

PROPOSED BLUETOOTH DETECTOR
 MM 127.0
 (SEE ITS-92, ITS-93, ITS-94, ITS-95 FOR
 BLUETOOTH DETAILS)
 STA. 327+35

MODEL: Default
 FILE NAME: \\110601\Task_Order_6104_CADD\CADD_Sheet\1D121666\1-ITS58Bluetooth.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
PLOT SCALE = 99.9998 ' / in.	DRAWN - NG	REVISED -
PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

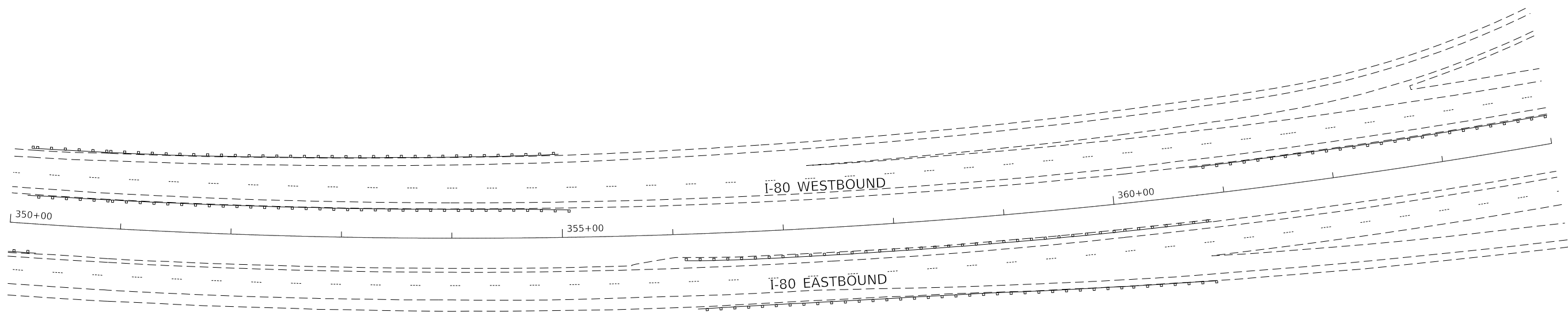
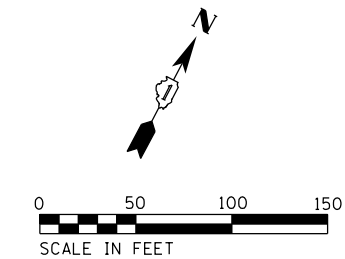
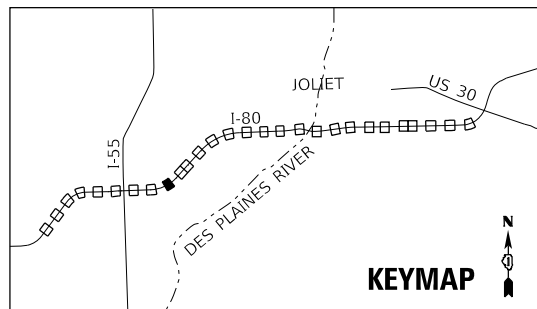
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED BLUETOOTH
 DETECTOR PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	101
			CONTRACT NO. 62G66	
			ILLINOIS FED. AID PROJECT	

ITS-58
 *I-55, I-80, & I-290



(B) PROPOSED BLUETOOTH DETECTOR
 MM 127.5
 (SEE ITS-92, ITS-93, ITS-94, ITS-95 FOR BLUETOOTH
 DETAILS)
 STA. 353+16

MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\10121666\sh-its59-blutooth.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
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PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

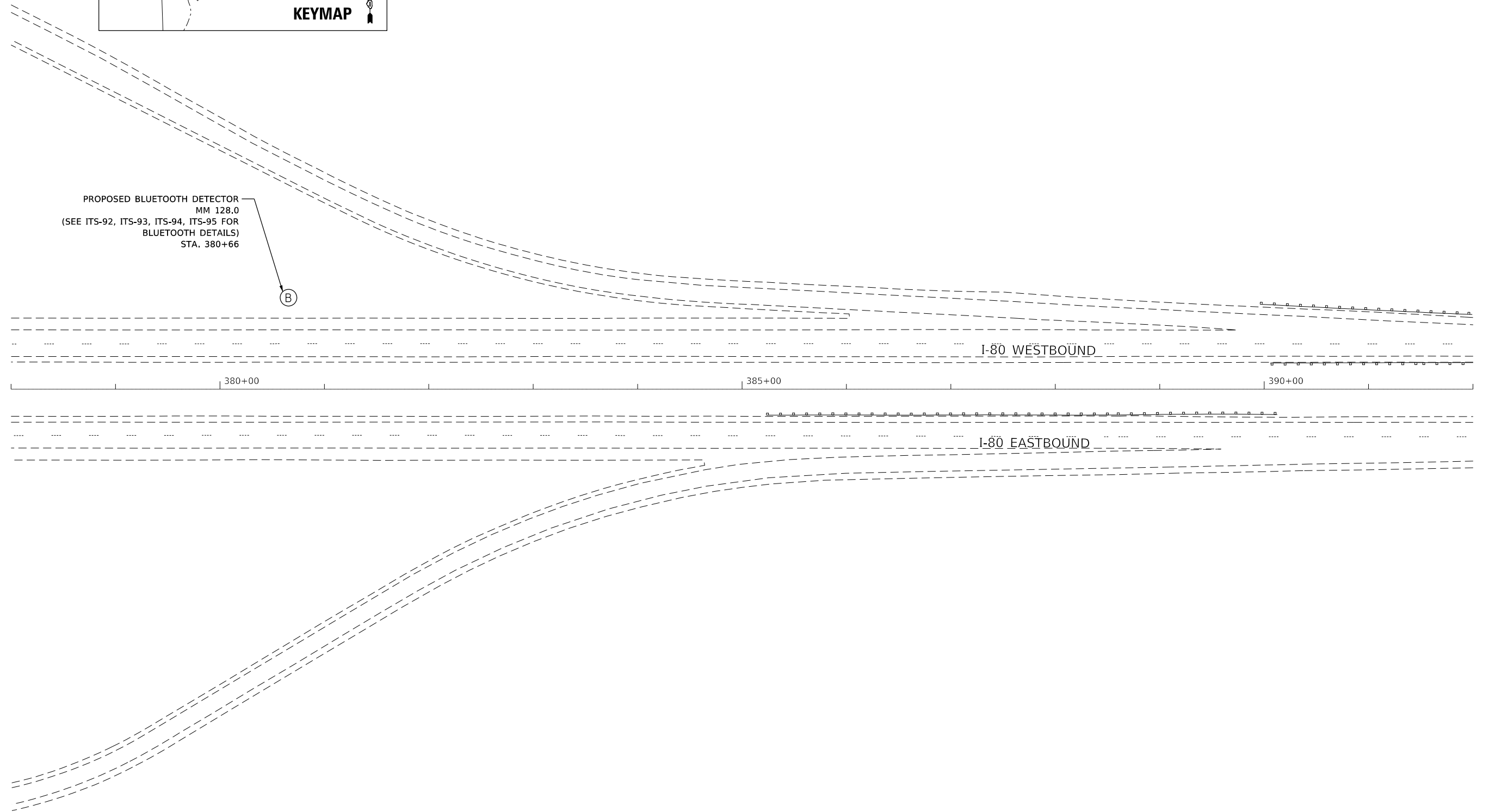
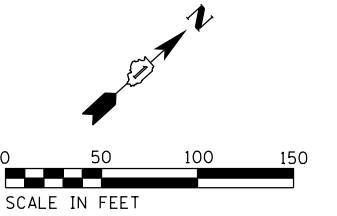
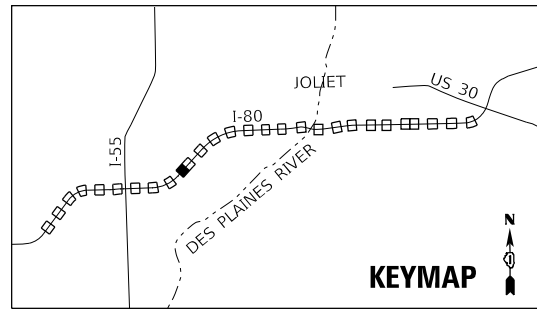
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**PROPOSED BLUETOOTH
DETECTOR PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	102
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62G66	

ITS-59
*I-55, I-80, & I-290



MODEL: D:\default
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	DATE - 10/12/2018	REVISED -

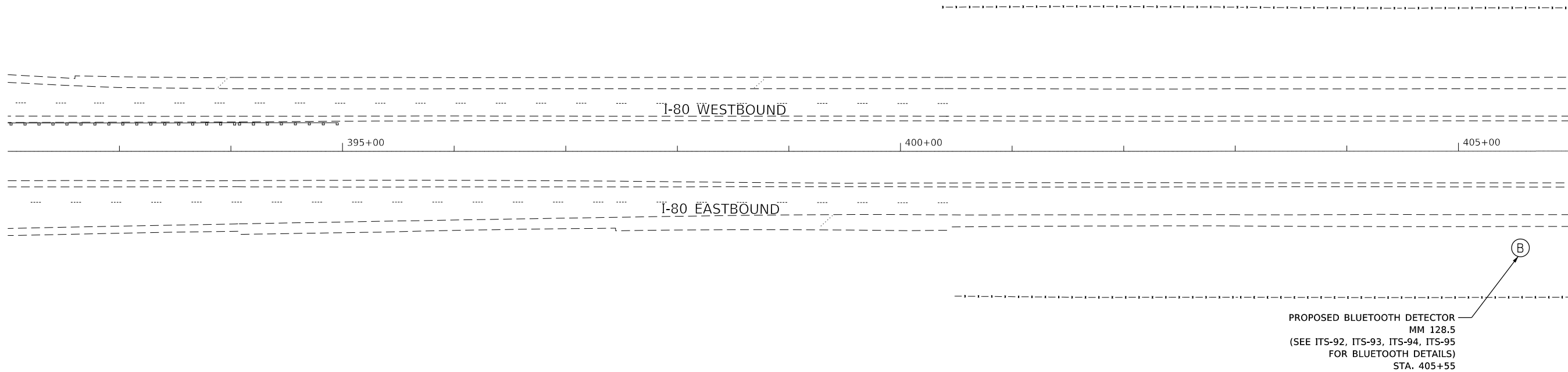
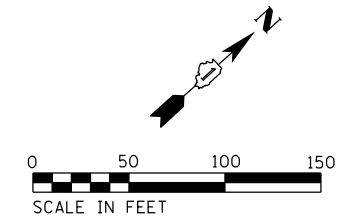
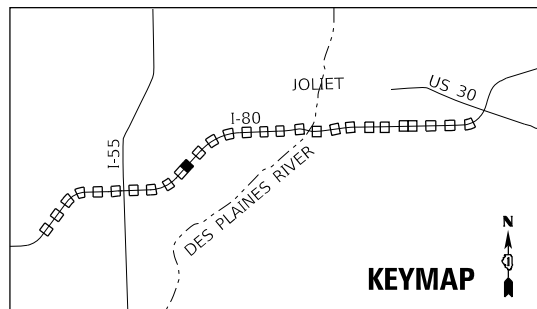
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED BLUETOOTH
 DETECTOR PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	103
			CONTRACT NO. 62G66	
		ILLINOIS	FED. AID PROJECT	

ITS-60
 *I-55, I-80, & I-290



MODEL: Default
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PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

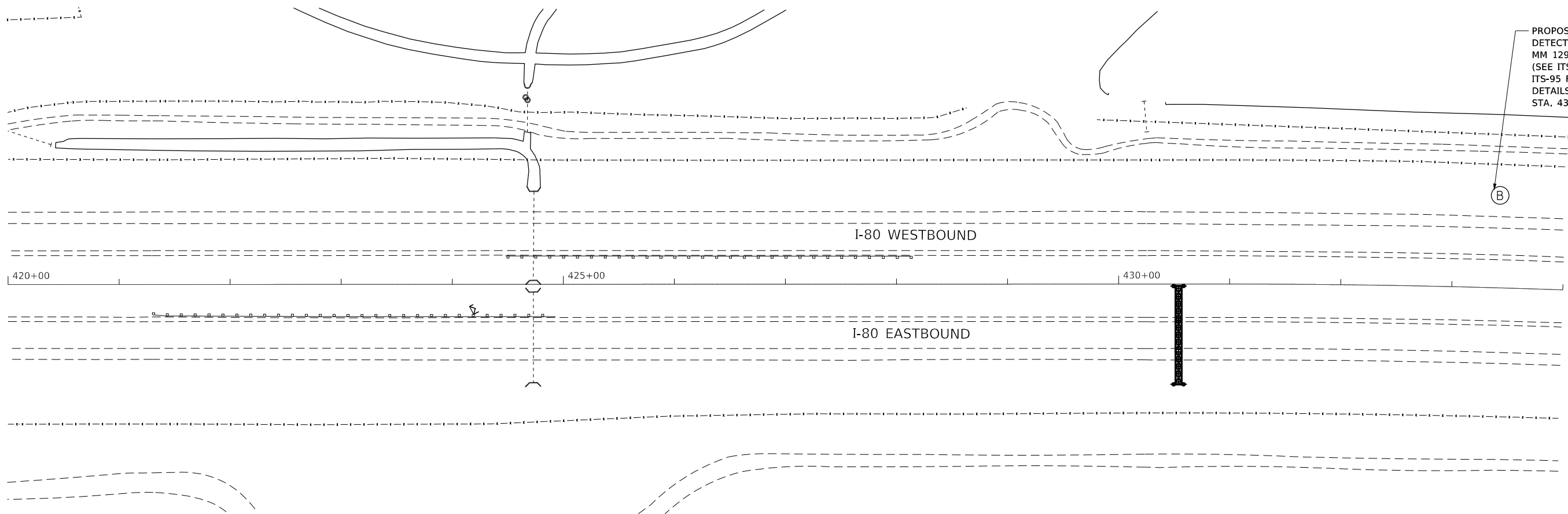
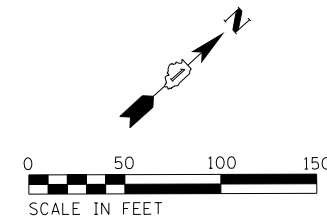
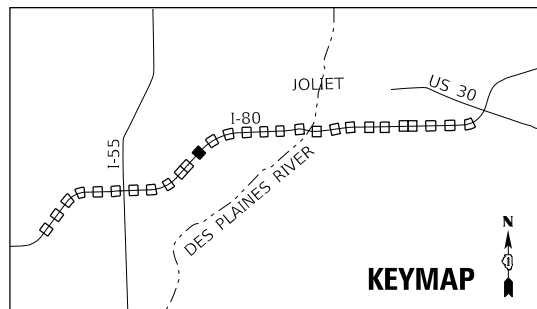
**PROPOSED BLUETOOTH
DETECTOR PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	104
			CONTRACT NO. 62G66	
			ILLINOIS FED. AID PROJECT	

