.

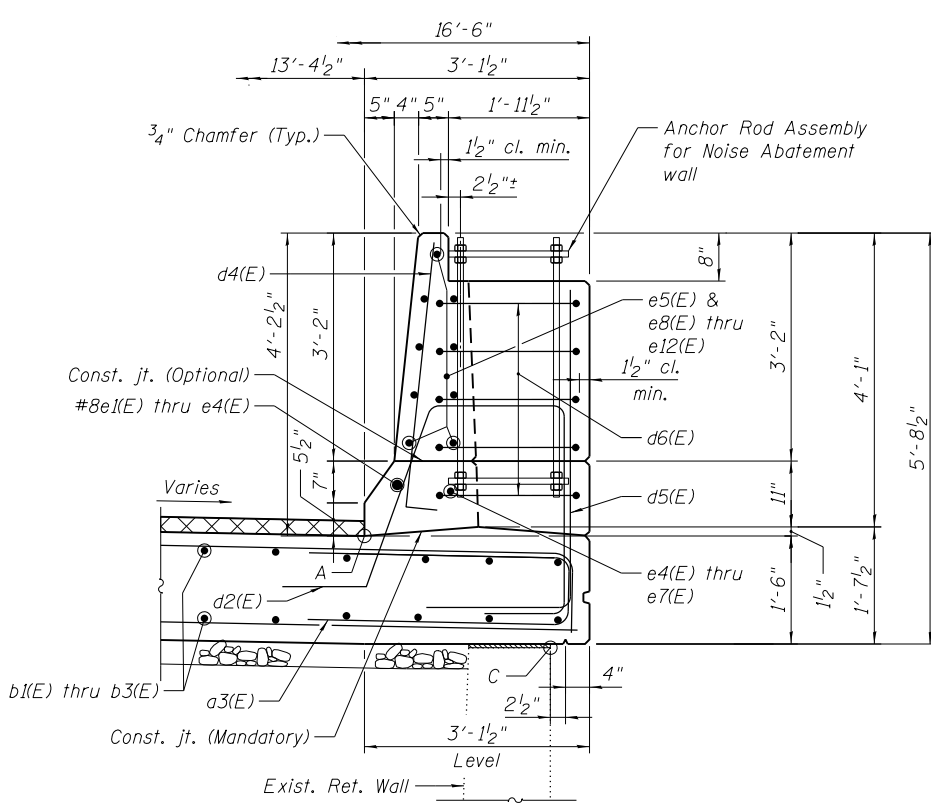
USER NAME = *USER*	DESIGNED STD	REVISED
PLOT SCALE = *SCALE*	CHECKED KK	REVISED
PLOT DATE = 8-15-2017	DRAWN FD	REVISED
	DATE 8/21/2017	REVISED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	204
S.N. 016-2293		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				

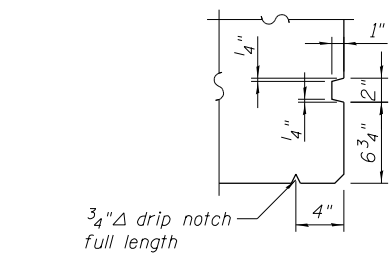


SECTION A-A

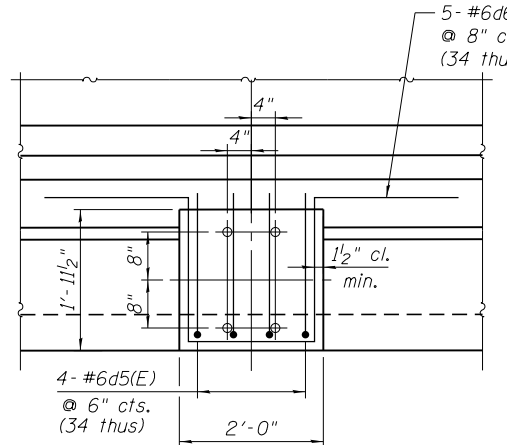
\*\* Cost included with Concrete Superstructure



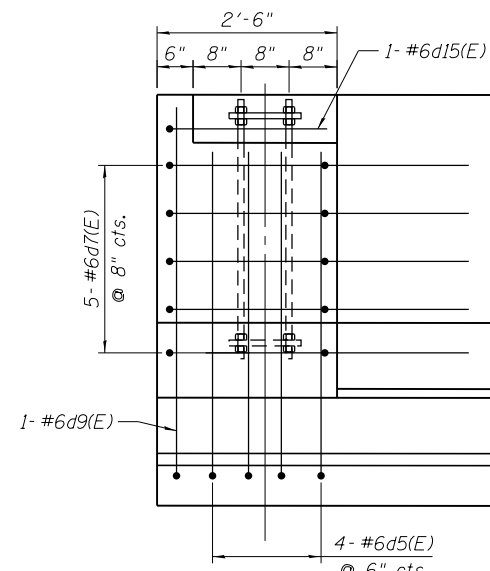
SECTION A1-A1  
(AT NOISE WALL PILASTERS)



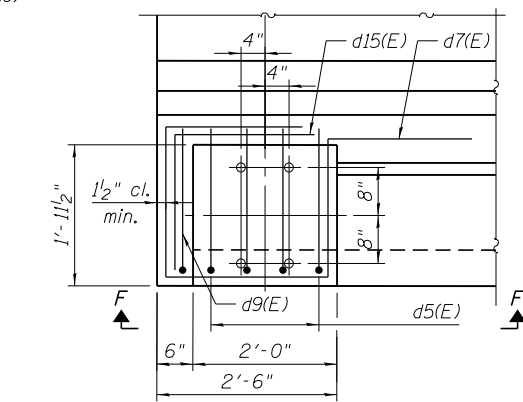
DETAIL "B"



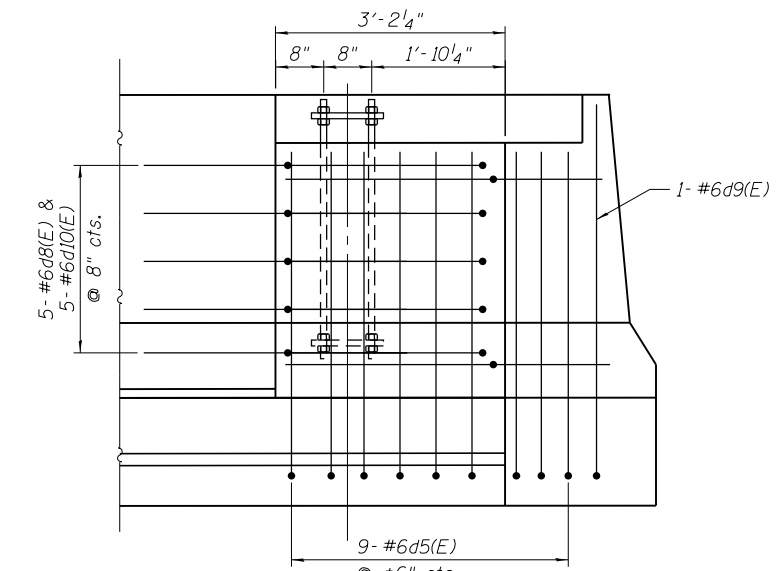
PLAN  
(AT TYPICAL NOISE WALL PILASTER)



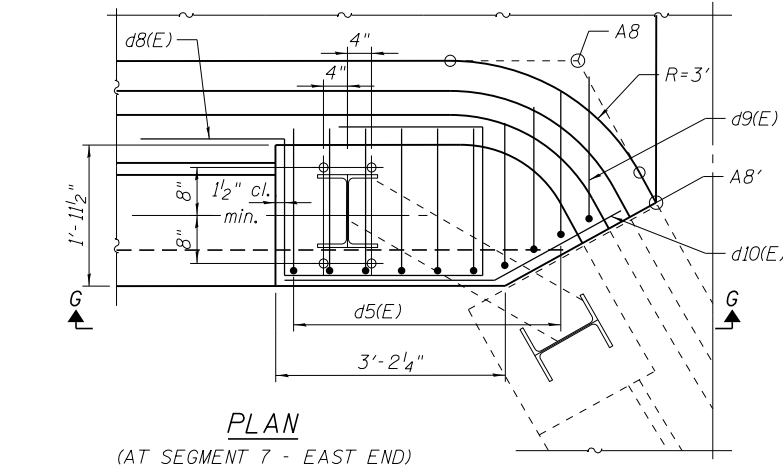
ELEVATION F-F



PLAN  
(AT SEGMENT 1 - WEST END)



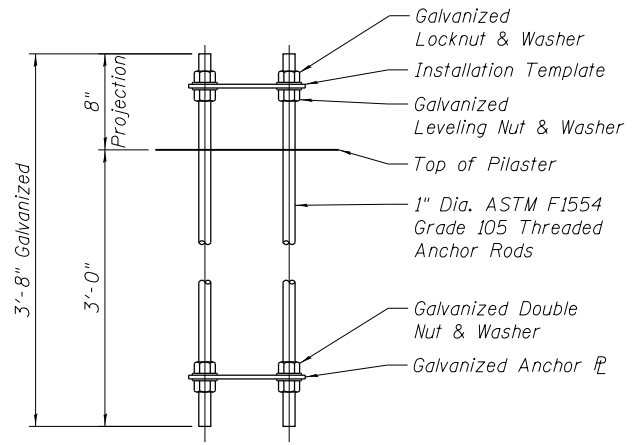
ELEVATION G-G



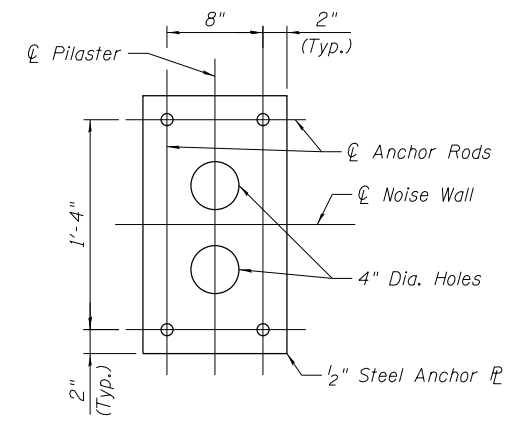
PLAN  
(AT SEGMENT 7 - EAST END)

Notes:

1. For moment slab details not provided here, see Moment Slab Plan and Elevation sheets.
2. For locations of Section A-A, see Moment Slab Plan and Elevation sheets.
3. For Bar List and Bar Details, see Sheet MS-15.
4. Noise Abatement Wall not shown for clarity, see Sht. MS-3.
5. Cost of P/JF & bond breaker is included with Concrete Superstructure.
6. Drill and grout a4(E) bars. Locate at the mid-depth of adjacent PCC pavement.



ELEVATION

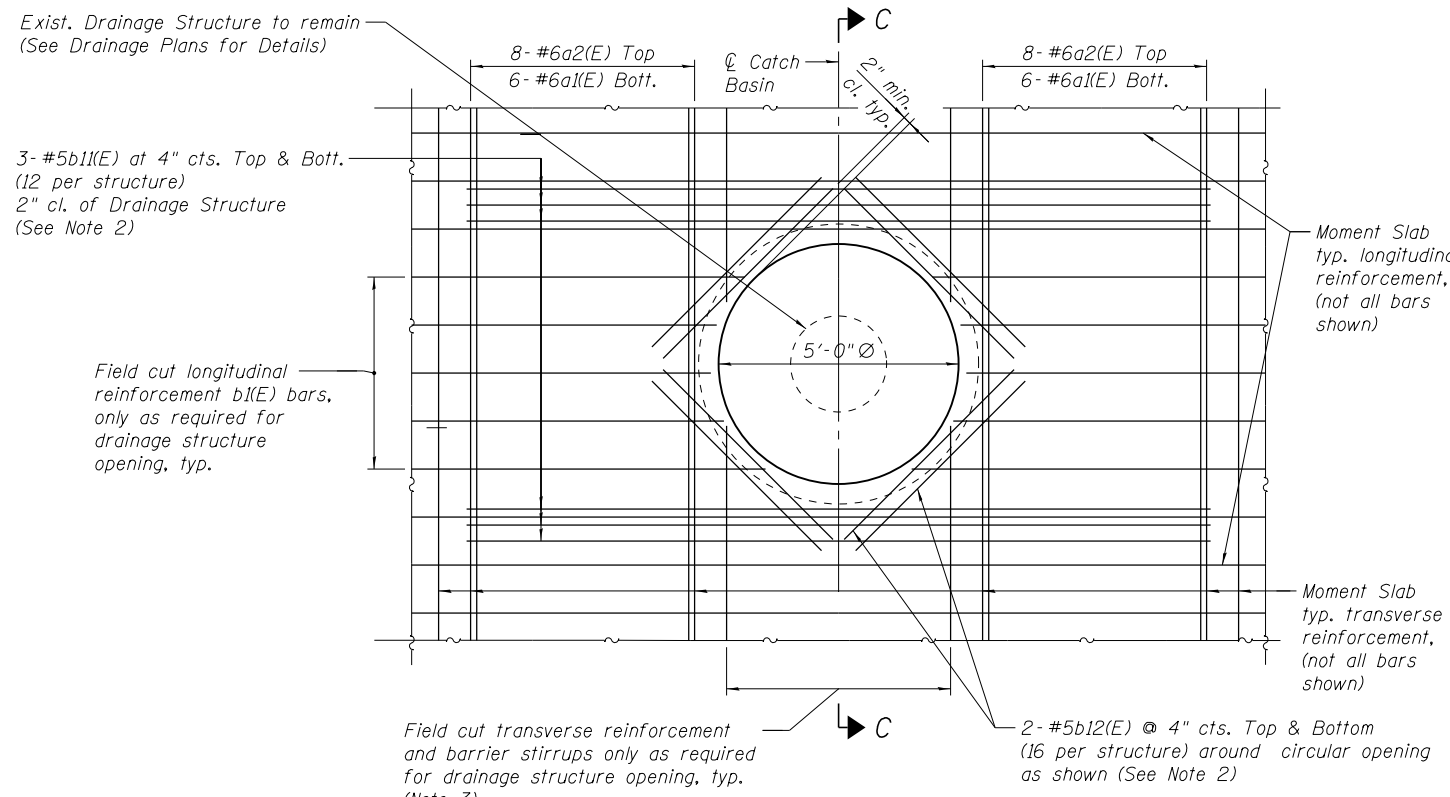


PLAN - ANCHOR PLATE

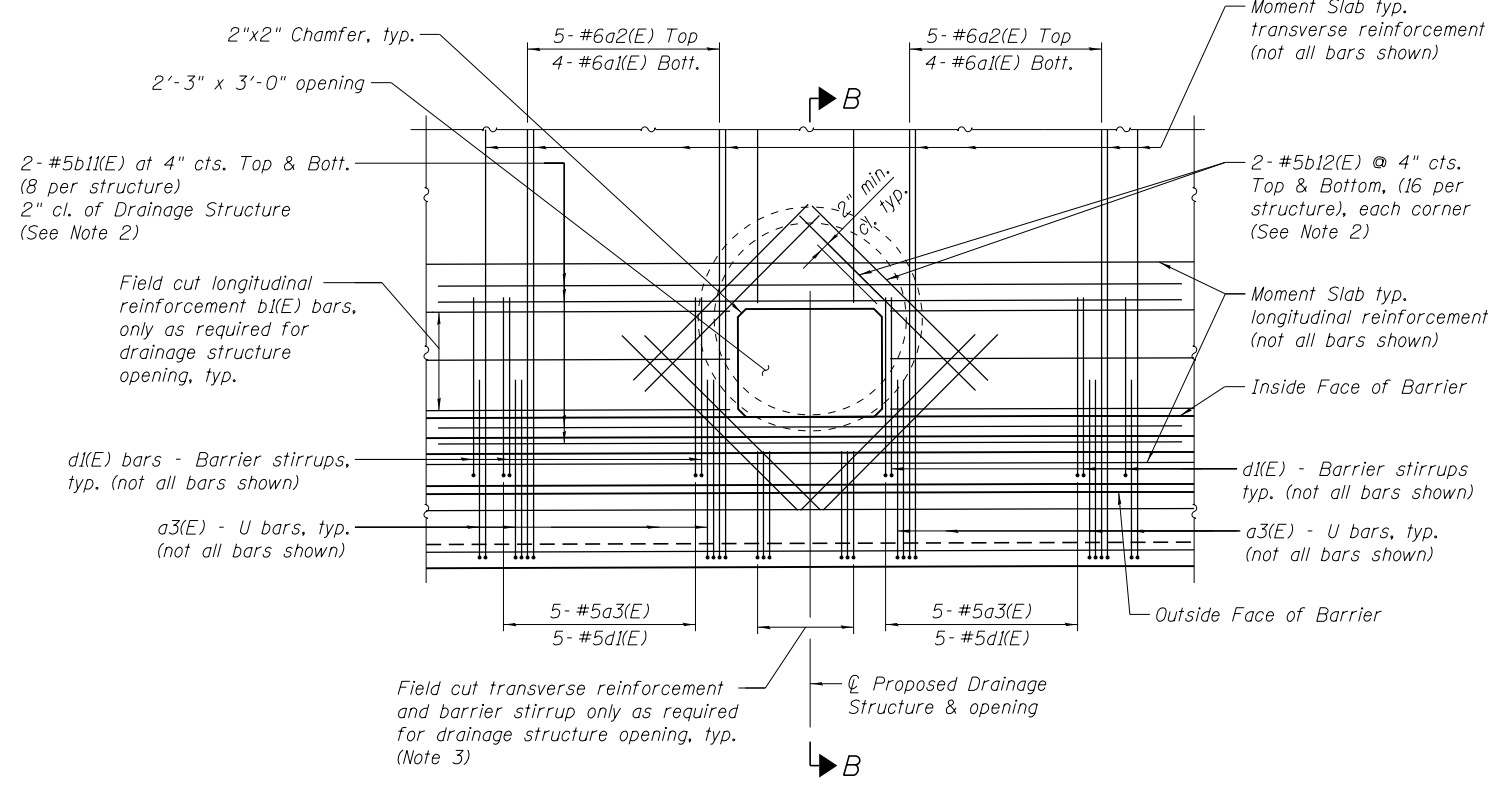
ANCHOR ROD ASSEMBLY FOR NOISE ABATEMENT WALL  
(36 THUS)

USER NAME = JOHNSHB	DESIGNED STD	REVISED
PLOT SCALE = @ 1/2" = 1' / in.	CHECKED KK	REVISED
PLOT DATE = 11/28/2017	DRAWN FD	REVISED
	DATE 8/21/2017	REVISED

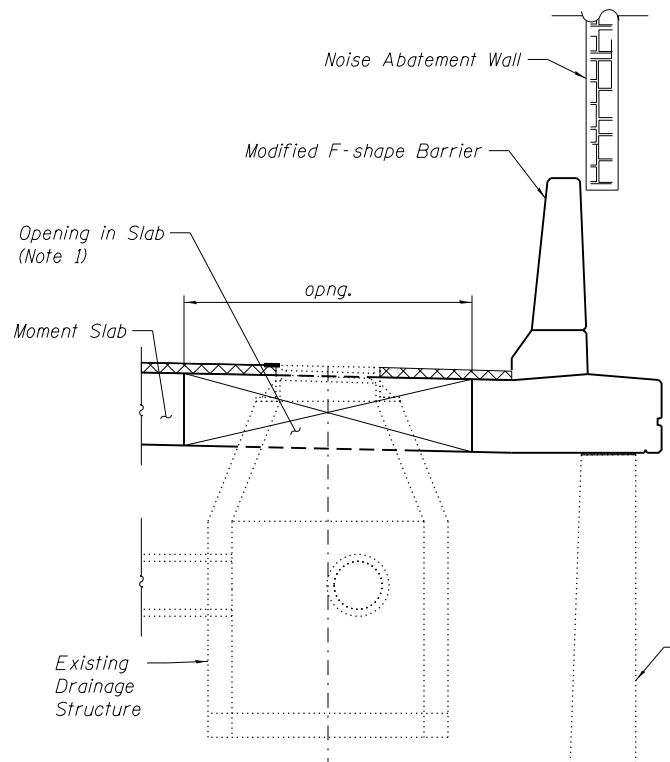
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-90	(1517 & 1415) R-2	COOK	353	205
S.N. 016-2293		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



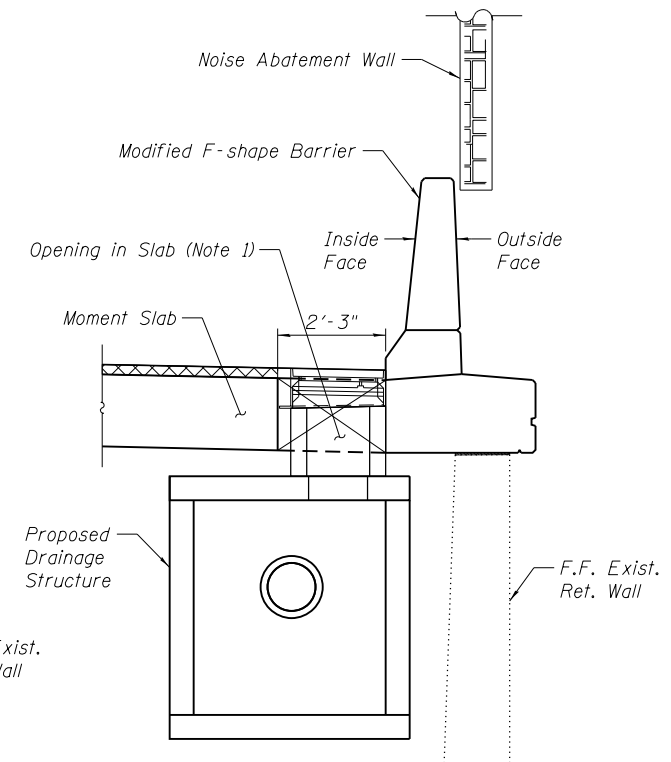
**PLAN AT EXISTING DRAINAGE STRUCTURE**  
(1 THUS)



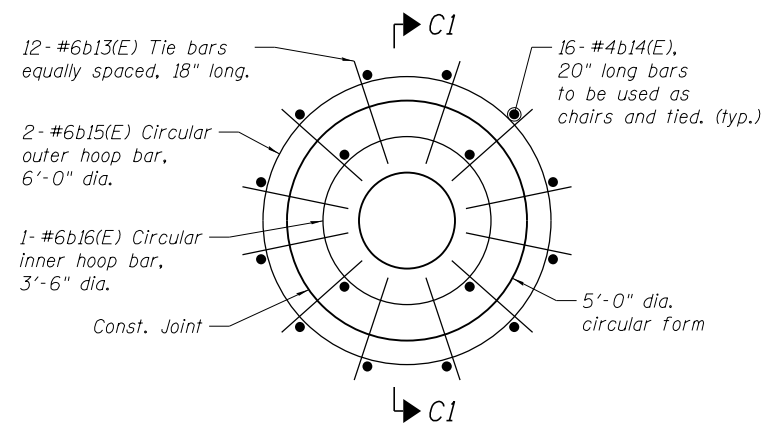
**PLAN AT PROPOSED DRAINAGE STRUCTURE**  
(2 THUS)



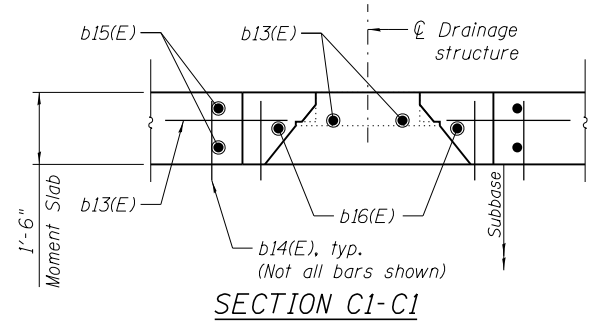
**SECTION C-C**  
(AT EXISTING DRAINAGE STRUCTURE)



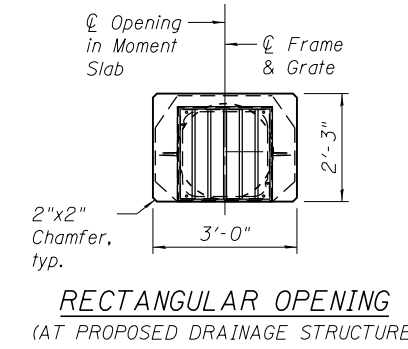
**SECTION B-B**  
(AT PROPOSED DRAINAGE STRUCTURE)



**REINFORCEMENT DETAIL AT CIRCULAR OPENING**



**SECTION C1-C1**

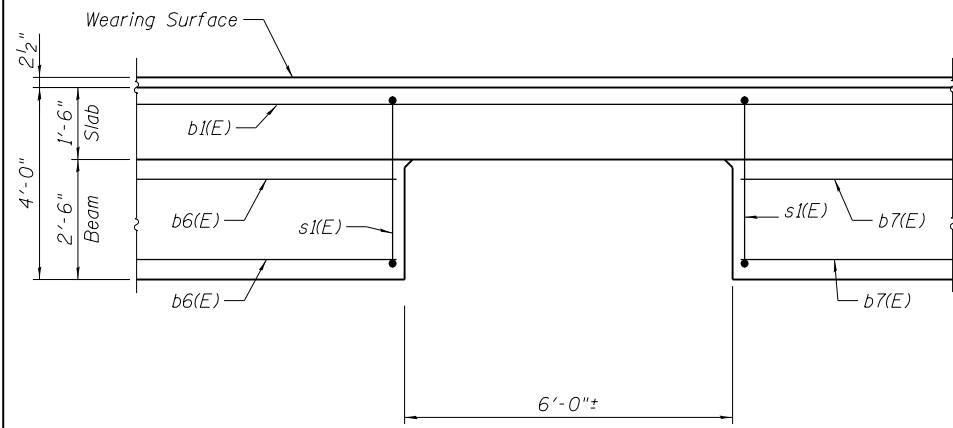


**RECTANGULAR OPENING**  
(AT PROPOSED DRAINAGE STRUCTURE)

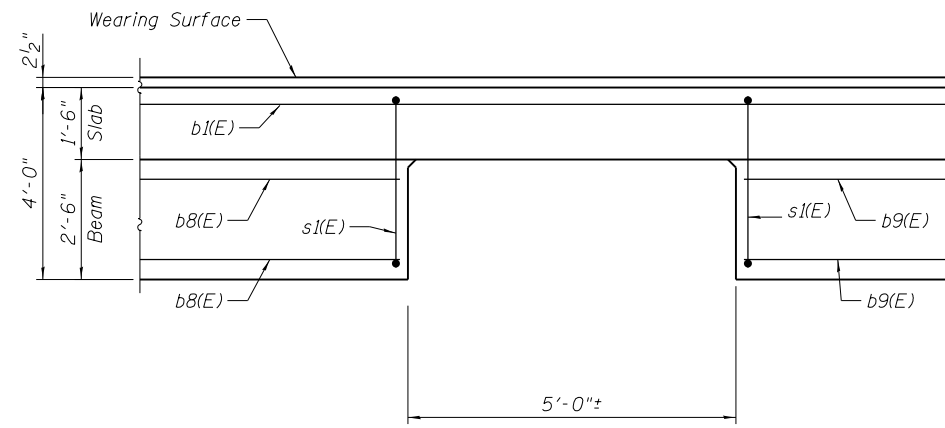
- Notes:**
1. Fill in the opening around drainage structures with concrete after placing the proposed drainage structures and replacing the lids on existing drainage structures. Cost included with Concrete Structures.
  2. Place bars symmetric about centerline of drainage structure as space permits.
  3. For each transverse bar & barrier stirrup field cut, place equal number of additional same bars on each side of opening.
  4. Size and shape of drainage structures are approximate, see Drainage Plans for details.
  5. For Bar List, see Sht. MS-15.

USER NAME = #USER#	DESIGNED STD	REVISED
CHECKED KK	REVISOR	
PLOT SCALE = #SCALE#	DRAWN FD	REVISOR
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISOR

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-90	(1517 & 1415) R-2	COOK	353	206
S.N. 016-2293		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



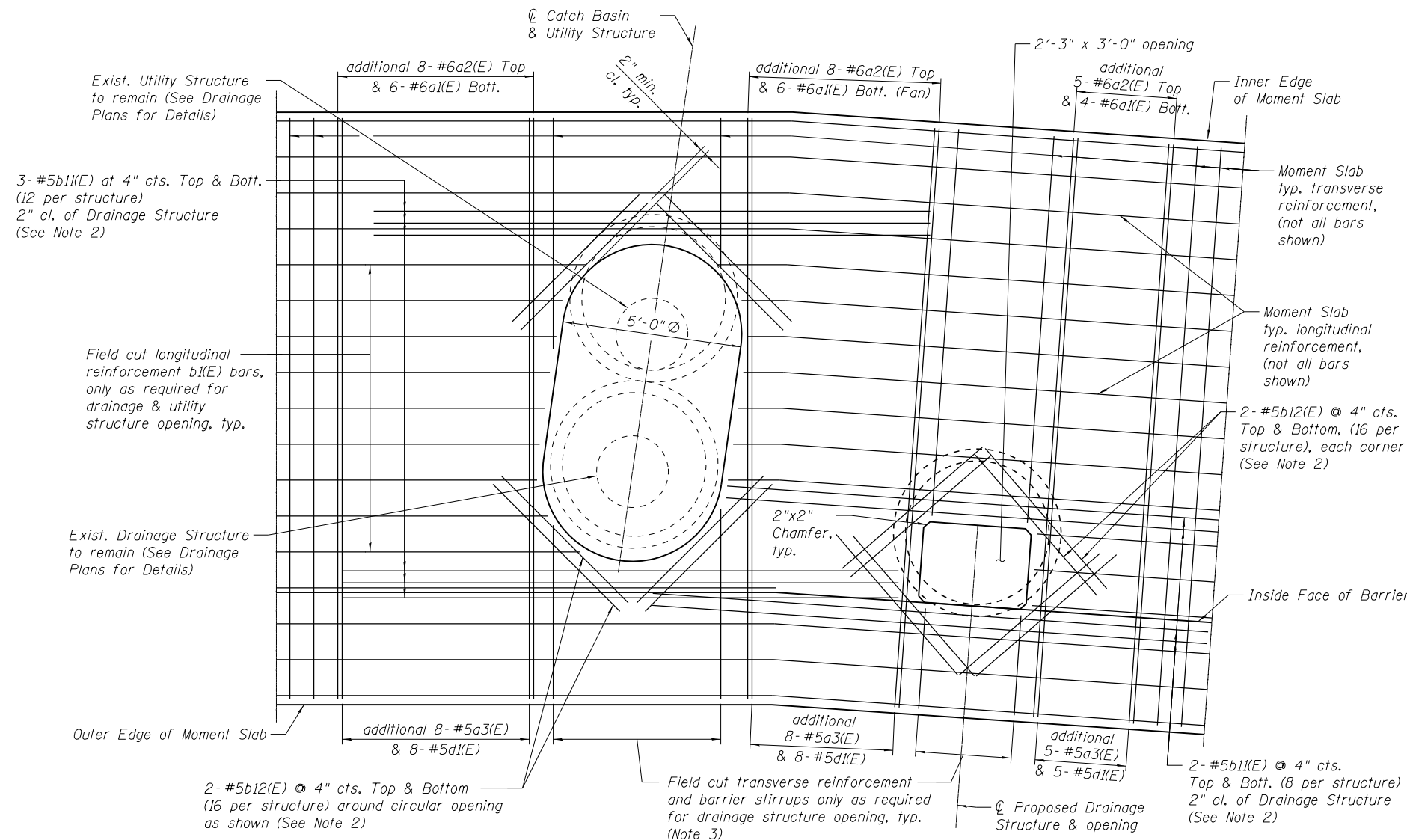
SECTION D-D



SECTION E-E

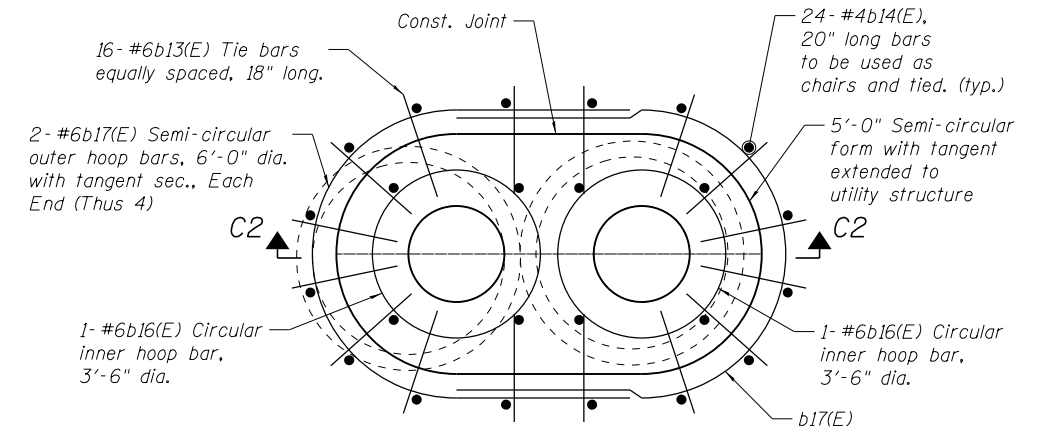
**Notes:**

1. Fill in the opening around drainage structures with concrete after placing the proposed drainage structures and replacing the lids on existing drainage structures. Cost included with Concrete Structures.
2. Place bars symmetric about  $\bar{C}$  drainage structure as space permits.
3. For each transverse bar & barrier stirrup field cut, place equal number of additional same bars on each side of opening.
4. Size and shape of drainage structures are approximate, see Drainage Plans for details.
5. For Bar List, see Sht. MS-15.

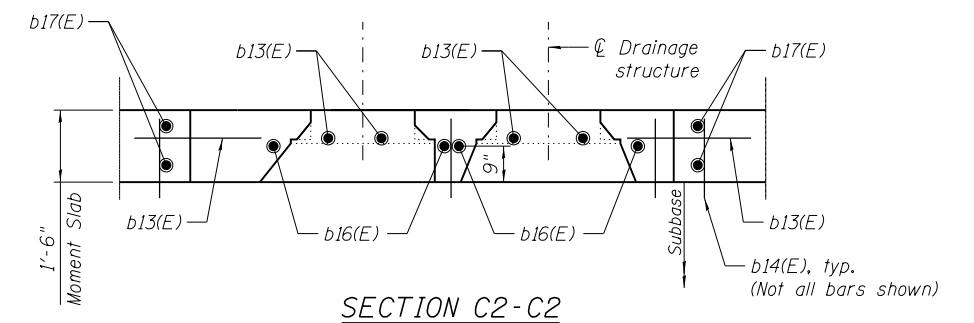


PLAN AT EXISTING DRAINAGE & UTILITY STRUCTURES

(1 THUS)



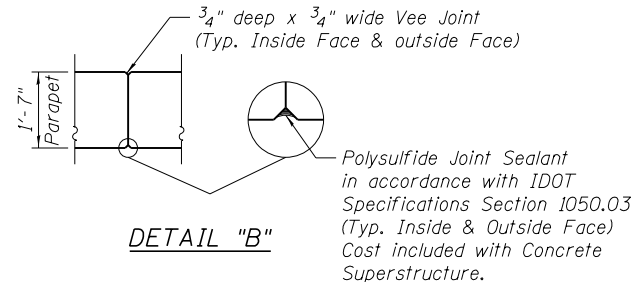
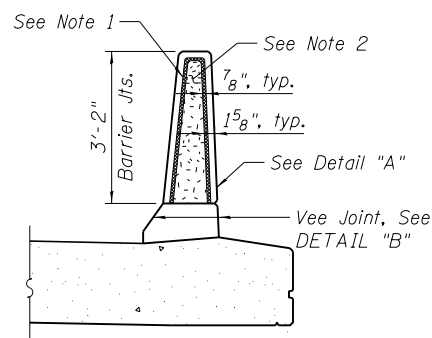
REINFORCEMENT DETAIL AT SEMI-CIRCULAR OPENING



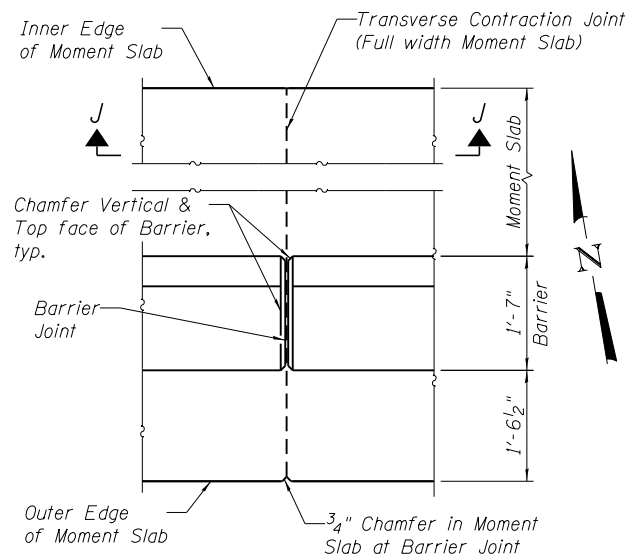
SECTION C2-C2

USER NAME = *USER*	DESIGNED STD	REVISED
PLOT SCALE = *SCALE*	CHECKED KK	REVISED
PLOT DATE = 8-15-2017	DRAWN FD	REVISED
	DATE 8/21/2017	REVISED

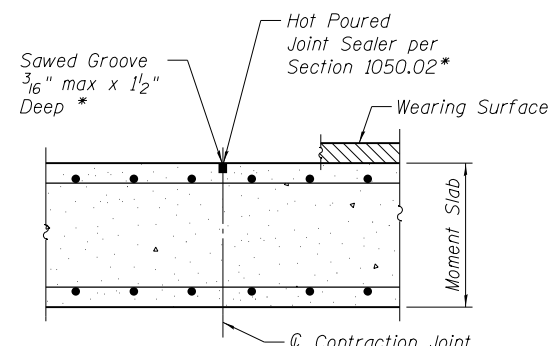
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-90	(1517 & 1415) R-2	COOK	353	207
S.N. 016-2293		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



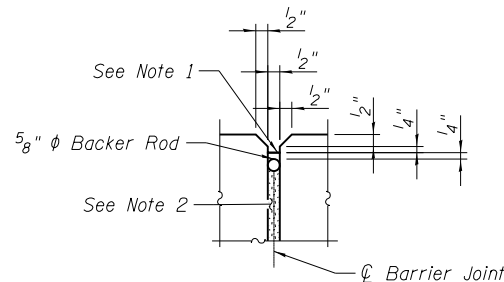
**BARRIER JOINT**  
(in between expansion joints)



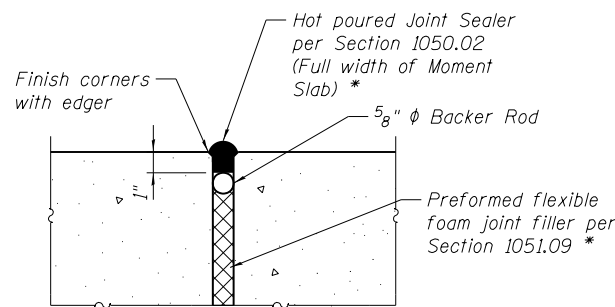
**PLAN - CONTRACTION JOINT**



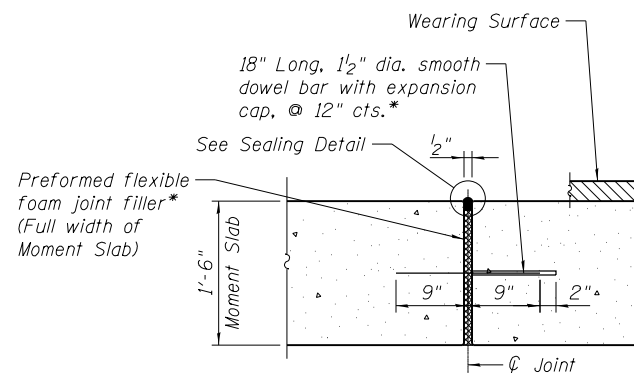
**SECTION J-J**



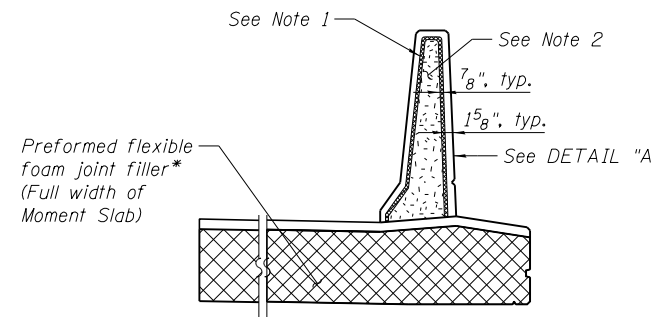
**DETAIL "A"**



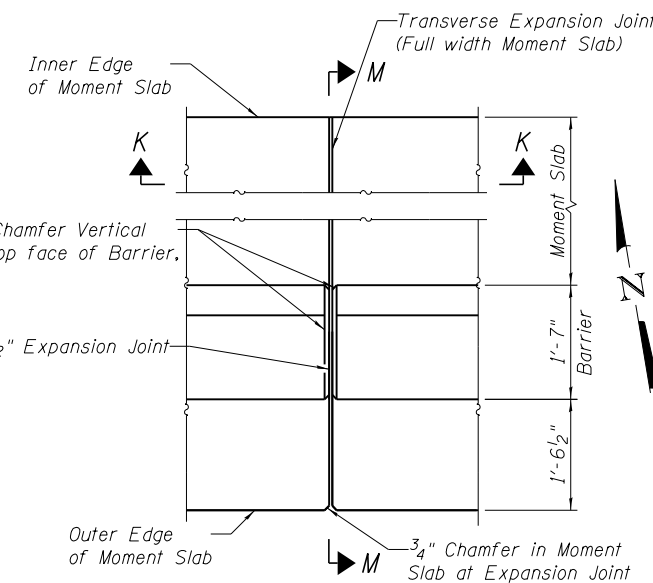
**SEALING DETAIL**



**SECTION K-K**



**SECTION M-M**



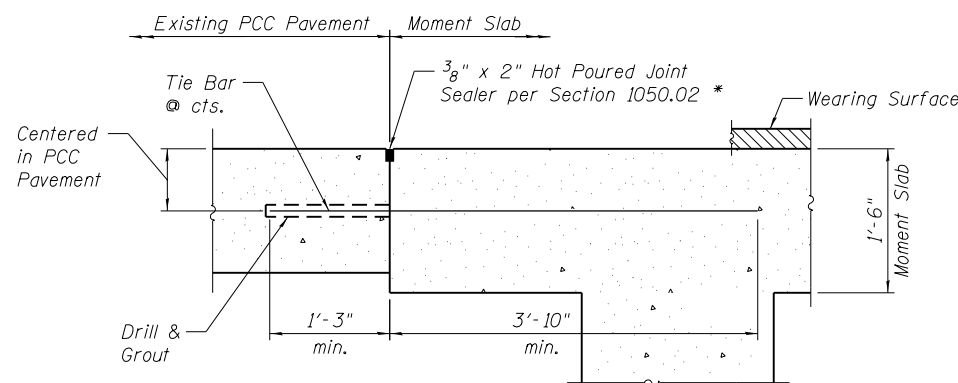
**PLAN - TYPICAL TRANSVERSE EXPANSION JOINT**

**TRANSVERSE CONTRACTION JOINT**

**Notes:**

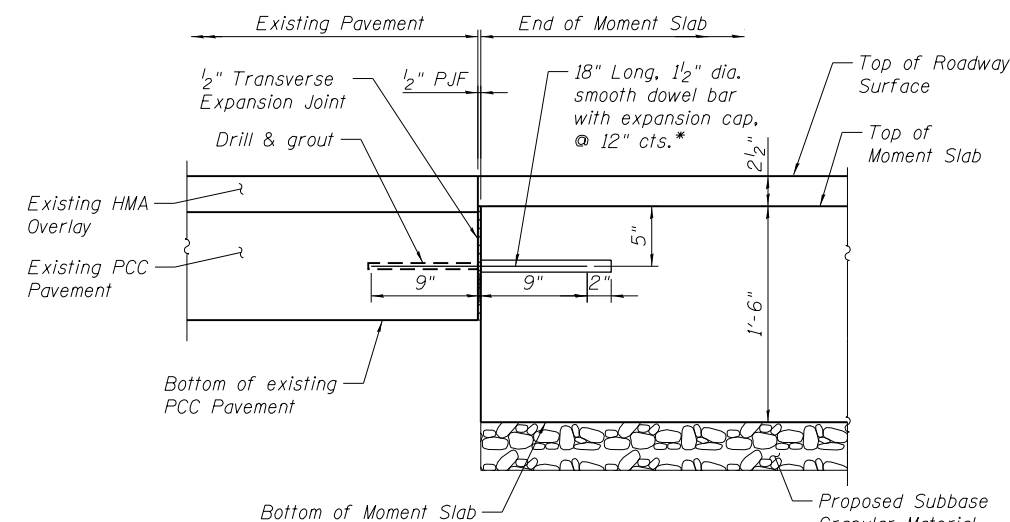
1. Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25, use T with a backer rod.
2. Performed Self-Expanding Cork Joint Filler according to Article 1051.07 of Std. Spec.

\* Cost to be included with Concrete Structures



**LONGITUDINAL CONSTRUCTION JOINT**

(Sta. 601+73.81 to 605+99.43)

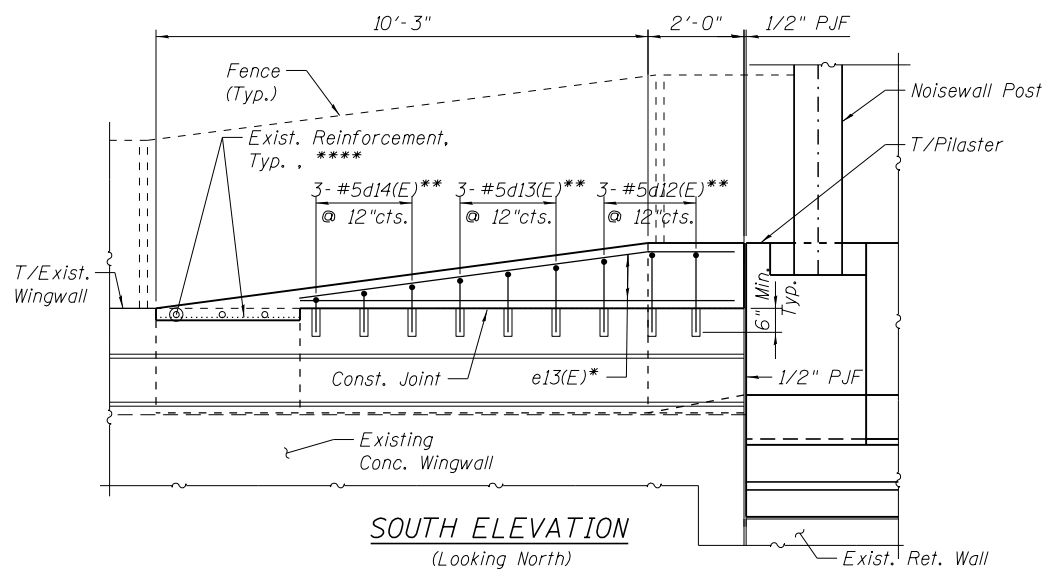


**SECTION L-L**

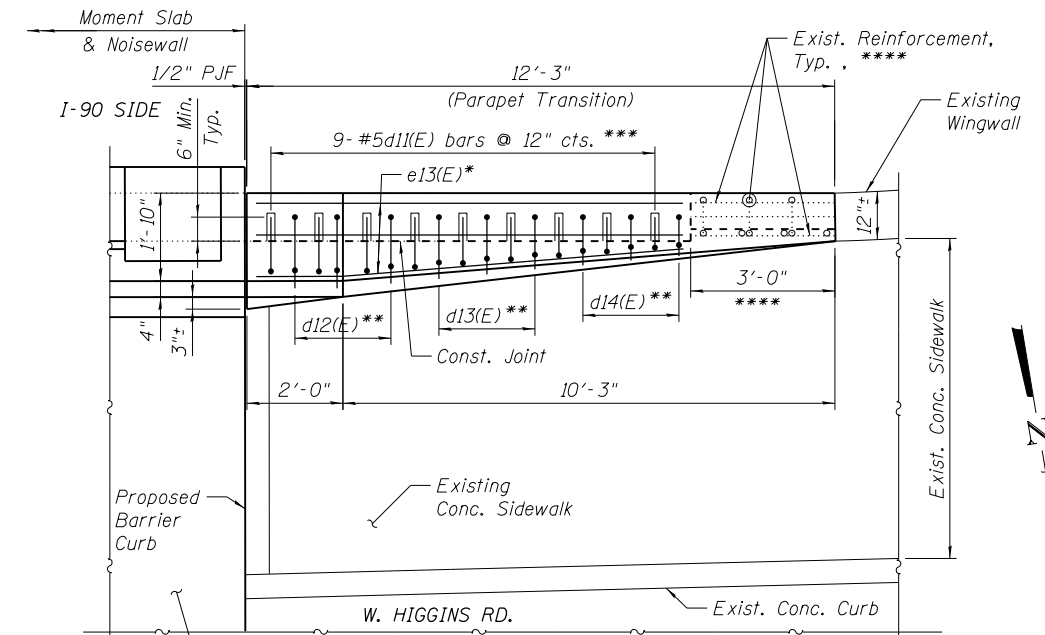
At Ends of Moment Slab  
(See Moment Slab Plan for locations)

**TRANSVERSE EXPANSION JOINTS**

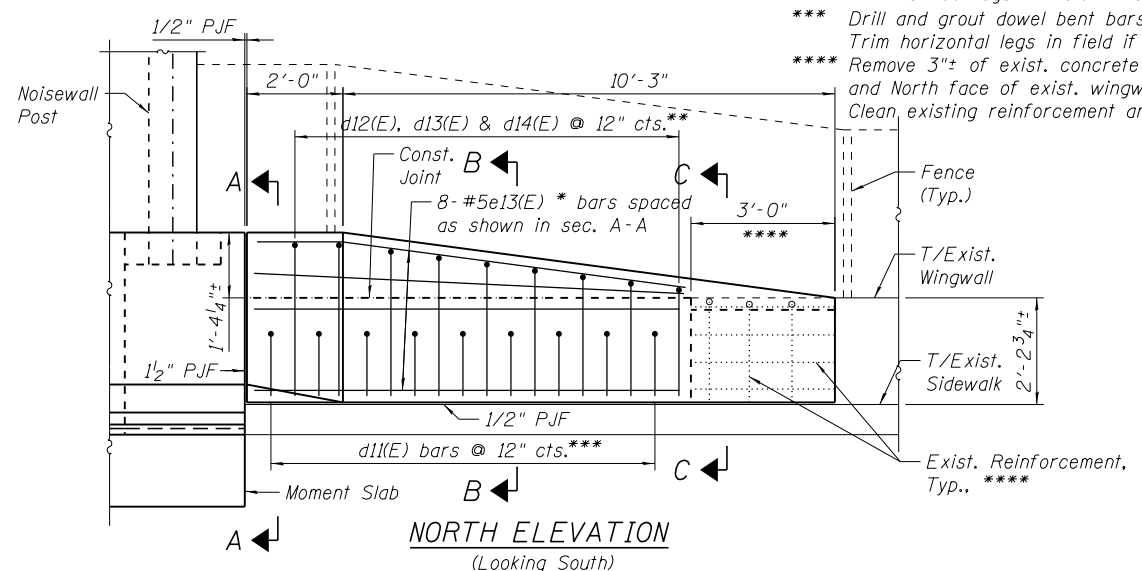




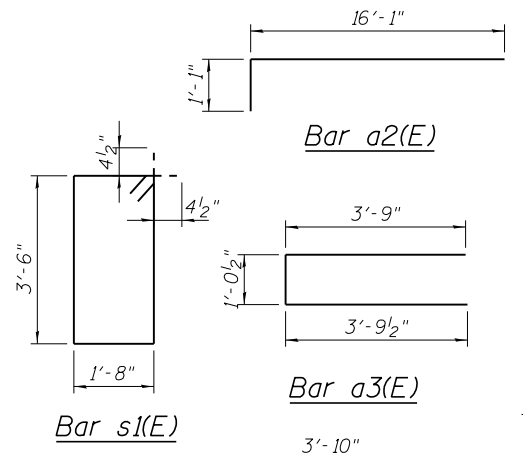
**SOUTH ELEVATION**  
(Looking North)



**PLAN**  
(Parapet Transition)

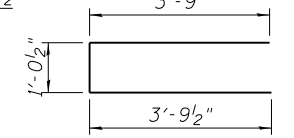


**NORTH ELEVATION**  
(Looking South)

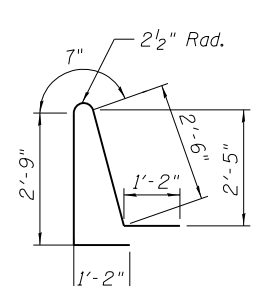


**Bar s1(E)**

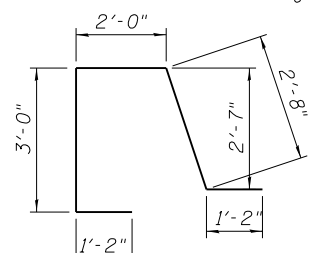
**Bar a2(E)**



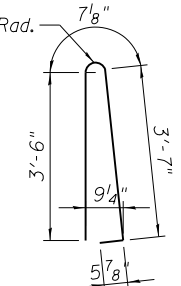
**Bar a3(E)**



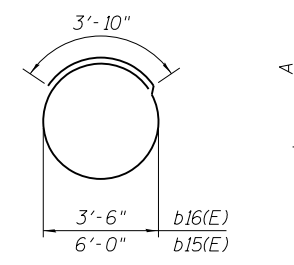
**Bar d1(E)**



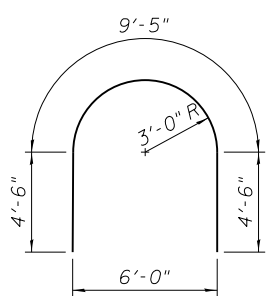
**Bar d2(E)**



**Bar d3(E)**



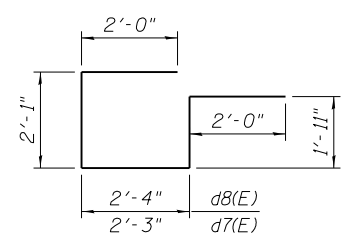
**Bars b15(E) & b16(E)**



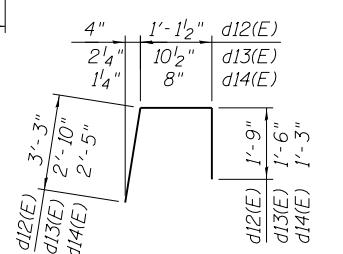
**Bar b17(E)**

Bar	A	B
d4(E)	3'-9"	6"
d5(E)	4'-7"	2'-0"
d9(E)	5'-3"	2'-0"
d11(E)	1'-3"	1'-3"
d15(E)	2'-0"	2'-0"

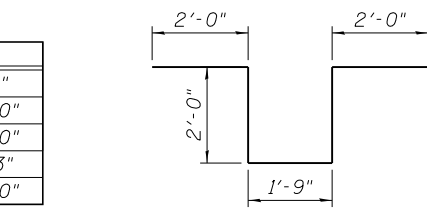
**Bars d4(E), d5(E), d9(E), d11(E) & d15(E)**



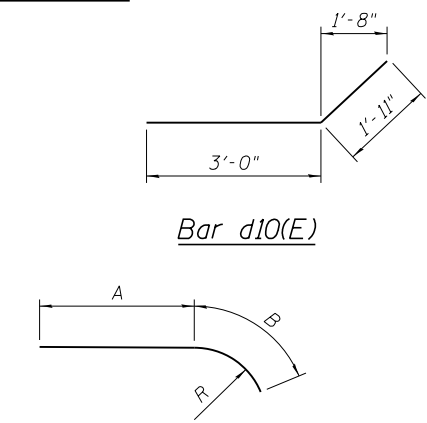
**Bars d7(E) & d8(E)**



**Bars d12(E), d13(E) & d14(E)**



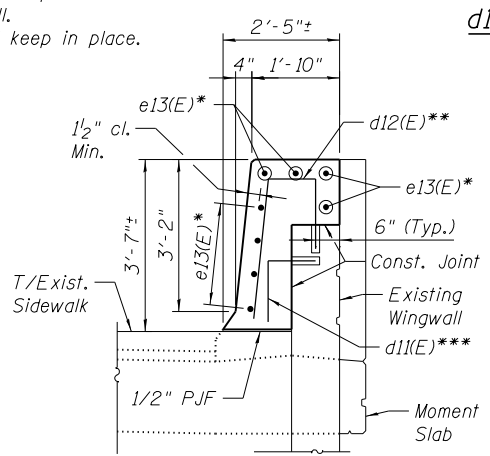
**Bar d6(E)**



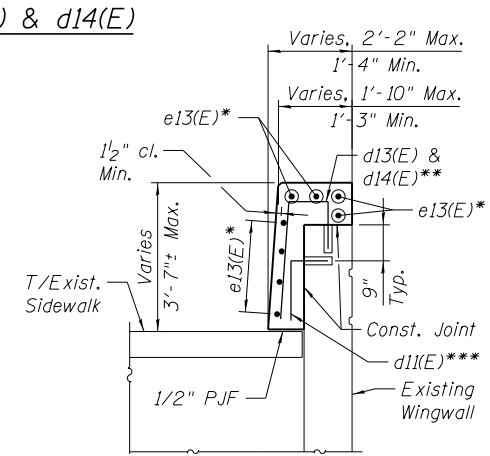
**Bar d10(E)**

Bar	A	B	R
e3(E)	6'-9"	3'-1"	2'-6"
e7(E)	3'-0"	2'-0"	1'-8"
e11(E)	3'-9"	2'-7"	2'-2"
e12(E)	3'-9"	2'-1"	1'-8"

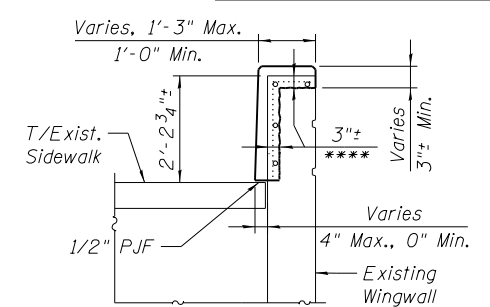
**Bars e3(E), e7(E), e11(E) & e12(E)**



**SECTION A-A**



**SECTION B-B**



**SECTION C-C**

**BAR LIST**

Bar	No.	Size	Length	Shape
a1(E)	477	#6	16'-2"	—
a2(E)	699	#6	17'-2"	—
a3(E)	683	#5	8'-7"	—
a4(E)	322	#6	5'-1"	—
b1(E)	510	#5	26'-6"	—
b2(E)	34	#5	23'-8"	—
b3(E)	68	#5	23'-0"	—
b4(E)	63	#4	25'-10"	—
b5(E)	7	#4	23'-8"	—
b6(E)	7	#4	23'-3"	—
b7(E)	14	#4	22'-3"	—
b8(E)	14	#4	20'-0"	—
b9(E)	14	#4	17'-0"	—
b10(E)	14	#4	22'-8"	—
b11(E)	48	#5	15'-6"	—
b12(E)	80	#5	5'-2"	—
b13(E)	28	#6	1'-6"	—
b14(E)	40	#4	1'-8"	—
b15(E)	2	#6	22'-9"	○
b16(E)	3	#6	14'-10"	○
b17(E)	4	#6	18'-5"	∩
d1(E)	597	#5	8'-2"	∩
d2(E)	147	#5	10'-0"	∩
d3(E)	556	#5	8'-2"	∩
d4(E)	151	#5	4'-3"	∩
d5(E)	149	#6	6'-7"	∩
d6(E)	170	#6	9'-9"	∩
d7(E)	5	#6	10'-3"	∩
d8(E)	5	#6	10'-4"	∩
d9(E)	2	#6	7'-3"	∩
d10(E)	5	#6	4'-11"	∩
d11(E)	9	#5	2'-6"	∩
d12(E)	3	#5	6'-2"	∩
d13(E)	3	#5	5'-3"	∩
d14(E)	3	#5	4'-4"	∩
d15(E)	1	#6	4'-0"	∩
e1(E)	11	#8	39'-3"	—
e2(E)	1	#8	23'-8"	—
e3(E)	1	#8	9'-10"	—
e4(E)	15	#4	26'-0"	—
e5(E)	136	#4	23'-8"	—
e6(E)	2	#4	22'-0"	—
e7(E)	1	#4	5'-0"	—
e8(E)	9	#4	23'-9"	—
e9(E)	9	#4	22'-8"	—
e10(E)	9	#4	15'-0"	—
e11(E)	5	#4	6'-4"	—
e12(E)	4	#4	5'-10"	—
e13(E)	8	#5	9'-6"	—
s1(E)	641	#4	11'-1"	∩

- \* Bend bars in field as required to fit.
- \*\* Drill and grout dowel bent bars. Trim vertical legs in field if required to fit.
- \*\*\* Drill and grout dowel bent bars. Trim horizontal legs in field if required to fit.
- \*\*\*\* Remove 3"± of exist. concrete on top and North face of exist. wingwall. Clean existing reinforcement and keep in place.



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/28/14

ROUTE -- DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Oriole Ave.) LOGGED BY VH

SECTION -- LOCATION SW 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H S Qu	B L O W S Qu	U C S Qu	M O I S T Qu	Surface Water Elev.		D E P T H S Qu	B L O W S Qu	U C S Qu	M O I S T Qu
					ft	n/a				
BORING NO. NWB-01 Station 3076+21 Offset 109.40ft Left Ground Surface Elev. 655.40	(ft)	(/6")	(tsf)	(%)						
3.0" ASPHALT, 9.0" CONCRETE										
654.40										
SAND with Gravel-brown-loose to dense (Fill)		15						10		
		19		3				5		17
		22						8		
		13						5		
		15		5				6		9
		17						7		
		-5								
		4								
		5		5						
		8								
		5								
		6		4						
		5								
		-10								
		4								
		4		7						
		3								
642.40										
CLAYEY SAND with Gravel-dark gray-very loose (Fill)		6								
		1		13						
		2								
		-15								
639.90										
SAND with Gravel-brown-very loose to medium dense (Fill)		2								
		2		16						
		1								
		4								
		1		11						
		3								
		-20								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/28/14

ROUTE -- DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Oriole Ave.) LOGGED BY VH

SECTION -- LOCATION SW 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H S Qu	B L O W S Qu	U C S Qu	M O I S T Qu	Surface Water Elev.		D E P T H S Qu	B L O W S Qu	U C S Qu	M O I S T Qu
					ft	n/a				
BORING NO. NWB-02 Station 3077+61 Offset 112.20ft Left Ground Surface Elev. 655.70	(ft)	(/6")	(tsf)	(%)						
3.0" ASPHALT, 9.0" CONCRETE										
654.70										
SAND with Gravel-brown-medium dense (Fill)		12						3		
		13		4				4	1.7	21
		13						5	B	
		10						2		
		3	0.6	30				3	1.1	22
		3	B					5	B	
		-5								
		6								
		4	2.7	22						
		5	B							
		2								
		3	1.2	24						
		5	B							
		-10								
		4								
		5	2.6	18						
		7	B							
		2								
		4	1.8	22						
		6	B							
		-15								
		2								
		4	1.1	23						
		4	B							
		2								
		4	1.8	23						
		4	B							
		-20								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

# SOIL BORING LOG

ROUTE -- DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Oriole Ave.) LOGGED BY VH

SECTION -- LOCATION SW 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	D	B	U	M	Surface Water Elev.	D	B	U	M
Station	E	L	C	O	Stream Bed Elev.	E	L	C	O
	P	O	S	I		P	O	S	I
	T	W	Q	S		H	S	U	T
	H	S	u	T		T	S	Qu	T
BORING NO.	(ft)	(/6")	(tsf)	(%)	Groundwater Elev.:	(ft)	(/6")	(tsf)	(%)
Station					First Encounter				
Offset					Upon Completion				
Ground Surface Elev.					After				
	ft	(ft)	(/6")	(tsf)	Hrs.	ft	(ft)	(/6")	(tsf)
3.0" ASPHALT, 9.0" CONCRETE					CLAY-brown & gray-stiff to hard (continued)				
655.00									
SAND with Gravel-brown-medium dense (Fill)		10				3			
		14		3		5	1.5	22	
		16				5	B		
653.00									
CLAY-brown & gray-stiff to hard									
		2				3			
		2	2.8	22		5	1.8	22	
		4	P		End Of Boring @ -25.0'. Boring backfilled with cuttings.	6	B		
	-5				631.00	-25			
		5							
		6	6.8	19					
		9	B						
		4							
		7	6.5	19					
	-10	8	B			-30			
becoming gray @ -10.5'									
		2							
		5	6.5	19					
		9	B						
		4							
		5	4.0	19					
	-15	7	B			-35			
		4							
		4	2.9	20					
		6	B						
		3							
		4	2.5	21					
	-20	6	B			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

# SOIL BORING LOG

ROUTE -- DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Oriole Ave.) LOGGED BY VH

SECTION -- LOCATION SW 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	D	B	U	M	Surface Water Elev.	D	B	U	M
Station	E	L	C	O	Stream Bed Elev.	E	L	C	O
	P	O	S	I		P	O	S	I
	T	W	Q	S		H	S	U	T
	H	S	u	T		T	S	Qu	T
BORING NO.	(ft)	(/6")	(tsf)	(%)	Groundwater Elev.:	(ft)	(/6")	(tsf)	(%)
Station					First Encounter				
Offset					Upon Completion				
Ground Surface Elev.					After				
	ft	(ft)	(/6")	(tsf)	Hrs.	ft	(ft)	(/6")	(tsf)
4.0" ASPHALT, 8.0" CONCRETE					CLAY-brown & gray-stiff to hard (continued)				
654.40									
CLAY-brown & gray-stiff to hard									
		6				4			
		4	4.8	19		6	1.9	22	
		4	B			8	B		
		3				3			
		8	7.5	19	End Of Boring @ -25.0'. Boring backfilled with cuttings.	5	2.9	20	
	-5	10	B		630.40	8	B		
		5							
		9	6.3	20					
		13	B						
		3							
		6	6.5	20					
	-10	10	B			-30			
		2							
		4	4.2	20					
		8	B						
		4							
		7	4.1	19					
	-15	10	B			-35			
		3							
		7	2.6	19					
		9	B						
		4							
		6	1.9	22					
	-20	7	B			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Bench Mark: Chain Bolt on hydrant on NW corner of Nordica and Bryn Mawr Ave.

Existing Structure: Existing structure constructed in 1959, is a T-type cast-in-place retaining wall on a spread footing. The retaining wall is approximately 595 feet long with a max. exposed height of 13'-3". A chain link fence is mounted on top of the wall. Top portion of wall will be removed and a Moment Slab and associated noise wall will be constructed in this contract. Existing wall to remain. Traffic to be maintained in both directions during construction using Higgins Road lane closures when required.

Salvage - None

**LOADING**

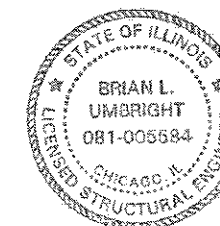
Allow 35 psf wind load for Structure Mounted Noise Wall (see Special Provision)  
 Maximum Dead Load not to exceed 55 psf of Noise wall face area.  
 Traffic Impact per AASHTO LRFD Bridge Specifications

**DESIGN SPECIFICATIONS**

AASHTO LRFD Bridge Design Specifications, 7th Edition (2014) with 2016 Interim Revisions

**DESIGN STRESSES**

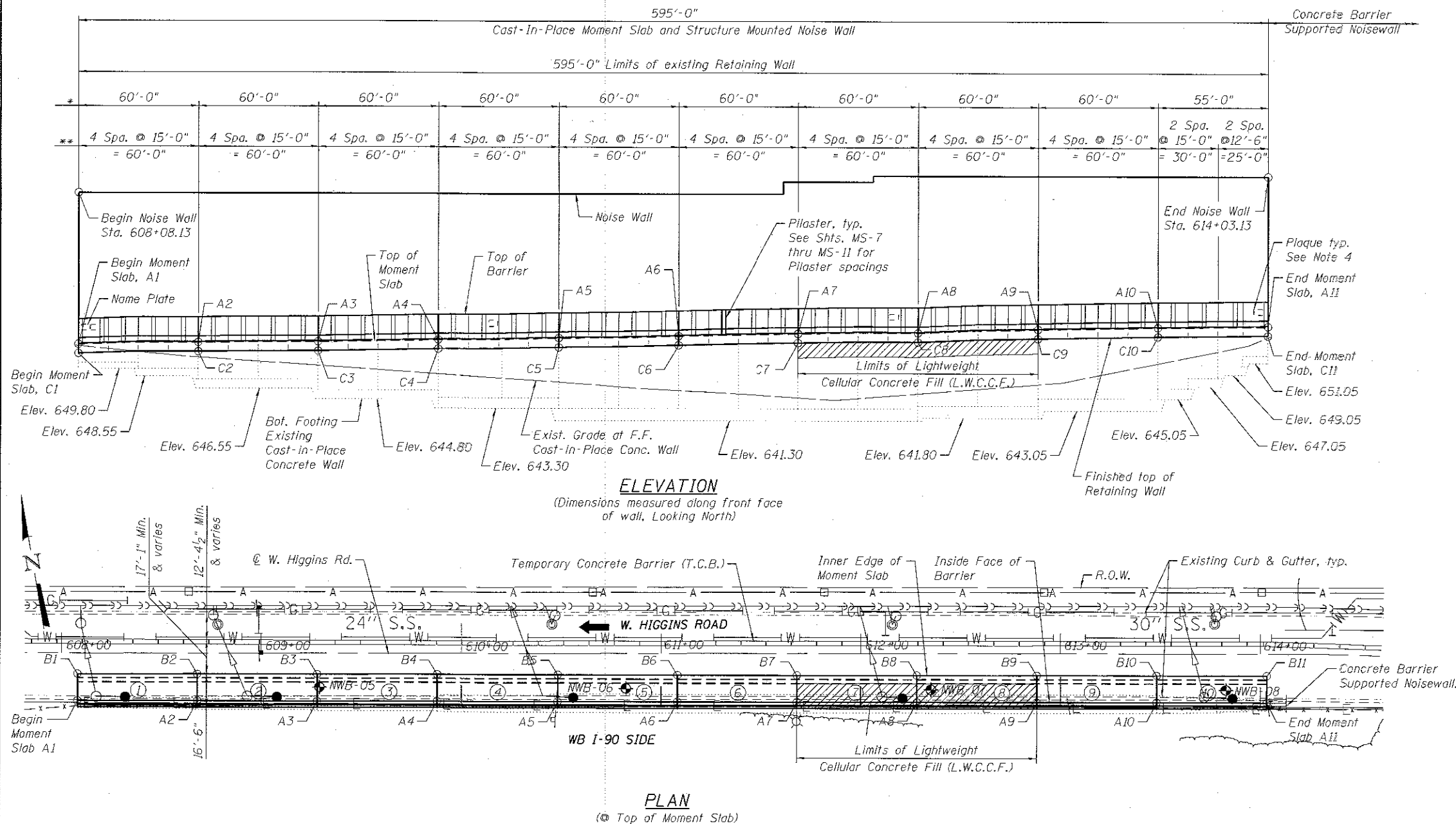
(Field Units)  
 f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)  
 Existing Units (Allowable)  
 f'c = 800 psi  
 fy = 20,000 psi (Reinforcement)



Signed: *Brian L. Umbright*  
 Date: 01/19/2018  
 Exp: 11/30/2018  
 Sheets: S-1 thru S-18

**APPROVED**  
 For Structural Adequacy Only

*Brian L. Umbright*  
 Engineer of Bridges & Structures

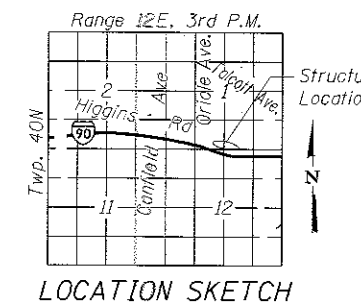


**LEGEND:**

- E— Exist. Electrical Line
- X— Exist. Fence
- G— Exist. Gas Line
- S— Exist. Storm Sewer
- W— Exist. Water Line
- P— Prop. Storm Sewer
- A— Exist. Aerial Line
- U— Exist. Underground Combined Sewer
- ⊙ Boring Location
- Proposed Catch Basin
- Exist. Manhole
- ⊗ Moment Slab Segment Number
- ← Temporary Travel Lane
- ⊙ Exist. Light Pole

**Notes:**

1. Horizontal dimensions measured along front face (I-90 side) of Existing Retaining Wall U.N.O.
  2. Stations & offsets are relative to @ W. Higgins Road.
  3. Stations, offsets & elevations for control points are provided on Sheet MS-3.
  4. Provide Plaque on inside face (W. Higgins Road side) of Barrier. See Moment Slab/ Barrier Elevation for Locations.
- \* Expansion Joint Spacing in Barrier and Moment Slab (along front face (I-90 side) of Existing Retaining Wall)  
 \*\* Construction Joint Spacing in Barrier



**GENERAL PLAN AND ELEVATION**  
**W. HIGGINS ROAD**  
**F.A.P. RTE. I-90 - SEC. (1517 & 1415) R-2**  
**COOK COUNTY**  
**STA. 608+08.13 TO STA. 614+03.13**  
**STRUCTURE NO. 016-2294**

exp U.S. Services Inc. CHICAGO, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = #USER#	DESIGNED STD	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN &amp; ELEVATION</b> <b>MOMENT SLAB (S.N. 016-2294)</b> SHEET NO. MS-1 OF 18 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = @SCALE@	CHECKED KK	REVISED			1-90	(1517 & 1415) R-2	COOK	353	212
	PLOT DATE = 1-17-2018	DRAWN STD	REVISED			S.N. 016-2294	CONTRACT NO. 60Y40			
	DATE 8/21/2017	REVISED				ILLINOIS FED. AID PROJECT				

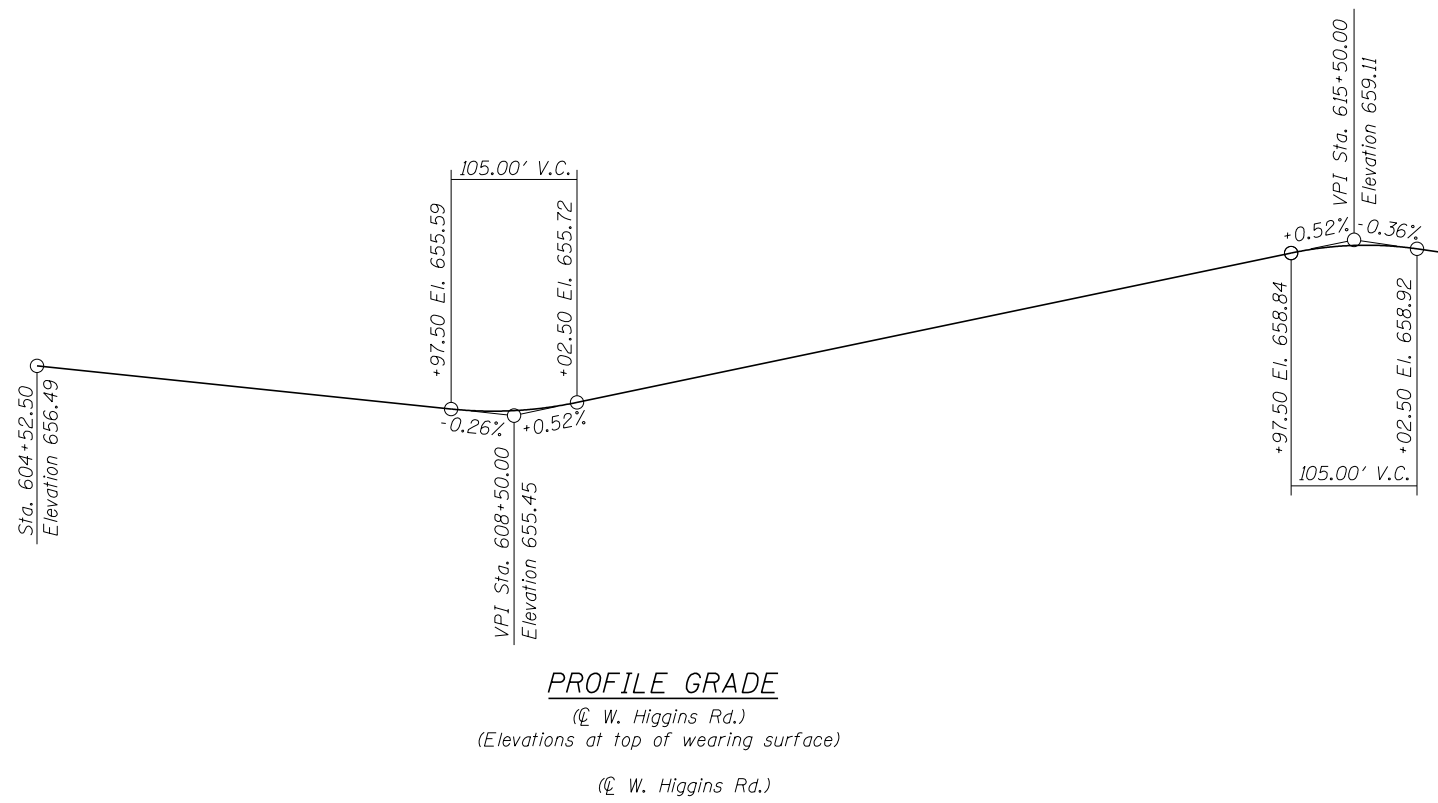
FILE NAME = #FILE#

**EXISTING STRUCTURE PLANS**

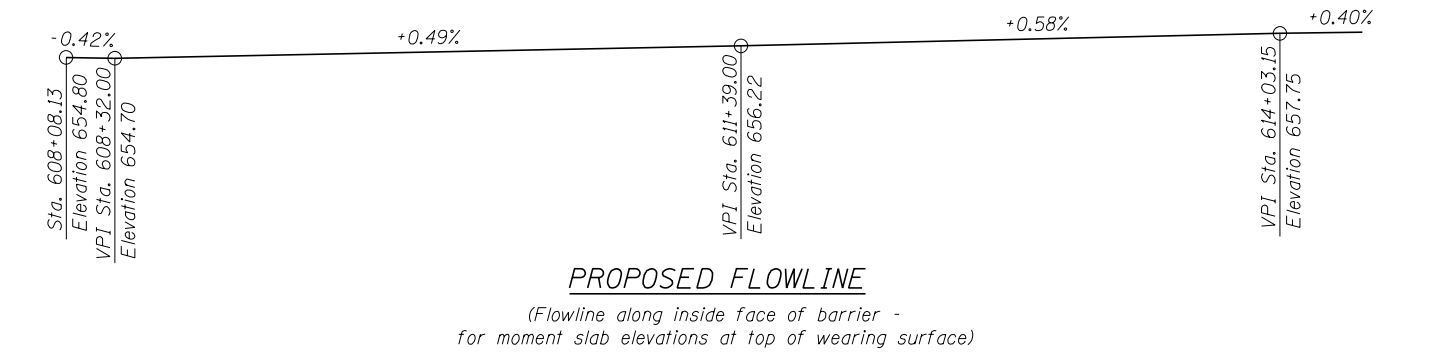
The existing structure plans are available from the IDOT - District One, 201 West Center Court, Schaumburg, Illinois 60196. The Contractor shall make an appointment with the Chief of Bureau of Maintenance (217.782.7820) with at least 48 hours notice to review or retrieve available microfilm drawings of the existing structure. The legibility and completeness of these plans is not guaranteed and no responsibility is assumed by the Department for their accuracy. Information is furnished for whatever value may be derived by the Contractor, and is to be used solely at the Contractor's risk.