ITS-61

*I-55, I-80, & I-290



PROPOSED BLUETOOTH
DETECTOR
MM 129.0
(SEE ITS-92, ITS-93, ITS-94,
ITS-95 FOR BLUETOOTH
DETAILS)
STA. 433+43

(B)

I-80 WESTBOUND

I-80 EASTBOUND

420+00

425+00

430+00

MODEL: Default
FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\101216662\1-43512-Bluetooth.dgn



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	DRAWN - NG	REVISED -
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PLOT DATE = 10/10/2018	DATE - 10/12/2018	REVISED -

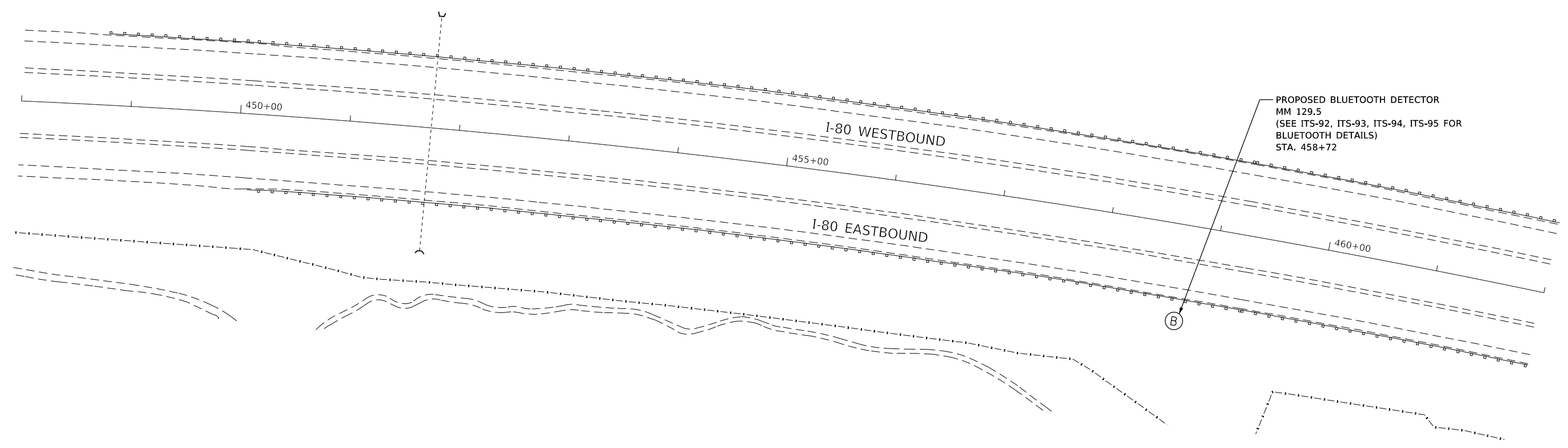
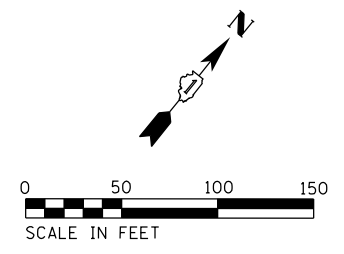
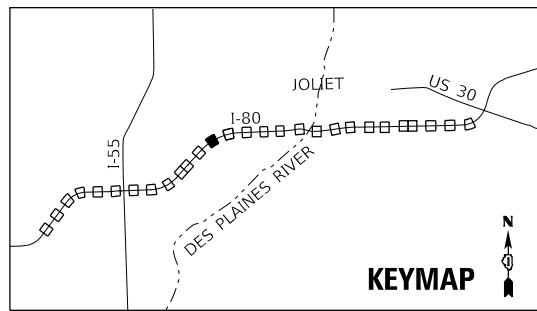
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED BLUETOOTH
DETECTOR PLAN

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	105
			CONTRACT NO. 62G66	
		ILLINOIS	FED. AID PROJECT	

ITS-62
*I-55, I-80, & I-290



PROPOSED BLUETOOTH DETECTOR
 MM 129.5
 (SEE ITS-92, ITS-93, ITS-94, ITS-95 FOR
 BLUETOOTH DETAILS)
 STA. 458+72

MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\15121666-sh-4513-bluetooth.dgn



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	DRAWN - NG	REVISED -
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PLOT DATE = 10/10/2018	DATE - 10/12/2018	REVISED -

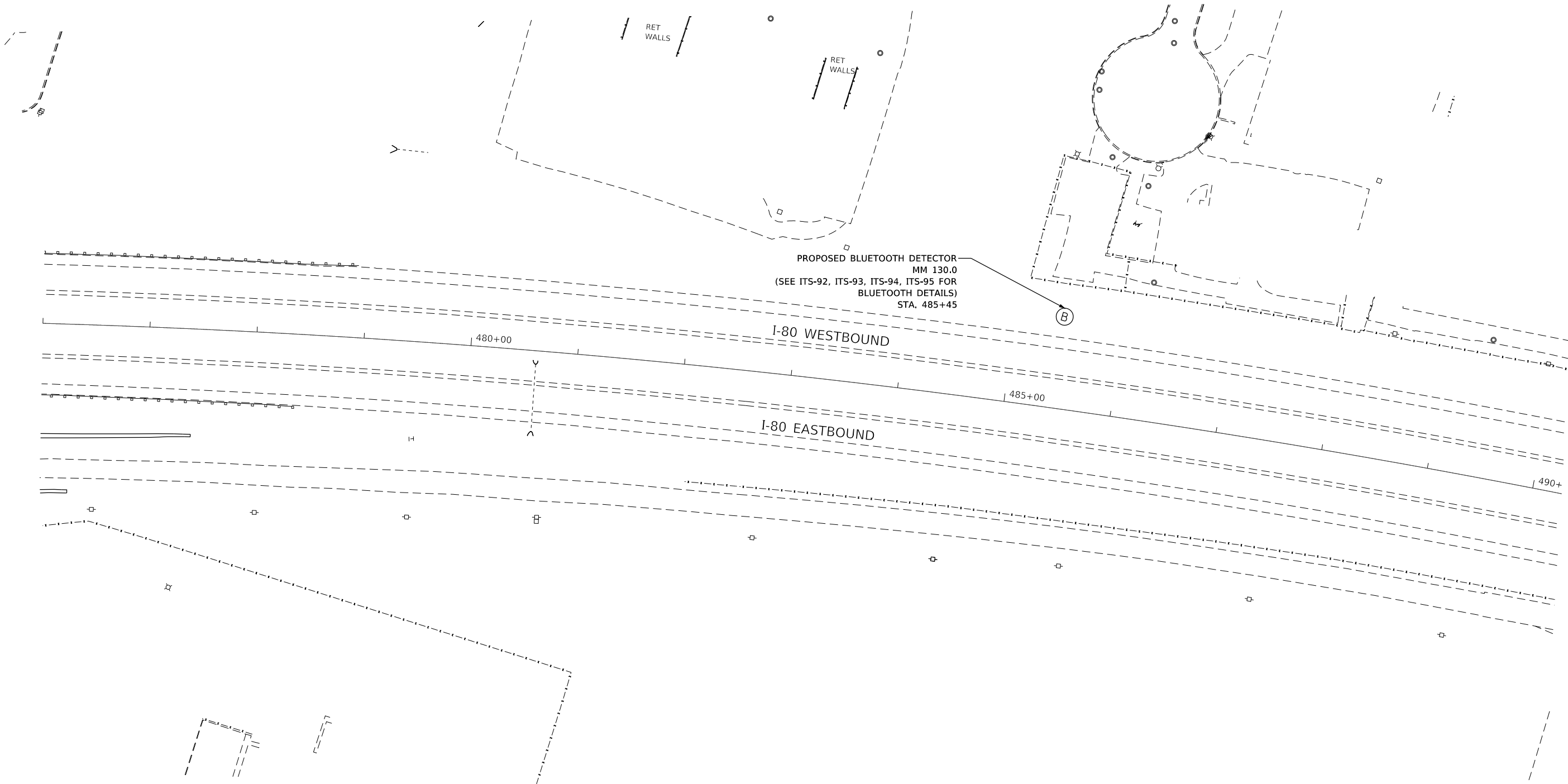
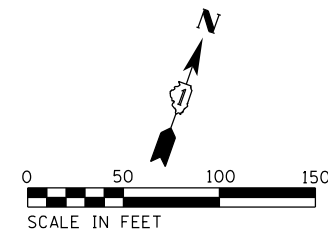
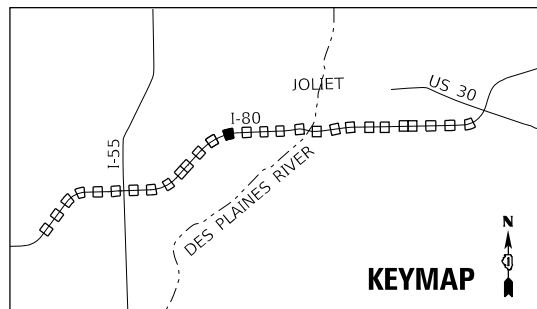
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED BLUETOOTH
 DETECTOR PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	106
			CONTRACT NO. 62G66	
		ILLINOIS	FED. AID PROJECT	

ITS-63
 *I-55, I-80, & I-290



MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\101216662\1-485+45 Bluetooth.dgn



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DRAWN - NG	REVISIONS -	
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PLOT DATE = 10/10/2018	DATE - 10/12/2018	REVISED -

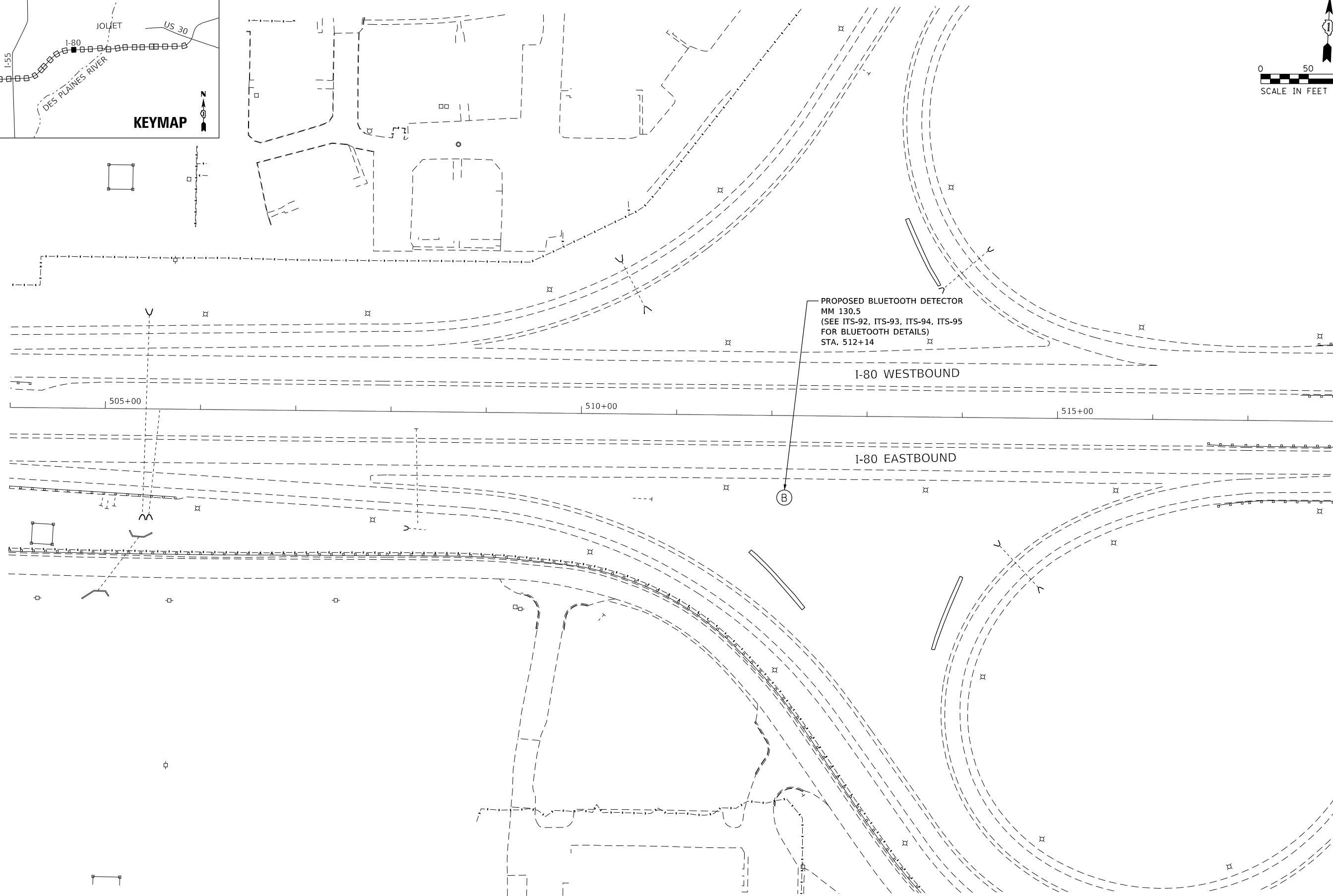
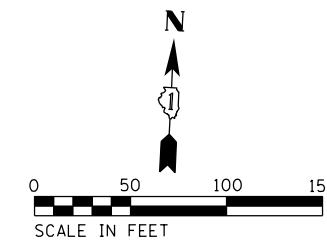
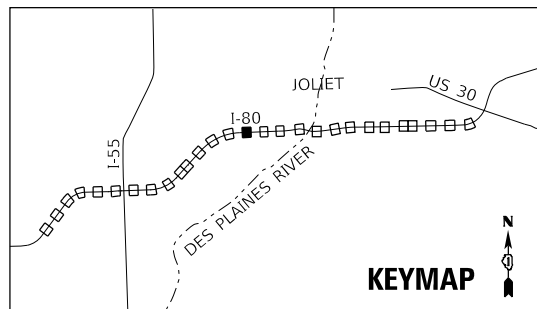
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED BLUETOOTH
DETECTOR PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	107
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

ITS-64
*I-55, I-80, & I-290



MODEL: Default
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PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

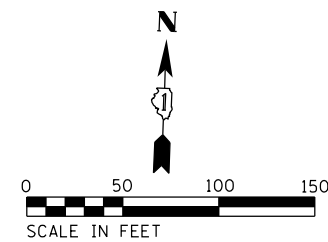
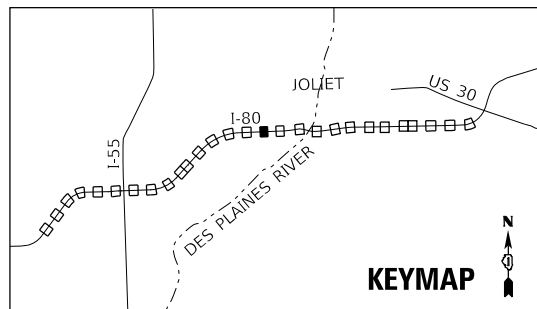
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED BLUETOOTH
DETECTOR PLAN

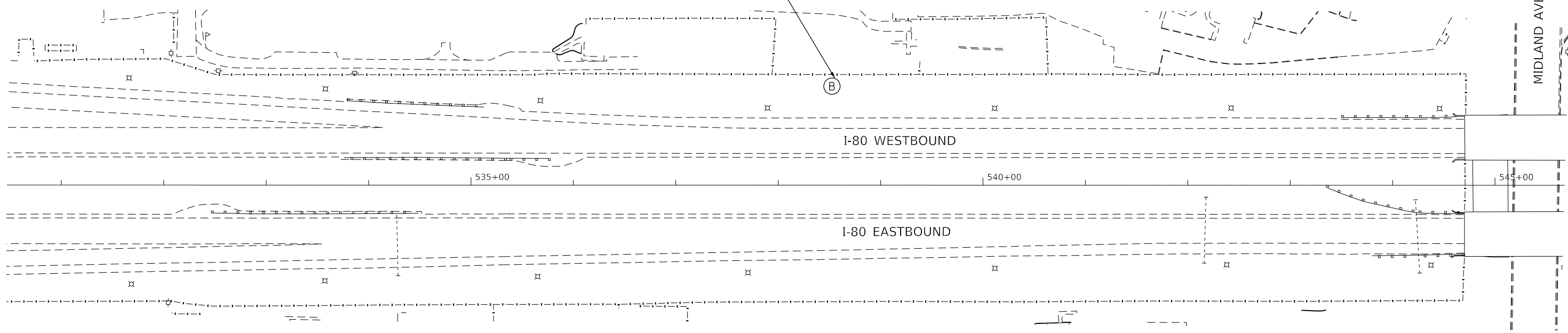
SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	108
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-65
 *I-55, I-80, & I-290



PROPOSED BLUETOOTH DETECTOR
 MM 131.0
 (SEE ITS-92, ITS-93, ITS-94, ITS-95
 FOR BLUETOOTH DETAILS)
 STA. 538+54



MIDLAND AVENUE

MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\15121666-shr-its-66-bluetooth.dgn



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	DRAWN - NG	REVISED -
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PLOT DATE = 10/10/2018	DATE - 10/12/2018	REVISED -

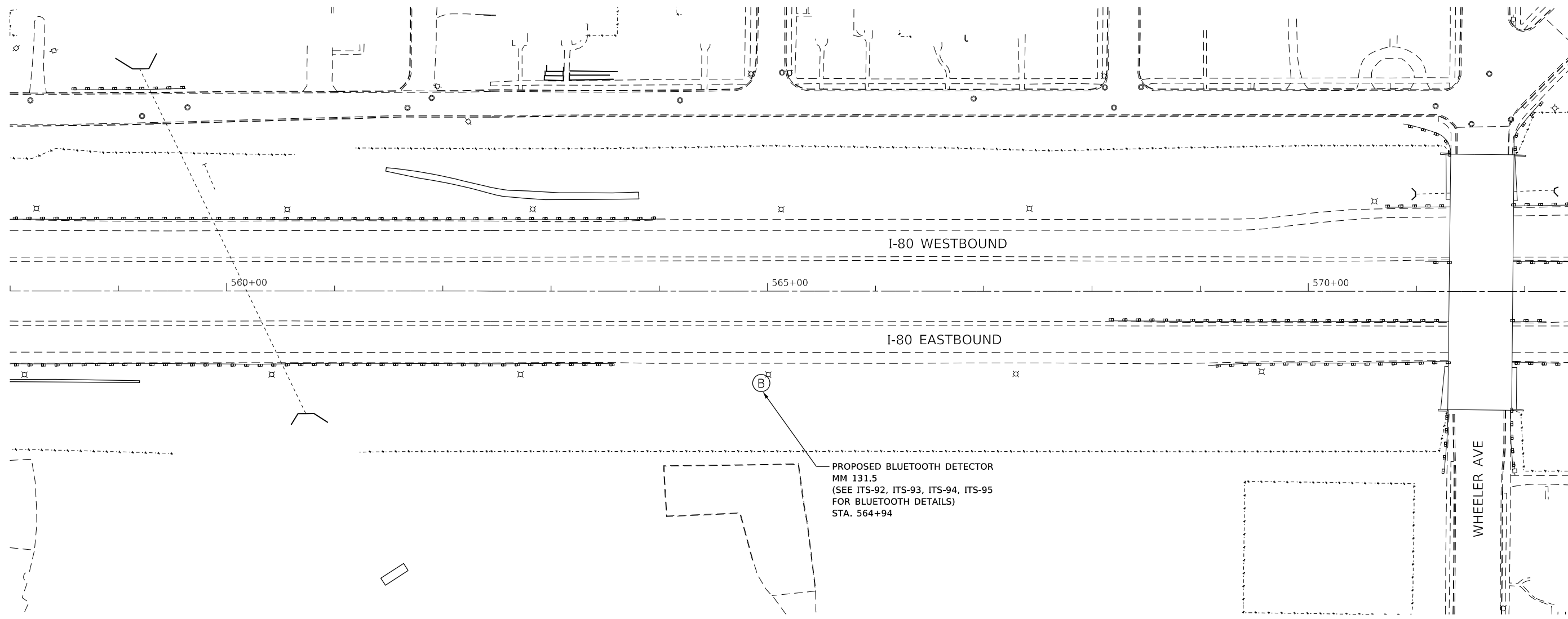
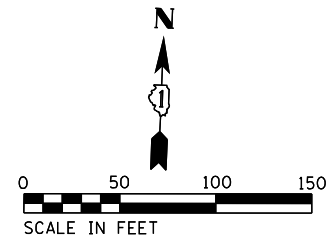
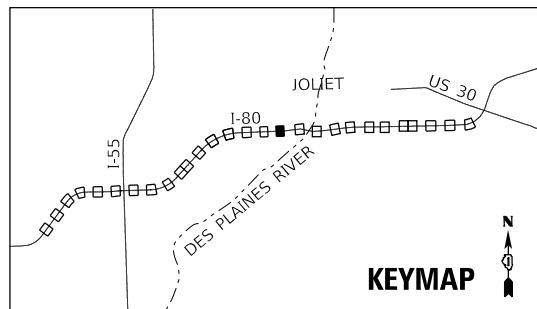
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PROPOSED BLUETOOTH
 DETECTOR PLAN

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	109
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62G66	

ITS-66
 *I-55, I-80, & I-290



PROPOSED BLUETOOTH DETECTOR
 MM 131.5
 (SEE ITS-92, ITS-93, ITS-94, ITS-95
 FOR BLUETOOTH DETAILS)
 STA. 564+94

WHEELER AVE

MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\106024-I-80-Bluetooth.dgn



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	DATE - 10/12/2018	REVISED -

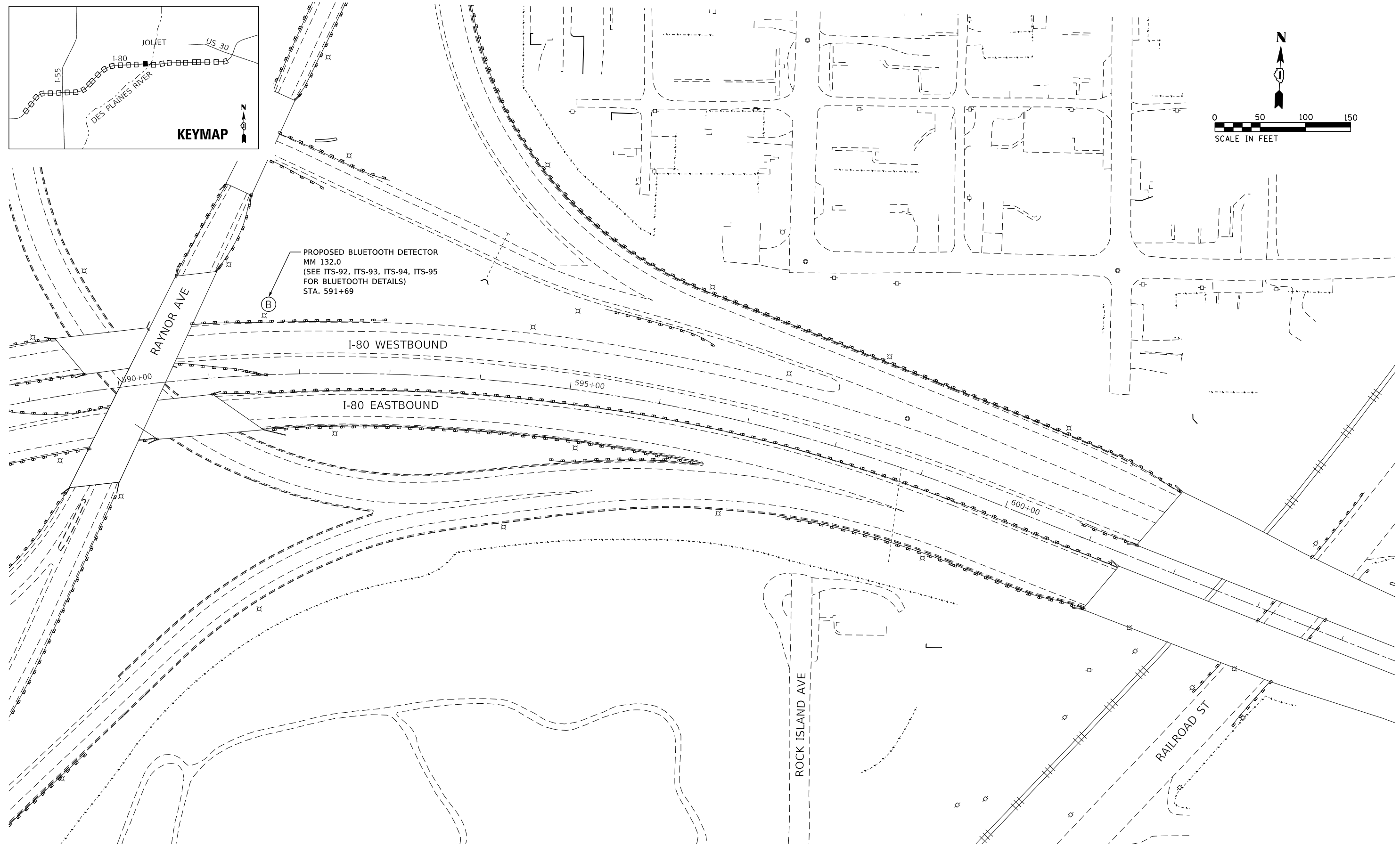
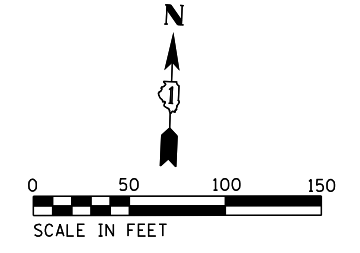
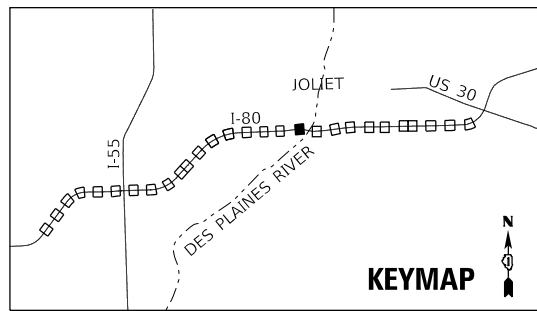
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PROPOSED BLUETOOTH
 DETECTOR PLAN

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	110
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-67
 *I-55, I-80, & I-290



PROPOSED BLUETOOTH DETECTOR
MM 132.0
(SEE ITS-92, ITS-93, ITS-94, ITS-95
FOR BLUETOOTH DETAILS)
STA. 591+69

I-80 WESTBOUND

I-80 EASTBOUND

RAYNOR AVE

ROCK ISLAND AVE

RAILROAD ST

590+00

595+00

600+00

MODEL: Default
FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\1060666\1-ITS-92-ITS-95-Bluetooth.dgn



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PLOT SCALE = 99.9998 ' / in.
PLOT DATE = 10/10/2018

DESIGNED - KV _____
DRAWN - NG _____
CHECKED - KP _____
DATE - 10/12/2018

REVISED - _____
REVISED - _____
REVISED - _____
REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