**GENERAL NOTES**

- Reinforcing bar bending details shall be in accordance with the latest "Manual of Standard Practice for Detailing Reinforced Concrete Structures", ACI 315, latest edition.
- Reinforcement bar bending dimensions are out to out.
- Reinforcing bars designated "(E)" shall be epoxy coated.
- All exposed concrete edges shall have a 3/4" x 45° chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground line.
- Bars noted thus, 3x2-#5 indicates 3 lines of #5 bars with 2 lengths of bars per line.
- No construction joints except those shown on the plans will be allowed unless otherwise approved by the Engineer.
- It shall be the Contractor's responsibility to verify the location of all utilities prior to starting construction. Contact J.U.L.I.E., 800-892-0123.
- Plan dimensions and details relative to existing structure are taken from existing plans, and are subject to nominal construction variations. The contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.



**PROFILE GRADE**  
(☐ W. Higgins Rd.)  
(Elevations at top of wearing surface)  
(☐ W. Higgins Rd.)



**PROPOSED FLOWLINE**  
(Flowline along inside face of barrier -  
for moment slab elevations at top of wearing surface)

**INDEX OF SHEETS**

- MS-1 General Plan & Elevation
- MS-2 Index of Sheets, General Notes & Total Bill of Material
- MS-3 Sections & Details
- MS-4 Partial Structure Removal - 1 of 3
- MS-5 Partial Structure Removal - 2 of 3
- MS-6 Partial Structure Removal - 3 of 3
- MS-7 Moment Slab Plan & Elevation - 1 of 5
- MS-8 Moment Slab Plan & Elevation - 2 of 5
- MS-9 Moment Slab Plan & Elevation - 3 of 5
- MS-10 Moment Slab Plan & Elevation - 4 of 5
- MS-11 Moment Slab Plan & Elevation - 5 of 5
- MS-12 Moment Slab & Barrier Details - 1 of 4
- MS-13 Moment Slab & Barrier Details - 2 of 4
- MS-14 Moment Slab & Barrier Details - 3 of 4
- MS-15 Moment Slab & Barrier Details - 4 of 4
- MS-16 Bar List & Details
- MS-17 Boring Logs - 1 of 2
- MS-18 Boring Logs - 2 of 2

STA. 608+08.13  
TO 614+03.13  
RE-BUILT 20\_ BY  
STATE OF ILLINOIS  
F.A.I. RT. 90  
SEC. (1517 & 1415) R-2  
STR. NO. 016-2294

**NAME PLATE**  
See Std. 515001

PLAQUE --  
MOMENT SLAB AREA  
DO NOT OPEN-CUT  
ROADWAY FROM  
PLAQUE 1 TO PLAQUE 4

**PLAQUE**  
(Paid for as Name Plate)

**PLAQUE LOCATIONS**

Plaque No.	Station*
1	608+13.40
2	610+14.40
3	612+16.40
4	614+00.40

\* Stations provided at top left corner of Plaques

TOTAL BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
Subbase Granular Material, Type B 4"	Sq Yd	836
Concrete Removal	Cu Yd	86.0
Structure Excavation	Cu Yd	844
Concrete Structures	Cu Yd	658.9
Concrete Superstructure **	Cu Yd	109.8
Protective Coat	Sq Yd	353
Reinforcement Bars, Epoxy Coated	Pound	131790
Name Plates	Each	5
Barrier Wall Reflectors, Type C	Each	8
Noise Abatement Wall Anchor Rod Assembly	Each	41
Lightweight Cellular Concrete Fill	Cu Yd	120
Granular Backfill for Structures	Cu Yd	198
Fence Removal	Foot	595

\*\* Includes cost of Traffic Barriers and Pilasters.

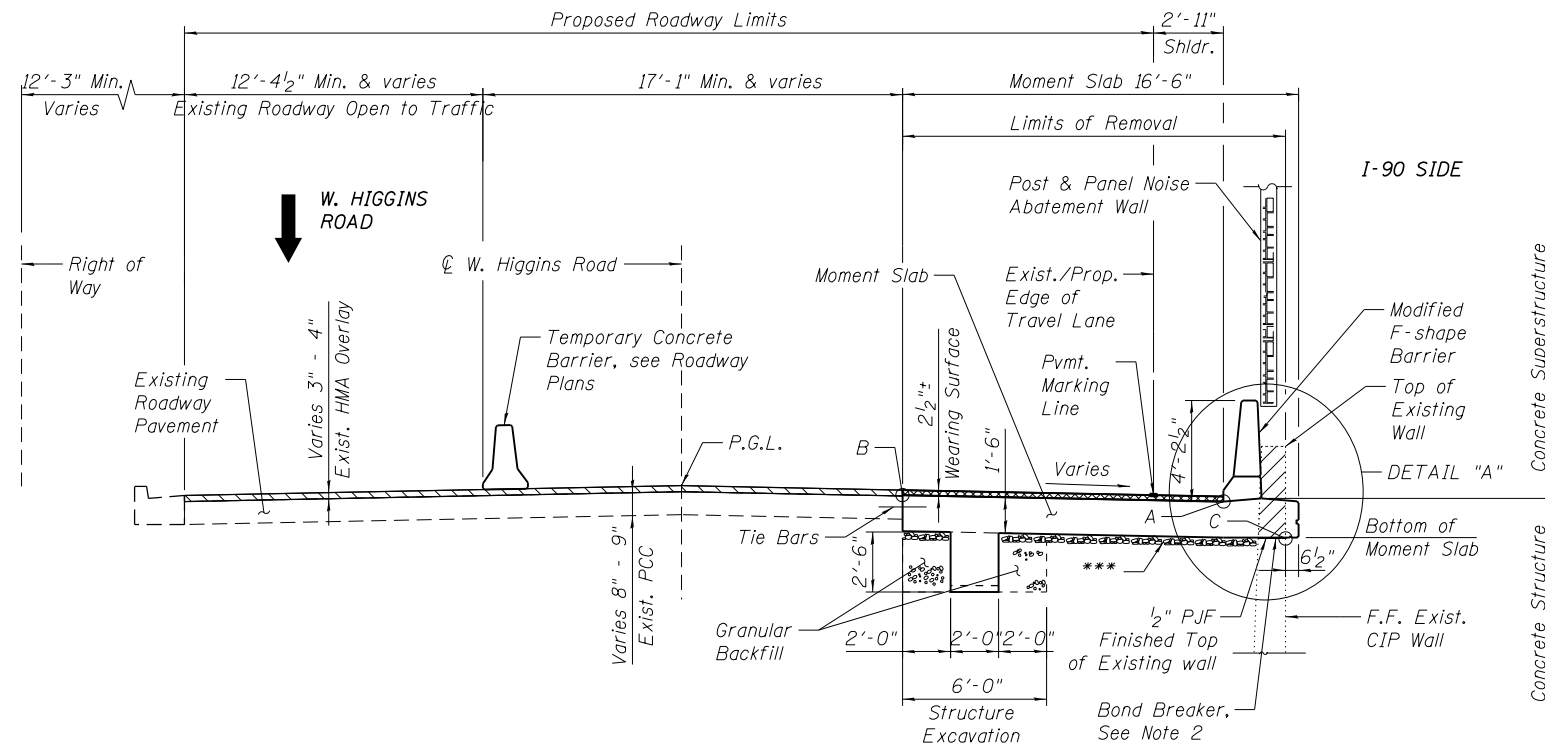
exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = #USER#	DESIGNED STD	REVISED
		CHECKED KK	REVISED
	PLOT SCALE = #SCALE#	DRAWN STD	REVISED
	PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, GENERAL NOTES & TOTAL BILL OF MATERIAL**  
**MOMENT SLAB (S.N. 016-2294)**

SHEET NO. MS-2 OF 18 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-90	(1517 & 1415) R-2	COOK	353	213
S.N. 016-2294		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



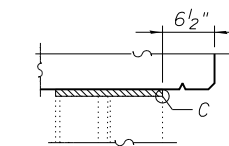
TYPICAL SECTION THRU MOMENT SLAB & NOISE WALL  
(Looking East)

INSIDE FACE OF BARRIER (A)			
Location	Station	Offset (LT)	Elevation
A1	608+08.13	23.80	654.59
A2	608+68.13	23.83	654.67
A3	609+28.13	23.93	654.96
A4	609+88.13	23.95	655.26
A5	610+48.14	24.04	655.56
A6	611+08.13	24.21	655.85
A7	611+68.13	24.31	656.17
A8	612+28.13	24.32	656.52
A9	612+88.13	24.31	656.87
A10	613+48.13	24.32	657.22
A11	614+03.13	24.41	657.54

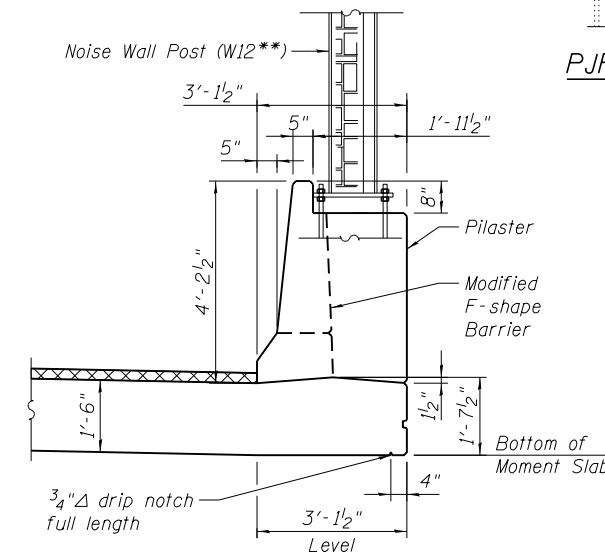
INNER EDGE OF MOMENT SLAB (B)			
Location	Station	Offset (LT)	Elevation
B1	608+08.13	10.42	655.02
B2	608+68.16	10.45	655.02
B3	609+28.13	10.56	655.14
B4	609+88.13	10.58	655.45
B5	610+48.18	10.67	655.74
B6	611+08.15	10.84	656.16
B7	611+68.15	10.93	656.58
B8	612+28.51	10.95	656.93
B9	612+88.12	10.93	657.31
B10	613+48.13	10.95	657.64
B11	614+03.24	11.04	657.87

FINISHED TOP OF EXISTING RETAINING WALL (C)		
Location	Station	Elevation
C1	608+08.13	653.05
C2	608+68.13	653.13
C3	609+28.13	653.42
C4	609+88.13	653.72
C5	610+48.13	654.02
C6	611+08.13	654.31
C7	611+68.13	654.63
C8	612+28.13	654.98
C9	612+88.13	655.33
C10	613+48.13	655.68
C11	614+03.13	656.00

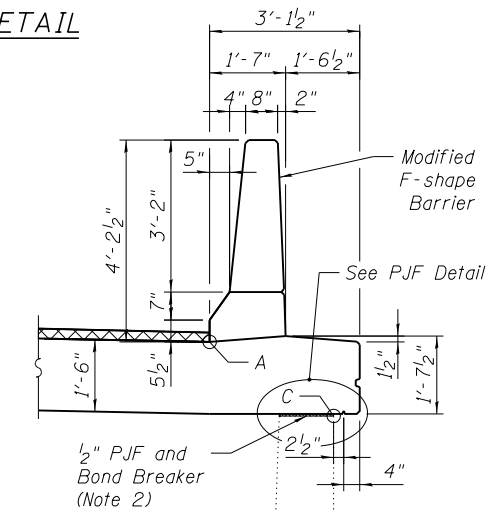
- A Stations, offsets and elevations for Inside Face of Barrier (at elevation 2 1/2" below top of wearing surface) are provided w.r.t. this point, see Plan & Elevation views.
- B Stations and offsets for Inner Edge of Moment Slab (at elevation 2 1/2" below top of wearing surface) are provided w.r.t. this point, see Plan view.
- C Stations and elevations for finished top of Retaining Wall (bottom of 1/2" PJF) are provided w.r.t. this point, see Elevation view.



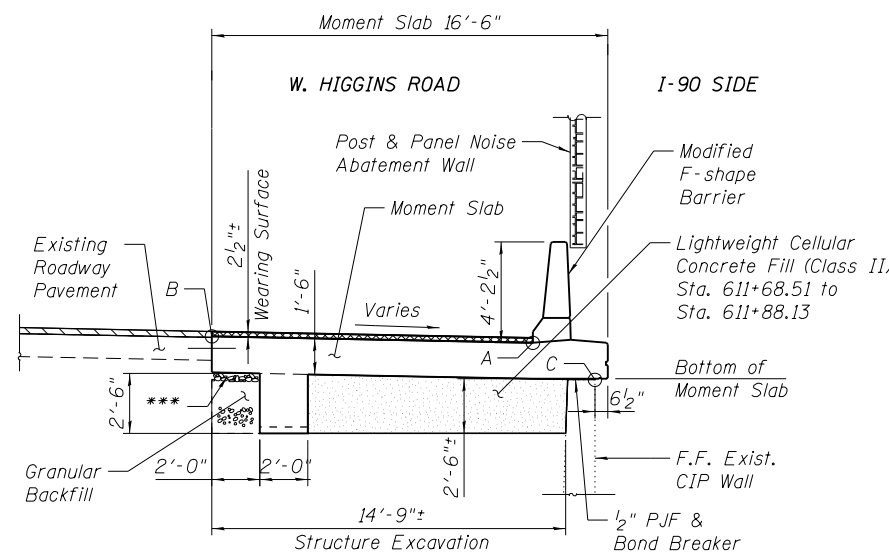
PJF DETAIL



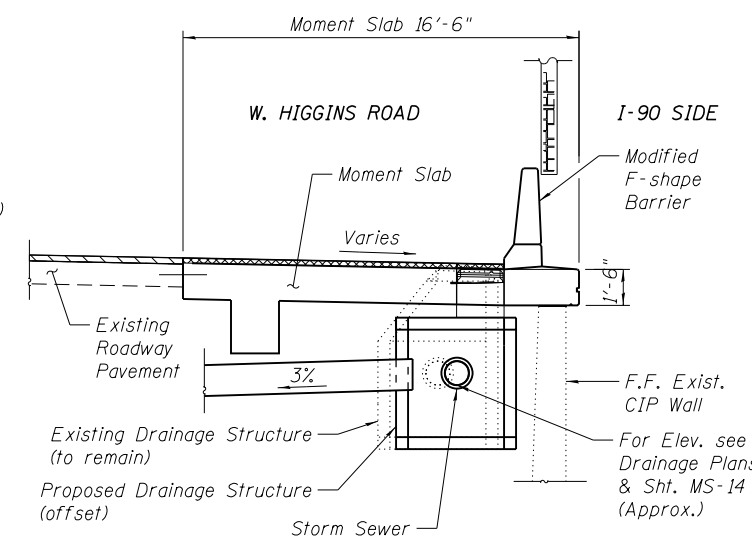
SECTION THRU MOMENT SLAB & NOISE WALL PILASTER



DETAIL "A"



SECTION THRU MOMENT SLAB  
(Looking East)  
(Sta. 611+51 to Sta. 611+88.13)



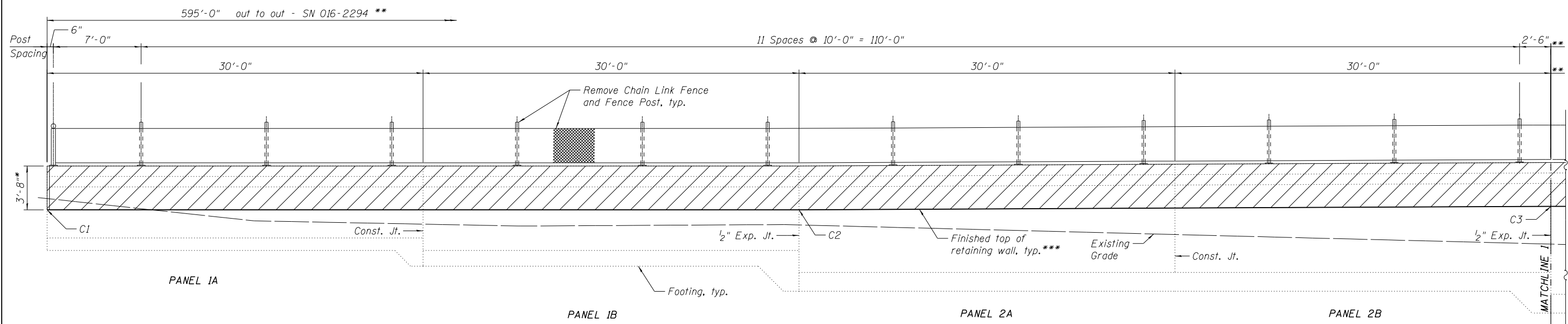
SECTION THRU MOMENT SLAB & NOISE WALL  
(Catch Basin Location)

LEGEND

- ➡ Temporary Travel Lanes
- ▨ Existing Concrete Removal

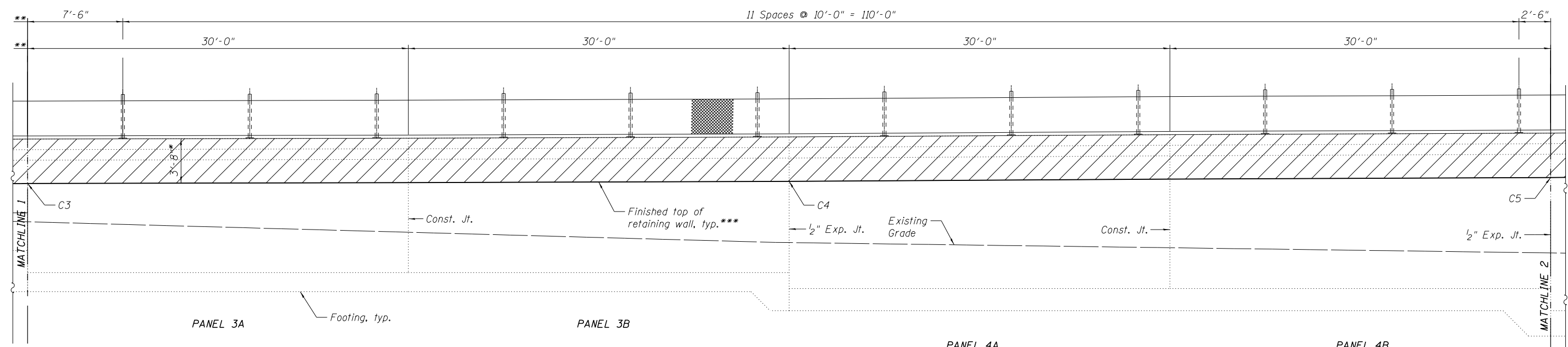
Notes:

- \*\* To be designed by Noise Abatement wall supplier.
- \*\*\* Subbase Granular Material, Type B 4"
- 1. See TYPICAL SECTION THRU MOMENT SLAB & NOISE WALL for location of Geometric Control Points.
- 2. Apply Bond Breaker followed by 1/2" PJF before casting Moment Slab concrete.



**ELEVATION**  
(Front face - I-90 side, looking north)

- \* Average Removal Height (For Quantity purposes only)
- \*\* Length taken from Existing Structure Plans - field verify. Distance measured along front face of Retaining wall.
- \*\*\* Finish ground smooth (concrete & rebar)



**ELEVATION**  
(Front face - I-90 side, looking north)

**LEGEND**



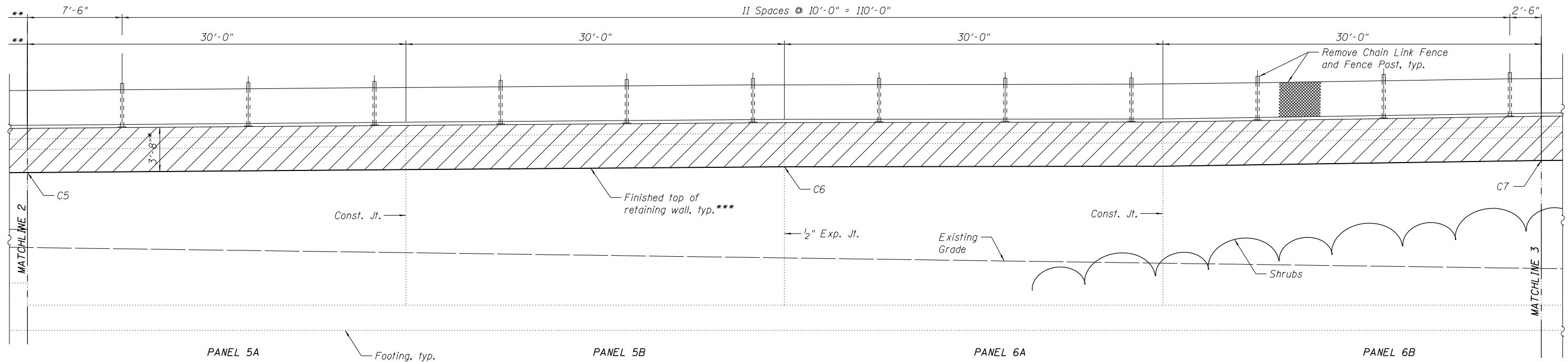
exp U.S. Services Inc. Chicago, IL BUILDINGS • EARTH & ENVIRONMENT • ENERGY INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY	USER NAME = *USER*	DESIGNED STD	REVISED
		CHECKED KK	REVISED
	PLOT SCALE = *SCALE*	DRAWN EG	REVISED
	PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PARTIAL STRUCTURE REMOVAL - 1 OF 3**  
**MOMENT SLAB (S.N. 016-2294)**

SHEET NO. MS-4 OF 18 SHEETS

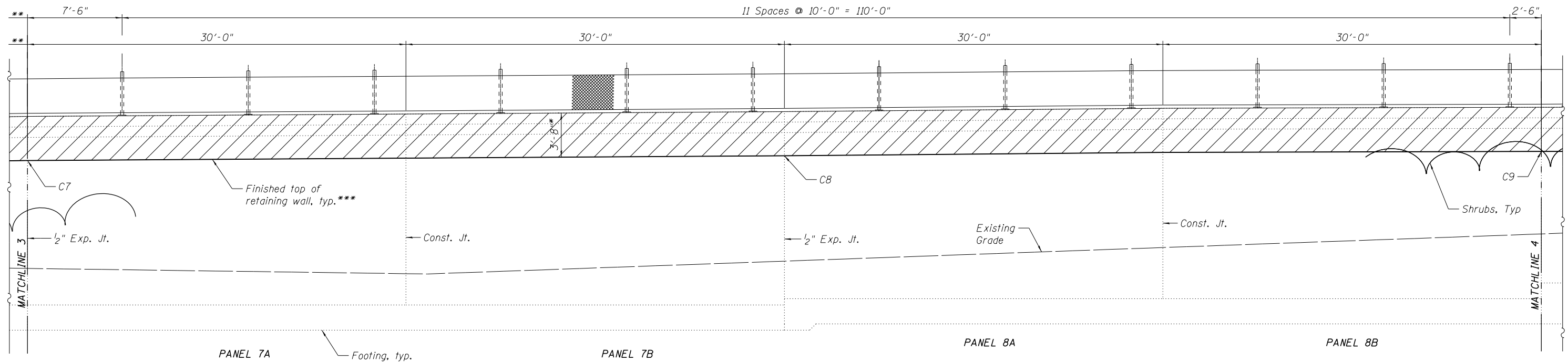
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	215
S.N. 016-2294		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



**ELEVATION**

(Front face - I-90 side, looking north)

- \* Average Removal Height (For Quantity purposes only)
- \*\* Length taken from Existing Structure Plans - field verify. Distance measured along front face of Retaining wall.
- \*\*\* Finish ground smooth (concrete & rebar)



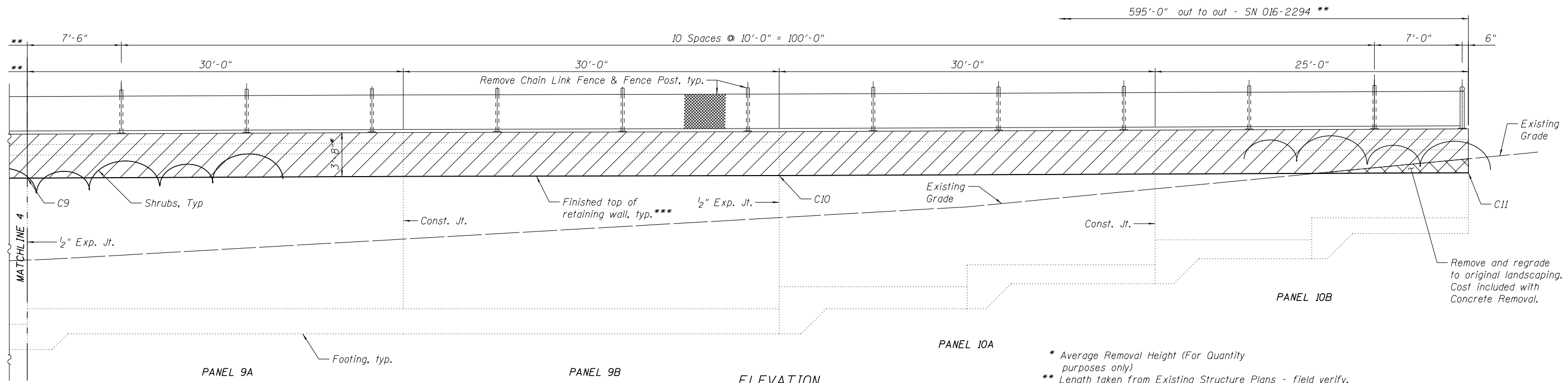
**ELEVATION**

(Front face - I-90 side, looking north)

USER NAME = *USER*	DESIGNED STD	REVISED
CHECKED KK	REVISIONS	
PLOT SCALE = *SCALE*	DRAWN EG	REVISED
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-90	(1517 & 1415) R-2	COOK	353	216
S.N. 016-2294		CONTRACT NO. 60Y40		





**ELEVATION**  
(Front face - I-90 side, looking north)

- \* Average Removal Height (For Quantity purposes only)
- \*\* Length taken from Existing Structure Plans - field verify. Distance measured along front face of Retaining wall.
- \*\*\* Finish ground smooth (concrete & rebar)

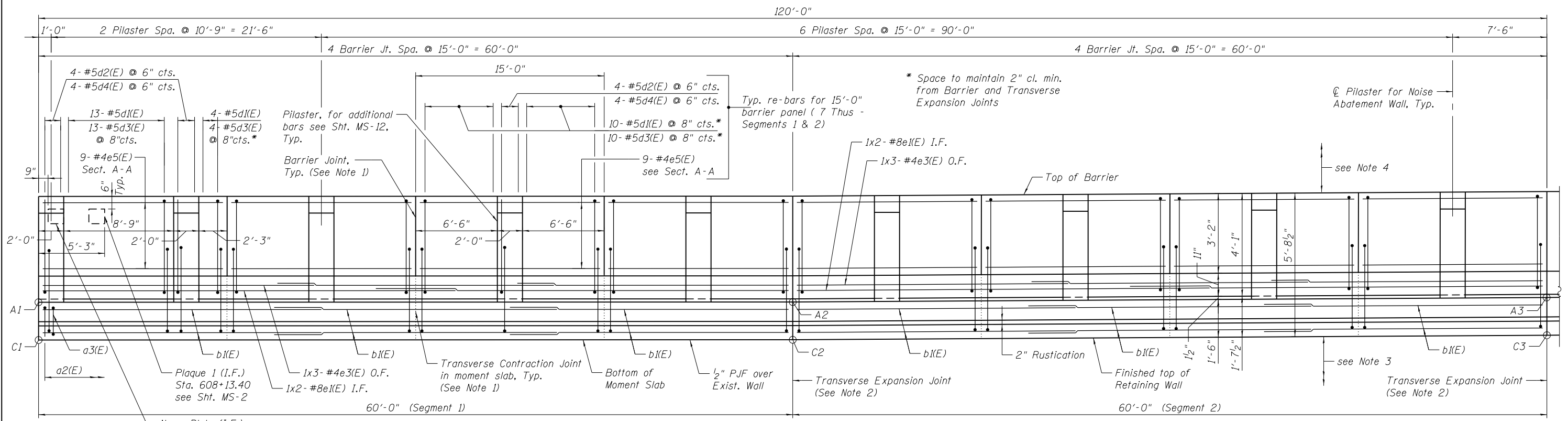
	USER NAME = *USER*	DESIGNED STD	REVISED
	CHECKED KK	REVISIONS	
	PLOT SCALE = *SCALE*	DRAWN EG	REVISED
	PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

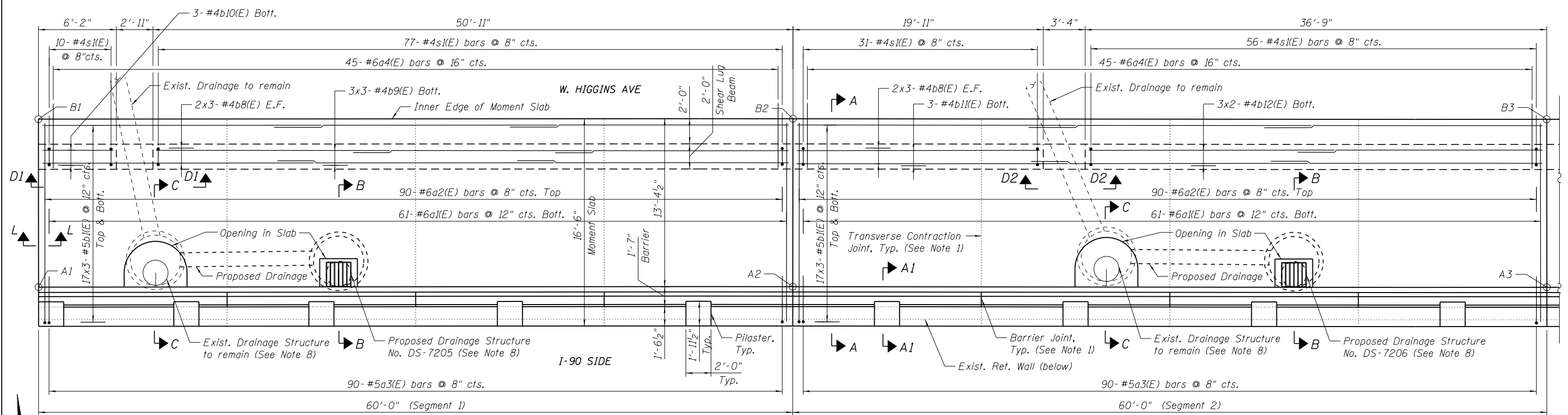
**PARTIAL STRUCTURE REMOVAL - 3 OF 3**  
**MOMENT SLAB (S.N. 016-2294)**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	217
S.N. 016-2294		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				

SHEET NO. MS-6 OF 18 SHEETS



ELEVATION



PLAN SEGMENTS 1 & 2

Notes:

- For Barrier Joint & Transverse Contraction Joint details, see Sheet MS-15.
- For Transverse Expansion Joint details, see Sheet MS-15.
- Existing Retaining wall not shown for clarity.
- Future Noise Wall Panels and posts not shown for clarity.
- A1, B1, C1 etc. denote control points. See Sht. MS-3 for stations, offsets & elevations.
- Bar indicated thus 17x3-#5 etc. indicates 17 lines of #5 bars with 3 lengths per line.
- For Bar List, see Sht. MS-16.
- For locations and invert elevations of proposed & existing Catch basins, see Drainage Plans.

Notes/cont.:

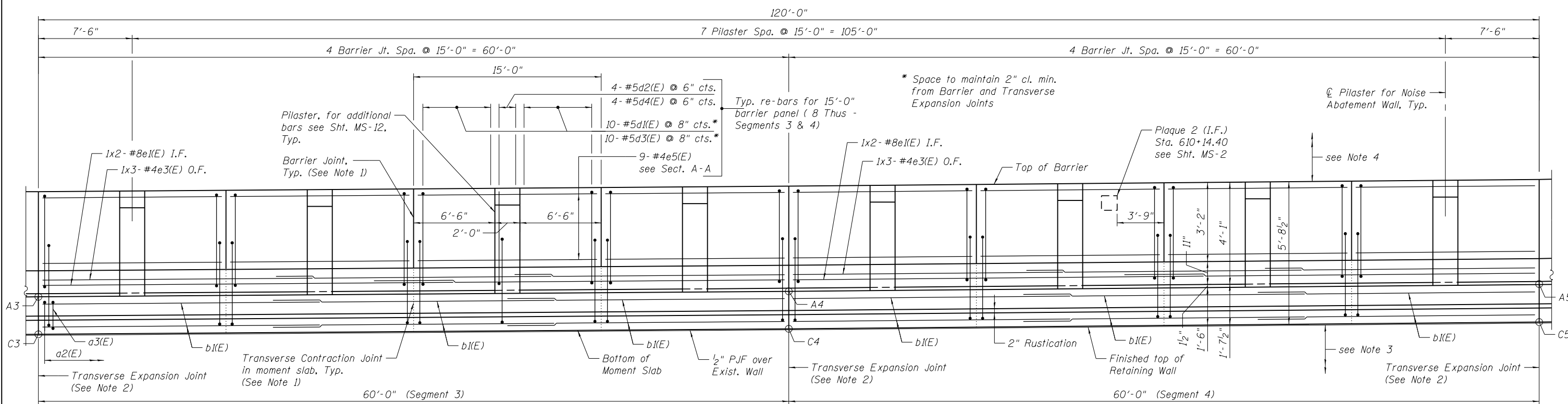
- For Sections A-A & A1-A1, see Sht. MS-12. For Sections B-B & C-C, see Sht. MS-13. For Sections D1-D1 thru D5-D5, see Sht. MS-14. For Section L-L, see Sht. MS-15.
- E.F. denotes Each Face I.F. denotes Inside Face O.F. denotes Outside Face

Minimum Bar Lap

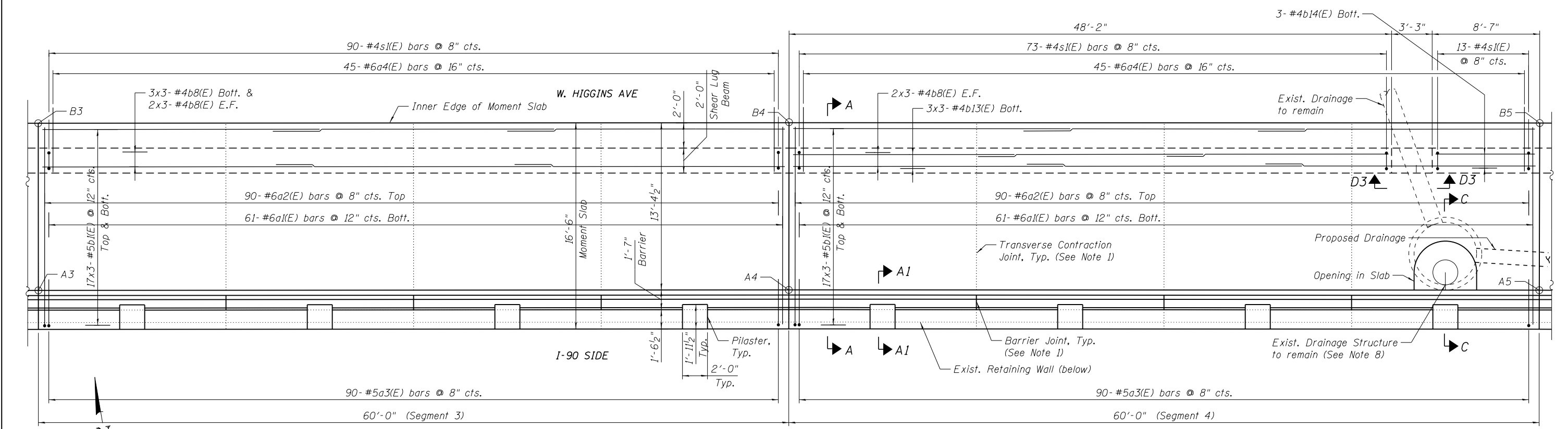
- #4 = 2'-11"
- #5 = 3'-9"
- #6 = 3'-10"
- #8 = 6'-4"

USER NAME : #USER#	DESIGNED STD	REVISD
PLLOT SCALE : #SCALE#	CHECKED KK	REVISD
PLLOT DATE : 8-15-2017	DRAWN HBJ	REVISD
	DATE 8/21/2017	REVISD

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	218
S.N. 016-2294		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



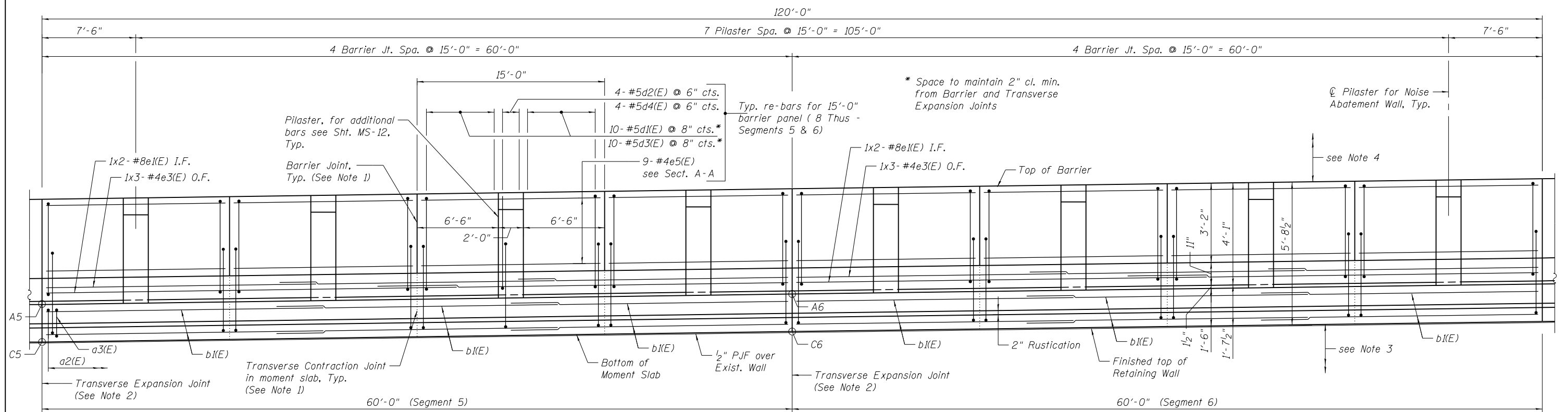
ELEVATION



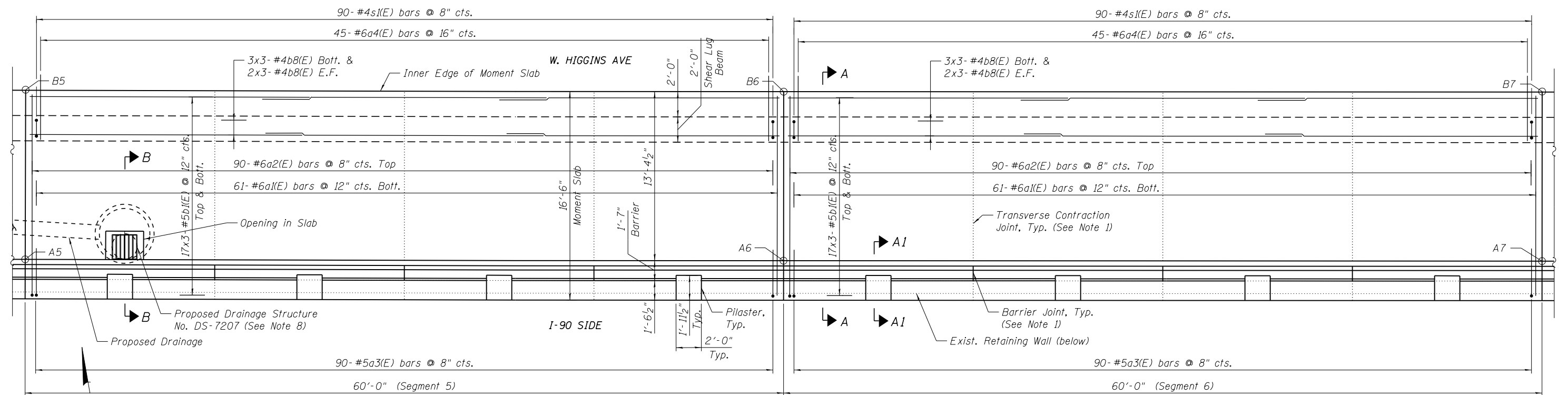
PLAN SEGMENTS 3 & 4

Minimum Bar Lap  
 #4 = 2'-11"  
 #5 = 3'-9"  
 #6 = 3'-10"  
 #8 = 6'-4"

Notes:  
 For Notes, see Sht. MS-7.



ELEVATION



PLAN  
SEGMENTS 5 & 6

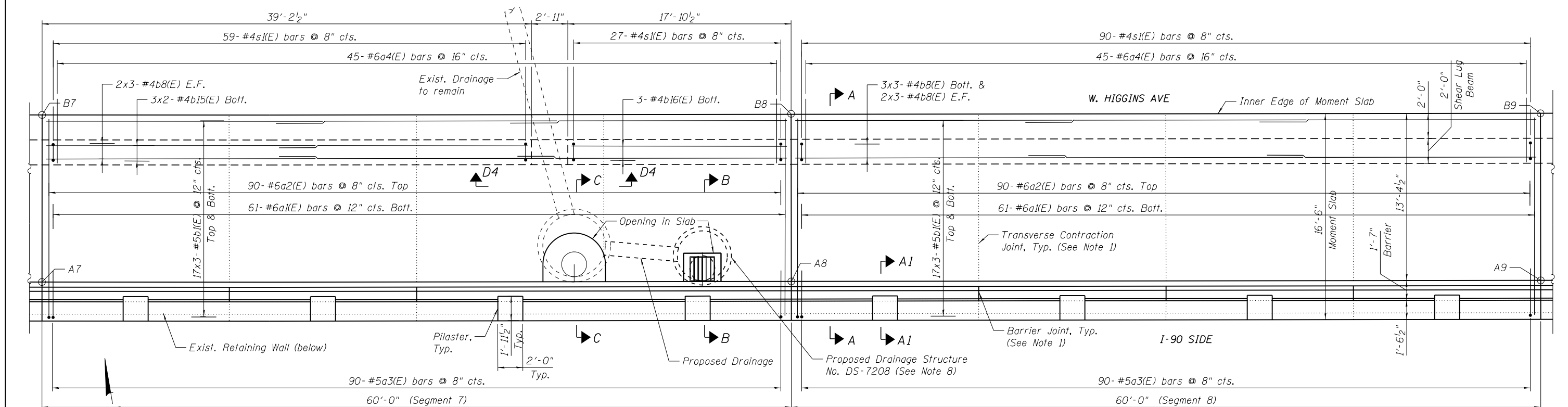
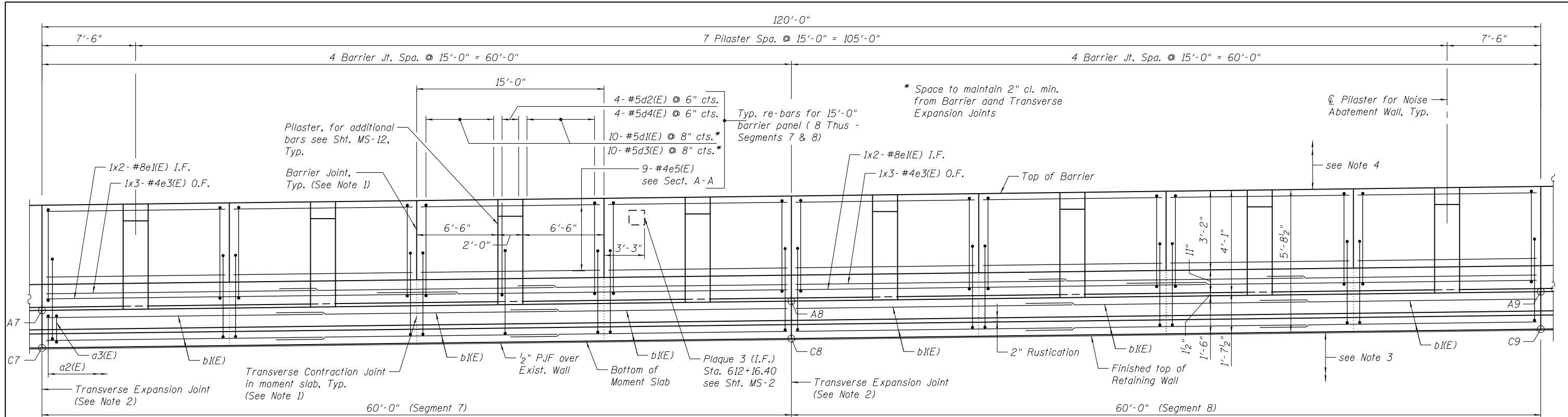
Minimum Bar Lap

- #4 = 2'-11"
- #5 = 3'-9"
- #6 = 3'-10"
- #8 = 6'-4"

Notes:  
For Notes, see Sht. MS-7.

USER NAME = *USER*	DESIGNED STD	REVISD
CHECKED KK		REVISD
PLOT SCALE = *SCALE*	DRAWN HBJ	REVISD
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISD

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	220
S.N. 016-2294		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				

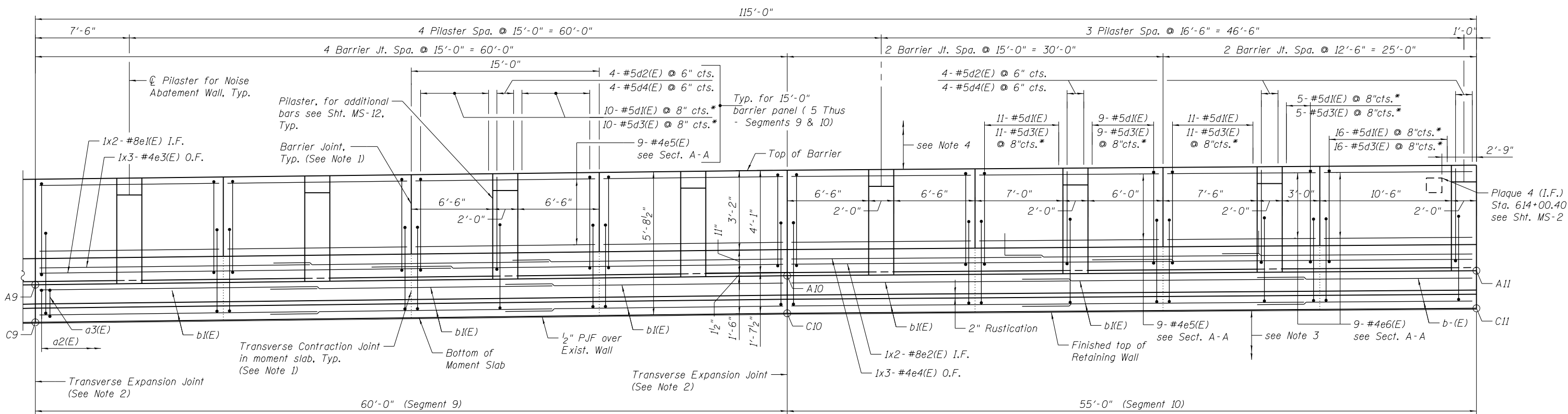


**Minimum Bar Lap**  
 #4 = 2'-11"  
 #5 = 3'-9"  
 #6 = 3'-10"  
 #8 = 6'-4"

**PLAN**  
**SEGMENTS 7 & 8**

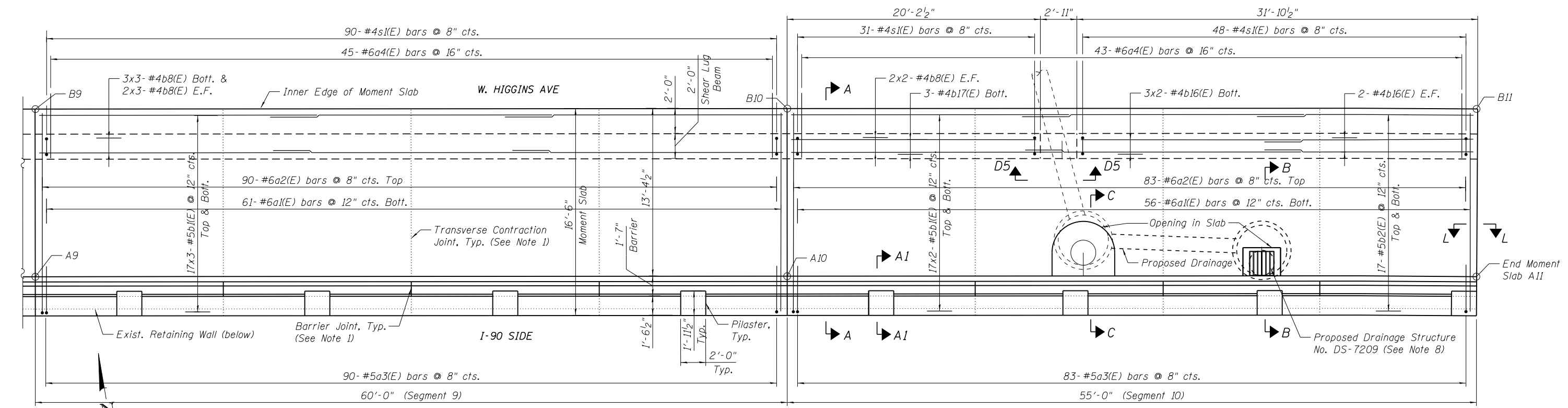
**Notes:**  
 For Notes, see Sht. MS-7.

exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = #USER#	DESIGNED STD	REVISIONS	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>MOMENT SLAB PLAN &amp; ELEVATION - 4 OF 5</b> <b>MOMENT SLAB (S.N. 016-2294)</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = #SCALE#	CHECKED KK	REVISIONS			I-90	(1517 & 1415) R-2	COOK	353	221
PLOT DATE = 8-15-2017	DRAWN HBJ	DATE 8/21/2017	REVISIONS	SHEET NO. MS-10 OF 18 SHEETS		S.N. 016-2294		CONTRACT NO. 60Y40		ILLINOIS FED. AID PROJECT



ELEVATION

\* Space to maintain 2" cl. min. from Barrier and Transverse Expansion Joints



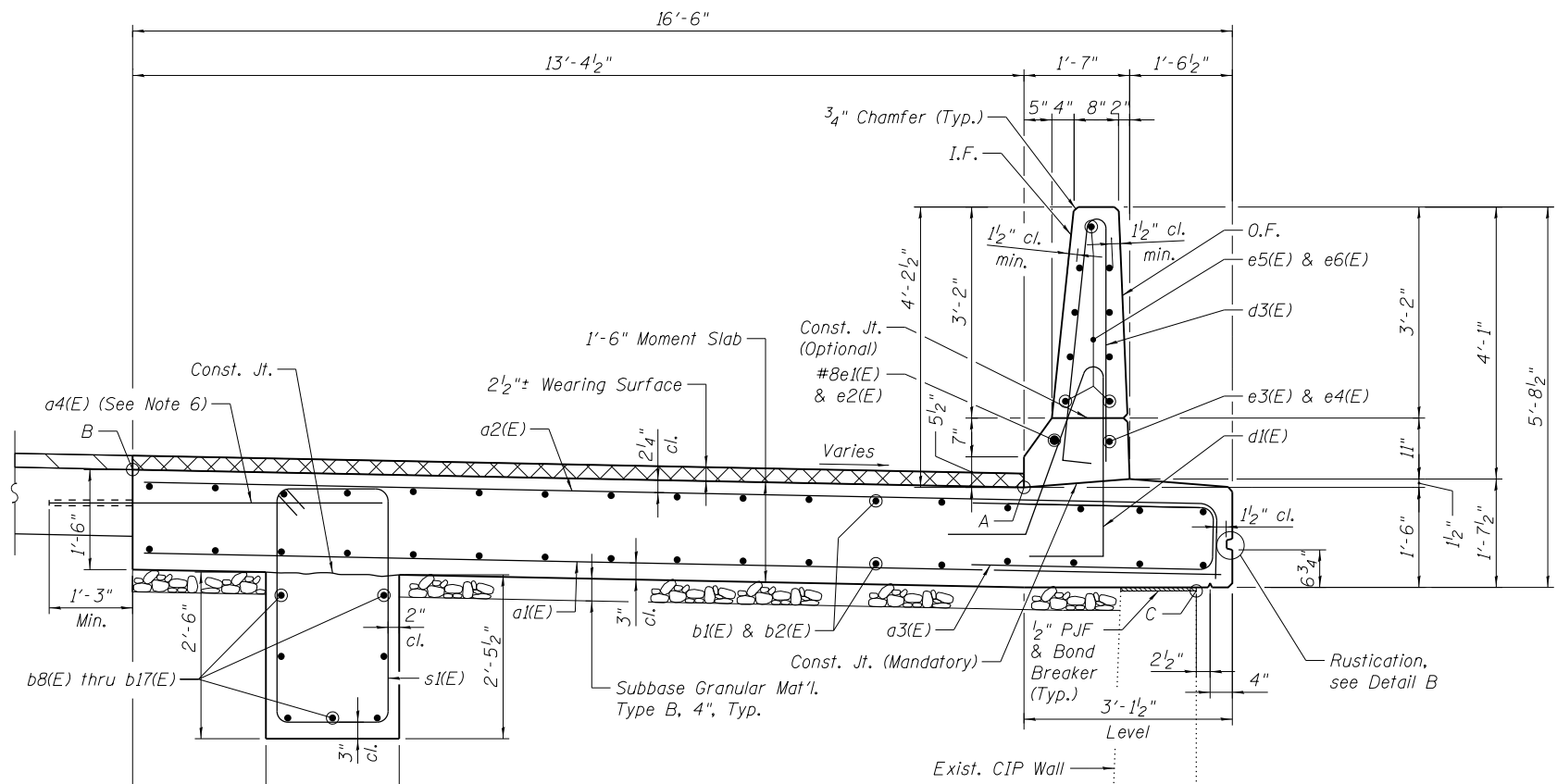
PLAN SEGMENTS 9 & 10

Minimum Bar Lap  
 #4 = 2'-11"  
 #5 = 3'-9"  
 #6 = 3'-10"  
 #8 = 6'-4"

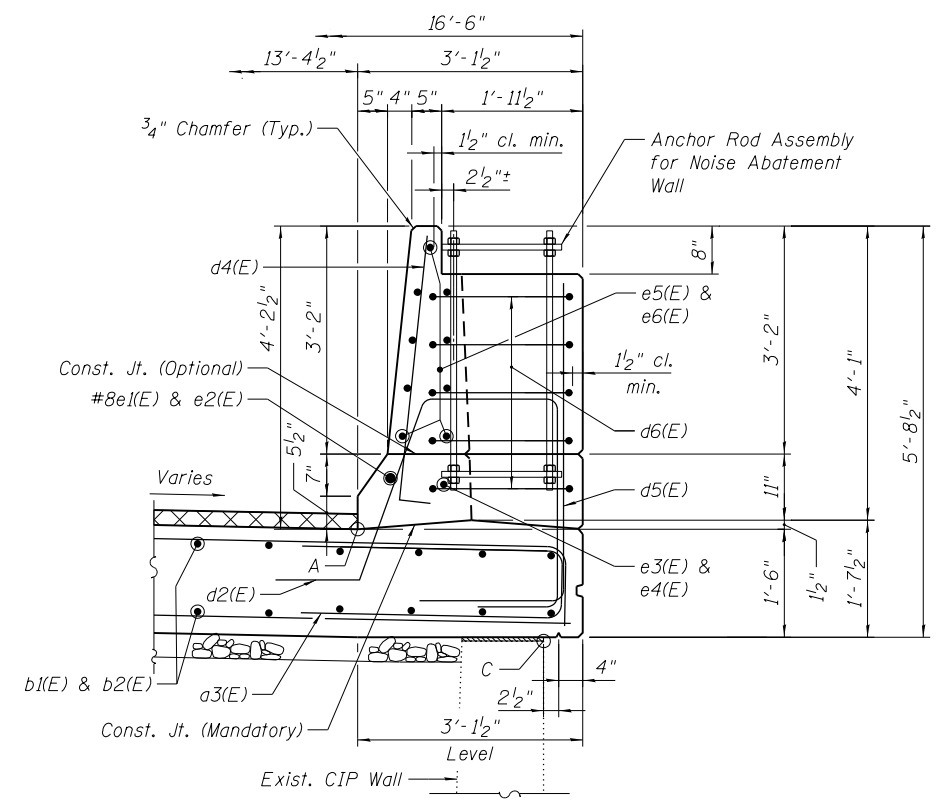
Notes:  
 For Notes, see Sht. MS-7.

USER NAME = #USER#	DESIGNED STD	REVISED
CHECKED KK	CHECKED KK	REVISED
PLOT SCALE = #SCALE#	DRAWN HBJ	REVISED
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

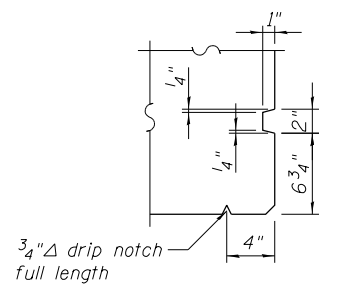
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	222
S.N. 016-2294		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



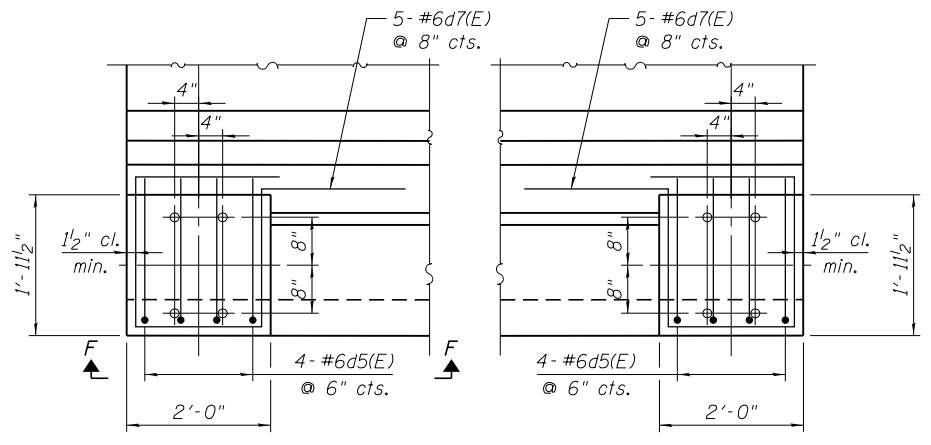
SECTION A-A



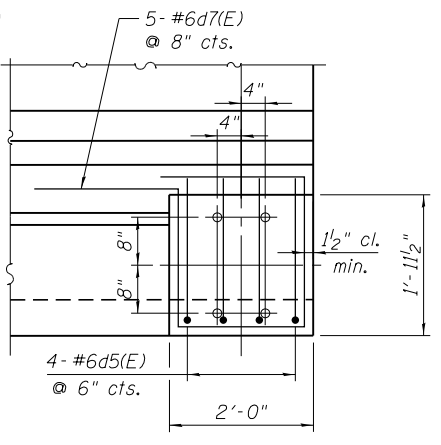
SECTION A1-A1  
(AT NOISE WALL PILASTERS)



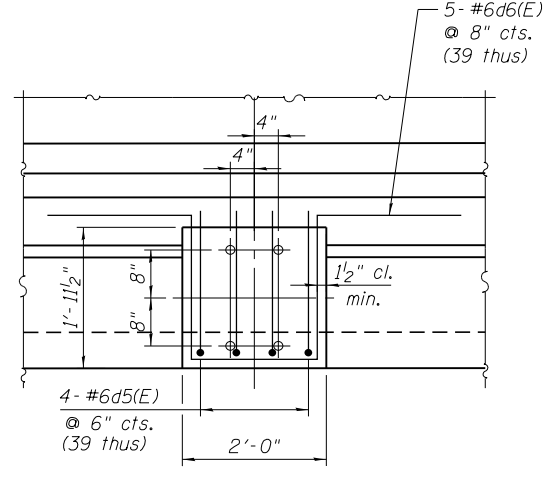
DETAIL "B"



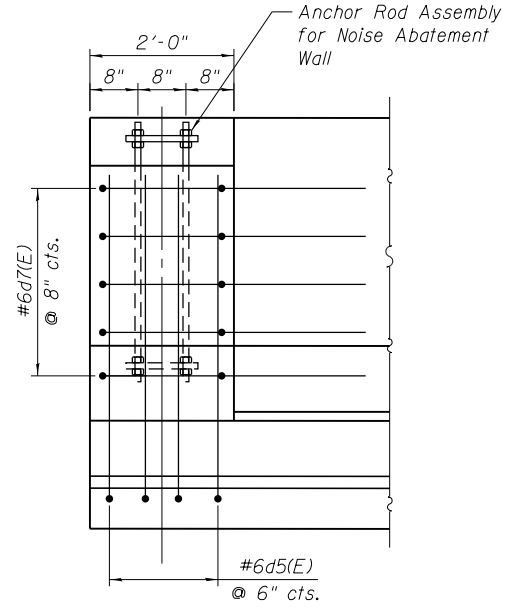
PLAN  
(AT SEGMENT 1 - WEST END)



PLAN  
(AT SEGMENT 10 - EAST END)



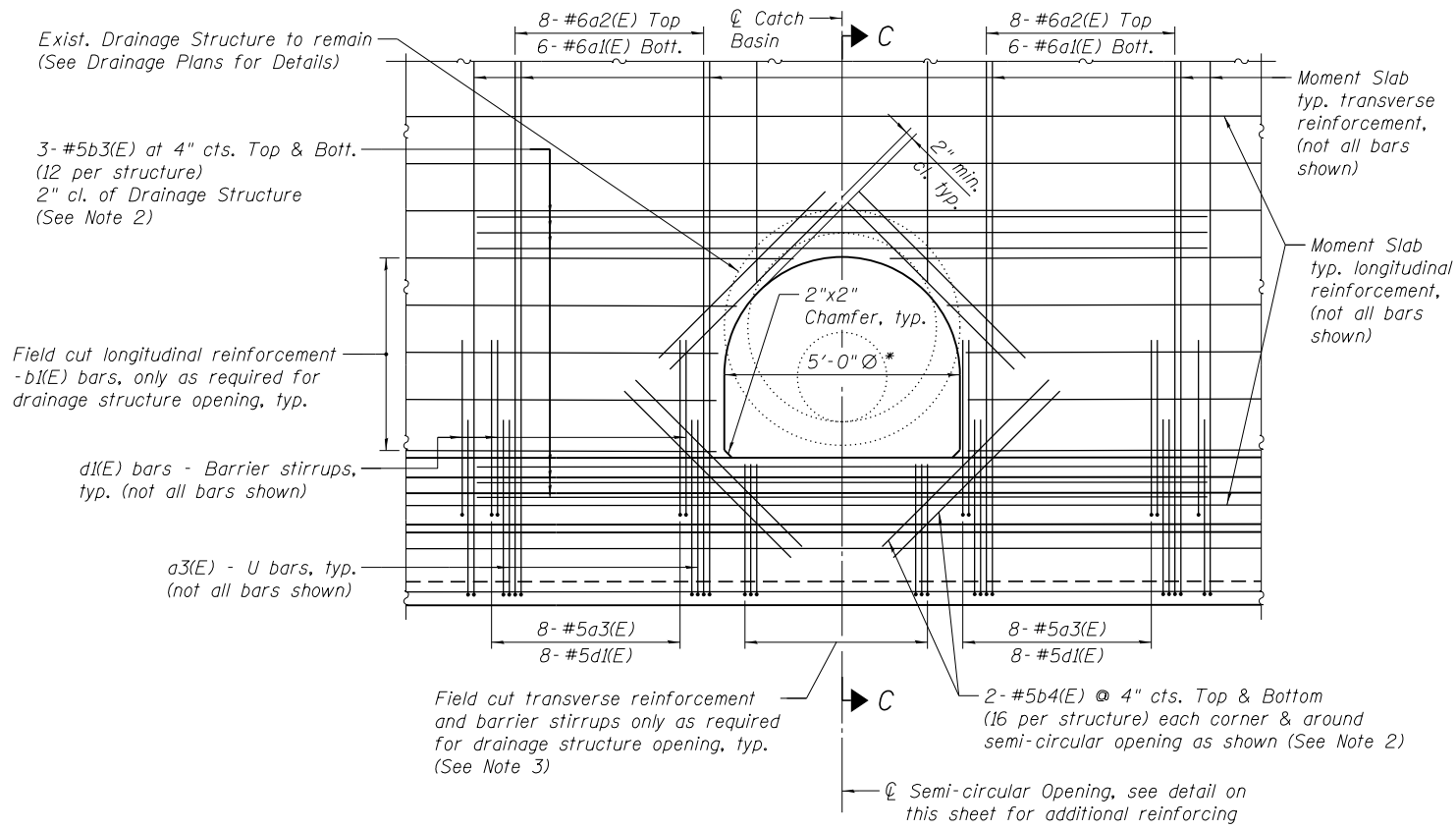
PLAN  
(AT TYPICAL NOISE WALL PILASTER)



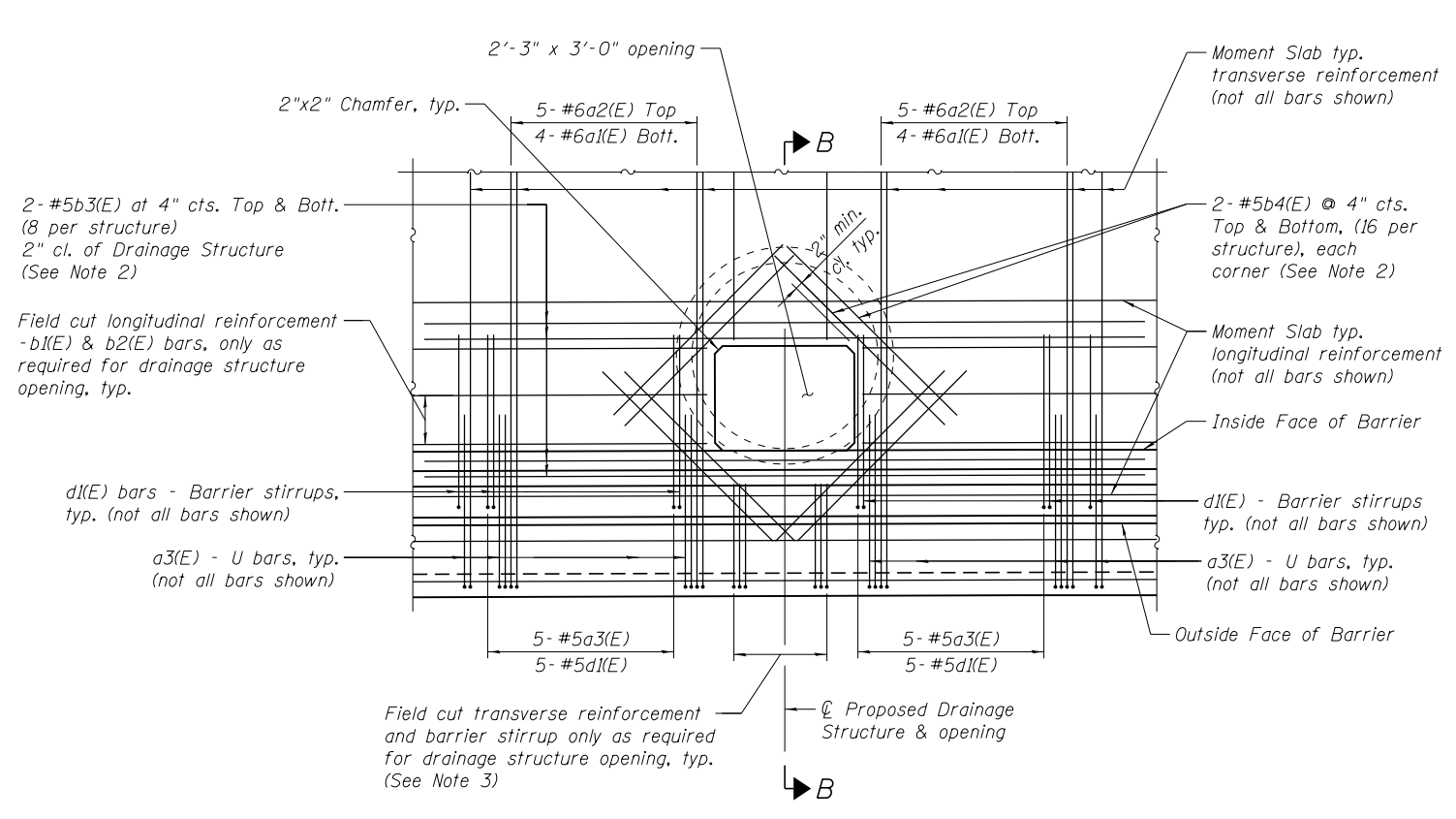
ELEVATION F-F

Notes:

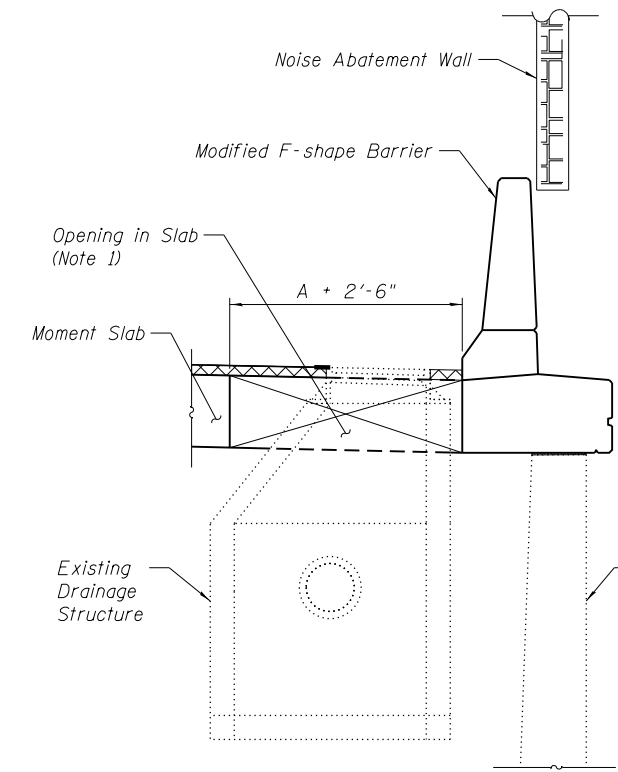
1. For moment slab details not provided here, see Moment Slab Plan and Elevation sheets.
2. For locations of Section A-A, see Moment Slab Plan and Elevation sheets.
3. For Bar Details, see Sheet MS-16.
4. Noise Abatement Wall not shown for clarity, see Sht. MS-3.
5. Cost of P.J.F. & bond breaker is included with Concrete Superstructure.
6. Drill and grout a4(E) bars. Locate at the mid-depth of adjacent PCC pavement.