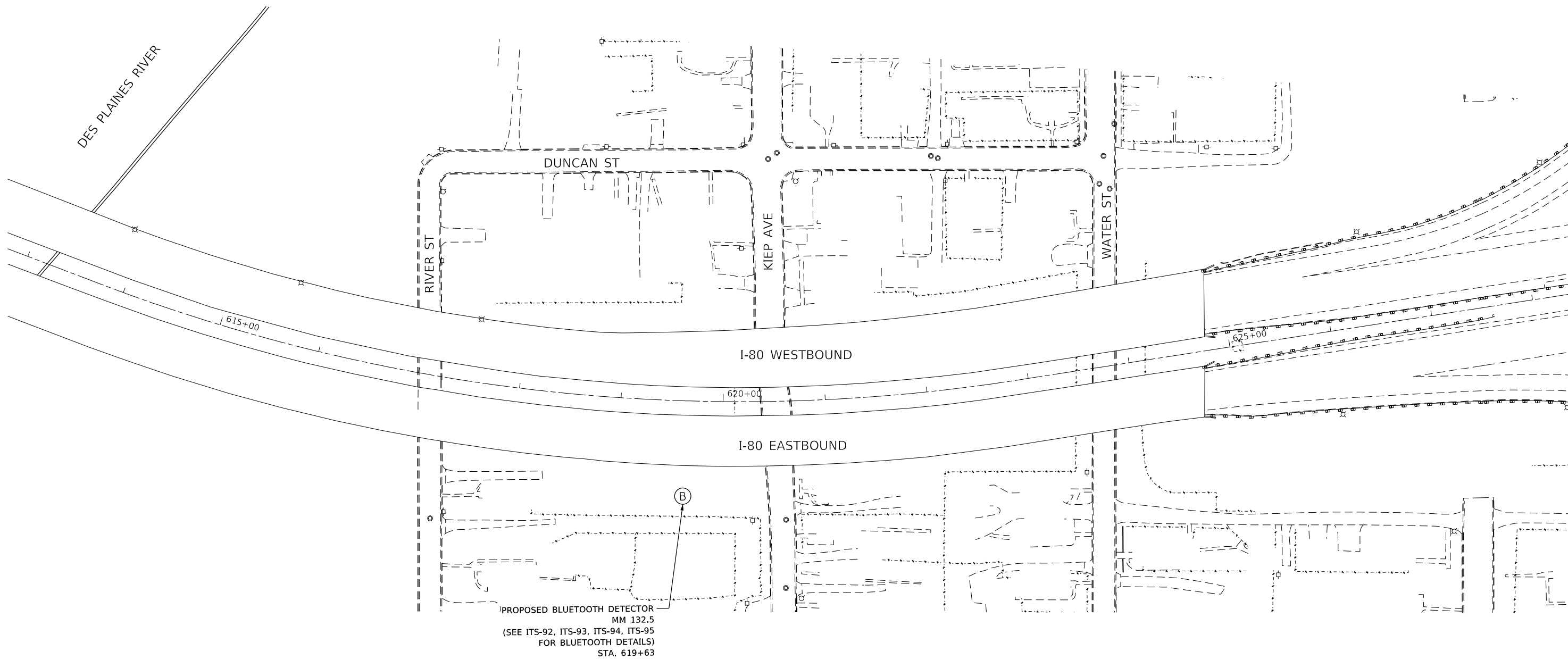
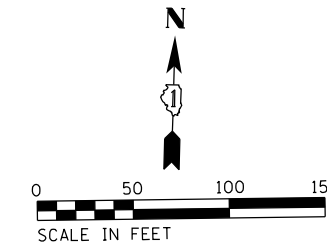
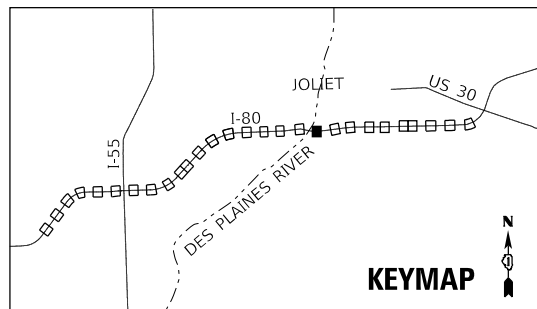
BLUETOOTH DETECTOR PLAN

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	111
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62G66	

ITS-68

*I-55, I-80, & I-290



MODEL: Default
FILE NAME: I:\1060\Task_Order_604_CADD\CADD_Sheet\106024-I-80-Bluetooth.dgn



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PLOT SCALE = 99.9998 ' / in.	DRAWN - NG	REVISED -
PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

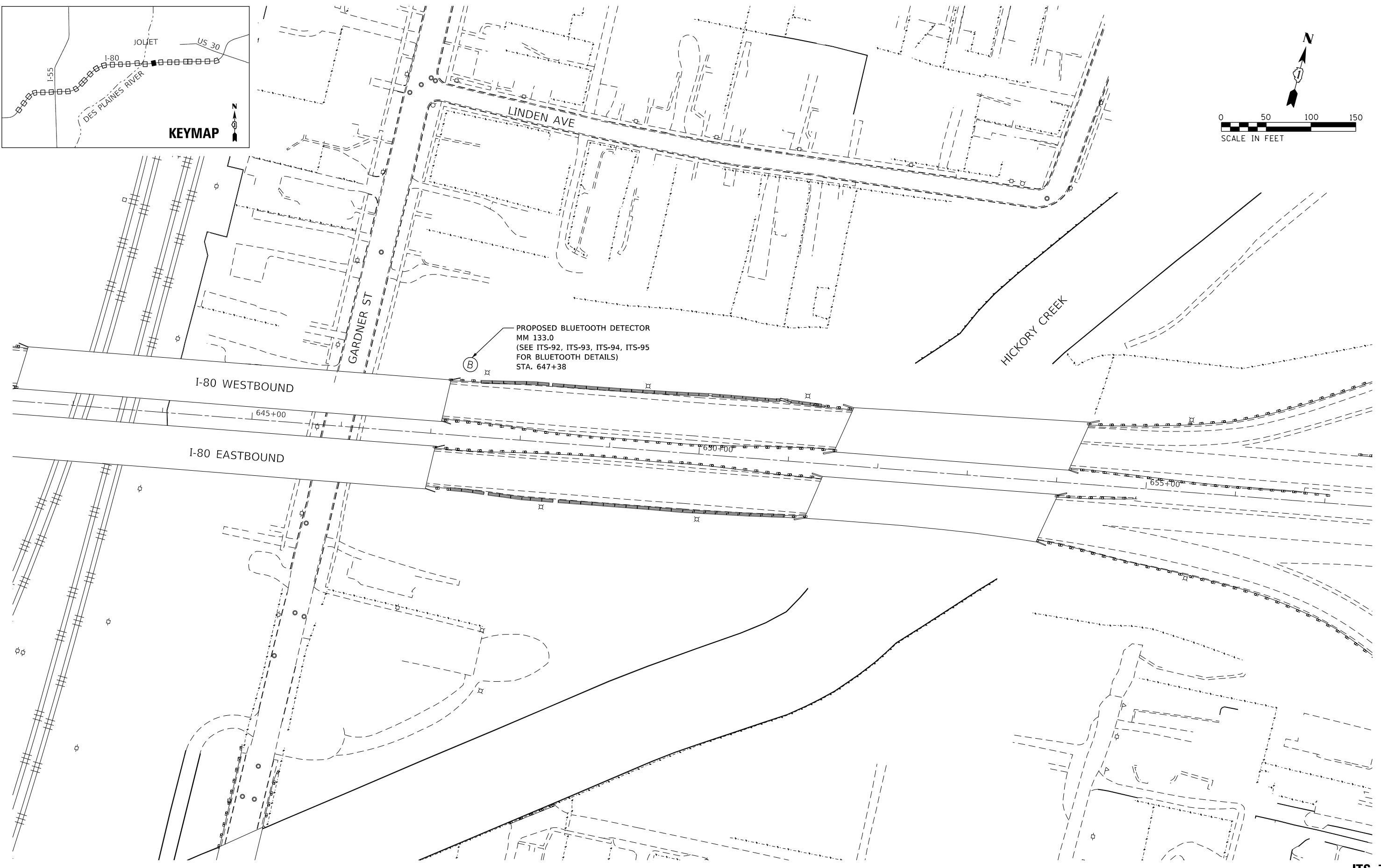
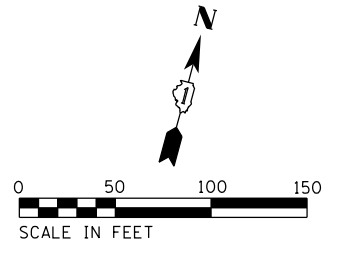
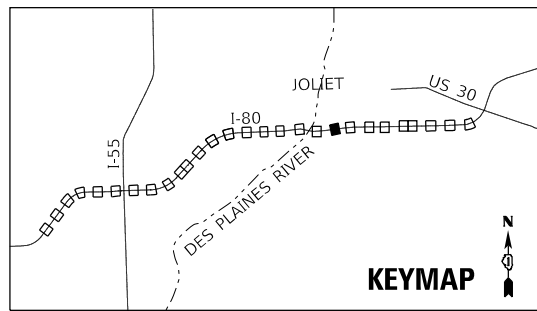
PROPOSED BLUETOOTH
DETECTOR PLAN

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	112
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-69

*I-55, I-80, & I-290



MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\1060666-shr-its-70-bluetooth.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
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PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

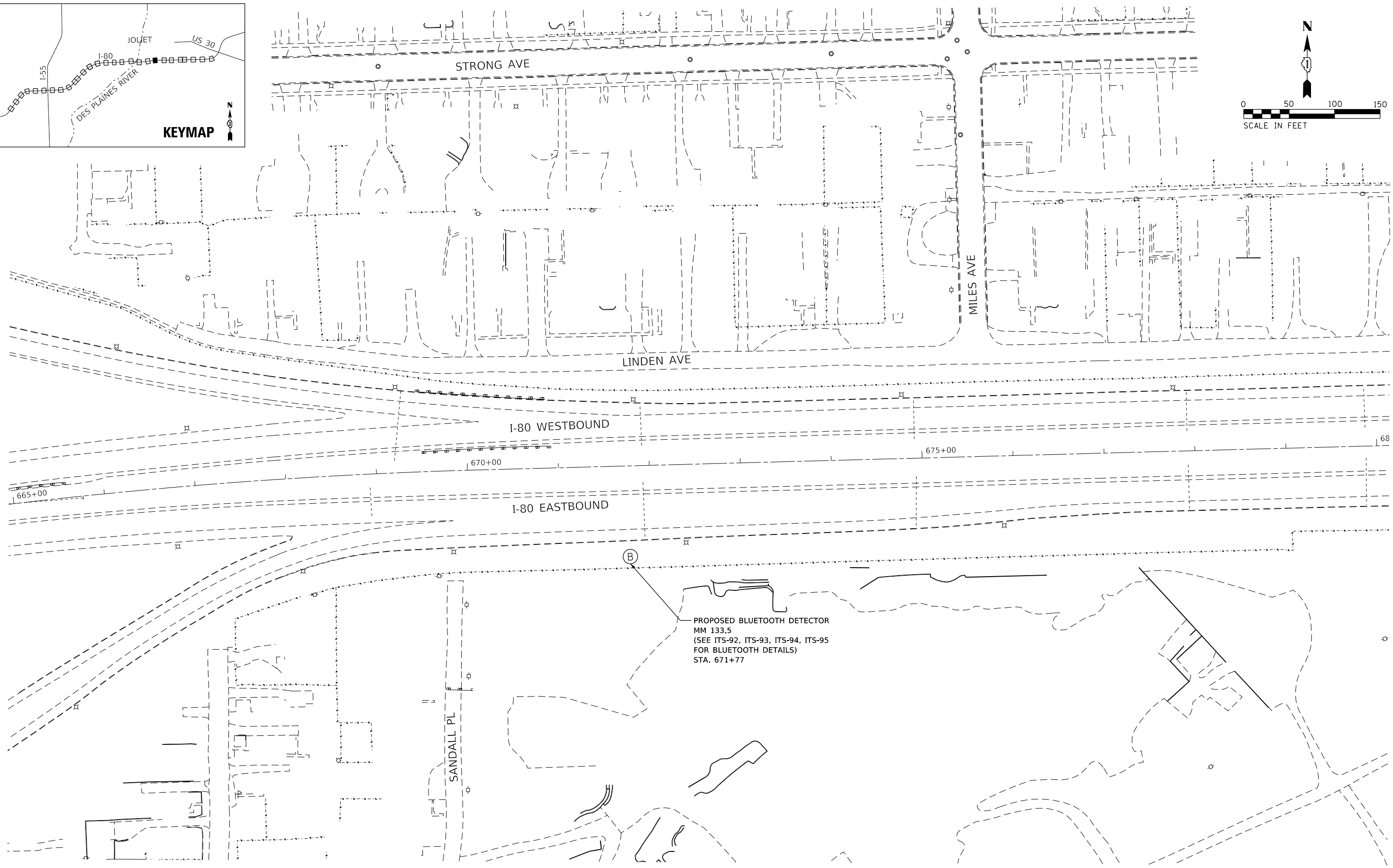
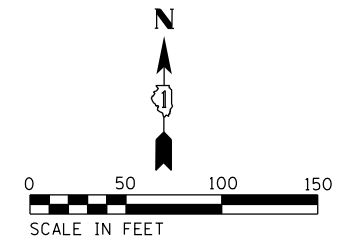
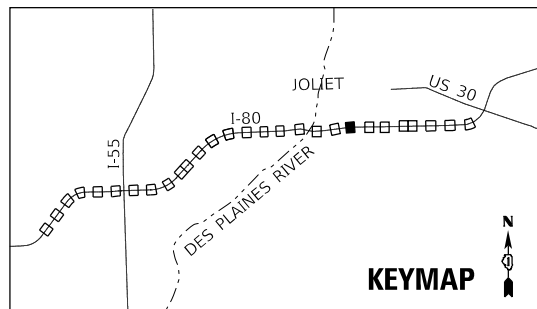
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED BLUETOOTH
DETECTOR PLAN

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	113
CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				

ITS-70
 *I-55, I-80, & I-290



PROPOSED BLUETOOTH DETECTOR
 MM 133.5
 (SEE ITS-92, ITS-93, ITS-94, ITS-95
 FOR BLUETOOTH DETAILS)
 STA. 671+77

MODEL: Default
 FILE NAME: J:\1060\Task_Order_6004_CADD\CADD_Sheet\15121666-shr-4r521-bluetooth.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
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	DATE - 10/12/2018	REVISED -

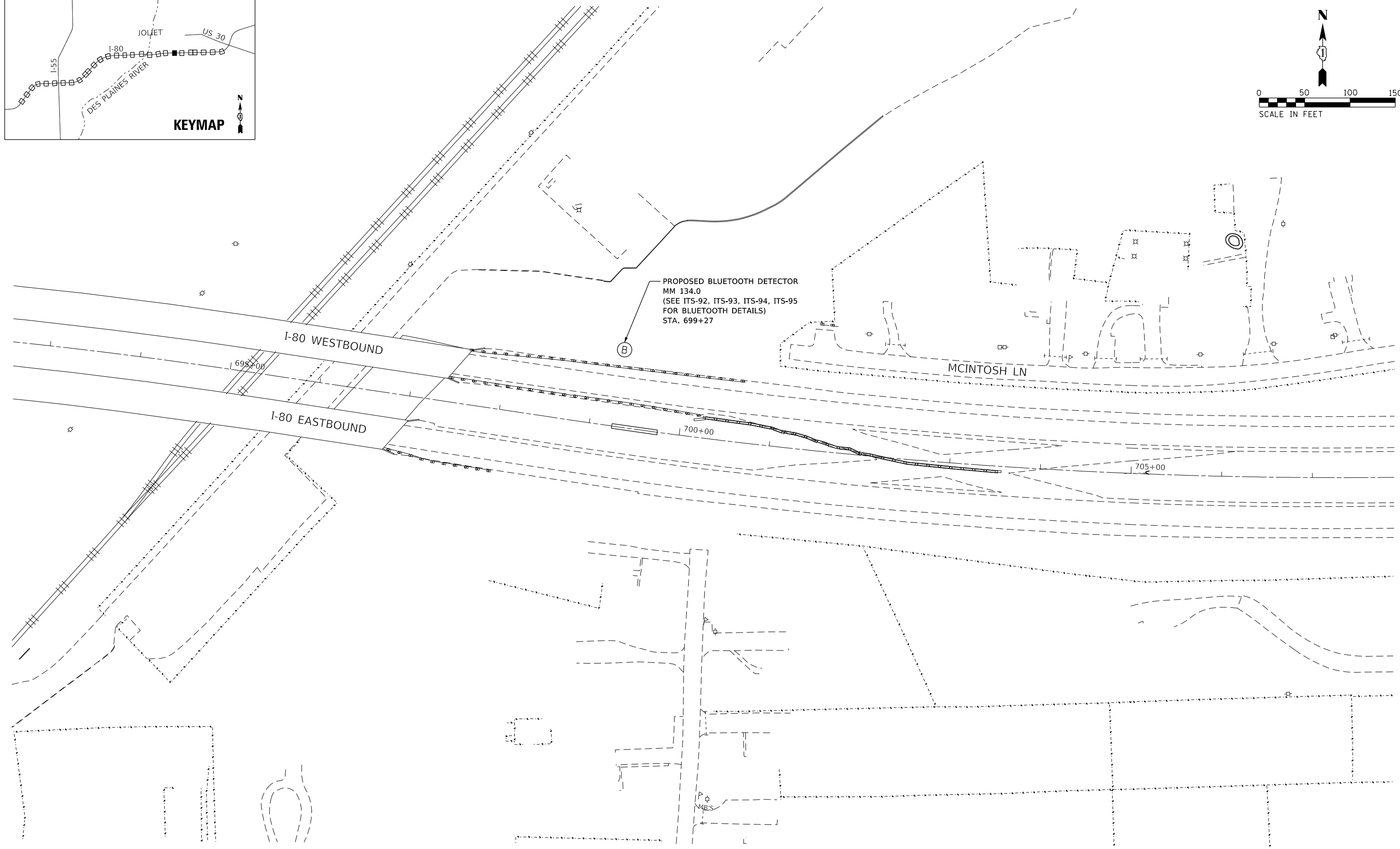
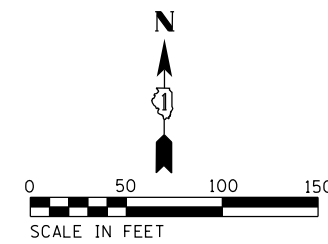
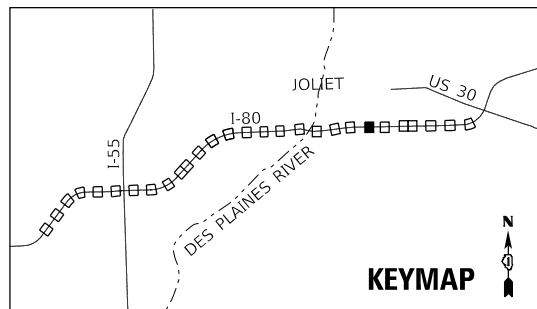
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

**PROPOSED BLUETOOTH
 DETECTOR PLAN**

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	114
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-71
 *I-55, I-80, & I-290



PROPOSED BLUETOOTH DETECTOR
 MM 134.0
 (SEE ITS-92, ITS-93, ITS-94, ITS-95
 FOR BLUETOOTH DETAILS)
 STA. 699+27

I-80 WESTBOUND

I-80 EASTBOUND

MCINTOSH LN

695+00

700+00

705+00

MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\10121666-shr-its-92-blutooth.dgn



USER NAME = nguo	DESIGNED - KV _____	REVISED - _____
DRAWN - NG _____	CHECKED - KP _____	REVISED - _____
PLOT SCALE = 99.9998 ' / in.	DATE = 10/12/2018	REVISED - _____
PLOT DATE = 10/10/2018		

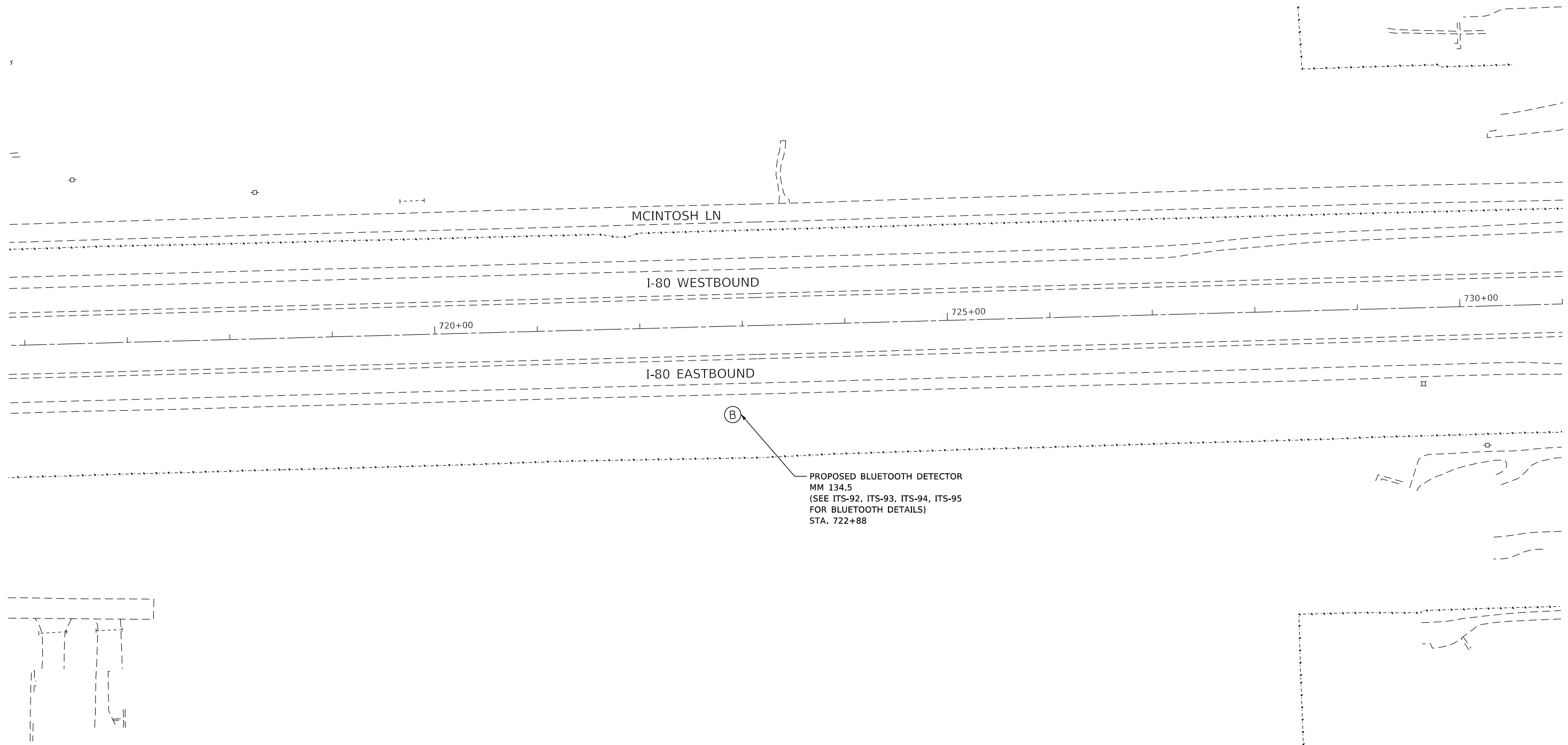
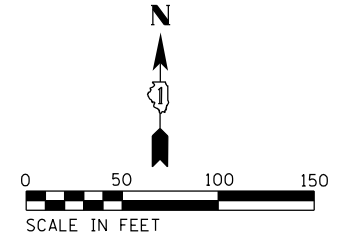
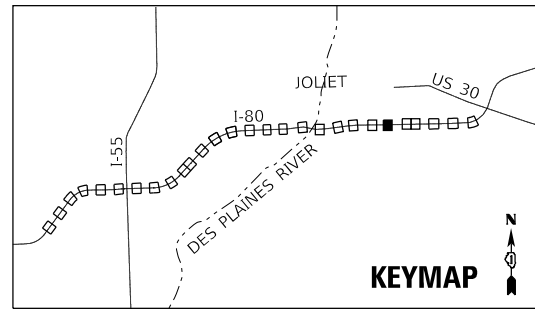
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

**PROPOSED BLUETOOTH
 DETECTOR PLAN**

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	115
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

ITS-72
 *I-55, I-80, & I-290



MODEL: Default
 FILE NAME: J:\1060\Task_Order_6\04_CADD\CADD_Sheets\1\2\1266.rvt\its73-bluetooth.dgn

ITS-73
 *I-55, I-80, & I-290



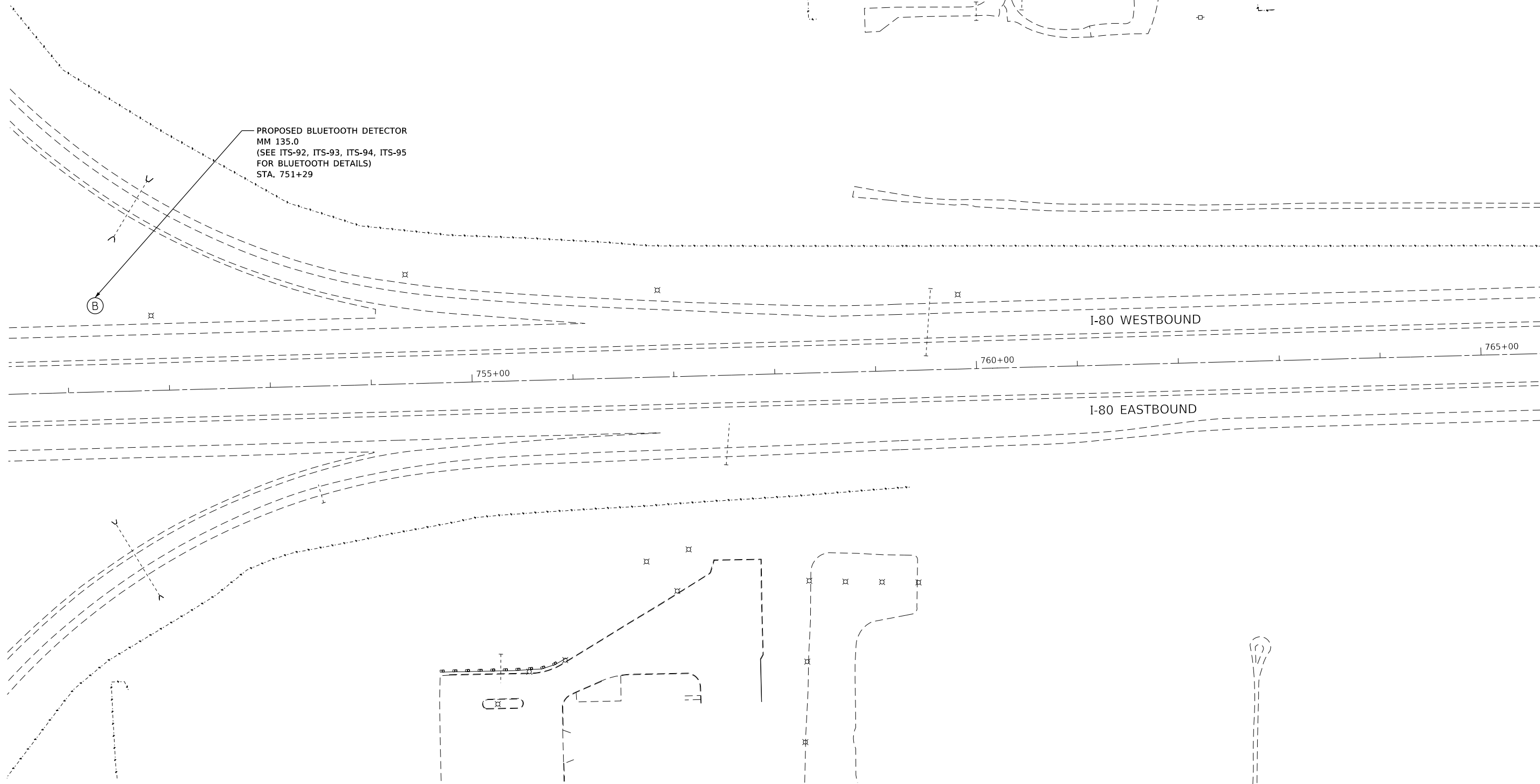
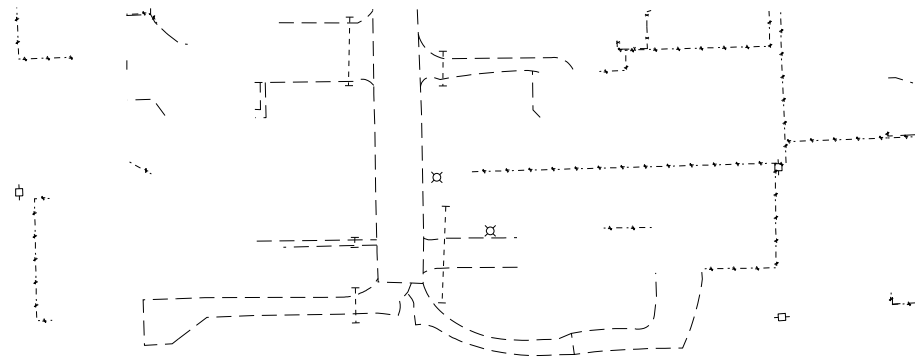
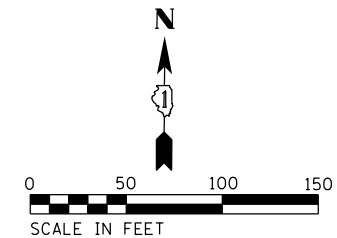
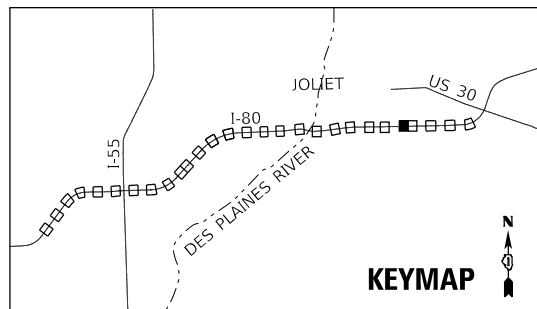
USER NAME = nguo	DESIGNED - KV_____	REVISED - _____
PLOT SCALE = 99.9998 1/ in.	CHECKED - KP_____	REVISED - _____
PLOT DATE = 10/10/2018	DATE - 10/12/2018	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED BLUETOOTH
DETECTOR PLAN