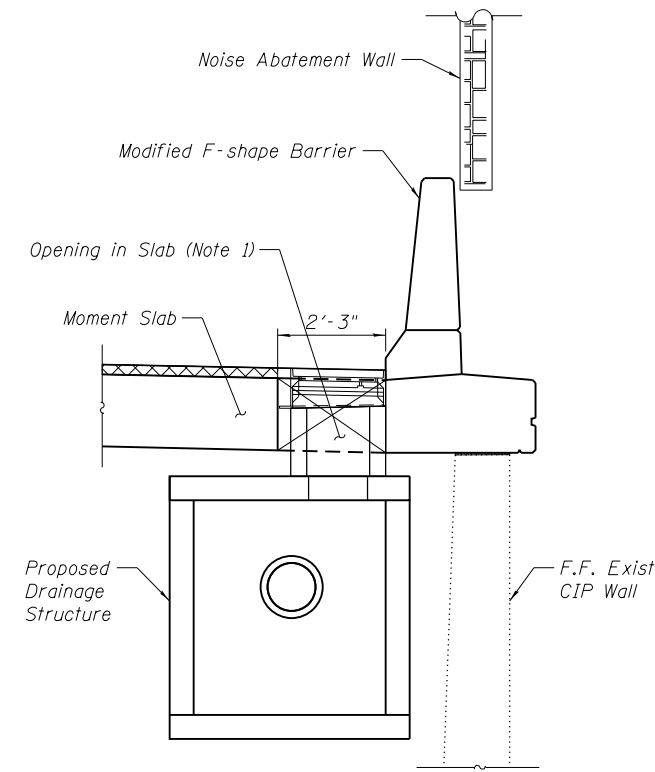
**PLAN AT EXISTING DRAINAGE STRUCTURE**  
(5 THUS)



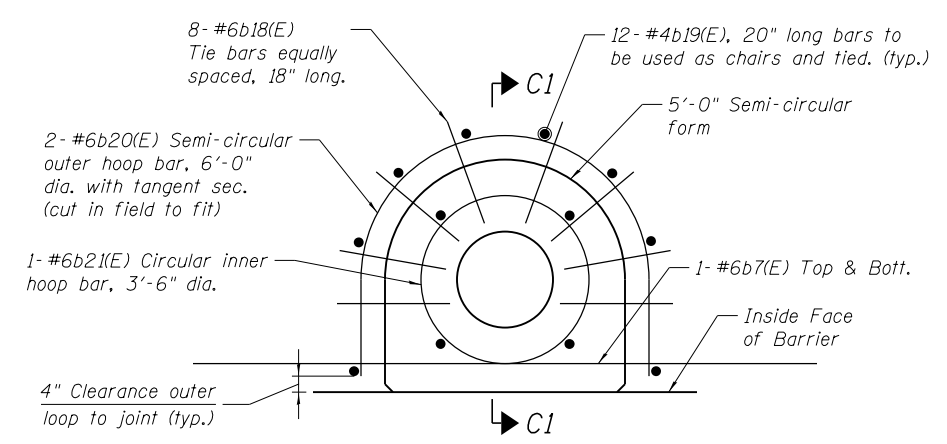
**PLAN AT PROPOSED DRAINAGE STRUCTURE**  
(5 THUS)



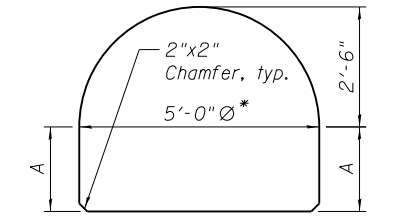
**SECTION C-C**  
(AT EXISTING DRAINAGE STRUCTURE)



**SECTION B-B**  
(AT PROPOSED DRAINAGE STRUCTURE)

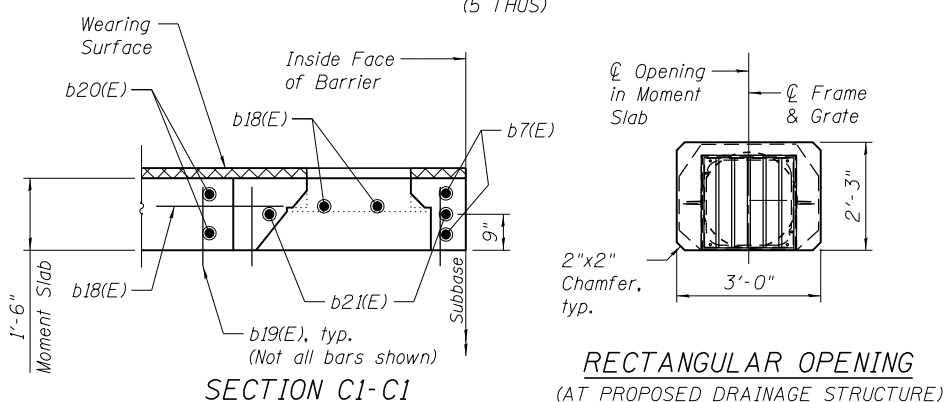


**REINFORCEMENT DETAIL AT SEMI-CIRCULAR OPENING**  
(5 THUS)



**SEMI-CIRCULAR OPENING**  
(AT EXISTING DRAINAGE STRUCTURE)  
\* Provide extended semi-circular opening with 5'-0" diameter as shown. See reinforcement detail at Semi-circular Opening. See table below for location of opening (4 locations).

Drainage Structure No.	A
DS-7205	1'-1 1/2"
DS-7206	1'-5 1/2"
DS-7207	1'-5"
DS-7208	1'-4 3/4"
DS-7209	1'-10 1/2"



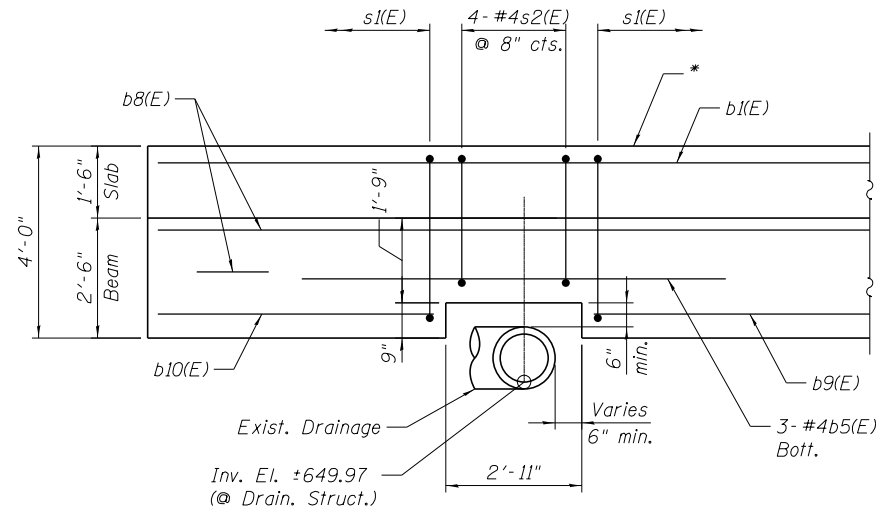
**SECTION C1-C1**  
(5 THUS)

**RECTANGULAR OPENING**  
(AT PROPOSED DRAINAGE STRUCTURE)

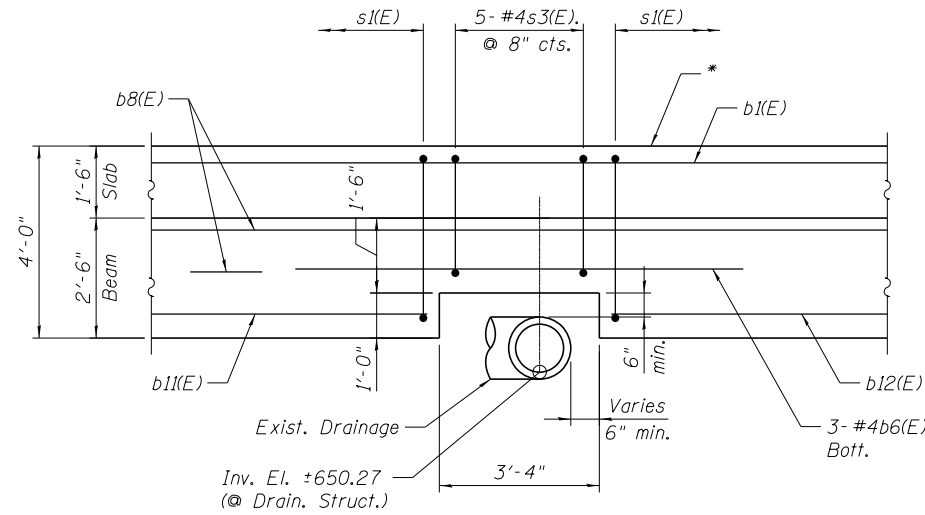
**Notes:**

- Fill in the opening around drainage structures with concrete after placing the proposed drainage structures and replacing the lids on existing drainage structures. Cost included with Concrete Structures.
- Place bars symmetric about centerline of drainage structure as space permits.
- For each transverse bar & barrier stirrup field cut, place equal number of additional same bars on each side of opening.
- Size and shape of drainage structures are approximate, see Drainage Plans for details.
- For Bar List, see Sht. MS-16.

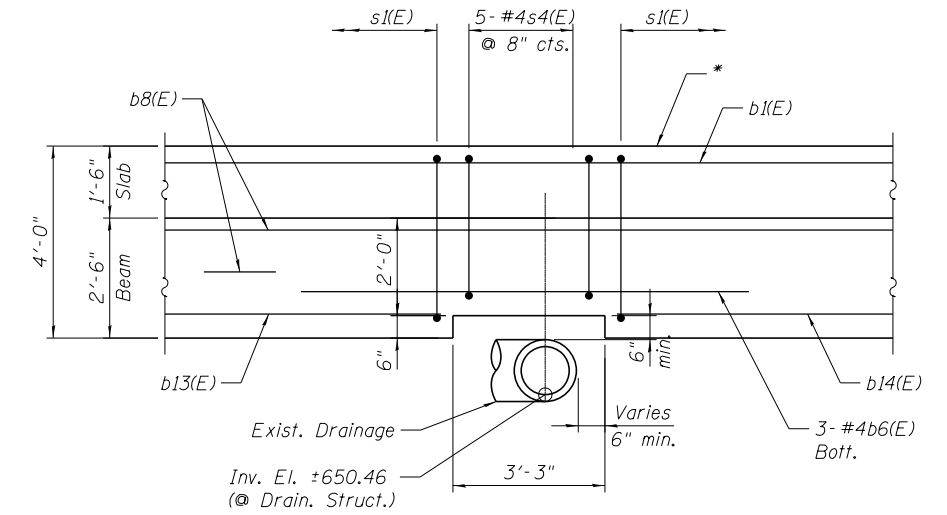




**SECTION D1-D1**  
(SEGMENT 1)

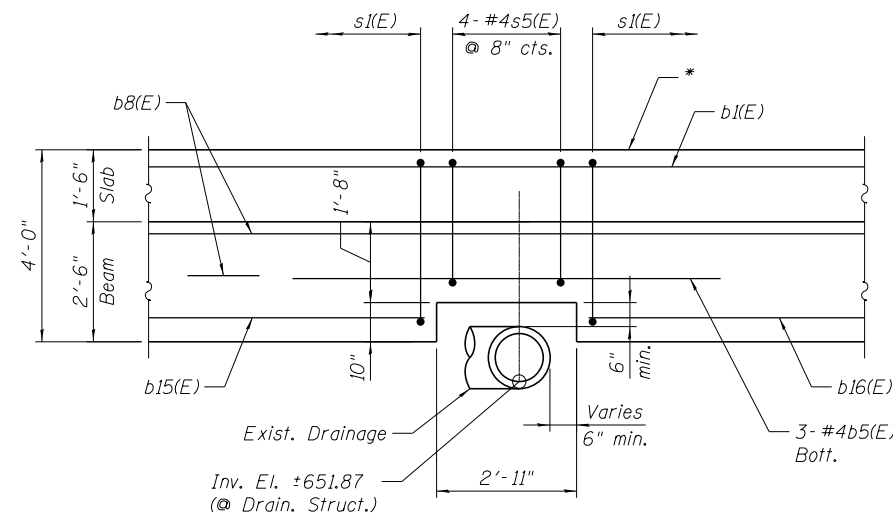


**SECTION D2-D2**  
(SEGMENT 2)

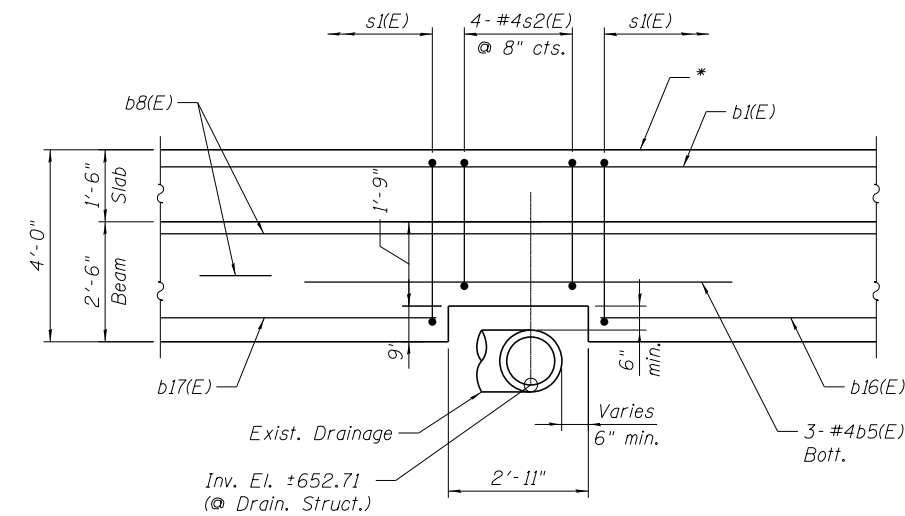


**SECTION D3-D3**  
(SEGMENT 4)

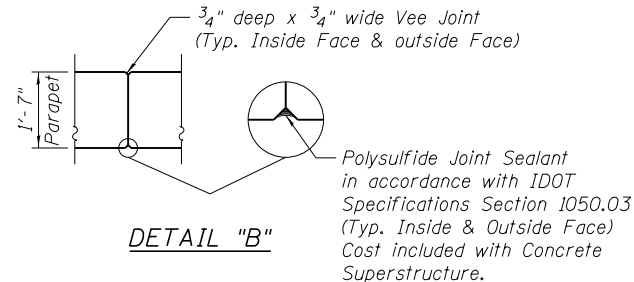
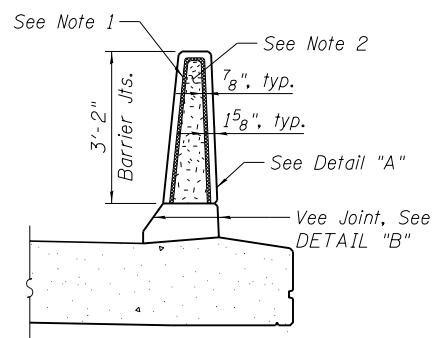
\* Top of Concrete, Wearing Surface not shown for clarity.



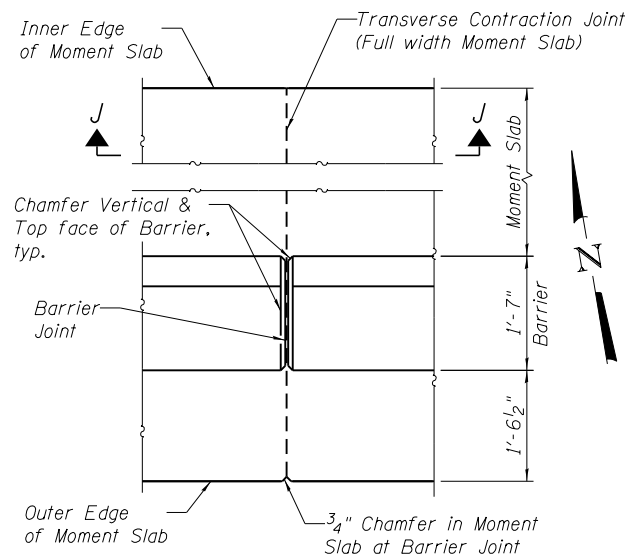
**SECTION D4-D4**  
(SEGMENT 7)



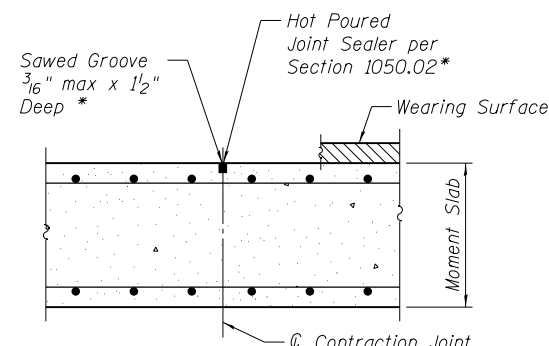
**SECTION D5-D5**  
(SEGMENT 10)



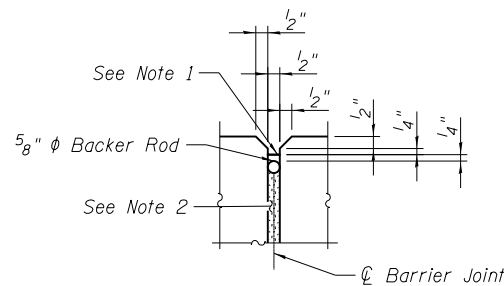
**BARRIER JOINT**  
(in between expansion joints)



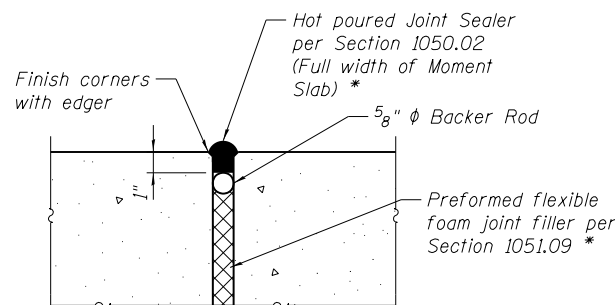
**PLAN - CONTRACTION JOINT**



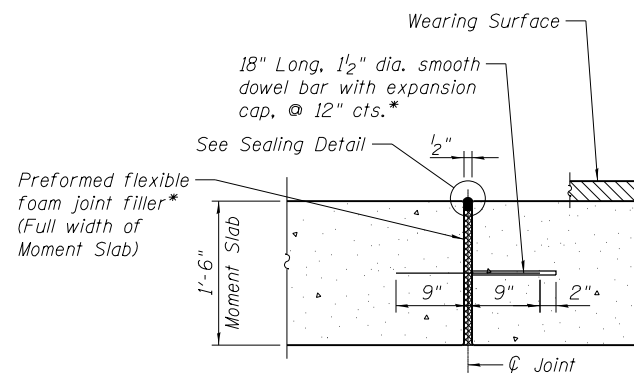
**SECTION J-J**



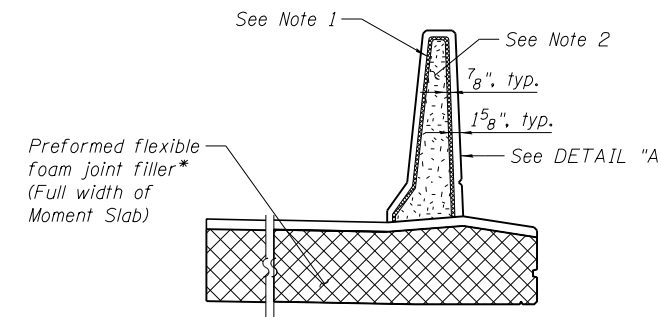
**DETAIL "A"**



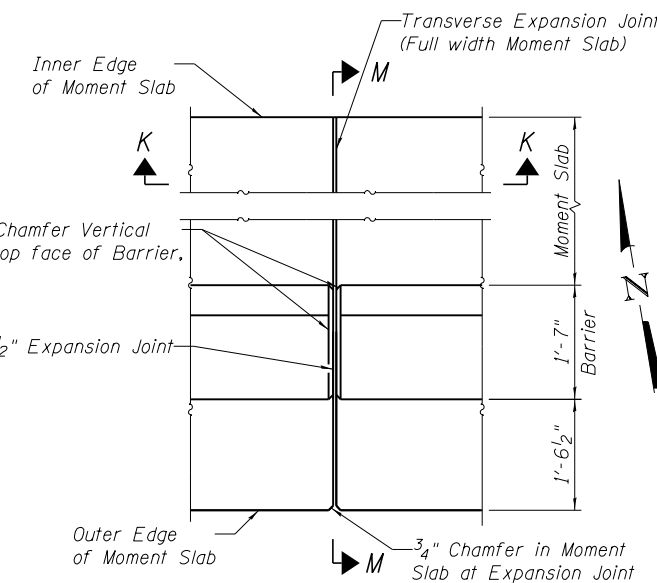
**SEALING DETAIL**



**SECTION K-K**



**SECTION M-M**



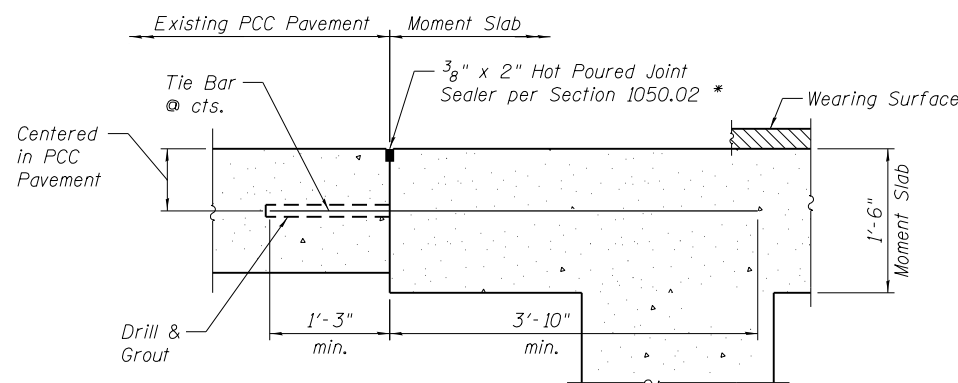
**PLAN - TYPICAL TRANSVERSE EXPANSION JOINT**

**TRANSVERSE CONTRACTION JOINT**

**Notes:**

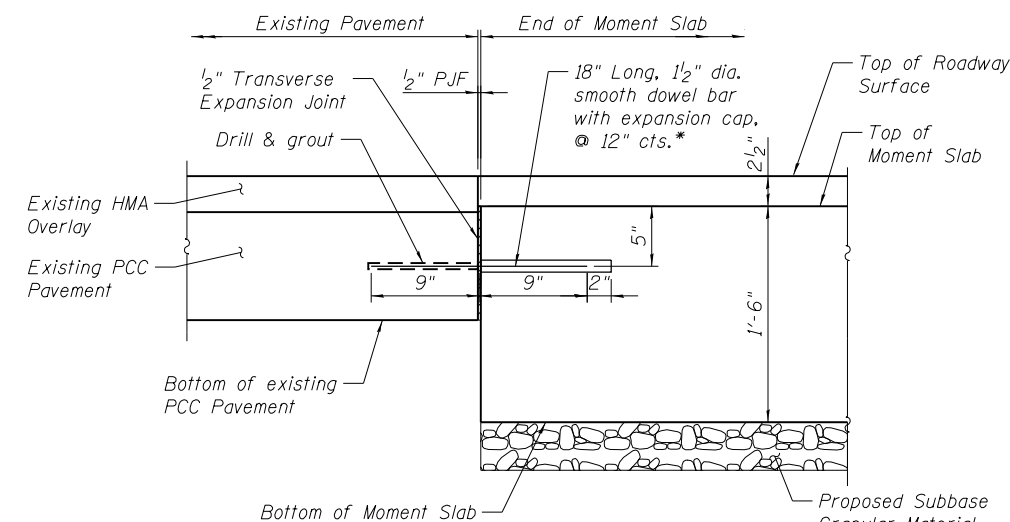
1. Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25, use T with a backer rod.
2. Performed Self-Expanding Cork Joint Filler according to Article 1051.07 of Std. Spec.

\* Cost to be included with Concrete Structures



**LONGITUDINAL CONSTRUCTION JOINT**

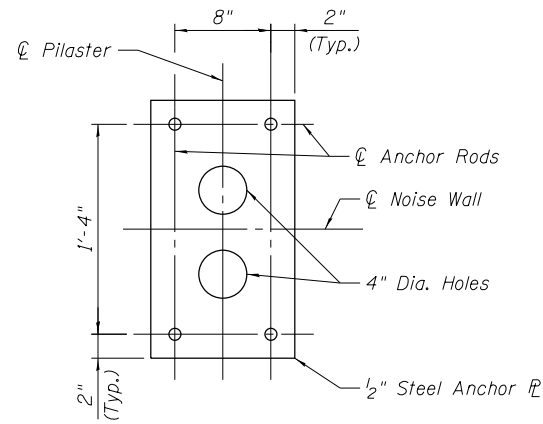
(Sta. 608+08.13 to 614+03.13)



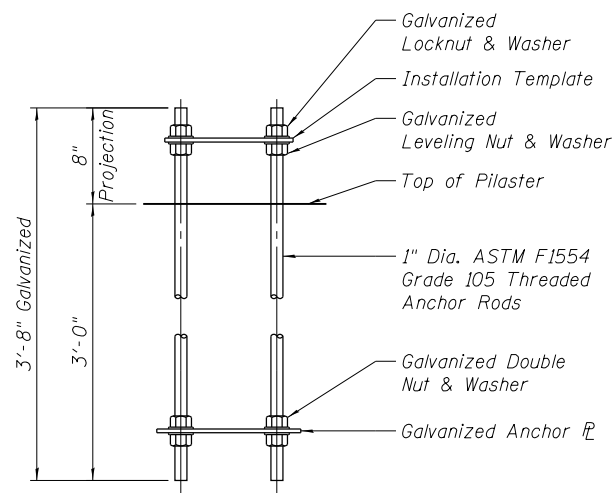
**SECTION L-L**

At Ends of Moment Slab  
(See Moment Slab Plan for locations)

**TRANSVERSE EXPANSION JOINTS**



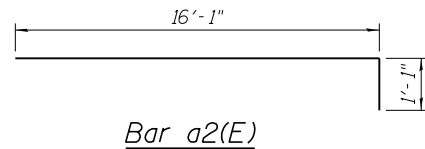
PLAN - ANCHOR PLATE



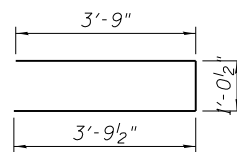
ELEVATION

ANCHOR ROD ASSEMBLY FOR NOISE ABATEMENT WALL

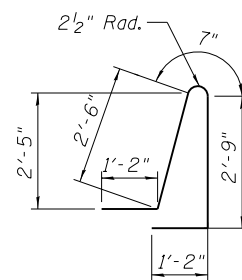
(41 REQUIRED)



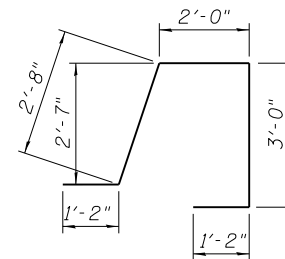
Bar a2(E)



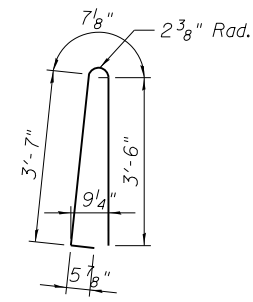
Bar a3(E)



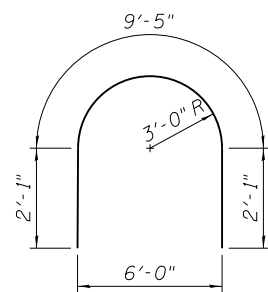
Bar d1(E)



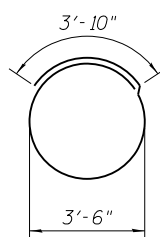
Bar d2(E)



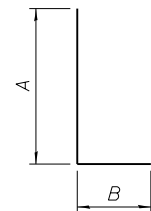
Bar d3(E)



Bar b20(E)

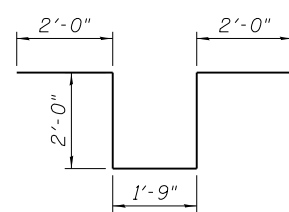


Bar b21(E)

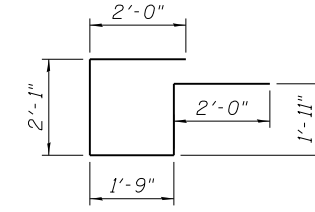


Bars d4(E), d5(E) & d12(E)

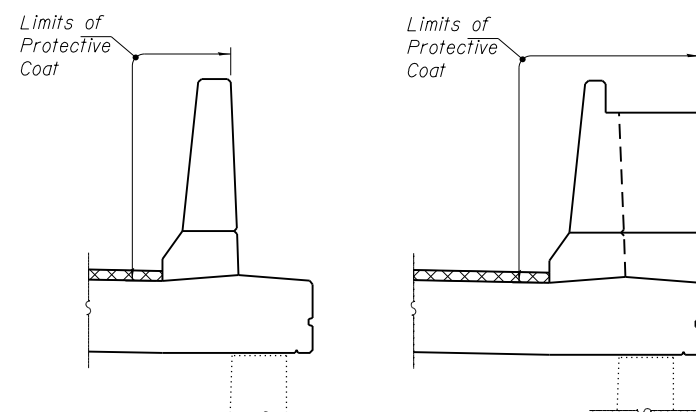
Bar	A	B
d4(E)	3'-9"	6"
d5(E)	4'-7"	2'-0"
d12(E)	5'-3"	2'-0"



Bar d6(E)

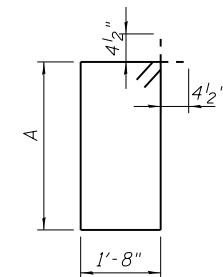


Bars d7(E)



BETWEEN NOISE WALL PILASTERS AT NOISE WALL PILASTER

LIMITS OF PROTECTIVE COAT



Bars s1(E) thru s5(E)

Bar	A
s1(E)	3'-6"
s2(E)	2'-9"
s3(E)	2'-7"
s4(E)	3'-0"
s5(E)	2'-8"

BAR LIST

Bar	No.	Size	Length	Shape
a1(E)	705	#6	16'-2"	—
a2(E)	1023	#6	17'-2"	—
a3(E)	1023	#5	8'-7"	—
a4(E)	448	#6	5'-1"	—
b1(E)	986	#5	22'-6"	—
b2(E)	34	#5	17'-6"	—
b3(E)	100	#5	15'-6"	—
b4(E)	160	#5	5'-2"	—
b5(E)	9	#4	9'-0"	—
b6(E)	6	#4	9'-4"	—
b7(E)	10	#6	13'-0"	—
b8(E)	161	#4	22'-0"	—
b9(E)	9	#4	19'-0"	—
b10(E)	3	#4	5'-10"	—
b11(E)	3	#4	19'-7"	—
b12(E)	6	#4	20'-0"	—
b13(E)	9	#4	18'-0"	—
b14(E)	3	#4	8'-3"	—
b15(E)	6	#4	21'-0"	—
b16(E)	13	#4	17'-6"	—
b17(E)	3	#4	19'-10"	—
b18(E)	40	#6	1'-6"	—
b19(E)	60	#4	1'-8"	—
b20(E)	10	#6	13'-7"	⌒
b21(E)	5	#6	14'-10"	○
d1(E)	919	#5	8'-2"	⌒
d2(E)	164	#5	10'-0"	⌒
d3(E)	789	#5	8'-2"	⌒
d4(E)	164	#5	4'-3"	L
d5(E)	164	#6	6'-7"	L
d6(E)	195	#6	9'-9"	⌒
d7(E)	10	#6	9'-9"	⌒
e1(E)	18	#8	33'-0"	—
e2(E)	2	#8	31'-6"	—
e3(E)	27	#8	22'-0"	—
e4(E)	3	#8	20'-3"	—
e5(E)	342	#8	14'-8"	—
e6(E)	18	#8	12'-2"	—
s1(E)	875	#4	11'-1"	□
s2(E)	8	#4	9'-7"	□
s3(E)	5	#4	9'-3"	□
s4(E)	5	#4	10'-1"	□
s5(E)	4	#4	9'-5"	□

USER NAME = #USER#	DESIGNED STD	REVISED
	CHECKED KK	REVISED
PLOT SCALE = #SCALE#	DRAWN HBJ	REVISED
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-90	(1517 & 1415) R-2	COOK	353	227
S.N. 016-2294		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/28/14

ROUTE -- DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Oriole Ave.) LOGGED BY VH

SECTION -- LOCATION SW 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H  (ft)	B L O W S  (/6")	U C S Qu (tsf)	M O I S T  (%)	Surface Water Elev.	D E P T H  (ft)	B L O W S  (/6")	U C S Qu (tsf)	M O I S T  (%)
					n/a ft				
3.0" ASPHALT, 9.0" CONCRETE									
654.00									
SAND with Gravel-brown-medium dense (Fill)		4				2			
		8		3		4	1.8	20	
		10				6	B		
652.00									
CLAY LOAM-brown & gray-very stiff to hard (Fill)		3				2			
		4	2.7	20		5	1.5	23	
	-5	5	B			6	B		
					630.00	-25			
		2							
		6	4.2	12					
		9	B						
647.00									
CLAY-brown & gray-stiff to hard		4							
		9	6.1	19					
	-10	12	B			-30			
becoming gray @ -10.5'									
		3							
		5	4.0	20					
		8	B						
		3							
		5	2.6	21					
	-15	6	B			-35			
		3							
		4	2.7	23					
		8	B						
		3							
		4	1.9	18					
	-20	5	B			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/29/14

ROUTE -- DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Oriole Ave.) LOGGED BY VH

SECTION -- LOCATION SW 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H  (ft)	B L O W S  (/6")	U C S Qu (tsf)	M O I S T  (%)	Surface Water Elev.	D E P T H  (ft)	B L O W S  (/6")	U C S Qu (tsf)	M O I S T  (%)
					n/a ft				
4.0" ASPHALT, 8.0" CONCRETE									
655.00									
SAND & Gravel-brown-loose to medium dense (Fill)		26				3			
		16		3		4	1.6	23	
		10				6	B		
		6				2			
		4		3		3	1.2	23	
	-5	4				5	B		
					631.00	-25			
		4							
		8		2					
		10							
		2							
		2		6					
	-10	13				-30			
645.50									
CLAY-gray-stiff to hard		4							
		8	4.8	19					
		11	B						
		4							
		7	4.2	20					
	-15	9	B			-35			
		3							
		5	2.2	23					
		7	B						
		3							
		4	1.9	23					
	-20	7	B			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/29/14

ROUTE -- DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Oriole Ave.) LOGGED BY VH

SECTION -- LOCATION SW 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H  ft	B L O W S  (ft)	U C S  Qu (tsf)	M O I S T  (%)	Surface Water Elev. n/a ft Stream Bed Elev. n/a ft	D E P T H  ft	B L O W S  (ft)	U C S  Qu (tsf)	M O I S T  (%)
3.0" ASPHALT, 9.0" CONCRETE					CLAY-gray-stiff to very stiff (continued)				
		655.70					2		
SAND & Gravel-brown-very loose to medium dense (Fill)		8					5	2.0	22
		8		3			8	19	
		7							
		4					4		
		2		4			4	1.5	23
		-5			End Of Boring @ -25.0'. Boring backfilled with cuttings.	631.70	-25	6	20
		6							
		2		4					
		2							
		3							
		3		4					
		-10					-30		
CLAY-gray-stiff to very stiff		646.20							
		4							
		6	3.5	19					
		8	3						
		3							
		4	2.5	21					
		-15	7	3			-35		
		3							
		5	2.1	22					
		6	2						
		3							
		4	2.5	20					
		-20	8	6			-40		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/30/14

ROUTE -- DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Oriole Ave.) LOGGED BY VH

SECTION -- LOCATION SW 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H  ft	B L O W S  (ft)	U C S  Qu (tsf)	M O I S T  (%)	Surface Water Elev. n/a ft Stream Bed Elev. n/a ft	D E P T H  ft	B L O W S  (ft)	U C S  Qu (tsf)	M O I S T  (%)
4.0" ASPHALT, 8.0" CONCRETE					CLAY-brown & gray-stiff to hard (continued)				
		656.40							
SAND & GRAVEL-brown-medium dense (Fill)		18							
		8		3					
		9							
		654.40							
CLAY LOAM-brown-stiff		8							
		3	2.4	19					
		-5	5	B					
		651.90			End Of Boring @ -25.0'. Boring backfilled with cuttings.	632.40	-25	9	B
		4							
		4	5.2	20					
		9	B						
		4							
		5	4.0	20					
		-10	8	B			-30		
		3							
		7	3.3	20					
		7	B						
		3							
		4	2.3	22					
		-15	8	B			-35		
		4							
		6	2.8	20					
		9	p						
		4							
		5	3.0	20					
		-20	8	B			-40		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Bench Mark: TBM #17 (ELEV. 637.45)-"x" cut SW bolt of light pole (FH8) on North side of WB I-90. 3rd pole West of CTA bridge West of Harlem Ave.

Existing Structure: Existing structure, constructed in 1959, is a T-type cast-in-place retaining wall on a combination of spread footing and cast-in-place concrete piles. The retaining wall is approximately 1,565 feet long with a max. exposed height of 15'-7". A chain link fence is mounted on top of the wall. Existing wall to remain. Top portion of wall will be removed and a Moment Slab and associated noise wall will be constructed in this contract. One lane of traffic will be maintained in WB direction.

Salvage - None

**APPROVED**  
For Structural Adequacy Only  
*Brian L. Umbright*  
Engineer of Bridges & Structures

**LOADING**

Allow 35 psf wind load for Structure Mounted Noise Wall (see Special Provision)  
Maximum Dead Load not to exceed 55 psf of wall face area.  
Traffic Impact per AASHTO LRFD Bridge Specifications  
Approx. Noise Wall Height = 15'-0"

**DESIGN SPECIFICATIONS**

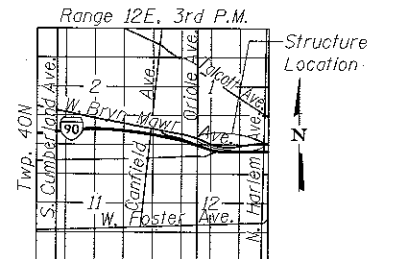
AASHTO LRFD Bridge Design Specifications, 7th Edition (2014) with 2016 Interim Revisions

**DESIGN STRESSES**

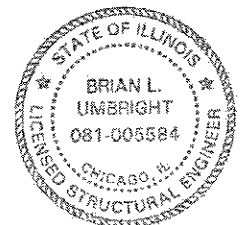
New Construction  
f'c = 4,000 psi (Superstructure Concrete)  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)  
Existing Construction  
fc = 800 psi  
fs = 20,000 psi (Reinforcement)

**CURVE DATA**

(@ W. Bryn Mawr Ave.)  
PI STA. = 110+17.55  
Δ = 18° 37' 53" (LT)  
D = 5° 40' 05"  
R = 1,010.88'  
T = 165.82'  
L = 328.71'  
E = 13.51'  
P.C. STA. = 108+51.73  
P.T. STA. = 111+80.45

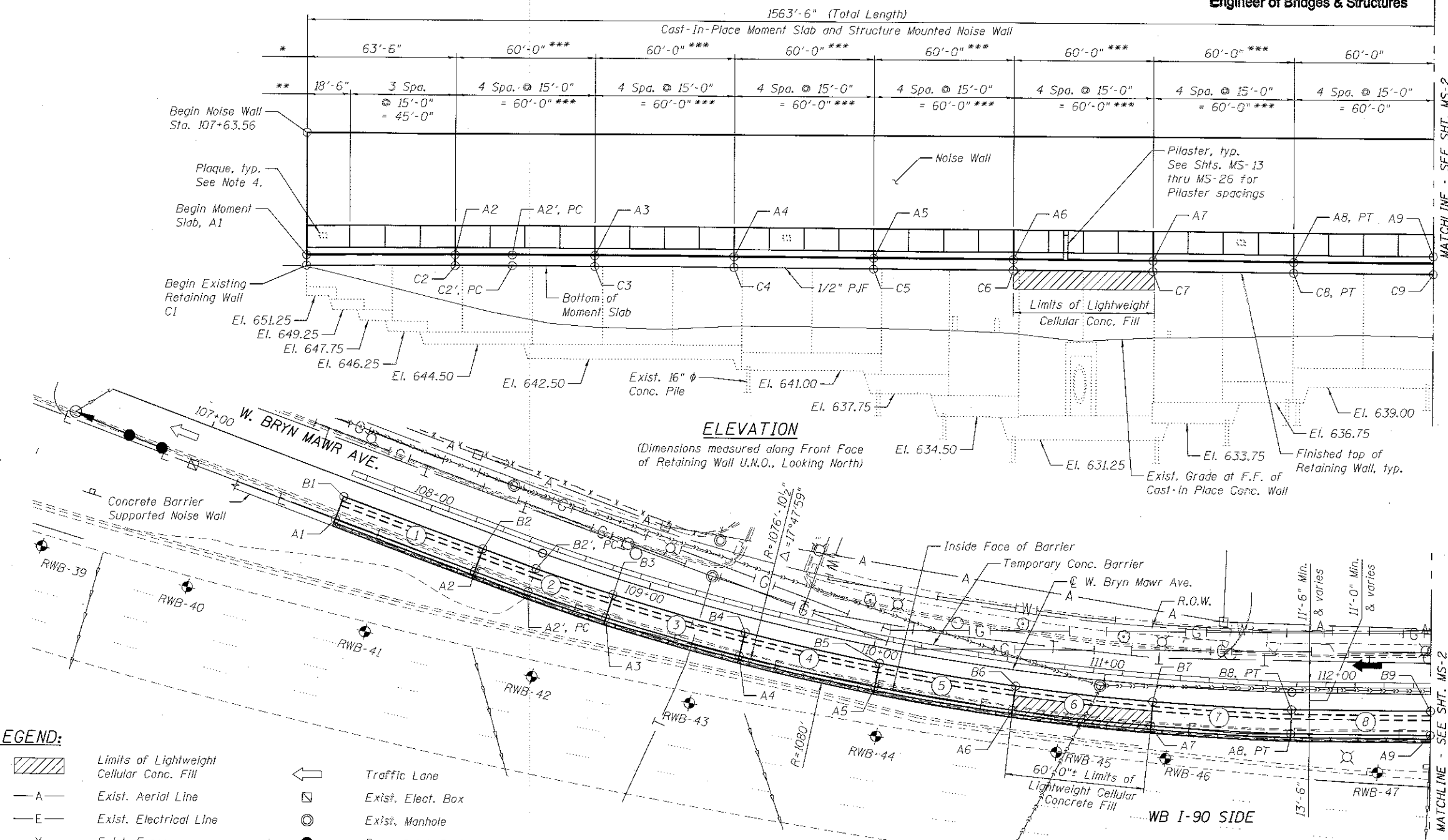


LOCATION SKETCH



Signed: *Brian L. Umbright*  
Date: 01/19/2018  
Exp: 11/30/2018  
Sheets: S-1 thru S-39

**GENERAL PLAN AND ELEVATION I**  
**W. BRYN MAWR AVENUE**  
**F.A.P. RTE. I-90 - SEC. (1517 & 1415) R-2**  
**COOK COUNTY**  
**STA. 107+63.56 TO STA. 123+19.96**  
**STRUCTURE NO. 016-2295**



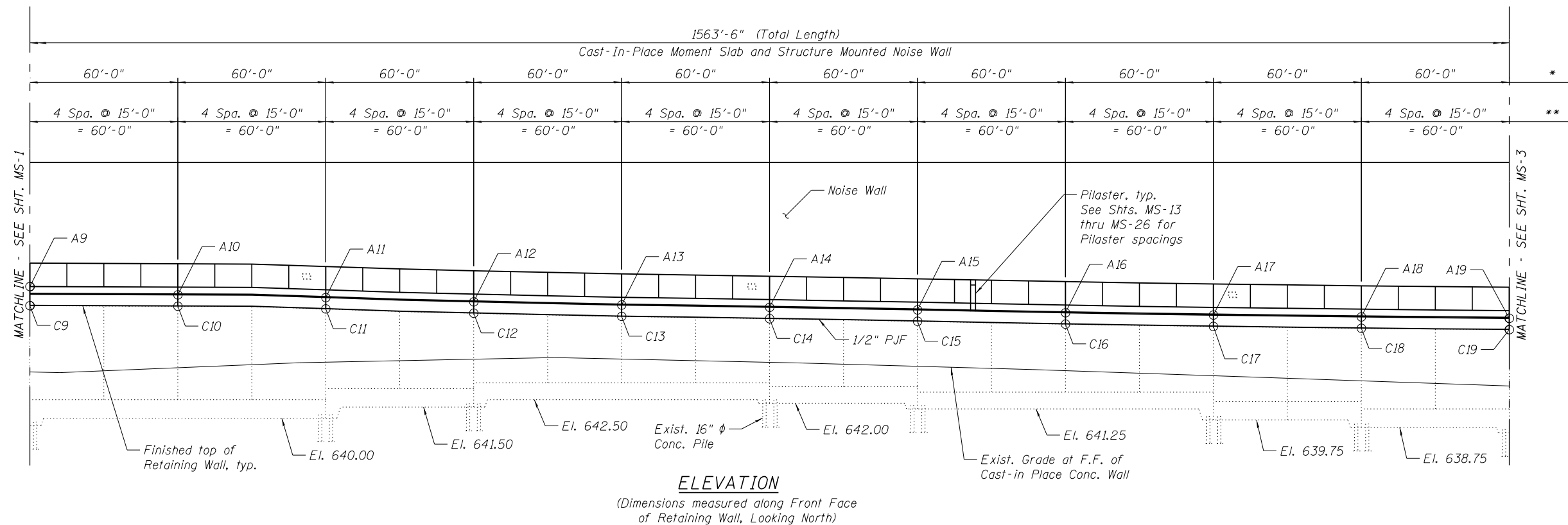
- LEGEND:**
- Limits of Lightweight Cellular Conc. Fill
  - Exist. Aerial Line
  - Exist. Electrical Line
  - Exist. Fence
  - Exist. Gas Line
  - Exist. Storm Sewer
  - Exist. Telephone Line
  - Exist. Water Line
  - Prop. Storm Sewer
  - Exist. Light Pole
  - Exist. Power Pole
  - Exist. Underground Combined Sewer
  - Traffic Lane
  - Exist. Elect. Box
  - Exist. Manhole
  - Prop. Catch Basin
  - Exist. Catch Basin (to remain)
  - Exist. Inlet
  - Exist. Fire Hydrant
  - Exist. Traffic Sign
  - Tree
  - Moment Slab Segment Number
  - Temporary Travel Lane
  - Soil Boring Location

**PLAN**  
(@ Top of Moment Slab)

- NOTES:**
- Horizontal dimensions measured along front face (I-90 side) of Existing Retaining Wall U.N.O.
  - Stations & offsets are relative to C W. Bryn Mawr Ave. U.N.O.
  - Stations, offsets & elevations for control points are provided on Sheet MS-5.
  - Provide Plaque on inside face (W. Bryn Mawr Ave. side) of Barrier. See Moment Slab/ Barrier Elevation for Locations.

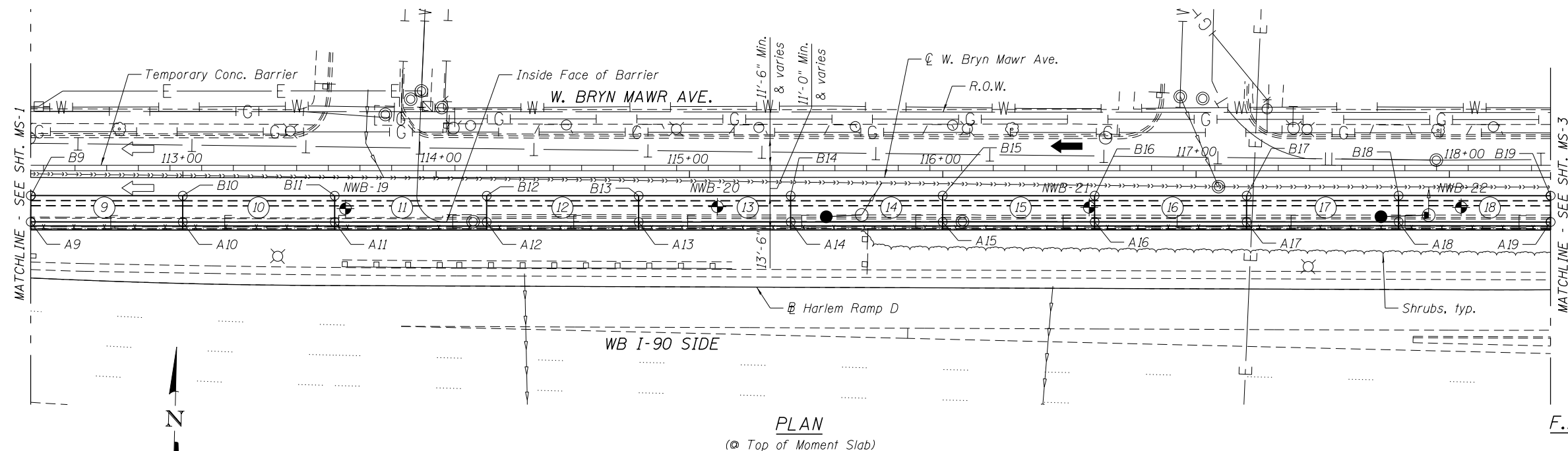
- \* Expansion Joint Spacing in Barrier and Moment Slab (along front face (I-90 side) of Existing Retaining Wall U.N.O.)
- \*\* Construction Joint Spacing in Barrier
- \*\*\* Dimensions measured along circular arc (Reference Arc) at an offset of 6 1/2" from the Outer Edge of Moment Slab (R=1079'-5 1/2") between points C2' and C8.

exp U.S. Services Inc. Chicago, IL BUILDINGS - EARTH & ENVIRONMENT - ENERGY INDUSTRIAL - INFRASTRUCTURE - SUSTAINABILITY	USER NAME = #USER#	DESIGNED STD	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN &amp; ELEVATION</b> <b>MOMENT SLAB (S.N. 016-2295)</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = #SCALE#	CHECKED KK	REVISED			1-90	(1517 & 1415) R-2	COOK	353	230
FILE NAME = #FILE#	PLOT DATE = 1-17-2018	DRAWN FG	REVISED	SHEET NO. MS-1 OF 39 SHEETS		S.N. 016-2295		CONTRACT NO. 60Y40		ILLINOIS FED. AID PROJECT
		DATE 8/21/2017	REVISED							



**ELEVATION**

(Dimensions measured along Front Face of Retaining Wall, Looking North)



**PLAN**

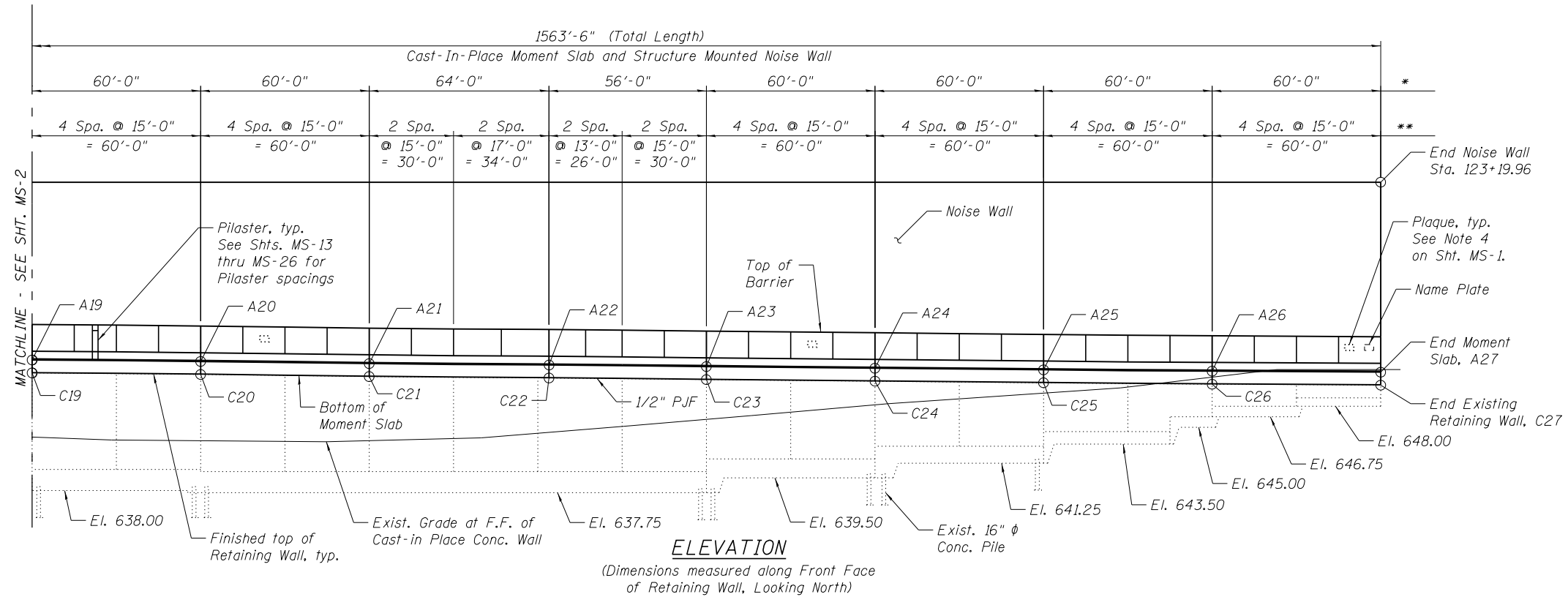
(@ Top of Moment Slab)

**Note:**  
For Notes, see Sht. MS-1.

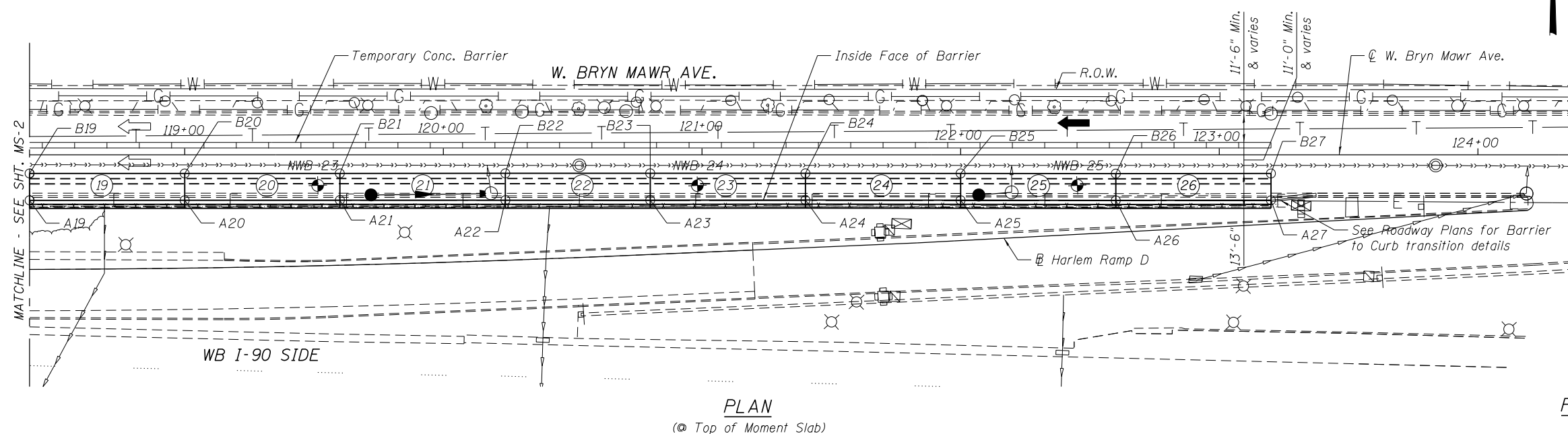
**GENERAL PLAN AND ELEVATION II**  
**W. BRYN MAWR AVENUE**  
**F.A.P. RTE. I-90 - SEC. (1517 & 1415) R-2**  
**COOK COUNTY**  
**STA. 107+63.56 TO STA. 123+19.96**  
**STRUCTURE NO. 016-2295**

USER NAME = *USER*	DESIGNED STD	REVISED
DESIGNED KK	CHECKED KK	REVISED
DRAWN FD	DATE 8/21/2017	REVISED
DATE 8-15-2017		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	231
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



**ELEVATION**  
(Dimensions measured along Front Face of Retaining Wall, Looking North)



**PLAN**  
(@ Top of Moment Slab)

**Note:**  
For Notes, see Sht. MS-1.

**GENERAL PLAN AND ELEVATION III**  
**W. BRYN MAWR AVENUE**  
**F.A.P. RTE. I-90 - SEC. (1517 & 1415) R-2**  
**COOK COUNTY**  
**STA. 107+63.56 TO STA. 123+19.96**  
**STRUCTURE NO. 016-2295**

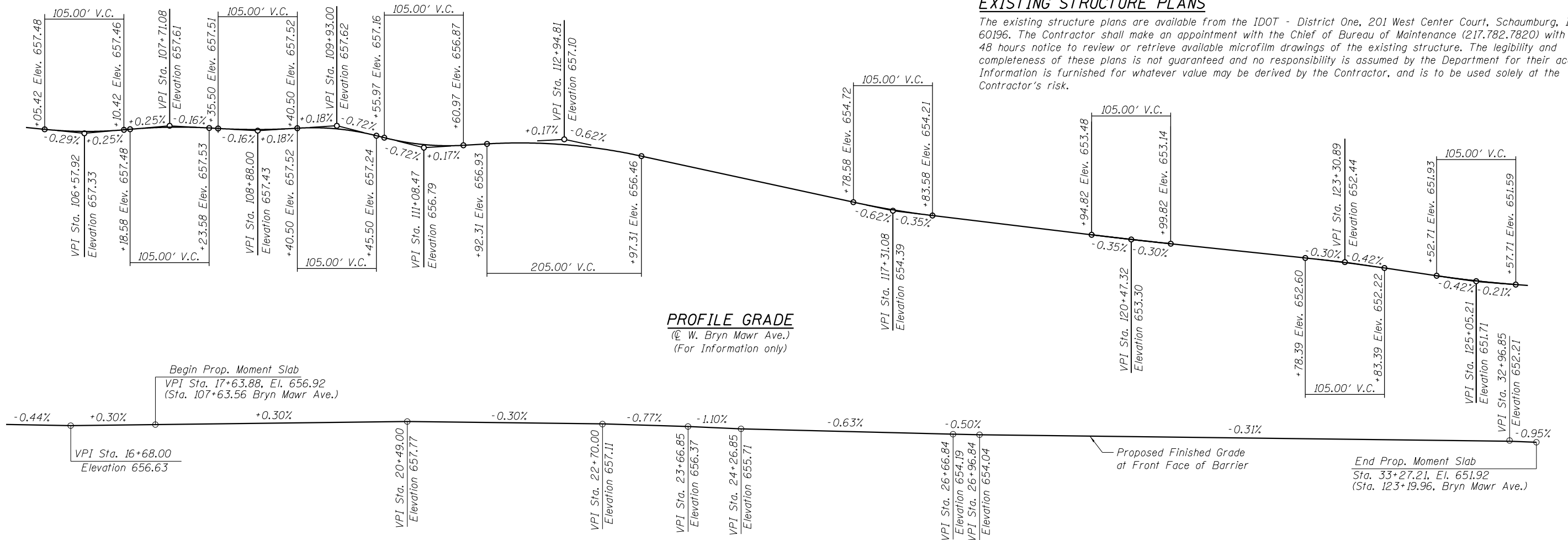
exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = *USER*	DESIGNED STD	REVISIONS	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN &amp; ELEVATION</b> <b>MOMENT SLAB (S.N. 016-2295)</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	CHECKED KK	REVISIONS			I-90	(1517 & 1415) R-2	COOK	353	232
	PLOT DATE = 8-15-2017	DRAWN FD	REVISIONS			S.N. 016-2295	CONTRACT NO. 60Y40		ILLINOIS FED. AID PROJECT	
		DATE 8/21/2017	REVISIONS			SHEET NO. MS-3 OF 39 SHEETS				

FILE NAME = \*FILE\*



**EXISTING STRUCTURE PLANS**

The existing structure plans are available from the IDOT - District One, 201 West Center Court, Schaumburg, Illinois 60196. The Contractor shall make an appointment with the Chief of Bureau of Maintenance (217.782.7820) with at least 48 hours notice to review or retrieve available microfilm drawings of the existing structure. The legibility and completeness of these plans is not guaranteed and no responsibility is assumed by the Department for their accuracy. Information is furnished for whatever value may be derived by the Contractor, and is to be used solely at the Contractor's risk.



**INDEX OF SHEETS**

- |  |  |
|--|--|
| MS-1 General Plan & Elevation - 1                            | MS-27 Moment Slab & Barrier Details - 1 of 4 |
| MS-2 General Plan & Elevation - 2                            | MS-28 Moment Slab & Barrier Details - 2 of 4 |
| MS-3 General Plan & Elevation - 3                            | MS-29 Moment Slab & Barrier Details - 3 of 4 |
| MS-4 Index of Sheets, General Notes & Total Bill of Material | MS-30 Moment Slab & Barrier Details - 4 of 4 |
| MS-5 Sections & Details                                      | MS-31 Bar List & Details                     |
| MS-6 Partial Structure Removal - 1 of 7                      | MS-32 Boring Logs - 1                        |
| MS-7 Partial Structure Removal - 2 of 7                      | MS-33 Boring Logs - 2                        |
| MS-8 Partial Structure Removal - 3 of 7                      | MS-34 Boring Logs - 3                        |
| MS-9 Partial Structure Removal - 4 of 7                      | MS-35 Boring Logs - 4                        |
| MS-10 Partial Structure Removal - 5 of 7                     | MS-36 Boring Logs - 5                        |
| MS-11 Partial Structure Removal - 6 of 7                     | MS-37 Boring Logs - 6                        |
| MS-12 Partial Structure Removal - 7 of 7                     | MS-38 Boring Logs - 7                        |
| MS-13 Moment Slab Plan & Elevation - 1 of 14                 | MS-39 Boring Logs - 8                        |
| MS-14 Moment Slab Plan & Elevation - 2 of 14                 |  |
| MS-15 Moment Slab Plan & Elevation - 3 of 14                 |  |
| MS-16 Moment Slab Plan & Elevation - 4 of 14                 |  |
| MS-17 Moment Slab Plan & Elevation - 5 of 14                 |  |
| MS-18 Moment Slab Plan & Elevation - 6 of 14                 |  |
| MS-19 Moment Slab Plan & Elevation - 7 of 14                 |  |
| MS-20 Moment Slab Plan & Elevation - 8 of 14                 |  |
| MS-21 Moment Slab Plan & Elevation - 9 of 14                 |  |
| MS-22 Moment Slab Plan & Elevation - 10 of 14                |  |
| MS-23 Moment Slab Plan & Elevation - 11 of 14                |  |
| MS-24 Moment Slab Plan & Elevation - 12 of 14                |  |
| MS-25 Moment Slab Plan & Elevation - 13 of 14                |  |
| MS-26 Moment Slab Plan & Elevation - 14 of 14                |  |

**PLAQUE LOCATIONS**

Plaque No.	Station*
1	107+68.31
2	109+65.00
3	111+41.55
4	113+50.45
5	115+45.45
6	117+40.46
7	119+20.46
8	121+00.46
9	123+19.21

\* Stations provided at top left corner of Plaques

**GENERAL NOTES**

- Reinforcing bar bending details shall be in accordance with the latest "Manual of Standard Practice for Detailing Reinforced Concrete Structures", ACI 315, latest edition.
- Reinforcement bar bending dimensions are out to out.
- Reinforcing bars designated "(E)" shall be epoxy coated.
- All exposed concrete edges shall have a 3/4" x 45° chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground line.
- Bars noted thus, 3x2-#5 indicates 3 lines of #5 bars with 2 lengths of bars per line.
- No construction joints except those shown on the plans will be allowed unless otherwise approved by the Engineer.
- It shall be the Contractor's responsibility to verify the location of all utilities prior to starting construction. Contact J.U.L.I.E., 800-892-0123.
- Plan dimensions and details relative to existing structure are taken from existing plans, and are subject to nominal construction variations. The contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

STA. 107+63.56  
 TO 123+19.96  
 RE-BUILT 20\_\_ BY  
 STATE OF ILLINOIS  
 F.A.I. RT. 90  
 SEC. (1517 & 1415) R-2  
 STR. NO. 016-2295

**NAME PLATE**  
 See Std. 515001

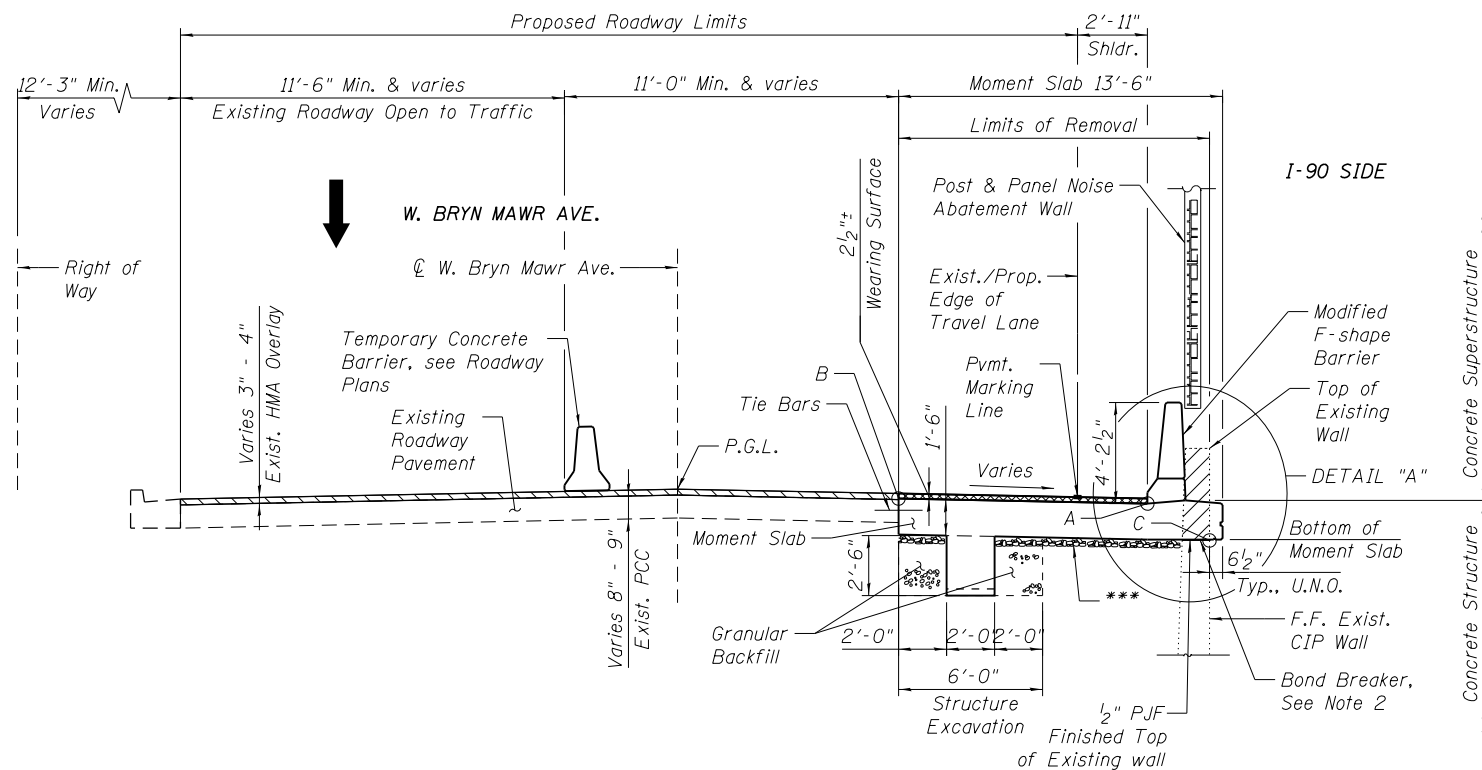
PLAQUE --  
 MOMENT SLAB AREA  
 DO NOT OPEN-CUT  
 ROADWAY FROM  
 PLAQUE 1 TO PLAQUE 9

**PLAQUE**  
 (Paid for as Name Plate)

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Subbase Granular Material, Type B 4"	Sq Yd	2005.9
Concrete Removal	Cu Yd	239.1
Structure Excavation	Cu Yd	1849
Concrete Structures	Cu Yd	1466.2
Concrete Superstructure **	Cu Yd	263.5
Protective Coat	Sq Yd	919
Reinforcement Bars, Epoxy Coated	Pound	265000
Name Plates	Each	10
Barrier Wall Reflectors, Type C	Each	20
Noise Abatement Wall Anchor Rod Assembly	Each	106
Lightweight Cellular Concrete Fill	Cu Yd	61
Granular Backfill for Structures	Cu Yd	574
Fence Removal	Foot	1564

\*\* Includes cost of Traffic Barriers and Pilasters.



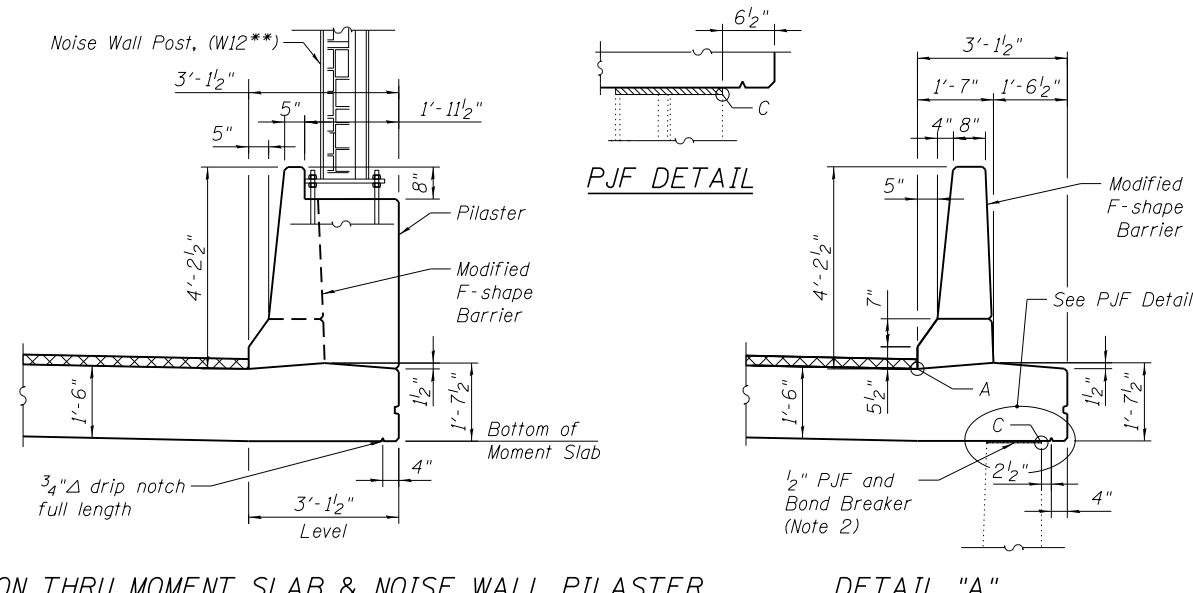
TYPICAL SECTION THRU MOMENT SLAB & NOISE WALL  
(Looking East)

INSIDE FACE OF BARRIER (A)			
Location	Station	Offset ('RT)	Elevation
A1	107+63.56	18.03	656.71
A2	108+27.06	17.69	656.90
A2'	108+51.66	17.56	656.97
A3	108+86.03	17.36	657.08
A4	109+44.88	17.14	657.26
A5	110+03.74	17.09	657.44
A6	110+62.60	17.19	657.51
A7	111+21.45	17.45	657.33
A8	111+80.28	17.86	657.15
A9	112+40.14	17.54	656.97
A10	112+99.95	17.50	656.62
A11	113+59.95	17.52	656.16
A12	114+19.95	17.56	655.50
A13	114+79.95	17.59	655.12
A14	115+39.95	17.60	654.74
A15	115+99.96	17.59	654.36
A16	116+59.96	17.59	653.98
A17	117+19.96	17.60	653.74
A18	117+79.96	17.56	653.56
A19	118+39.96	17.62	653.37
A20	118+99.96	17.60	653.19
A21	119+59.96	17.57	653.01
A22	120+23.96	17.57	652.81
A23	120+79.96	17.56	652.64
A24	121+39.96	17.54	652.46
A25	121+99.96	17.59	652.28
A26	122+59.96	17.66	652.09
A27	123+19.96	17.60	651.71

INNER EDGE OF MOMENT SLAB (B)			
Location	Station	Offset ('RT)	Elevation
B1	107+63.50	7.65	657.18
B2	108+27.00	7.32	657.15
B2'	108+51.42	7.19	657.13
B3	108+85.98	6.98	657.15
B4	109+44.86	6.77	657.32
B5	110+03.74	6.71	657.15
B6	110+62.63	6.81	657.06
B7	111+21.51	7.07	656.94
B8	111+80.36	7.49	656.88
B9	112+40.04	7.17	656.95
B10	112+99.96	7.12	656.76
B11	113+59.96	7.15	656.46
B12	114+19.96	7.19	655.88
B13	114+79.95	7.22	655.50
B14	115+39.95	7.23	655.20
B15	115+99.96	7.22	654.71
B16	116+59.96	7.21	654.43
B17	117+19.96	7.23	654.03
B17	117+79.96	7.19	653.85
B19	118+39.96	7.25	653.63
B20	118+99.96	7.22	653.43
B21	119+59.96	7.20	653.24
B22	120+23.96	7.19	652.85
B23	120+79.96	7.18	652.85
B24	121+39.96	7.17	652.69
B25	121+99.97	7.21	652.37
B26	122+59.96	7.28	652.26
B27	123+19.96	7.23	652.13

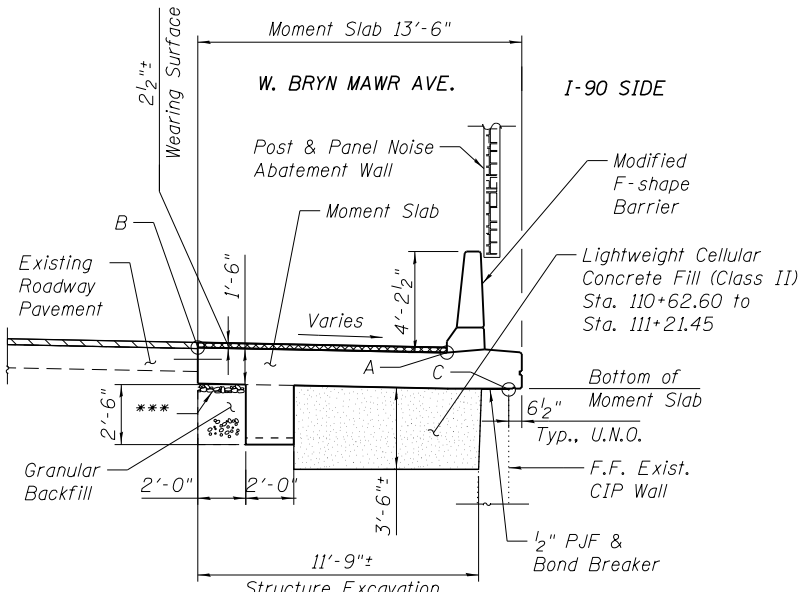
FINISHED TOP OF EXISTING RETAINING WALL (C)		
Location	Station	Elevation
C1	107+63.59	655.17
C2	108+27.07	655.36
C2'	108+51.72	655.43
C3	108+86.04	655.54
C4	109+44.88	655.72
C5	110+03.74	655.90
C6	110+62.59	655.97
C7	111+21.43	655.79
C8	111+80.26	655.61
C9	112+40.18	655.43
C10	112+99.95	655.08
C11	113+59.95	654.62
C12	114+19.95	653.96
C13	114+79.95	653.58
C14	115+39.95	653.20
C15	115+99.96	652.82
C16	116+59.96	652.44
C17	117+19.96	652.20
C18	117+79.96	652.01
C19	118+39.96	651.83
C20	118+99.96	651.65
C21	119+59.96	651.47
C22	120+23.96	651.27
C23	120+79.96	651.10
C24	121+39.96	650.92
C25	121+99.96	650.73
C26	122+59.96	650.55
C27	123+19.96	650.17

- A Stations, offsets and elevations for Inside Face of Barrier (at elevation 2 1/2" below top of wearing surface) are provided w.r.t. this point, see Plan & Elevation views.
- B Stations and offsets for Inner Edge of Moment Slab (at elevation 2 1/2" below top of wearing surface) are provided w.r.t. this point, see Plan view.
- C Stations and elevations for finished top of Retaining Wall (bottom of 1/2" PJF) are provided w.r.t. this point, see Elevation view.

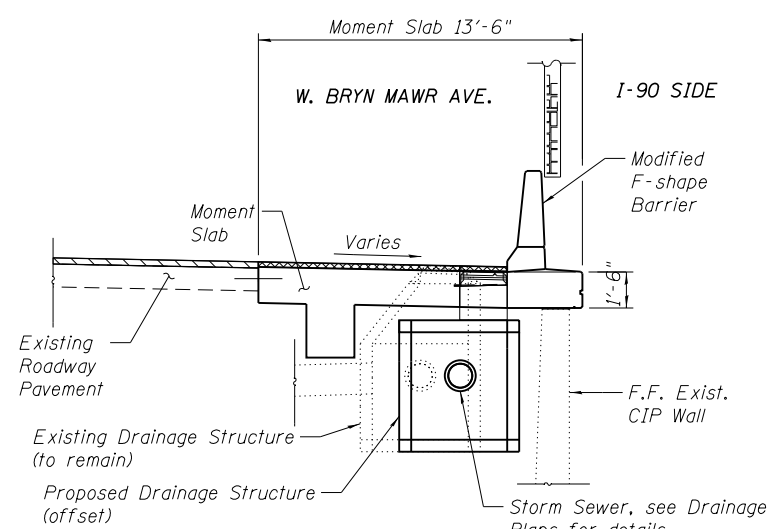


SECTION THRU MOMENT SLAB & NOISE WALL PILASTER

DETAIL "A"



SECTION THRU MOMENT SLAB  
(Looking East)  
(Sta. 110+62.60 to Sta. 111+21.45)



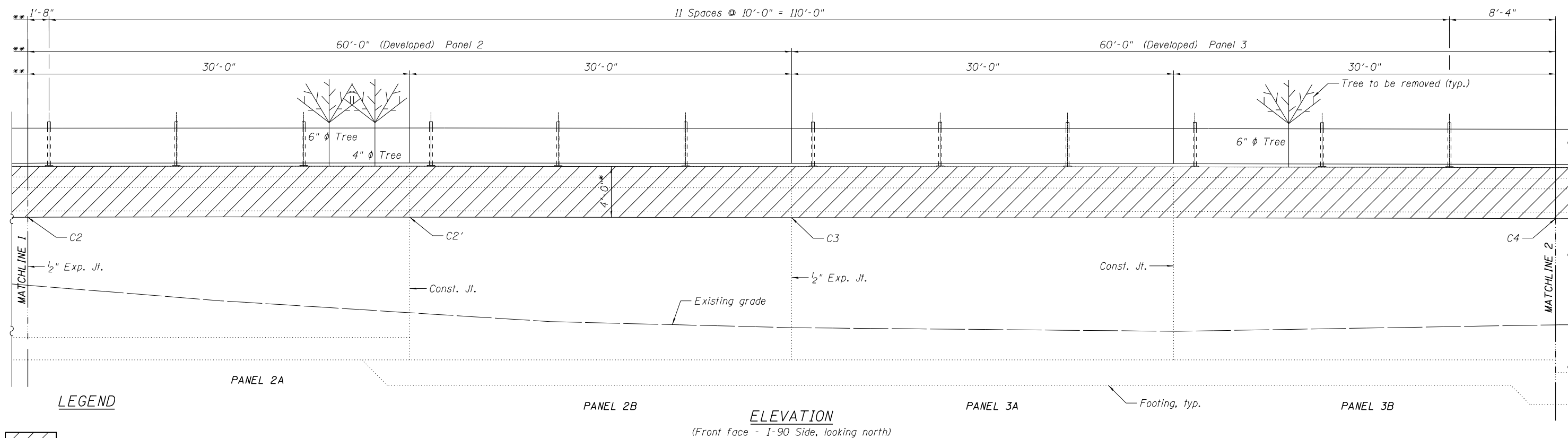
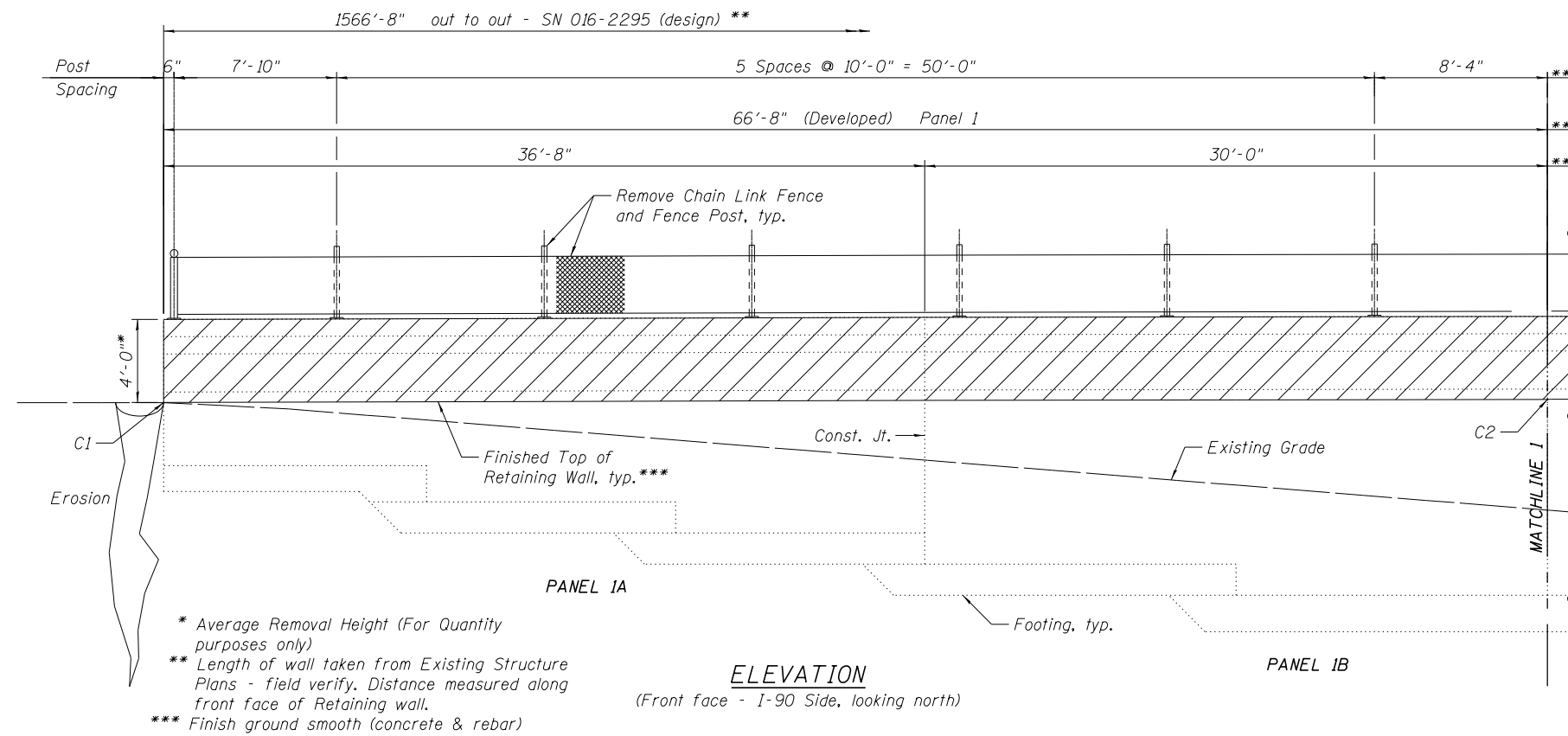
SECTION THRU MOMENT SLAB & NOISE WALL  
(Catch Basin Location)

LEGEND

- ➡ Temporary Travel Lanes
- ▨ Existing Concrete Removal

Notes:

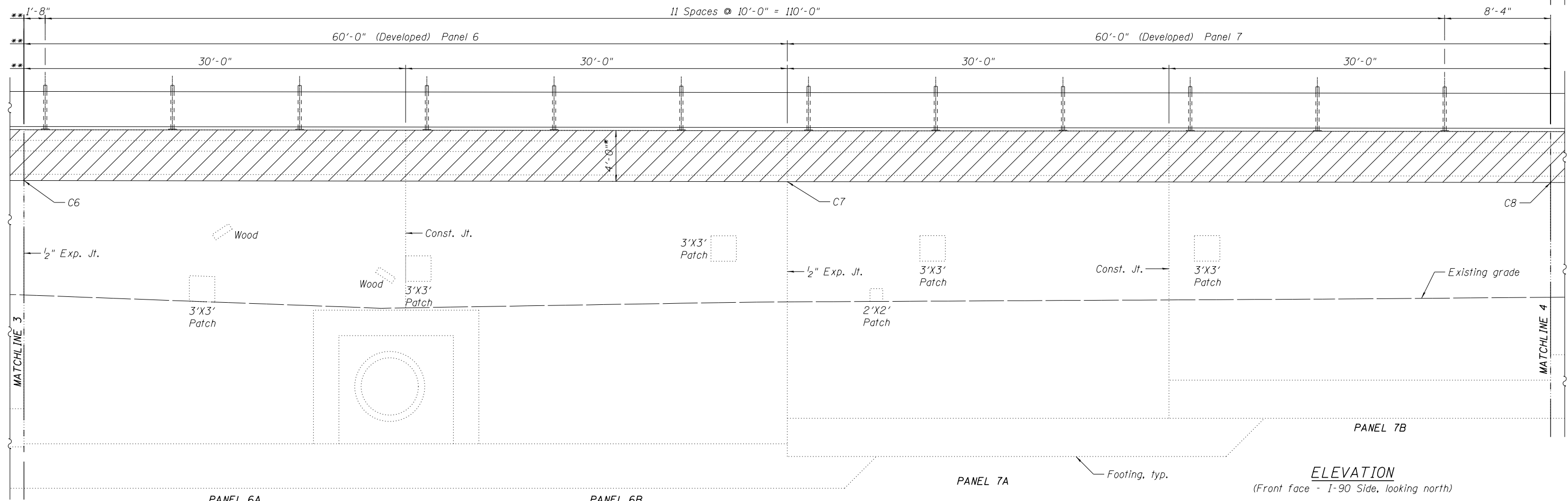
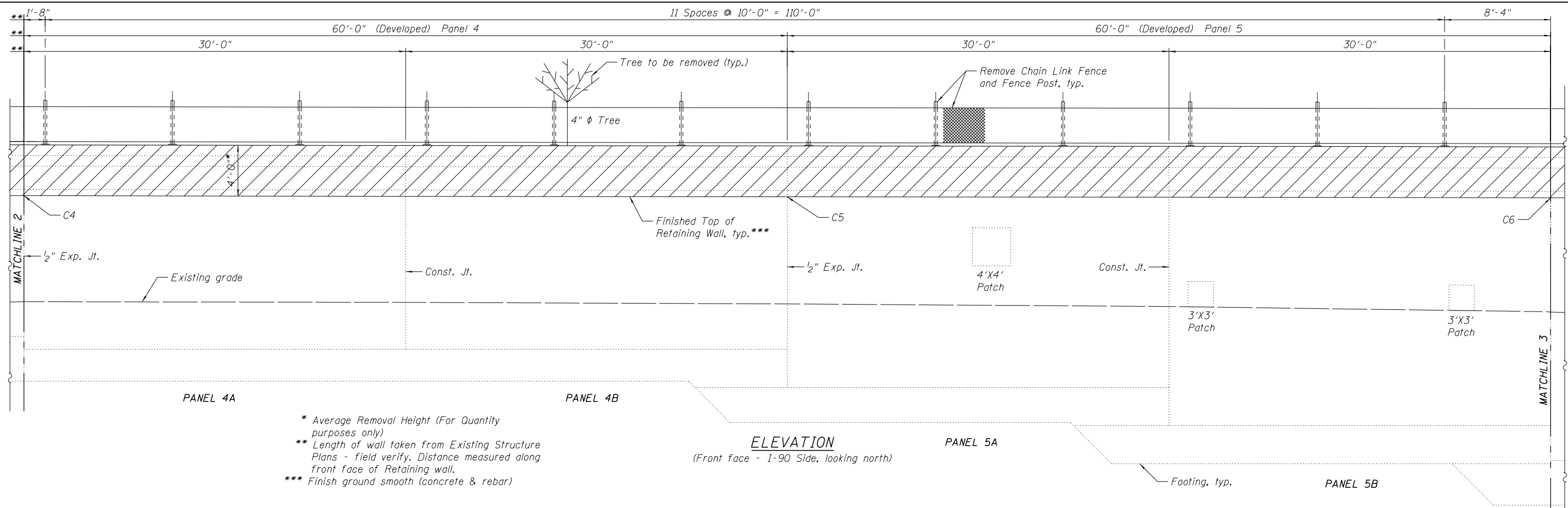
- \*\* To be designed by Noise Abatement wall supplier.
- \*\*\* Subbase Granular Material, Type B 4"
- 1. See TYPICAL SECTION THRU MOMENT SLAB & NOISE WALL for location of Geometric Control Points.
- 2. Apply Bond Breaker followed by 1/2" PJF before casting Moment Slab concrete.



**LEGEND**

Concrete Removal

exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = *USER*	DESIGNED STD	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>PARTIAL STRUCTURE REMOVAL 1 OF 7</b> <b>MOMENT SLAB (S.N. 016-2295)</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	CHECKED KK	REVISED			I-90	(1517 & 1415) R-2	COOK	353	235
	PLOT DATE = 8-15-2017	DRAWN EG	REVISED			S.N. 016-2295	CONTRACT NO. 60Y40		ILLINOIS FED. AID PROJECT	
	DATE 8/21/2017	REVIS	REVISED			SHEET NO. MS-6 OF 39 SHEETS				



exp U.S. Services Inc.  
Chicago, IL  
BUILDINGS-EARTH & ENVIRONMENT-ENERGY  
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

USER NAME = *USER*	DESIGNED STD	REVISED
CHECKED KK	REVISIONS	
DRAWN EG	REVISIONS	
DATE 8/21/2017	REVISIONS	

PLLOT SCALE = *SCALE*	DATE 8/21/2017
PLLOT DATE = 8-15-2017	

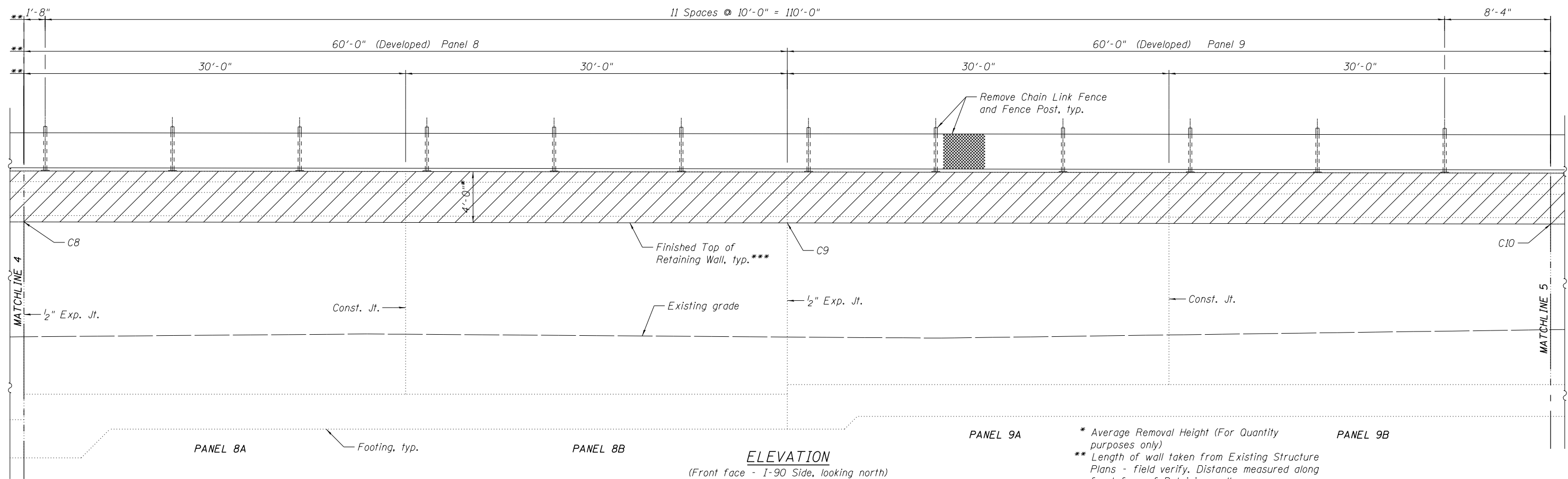
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PARTIAL STRUCTURE REMOVAL 2 OF 7**  
**MOMENT SLAB (S.N. 016-2295)**

SHEET NO. MS-7 OF 39 SHEETS

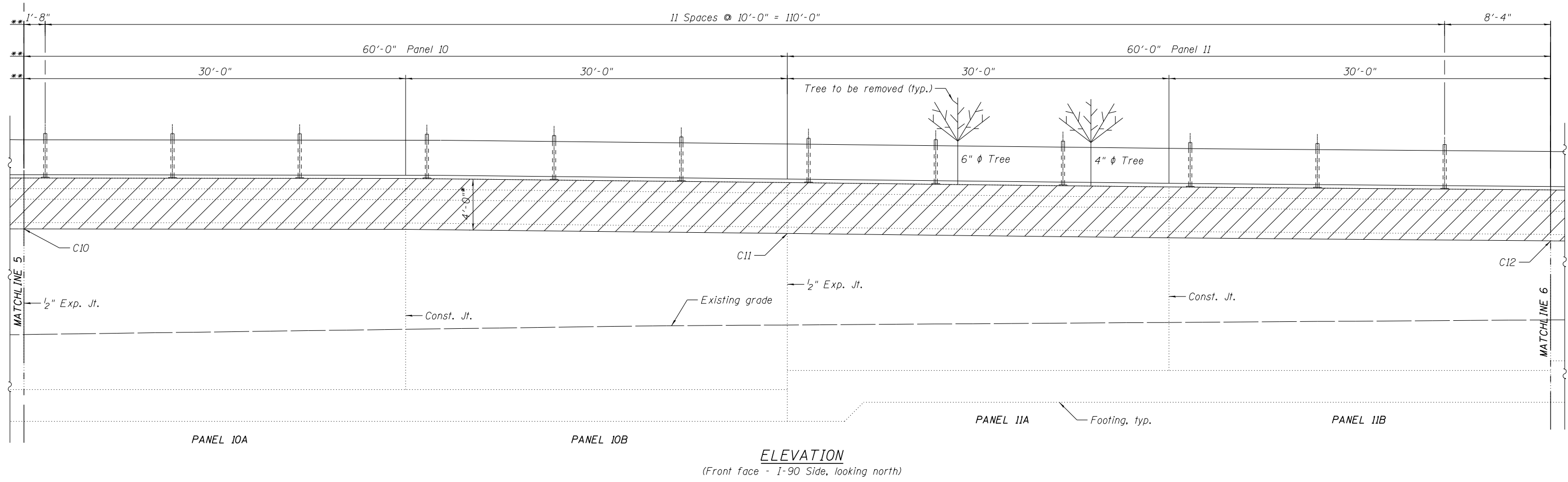
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	236
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				

FILE NAME = \*FILE\*



**ELEVATION**  
(Front face - I-90 Side, looking north)

- \* Average Removal Height (For Quantity purposes only)
- \*\* Length of wall taken from Existing Structure Plans - field verify. Distance measured along front face of Retaining wall.
- \*\*\* Finish ground smooth (concrete & rebar)



**ELEVATION**  
(Front face - I-90 Side, looking north)

exp U.S. Services Inc.  
Chicago, IL  
BUILDINGS-EARTH & ENVIRONMENT-ENERGY  
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

USER NAME = *USER*	DESIGNED STD	REVISED
CHECKED KK		REVISED
PLOT SCALE = *SCALE*	DRAWN EG	REVISED
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

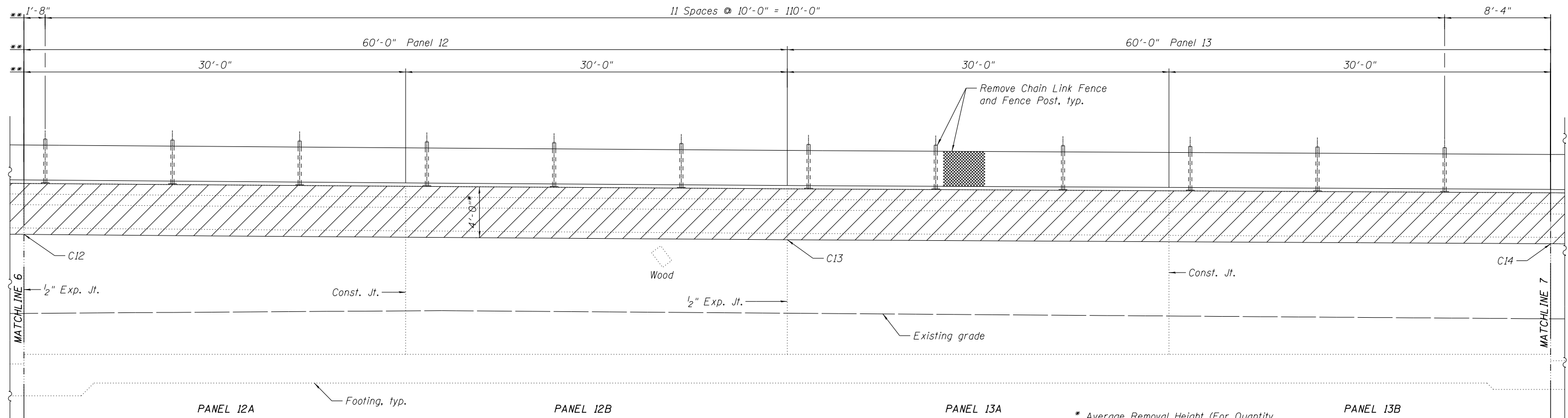
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PARTIAL STRUCTURE REMOVAL 3 OF 7**  
**MOMENT SLAB (S.N. 016-2295)**

SHEET NO. MS-8 OF 39 SHEETS

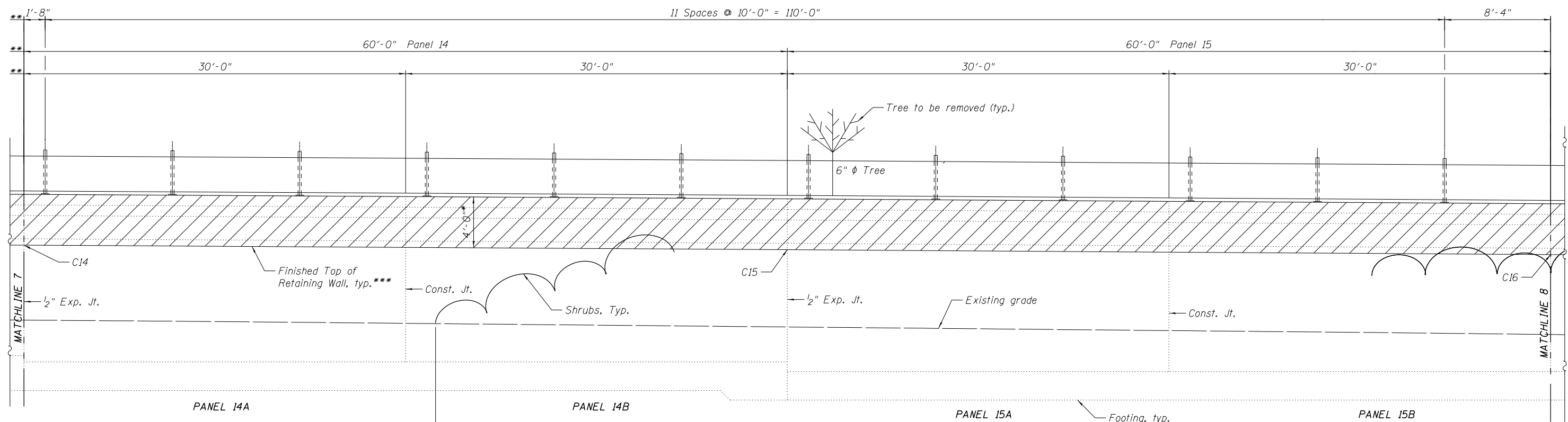
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	237
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				

FILE NAME = \*FILE\*



**ELEVATION**  
(Front face - I-90 Side, looking north)

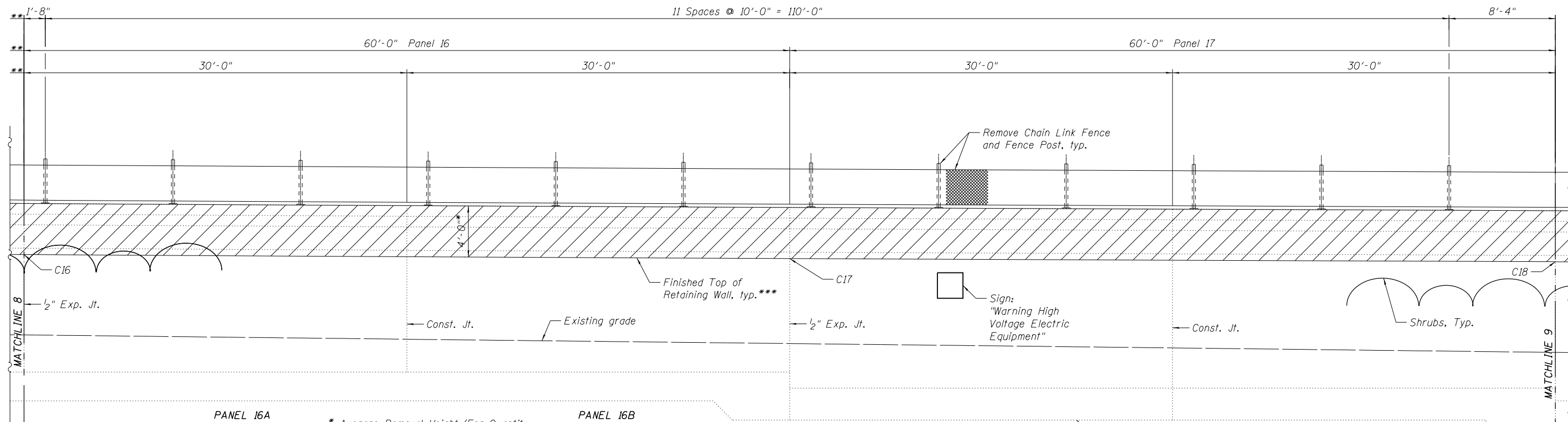
- \* Average Removal Height (For Quantity purposes only)
- \*\* Length of wall taken from Existing Structure Plans - field verify. Distance measured along front face of Retaining wall.
- \*\*\* Finish ground smooth (concrete & rebar)



**ELEVATION**  
(Front face - I-90 Side, looking north)

USER NAME = *USER*	DESIGNED STD	REVISED
PLLOT SCALE = *SCALE*	CHECKED KK	REVISED
PLOT DATE = 8-15-2017	DRAWN EG	REVISED
	DATE 8/21/2017	REVISED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-90	(1517 & 1415) R-2	COOK	353	238
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



PANEL 16A

PANEL 16B

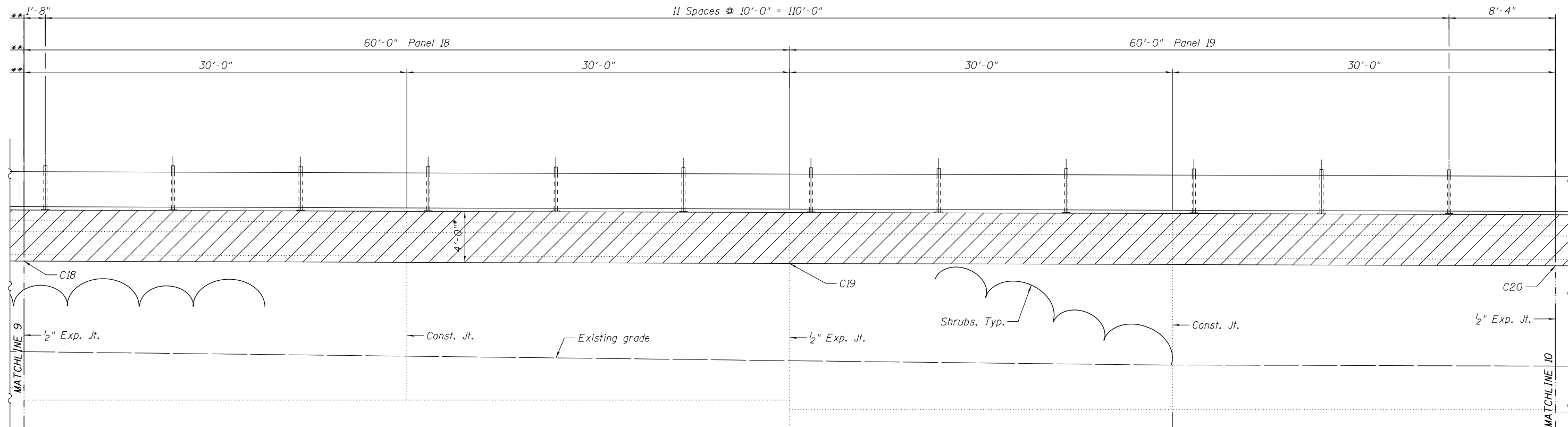
PANEL 17A

PANEL 17B

- \* Average Removal Height (For Quantity purposes only)
- \*\* Length of wall taken from Existing Structure Plans - field verify. Distance measured along front face of Retaining wall.
- \*\*\* Finish ground smooth (concrete & rebar)

**ELEVATION**

(Front face - I-90 Side, looking north)



PANEL 18A

PANEL 18B

PANEL 19A

PANEL 19B

**ELEVATION**

(Front face - I-90 Side, looking north)

exp U.S. Services Inc.  
Chicago, IL  
BUILDINGS-EARTH & ENVIRONMENT-ENERGY  
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

USER NAME = *USER*	DESIGNED STD	REVISED
PLLOT SCALE = *SCALE*	CHECKED KK	REVISED
PLLOT DATE = 8-15-2017	DRAWN EG	REVISED
	DATE 8/21/2017	REVISED

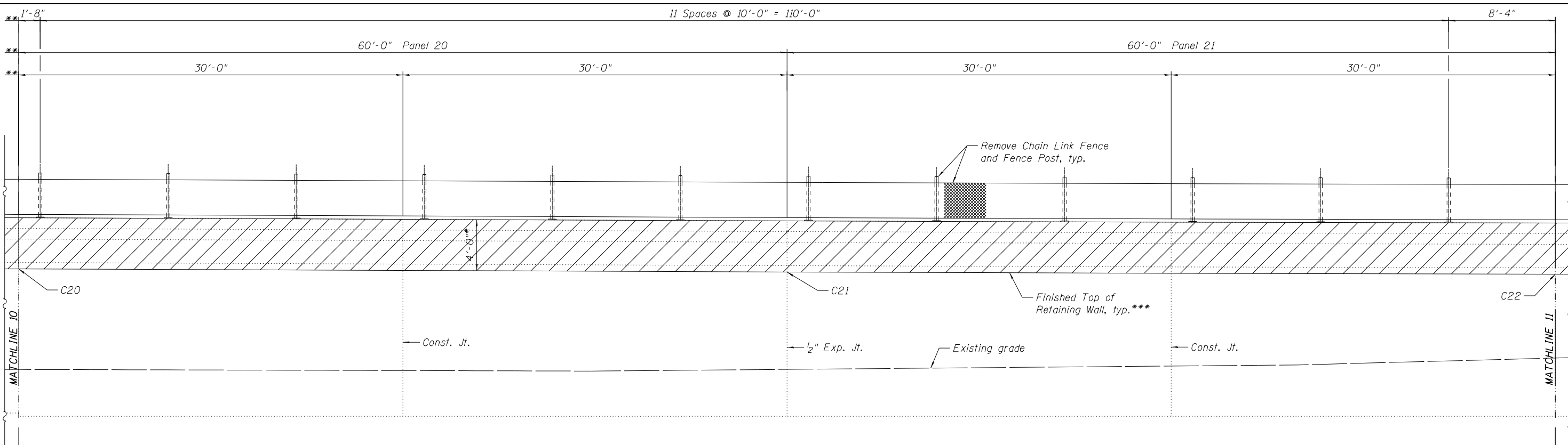
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PARTIAL STRUCTURE REMOVAL 5 OF 7  
MOMENT SLAB (S.N. 016-2295)**

SHEET NO. MS-10 OF 39 SHEETS

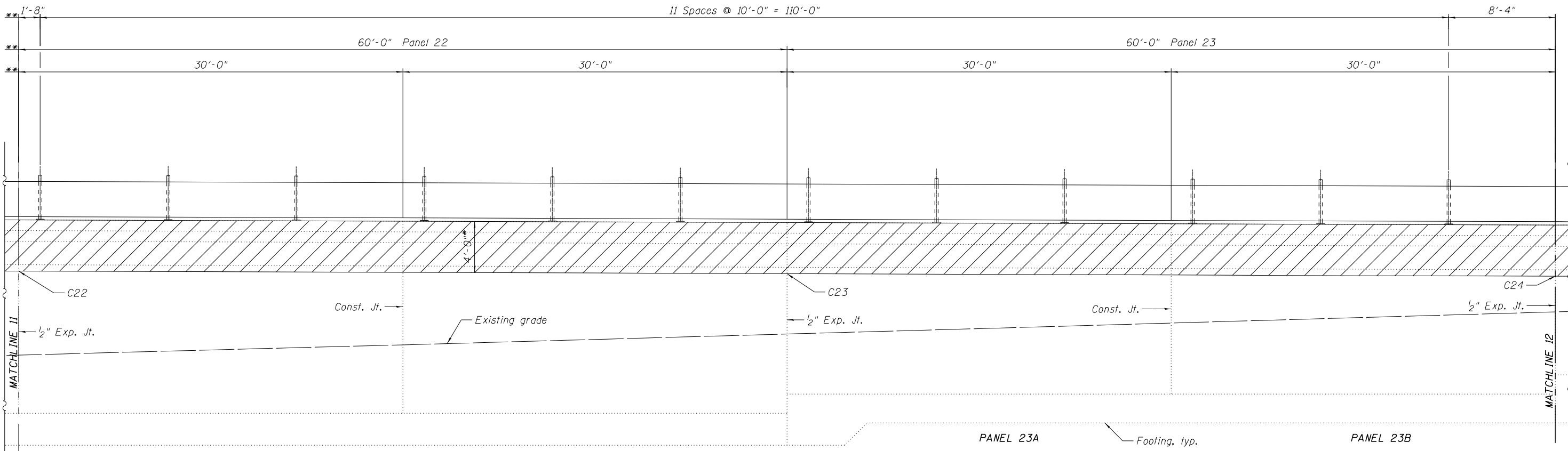
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	239
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				

FILE NAME = \*FILE\*



PANEL 20A      PANEL 20B      **ELEVATION**      PANEL 21A      PANEL 21B  
 (Front face - I-90 Side, looking north)

- \* Average Removal Height (For Quantity purposes only)
- \*\* Length of wall taken from Existing Structure Plans - field verify. Distance measured along front face of Retaining wall.
- \*\*\* Finish ground smooth (concrete & rebar)



PANEL 22A      PANEL 22B      **ELEVATION**      PANEL 23A      PANEL 23B  
 (Front face - I-90 Side, looking north)

exp U.S. Services Inc.  
 Chicago, IL  
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY  
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

USER NAME = *USER*	DESIGNED STD	REVISED
CHECKED KK	REVISOR	REVISOR
PLOT SCALE = *SCALE*	DRAWN EG	REVISOR
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISOR

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

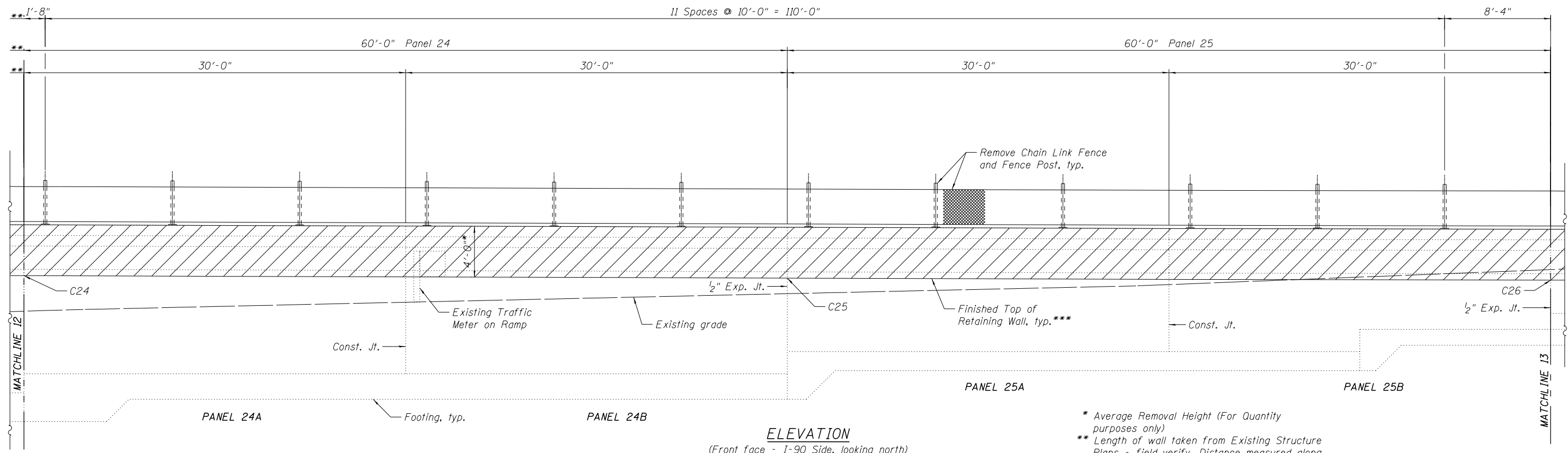
**PARTIAL STRUCTURE REMOVAL 6 OF 7**  
**MOMENT SLAB (S.N. 016-2295)**

SHEET NO. MS-11 OF 39 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	240
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				

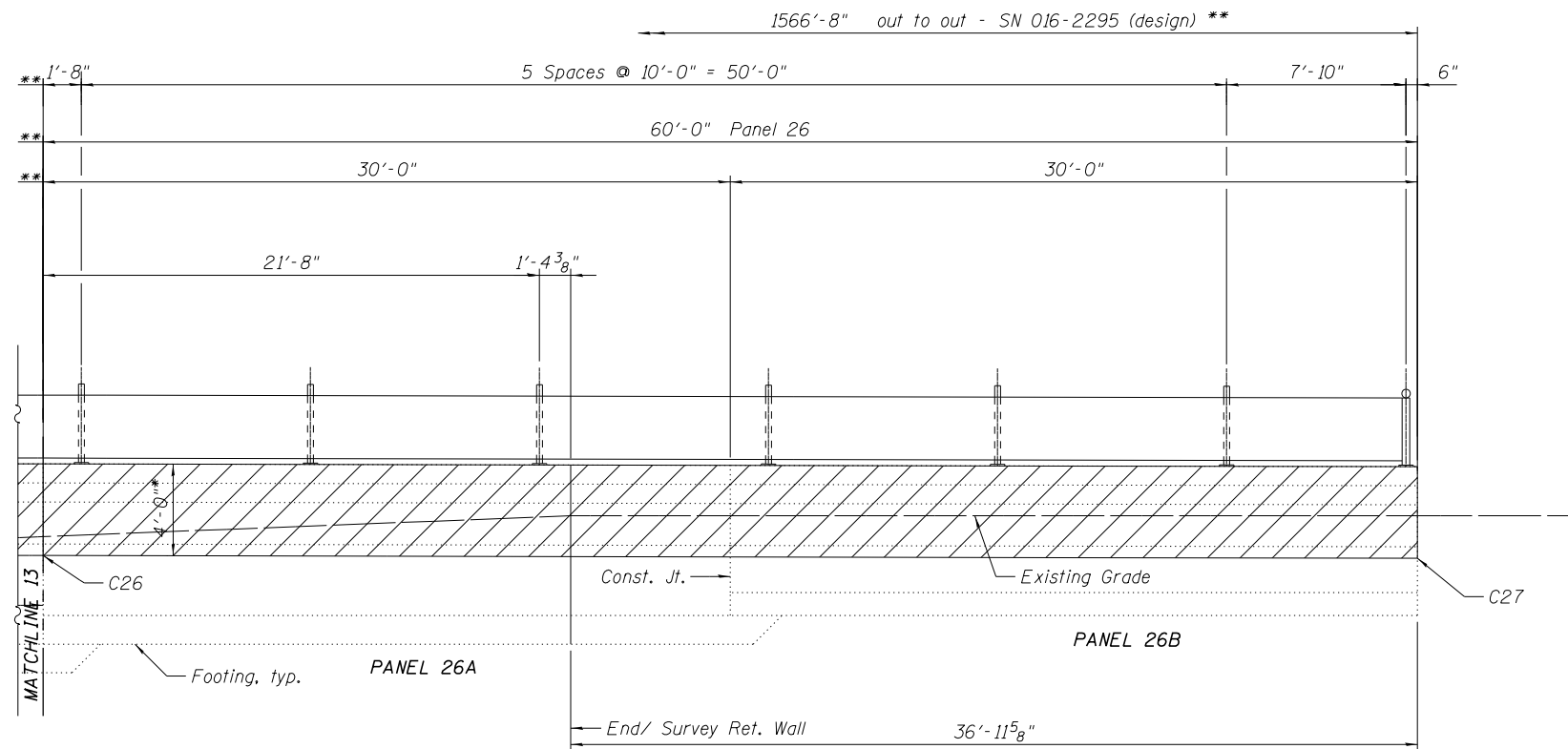
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**ELEVATION**  
(Front face - I-90 Side, looking north)

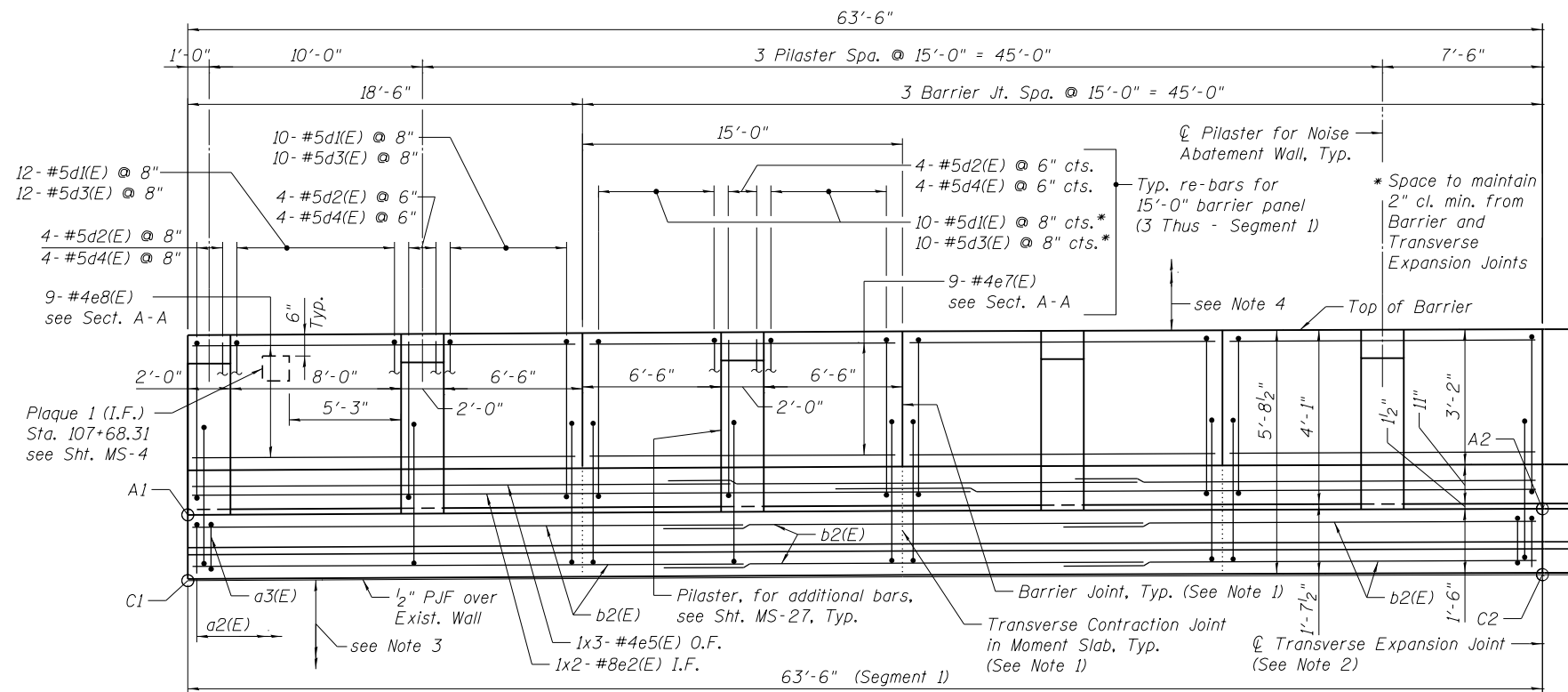
- \* Average Removal Height (For Quantity purposes only)
- \*\* Length of wall taken from Existing Structure Plans - field verify. Distance measured along front face of Retaining wall.
- \*\*\* Finish ground smooth (concrete & rebar)



**ELEVATION**  
(Front face - I-90 Side, looking north)

USER NAME = *USER*	DESIGNED STD	REVISED
PLOT SCALE = *SCALE*	CHECKED KK	REVISED
PLOT DATE = 8-15-2017	DRAWN EG	REVISED
	DATE 8/21/2017	REVISED

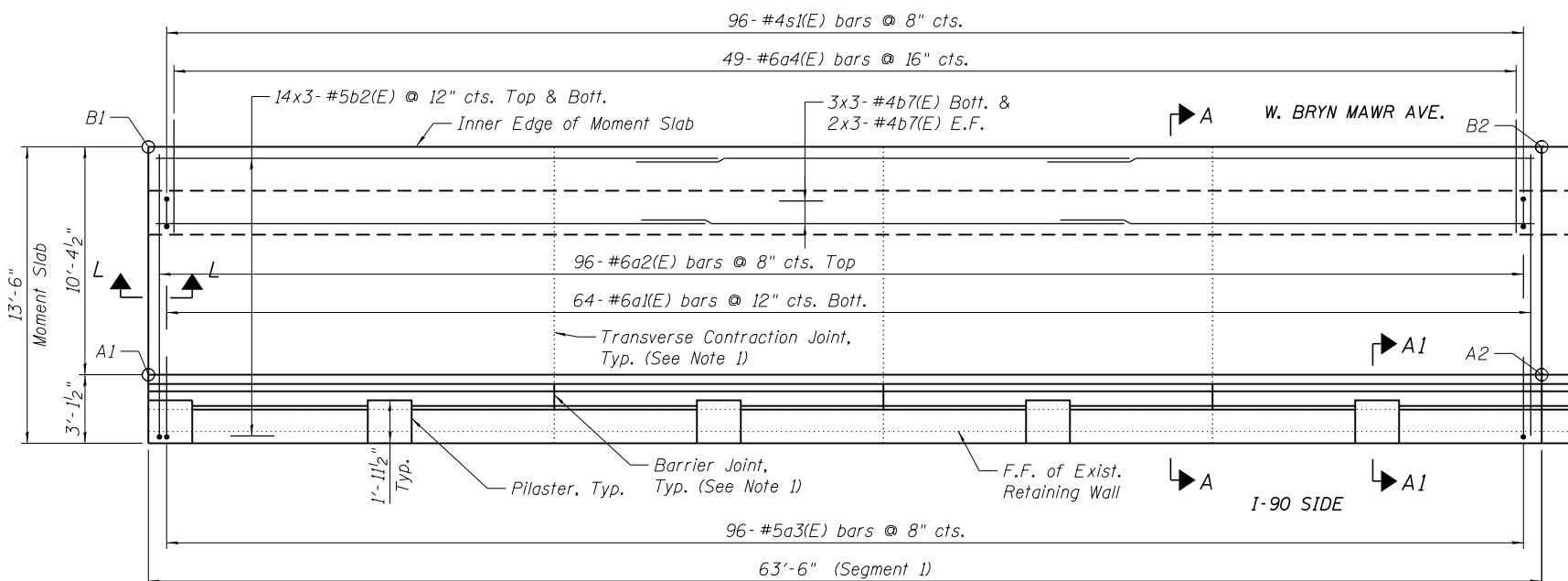
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-90	(1517 & 1415) R-2	COOK	353	241
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



**ELEVATION**  
(Looking North)

**Notes:**

1. For Barrier Joint & Transverse Contraction Joint details, see Sheet MS-30.
2. For Transverse Expansion Joint details, see Sheet MS-30.
3. Existing Retaining wall not shown for clarity.
4. Noise Abatement Panels not shown for clarity.
5. A1, B1, C1 etc. denote control points. See Sht. MS-5 for stations, offsets & elevations.
6. Bar indicated thus 17x3-#5 etc. indicates 17 lines of bars with 3 lengths per line.
7. For Bar List, see Sht. MS-31.
8. For locations and invert elevations of proposed & existing Catch basins, see Drainage Plans.
9. For Sections A-A & A1-A1, see Sht. MS-27. For Sections B-B & C-C, see Sht. MS-28. For Sections D-D & E-E, see Sht. MS-29. For Section L-L, see Sht. MS-30.
10. E.F. denotes Each Face  
I.F. denotes Inside Face  
O.F. denotes Outside Face

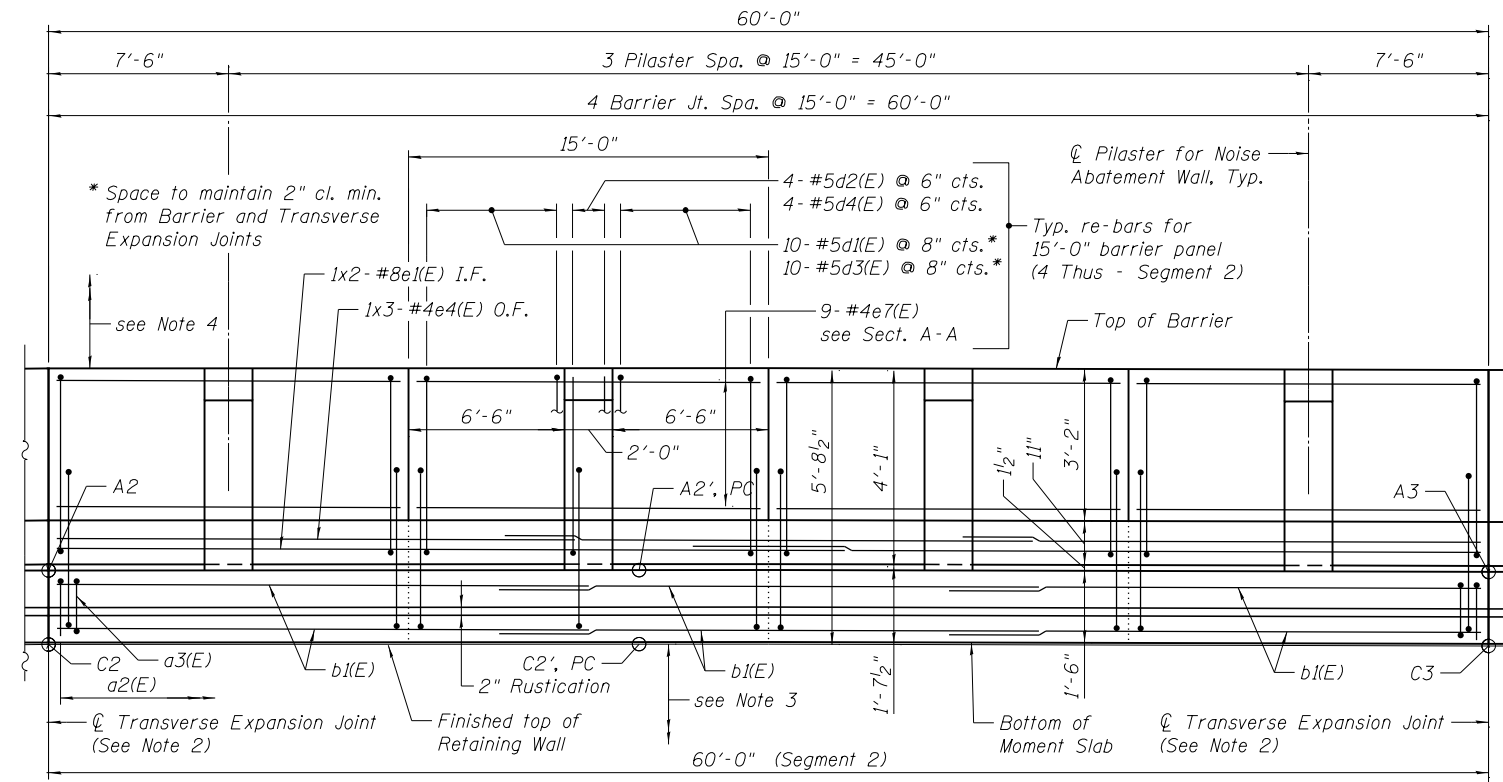


**PLAN**  
**SEGMENT 1**

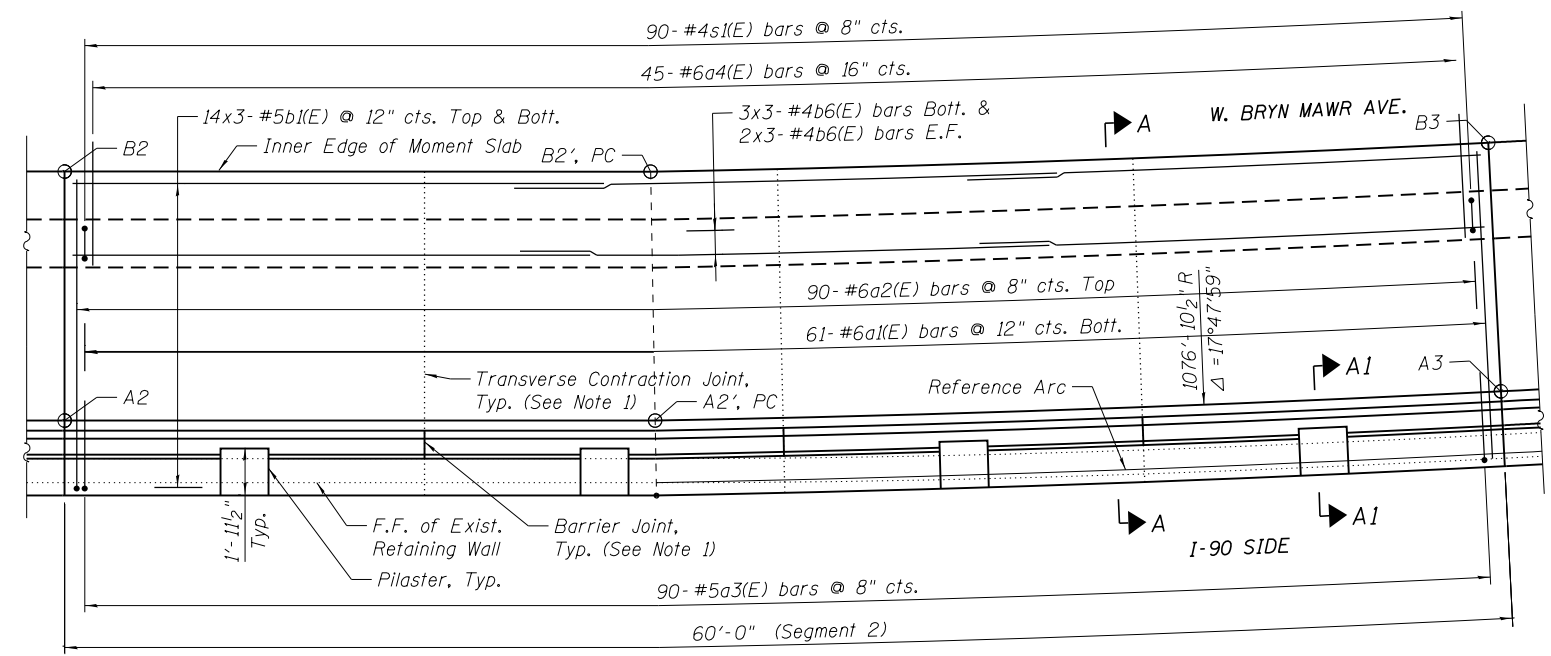
**Minimum Bar Lap**  
#4 = 2'-11"  
#5 = 3'-9"  
#6 = 3'-10"  
#8 = 6'-4"

USER NAME = #USER#	DESIGNED STD	REVISD
CHECKED KK	REVISD	
PLOT SCALE = #SCALE#	DRAWN FD	REVISD
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISD

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	242
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



**ELEVATION**  
(Looking North)



**PLAN**  
**SEGMENT 2**

**Minimum Bar Lap**  
 #4 = 2'-11"  
 #5 = 3'-9"  
 #6 = 3'-10"  
 #8 = 6'-4"

**Re-bar Notes:**

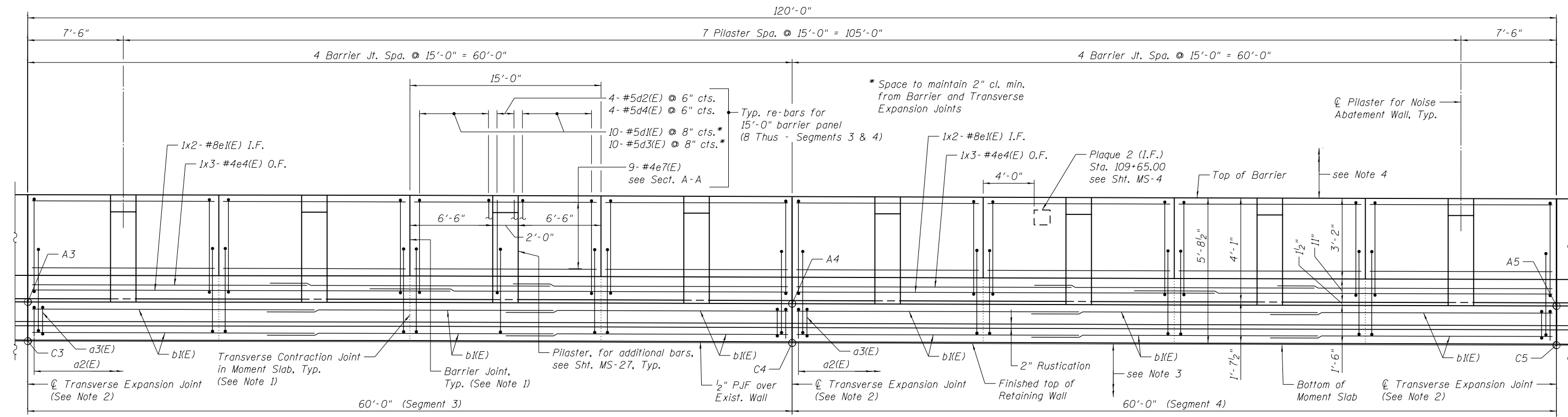
1. Transverse a(E) bars shall be placed radially at spacing noted.
2. Longitudinal b(E) & e(E) bars shall be sprung in place to be concentrically placed at the spacing noted.

**Note:**

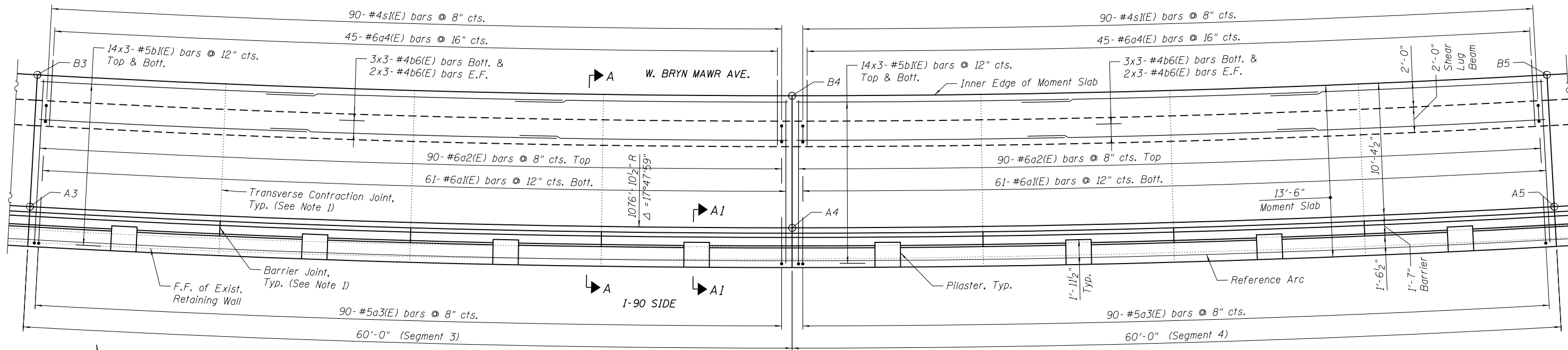
For Notes, see Sht. MS-13.

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PLOT SCALE = #SCALE#	CHECKED KK	REVISED
PLOT DATE = 8-15-2017	DRAWN FD	REVISED
	DATE 8/21/2017	REVISED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	243
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



**ELEVATION**  
(Looking North)



**PLAN**  
SEGMENTS 3 & 4

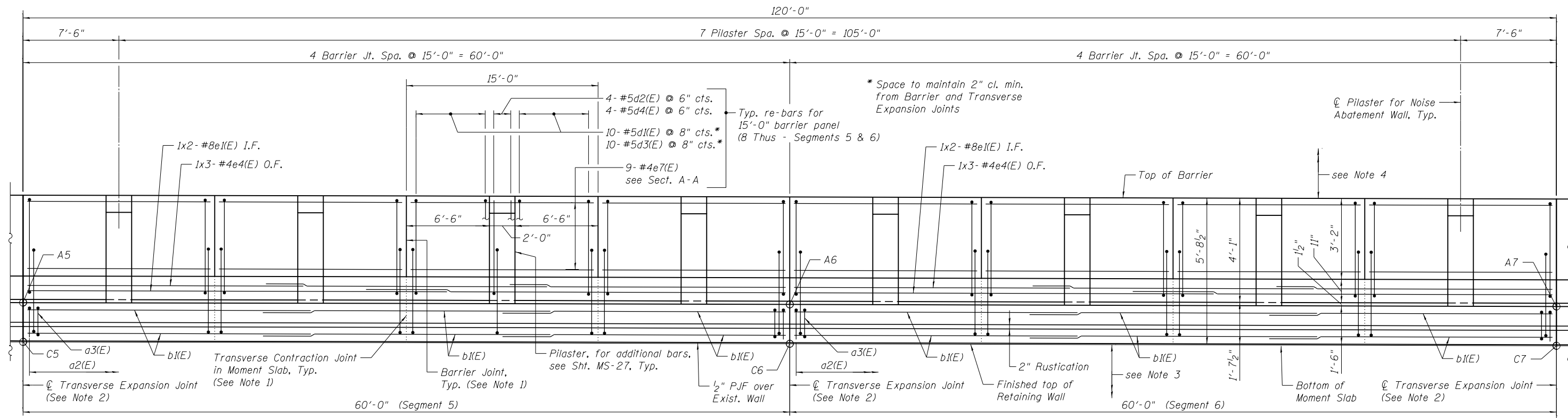
**Minimum Bar Lap**  
 #4 = 2'-11"  
 #5 = 3'-9"  
 #6 = 3'-10"  
 #8 = 6'-4"

**Re-bar Notes:**  
 1. Transverse a(E) bars shall be placed radially at spacing noted.  
 2. Longitudinal b(E) & e(E) bars shall be sprung in place to be concentrically placed at the spacing noted.

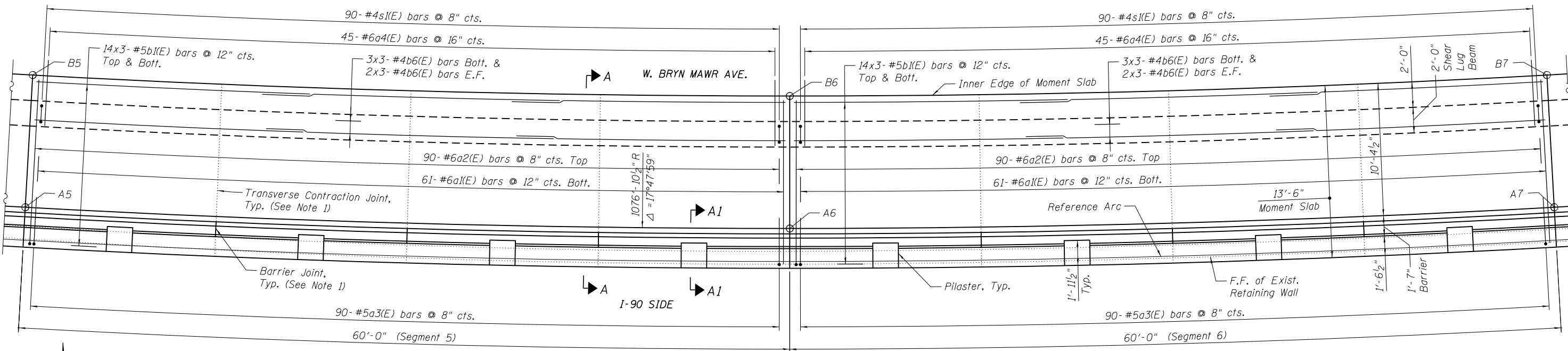
**Note:**  
 For Notes, see Sht. MS-13.

USER NAME = #USER*	DESIGNED STD	REVISED
PLLOT SCALE = #SCALE*	CHECKED KK	REVISED
PLLOT DATE = 8-15-2017	DRAWN FD	REVISED
	DATE 8/21/2017	REVISED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	244
S.N. 016-2295		CONTRACT NO. 60Y40		



**ELEVATION**  
(Looking North)



**PLAN**  
**SEGMENTS 5 & 6**

**Minimum Bar Lap**

- #4 = 2'-11"
- #5 = 3'-9"
- #6 = 3'-10"
- #8 = 6'-4"

**Re-bar Notes:**

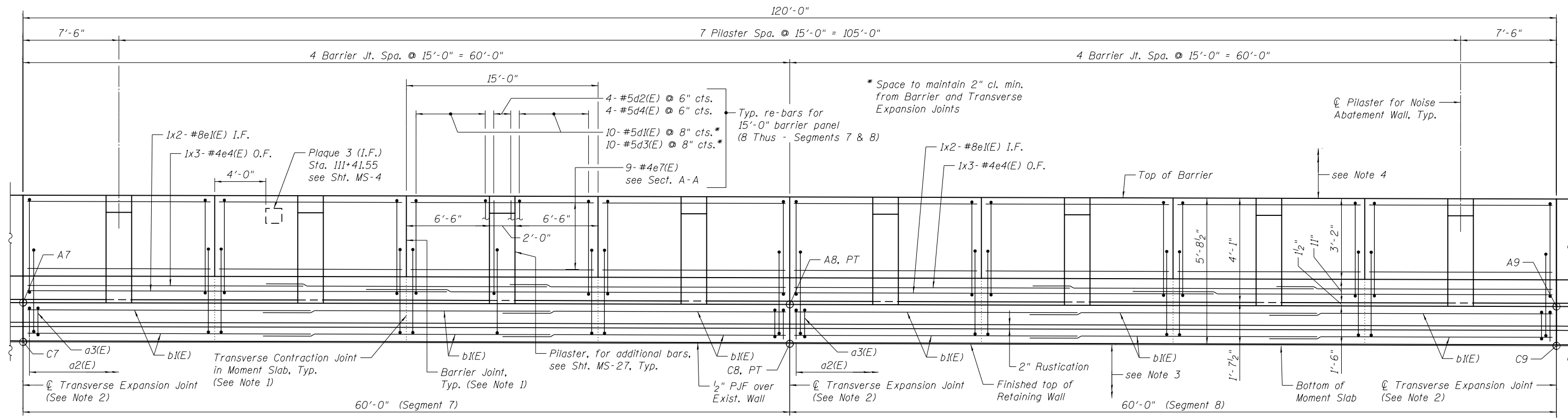
1. Transverse a(E) bars shall be placed radially at spacing noted.
2. Longitudinal b(E) & e(E) bars shall be sprung in place to be concentrically placed at the spacing noted.

**Note:**

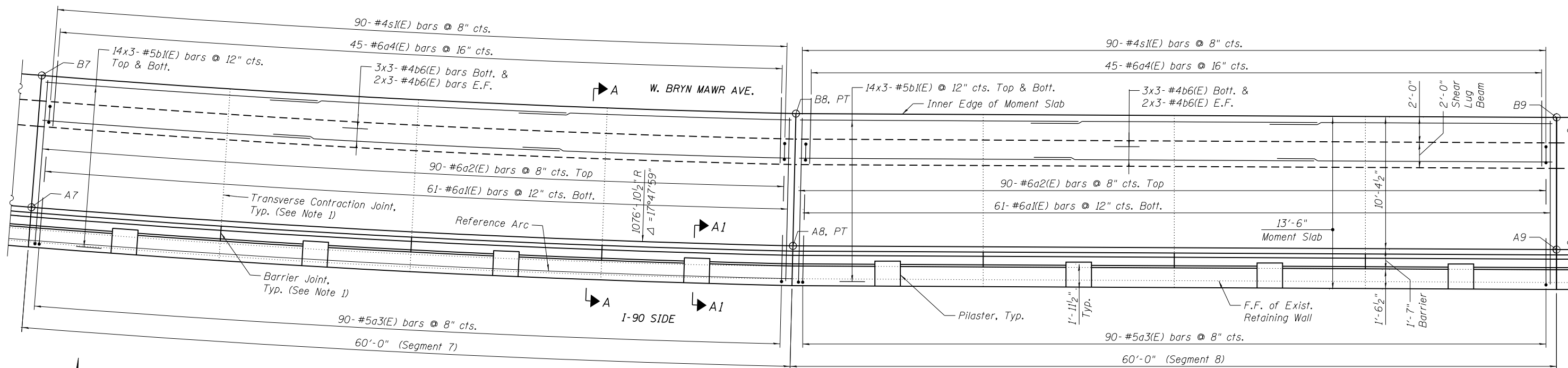
For Notes, see Sht. MS-13.

exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = *USER*	DESIGNED STD	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>MOMENT SLAB PLAN &amp; ELEVATION - 4 OF 14</b> <b>MOMENT SLAB (S.N. 016-2295)</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	DRAWN FD	REVISED			I-90	(1517 & 1415) R-2	COOK	353	245
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED		SHEET NO. MS-16 OF 39 SHEETS		S.N. 016-2295		CONTRACT NO. 60Y40		ILLINOIS FED. AID PROJECT

FILE NAME = #FILE#



**ELEVATION**  
(Looking North)



**PLAN**  
SEGMENTS 7 & 8



**Minimum Bar Lap**

- #4 = 2'-11"
- #5 = 3'-9"
- #6 = 3'-10"
- #8 = 6'-4"

**Re-bar Notes:**

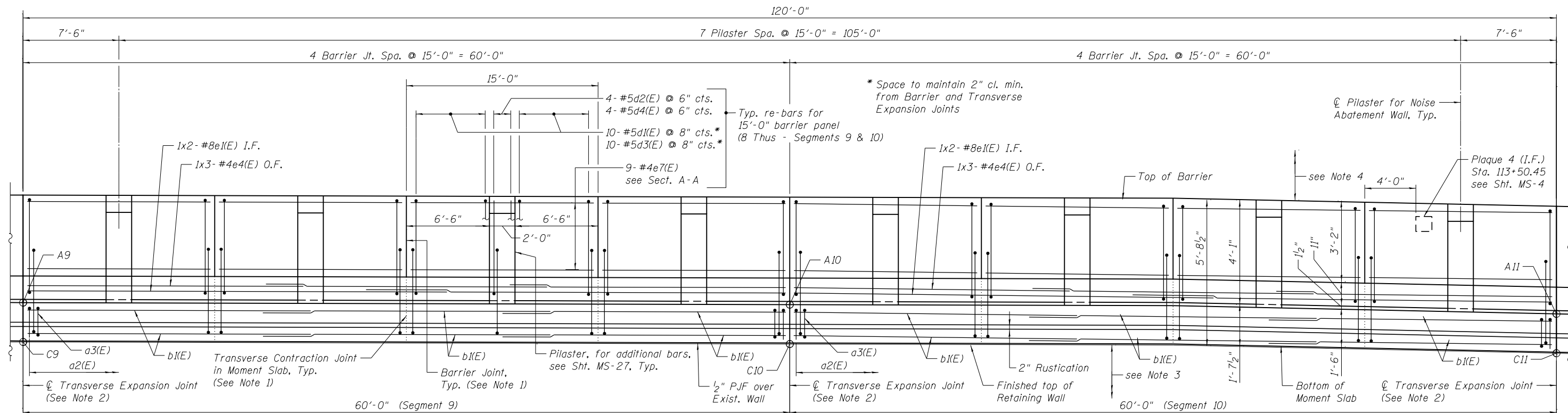
1. Transverse a(E) bars shall be placed radially at spacing noted.
2. Longitudinal b(E) & e(E) bars shall be sprung in place to be concentrically placed at the spacing noted.

**Note:**

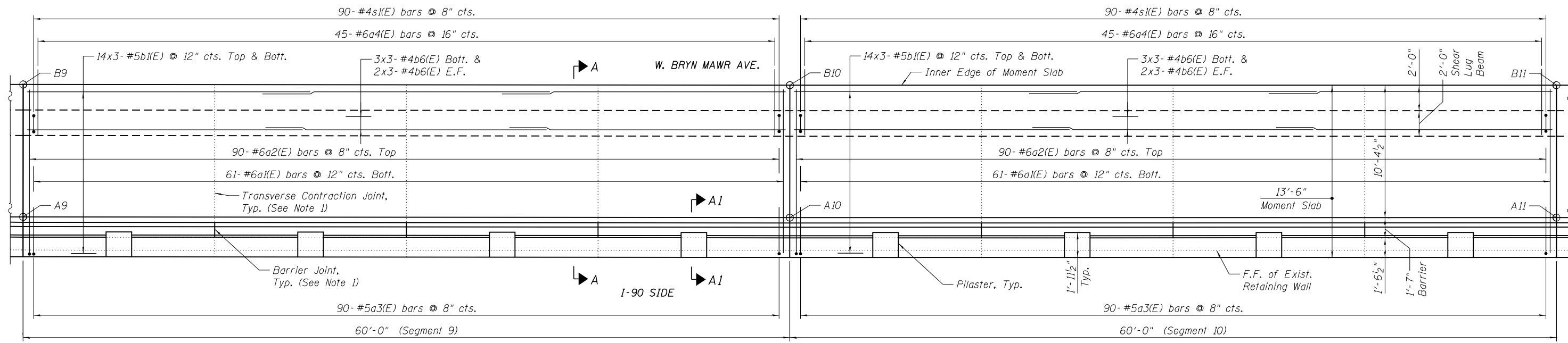
For Notes, see Sht. MS-13.