SCALE: _____ SHEET ____ OF ____ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2018-024-I	WILL/DUPAGE	177	116
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	



PROPOSED BLUETOOTH DETECTOR
 MM 135.0
 (SEE ITS-92, ITS-93, ITS-94, ITS-95
 FOR BLUETOOTH DETAILS)
 STA. 751+29

I-80 WESTBOUND

I-80 EASTBOUND

755+00

760+00

765+00

MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\106024-I-80-Bluetooth.dgn



USER NAME = nguo
 PLOT SCALE = 99.9998 ' / in.
 PLOT DATE = 10/10/2018

DESIGNED - KV _____
 DRAWN - NG _____
 CHECKED - KP _____
 DATE - 10/12/2018

REVISED - _____
 REVISED - _____
 REVISED - _____
 REVISED - _____

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

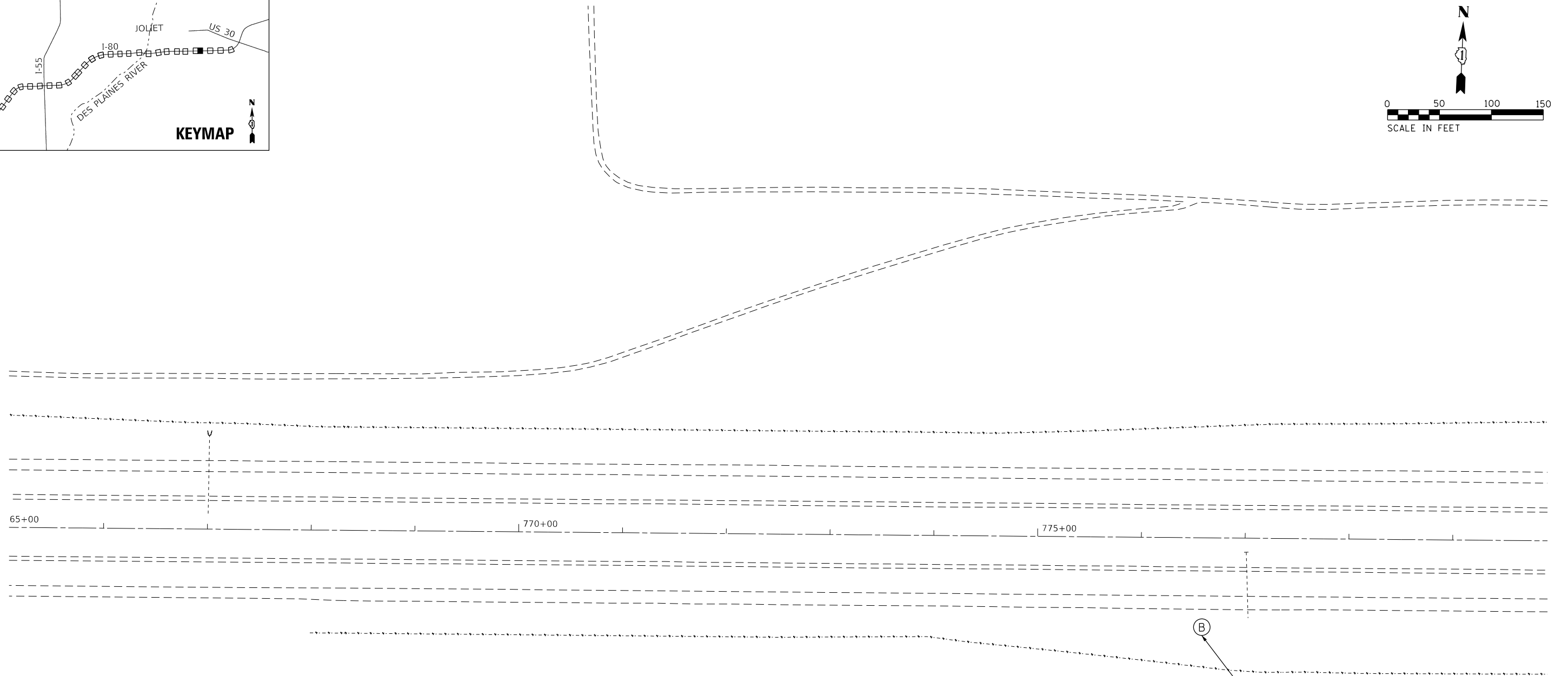
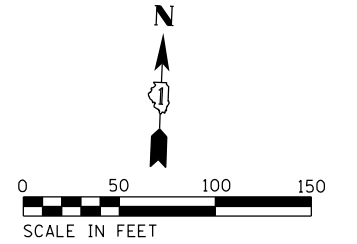
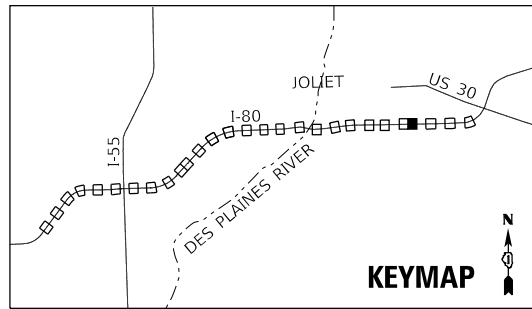
PROPOSED BLUETOOTH
 DETECTOR PLAN

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	117
			CONTRACT NO. 62G66	
			ILLINOIS FED. AID PROJECT	

ITS-74

*I-55, I-80, & I-290



Ⓑ

PROPOSED BLUETOOTH DETECTOR
 MM 135.5
 (SEE ITS-92, ITS-93, ITS-94, ITS-95
 FOR BLUETOOTH DETAILS)
 STA. 776+59

MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\101216662\ht-4r525-Bluetooth.dgn



USER NAME = nguo	DESIGNED - KV _____	REVISED - _____
PLOT SCALE = 99.9998 ' / in.	DRAWN - NG _____	REVISED - _____
PLOT DATE = 10/10/2018	CHECKED - KP _____	REVISED - _____
	DATE - 10/12/2018	REVISED - _____

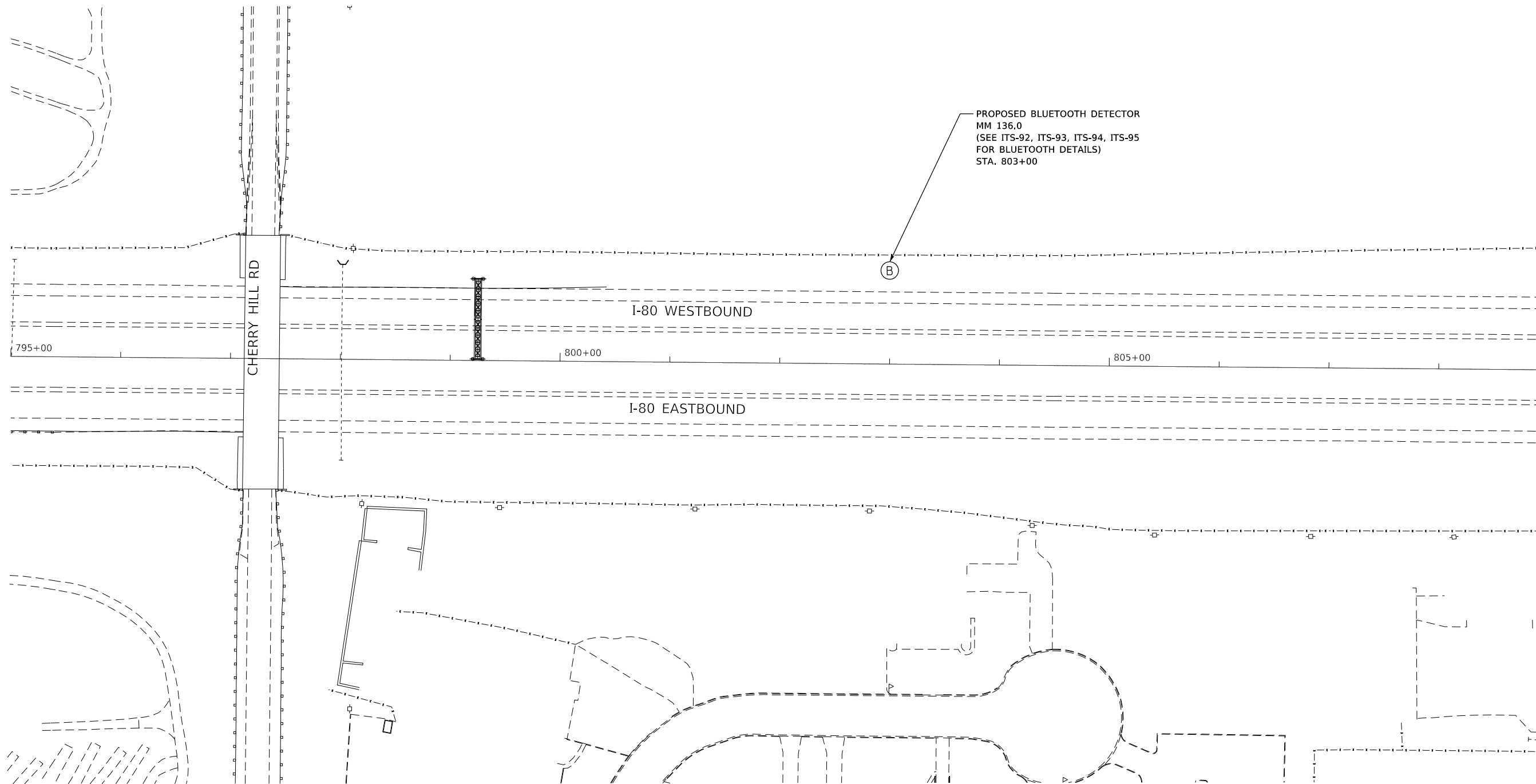
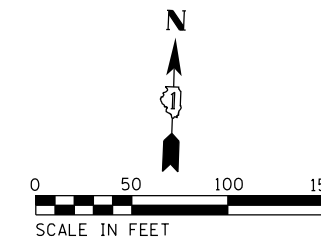
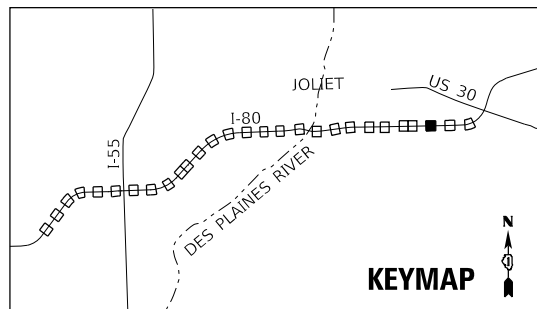
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PROPOSED BLUETOOTH
 DETECTOR PLAN**

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	118
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62G66	

ITS-75
 *I-55, I-80, & I-290



PROPOSED BLUETOOTH DETECTOR
 MM 136.0
 (SEE ITS-92, ITS-93, ITS-94, ITS-95
 FOR BLUETOOTH DETAILS)
 STA. 803+00

(B)

I-80 WESTBOUND

I-80 EASTBOUND

CHERRY HILL RD

795+00

800+00

805+00

MODEL: D:\default
 FILE NAME: ILL10601\Task_Order_6104_CADD\CADD_Sheet\101216662\ht-4r5256-Bluetooth.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
PLOT SCALE = 99.9998 ' / in.	DRAWN - NG	REVISED -
PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

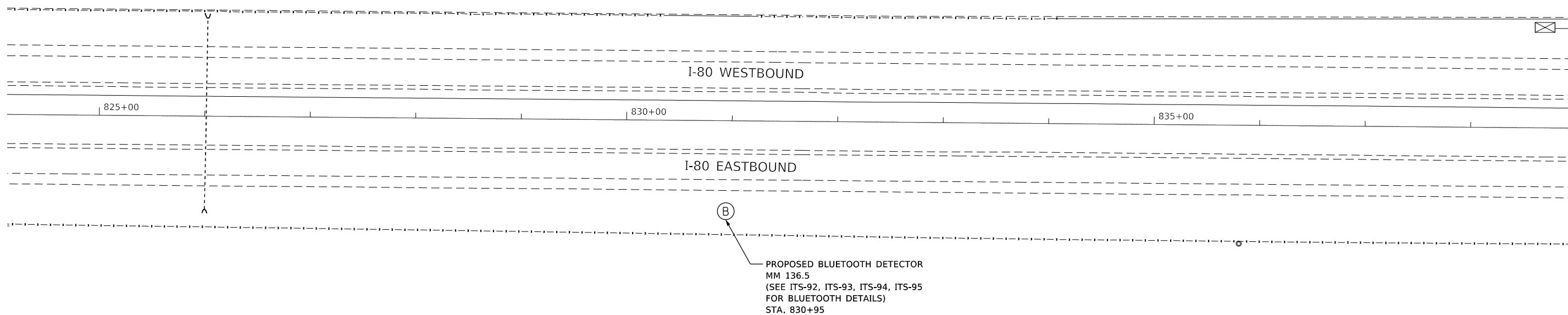
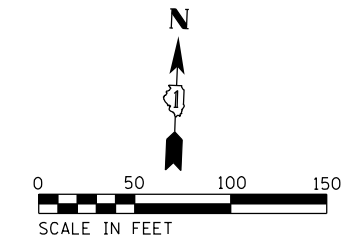
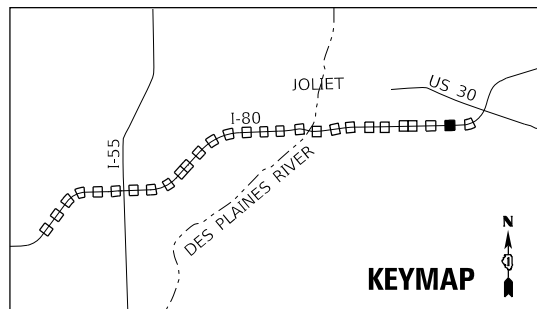
PROPOSED BLUETOOTH
 DETECTOR PLAN