USER NAME = *USER*	DESIGNED STD	REVISED
CHECKED KK	REVISOR	
PLOT SCALE = *SCALE*	DRAWN FD	REVISOR
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISOR

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	246
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



**ELEVATION**  
(Looking North)



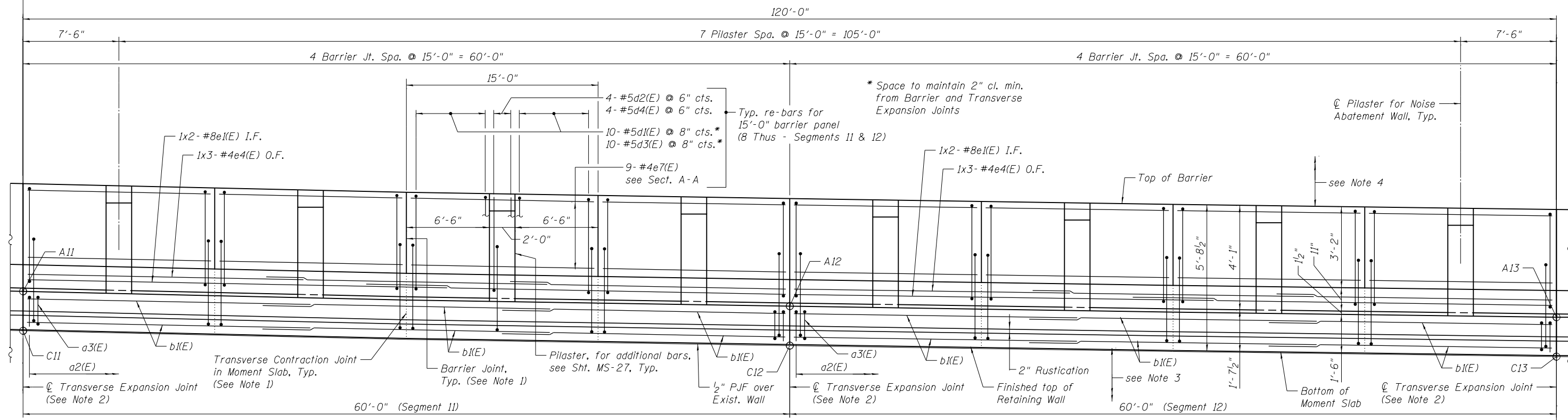
**PLAN**  
SEGMENTS 9 & 10

**Minimum Bar Lap**  
 #4 = 2'-11"  
 #5 = 3'-9"  
 #6 = 3'-10"  
 #8 = 6'-4"

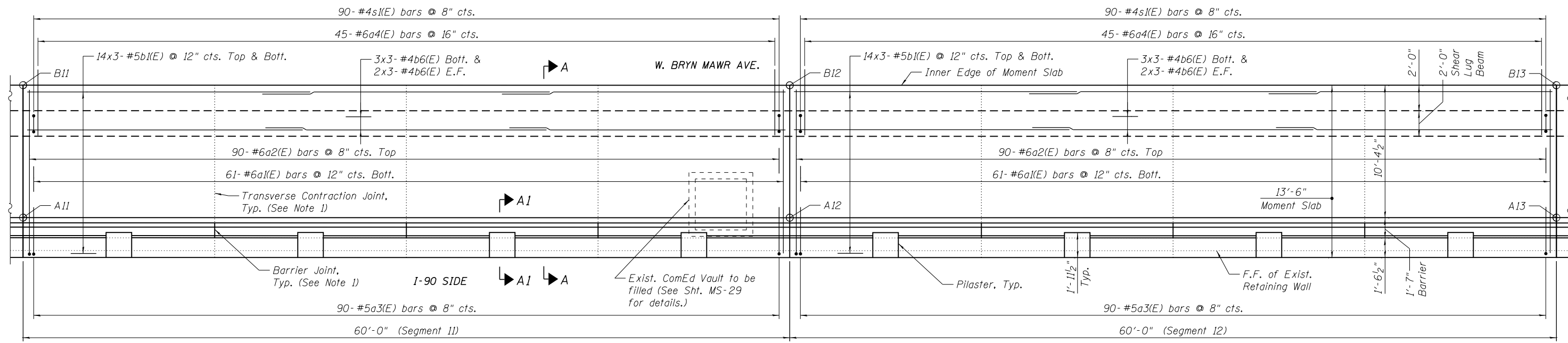
**Note:**  
For Notes, see Sht. MS-13.

USER NAME = *USER*	DESIGNED STD	REVISED
CHECKED KK	REVISIONS	
PLOT SCALE = *SCALE*	DRAWN FD	REVISED
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	247
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



**ELEVATION**  
(Looking North)



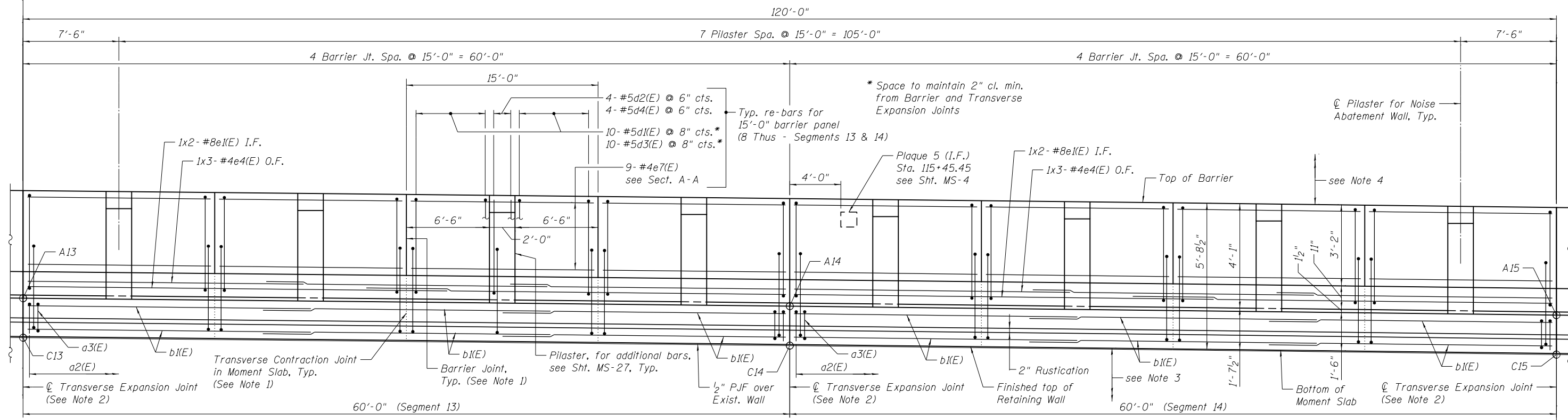
**PLAN**  
**SEGMENTS 11 & 12**

**Minimum Bar Lap**  
 #4 = 2'-11"  
 #5 = 3'-9"  
 #6 = 3'-10"  
 #8 = 6'-4"

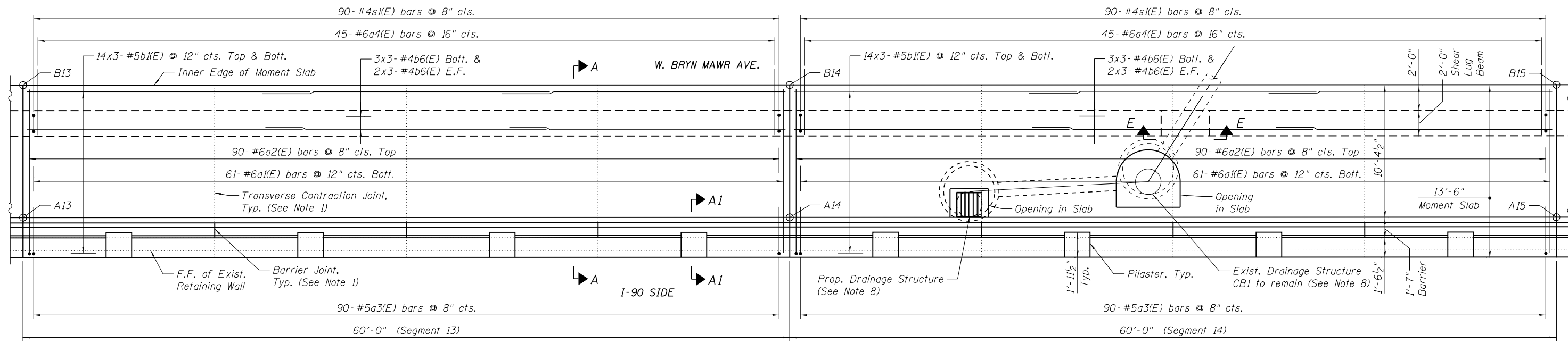
**Note:**  
For Notes, see Sht. MS-13.

exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = *USER*	DESIGNED STD	REVISD	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>MOMENT SLAB PLAN &amp; ELEVATION - 7 OF 14</b> <b>MOMENT SLAB (S.N. 016-2295)</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	CHECKED KK	REVISD			I-90	(1517 & 1415) R-2	COOK	353	248
PLOT DATE = 8-15-2017	DRAWN FD	REVISD				S.N. 016-2295		CONTRACT NO. 60Y40		
FILE NAME = *FILE*	DATE 8/21/2017	REVISD				SHEET NO. MS-19 OF 39 SHEETS		ILLINOIS FED. AID PROJECT		





**ELEVATION**  
(Looking North)



**PLAN**  
**SEGMENTS 13 & 14**

**Minimum Bar Lap**  
 #4 = 2'-11"  
 #5 = 3'-9"  
 #6 = 3'-10"  
 #8 = 6'-4"

**Note:**  
For Notes, see Sht. MS-13.

exp U.S. Services Inc. Chicago, IL BUILDINGS • EARTH & ENVIRONMENT • ENERGY INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY	USER NAME = #USER*	DESIGNED STD	REVISIONS
	CHECKED KK	REVISIONS	
	PLOT SCALE = #SCALE*	DRAWN FD	REVISIONS
	PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISIONS

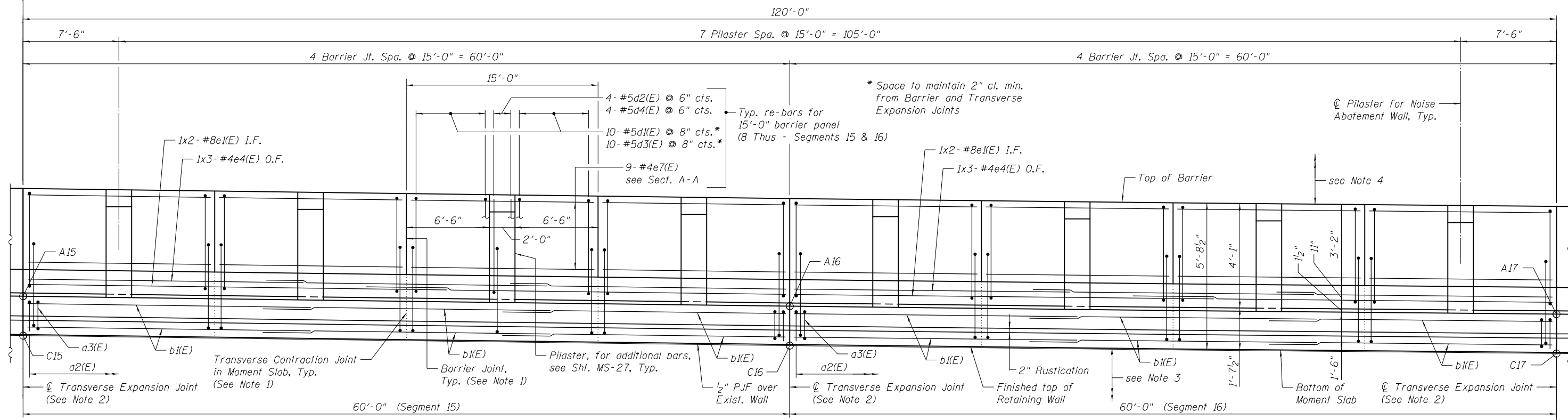
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**MOMENT SLAB PLAN & ELEVATION - 8 OF 14**  
**MOMENT SLAB (S.N. 016-2295)**

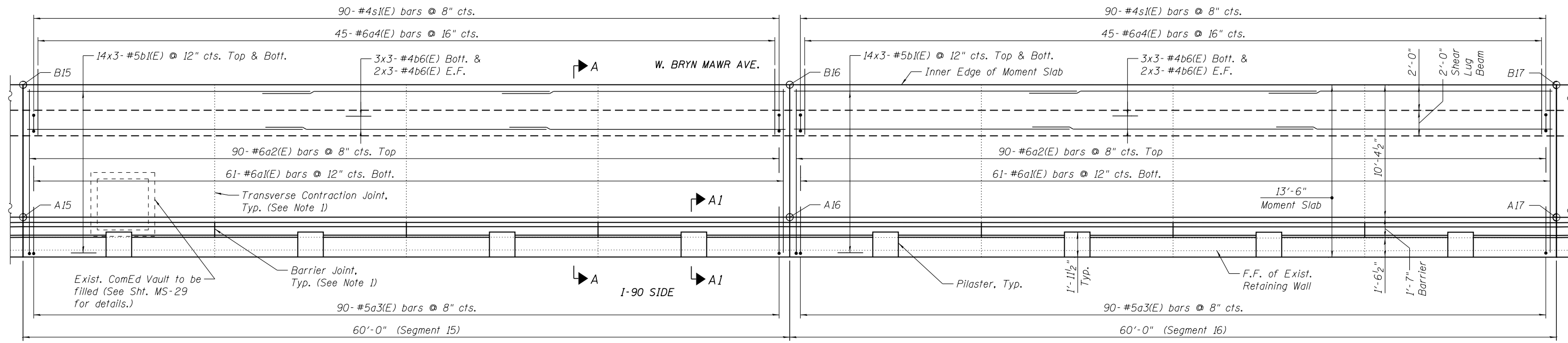
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	249
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				

SHEET NO. MS-20 OF 39 SHEETS

FILE NAME = #FILE#



**ELEVATION**  
(Looking North)



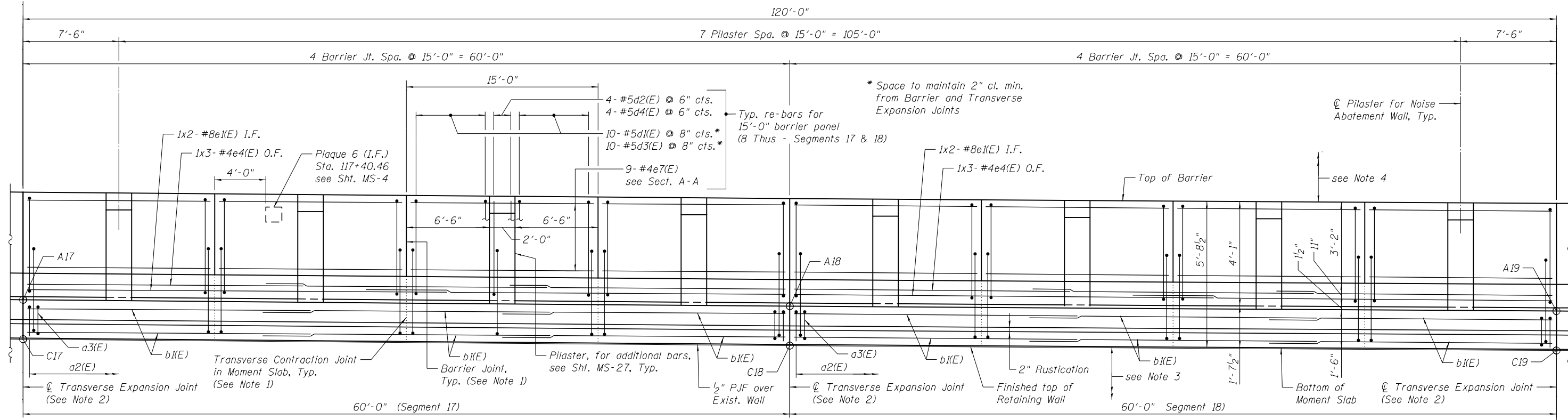
**PLAN**  
**SEGMENTS 15 & 16**

**Minimum Bar Lap**  
 #4 = 2'-11"  
 #5 = 3'-9"  
 #6 = 3'-10"  
 #8 = 6'-4"

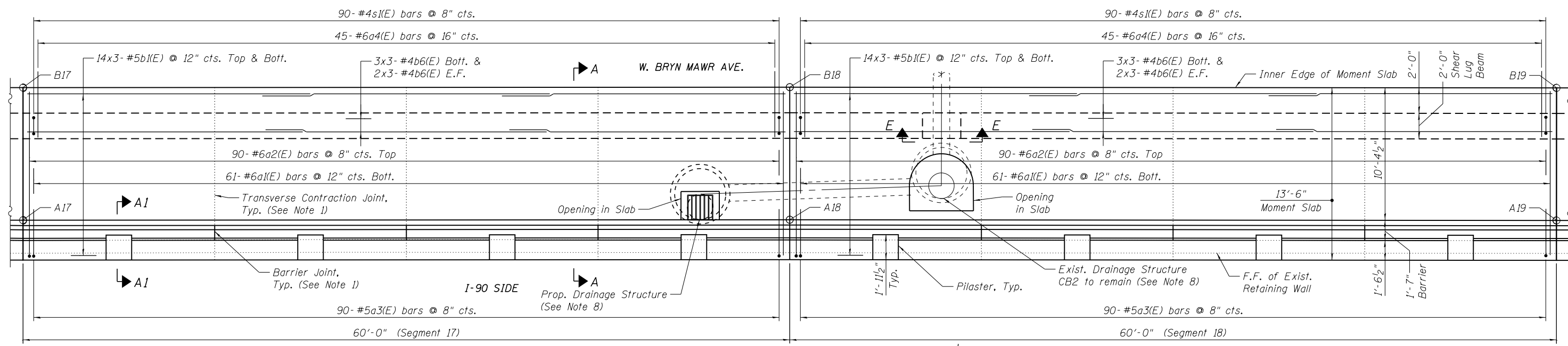


**Note:**  
For Notes, see Sht. MS-13.

exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = *USER*	DESIGNED STD	REVISD	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>MOMENT SLAB PLAN &amp; ELEVATION - 9 OF 14</b> <b>MOMENT SLAB (S.N. 016-2295)</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	CHECKED KK	REVISD			I-90	(1517 & 1415) R-2	COOK	353	250
PLOT DATE = 8-15-2017	DRAWN FD	REVISD				S.N. 016-2295		CONTRACT NO. 60Y40		
FILE NAME = *FILE#*	DATE 8/21/2017	REVISD				SHEET NO. MS-21 OF 39 SHEETS		ILLINOIS FED. AID PROJECT		



**ELEVATION**  
(Looking North)



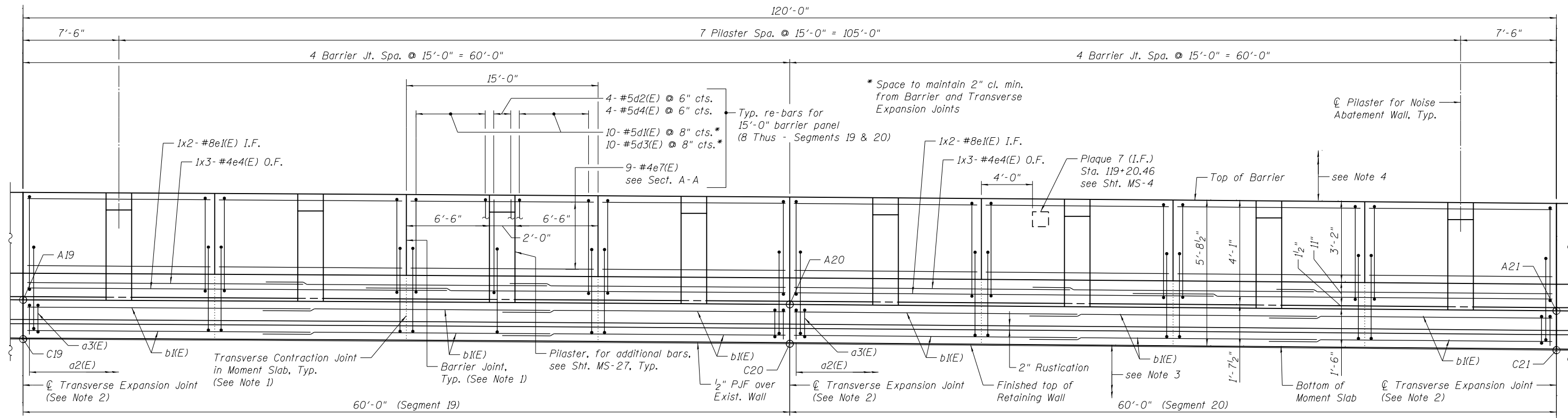
**PLAN**  
**SEGMENTS 17 & 18**

**Minimum Bar Lap**

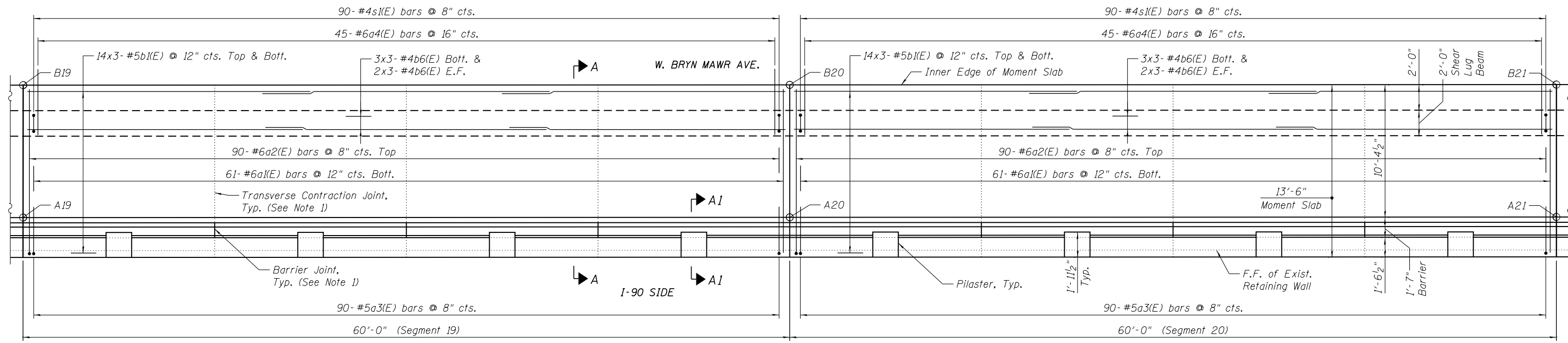
- #4 = 2'-11"
- #5 = 3'-9"
- #6 = 3'-10"
- #8 = 6'-4"

**Note:**  
For Notes, see Sht. MS-13.

exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = *USER*	DESIGNED STD	REVISD	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>MOMENT SLAB PLAN &amp; ELEVATION - 10 OF 14</b> <b>MOMENT SLAB (S.N. 016-2295)</b>	F.A.I R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	CHECKED KK	REVISD			I-90	(1517 & 1415) R-2	COOK	353	251
PLOT DATE = 8-15-2017	DRAWN FD	REVISD				S.N. 016-2295		CONTRACT NO. 60Y40		
FILE NAME = *FILE#*	DATE 8/21/2017	REVISD				ILLINOIS FED. AID PROJECT				



**ELEVATION**  
(Looking North)



**PLAN**  
**SEGMENTS 19 & 20**

**Minimum Bar Lap**

- #4 = 2'-11"
- #5 = 3'-9"
- #6 = 3'-10"
- #8 = 6'-4"

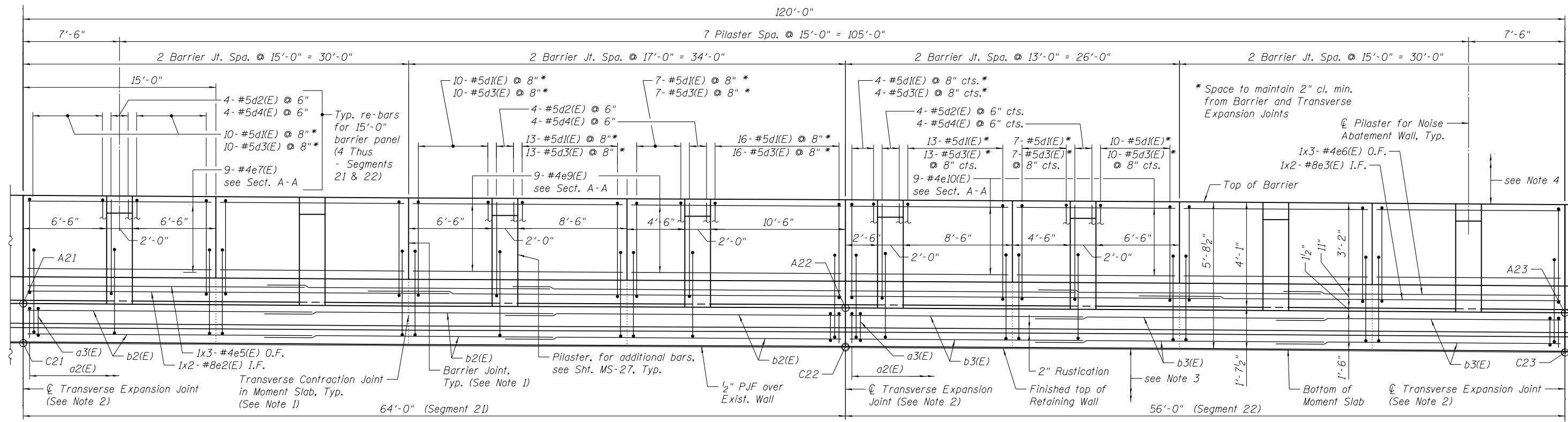


**Note:**  
For Notes, see Sht. MS-13.

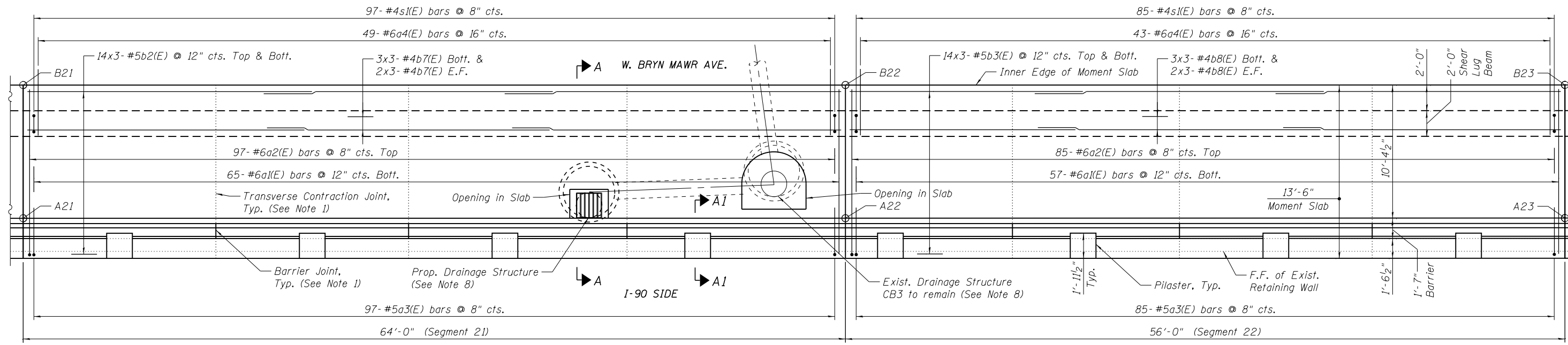
exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = *USER* DESIGNED STD CHECKED KK DRAWN FD DATE 8/21/2017	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>MOMENT SLAB PLAN &amp; ELEVATION - 11 OF 14</b> <b>MOMENT SLAB (S.N. 016-2295)</b>	F.A.I. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
	PLOT SCALE = *SCALE* PLOT DATE = 8-15-2017	REVISED REVISED REVISED			I-90 (1517 & 1415) R-2 COOK S.N. 016-2295 CONTRACT NO. 60Y40 ILLINOIS FED. AID PROJECT

FILE NAME = #FILE#

SHEET NO. MS-23 OF 39 SHEETS



**ELEVATION**  
(Looking North)

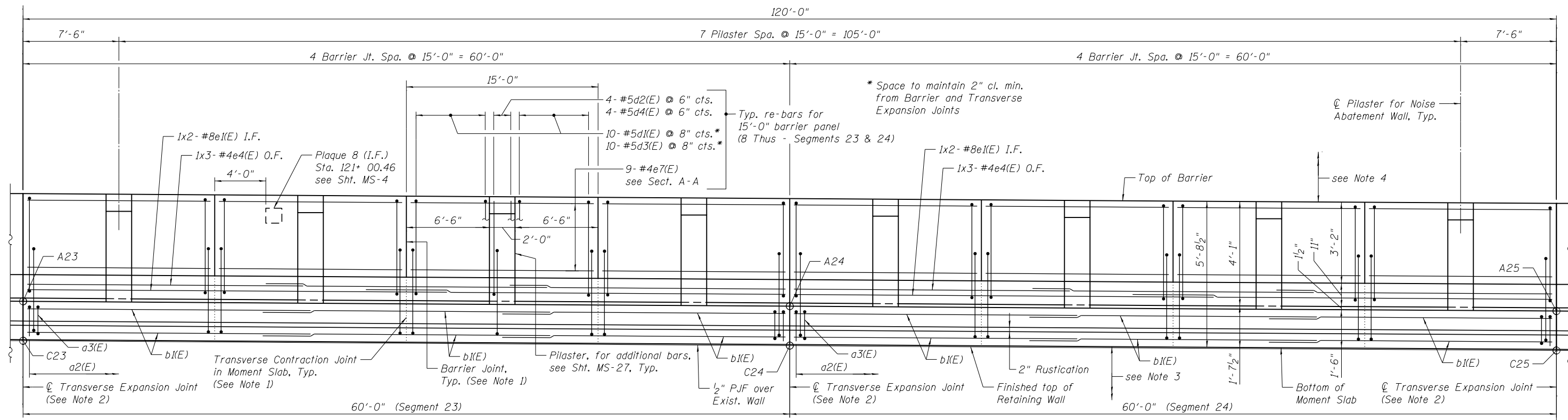


**PLAN**  
**SEGMENTS 21 & 22**

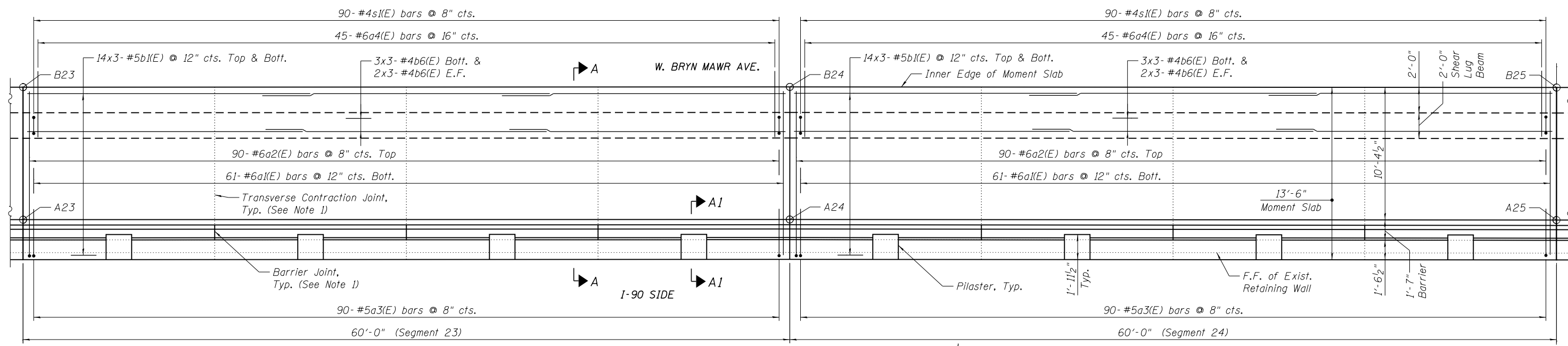
**Minimum Bar Lap**  
 #4 = 2'-11"  
 #5 = 3'-9"  
 #6 = 3'-10"  
 #8 = 6'-4"

**Note:**  
For Notes, see Sht. MS-13.

exp U.S. Services Inc. Chicago, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = *USER*	DESIGNED STD	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>MOMENT SLAB PLAN &amp; ELEVATION - 12 OF 14</b> <b>MOMENT SLAB (S.N. 016-2295)</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	CHECKED KK	REVISED			I-90	(1517 & 1415) R-2	COOK	353	253
PLOT DATE = 8-15-2017	DRAWN FD	REVISED				S.N. 016-2295		CONTRACT NO. 60Y40		
FILE NAME = #FILE#	DATE 8/21/2017	REVISED				SHEET NO. MS-24 OF 39 SHEETS		ILLINOIS FED. AID PROJECT		



**ELEVATION**  
(Looking North)



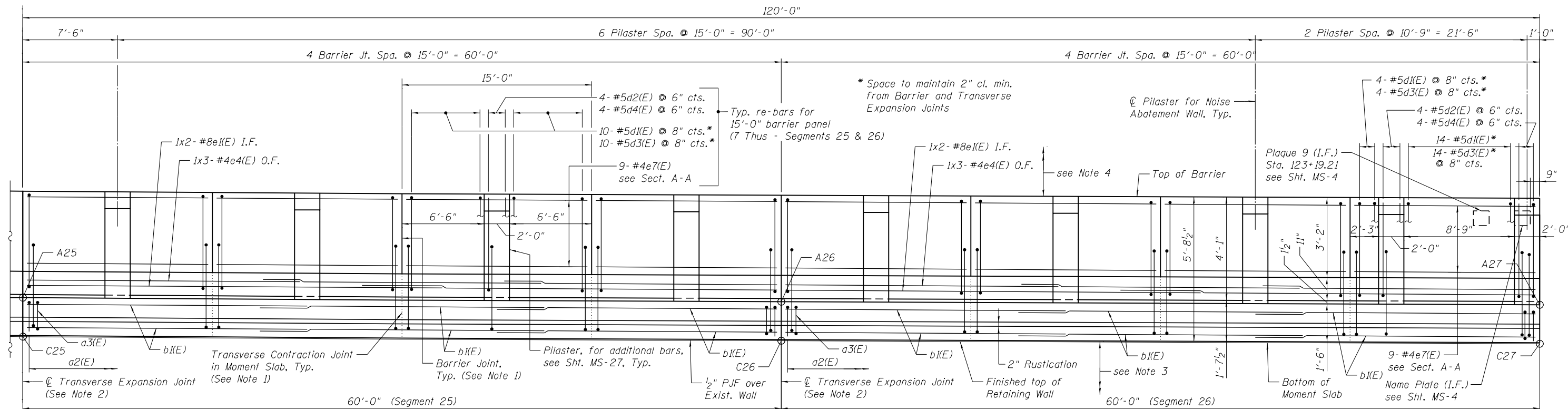
**PLAN**  
**SEGMENTS 23 & 24**

**Minimum Bar Lap**

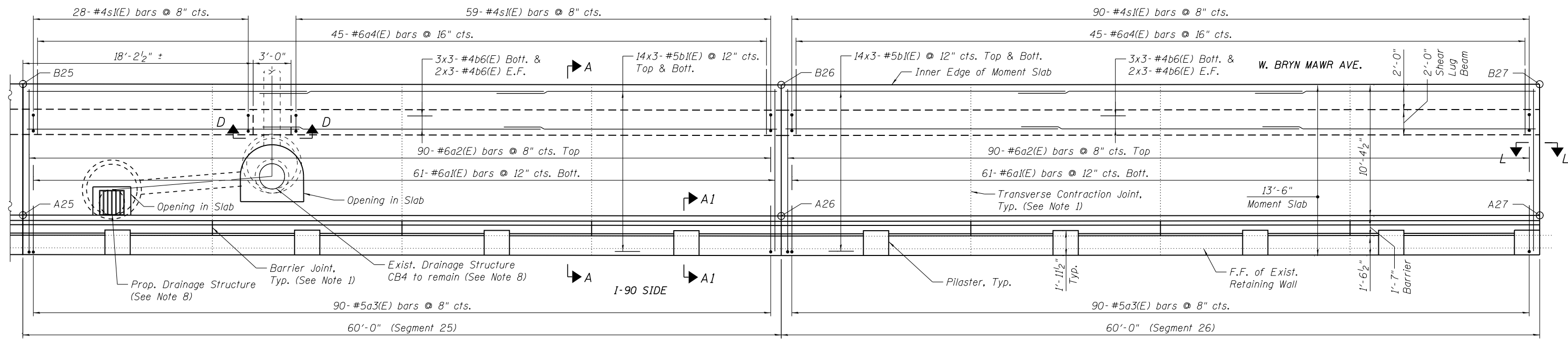
- #4 = 2'-11"
- #5 = 3'-9"
- #6 = 3'-10"
- #8 = 6'-4"

**Note:**  
For Notes, see Sht. MS-13.

exp U.S. Services Inc. Chicago, IL BUILDINGS • EARTH & ENVIRONMENT • ENERGY INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY	USER NAME = *USER*	DESIGNED STD	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>MOMENT SLAB PLAN &amp; ELEVATION - 13 OF 14</b> <b>MOMENT SLAB (S.N. 016-2295)</b>	F.A.I R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = *SCALE*	CHECKED KK	REVISED			I-90	(1517 & 1415) R-2	COOK	353	254
	PLOT DATE = 8-15-2017	DRAWN FD	REVISED			S.N. 016-2295	CONTRACT NO. 60Y40		ILLINOIS FED. AID PROJECT	
FILE NAME = *FILE#*	DATE 8/21/2017	REVISED		SHEET NO. MS-25 OF 39 SHEETS						



**ELEVATION**  
(Looking North)

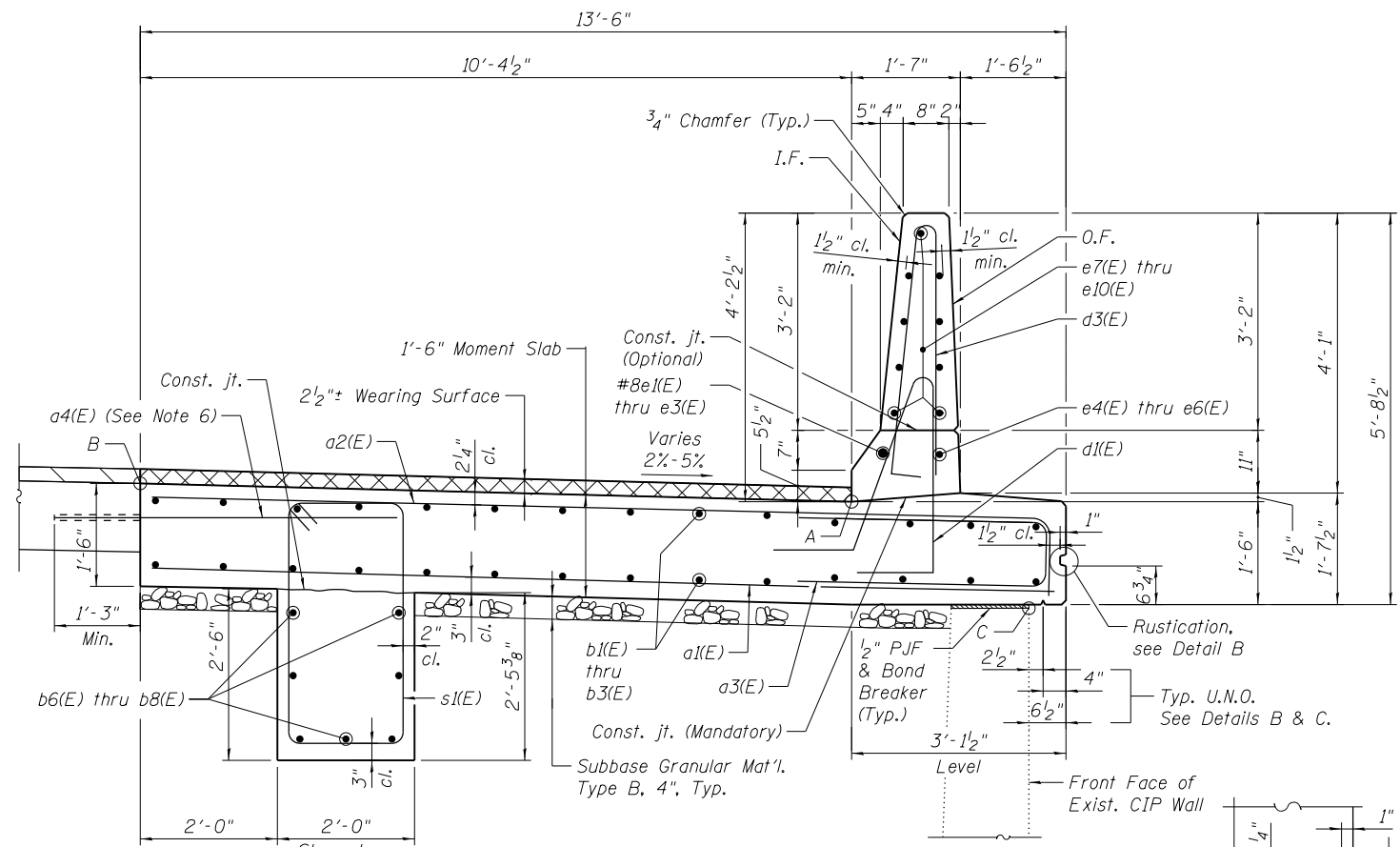


**PLAN**  
SEGMENTS 25 & 26

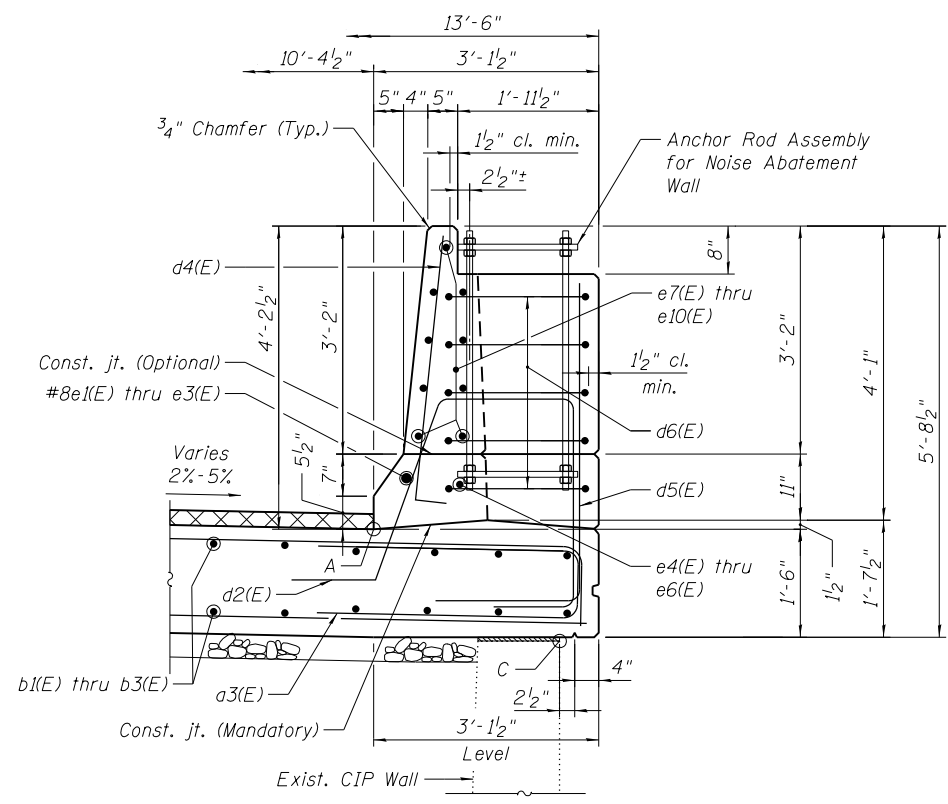
**Minimum Bar Lap**

#4	= 2'-11"
#5	= 3'-9"
#6	= 3'-10"
#8	= 6'-4"

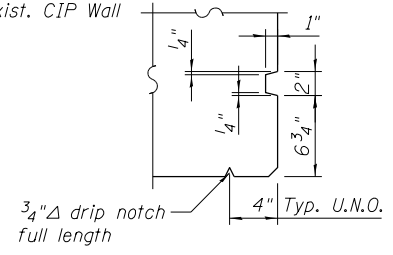
**Note:**  
For Notes, see Sht. MS-13.



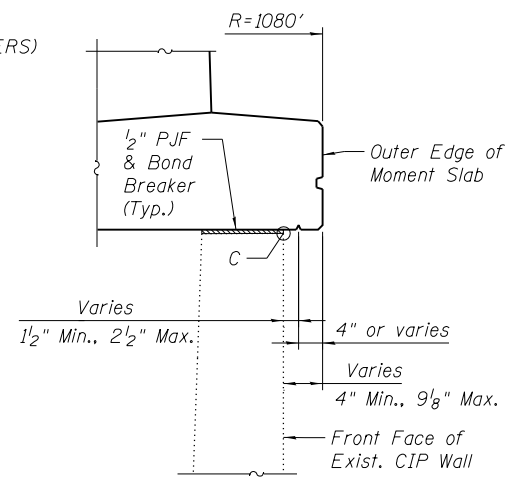
SECTION A-A



SECTION A1-A1  
(AT NOISE WALL PILASTERS)

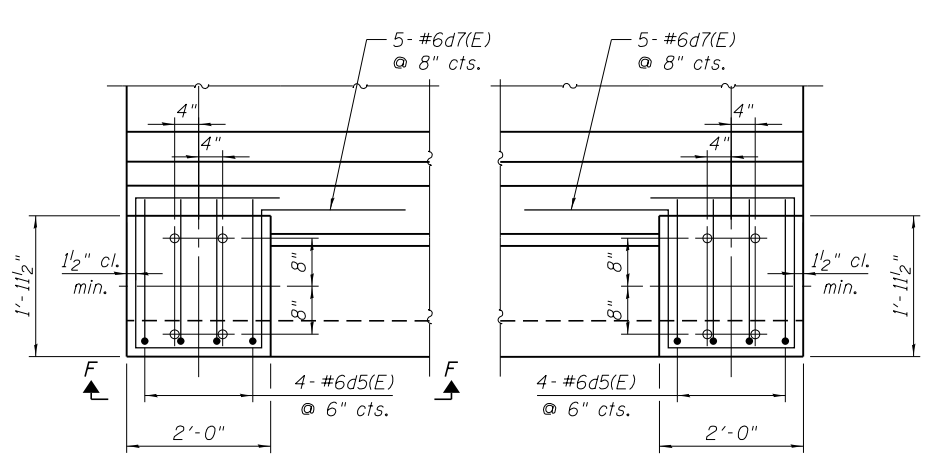


DETAIL "B"



DETAIL "C"  
(between points C2' and C8)

\*\* Cost included with Concrete Superstructure



PLAN

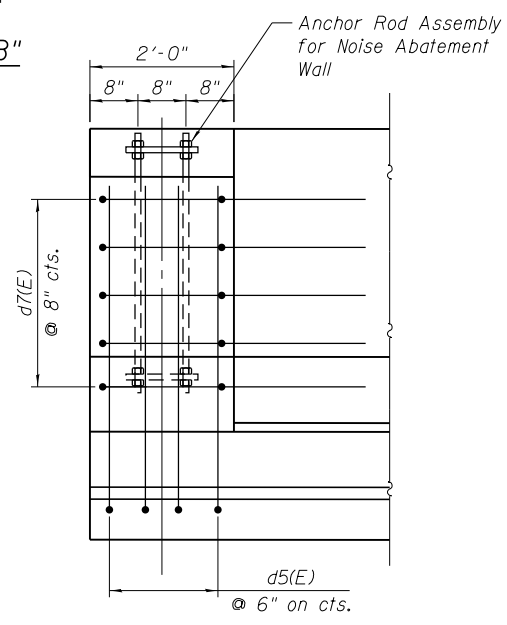
(AT SEGMENT 1 - WEST END)

PLAN

(AT SEGMENT 26 - EAST END)

PLAN

(AT TYPICAL NOISE WALL PILASTER)

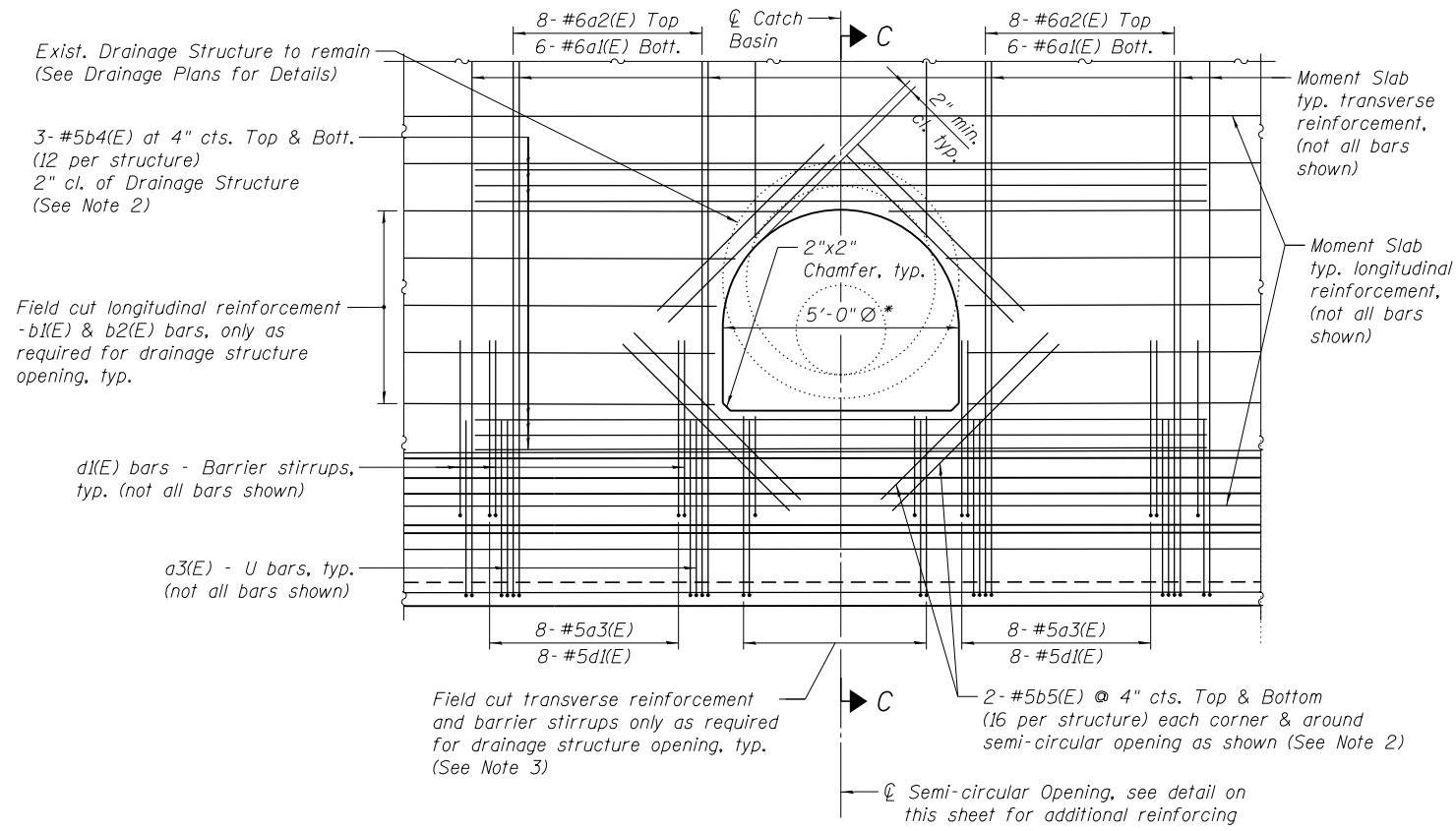


ELEVATION F-F

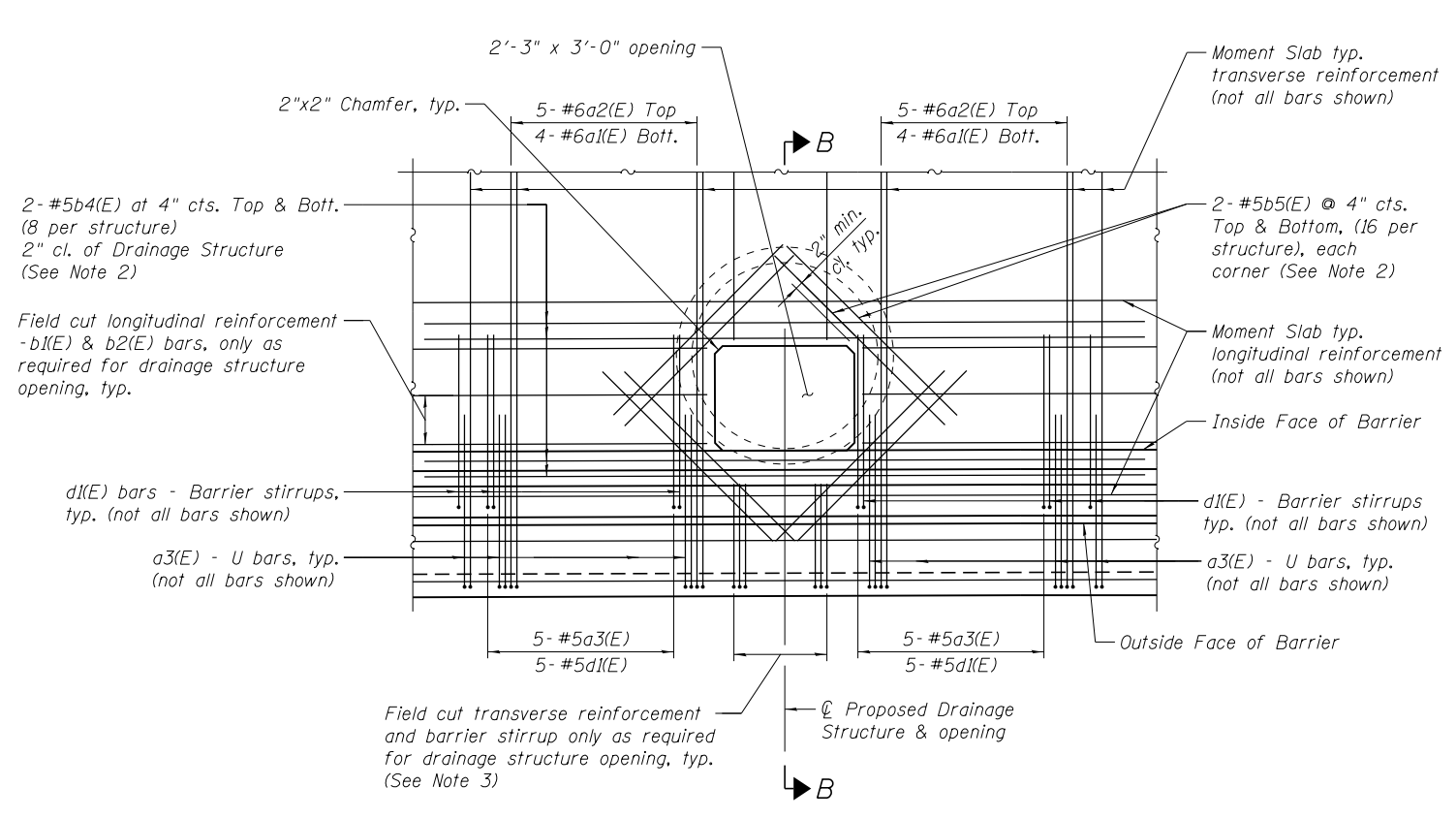
Notes:

- For moment slab details not provided here, see Moment Slab Plan and Elevation sheets.
- For locations of Sections A-A and A1-A1, see Moment Slab Plan and Elevation sheets.
- For Bar Details, see Sheet MS-31.
- Noise Abatement Wall not shown for clarity, see Sht. MS-5.
- Cost of P.J.F. & bond breaker is included with Concrete Superstructure.
- Drill and grout a4(E) bars. Locate at the mid-depth of adjacent PCC pavement.

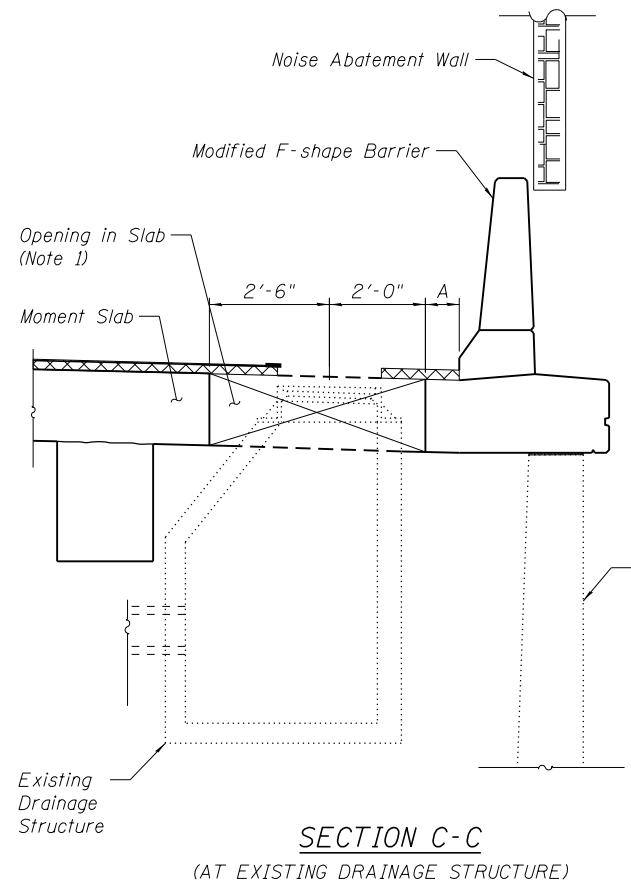




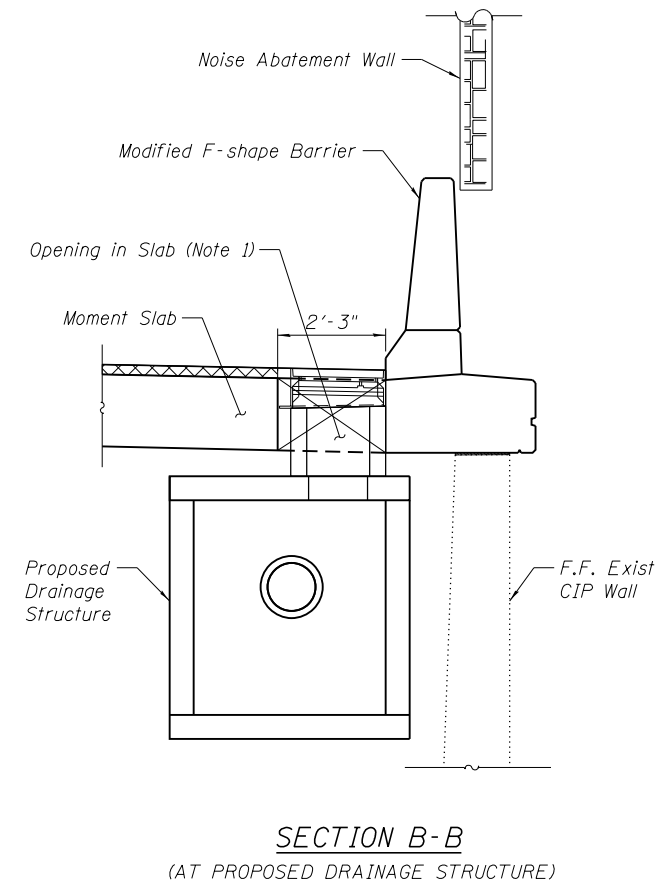
**PLAN AT EXISTING DRAINAGE STRUCTURE**  
(4 THUS)



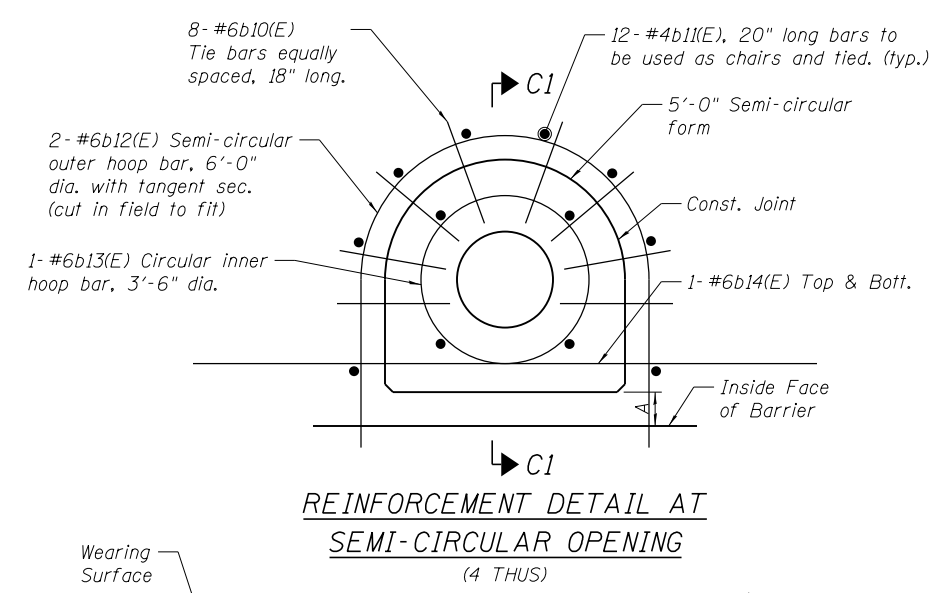
**PLAN AT PROPOSED DRAINAGE STRUCTURE**  
(4 THUS)



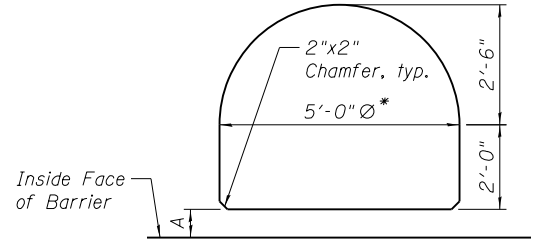
**SECTION C-C**  
(AT EXISTING DRAINAGE STRUCTURE)



**SECTION B-B**  
(AT PROPOSED DRAINAGE STRUCTURE)



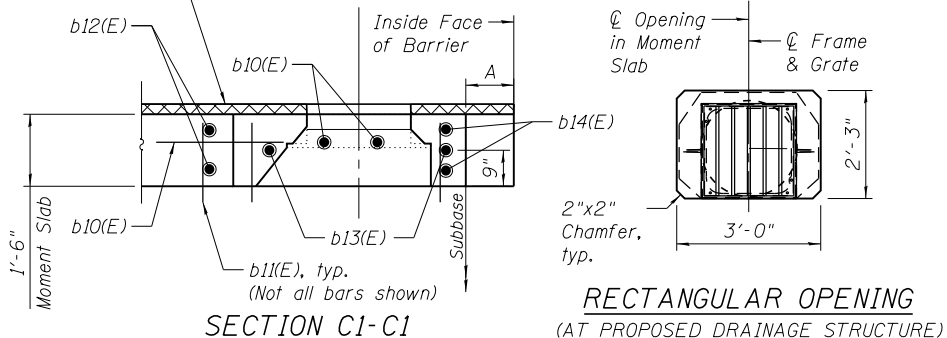
**REINFORCEMENT DETAIL AT SEMI-CIRCULAR OPENING**  
(4 THUS)



**SEMI-CIRCULAR OPENING**  
(AT EXISTING DRAINAGE STRUCTURE)

\* Provide extended semi-circular opening with 5'-0" diameter as shown. See reinforcement detail at Semi-circular Opening. See table below for location of opening (4 locations).

Drainage Structure No.	A
CB1	9 1/2"
CB2	8 1/2"
CB3	8 1/2"
CB4	1'-1"

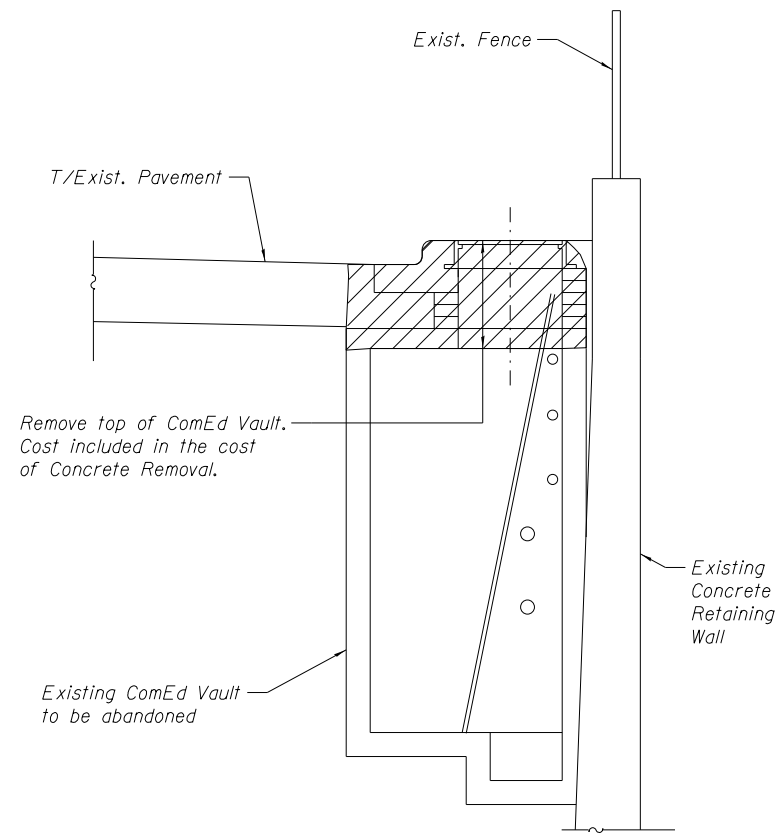


**SECTION C1-C1**  
(AT PROPOSED DRAINAGE STRUCTURE)

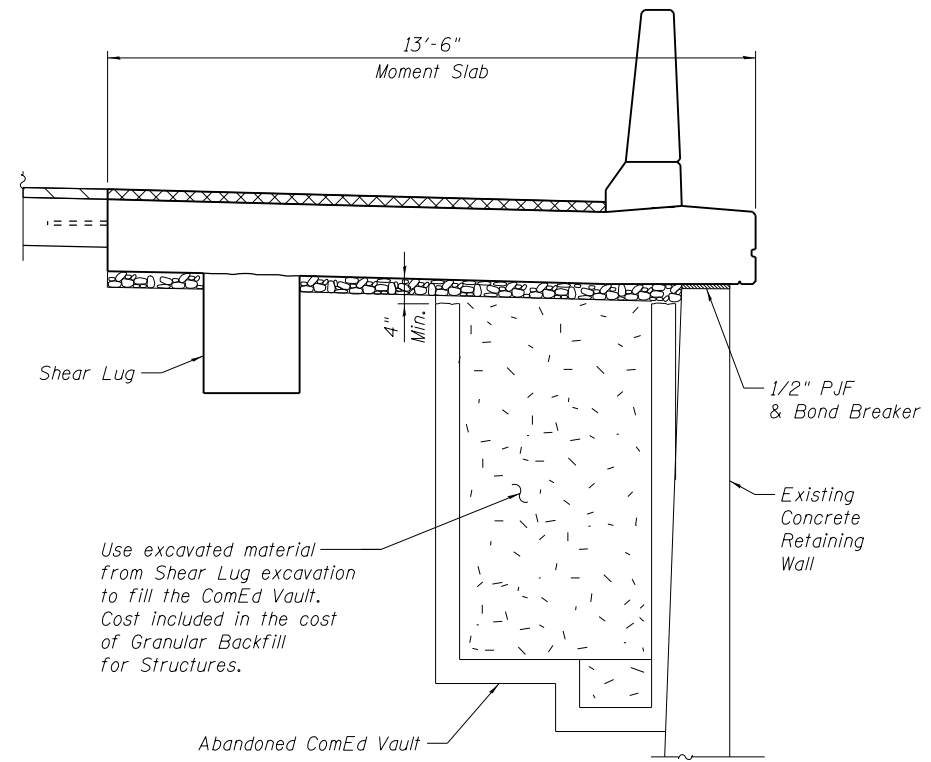
**RECTANGULAR OPENING**  
(AT PROPOSED DRAINAGE STRUCTURE)

**Notes:**

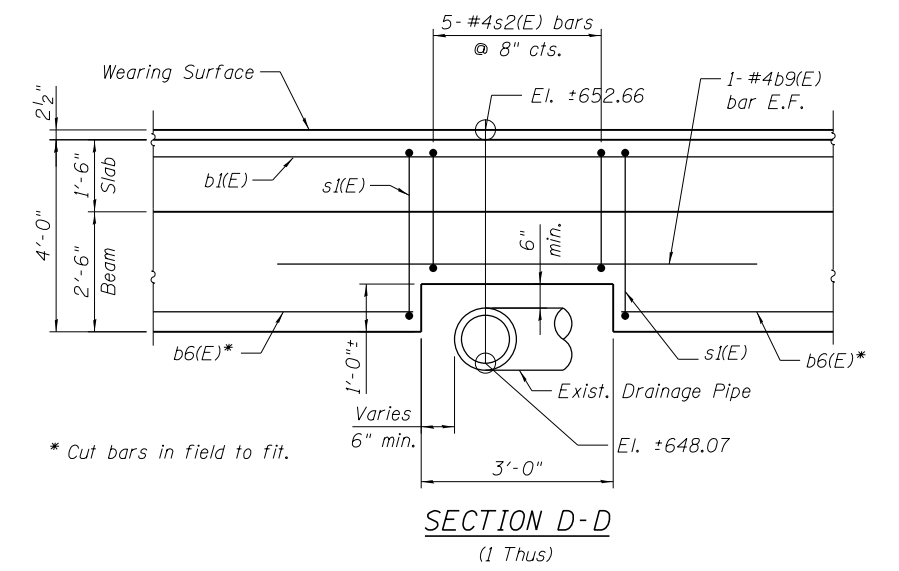
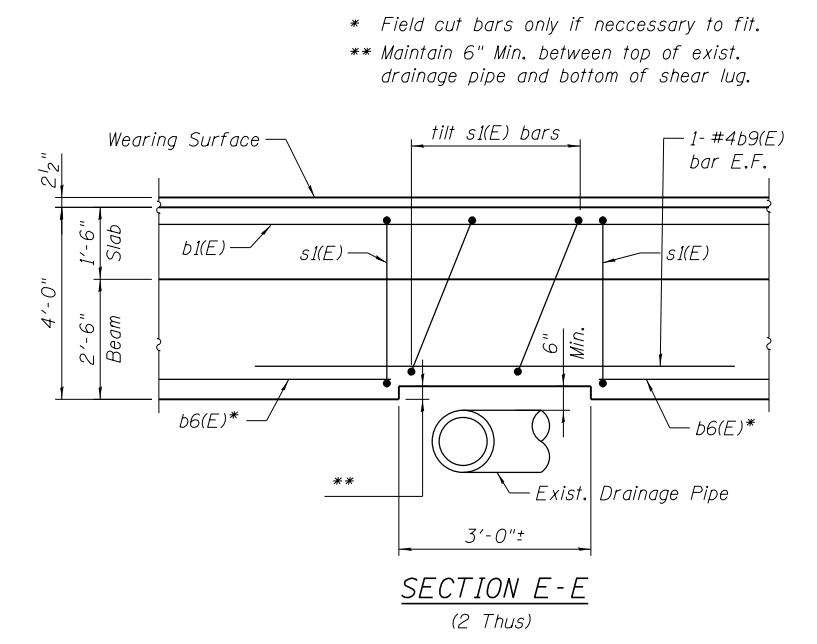
- Fill in the opening around drainage structures with concrete after placing the proposed drainage structures and replacing the lids on existing drainage structures. Cost included with Concrete Structures.
- Place bars symmetric about centerline of drainage structure as space permits.
- For each transverse bar & barrier stirrup field cut, place equal number of additional same bars on each side of opening.
- Size and shape of drainage structures are approximate, see Drainage Plans for details.
- For Bar List, see Sht. MS-31.



**EXISTING SECTION THRU COMED VAULT**  
(Looking East)



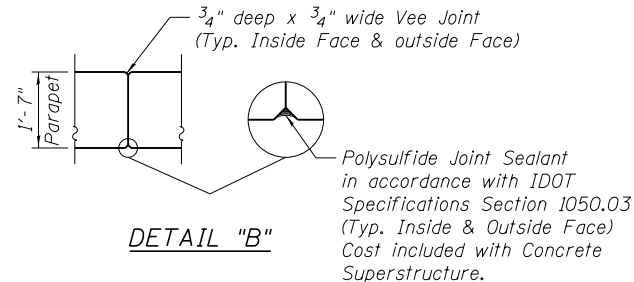
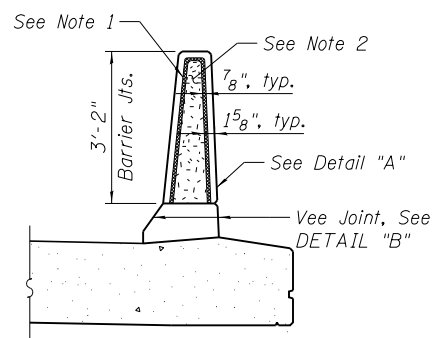
**PROPOSED SECTION THRU COMED VAULT**  
(Looking East)



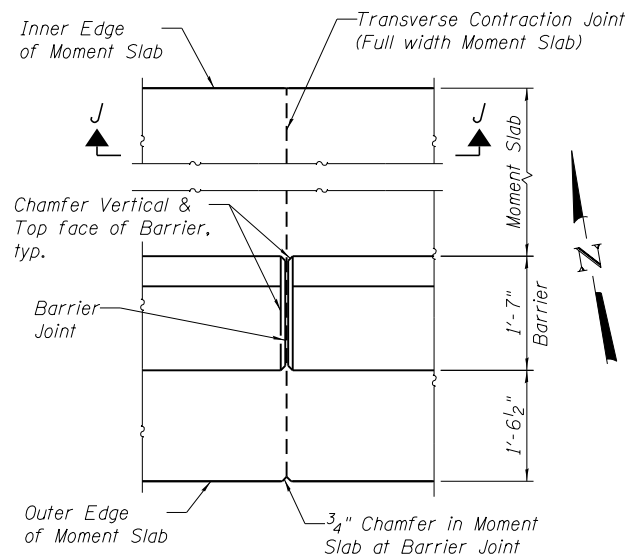
**Notes:**  
1. For Bar List, see Sht. MS-31.

USER NAME = *USER*	DESIGNED STD	REVISED
CHECKED KK	REVISIONS	
PLOT SCALE = *SCALE*	DRAWN FD	REVISED
PLOT DATE = 8-15-2017	DATE 8/21/2017	REVISED

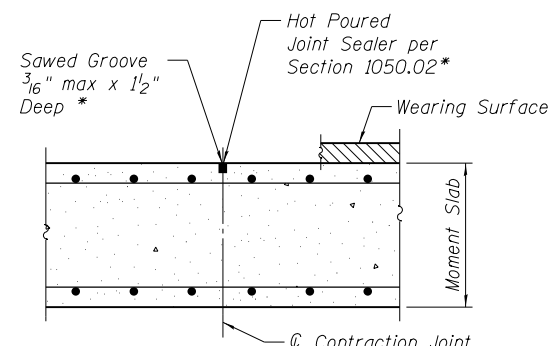
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-90	(1517 & 1415) R-2	COOK	353	258
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				



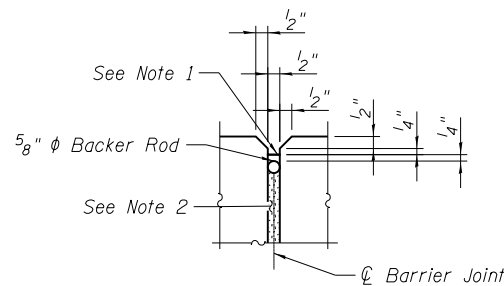
**BARRIER JOINT**  
(in between expansion joints)



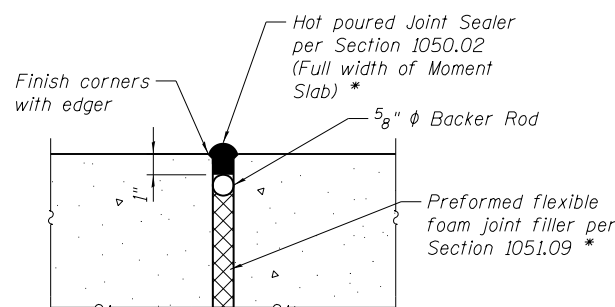
**PLAN - CONTRACTION JOINT**



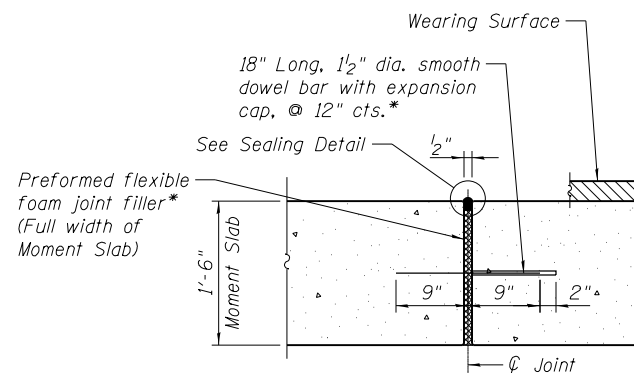
**SECTION J-J**



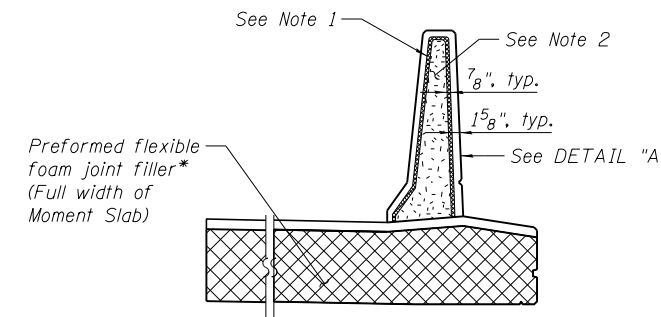
**DETAIL "A"**



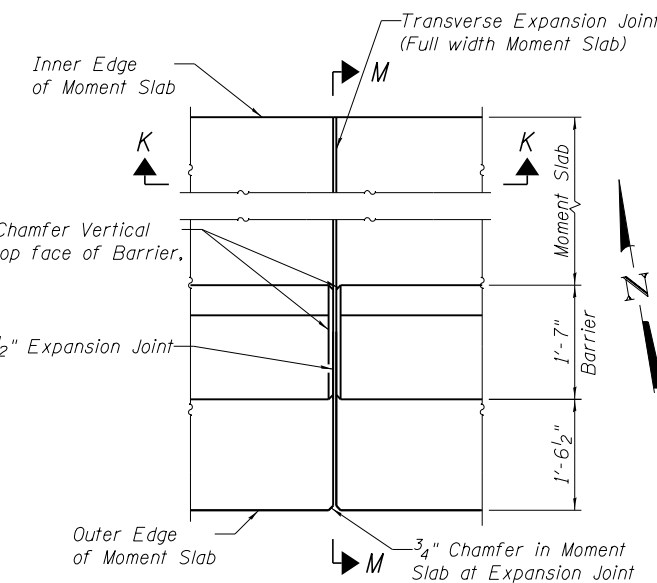
**SEALING DETAIL**



**SECTION K-K**



**SECTION M-M**



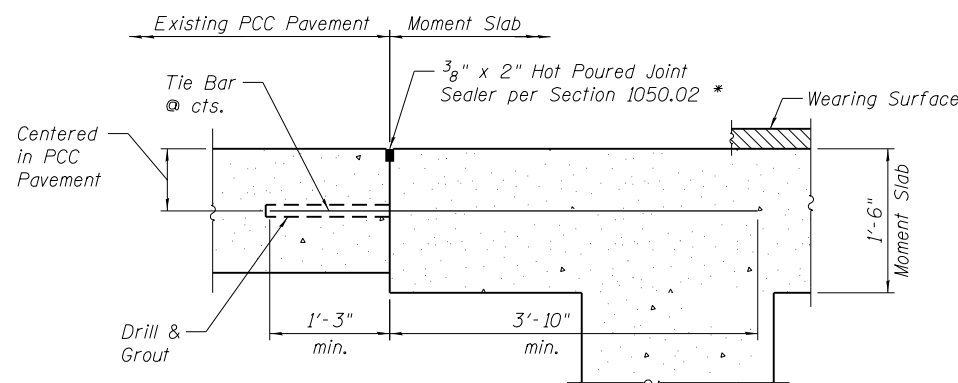
**PLAN - TYPICAL TRANSVERSE EXPANSION JOINT**

**TRANSVERSE CONTRACTION JOINT**

**Notes:**

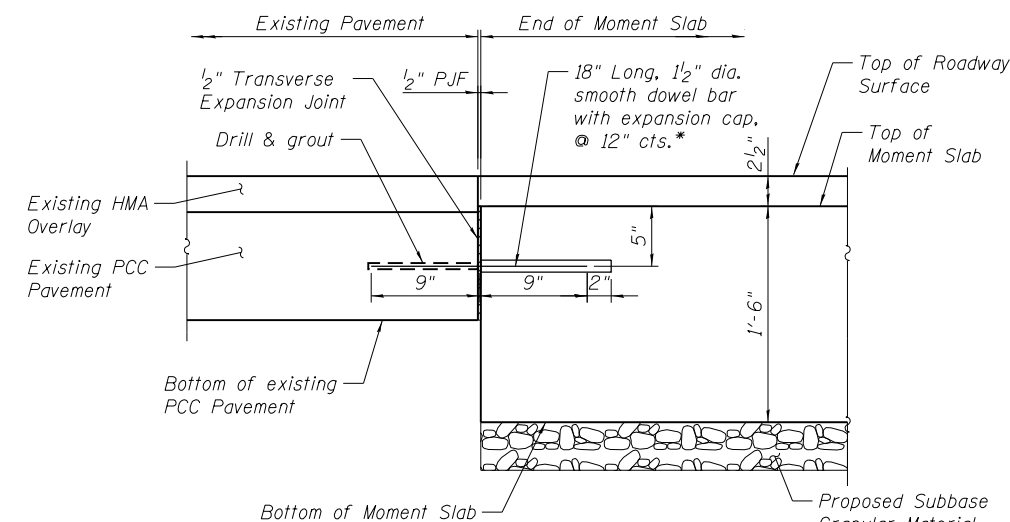
1. Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25, use T with a backer rod.
2. Performed Self-Expanding Cork Joint Filler according to Article 1051.07 of Std. Spec.

\* Cost to be included with Concrete Structures



**LONGITUDINAL CONSTRUCTION JOINT**

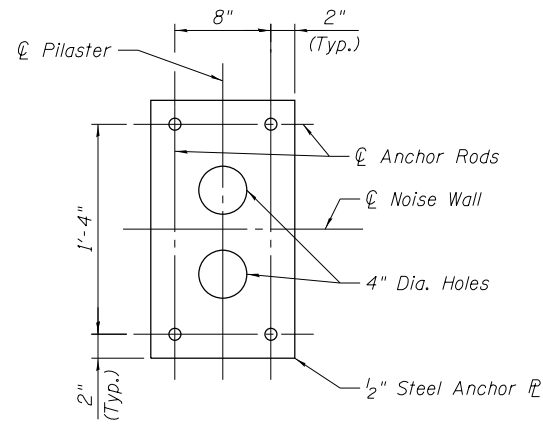
(Sta. 107+63.50 to 123+19.95)



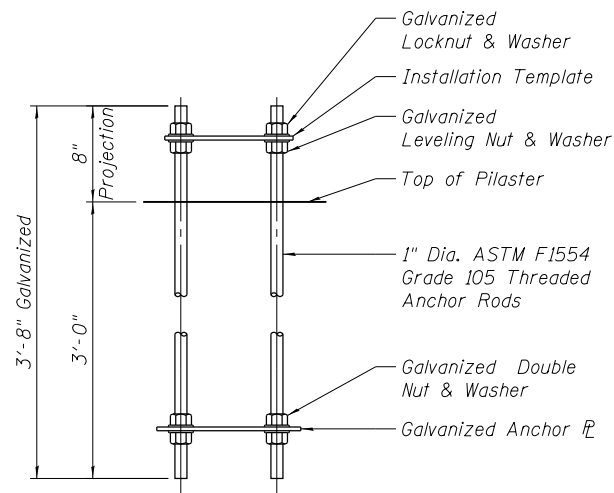
**SECTION L-L**

At Ends of Moment Slab  
(See Moment Slab Plan for locations)

**TRANSVERSE EXPANSION JOINTS**



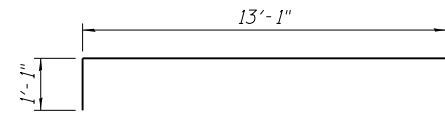
PLAN - ANCHOR PLATE



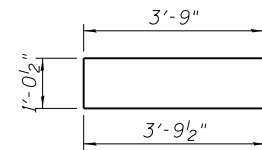
ELEVATION

ANCHOR ROD ASSEMBLY FOR NOISE ABATEMENT WALL

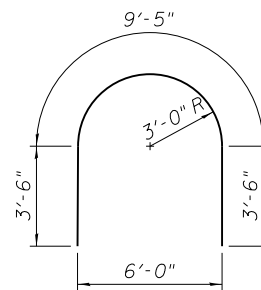
(106 REQUIRED)



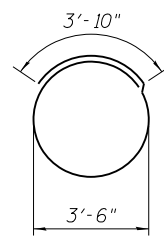
Bar a2(E)



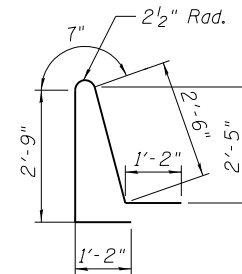
Bar a3(E)



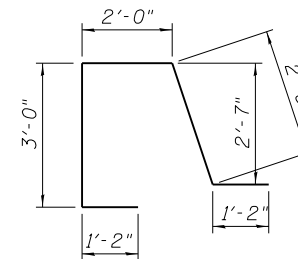
Bar b12(E)



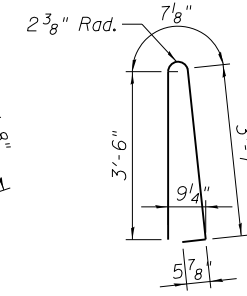
Bar b13(E)



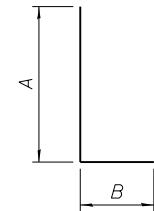
Bar d1(E)



Bar d2(E)

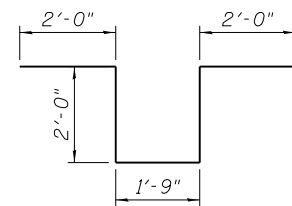


Bar d3(E)

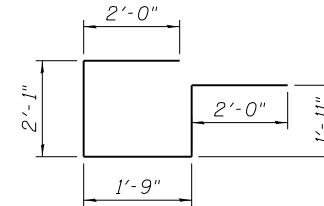


Bars d4(E) & d5(E)

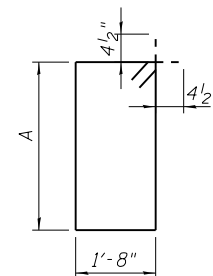
Bar	A	B
d4(E)	3'-9"	6"
d5(E)	4'-7"	2'-0"



Bar d6(E)



Bars d7(E)

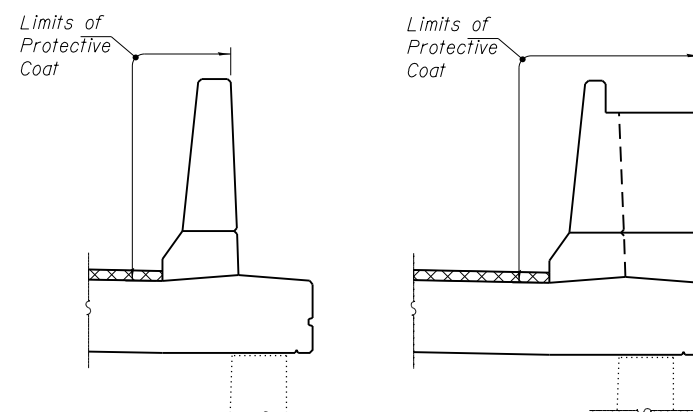


Bars s1(E) & s2(E)

Bar	A
s1(E)	3'-6"
s2(E)	1'-11 1/2"

BAR LIST

Bar	No.	Size	Length	Shape
a1(E)	1669	#6	13'-2"	—
a2(E)	2452	#6	14'-2"	—
a3(E)	2452	#5	8'-7"	—
a4(E)	1176	#6	5'-1"	—
b1(E)	1932	#5	22'-6"	—
b2(E)	168	#5	23'-10"	—
b3(E)	84	#5	21'-2"	—
b4(E)	80	#5	15'-6"	—
b5(E)	128	#5	5'-2"	—
b6(E)	483	#4	22'-0"	—
b7(E)	42	#4	23'-3"	—
b8(E)	21	#4	20'-7"	—
b9(E)	6	#4	9'-0"	—
b10(E)	32	#6	1'-6"	—
b11(E)	48	#4	1'-8"	—
b12(E)	8	#6	16'-5"	—
b13(E)	4	#6	14'-10"	—
b14(E)	8	#6	13'-0"	—
d1(E)	2184	#5	8'-2"	—
d2(E)	424	#5	10'-0"	—
d3(E)	2080	#5	8'-2"	—
d4(E)	424	#5	4'-3"	—
d5(E)	424	#6	6'-7"	—
d6(E)	520	#6	9'-9"	—
d7(E)	10	#6	9'-9"	—
e1(E)	46	#8	33'-0"	—
e2(E)	4	#8	35'-0"	—
e3(E)	2	#8	31'-0"	—
e4(E)	69	#4	21'-11"	—
e5(E)	6	#4	23'-3"	—
e6(E)	3	#4	20'-7"	—
e7(E)	891	#4	14'-8"	—
e8(E)	9	#4	18'-2"	—
e9(E)	18	#4	16'-8"	—
e10(E)	18	#4	12'-8"	—
s1(E)	2345	#4	11'-1"	—
s2(E)	5	#4	8'-0"	—



BETWEEN NOISE WALL PILASTERS AT NOISE WALL PILASTER

LIMITS OF PROTECTIVE COAT



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 3/11/15

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	D	B	U	M	Surface Water Elev.	D	B	U	M
Station	E	L	C	O	Stream Bed Elev.	E	L	C	O
BORING NO.	P	O	S	I	Groundwater Elev.:	P	O	S	I
Station	T	W	Qu	T	First Encounter	H	S	Qu	T
Offset	H	S			Upon Completion	(ft)	(/6")	(tsf)	(%)
Ground Surface Elev.	(ft)	(/6")	(tsf)	(%)	After	(ft)	(/6")	(tsf)	(%)
3.5" ASPHALT, 10.5" CONCRETE					CLAY-brown & gray-stiff to hard (continued)				
655.23		3					3		
SAND, GRAVEL & STONE-loose to medium dense		5		3			3	2.0	22
		8					5	B	
		2					3		
		3		3			4	1.7	22
	-5	4			631.40	-25	5	B	
		4			End Of Boring @ -25.0'. Boring backfilled with cuttings.				
		6		5					
		6							
647.40		4							
CLAY-brown & gray-stiff to hard		3		22					
	-10	4				-30			
		3							
		6	4.6	20					
		8	B						
		4							
		7	4.2	18					
	-15	9	B			-35			
becoming gray @ -15.5'		3							
		4	2.2	21					
		6	B						
		3							
		4	1.9	22					
	-20	5	B			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 3/11/15

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	D	B	U	M	Surface Water Elev.	D	B	U	M
Station	E	L	C	O	Stream Bed Elev.	E	L	C	O
BORING NO.	P	W	S	T	Groundwater Elev.:	P	W	S	T
Station	H	S	Qu	T	First Encounter	H	S	Qu	T
Offset	(ft)	(/6")	(tsf)	(%)	Upon Completion	(ft)	(/6")	(tsf)	(%)
Ground Surface Elev.	(ft)	(/6")	(tsf)	(%)	After	(ft)	(/6")	(tsf)	(%)
3.5" ASPHALT, 10.5" CONCRETE					CLAY-brown & gray-stiff to hard (continued)				
654.23		6					2		
SAND, GRAVEL & STONE-loose to medium dense		8		6			3	1.2	24
		10					4	B	
		8					3		
		4		7			3	1.7	22
	-5	6			630.40	-25	4	B	
		3			End Of Boring @ -25.0'. Boring backfilled with cuttings.				
		2		7					
		2	B						
646.40		3							
CLAY-brown & gray-stiff to hard		4	5.0	20					
	-10	6	B			-30			
		3							
		5	5.0	20					
		7	B						
		3							
		4	1.5	23					
	-15	5	B			-35			
becoming gray @ -15.5'		3							
		4	1.4	22					
		4	B						
		7							
		3	1.6	23					
	-20	4	B			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 3/11/15

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	D	B	U	M	Surface Water Elev.	D	B	U	M
Station	E	L	C	O	Stream Bed Elev.	E	L	C	O
BORING NO.	P	O	S	I	Groundwater Elev.:	P	O	S	I
Station	T	W	Qu	T	First Encounter	H	S	Qu	T
Offset	H	S	(tsf)	(%)	Upon Completion	(ft)	(/6")	(tsf)	(%)
Ground Surface Elev.	(ft)	(/6")	(tsf)	(%)	After	(ft)	(/6")	(tsf)	(%)
3.5" ASPHALT, 10.5" CONCRETE					CLAY LOAM-gray-stiff to very stiff (continued)	634.00			
653.33		7			CLAY-gray- stiff		2		
SAND, GRAVEL & STONE-loose to medium dense		9		5			3	1.5	23
		7					4	B	
		4					2		
		4		6			3	1.7	22
		4					5	B	
		-5			End Of Boring @ -25.0'. Boring backfilled with cuttings.	629.50	-25		
		2							
647.50		2	3.3	21					
CLAY-brown & gray-very stiff to hard		3	P						
		3							
		5	4.3	20					
		-10	B				-30		
		3							
		4	3.5	22					
		6	B						
		3							
		4	2.8	21					
		-15	B				-35		
639.00									
CLAY LOAM-gray-stiff to very stiff		3							
		4	1.8	14					
		5	B						
		3							
		3	2.0	12					
		-20	B				-40		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 3/10/15

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	D	B	U	M	Surface Water Elev.	D	B	U	M
Station	E	L	C	O	Stream Bed Elev.	E	L	C	O
BORING NO.	P	O	S	I	Groundwater Elev.:	P	O	S	I
Station	T	W	Qu	T	First Encounter	H	S	Qu	T
Offset	H	S	(tsf)	(%)	Upon Completion	(ft)	(/6")	(tsf)	(%)
Ground Surface Elev.	(ft)	(/6")	(tsf)	(%)	After	(ft)	(/6")	(tsf)	(%)
3.5" ASPHALT, 10.5" CONCRETE					CLAY-brown & gray-stiff to very stiff (continued)	633.10			
652.43		5			CLAY LOAM-gray-medium stiff		3		
SAND, GRAVEL & STONE-medium dense		5		7			3	0.9	13
		6					6	B	
		3			SILTY CLAY-gray-stiff	630.60			
		5		8			3		
		-5					4	1.2	19
		5			End Of Boring @ -25.0'. Boring backfilled with cuttings.	628.60	-25		
		4							
		5		6					
		5							
645.10		2							
CLAY LOAM-brown & gray spotted black-medium stiff (Fill)		3	0.7	25					
		-10	B				-30		
643.10									
CLAY-brown & gray-stiff to very stiff		4							
		5	3.7	22					
		6	B						
		3			becoming gray @ -13.0'				
		4	3.3	20					
		-15	B				-35		
		3							
		4	1.7	23					
		5	B						
		3							
		3	1.2	24					
		-20	B				-40		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSJ Job No. 12245

SOIL BORING LOG

Page 1 of 1

Date 3/10/15

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

Table with columns for DEPTH, BLOW COUNT, UCS, MOISTURE, and soil descriptions. Includes groundwater levels and structural notes.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



GSJ Job No. 12245

SOIL BORING LOG

Page 1 of 1

Date 3/10/15

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3rd PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

Table with columns for DEPTH, BLOW COUNT, UCS, MOISTURE, and soil descriptions. Includes groundwater levels and structural notes.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 3/10/15

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev.		D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
					n/a	ft				
BORING NO. NWB-25 Station 101+73 Offset 18.90ft Right Ground Surface Elev. 652.50 ft										
4.0" ASPHALT, 2.0: GRAVEL, 8.0" CONCRETE										
	651.33	4						3		
CLAY-brown & gray-stiff to very stiff		5	3.2	19				5	1.9	21
		6	B					7	B	
		2						3		
		2	1.3	21				4	2.0	22
		2	B					6	B	
	-5					627.50	-25			
		2								
		3	1.0	25						
		4	P							
		3								
		4	3.5	21						
	-10	6	B				-30			
becoming gray @ -10.5'		4								
		4	3.0	20						
		6	B							
		3								
		3	2.5	20						
	-15	5	B				-35			
		3								
		6	2.7	21						
		7	B							
		3								
		5	2.4	20						
	-20	5	B				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/14/13

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev.		D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
					n/a	ft				
BORING NO. RWB-39 Station 3100+06 Offset 69.10ft Left Ground Surface Elev. 639.30 ft										
7.0" ASPHALT										
	638.72									
CLAY LOAM-dark brown & gray-very stiff (Apparent Fill)		5							5	
		5	2.4	18					6	1.0
		6	B						9	B
	636.30									
CLAY-gray-medium stiff to stiff		2							4	
		2	0.6	25					4	0.9
		3	B						5	B
	-5					614.30	-25			
		ST	1.0	24						
		2								
		3	0.9	25						
	-10	4	B				-30			
		3								
		3	1.0	23						
		4	B							
		2								
		3	1.5	23						
	-15	5	B				-35			
		2								
		3	1.3	22						
		5	B							
		3								
		4	1.5	18						
	-20	7	B				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)





GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/14/13

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	Station	BORING NO.	Station	Offset	Ground Surface Elev.	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	Hrs.	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
-	-	RWB-40	3100+73	69.40ft Left	639.60					n/a	n/a		Dry	Dry						
7.0" ASPHALT 639.02																				
SANDY CLAY LOAM with STONE-gray-medium dense (Fill)																				
CLAY-gray-medium stiff to stiff (continued)																				
CLAY-gray-medium stiff to stiff 636.60																				
End Of Boring @ -25.0'. Boring backfilled with cuttings. 614.60 -25																				
CLAY LOAM-gray-stiff to very stiff (continued)																				
CLAY LOAM-gray-hard (Apparent Fill) 638.60																				
CLAY-gray-stiff																				
CLAY LOAM-gray-stiff to very stiff 625.10																				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/10/13

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY NW

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	Station	BORING NO.	Station	Offset	Ground Surface Elev.	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	Hrs.	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
-	-	RWB-41	3101+54	69.80ft Left	640.60					n/a	n/a		616.6	616.6						
10.0" ASPHALT 639.77																				
CLAY LOAM-gray-stiff to very stiff (continued)																				
CLAY LOAM-gray-hard (Apparent Fill) 638.60																				
CLAY-gray-stiff																				
CLAY LOAM-gray-stiff to very stiff 617.60																				
SANDY CLAY LOAM with GRAVEL-gray-medium dense 615.60 -25																				
End Of Boring @ -25.0'. Boring backfilled with cuttings. 615.60 -25																				
CLAY LOAM-gray-stiff to very stiff 625.10																				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 2

Date 11/4/13

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY NW

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H  (ft)	B L O W S  (/6")	U C S  Qu (tsf)	M O I S T  (%)	Surface Water Elev. Stream Bed Elev.	D E P T H  (ft)	B L O W S  (/6")	U C S  Qu (tsf)	M O I S T  (%)
-	-	-	-	-	n/a n/a	-	-	-	-
RWB-42 3102+29 67.10ft Left 641.60									
8.0" ASPHALT	640.93				CLAY-gray-stiff to very stiff (continued)				
CRUSHED BRICK & STONE-medium dense		7				5		1.5	18
		9		13		7		B	
		9							
CLAY-gray-stiff to very stiff	638.60								
		3				7			
		4	2.2	20		4	1.9	20	
		6	B			6	B		
		4				4			
		5	2.4	21		6	1.5	20	
		7	B			9	B		
		4				5			
		5	2.3	21		7	1.7	22	
		7	B			9	B		
		3				5			
		5	1.9	20		7	2.2	17	
		7	B			10	B		
		3				7			
		4	1.7	18		12	2.7	20	
		6	B			14	B		
		3				7			
		4	1.2	22					
		6	B						
		3				7			
		6	1.3	17		12	2.7	20	
		6	B			14	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 2 of 2

Date 11/4/13

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY NW

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	D E P T H  (ft)	B L O W S  (/6")	U C S  Qu (tsf)	M O I S T  (%)	Surface Water Elev. Stream Bed Elev.	D E P T H  (ft)	B L O W S  (/6")	U C S  Qu (tsf)	M O I S T  (%)
-	-	-	-	-	n/a n/a	-	-	-	-
RWB-42 3102+29 67.10ft Left 641.60									
CLAY-gray-stiff to very stiff (continued)									
		5							
End Of Boring @ -45.0'. Boring backfilled with cuttings.	596.60	11	2.1	21					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Z:\PROJECTS\2012\12245-A HNTB, I-90 PHASE III\12245-A BORING LOGS\12245-A LOG.GPJ 10/19/15

Z:\PROJECTS\2012\12245-A HNTB, I-90 PHASE III\12245-A BORING LOGS\12245-A LOG.GPJ 10/19/15



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/10/13

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY NW

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	D	B	U	M	Surface Water Elev.	D	B	U	M
Station	E	L	C	O	Stream Bed Elev.	E	L	C	O
BORING NO.	P	O	S	I	Groundwater Elev.:	P	O	S	I
Station	T	W	Qu	T	First Encounter	H	S	Qu	T
Offset	H	S	(tsf)	(%)	Upon Completion	(ft)	(/6")	(tsf)	(%)
Ground Surface Elev.	(ft)	(/6")	(tsf)	(%)	After	(ft)	(/6")	(tsf)	(%)
10.0" ASPHALT					CLAY-gray-stiff to very stiff				
					(continued)				
CLAY-gray-stiff to very stiff		3					3		
		3	2.3	20			4	1.7	20
		3	P				5	B	
		2					4		
		3	2.3	22			5	1.9	21
		4	B				6	B	
					616.90	-25			
					End Of Boring @ -25.0'. Boring backfilled with cuttings.				
		3							
		3	2.0	23					
		4	B						
		3							
		4	2.0	22					
		5	B						
		3							
		5	1.8	21					
		5	B						
		3							
		3	2.3	22					
		5	B						
		3							
		4	1.7	22					
		5	B						
		3							
		4	1.8	20					
		6	B						

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



GSI Job No. 12245

# SOIL BORING LOG

Page 1 of 1

Date 10/10/13

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY NW

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO.	D	B	U	M	Surface Water Elev.	D	B	U	M
Station	E	L	C	O	Stream Bed Elev.	E	L	C	O
BORING NO.	P	O	S	I	Groundwater Elev.:	P	O	S	I
Station	T	W	Qu	T	First Encounter	H	S	Qu	T
Offset	H	S	(tsf)	(%)	Upon Completion	(ft)	(/6")	(tsf)	(%)
Ground Surface Elev.	(ft)	(/6")	(tsf)	(%)	After	(ft)	(/6")	(tsf)	(%)
11.0" ASPHALT					SILTY SAND & GRAVEL-gray-medium dense				
					(continued)				
CLAY-brown & gray-stiff to hard (Fill)		3					7		
		4	4.1	18			10		9
		5	B				12		
		2			619.60				
		2			CLAY-gray-stiff				
		2	1.2	23			4		
		3	B				5	1.8	19
		3	B				6	B	
					617.60	-25			
					End Of Boring @ -25.0'. Boring backfilled with cuttings.				
		2							
		3	2.3	21					
		4	B						
		3							
		4	2.7	21					
		6	B						
		3							
		3	1.6	23					
		5	B						
		3							
		5	2.3	22					
		6	P						
		4							
		4	1.6	19					
		6	B						
					624.60				
					SILTY SAND & GRAVEL-gray-medium dense				
		8							
		10		10					
		13							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



USER NAME = *USER*	DESIGNED	REVISED
PLOT SCALE = *SCALE*	CHECKED	REVISED
PLOT DATE = 8-15-2017	DRAWN STD	REVISED
	DATE 8/21/2017	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOGS - 7 OF 8  
MOMENT SLAB (S.N. 016-2295)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-90	(1517 & 1415) R-2	COOK	353	267
S.N. 016-2295		CONTRACT NO. 60Y40		
ILLINOIS FED. AID PROJECT				

SHEET NO. MS-38 OF 39 SHEETS



# SOIL BORING LOG

GSI Job No. 12245

Page 1 of 1

Date 10/10/13

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY NW

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	DEPTH H	BLOW W	UCS S	MOIST T	Surface Water Elev. Stream Bed Elev.	DEPTH H	BLOW W	UCS S	MOIST T
12.0" ASPHALT					n/a				
641.70					n/a				
CRUSHED STONE-medium dense to very dense		8				3		1.4	19
		11		4		5		6	
		16				6			
		17				7		1.2	21
50/3"						8		B	
637.20					617.70				
CLAY-gray-stiff to very stiff									
		2		23		2		1.8	22
		2	1.5			3		B	
		3				4			
		3				4		1.9	22
		4	2.0			4		B	
		5				8			
		5				5			
		3	2.0			6		2.2	20
		5				8		B	
		3				4			
		5	2.1			6		1.9	21
		5				7		B	
		5	1.8			5		1.9	21
		7				7		B	
		5				4			
		6	1.9			6		2.7	20
		7				8		B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
 BBS, from 137 (Rev. 8-99)



# SOIL BORING LOG

GSI Job No. 12245

Page 1 of 1

Date 10/11/13

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	DEPTH H	BLOW W	UCS S	MOIST T	Surface Water Elev. Stream Bed Elev.	DEPTH H	BLOW W	UCS S	MOIST T
11.0" ASPHALT					n/a				
641.78					n/a				
CLAY-brown & gray-stiff to very stiff						5		2.3	21
		3		18		7		P	
		4	3.5			7			
		7				5			
becoming gray @ -3.0'						8		1.9	19
		2				9		B	
637.70					637.70				
CLAY-gray-stiff to very stiff									
		2		22		2		1.8	22
		2				3		B	
		3				4			
		4				4		1.9	22
		4				4		B	
		8				8			
		5				5			
		6	2.2			6		2.2	20
		8				8		B	
		4				4			
		6	1.9			6		1.9	21
		7				7		B	
		4				5		1.9	21
		5				7		B	
		4				4			
		6	2.7			6		2.7	20
		8				8		B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
 BBS, from 137 (Rev. 8-99)



# SOIL BORING LOG

GSI Job No. 12245

Page 1 of 1

Date 10/11/13

ROUTE FAI 90 (I-90 - Kennedy Expressway) DESCRIPTION I-90 Retaining Walls (Canfield Ave. to Harlem Ave.) LOGGED BY TZ

SECTION (1517 & 1415) R-3 LOCATION SE 1/4, SEC. 1, TWP. T40N, RNG. R12E, 3<sup>rd</sup> PM

COUNTY Cook DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. Station	DEPTH H	BLOW W	UCS S	MOIST T	Surface Water Elev. Stream Bed Elev.	DEPTH H	BLOW W	UCS S	MOIST T
10.0" ASPHALT					n/a				
641.67					n/a				
CLAY-gray-stiff to very stiff						5		4.5	17
		7				8		1.8	18
		8				9		B	
		4				4			
		6	2.5			6		2.5	20
		8				8		B	
		5				5			
		7	2.6			7		2.6	21
		10				10		B	
		4				4			
		7	2.8			7		2.8	20
		9				9		B	
		5				5			
		8	2.7			8		2.7	20
		10				10		B	
		6				6			
		8	2.5			8		2.5	17
		9				9		B	
		4				4			
		7	2.7			7		2.7	17
		10				10		B	
		5				5			
		7	1.9			7		1.9	20
		8				8		B	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
 BBS, from 137 (Rev. 8-99)

Bench Mark: Square cut on top of barrier wall by light pole (FD2) mile marker 80.74 on north side WB I-90 just east of Oriole Bridge

Existing Structure: None

**DESIGN SPECIFICATIONS**

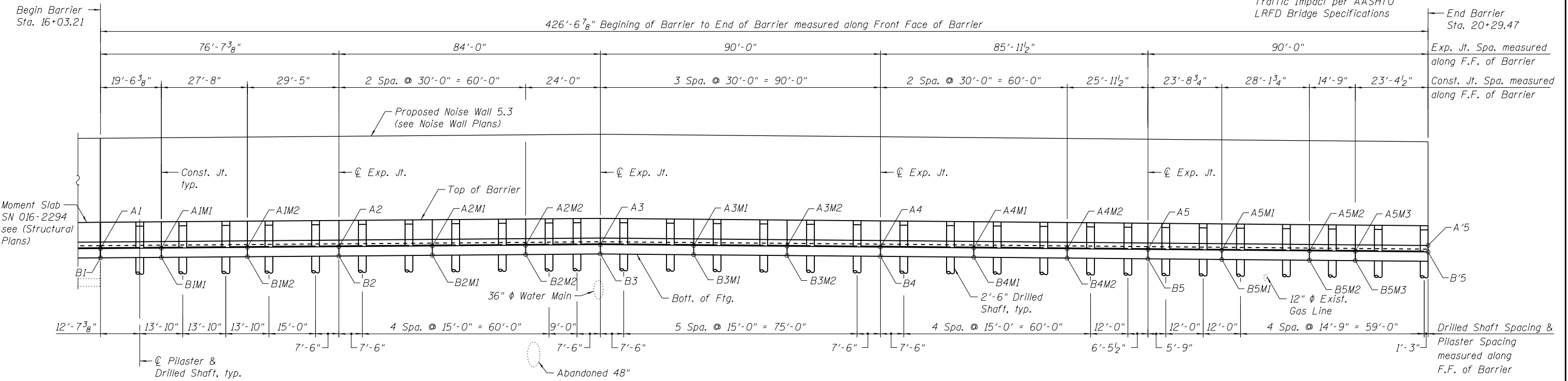
2014 AASHTO LRFD Bridge Design Specifications,  
7th Edition, with 2016 Interim Revisions

**DESIGN STRESSES**

**FIELD UNITS**  
 f'c = 3,500 psi  
 f'c = 4,000 psi (Drilled Shafts)  
 fy = 60,000 psi (Reinforcement)

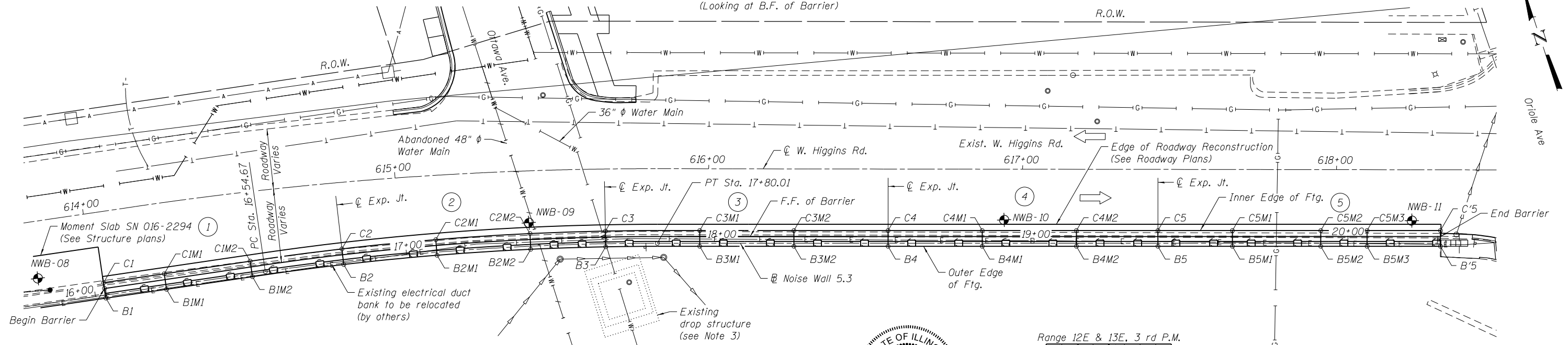
**LOADING**

Allow 35 psf wind load for  
Structure Mounted Noise Wall  
(see Special Provision).  
Maximum Dead Load not to  
exceed 55 psf of wall face area.  
Traffic Impact per AASHTO  
LRFD Bridge Specifications



**ELEVATION**

(Looking at B.F. of Barrier)

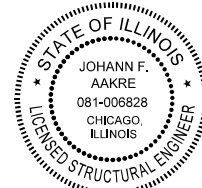


**PLAN**

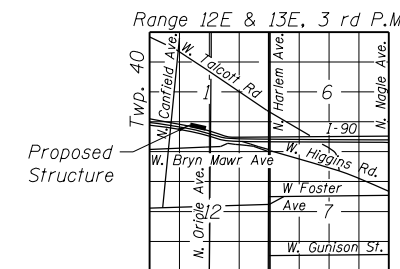
(@ Bott. of Barrier)

**LEGEND:**

- |          |          |   |                                    |
|----------|----------|---|------------------------------------|
| Existing | Proposed |   |                                    |
| ○        | ●        | ○ | Catch Basin                        |
| ○        | ○        | ○ | Manhole                            |
| —        | —        | — | Storm Sewer                        |
| —        | —        | — | Exist. Underground Electrical Line |
| —        | —        | — | Exist. Underground Telephone Line  |
| —        | —        | — | Exist. Underground Gas Line        |
| —        | —        | — | Exist. Underground Water Line      |
| —        | —        | — | Exist. Aerial Electrical Line      |
- ① Barrier Support Segment Number
- F.F. - denotes Front Face  
B.F. - denotes Back Face



Signed: *J. Aakre*  
 Date: 1/19/2018  
 Exp: 11/30/2018  
 Sheets: S-1 thru S-22



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**

**W. HIGGINS ROAD**  
**F.A.I. RTE. I-90 - SEC. (1517 & 1415) I-14**  
**COOK COUNTY**  
**STATION 16+03.21 TO 20+29.47**  
**BARRIER SUPPORT STRUCTURE**  
**FOR NOISE WALL 5.3**



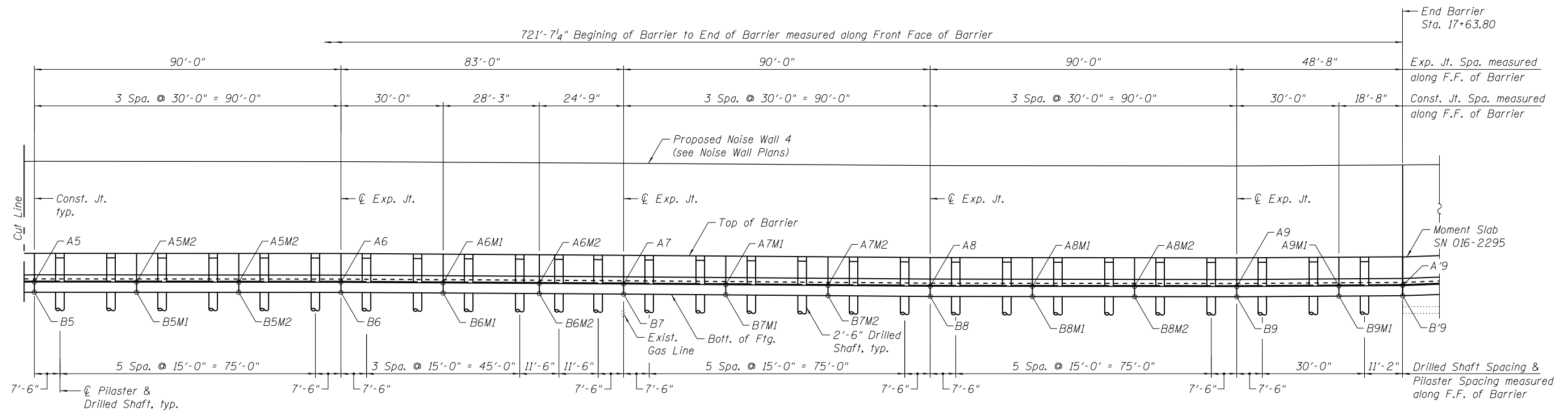
USER NAME = mksrby	DESIGNED JFA	REVISED
PLOT SCALE = 2.00000' / ft.	CHECKED APC	REVISED
PLOT DATE = 1/17/2018	DRAWN LK	REVISED
	DATE 8/21/2017	REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

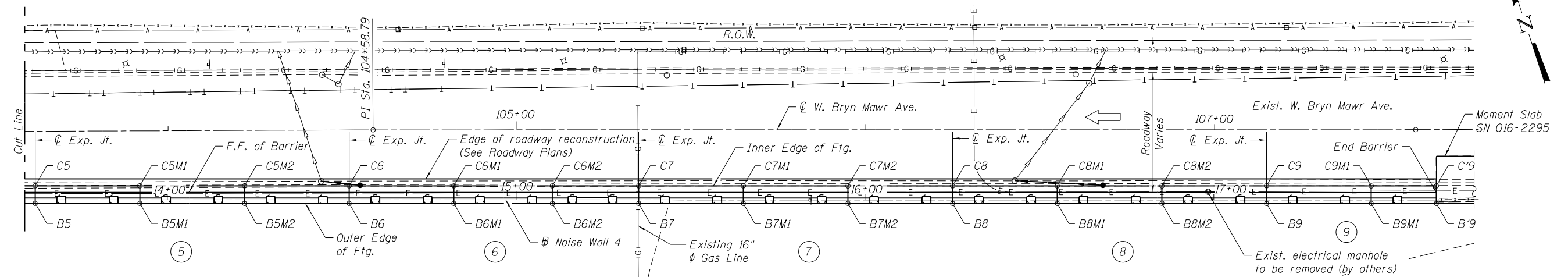
SHEET NO. 1 OF 22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	269
CONTRACT NO. 60Y40				
ILLINOIS FED. AID PROJECT				





**ELEVATION**  
(Looking at B.F. of Barrier)



**PLAN**  
(@ Bott. of Barrier)

**GENERAL PLAN & ELEVATION**  
**W. BRYN MAWR AVE**  
**F.A.I. RTE. I-90 - SEC. (1517 & 1415) I-14**  
**COOK COUNTY**  
**STATION 10+13.94 TO 17+63.79**  
**BARRIER SUPPORT STRUCTURE**  
**FOR NOISE WALL 4**

Notes:  
1. For Notes, see Sheet 2 of 22.  
2. For Legend, see Sheet 2 of 22.



USER NAME = ikelste	DESIGNED JFA	REVISED
CHECKED APC	REVISOR	REVISED
PLOT SCALE = 0.16667 "/> <td>DRAWN LK</td> <td>REVISED</td>	DRAWN LK	REVISED
PLOT DATE = 8/7/2017	DATE 8/21/2017	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

SHEET NO. 3 OF 22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	271
CONTRACT NO. 60Y40				

ILLINOIS FED. AID PROJECT

**GENERAL NOTES**

Reinforcing bar bending dimensions are out to out.

Reinforcing bars designated "(E)" shall be epoxy coated.

All exposed concrete edges shall be a 3/4" x 45° chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground line.

No construction joints except those shown on the plans will be allowed unless otherwise approved by the Engineer.

It shall be the Contractor's responsibility to verify the location of all utilities prior to starting construction.

Concrete for drilled shafts shall be class DS Concrete.

**CURVE DATA @ NOISE WALL 5.3**

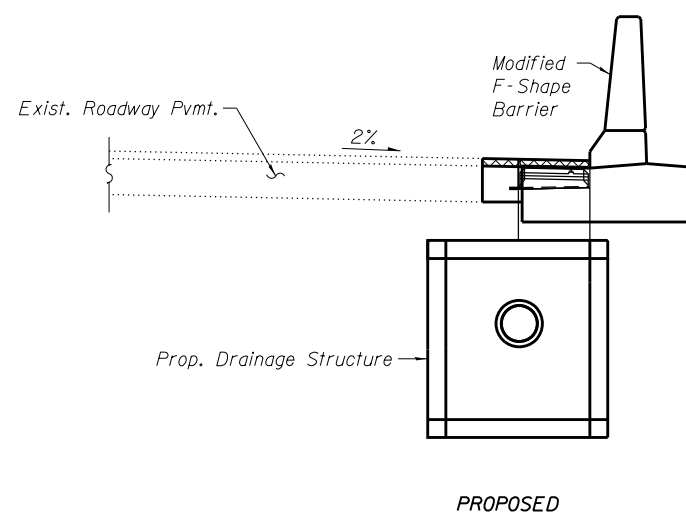
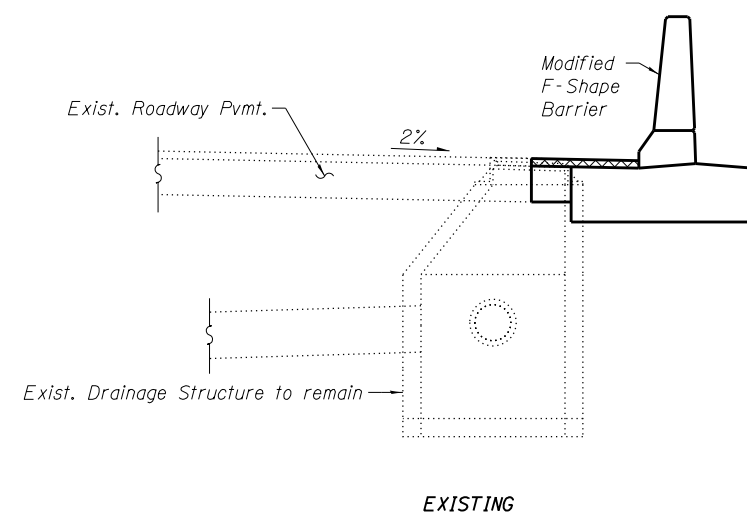
Prop. Curve 5.3-01  
 PI Sta. = 17+17.45  
 $\Delta = 8^\circ 18' 47''$  (RT)  
 $D = 6^\circ 37' 57''$   
 $R = 863.85'$   
 $T = 62.78'$   
 $L = 125.34'$   
 $E = 2.28'$   
 P.C. Sta. = 16+54.68  
 P.T. Sta. = 17+80.01

**INDEX OF SHEETS**

- S-1 General Plan & Elevation Barrier Support for Noise Wall 5.3
- S-2 General Plan & Elevation Barrier Support for Noise Wall 4 - 1
- S-3 General Plan & Elevation Barrier Support for Noise Wall 4 - 2
- S-4 General Data - 1
- S-5 General Data - 2
- S-6 Plan & Elevation Barrier Support for Noise Wall 5.3 - 1
- S-7 Plan & Elevation Barrier Support for Noise Wall 5.3 - 2
- S-8 Plan & Elevation Barrier Support for Noise Wall 5.3 - 3
- S-9 Plan & Elevation Barrier Support for Noise Wall 5.3 - 4
- S-10 Plan & Elevation Barrier Support for Noise Wall 5.3 - 5
- S-11 Plan & Elevation Barrier Support for Noise Wall 4 - 1
- S-12 Plan & Elevation Barrier Support for Noise Wall 4 - 2
- S-13 Plan & Elevation Barrier Support for Noise Wall 4 - 3
- S-14 Plan & Elevation Barrier Support for Noise Wall 4 - 4
- S-15 Plan & Elevation Barrier Support for Noise Wall 4 - 5
- S-16 Plan & Elevation Barrier Support for Noise Wall 4 - 6
- S-17 Plan & Elevation Barrier Support for Noise Wall 4 - 7
- S-18 Plan & Elevation Barrier Support for Noise Wall 4 - 8
- S-19 Plan & Elevation Barrier Support for Noise Wall 4 - 9
- S-20 Barrier Support Details - 1
- S-21 Barrier Support Details - 2
- S-22 Barrier Support Details - 3

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Structure Excavation	Cu Yd	382.8
Concrete Structures	Cu Yd	547.2
Protective Coat	Sq Yd	616
Reinforcement Bars, Epoxy Coated	Pound	250,100
Drilled Shaft in Soil	Cu Yd	369.2
Noise Abatement Wall Anchor Rod Assembly	Each	79
Barrier Wall Reflectors, Type C	Each	34



**TYPICAL SECTION THRU BARRIER SUPPORT FOR NOISE WALL**  
 (© Catch Basin Location)

- Notes:
- For alignment information, see roadway drawings, ALG-02 & ALG-03.
  - For proposed flow line profiles, see Noise Wall 5.3 and 4 Plans and Profile Sheets.

<b>HNTB</b>	USER NAME = <b>lkelite</b>	DESIGNED <b>JFA</b>	REVISED	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL DATA - 1 BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 &amp; 4</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLLOT SCALE = 0.16667' / in.	CHECKED <b>APC</b>	REVISED			90	(1517 & 1415) I-14	COOK	353	272
	PLLOT DATE = 8/7/2017	DRAWN <b>LK</b>	REVISED			CONTRACT NO. 60Y40				
	DATE <b>8/21/2017</b>	DATE <b>8/21/2017</b>	REVISED			ILLINOIS FED. AID PROJECT				
FILE NAME = D160Y40-WB-Barrier.Support.Structure5.3.4.0-004-GN01.dgn					SHEET NO. 4 OF 22 SHEETS					



**GEOMETRIC CONTROL POINTS - STATIONS, OFFSETS & ELEVATIONS**  
**BARRIER SUPPORT STRUCTURE FOR NOISE WALL 5.3**

**FRONT FACE OF BARRIER (A)**

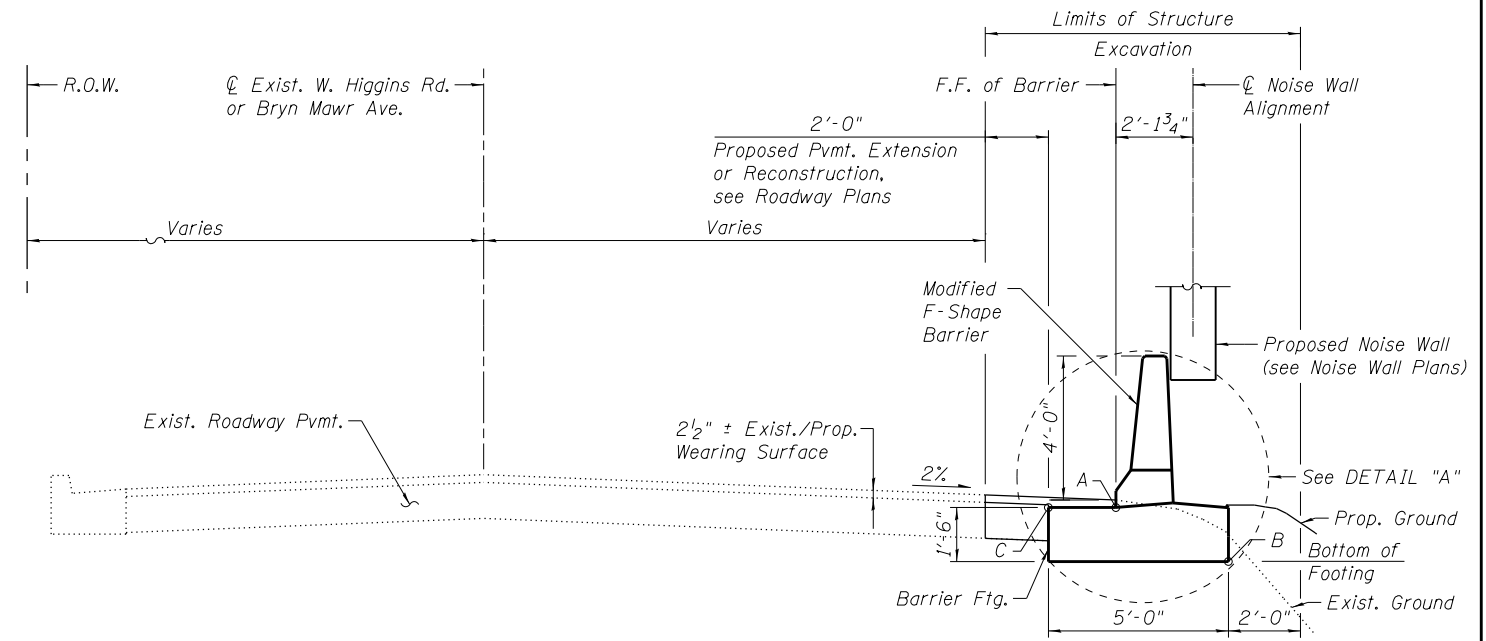
Location	Station	Offset	Elevation
A1	16+03.21	-2.146	657.54
A1M1	16+22.74	-2.146	657.62
A1M2	16+50.41	-2.146	657.73
A2	16+79.76	-2.146	657.84
A2M1	17+09.69	-2.146	657.96
A2M2	17+39.61	-2.146	658.08
A3	17+63.55	-2.146	658.18
A3M1	17+93.51	-2.146	658.05
A3M2	18+23.51	-2.146	657.92
A4	18+53.51	-2.146	657.78
A4M1	18+83.51	-2.146	657.65
A4M2	19+13.51	-2.146	657.51
A5	19+39.47	-2.146	657.40
A5M1	19+63.20	-2.146	657.29
A5M2	19+91.34	-2.146	657.16
A5M3	20+06.09	-2.146	657.10
A'5	20+29.47	-2.146	656.99

**BOTTOM OUTER EDGE OF FOOTING (B)**

Location	Station	Offset	Elevation
B1	16+03.21	0.979	656.04
B1M1	16+22.74	0.979	656.12
B1M2	16+50.41	0.979	656.23
B2	16+79.76	0.979	656.34
B2M1	17+09.69	0.979	656.46
B2M2	17+39.61	0.979	656.58
B3	17+63.55	0.979	656.68
B3M1	17+93.51	0.979	656.55
B3M2	18+23.51	0.979	656.42
B4	18+53.51	0.979	656.28
B4M1	18+83.51	0.979	656.15
B4M2	19+13.51	0.979	656.01
B5	19+39.47	0.979	655.90
B5M1	19+63.20	0.979	655.79
B5M2	19+91.34	0.979	655.66
B5M3	20+06.09	0.979	655.60
B'5	20+29.47	0.979	655.49

**TOP INNER EDGE OF FOOTING (C)**

Location	Station	Offset	Elevation
C1	16+03.21	-4.021	657.54
C1M1	16+22.74	-4.021	657.62
C1M2	16+50.41	-4.021	657.73
C2	16+79.76	-4.021	657.84
C2M1	17+09.69	-4.021	657.96
C2M2	17+39.61	-4.021	658.08
C3	17+63.55	-4.021	658.18
C3M1	17+93.51	-4.021	658.05
C3M2	18+23.51	-4.021	657.92
C4	18+53.51	-4.021	657.78
C4M1	18+83.51	-4.021	657.65
C4M2	19+13.51	-4.021	657.51
C5	19+39.47	-4.021	657.40
C5M1	19+63.20	-4.021	657.29
C5M2	19+91.34	-4.021	657.16
C5M3	20+06.09	-4.021	657.10
C'5	20+29.47	-4.021	656.99



**TYPICAL SECTION THRU BARRIER SUPPORT FOR NOISE WALL**  
(Looking East)

- A Stations, offsets and elevations for Front Face of Barrier at elevation 2 1/2" below top of wearing surface are provided w.r.t. this point.
- B Stations, offsets and elevations for Bottom Outer Edge of Footing are provided w.r.t. this point.
- C Stations, offsets and elevations for Top Inner Edge of Footing are provided w.r.t. this point.

**GEOMETRIC CONTROL POINTS - STATIONS, OFFSETS & ELEVATIONS**  
**BARRIER SUPPORT STRUCTURE FOR NOISE WALL 4**

**FRONT FACE OF BARRIER (A)**

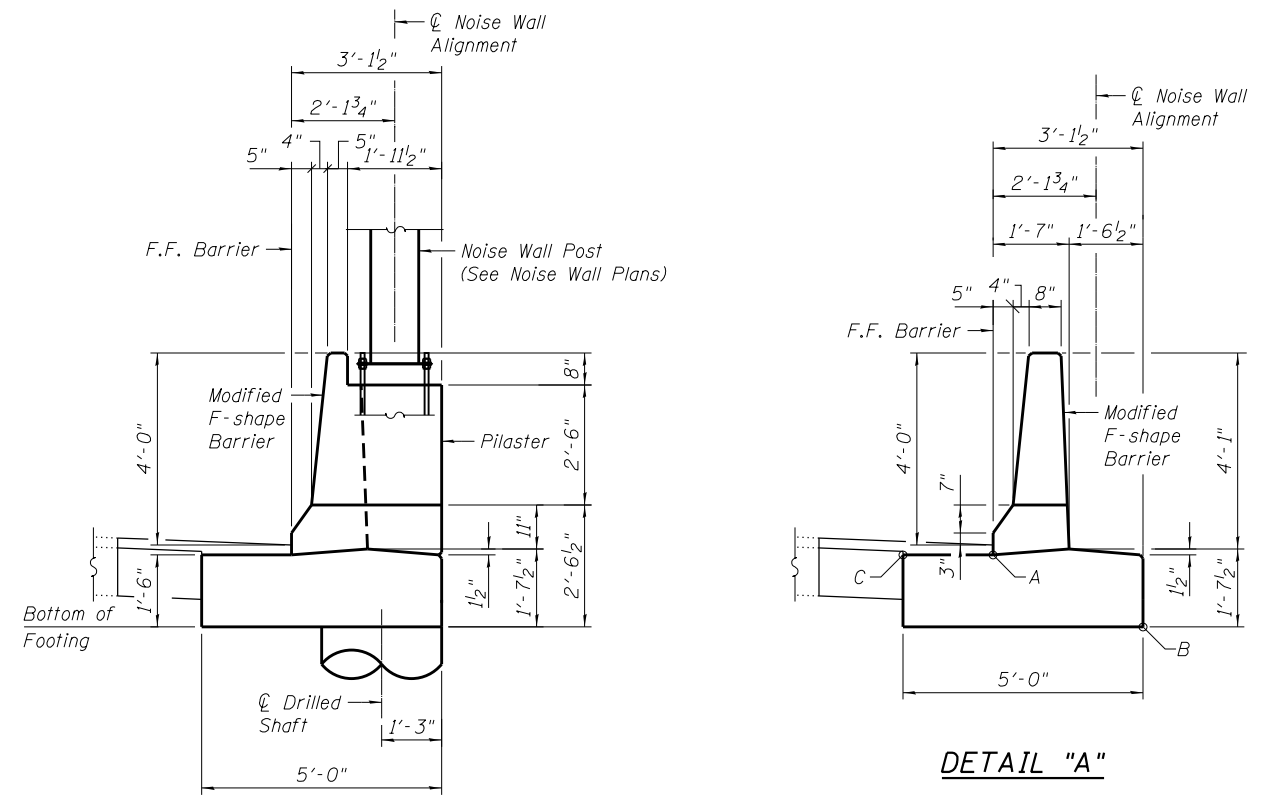
Location	Station	Offset	Elevation
A1	10+42.11	-2.146	657.32
A1M1	10+62.05	-2.146	657.38
A2	10+92.05	-2.146	657.30
A2M1	11+22.05	-2.146	657.08
A2M2	11+52.05	-2.146	656.87
A3	11+82.05	-2.146	656.69
A3M1	12+12.05	-2.146	656.78
A3M2	12+31.80	-2.146	656.84
A3M3	12+42.14	-2.146	656.87
A4	12+72.14	-2.146	656.96
A4M1	13+02.14	-2.146	657.05
A4M2	13+32.14	-2.146	657.14
A5	13+62.14	-2.146	657.23
A5M1	13+92.14	-2.146	657.32
A5M2	14+22.14	-2.146	657.29
A6	14+52.14	-2.146	657.20
A6M1	14+82.14	-2.146	657.11
A6M2	15+10.39	-2.146	657.03
A7	15+35.14	-2.146	656.95
A7M1	15+65.14	-2.146	656.86
A7M2	15+95.14	-2.146	656.74
A8	16+25.14	-2.146	656.61
A8M1	16+55.14	-2.146	656.48
A8M2	16+85.14	-2.146	656.47
A9	17+15.14	-2.146	656.56
A9M1	17+45.14	-2.146	656.65
A'9	17+63.80	-2.146	656.71

**BOTTOM OUTER EDGE OF FOOTING (B)**

Location	Station	Offset	Elevation
B1	10+42.11	0.979	655.82
B1M1	10+62.05	0.979	655.88
B2	10+92.05	0.979	655.80
B2M1	11+22.05	0.979	655.58
B2M2	11+52.05	0.979	655.37
B3	11+82.05	0.979	655.19
B3M1	12+12.05	0.979	655.28
B3M2	12+31.80	0.979	655.34
B3M3	12+42.14	0.979	655.37
B4	12+72.14	0.979	655.46
B4M1	13+02.14	0.979	655.55
B4M2	13+32.14	0.979	655.64
B5	13+62.14	0.979	655.73
B5M1	13+92.14	0.979	655.82
B5M2	14+22.14	0.979	655.79
B6	14+52.14	0.979	655.70
B6M1	14+82.14	0.979	655.61
B6M2	15+10.39	0.979	655.53
B7	15+35.14	0.979	655.45
B7M1	15+65.14	0.979	655.36
B7M2	15+95.14	0.979	655.24
B8	16+25.14	0.979	655.11
B8M1	16+55.14	0.979	654.98
B8M2	16+85.14	0.979	654.97
B9	17+15.14	0.979	655.06
B9M1	17+45.14	0.979	655.15
B'9	17+63.80	0.979	655.21

**TOP INNER EDGE OF FOOTING (C)**

Location	Station	Offset	Elevation
C1	10+42.11	-4.021	657.32
C1M1	10+62.05	-4.021	657.38
C2	10+92.05	-4.021	657.30
C2M1	11+22.05	-4.021	657.08
C2M2	11+52.05	-4.021	656.87
C3	11+82.05	-4.021	656.69
C3M1	12+12.05	-4.021	656.78
C3M2	12+31.80	-4.021	656.84
C3M3	12+42.14	-4.021	656.87
C4	12+72.14	-4.021	656.96
C4M1	13+02.14	-4.021	657.05
C4M2	13+32.14	-4.021	657.14
C5	13+62.14	-4.021	657.23
C5M1	13+92.14	-4.021	657.32
C5M2	14+22.14	-4.021	657.29
C6	14+52.14	-4.021	657.20
C6M1	14+82.14	-4.021	657.11
C6M2	15+10.39	-4.021	657.03
C7	15+35.14	-4.021	656.95
C7M1	15+65.14	-4.021	656.86
C7M2	15+95.14	-4.021	656.74
C8	16+25.14	-4.021	656.61
C8M1	16+55.14	-4.021	656.48
C8M2	16+85.14	-4.021	656.47
C9	17+15.14	-4.021	656.56
C9M1	17+45.14	-4.021	656.65
C'9	17+63.80	-4.021	656.71



**DETAIL "A"**

**SECTION THRU BARRIER SUPPORT FOR NOISE WALL**

- Notes:  
 1. Stationing and offsets are provided with respect to Noise Wall alignments. For alignment details, see Roadway Plans.



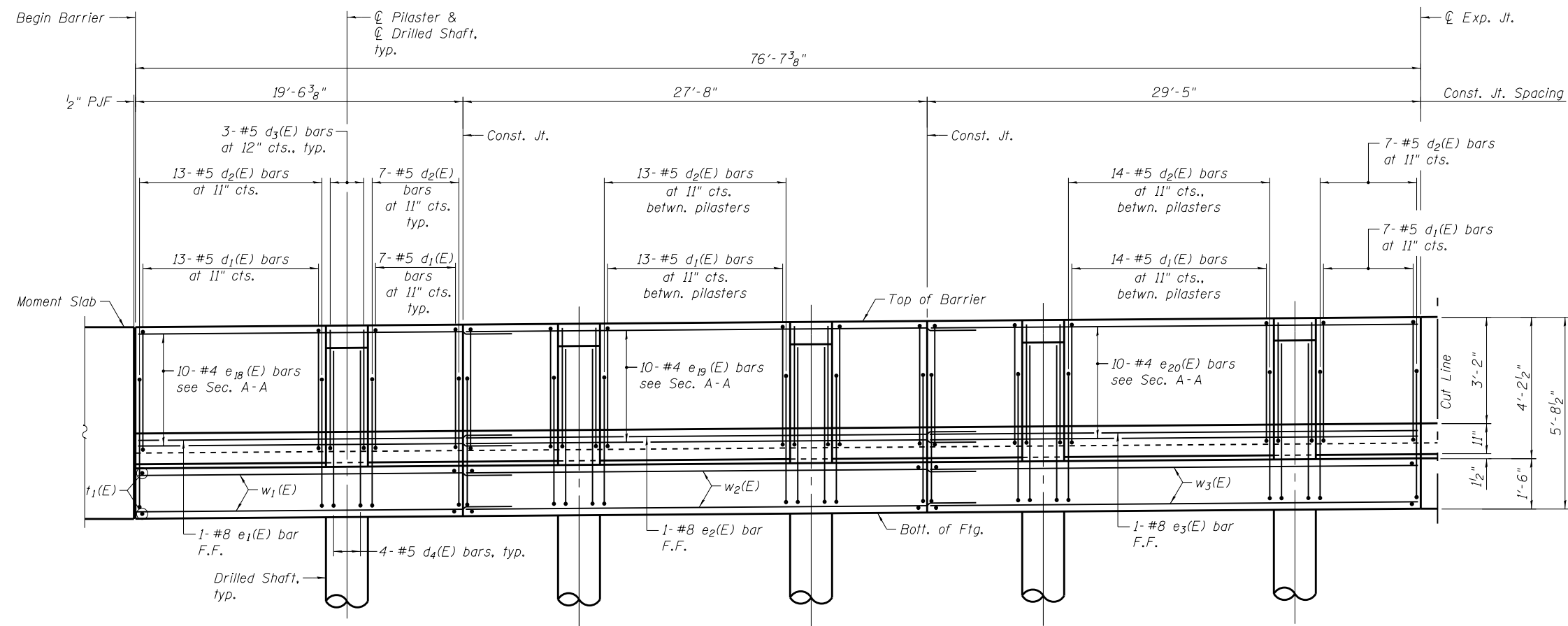
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	DATE 8/21/2017	REVISED

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA - 2  
 BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4**

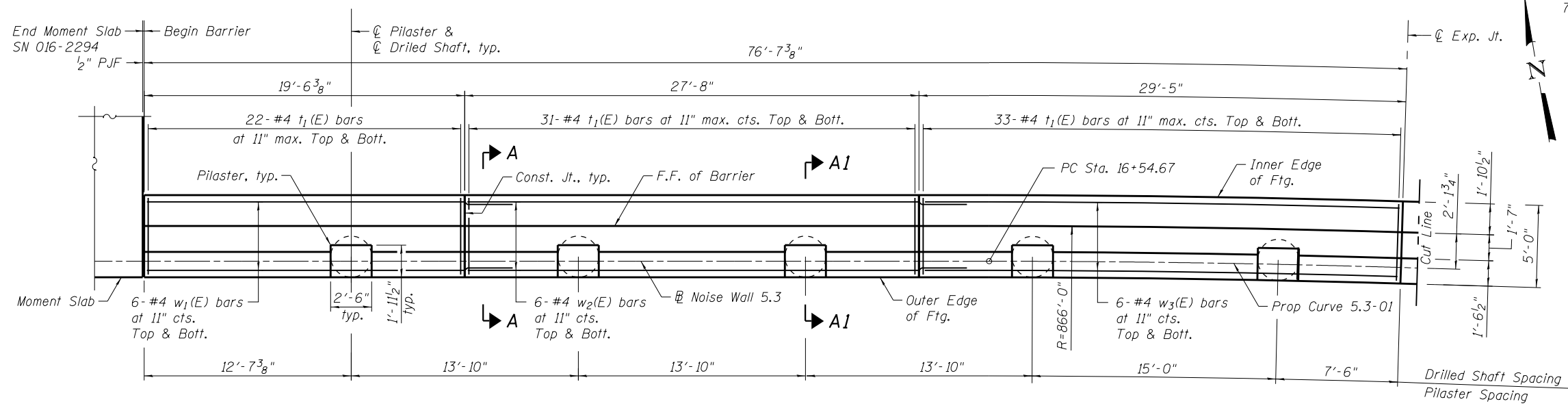
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90	(1517 & 1415) I-14	COOK	353	273
CONTRACT NO. 60Y40				
ILLINOIS FED. AID PROJECT				

SHEET NO. 5 OF 22 SHEETS



**ELEVATION - SEGMENT 1**  
(Drilled shaft reinforcement not shown for clarity)

- Notes:
1. Longitudinal dimensions measured along Front Face of Barrier.
  2. For Expansion Joint details, see Sheet 20 of 22.
  3. For Construction Joint detail, see Sheet 20 of 22.
  4. Proposed Noise Abatement Panels not shown for clarity.
  5. For Bill of Material, see Sheet 22 of 22.
  6. For Sections A-A and A1-A1, see Sheet 21 of 22.
  7. Protective Coat to be applied to Top and Front Face of Barrier.



**PLAN - SEGMENT 1**  
(At Bottom of Barrier)

**MINIMUM BAR LAP**  
#4 bar = 2'-11"  
#8 bar = 6'-4"



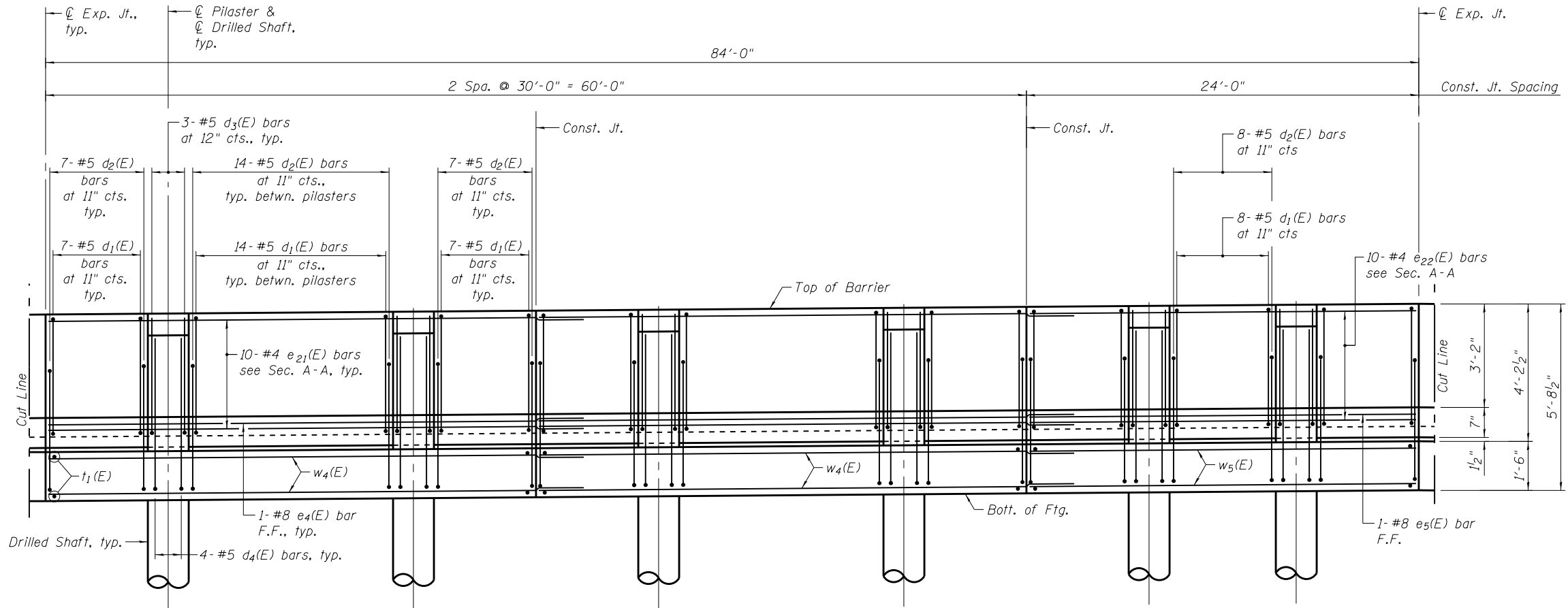
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PLOT DATE = 8/7/2017	DATE 8/21/2017	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 5.3 - 1  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

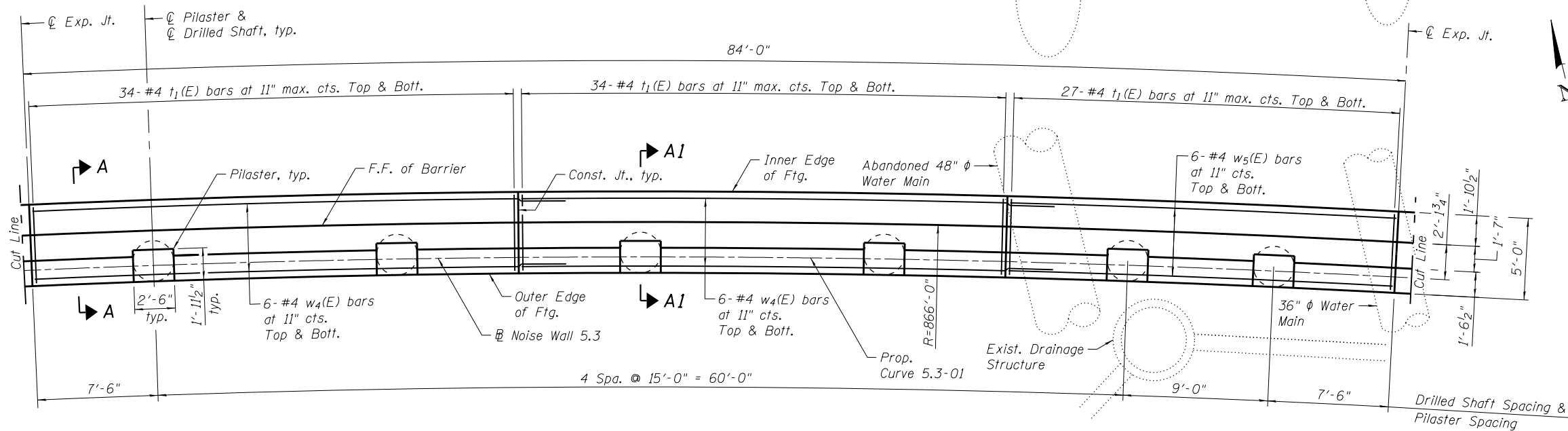
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	274
CONTRACT NO. 60Y40				
ILLINOIS FED. AID PROJECT				



**ELEVATION - SEGMENT 2**

(Drilled shaft reinforcement not shown for clarity)



**PLAN - SEGMENT 2**

(At Bottom of Barrier)

**MINIMUM BAR LAP**

- #4 bar = 2'-11"
- #8 bar = 6'-4"

Notes:  
1. For Notes, see Sheet 6 of 22.