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	119
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-76

*I-55, I-80, & I-290



PROPOSED BLUETOOTH DETECTOR
 MM 136.5
 (SEE ITS-92, ITS-93, ITS-94, ITS-95
 FOR BLUETOOTH DETAILS)
 STA. 830+95

MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\1060-024-I-80-Bluetooth.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
PLOT SCALE = 99.9998 ' / in.	DRAWN - NG	REVISED -
PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

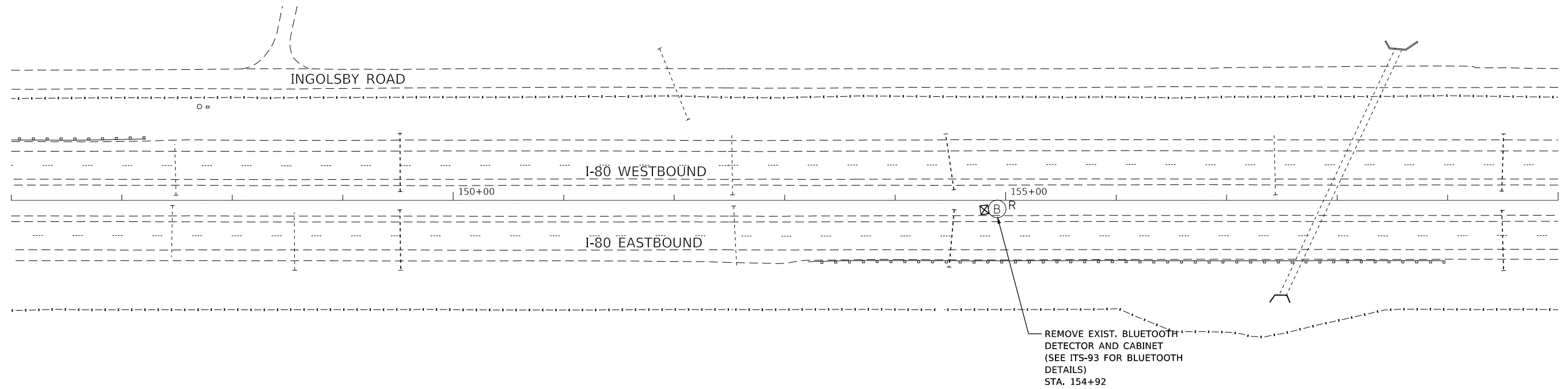
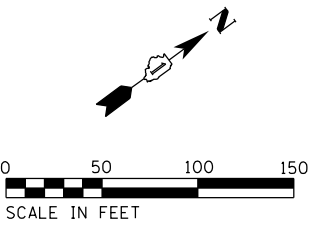
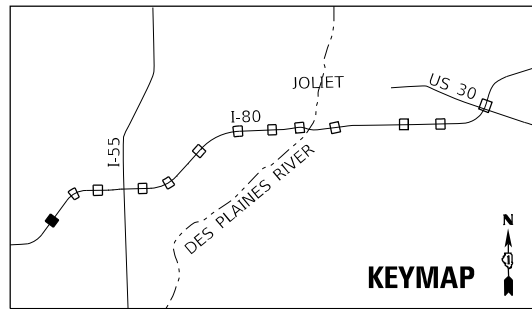
**PROPOSED BLUETOOTH
DETECTOR PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	120
			CONTRACT NO. 62G66	
			ILLINOIS FED. AID PROJECT	

ITS-77

*I-55, I-80, & I-290



MODEL: Default
 FILE: \\server11\00601\Task_Order_6001_CADD\CADD_Sheets\12\6266\sh-6266-1-Bluetooth_removal.dgn



USER NAME = nquo	DESIGNED - KV	REVISED -
PLOT SCALE = 100.0341' / in.	DRAWN - NG	REVISED -
PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

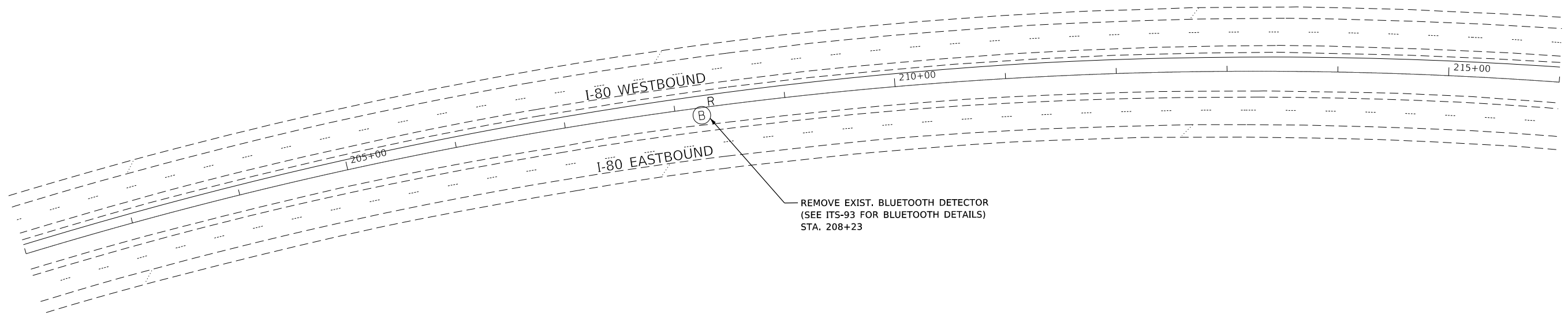
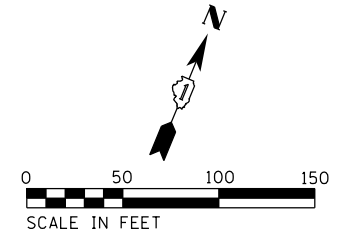
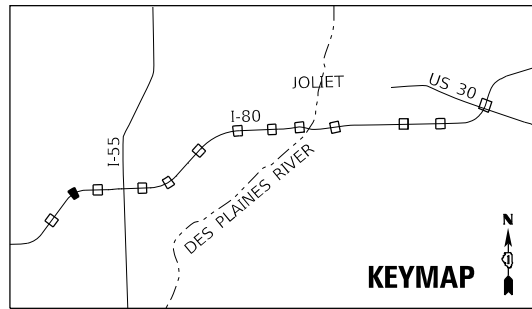
BLUETOOTH DETECTOR
 REMOVAL PLAN

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	122
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-79

*I-55, I-80, & I-290



REMOVE EXIST. BLUETOOTH DETECTOR
(SEE ITS-93 FOR BLUETOOTH DETAILS)
STA. 208+23

MODEL: Default
FILE NAME: I:\1060\Task_Order_604_CADD\CADD_Sheet\15121666\ht-602-bluetooth_removal.dgn



USER NAME = ngu0	DESIGNED - KV	REVISED -
DRAWN - NG	REVISIONS	
PLOT SCALE = 99.9998 ' / in.	CHECKED - KP	REVISED -
PLOT DATE = 10/10/2018	DATE - 10/12/2018	REVISED -

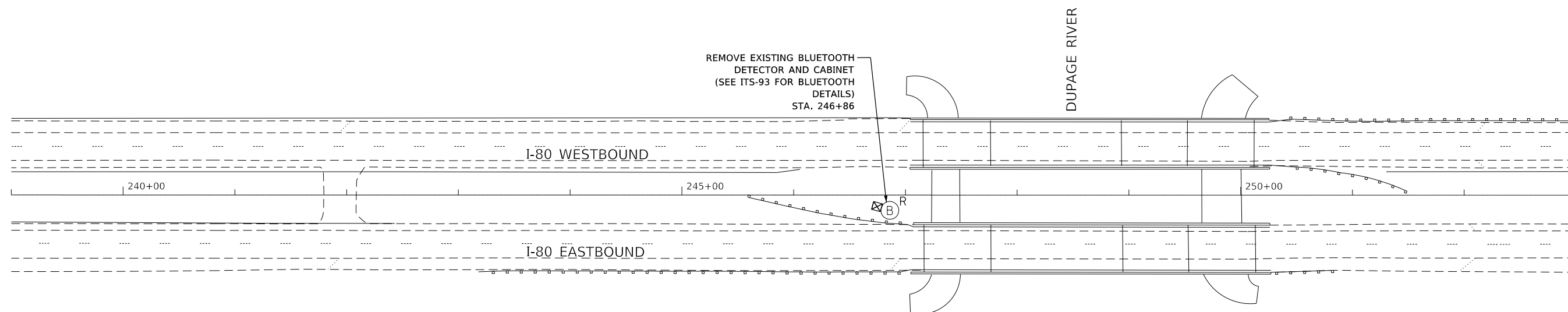
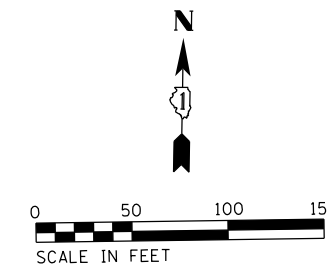
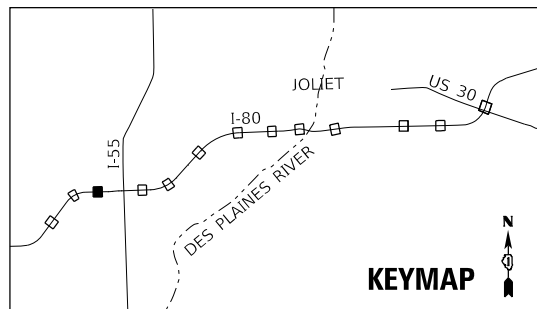
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**BLUETOOTH DETECTOR
REMOVAL PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	123
			CONTRACT NO. 62G66	
		ILLINOIS	FED. AID PROJECT	

ITS-80
*I-55, I-80, & I-290



(:

MODEL: D:\default\FILE NAME: ILL10601\Task_Order_6004_CADD\CADD_Sheet\151216662\ht-ht603-bluetooth_removal.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
PLOT SCALE = 99.9998 ' / in.	DRAWN - NG	REVISED -
PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

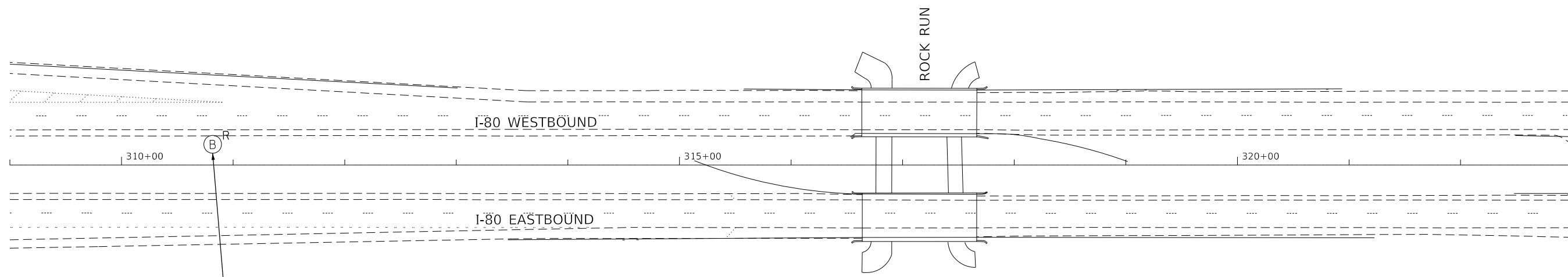
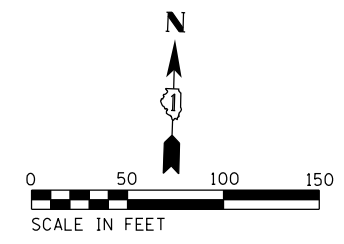
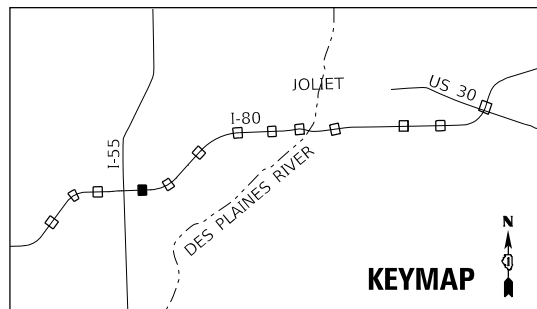
**BLUETOOTH DETECTOR
REMOVAL PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	124
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

ITS-81

*I-55, I-80, & I-290



REMOVE EXIST. BLUETOOTH DETECTOR
 (SEE ITS-93 FOR BLUETOOTH DETAILS)
 STA. 310+82

MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\101216662\ht-tr6604-bluetooth_removal.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
PLOT SCALE = 99.9998 ' / in.	DRAWN - NG	REVISED -
PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

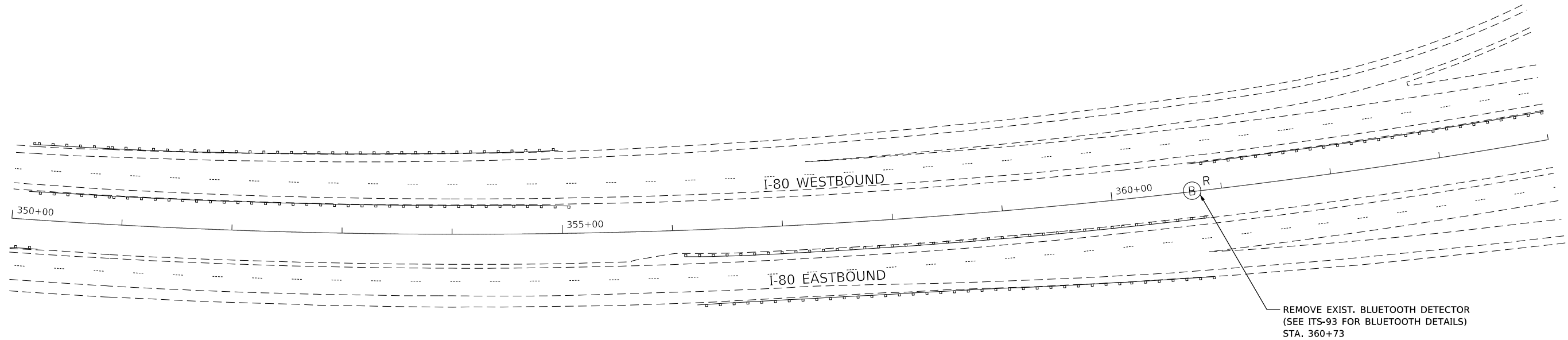
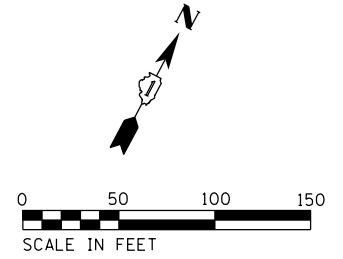
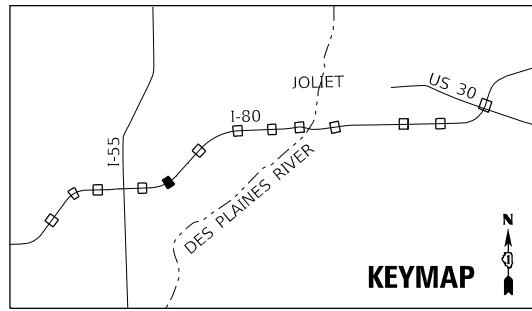
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