USER NAME = ikelste	DESIGNED APC	REVISED
	CHECKED JFA	REVISED
PLOT SCALE = 0.16667' / in.	DRAWN LK	REVISED
PLOT DATE = 8/7/2017	DATE 8/21/2017	REVISED

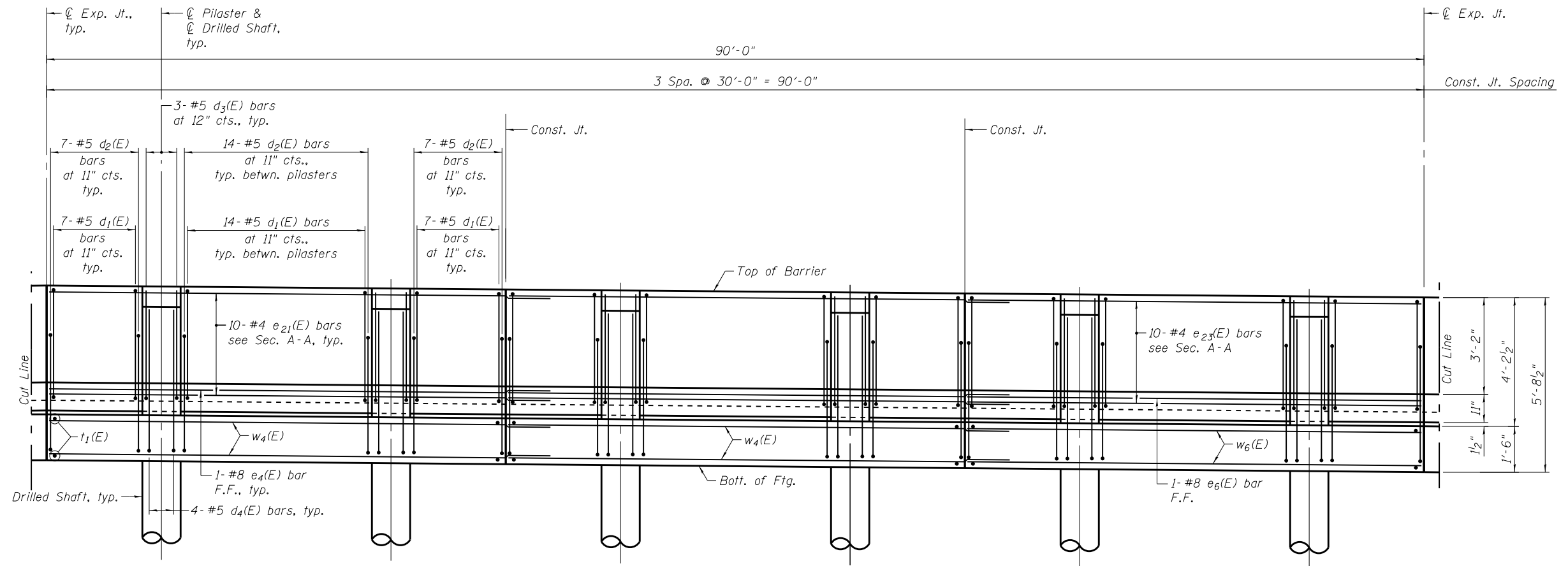
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 5.3 - 2  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

SHEET NO. 7 OF 22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	275
CONTRACT NO. 60Y40				

ILLINOIS FED. AID PROJECT

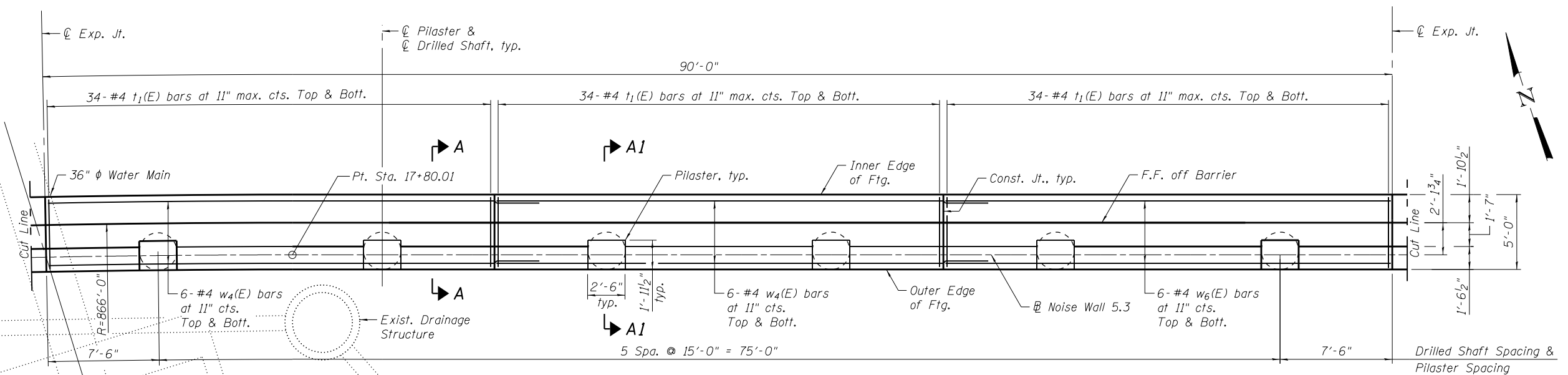


**ELEVATION - SEGMENT 3**

(Drilled shaft reinforcement not shown for clarity)

**MINIMUM BAR LAP**

#4 bar = 2'-11"  
#8 bar = 6'-4"



**PLAN - SEGMENT 3**

(At Bottom of Barrier)

Notes:  
1. For Notes, see Sheet 6 of 22.



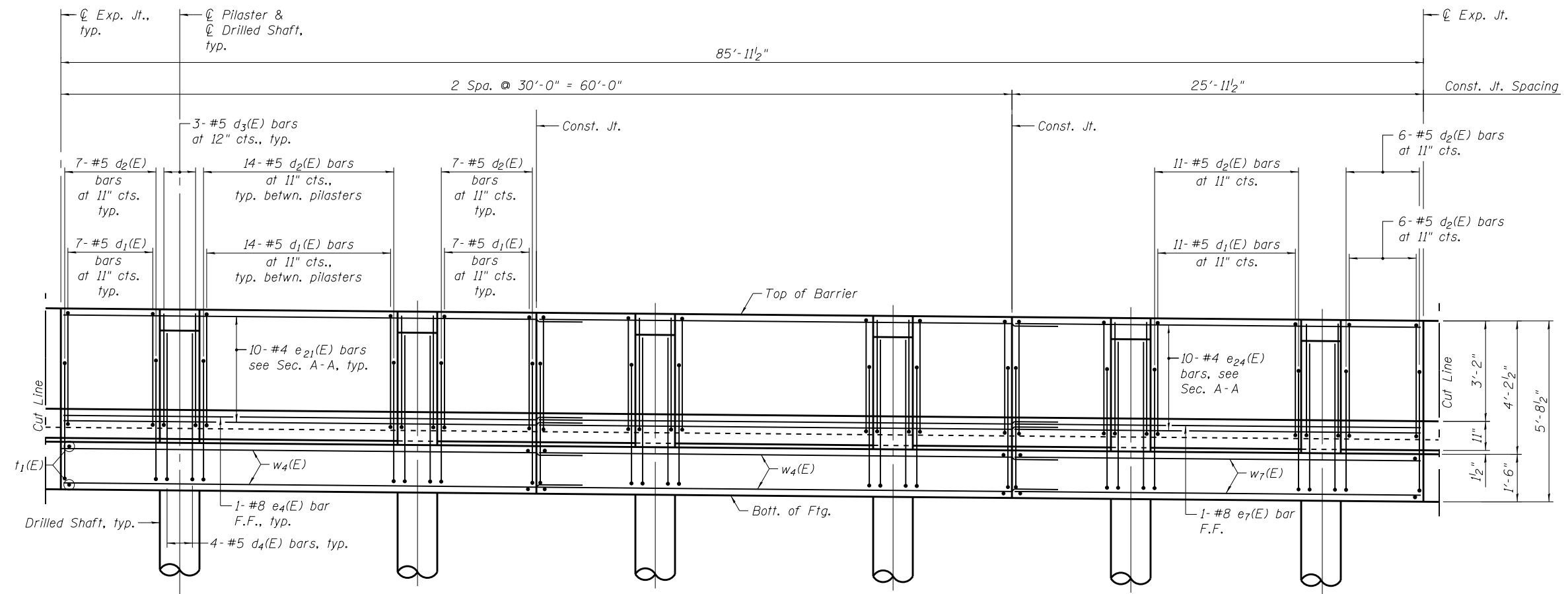
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	DATE 8/21/2017	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 5.3 - 3  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

SHEET NO. 8 OF 22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60Y40				
ILLINOIS FED. AID PROJECT				

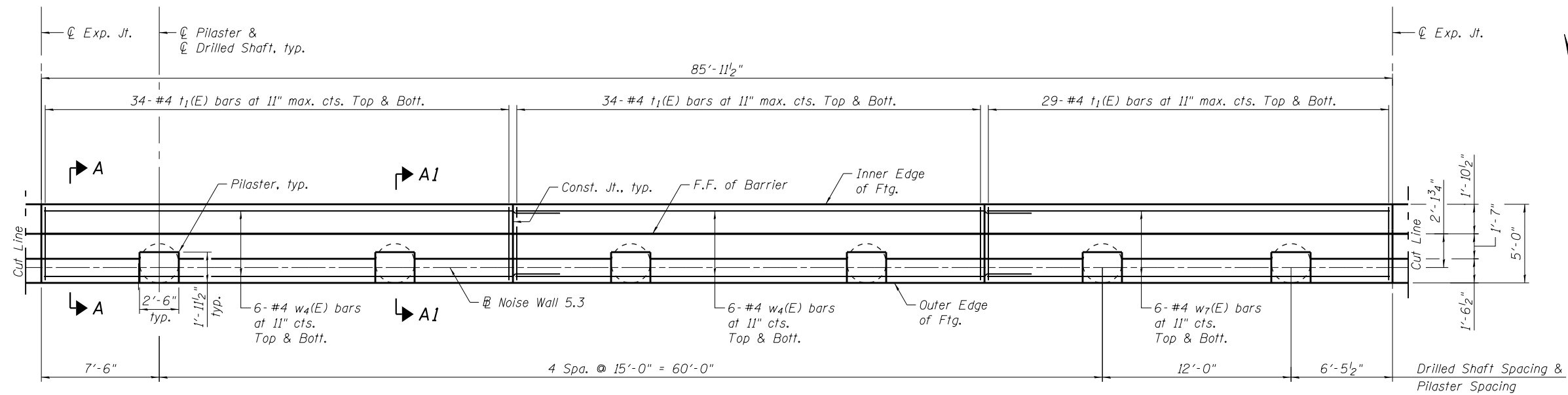


**ELEVATION - SEGMENT 4**

(Drilled shaft reinforcement not shown for clarity)

**MINIMUM BAR LAP**

#4 bar = 2'-11"  
#8 bar = 6'-4"



**PLAN - SEGMENT 4**

(At Bottom of Barrier)

Notes:  
1. For Notes, see Sheet 6 of 22.



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CHECKED JFA	REVISED	
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PLOT DATE = 8/7/2017	DATE 8/21/2017	REVISED

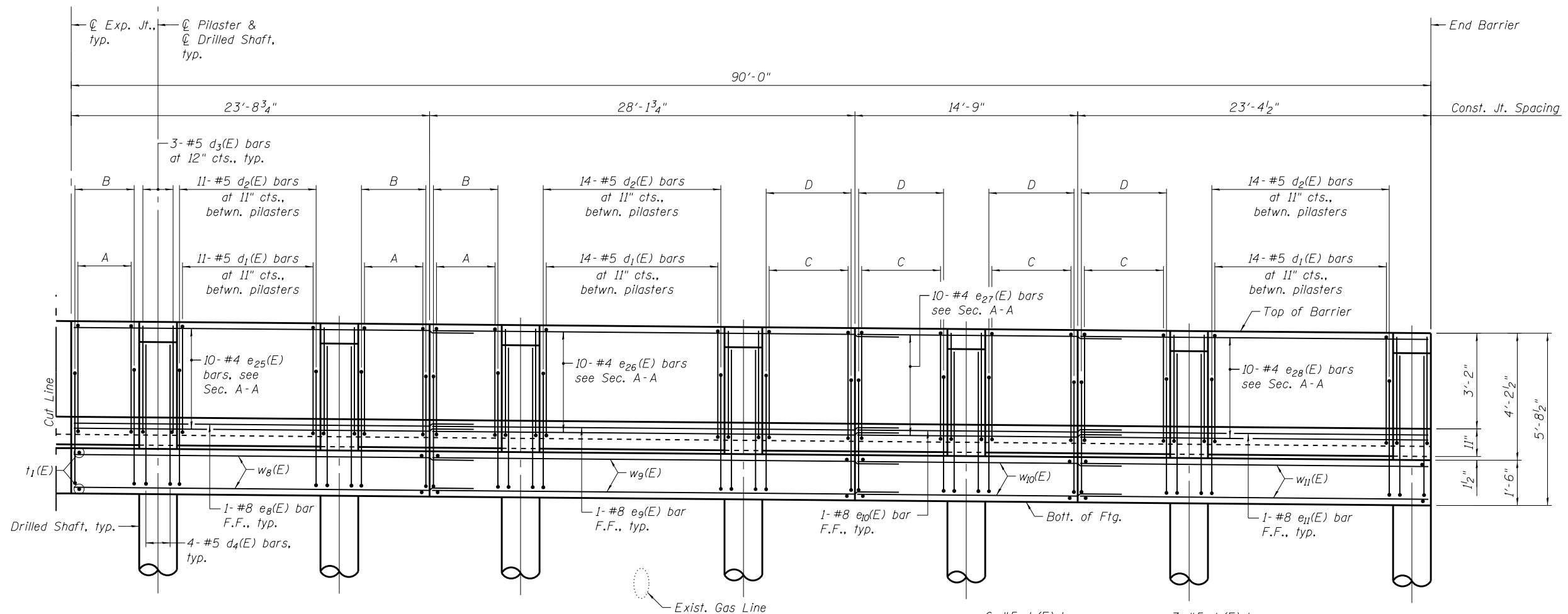
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 5.3 - 4  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	277
CONTRACT NO. 60Y40				

SHEET NO. 9 OF 22 SHEETS

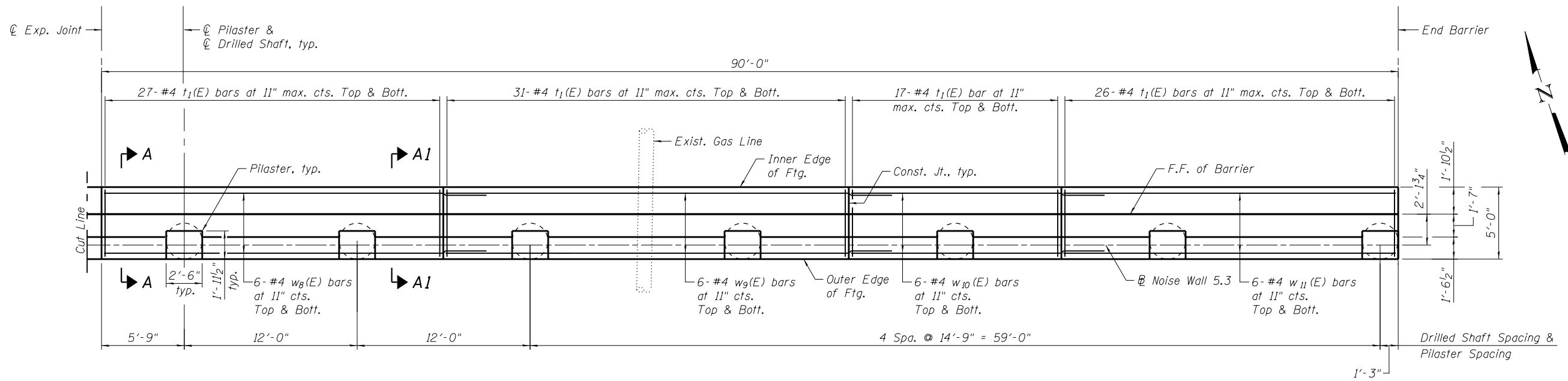
ILLINOIS FED. AID PROJECT



**ELEVATION - SEGMENT 5**  
(Drilled shaft reinforcement not shown for clarity)

- A: 6-#5 d1(E) bars at 11" cts.
- B: 6-#5 d2(E) bars at 11" cts.
- C: 7-#5 d1(E) bars at 11" cts.
- D: 7-#5 d2(E) bars at 11" cts.

**MINIMUM BAR LAP**  
#4 bar = 2'-11"  
#8 bar = 6'-4"



**PLAN - SEGMENT 5**  
(At Bottom of Barrier)

Notes:  
1. For Notes, see Sheet 6 of 22.



USER NAME = kkalite	DESIGNED APC	REVISED
CHECKED JFA	REVISED	
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PLOT DATE = 8/7/2017	DATE 8/21/2017	REVISED

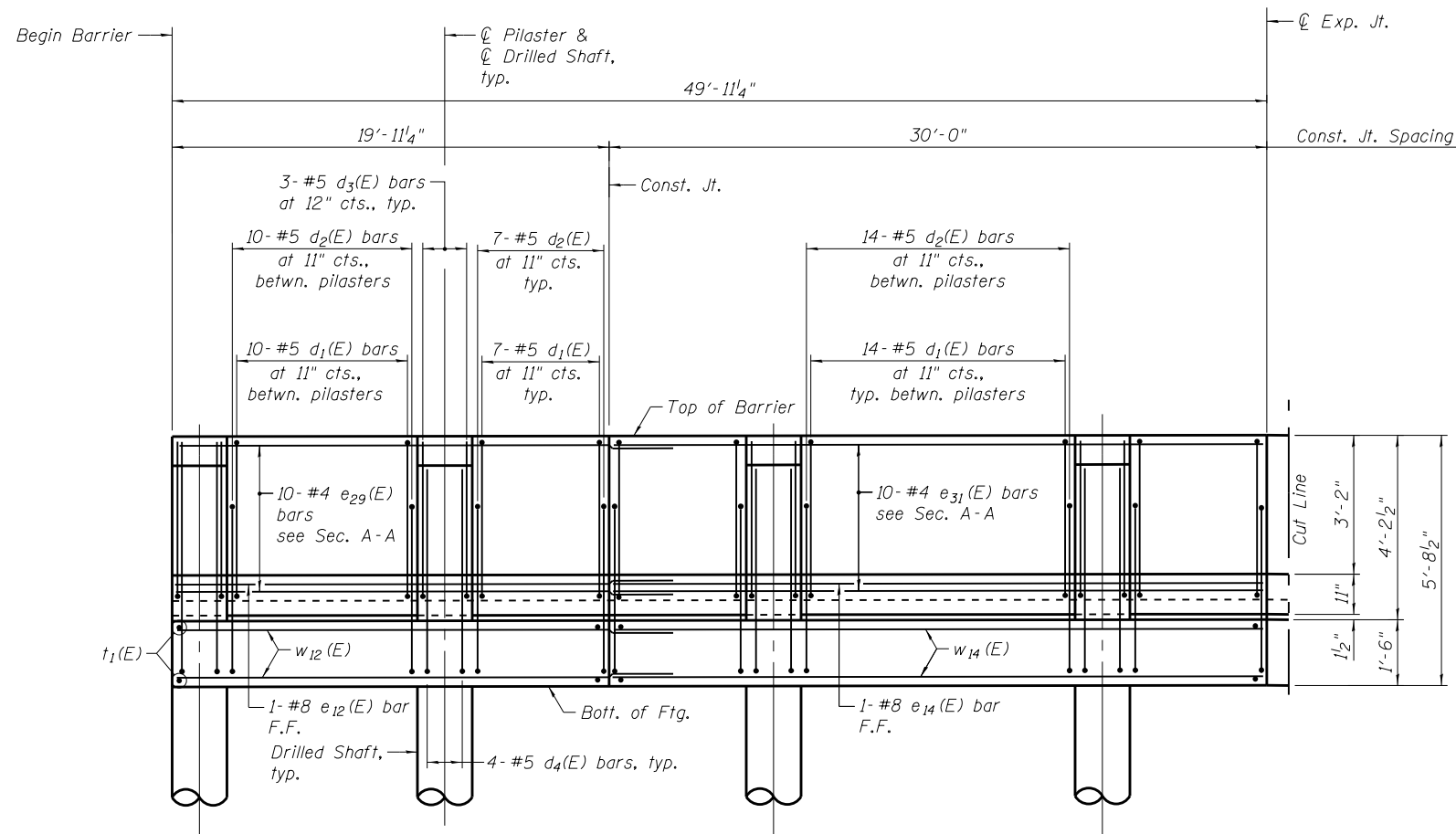
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 5.3 - 5  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	278
CONTRACT NO. 60Y40				

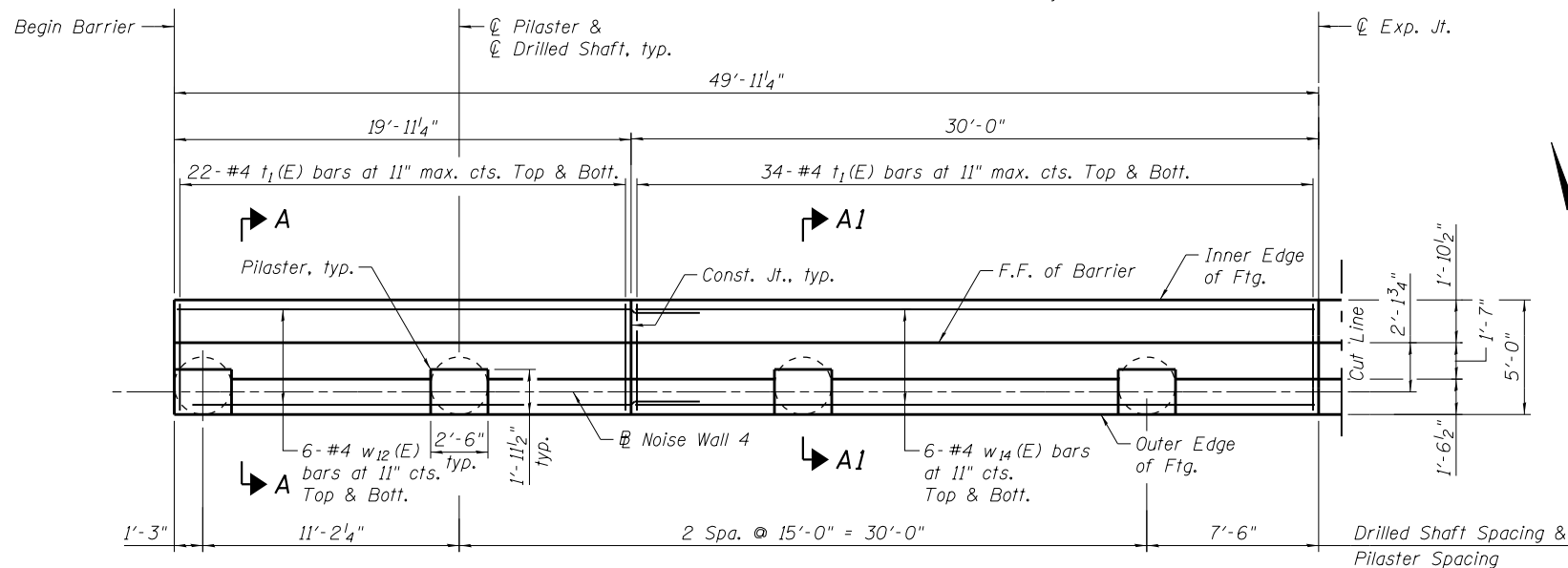
SHEET NO. 10 OF 22 SHEETS

ILLINOIS FED. AID PROJECT



**ELEVATION - SEGMENT 1**

(Drilled shaft reinforcement not shown for clarity)



**PLAN - SEGMENT 1**

(At Bottom of Barrier)

- Notes:
1. Longitudinal dimensions measured along Front Face of Barrier.
  2. For Expansion Joint details, see Sheet 20 of 22.
  3. For Construction Joint detail, see Sheet 20 of 22.
  4. Proposed Noise Abatement Panels not shown for clarity.
  5. For Bill of Material see Sheet 22 of 22.
  6. For Sections A-A and A1-A1, see Sheet 21 of 22.
  7. Protective Coat to be applied to Top and Front Face of Barrier.
  8. For locations and invert elevations of existing and proposed Catch Basins, see Drainage Plans.

**MINIMUM BAR LAP**

#4 bar = 2'-11"  
#8 bar = 6'-4"



USER NAME = ikelito  
PLOT SCALE = 0.16667 "/in.  
PLOT DATE = 8/7/2017

DESIGNED APC  
CHECKED JFA  
DRAWN LK  
DATE 8/21/2017

REVISED  
REVISED  
REVISED  
REVISED

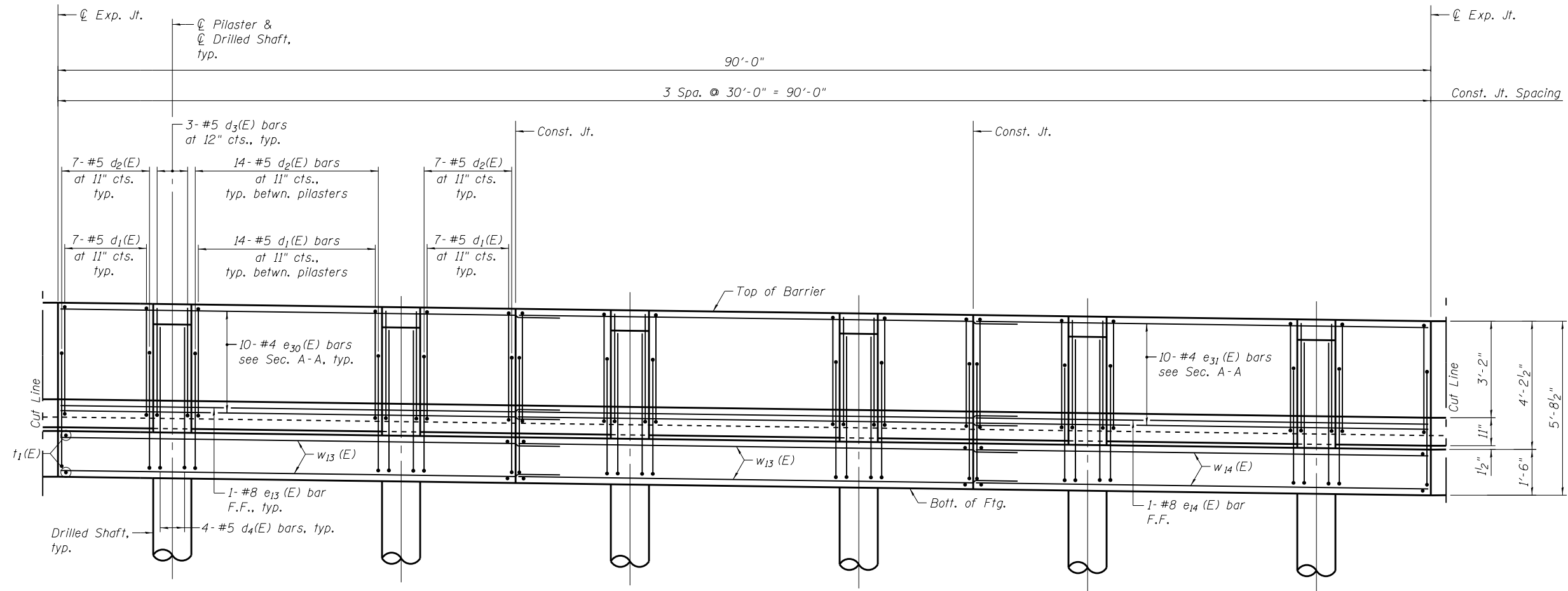
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 4 - 1  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

SHEET NO. 11 OF 22 SHEETS

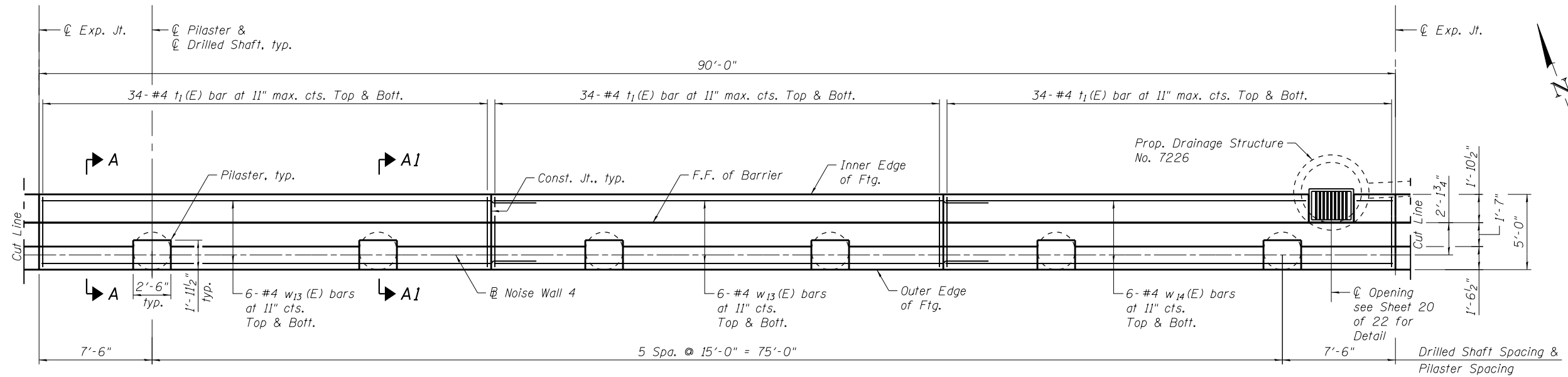
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				CONTRACT NO. 60Y40

ILLINOIS FED. AID PROJECT



**ELEVATION - SEGMENT 2**  
(Drilled shaft reinforcement not shown for clarity)

**MINIMUM BAR LAP**  
#4 bar = 2'-11"  
#8 bar = 6'-4"



**PLAN - SEGMENT 2**  
(At Bottom of Barrier)

Notes:  
1. For Notes, see Sheet 11 of 22.



USER NAME = ikalite	DESIGNED APC	REVISED
PLOT SCALE = 0.16667' / in.	CHECKED JFA	REVISED
PLOT DATE = 8/7/2017	DRAWN LK	REVISED
	DATE 8/21/2017	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

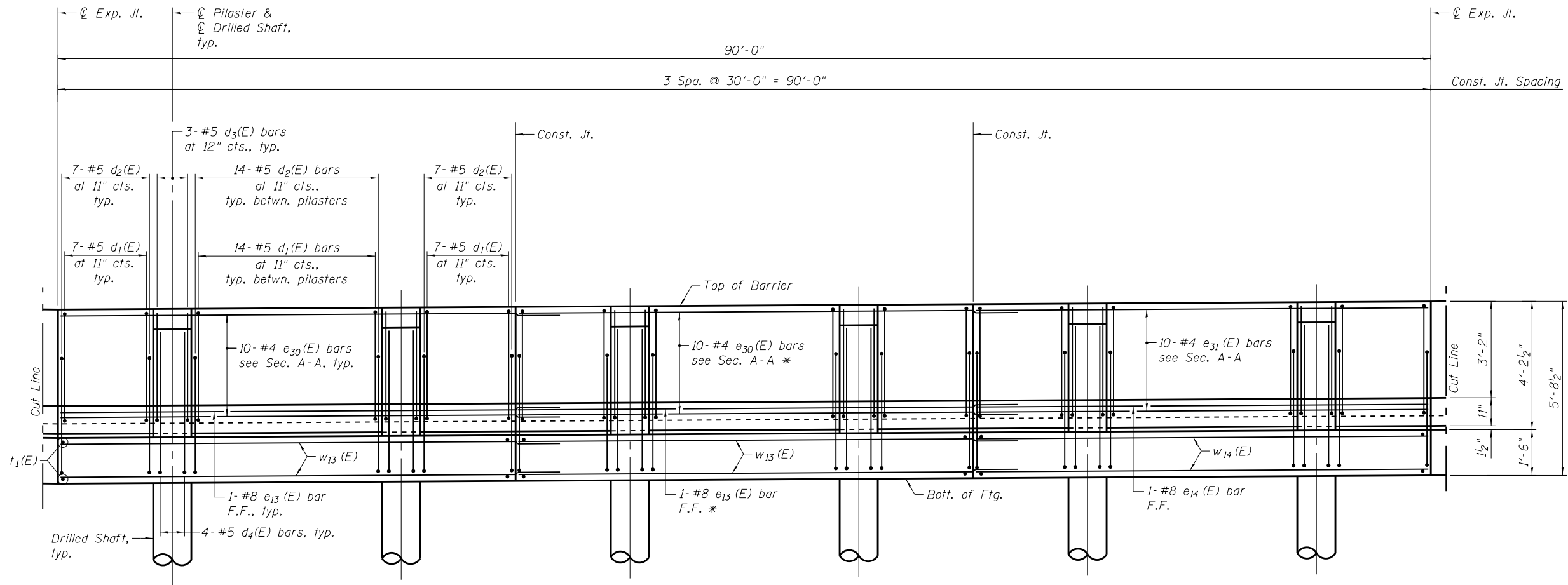
PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 4 - 2  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	280
CONTRACT NO. 60Y40				

SHEET NO. 12 OF 22 SHEETS

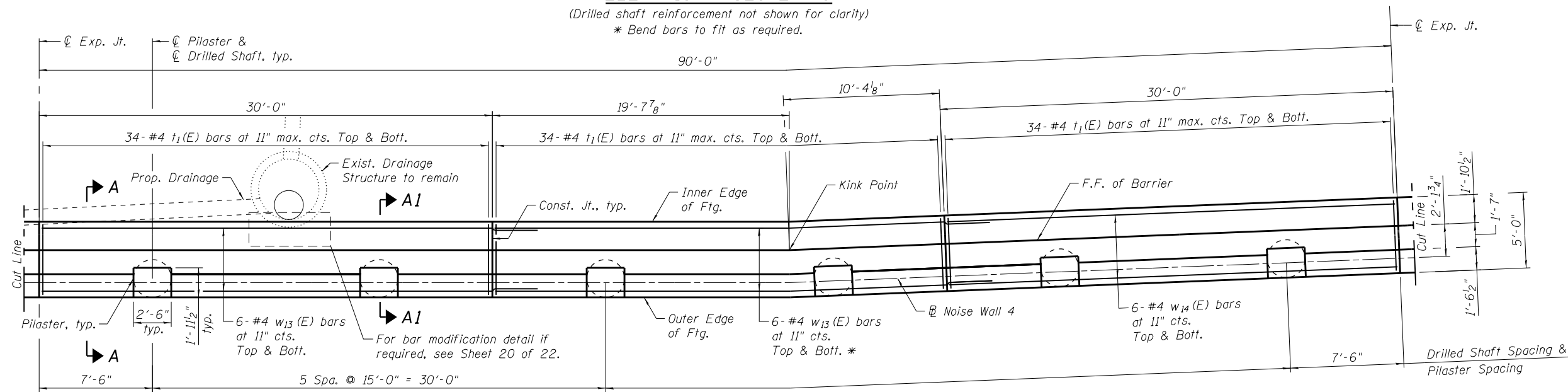
ILLINOIS FED. AID PROJECT





**ELEVATION - SEGMENT 3**  
 (Drilled shaft reinforcement not shown for clarity)  
 \* Bend bars to fit as required.

**MINIMUM BAR LAP**  
 #4 bar = 2'-11"  
 #8 bar = 6'-4"



**PLAN - SEGMENT 3**  
 (At Bottom of Barrier)  
 \* Bend bars to fit as required.

Notes:  
 1. For Notes, see Sheet 11 of 22.



USER NAME = ikalite	DESIGNED APC	REVISED
CHECKED JFA	REVISED	
PLOT SCALE = 0.16667' / in.	DRAWN LK	REVISED
PLOT DATE = 8/7/2017	DATE 8/21/2017	REVISED

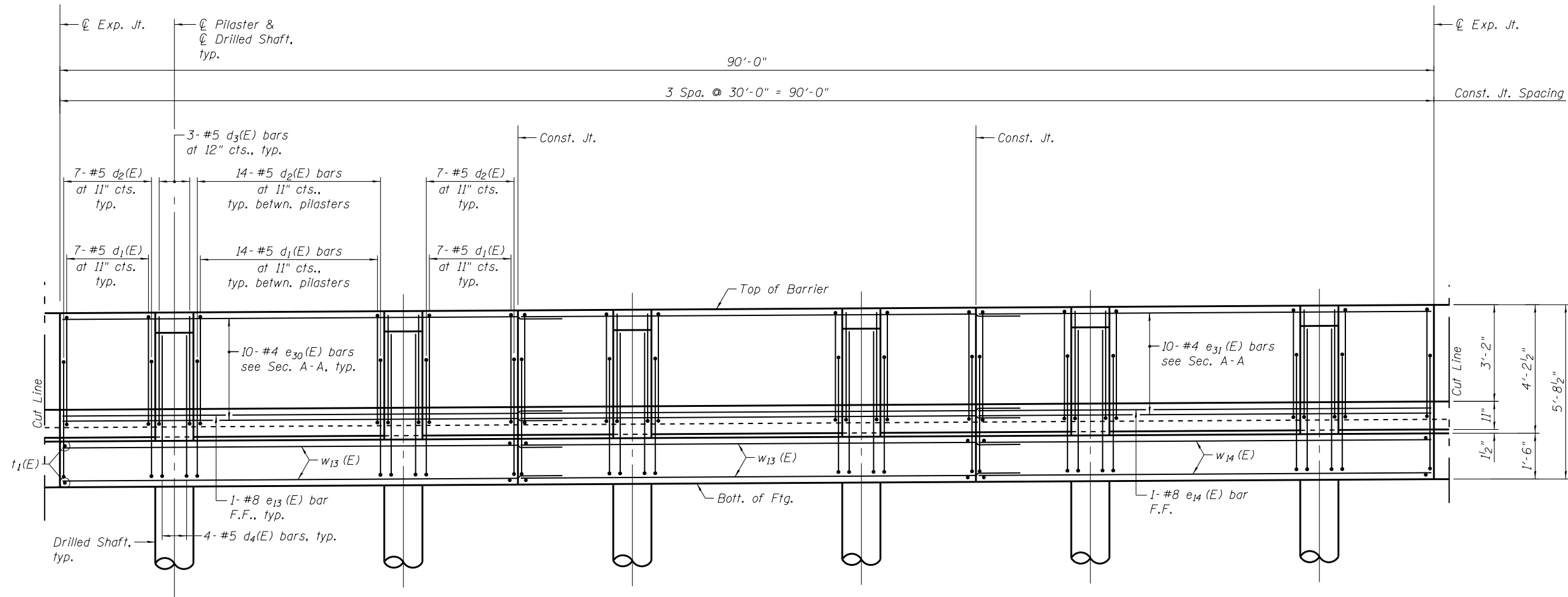
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 4 - 3  
 BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	281
CONTRACT NO. 60Y40				

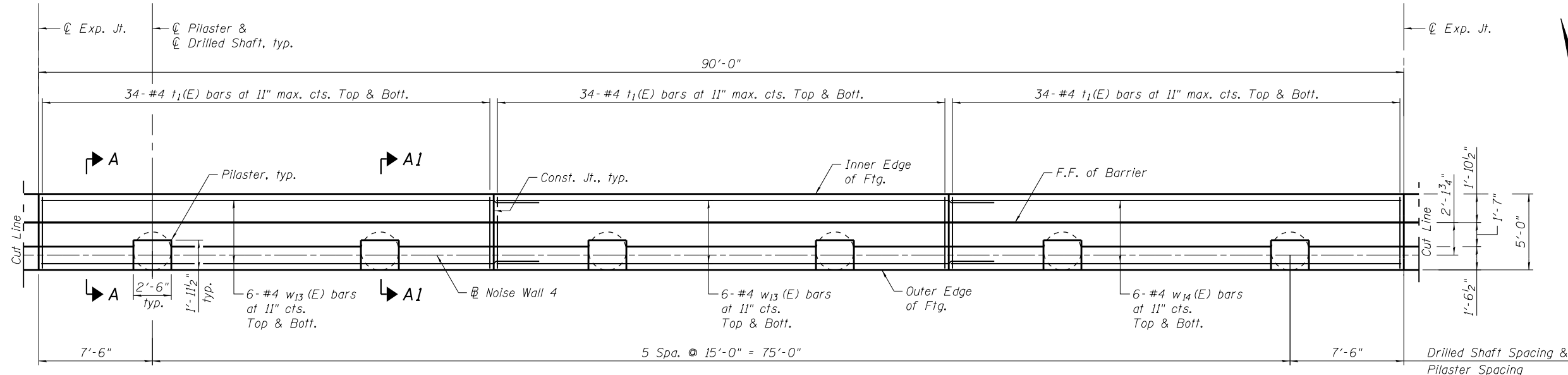
SHEET NO. 13 OF 22 SHEETS

ILLINOIS FED. AID PROJECT



**ELEVATION - SEGMENT 4**  
(Drilled shaft reinforcement not shown for clarity)

**MINIMUM BAR LAP**  
#4 bar = 2'-11"  
#8 bar = 6'-4"



**PLAN - SEGMENT 4**  
(At Bottom of Barrier)

Notes:  
1. For Notes, see Sheet 11 of 22.



USER NAME = ikelite	DESIGNED APC	REVISED
PLOT SCALE = 0.16667' / in.	CHECKED JFA	REVISED
PLOT DATE = 8/7/2017	DRAWN LK	REVISED
	DATE 8/21/2017	REVISED

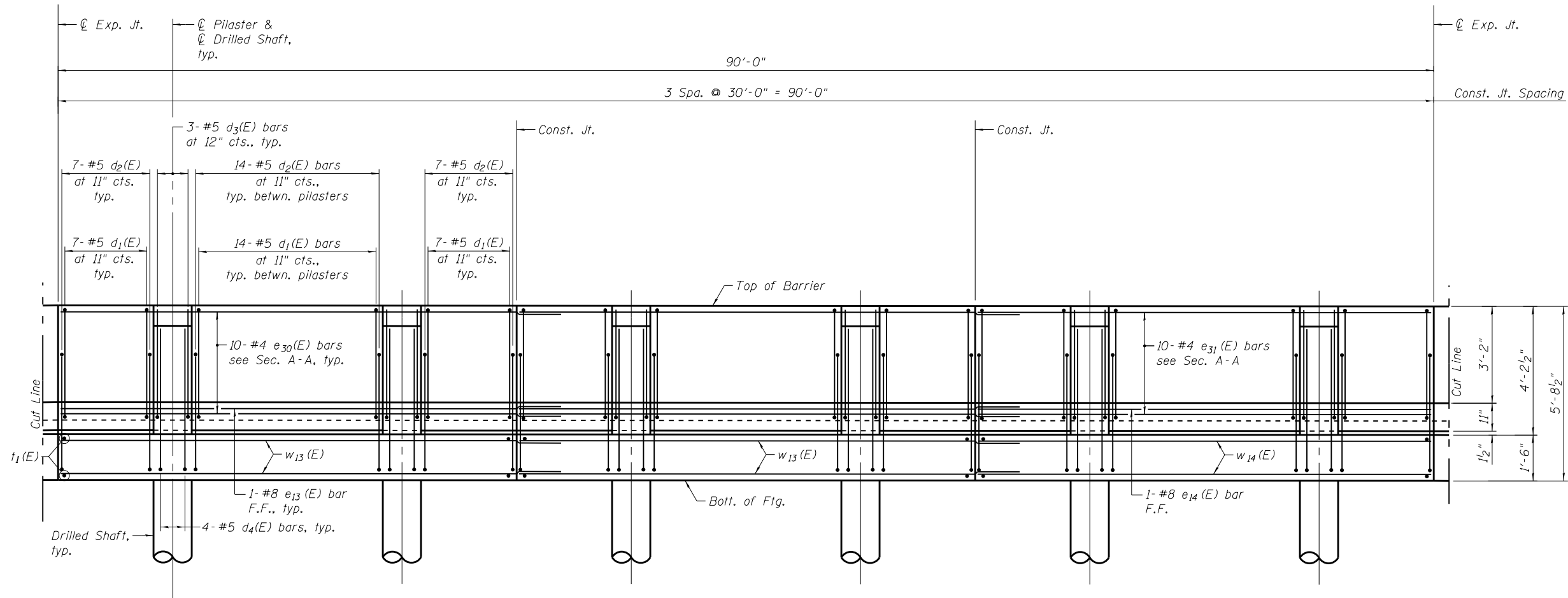
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 4 - 4  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

SHEET NO. 14 OF 22 SHEETS

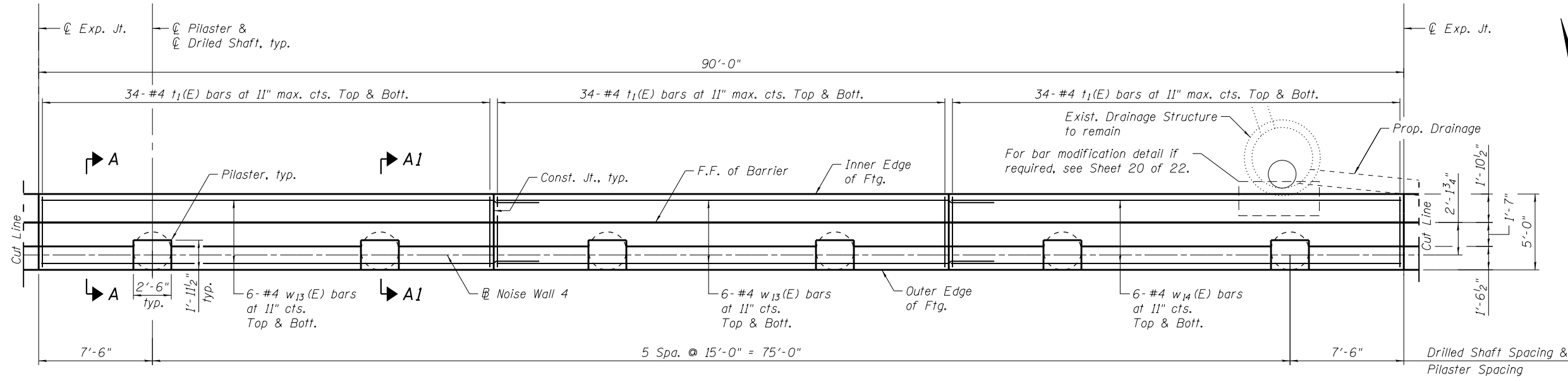
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	282
CONTRACT NO. 60Y40				

ILLINOIS FED. AID PROJECT



**ELEVATION - SEGMENT 5**  
(Drilled shaft reinforcement not shown for clarity)

**MINIMUM BAR LAP**  
#4 bar = 2'-11"  
#8 bar = 6'-4"



**PLAN - SEGMENT 5**  
(At Bottom of Barrier)

Notes:  
1. For Notes, see Sheet 11 of 22.



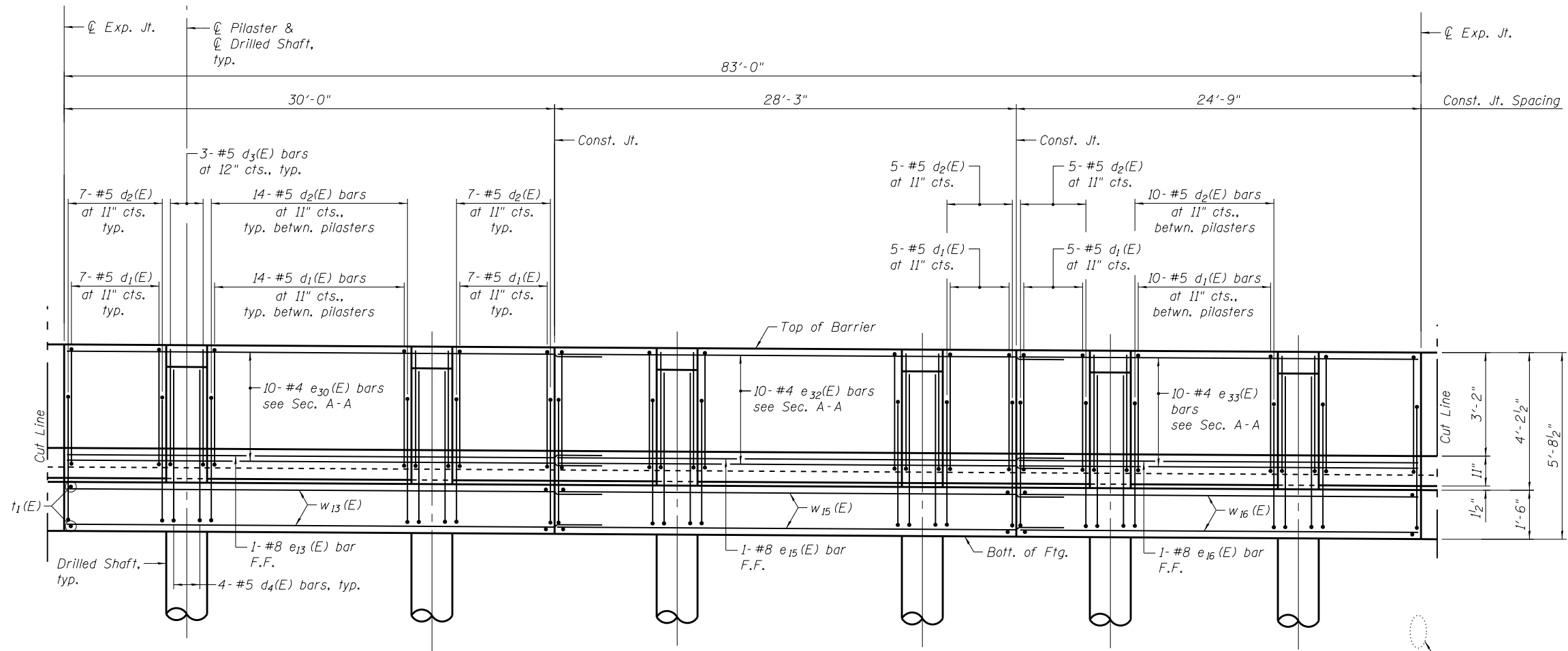
USER NAME = kkalite	DESIGNED APC	REVISED
PLOT SCALE = 0.16667' / 1" in.	CHECKED JFA	REVISED
PLOT DATE = 8/7/2017	DRAWN LK	REVISED
	DATE 8/21/2017	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 4 - 5**  
**BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4**

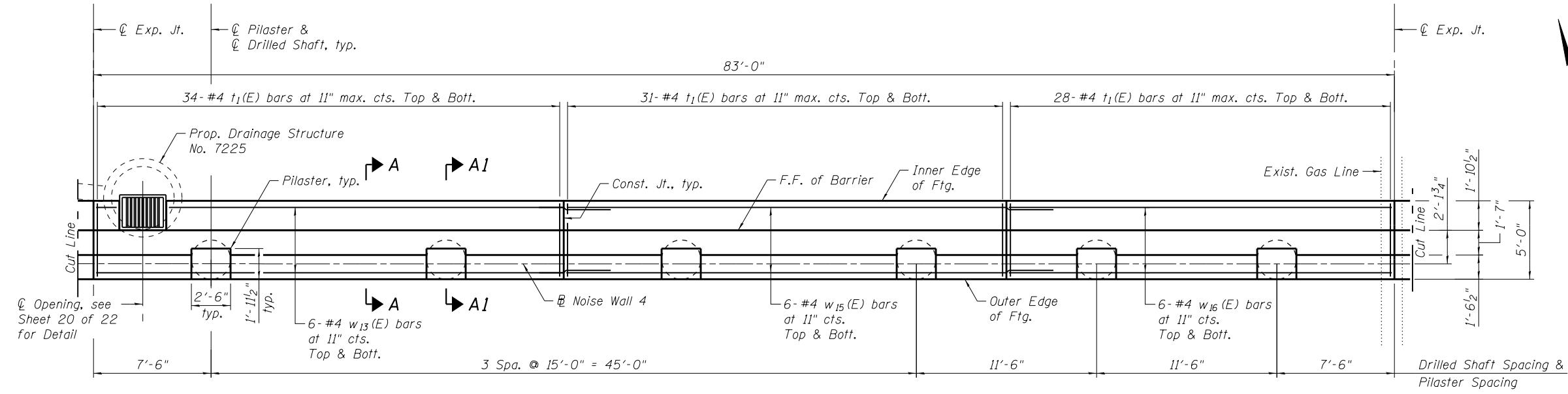
SHEET NO. 15 OF 22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	283
CONTRACT NO. 60Y40				
ILLINOIS FED. AID PROJECT				



**ELEVATION - SEGMENT 6**  
(Drilled shaft reinforcement not shown for clarity)

**MINIMUM BAR LAP**  
#4 bar = 2'-11"  
#8 bar = 6'-4"



**PLAN - SEGMENT 6**  
(At Bottom of Barrier)

Notes:  
1. For Notes, see Sheet 11 of 22.



USER NAME = kkalite	DESIGNED APC	REVISED
	CHECKED JFA	REVISED
PLOT SCALE = 0.16667' / 1" in.	DRAWN LK	REVISED
PLOT DATE = 8/7/2017	DATE 8/21/2017	REVISED

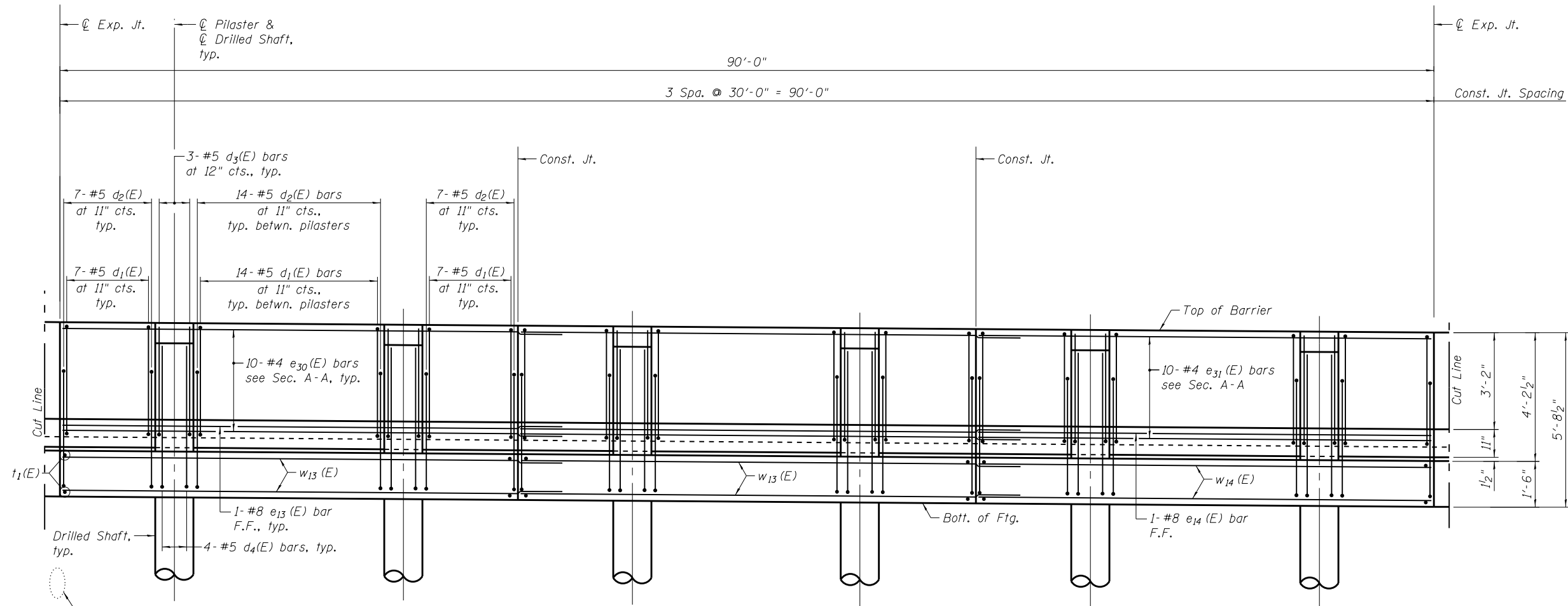
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 4 - 6**  
**BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	284
CONTRACT NO. 60Y40				

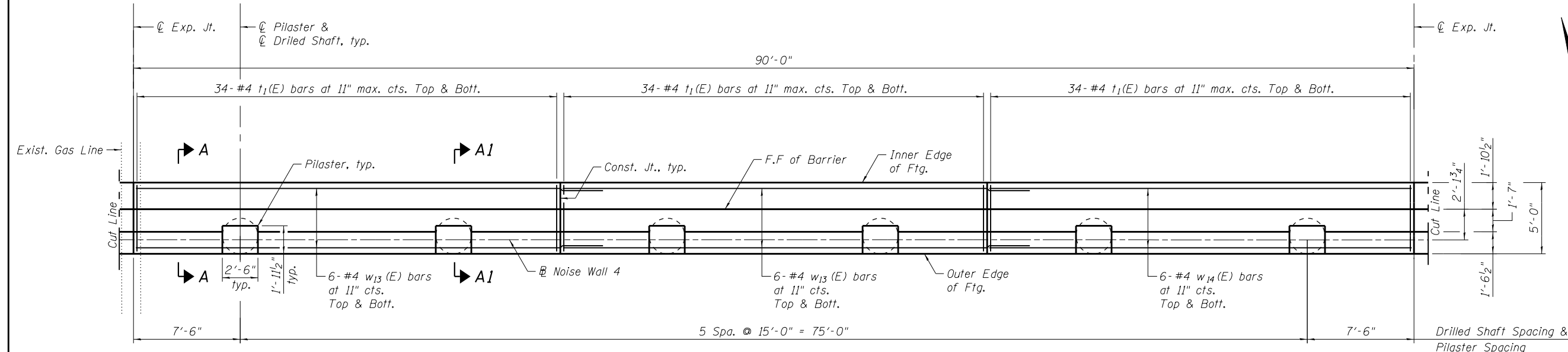
SHEET NO. 16 OF 22 SHEETS

ILLINOIS FED. AID PROJECT



**ELEVATION - SEGMENT 7**  
(Drilled shaft reinforcement not shown for clarity)

**MINIMUM BAR LAP**  
#4 bar = 2'-11"  
#8 bar = 6'-4"



**PLAN - SEGMENT 7**  
(At Bottom of Barrier)

Notes:  
1. For Notes, see Sheet 11 of 22.



USER NAME = kkalite	DESIGNED APC	REVISED
	CHECKED JFA	REVISED
PLOT SCALE = 0.16667' / in.	DRAWN LK	REVISED
PLOT DATE = 8/7/2017	DATE 8/21/2017	REVISED

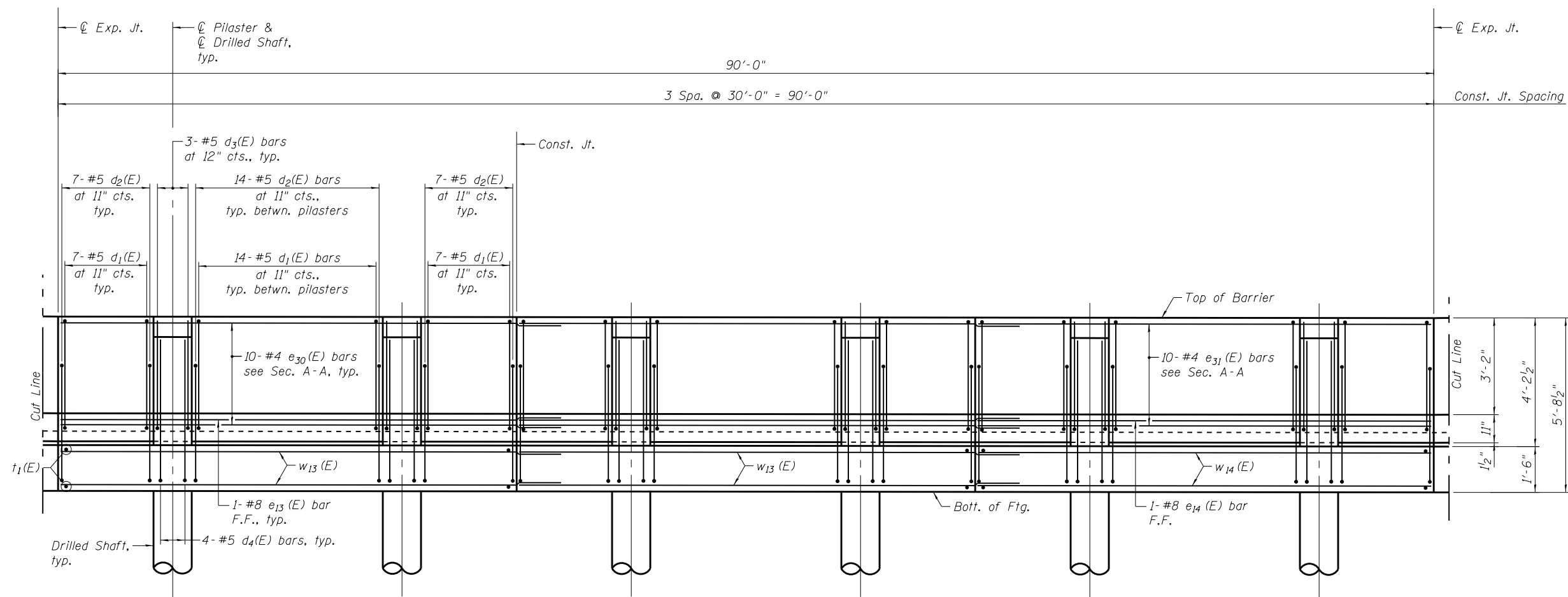
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 4 - 7  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	285
CONTRACT NO. 60Y40				

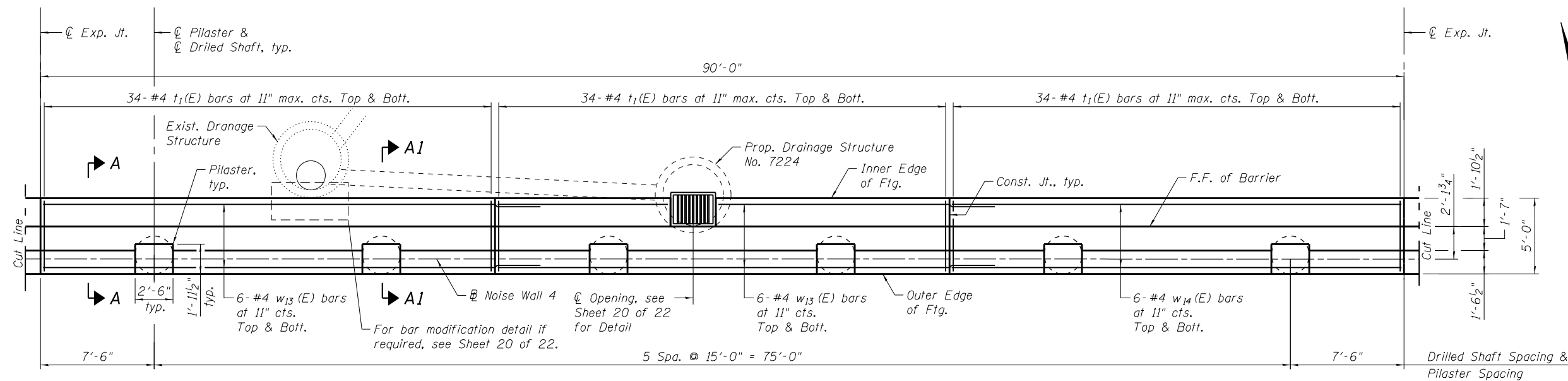
SHEET NO. 17 OF 22 SHEETS

ILLINOIS FED. AID PROJECT



**ELEVATION - SEGMENT 8**  
(Drilled shaft reinforcement not shown for clarity)

**MINIMUM BAR LAP**  
#4 bar = 2'-11"  
#8 bar = 6'-4"



**PLAN - SEGMENT 8**  
(At Bottom of Barrier)

Notes:  
1. For Notes, see Sheet 11 of 22.



USER NAME = kkalite	DESIGNED APC	REVISED
PLOT SCALE = 0.16667' / 1" in.	CHECKED JFA	REVISED
PLOT DATE = 8/7/2017	DRAWN LK	REVISED
	DATE 8/21/2017	REVISED

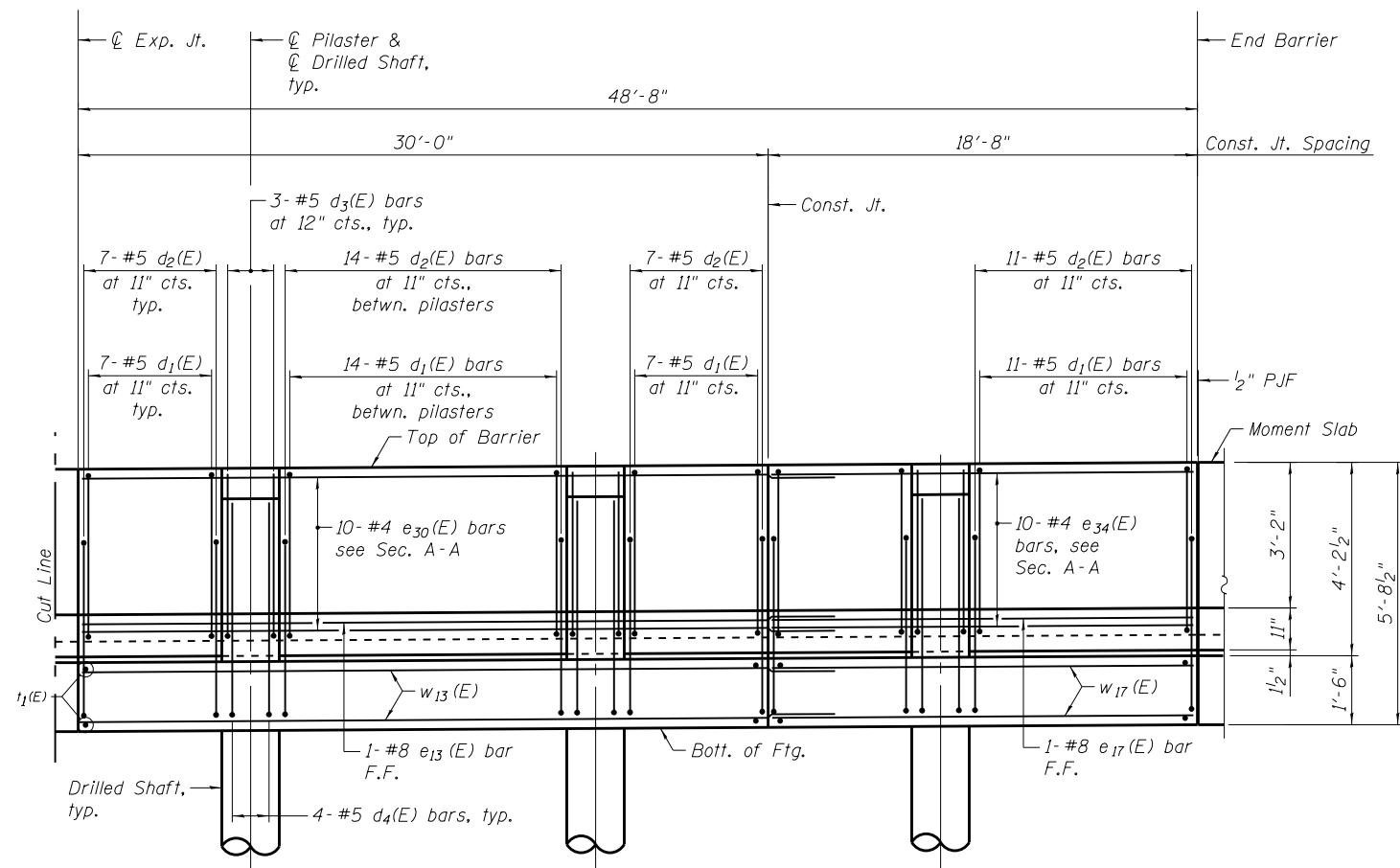
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 4 - 8  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	286
CONTRACT NO. 60Y40				

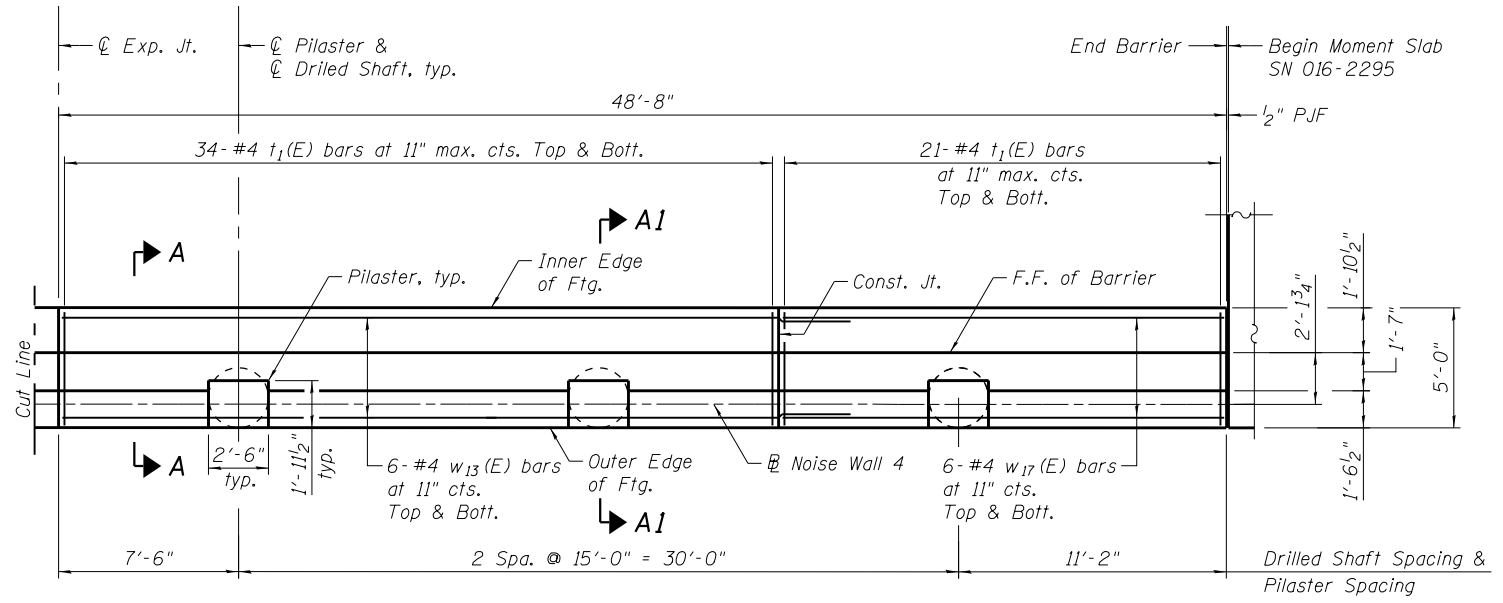
SHEET NO. 18 OF 22 SHEETS

ILLINOIS FED. AID PROJECT



**ELEVATION - SEGMENT 9**  
(Drilled shaft reinforcement not shown for clarity)

**MINIMUM BAR LAP**  
#4 bar = 2'-11"  
#8 bar = 6'-4"



**PLAN - SEGMENT 9**  
(At Bottom of Barrier)

Notes:  
1. For Notes, see Sheet 11 of 22.



USER NAME = ikelste	DESIGNED APC	REVISED
	CHECKED JFA	REVISED
PLOT SCALE = 0.16667' / in.	DRAWN LK	REVISED
PLOT DATE = 8/7/2017	DATE 8/21/2017	REVISED

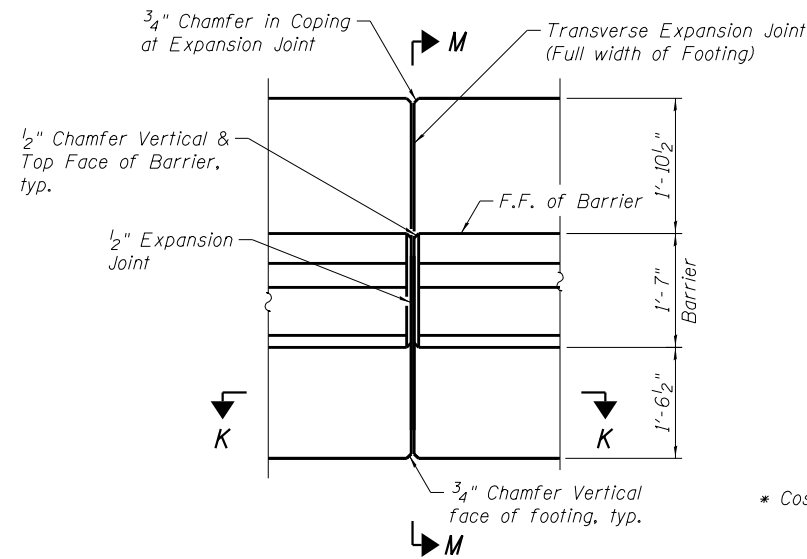
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PLAN & ELEVATION BARRIER SUPPORT NOISE WALL 4 - 9**  
**BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4**

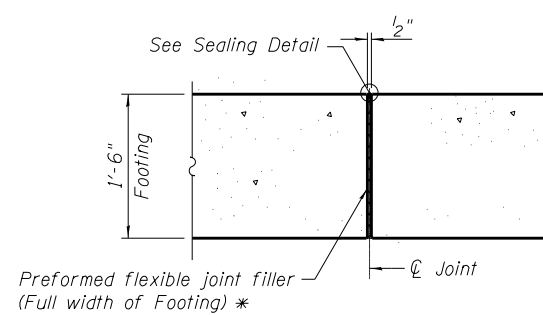
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	287
CONTRACT NO. 60Y40				

SHEET NO. 19 OF 22 SHEETS

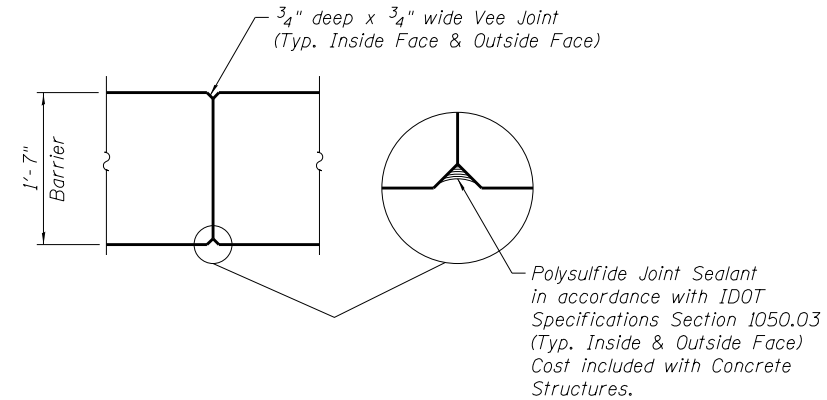
ILLINOIS FED. AID PROJECT



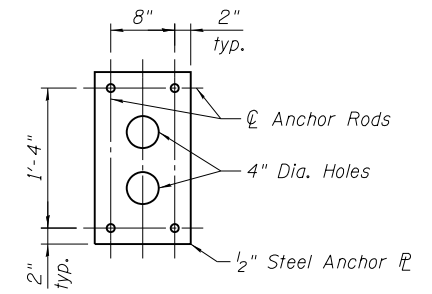
**PLAN - EXPANSION JOINT**



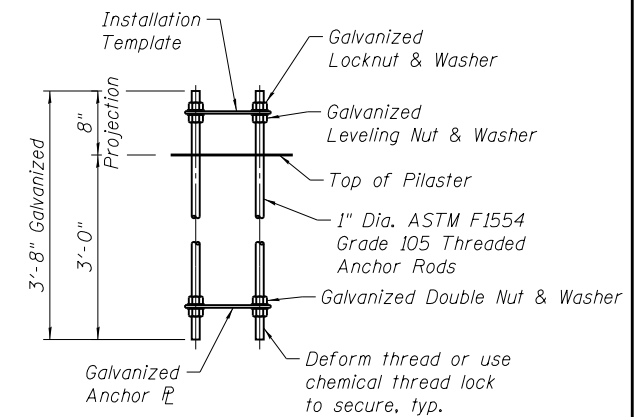
**SECTION K-K**



**PLAN - CONSTRUCTION JOINT**

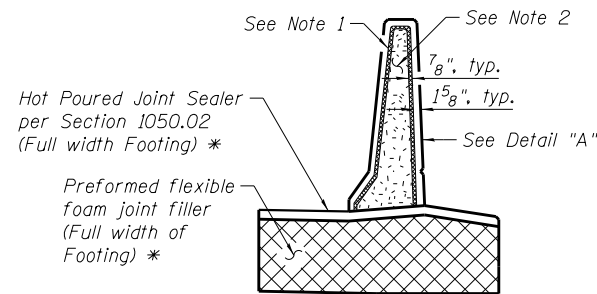


**PLAN - ANCHOR PLATE**

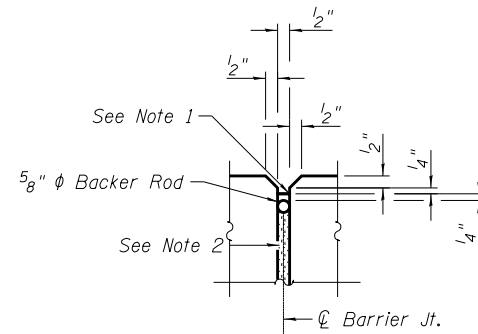


**ELEVATION**

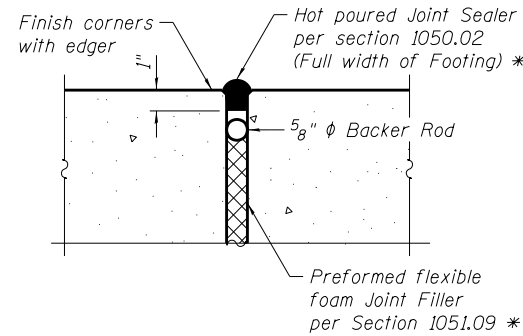
**NOISE WALL ANCHOR ROD ASSEMBLY**



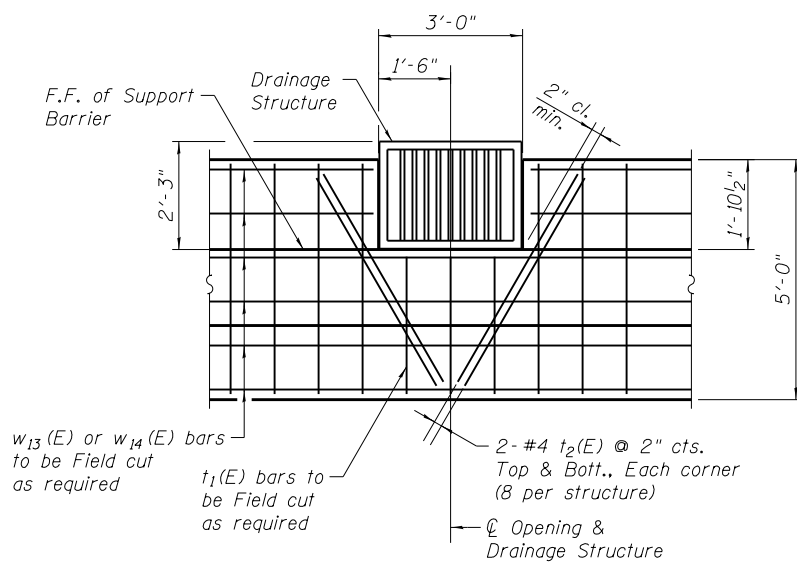
**SECTION M-M**



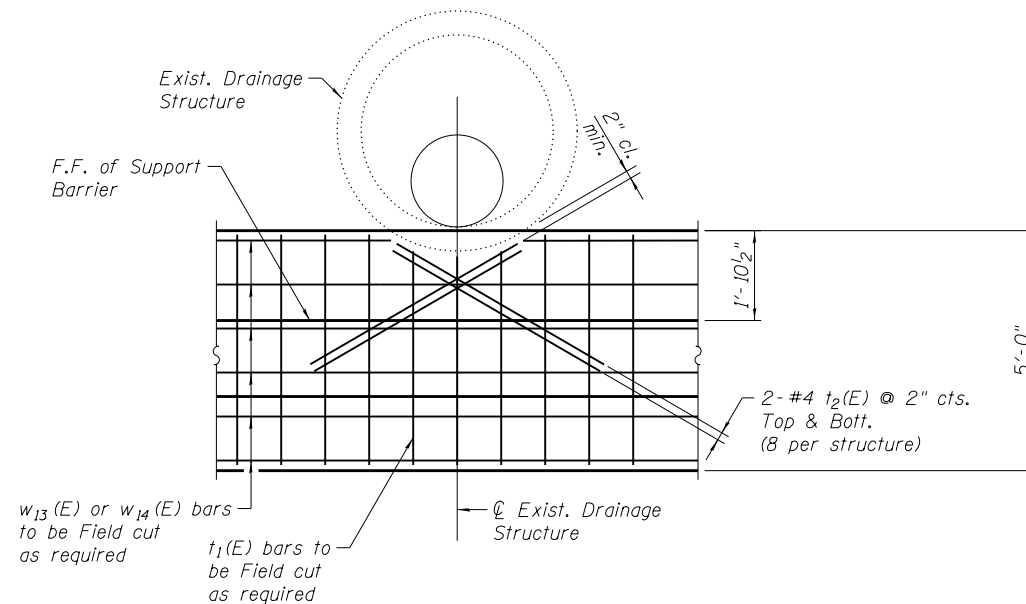
**DETAIL A**



**SEALING DETAIL**



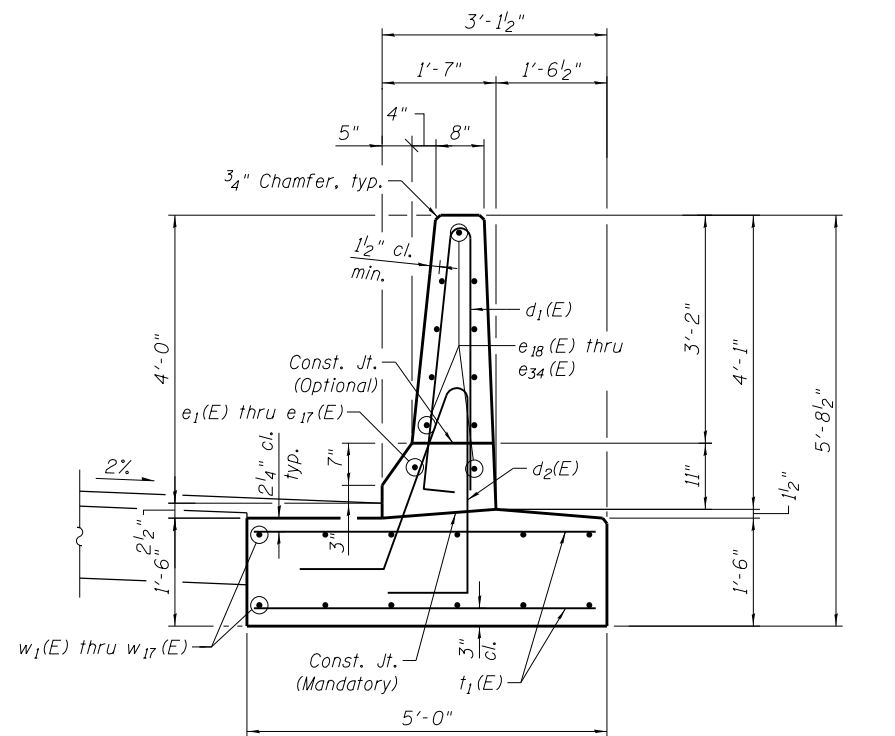
**OPENING IN FOOTING**  
(At Prop. Drainage Structure)



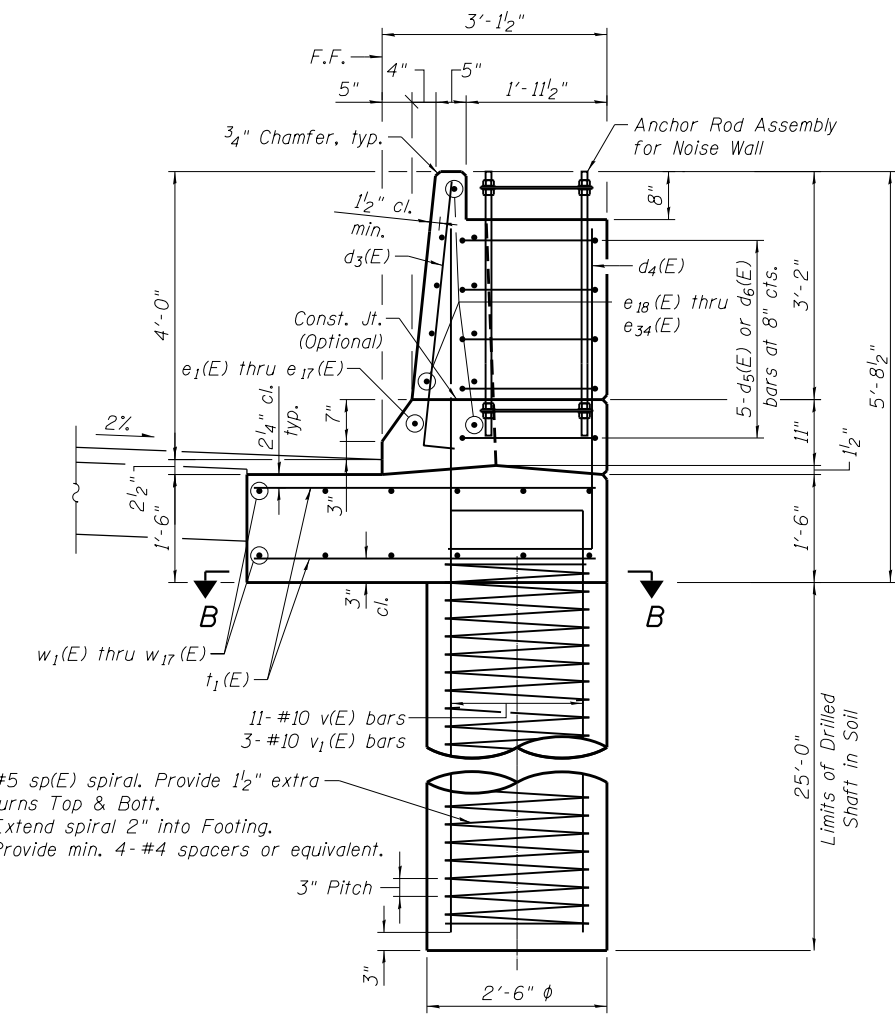
**OPENING IN FOOTING**  
(At Exist. Drainage Structure)

- Notes:
1. 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, use T with a backer rod.
  2. Perform Self-Expanding Cork Joint Filler according to Article 1051.07 of Std. Spec.
  3. Fill in opening around drainage structures with concrete after placing the proposed drainage structures. Cost included with Concrete Structures.
  4. Detail to be used if existing catch basin interferes with barrier footing.
  5. Size and shape of drainage structures are approximate, see Drainage plans for details.

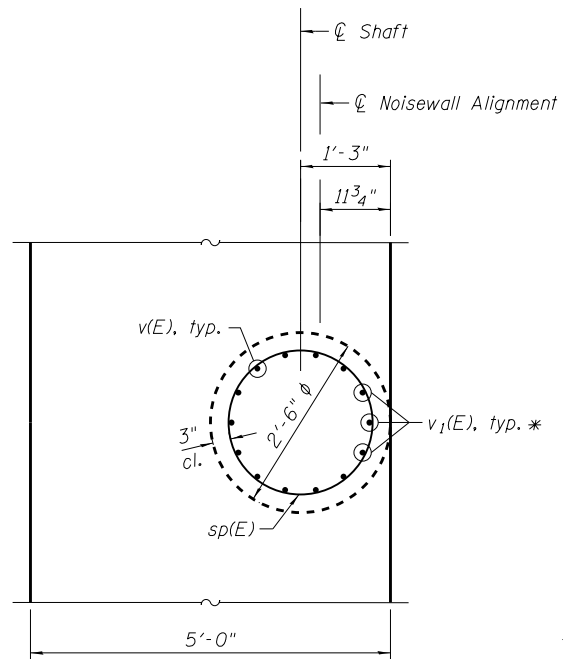




SECTION A-A

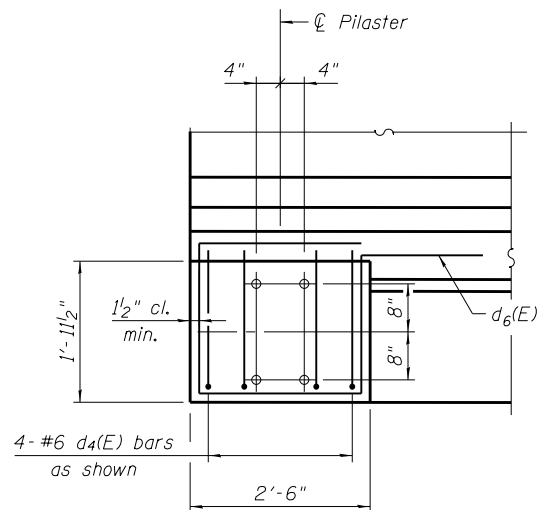


SECTION A1-A1



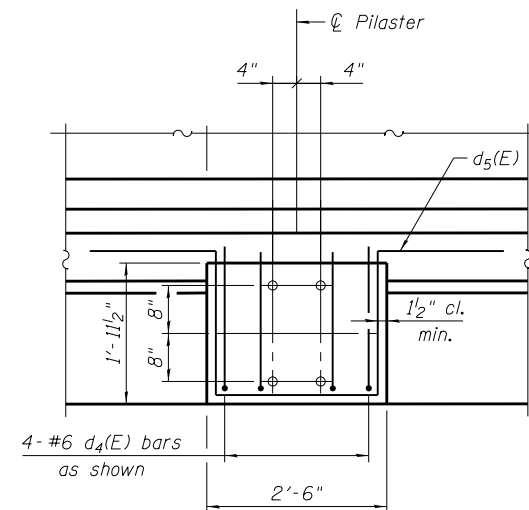
SECTION B-B

\* Shaft reinforcement shall be placed in orientation shown to avoid conflict with anchor rod assembly.



PLAN

(Shown at West end Wall 4, East end Wall 5.3 opposite)



PLAN

(At typical noise wall pilaster)



USER NAME = kkalite	DESIGNED JFA	REVISED
PLOT SCALE = 0.16667' / 1" IN.	CHECKED APC	REVISED
PLOT DATE = 8/7/2017	DRAWN LK	REVISED
	DATE 8/21/2017	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BARRIER SUPPORT STRUCTURE DETAILS - 2  
BARRIER SUPPORT STRUCTURE FOR NOISE WALLS 5.3 & 4

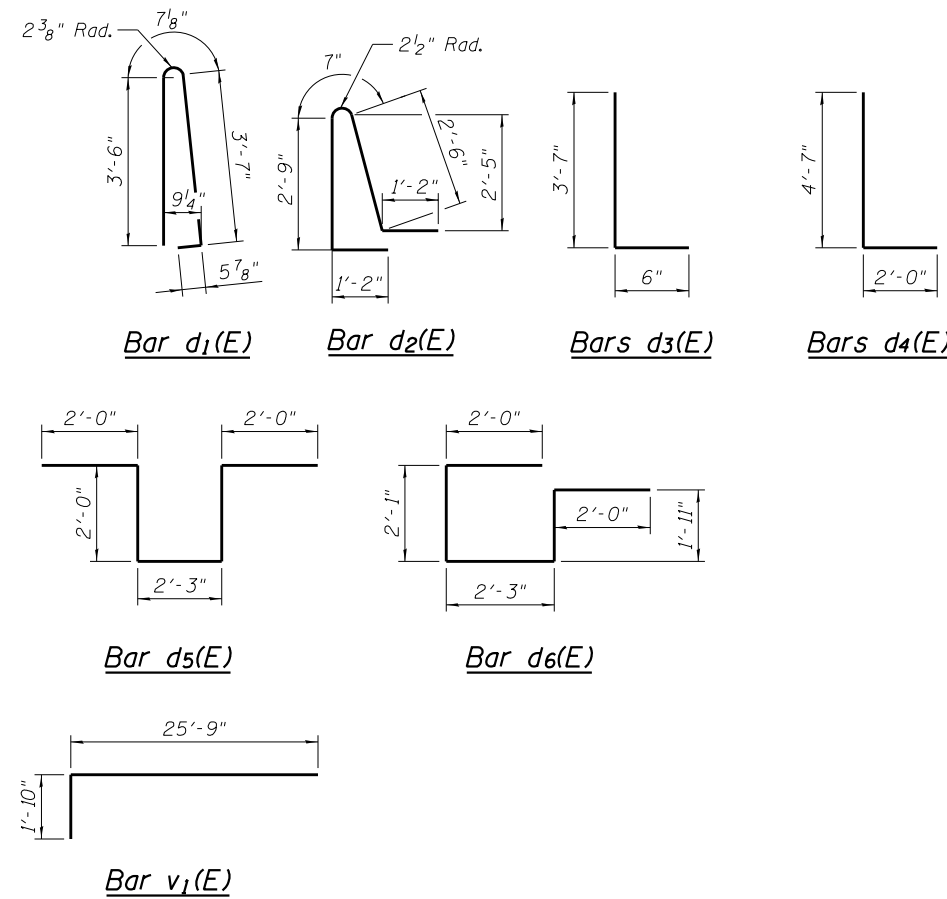
SHEET NO. 21 OF 22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	289
CONTRACT NO. 60Y40				

ILLINOIS FED. AID PROJECT

BILL OF MATERIAL

BILL OF MATERIAL



Bar	No.	Size	Length	Shape	
d <sub>1</sub> (E)	402	#5	7'-10"	U	
d <sub>2</sub> (E)	402	#5	8'-2"	U	
d <sub>3</sub> (E)	90	#5	4'-1"	L	
d <sub>4</sub> (E)	120	#6	6'-7"	L	
d <sub>5</sub> (E)	145	#6	10'-3"	U	
d <sub>6</sub> (E)	5	#6	10'-3"	U	
e <sub>1</sub> (E)	1	#8	25'-9"	—	
e <sub>2</sub> (E)	1	#8	34'-0"	—	
e <sub>3</sub> (E)	1	#8	29'-3"	—	
e <sub>4</sub> (E)	6	#8	36'-4"	—	
e <sub>5</sub> (E)	1	#8	23'-10"	—	
e <sub>6</sub> (E)	1	#8	29'-10"	—	
e <sub>7</sub> (E)	1	#8	25'-9"	—	
e <sub>8</sub> (E)	1	#8	29'-11"	—	
e <sub>9</sub> (E)	1	#8	34'-6"	—	
e <sub>10</sub> (E)	1	#8	21'-1"	—	
e <sub>11</sub> (E)	1	#8	23'-2"	—	
e <sub>18</sub> (E)	10	#4	22'-4"	—	
e <sub>19</sub> (E)	10	#4	30'-7"	—	
e <sub>20</sub> (E)	10	#4	29'-3"	—	
e <sub>21</sub> (E)	60	#4	32'-11"	—	
e <sub>22</sub> (E)	10	#4	23'-10"	—	
e <sub>23</sub> (E)	10	#4	29'-10"	—	
e <sub>24</sub> (E)	10	#4	25'-9"	—	
e <sub>25</sub> (E)	10	#4	26'-6"	—	
e <sub>26</sub> (E)	10	#4	31'-1"	—	
e <sub>27</sub> (E)	10	#4	17'-8"	—	
e <sub>28</sub> (E)	10	#4	23'-2"	—	
sp(E)	30	#5	24'-11"	W	
t <sub>1</sub> (E)	962	#4	4'-8"	—	
v(E)	330	#10	29'-8"	—	
v <sub>1</sub> (E)	90	#10	27'-7"	—	
w <sub>1</sub> (E)	12	#4	22'-4"	—	
w <sub>2</sub> (E)	12	#4	30'-7"	—	
w <sub>3</sub> (E)	12	#4	29'-3"	—	
w <sub>4</sub> (E)	72	#4	32'-11"	—	
w <sub>5</sub> (E)	12	#4	23'-10"	—	
w <sub>6</sub> (E)	12	#4	29'-10"	—	
w <sub>7</sub> (E)	12	#4	25'-9"	—	
w <sub>8</sub> (E)	12	#4	26'-6"	—	
w <sub>9</sub> (E)	12	#4	31'-1"	—	
w <sub>10</sub> (E)	12	#4	17'-8"	—	
w <sub>11</sub> (E)	12	#4	23'-2"	—	
Reinforcement Bars, Epoxy Coated				Pound	94630
Concrete Structures				Cu Yd	203.6
Drilled Shaft in Soil				Cu Yd	136.4

Bar	No.	Size	Length	Shape	
d <sub>1</sub> (E)	671	#5	7'-10"	U	
d <sub>2</sub> (E)	671	#5	8'-2"	U	
d <sub>3</sub> (E)	147	#5	4'-1"	L	
d <sub>4</sub> (E)	196	#6	6'-7"	L	
d <sub>5</sub> (E)	240	#6	10'-3"	U	
d <sub>6</sub> (E)	5	#6	10'-3"	U	
e <sub>12</sub> (E)	1	#8	26'-2"	—	
e <sub>13</sub> (E)	14	#8	36'-4"	—	
e <sub>14</sub> (E)	7	#8	29'-10"	—	
e <sub>15</sub> (E)	1	#8	34'-7"	—	
e <sub>16</sub> (E)	1	#8	24'-7"	—	
e <sub>17</sub> (E)	1	#8	18'-6"	—	
e <sub>29</sub> (E)	10	#4	22'-9"	—	
e <sub>30</sub> (E)	140	#4	32'-11"	—	
e <sub>31</sub> (E)	70	#4	29'-10"	—	
e <sub>32</sub> (E)	10	#4	31'-2"	—	
e <sub>33</sub> (E)	10	#4	24'-7"	—	
e <sub>34</sub> (E)	10	#4	18'-6"	—	
sp(E)	49	#5	24'-11"	W	
t <sub>1</sub> (E)	1632	#4	4'-8"	—	
t <sub>2</sub> (E)	48	#4	5'-0"	—	
v(E)	539	#10	29'-8"	—	
v <sub>1</sub> (E)	147	#10	27'-7"	—	
w <sub>12</sub> (E)	12	#4	22'-9"	—	
w <sub>13</sub> (E)	168	#4	32'-11"	—	
w <sub>14</sub> (E)	84	#4	29'-10"	—	
w <sub>15</sub> (E)	12	#4	31'-2"	—	
w <sub>16</sub> (E)	12	#4	24'-7"	—	
w <sub>17</sub> (E)	12	#4	18'-6"	—	
Reinforcement Bars, Epoxy Coated				Pound	155470
Concrete Structures				Cu Yd	343.6
Drilled Shaft in Soil				Cu Yd	222.8

Bench Mark: TBM #15 - Square cut SW corner at west end of barrier wall west of Oriole bridge on south side of I-90 EB, Elev. 638.80.

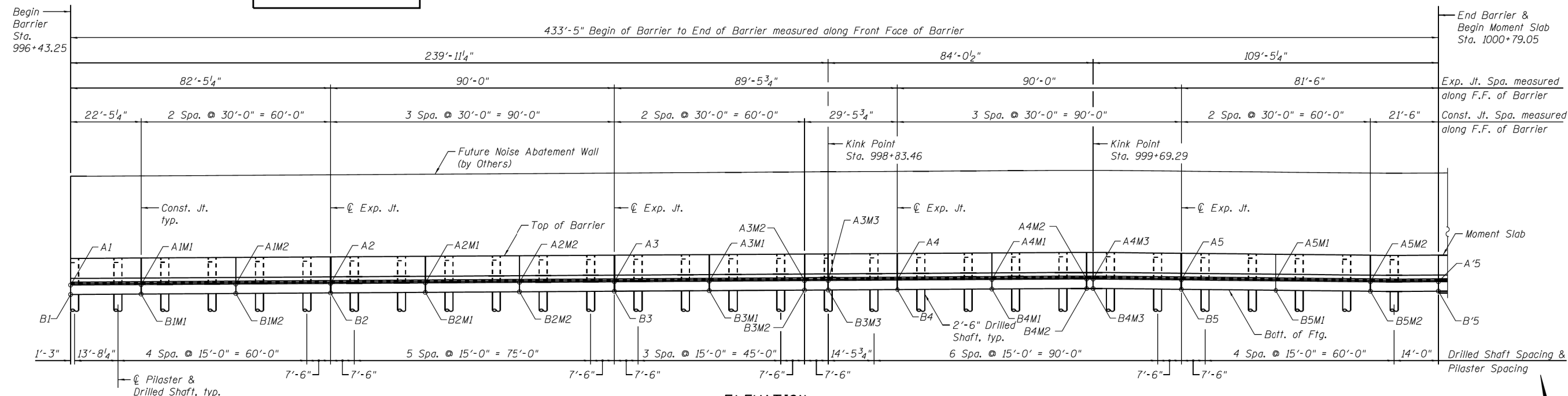
Existing Structure: None

**FOR INFORMATION ONLY**

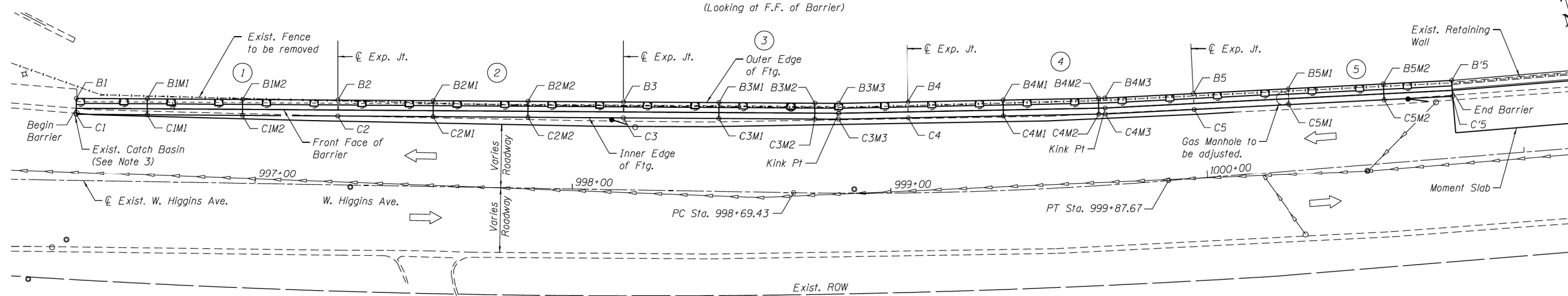
**DESIGN SPECIFICATIONS**  
2014 AASHTO LRFD Bridge Design Specifications,  
7th Edition, with 2015 Interim Revisions

**DESIGN STRESSES**  
**FIELD UNITS**  
f'c = 3,500 psi  
f'c = 4,000 psi (Drilled Shafts)  
fy = 60,000 psi (Reinforcement)

**LOADING**  
Allow 35 psf wind load for  
Structure Mounted Noise Wall.  
Maximum Dead Load not to  
exceed 55 psf of wall face area.  
Traffic Impact per AASHTO  
LRFD Bridge Specifications



**ELEVATION**  
(Looking along F.F. of Barrier)



**PLAN**  
(@ Bott. of Barrier)

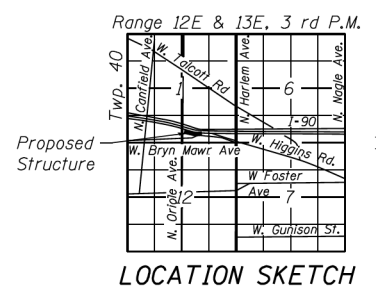
- Notes:**
1. Longitudinal dimensions are measured along F.F. of barrier.
  2. Stations, offsets and elevations for control points are provided on Sheet 2 of 9.
  3. The Contractor shall verify footprint of the existing catch basin prior to drilling. The Contractor can request permission from the Engineer to shift the location of the final drilled shaft by up to 3' in order to avoid potential conflict with the drainage structure.

**LEGEND:**

Existing	Proposed	Inlet	F.F. - denotes Front Face
○	●	Catch Basin	① Barrier Support Segment Number
○	○	Manhole	
○	○	Storm Sewer	



Signed: \_\_\_\_\_  
Date: 11/30/2016  
Exp: \_\_\_\_\_  
Sheets: S-1 thru S-9



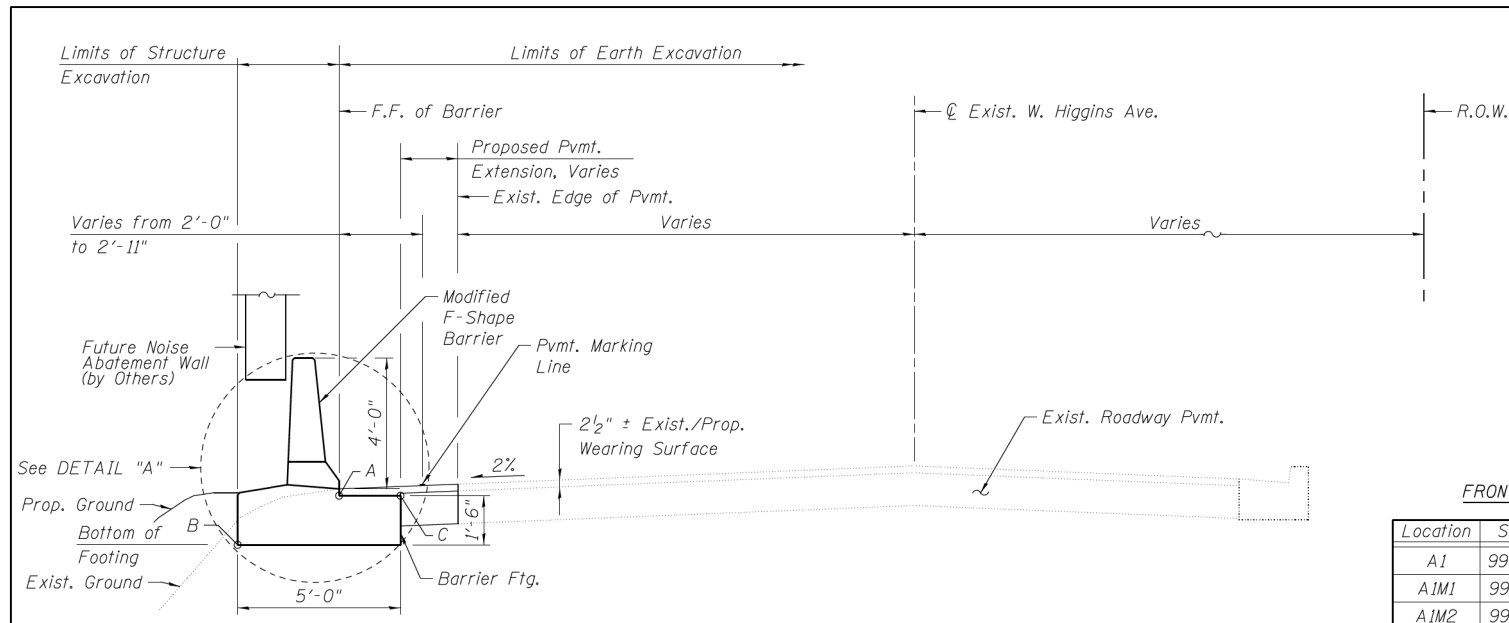
**GENERAL PLAN & ELEVATION**  
**W. HIGGINS AVENUE**  
F.A.P. RTE. I-90 - SEC. (1517 & 1415) R-3  
COOK COUNTY  
STATION 996+43.25 TO 1000+79.05  
STRUCTURE NO. 016-2296

<b>HNTB</b>	USER NAME = kkalita	DESIGNED APC	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	SHEET NO. 1 OF 9 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0.16667' / 1" = 1/6"	CHECKED ACF	REVISED			90	(1517 & 1415) R-3	COOK	557	423
	PLOT DATE = 6/6/2016	DRAWN LK	REVISED			CONTRACT NO. 60Y38				
	PLOT DATE = 6/6/2016	DATE 5/6/2016	REVISED			ILLINOIS FED. AID PROJECT				

FILE NAME = p:\hntb\356\hntb\org\PG\Greet\Lakes\Documents\Chicago\Projects\58015 I-90\Phase II\Contract 2 - Eastbound\Design\CADD\CADD Sheets\016-2296-60Y38-001-GPE01.dgn

<b>HNTB</b>	USER NAME = mksrby	DESIGNED MJK	REVISED - -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	I-90 NOISE WALLS FROM CUMBERLAND AVE. TO HARLEM AVE. COPY OF GENERAL PLAN & ELEVATION S.N. 016-2296	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 2.0000' / 1" = 1/5"	DRAWN JAB	REVISED -			90	(1517 & 1415) I-14	COOK	353	291
	PLOT DATE = 8/15/2017	CHECKED MAM	REVISED -			CONTRACT NO. 60Y40				
	PLOT DATE = 8/15/2017	DATE 8/21/2017	REVISED -			ILLINOIS FED. AID PROJECT				

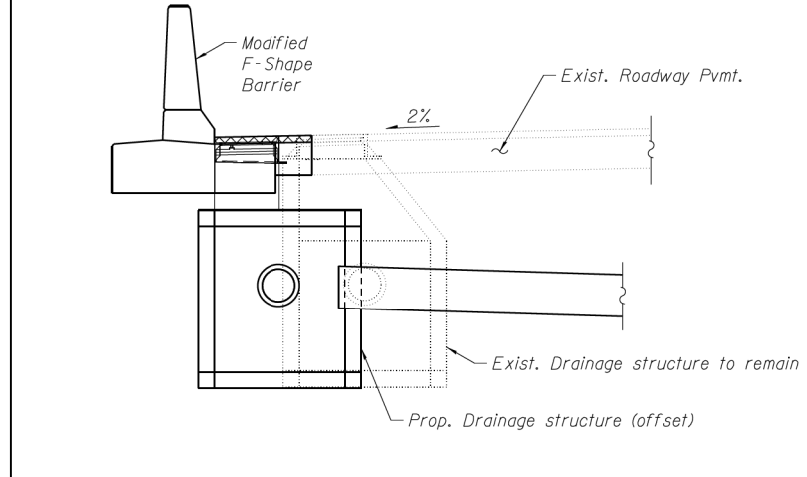
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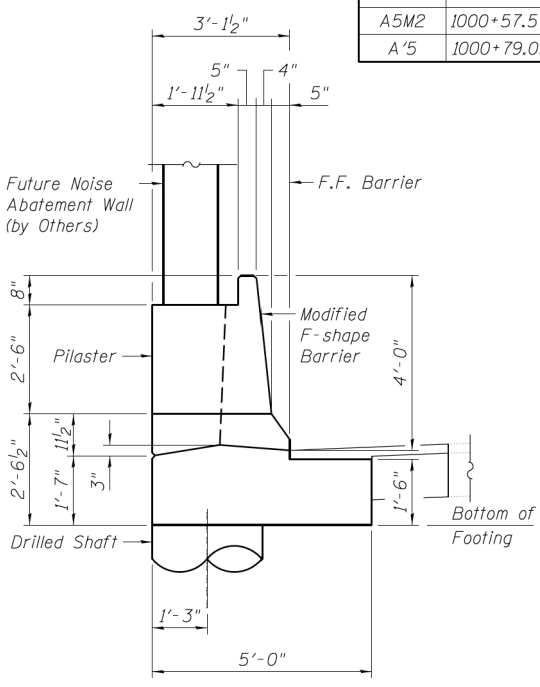
**TYPICAL SECTION THRU BARRIER SUPPORT FOR NOISE ABATEMENT WALL**  
(Looking East)

- A Stations, offsets and elevations for Front Face of Barrier at elevation 2 1/2" below top of wearing surface are provided w.r.t. this point.
- B Stations, offsets and elevations for Bottom Outer Edge of Footing are provided w.r.t. this point.
- C Stations, offsets and elevations for Top Inner Edge of Footing are provided w.r.t. this point.

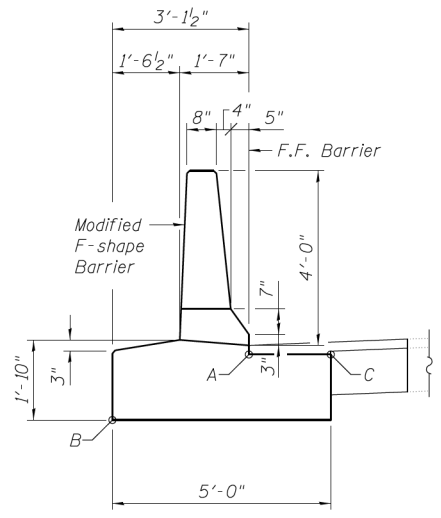
**FOR INFORMATION ONLY**



**TYPICAL SECTION THRU BARRIER SUPPORT FOR NOISE ABATEMENT WALL**  
(Catch Basin Location)



**SECTION THRU BARRIER SUPPORT FOR NOISE ABATEMENT WALL**



**DETAIL "A"**

**INDEX OF SHEETS**

- S-1 General Plan & Elevation
- S-2 General Data & Sections
- S-3 Barrier Support Plan & Elevation - 1
- S-4 Barrier Support Plan & Elevation - 2
- S-5 Barrier Support Plan & Elevation - 3
- S-6 Barrier Support Plan & Elevation - 4
- S-7 Barrier Support Plan & Elevation - 5
- S-8 Barrier Support Details - 1
- S-9 Barrier Support Details - 2

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Structure Excavation	Cu Yd	88
Concrete Structures	Cu Yd	210.1
Protective Coat	Sq Yd	232
Reinforcement Bars, Epoxy Coated	Pound	92480
Drilled Shaft in Soil	Cu Yd	131.8
Noise Abatement Wall Anchor Rod Assembly	Each	29

**GEOMETRIC CONTROL POINTS - STATIONS, OFFSETS & ELEVATIONS**

FRONT FACE OF BARRIER (A)				TOP OUTER EDGE OF FOOTING (B)				BOTTOM INNER EDGE OF FOOTING (C)			
Location	Station	Offset	Elevation	Location	Station	Offset	Elevation	Location	Station	Offset	Elevation
A1	996+43.25	22.85 Lt.	654.28	B1	996+43.21	25.98 Lt.	652.78	C1	996+43.26	20.98 Lt.	654.28
A1M1	996+65.68	23.09 Lt.	654.35	B1M1	996+65.65	26.21 Lt.	652.85	C1M1	996+65.70	21.21 Lt.	654.35
A1M2	996+95.68	23.40 Lt.	654.44	B1M2	996+95.65	26.53 Lt.	652.94	C1M2	996+95.70	21.53 Lt.	654.44
A2	997+25.68	23.72 Lt.	654.53	B2	997+25.64	26.85 Lt.	653.03	C2	997+25.70	21.85 Lt.	654.53
A2M1	997+55.68	24.04 Lt.	654.62	B2M1	997+55.64	27.16 Lt.	653.12	C2M1	997+55.70	22.16 Lt.	654.62
A2M2	997+85.67	24.35 Lt.	654.71	B2M2	997+85.64	27.48 Lt.	653.21	C2M2	997+85.69	22.48 Lt.	654.71
A3	998+15.67	24.67 Lt.	654.80	B3	998+15.64	27.79 Lt.	653.30	C3	998+15.69	22.79 Lt.	654.80
A3M1	998+45.67	24.99 Lt.	654.89	B3M1	998+45.64	28.11 Lt.	653.39	C3M1	998+45.69	23.11 Lt.	654.89
A3M2	998+75.80	25.28 Lt.	654.98	B3M2	998+75.79	28.41 Lt.	653.48	C3M2	998+75.81	23.41 Lt.	654.98
A3M3	998+83.46	25.30 Lt.	655.00	B3M3	998+83.43	28.43 Lt.	653.50	C3M3	998+83.49	23.43 Lt.	655.00
A4	999+05.92	25.64 Lt.	655.07	B4	999+05.90	28.77 Lt.	653.57	C4	999+05.93	23.77 Lt.	655.07
A4M1	999+36.57	25.45 Lt.	655.16	B4M1	999+36.63	28.58 Lt.	653.66	C4M1	999+36.53	23.58 Lt.	655.16
A4M2	999+67.19	24.49 Lt.	655.25	B4M2	999+67.33	27.61 Lt.	653.75	C4M2	999+67.11	22.62 Lt.	655.25
A4M3	999+69.29	24.40 Lt.	655.25	B4M3	999+69.39	27.52 Lt.	653.75	C4M3	999+69.23	22.52 Lt.	655.25
A5	999+97.59	23.68 Lt.	655.11	B5	999+97.69	26.80 Lt.	653.61	C5	999+97.54	21.80 Lt.	655.11
A5M1	1000+27.58	22.76 Lt.	654.96	B5M1	1000+27.68	25.88 Lt.	653.46	C5M1	1000+27.52	20.88 Lt.	654.96
A5M2	1000+57.57	21.83 Lt.	654.81	B5M2	1000+57.66	24.96 Lt.	653.31	C5M2	1000+57.51	19.96 Lt.	654.81
A'5	1000+79.05	21.17 Lt.	654.82	B'5	1000+79.05	24.30 Lt.	653.32	C'5	1000+79.05	19.30 Lt.	654.82

**GENERAL NOTES**

- Reinforcing bar bending dimensions are out to out.
- Reinforcing bars designated "(E)" shall be epoxy coated.
- All exposed concrete edges shall be a 3/4" x 45° chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground line.
- No construction joints except those shown on the plans will be allowed unless otherwise approved by the Engineer.
- It shall be the Contractor's responsibility to verify the location of all utilities prior to starting construction.
- Concrete for drilled shafts shall be class DS Concrete.



USER NAME = mkosir	DESIGNED APC	REVISED
CHECKED MRI	REVISED	
PLOT SCALE = 0.00333' / in.	DRAWN LK	REVISED
PLOT DATE = 6/27/2016	DATE 5/6/2016	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA & SECTIONS  
BARRIER SUPPORT STRUCTURE FOR NOISE ABATEMENT WALL**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) R-3	COOK	557	424
CONTRACT NO. 60Y38			ILLINOIS FED. AID PROJECT	

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USER NAME = mksrby	DESIGNED MJK	REVISED - -
DRAWN JAB	REVISED -	
PLOT SCALE = 2.0000' / in.	CHECKED MAM	REVISED -
PLOT DATE = 8/15/2017	DATE 8/21/2017	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-90 NOISE WALLS FROM CUMBERLAND AVE. TO HARLEM AVE.  
COPY OF GENERAL PLAN & ELEVATION  
S.N. 016-2296**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	292
CONTRACT NO. 60Y40			ILLINOIS FED. AID PROJECT	

FILE NAME = D160Y40-shr-SN016-2296-02.dgn

SCALE: NTS SHEET NO. 1 OF 1 SHEETS STA. TO STA.

Bench Mark: "X" Cut on SW bolt of LP "FH8" on north side of WB I-90, 3rd pole west of CTA bridge west of Harlem Ave.

Existing Structure: Existing structure consists of two T-type cast-in-place retaining walls on combination of spread footing and cast-in-place concrete piles (constructed in 1958), and HP 10x42 piles (N.W. Retaining Wall of Higgins Flyover, Structure No. 016-2519; constructed in 1981). Older Wall is approximately 566 feet long with a max. exposed height of 11'-0" and a chain link fence mounted on top of the wall. Newer wall is approximately 213 feet long with a max. exposed height of 15'-0" and Type L Aluminum railing mounted on top of the wall. Top portion of both walls will be removed and a Moment Slab and associated noise wall will be constructed in separate contracts. Traffic will be maintained in EB direction during construction. WB Higgins Ave. traffic will be detoured according to Detour Plan. Salvage - None

**DESIGN SPECIFICATIONS**

AASHTO LRFD Bridge Design Specifications, 7th Edition (2014) with 2015 Interim Revisions

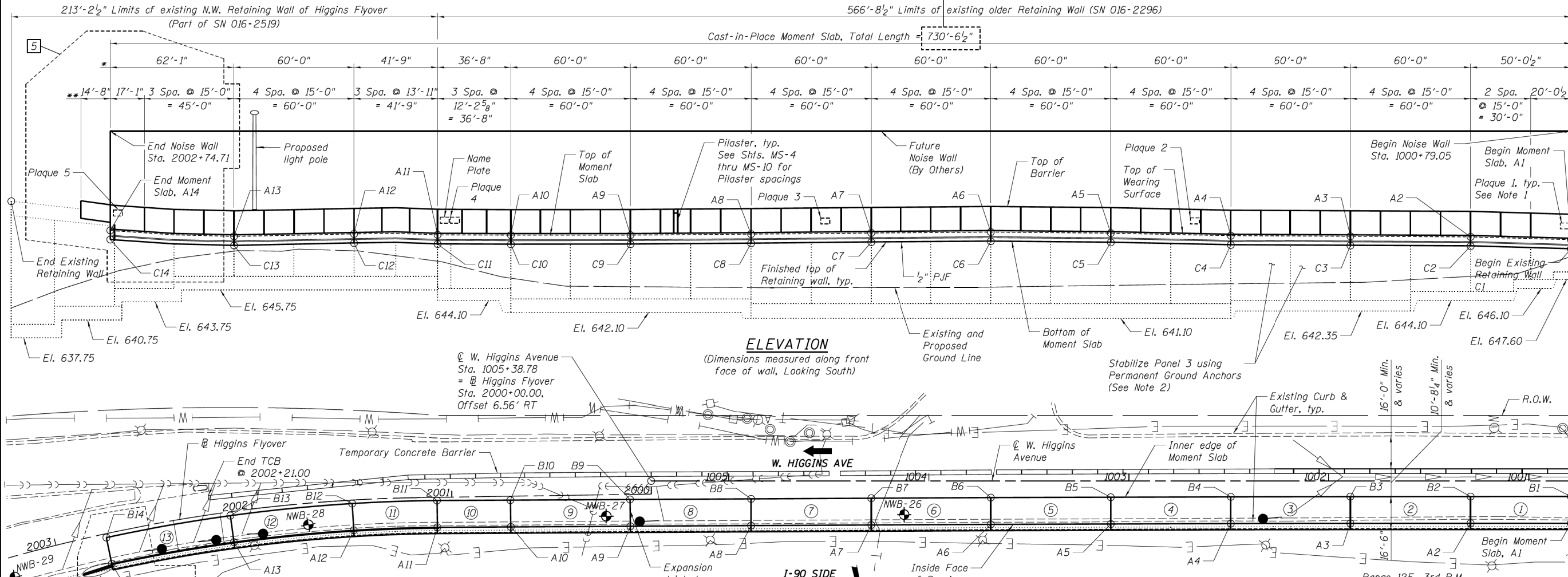
**DESIGN STRESSES**

New Construction  
 f'c = 4,000 psi (Superstructure Concrete)  
 f'c = 3,500 psi  
 fy = 60,000 psi (Reinf.)

Existing Construction (SN 016-2296) (SN 016-2519)  
 f'c = 800 psi f'c = 3,500 psi  
 fs = 20,000 psi fy = 60,000 psi (Reinf.)

**LOADING**

Allow 35 psf wind load for Structure Mounted Noise Wall (future contract)  
 Maximum Dead Load not to exceed 55 psf of wall face area.  
 Traffic Impact per AASHTO LRFD Bridge Specifications.  
 Approx. Noise Wall Height = 17'-0"

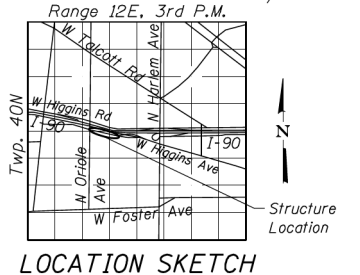


**FOR INFORMATION ONLY**

- LEGEND**
- T — Existing Underground Telephone Line
  - A — Existing Aerial Line
  - E — Existing Underground Electric Line
  - W — Existing Underground Water Line
  - W — Existing Underground Cable
  - CC — Existing Underground Combined Sewer
  - Proposed Catch Basin (Existing to be remain)
  - ➔ Proposed Storm Sewer
  - Existing Storm Sewer
  - (xx) Moment Slab Segment Number
  - ➔ Temporary Travel Lane
  - ⊙ Existing/Proposed Light Pole
  - ⊕ Soil Boring Location

**Notes:**

1. Provide Plaque on inside face (W. Higgins Ave. side) of Barrier, see Shts. MS-4 thru MS-10 for location.
  2. Plans and design details for stabilization of Panel 3 using Permanent Ground Anchors are provided as separate Existing Retaining Wall Repair Plans.
  3. Stations, Offsets & Elevations for Control Points are provided on Sht. MS-3.
- \* Expansion Joint Spacing in Barrier and Moment Slab (along front face (I-90 side) of Existing Retaining Wall)
- \*\* Barrier Joint Spacing
- \*\*\* Existing wall to remain. Remove parapet and railing within Barrier Transition Zone. See Existing Retaining Wall Repair Plans for removal limits.



**GENERAL PLAN & ELEVATION**  
**RETAINING WALLS AT IL 72 (W HIGGINS AVENUE)**  
**FAI RTE 90 - SEC (1517 & 1415) R-3**  
**COOK COUNTY**  
**STATION 1000+79.05 to 1005+38.78**  
**& STATION 2000+00.00 to 2002+95.07**  
**STRUCTURE NO. 016-2296 & 016-2519**

exp U.S. Services Inc. CHICAGO, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = JOHN50-B	DESIGNED STD	REVISOR [5] 02/21/2017 HBJ	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION MOMENT SLAB (S.N. 016-2296 & S.N. 016-2519)	F.A.I. RTE. I-90	SECTION (1517 & 1415) R-3	COUNTY COOK	TOTAL SHEETS 557	SHEET NO. 432
	PLOT SCALE = 0.17" / 1'-0" PLOT DATE = 2/28/2017	DRAWN STD	REVISOR			SHEET NO. MS-1 OF 18 SHEETS ILLINOIS FED. AID PROJECT				

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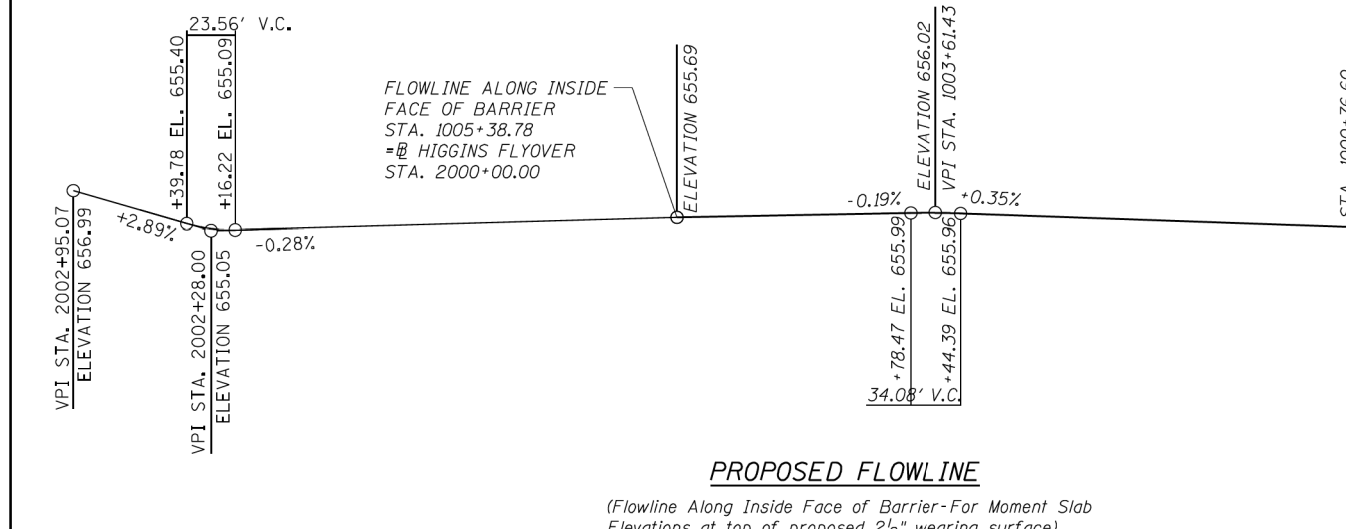
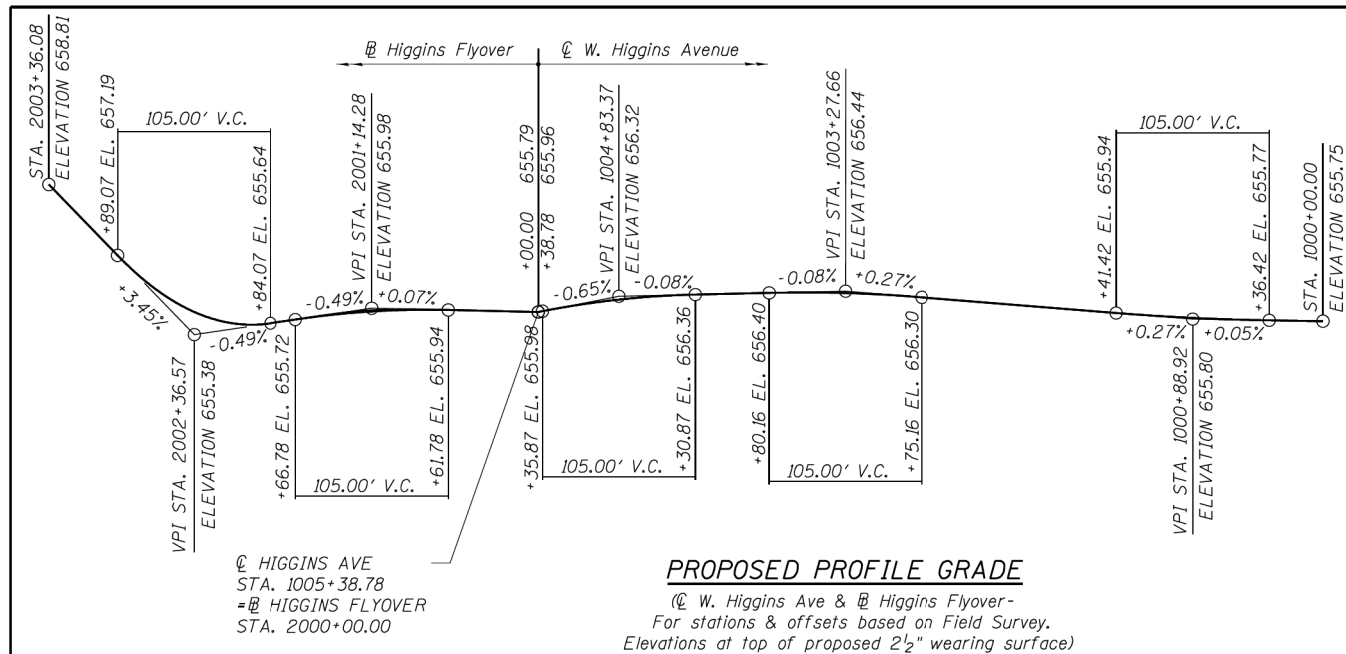
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DRAWN JAB	REVISOR -	REVISOR -
CHECKED MAM	REVISOR -	REVISOR -
DATE 8/21/2017	REVISOR -	REVISOR -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**I-90 NOISE WALLS FROM CUMBERLAND AVE. TO HARLEM AVE.**  
**COPY OF GENERAL PLAN & ELEVATION**  
**S.N. 016-2296**

F.A.I. RTE. 90	SECTION (1517 & 1415) I-14	COUNTY COOK	TOTAL SHEETS 353	SHEET NO. 293
CONTRACT NO. 60Y40				
ILLINOIS FED. AID PROJECT				

FILE NAME = 0160Y40-sht-SN016-2296-03.dgn



**INDEX OF SHEETS**

- MS-1 General Plan & Elevation
- MS-2 General Data
- MS-3 Sections & Details
- MS-4 Moment Slab Plan & Elevation - 1
- MS-5 Moment Slab Plan & Elevation - 2
- MS-6 Moment Slab Plan & Elevation - 3
- MS-7 Moment Slab Plan & Elevation - 4
- MS-8 Moment Slab Plan & Elevation - 5
- MS-9 Moment Slab Plan & Elevation - 6
- MS-10 Moment Slab Plan & Elevation - 7
- MS-11 Moment Slab & Barrier Details - 1
- MS-12 Moment Slab & Barrier Details - 2
- MS-13 Moment Slab & Barrier Details - 3
- MS-14 Moment Slab & Barrier Details - 4
- MS-15 Moment Slab & Barrier Details - 5
- MS-16 Temporary Concrete Barrier for Stage Construction
- MS-17 Boring Logs - 1
- MS-18 Boring Logs - 2

**HORIZONTAL CURVE DATA**

(Higgins Flyover)  
 P.I. STA. = 2002+53.82  
 $\Delta = 19^\circ 33' 39"$  (LT)  
 $D = 7^\circ 09' 43"$   
 $R = 800.00'$   
 $T = 137.90'$   
 $L = 273.12'$   
 $E = 11.80'$   
 P.C. STA. = 2001+15.92  
 P.T. STA. = 2003+89.04

**GENERAL NOTES**

1. Reinforcing bar bending details shall be in accordance with the latest "Manual of Standard Practice for Detailing Reinforced Concrete Structures", ACI 315, latest edition.
2. Reinforcement bar bending dimensions are out to out.
3. Reinforcing bars designated "(E)" shall be epoxy coated.
4. All exposed concrete edges shall have a 3/4" x 45° chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground line.
5. Bars noted thus, 3x2-#5 indicates 3 lines of bars with 2 lengths of bars per line.
6. No construction joints except those shown on the plans will be allowed unless otherwise approved by the Engineer.
7. It shall be the Contractor's responsibility to verify the location of all utilities prior to starting construction. Contact J.U.L.I.E., 800-892-0123.
8. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in scope of work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

STA. 1000+79.05  
 TO 2001+07.38  
 RE-BUILT 20\_\_ BY  
 STATE OF ILLINOIS  
 F.A.I. RT. 90  
 SEC. (1517 & 1415) R-3  
 STR. NO. 016-2296

**NAME PLATE**  
 See Std. 515001

PLAQUE --  
 MOMENT SLAB AREA  
 DO NOT OPEN-CUT  
 ROADWAY FROM  
 PLAQUE 1 TO PLAQUE 5

**PLAQUE**  
 (Paid for as Name Plate)

**LOCATIONS**

Plaque No.	Station*
1	1000+79.80
2	1002+64.80
3	1004+49.80
4	2000+96.00
5	2002+74.00

\* Stations provided at top left corner of Plaques

**FOR INFORMATION ONLY**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
STRUCTURE EXCAVATION	CU YD	440
CONCRETE STRUCTURES	CU YD	808.9
CONCRETE SUPERSTRUCTURE	CU YD	137.9
PROTECTIVE COAT	SQ YD	424
REINFORCEMENT BARS, EPOXY COATED	POUND	150140
NAME PLATES	EACH	6
NOISE ABATEMENT WALL ANCHOR ROD ASSEMBLY	EACH	57

exp U.S. Services Inc. CHICAGO, IL BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	USER NAME = JOHNSO-B	DESIGNED STD	REVISED 5 02/21/2017 HBJ	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL DATA          MOMENT SLAB (S.N. 016-2296 &amp; S.N. 016-2519)</b>	F.A.I. RTE. 1-90	SECTION (1517 & 1415) R-3	COUNTY COOK	TOTAL SHEETS 557	SHEET NO. 433
	PLOT SCALE = @2' / in.	DRAWN STD	REVISED			CONTRACT NO. 60Y38				
SHEET NO. MS-2 OF 18 SHEETS										
ILLINOIS FED. AID PROJECT										

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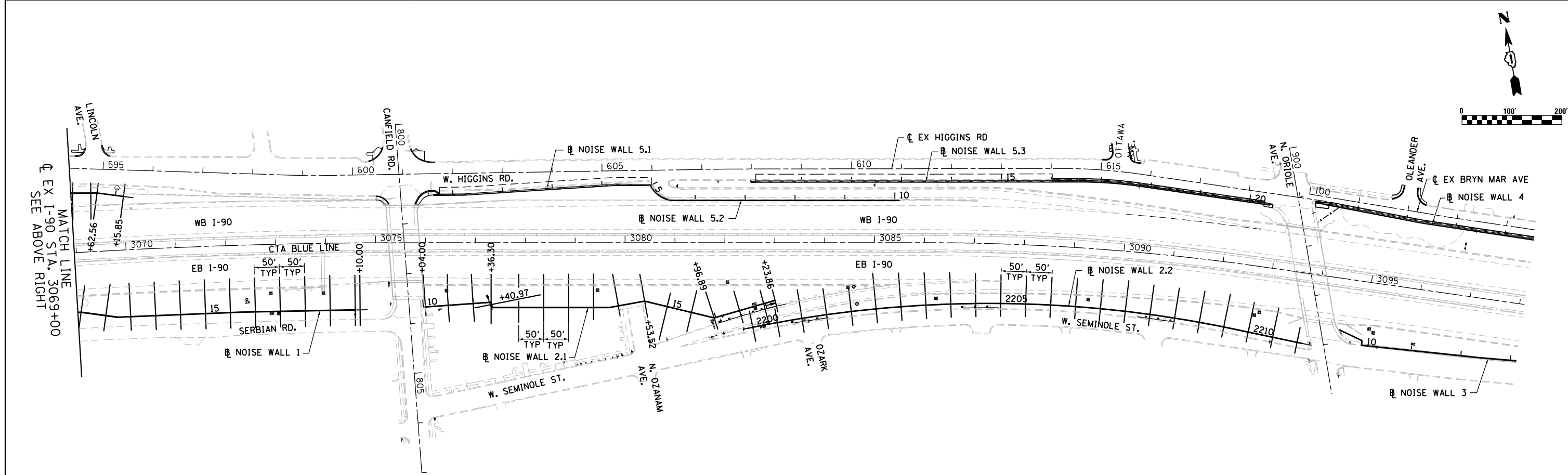
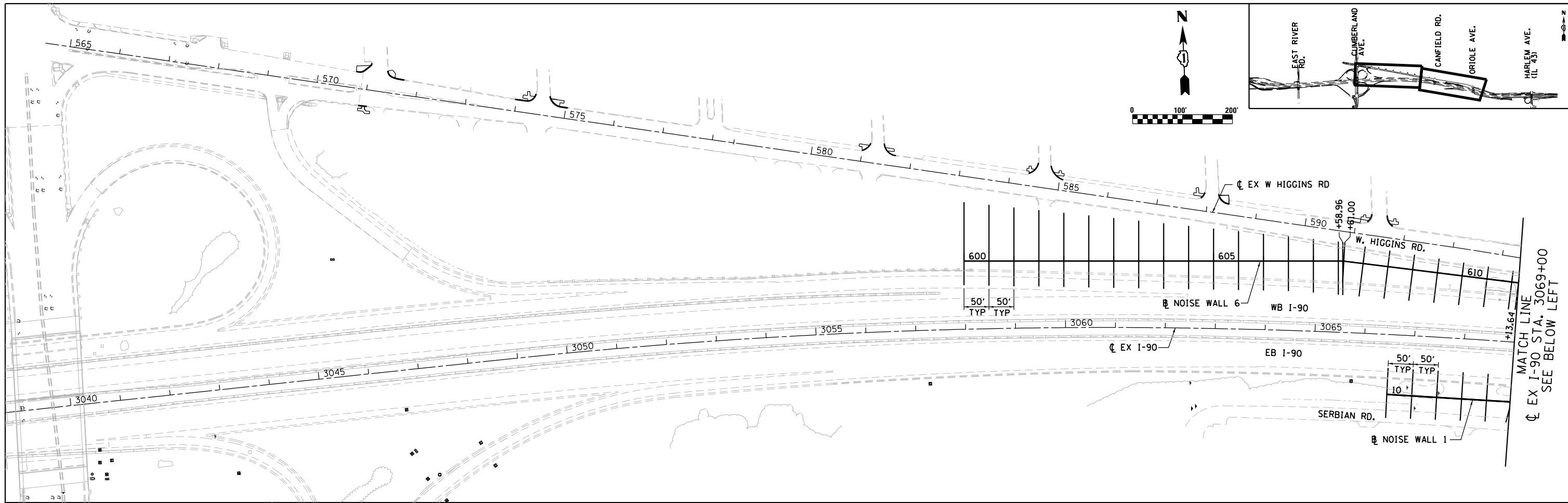
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DRAWN JAB	REVISED -	
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PLOT DATE = 8/15/2017	DATE 8/21/2017	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**I-90 NOISE WALLS FROM CUMBERLAND AVE. TO HARLEM AVE.  
 COPY OF GENERAL PLAN & ELEVATION  
 S.N.016-2296**

SCALE: NTS SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE. 90	SECTION (1517 & 1415) I-14	COUNTY COOK	TOTAL SHEETS 353	SHEET NO. 294
CONTRACT NO. 60Y40				
ILLINOIS FED. AID PROJECT				



USER NAME = mksrby	DESIGNED BAJ	REVISED -
	DRAWN BAJ	REVISED -
PLOT SCALE = 2.00' / in.	CHECKED MAM	REVISED -
PLOT DATE = 8/15/2017	DATE 8/21/2017	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**I-90 NOISE WALLS FROM CUMBERLAND AVE TO HARLEM AVE  
CROSS SECTION INDEX**

SCALE: 1" = 100'    SHEET NO. 1 OF 1 SHEETS    STA.    TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	295
CONTRACT NO. 60Y40				
ILLINOIS FED. AID PROJECT				

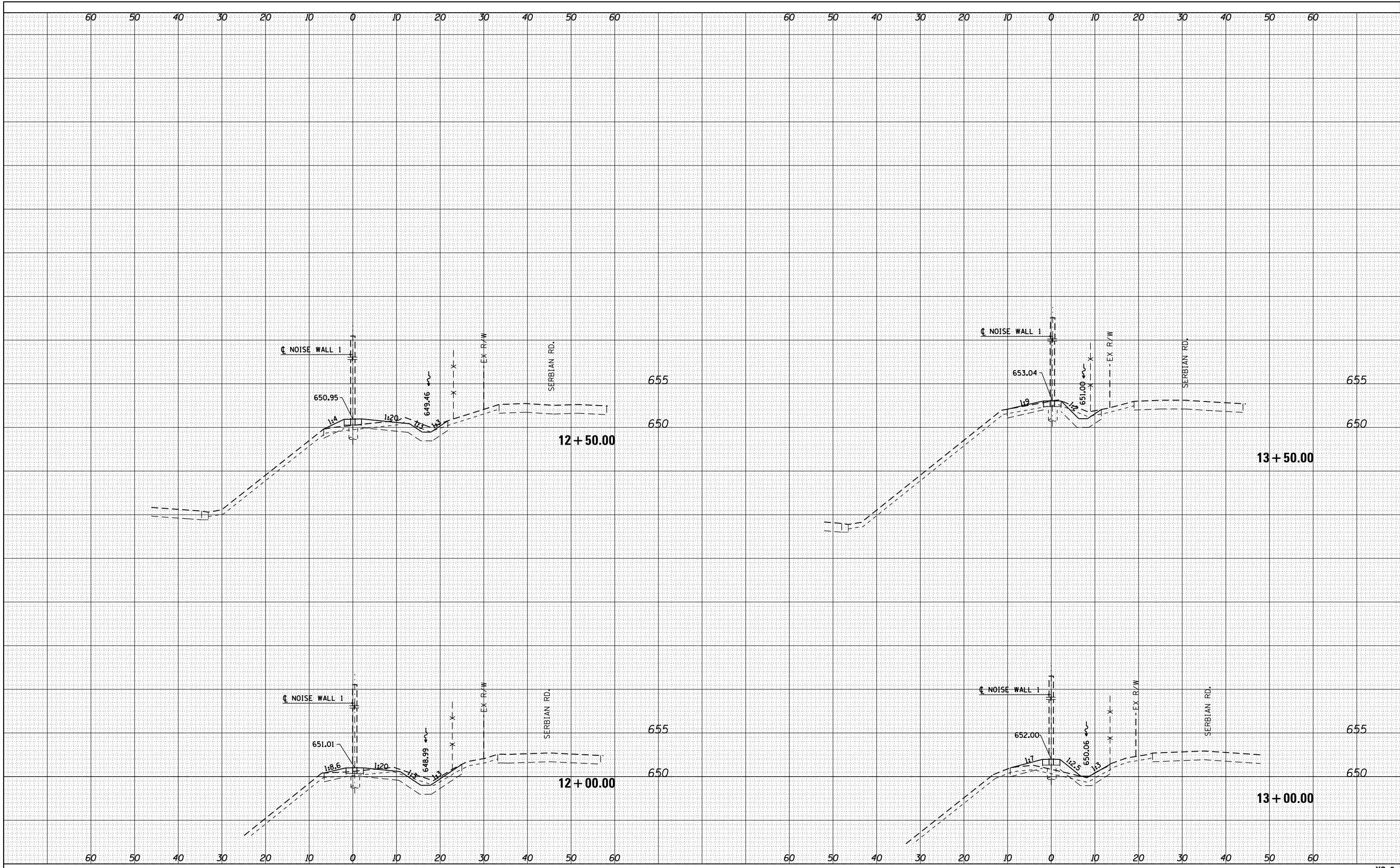
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FINAL SURVEY NO.	SURVEYED PLOTTED	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED		

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



USER NAME = mksrby	DESIGNED - BAJ	REVISED - -
	DRAWN - BAJ	REVISED - -
PLOT SCALE = 2.0000' / 1" =	CHECKED - MAM	REVISED - -
PLOT DATE = 8/15/2017	DATE - 8/21/2017	REVISED - -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROPOSED CROSS SECTIONS  
NOISE WALL 1

SCALE: 10' H : 5' V SHEET 2 OF 5 SHEETS STA. 12+00 TO STA. 13+50

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	297
			CONTRACT NO. 60Y40	
ILLINOIS FED. AID PROJECT				

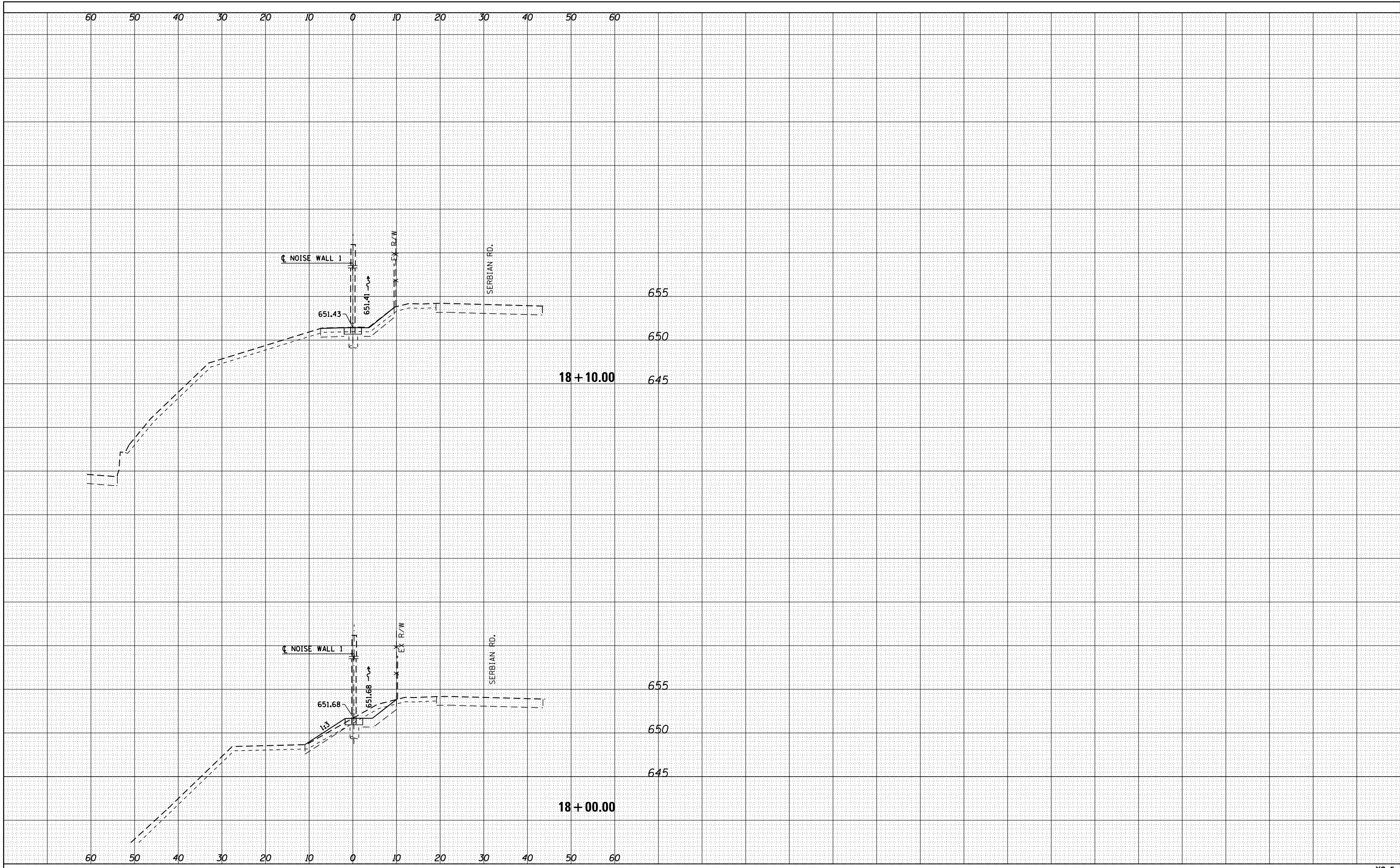
XS-2





FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE



USER NAME = mksrby  
 PLOT SCALE = 2.0000' / in.  
 PLOT DATE = 8/15/2017

DESIGNED - BAJ  
 DRAWN - BAJ  
 CHECKED - MAM  
 DATE - 8/21/2017

REVISED - -  
 REVISED - -  
 REVISED - -  
 REVISED - -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PROPOSED CROSS SECTIONS  
 NOISE WALL 1

SCALE: 10' H : 5' V SHEET 5 OF 5 SHEETS STA. 18+00 TO STA. 18+10

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	(1517 & 1415) I-14	COOK	353	300
CONTRACT NO. 60Y40				XS-5
ILLINOIS FED. AID PROJECT				