**BLUETOOTH DETECTOR
 REMOVAL PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	125
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

ITS-82
 *I-55, I-80, & I-290



REMOVE EXIST. BLUETOOTH DETECTOR
(SEE ITS-93 FOR BLUETOOTH DETAILS)
STA. 360+73

MODEL: Default
FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\10121666\shl-tr605-blutooth_removal.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
PLOT SCALE = 99.9998 ' / in.	DRAWN - NG	REVISED -
PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

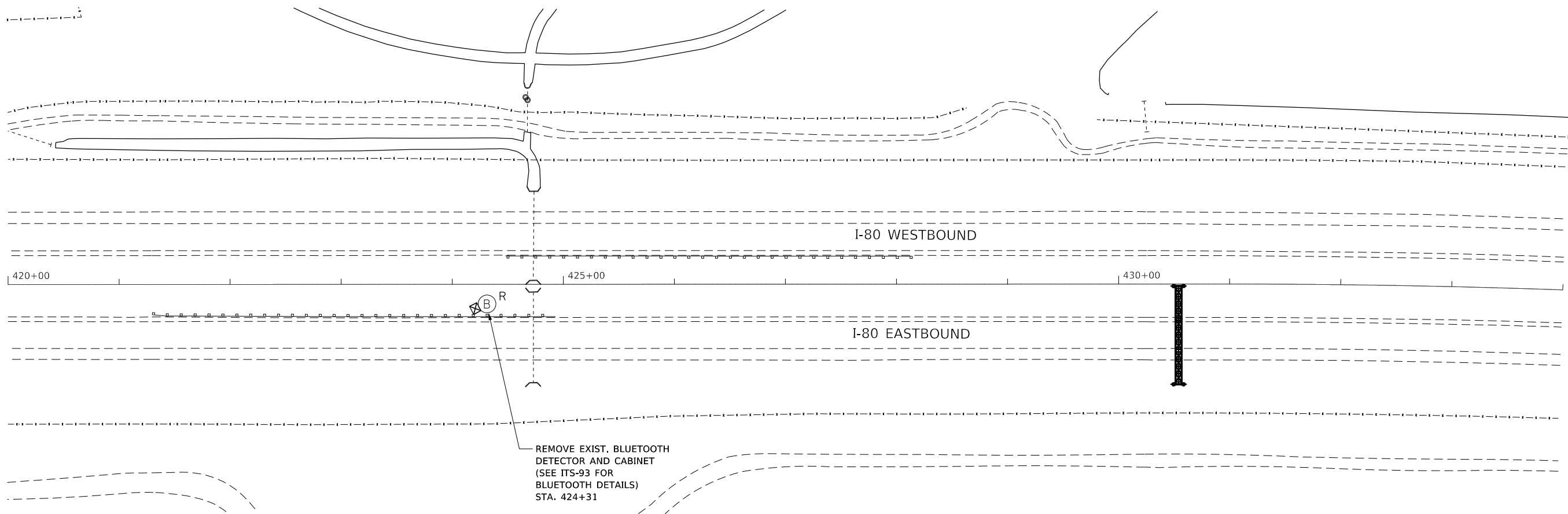
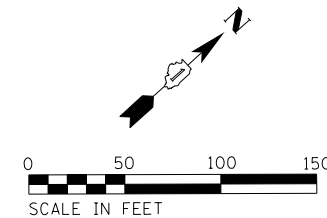
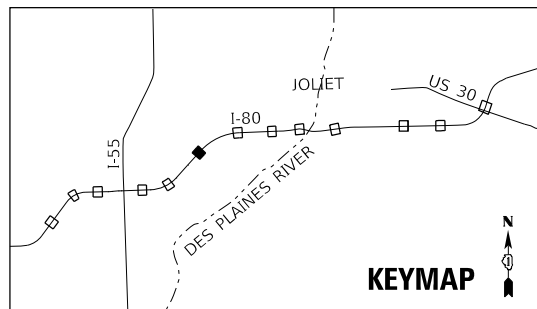
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**BLUETOOTH DETECTOR
REMOVAL PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	126
			CONTRACT NO. 62G66	
			ILLINOIS FED. AID PROJECT	

ITS-83
*I-55, I-80, & I-290



MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\101216662\ht-42666-Bluetooth_removal.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
DRAWN - NG	REVISIONS	
PLOT SCALE = 99.9998 ' / in.	CHECKED - KP	REVISED -
PLOT DATE = 10/10/2018	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

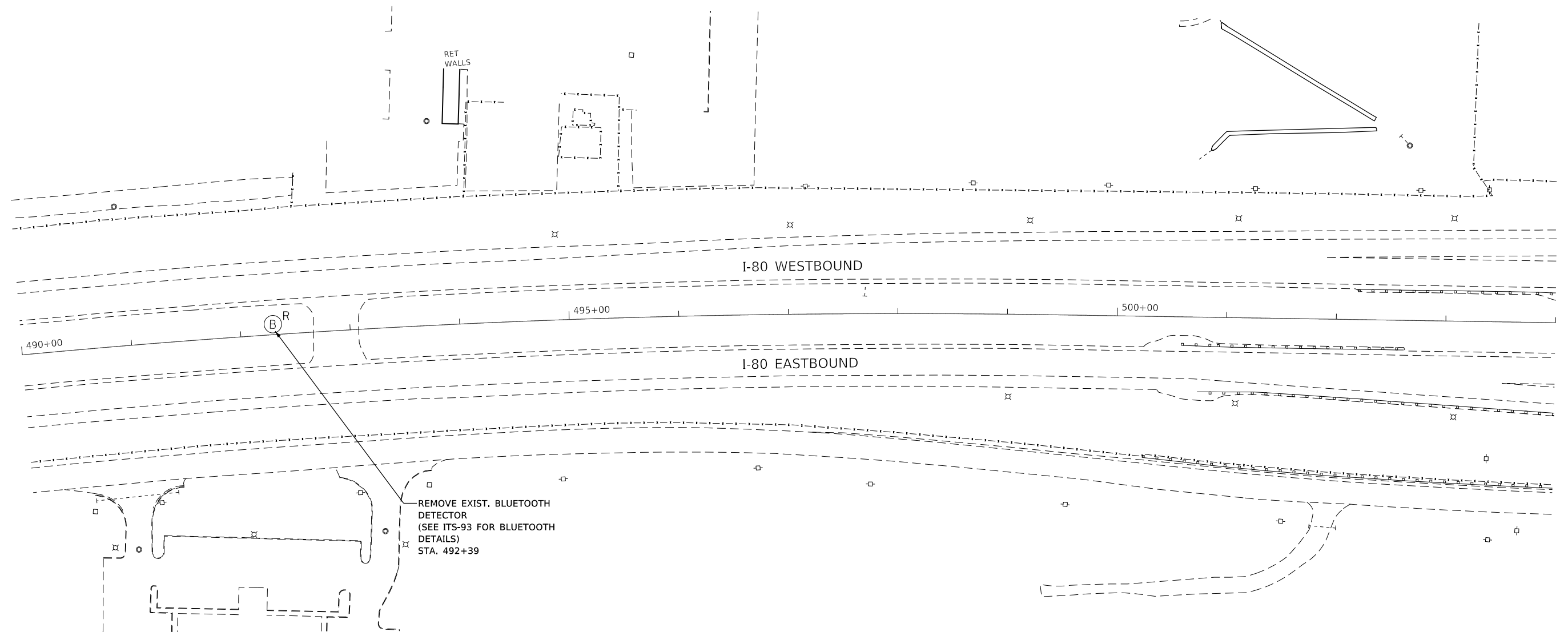
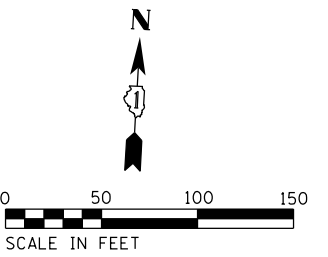
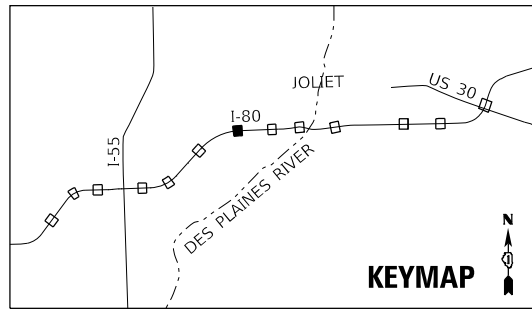
PROPOSED ITS PLAN
FIBER OPTIC BACKBONE

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	127
			CONTRACT NO. 62G66	
		ILLINOIS	FED. AID PROJECT	

ITS-84

*I-55, I-80, & I-290



MODEL: Default
FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\15162662\ht-49607-Bluetooth_removal.dgn



USER NAME = nguo	DESIGNED - KV	REVISED -
PLOT SCALE = 99.9998 ' / in.	DRAWN - NG	REVISED -
PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

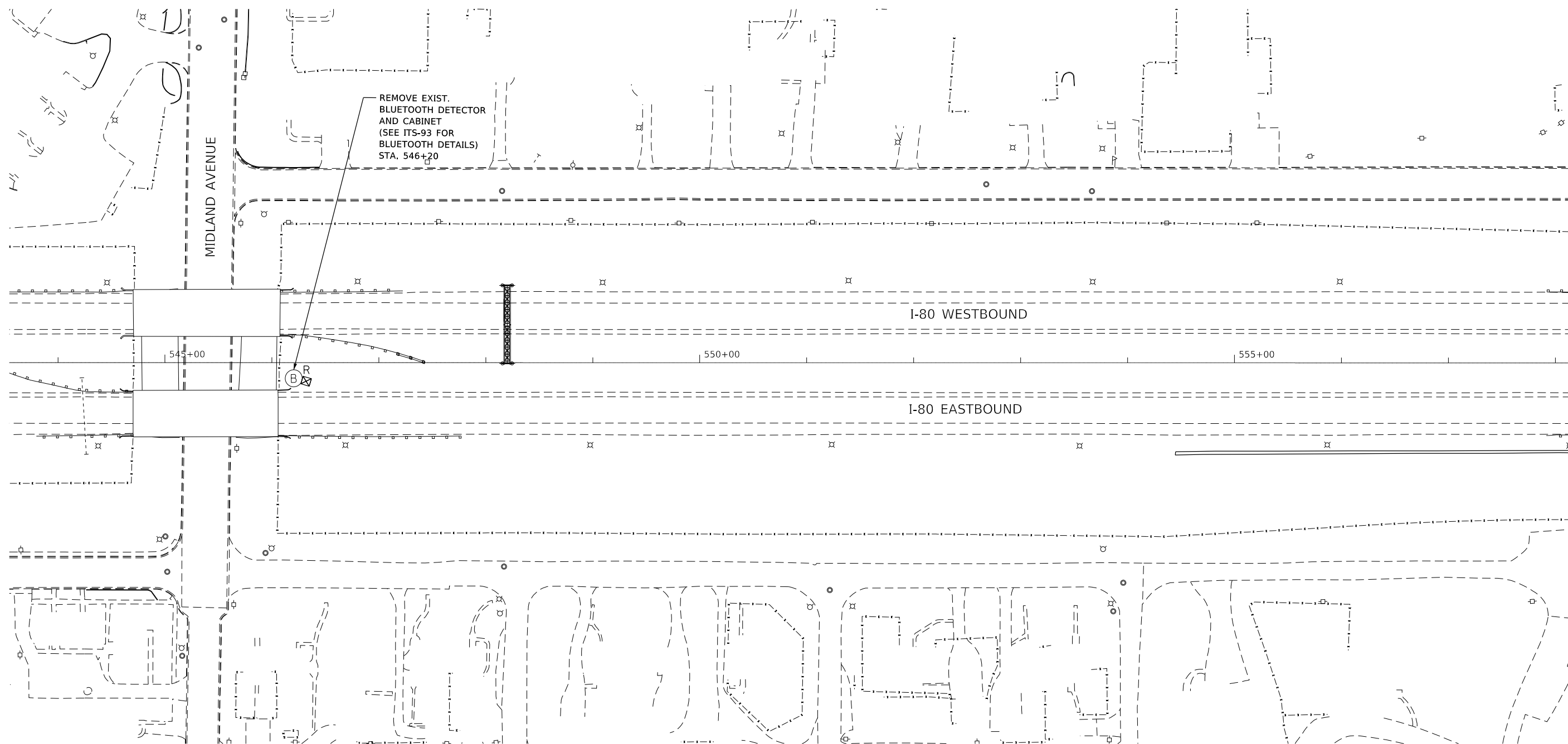
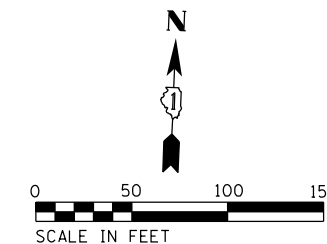
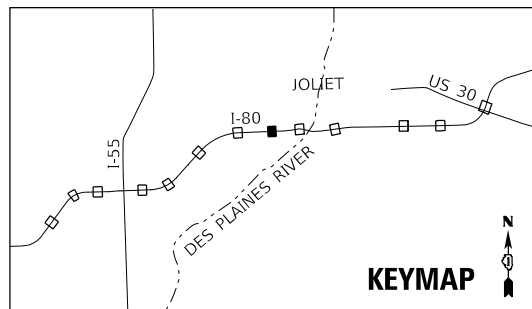
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**BLUETOOTH DETECTOR
REMOVAL PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	128
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

ITS-85
*I-55, I-80, & I-290



MODEL: Default
 FILE NAME: I:\1060\Task_Order_604_CADD\CADD_Sheet\10121666\ht-ht608-bluetooth_removal.dgn



USER NAME = nguoo
 PLOT SCALE = 99.9998 ' / in.
 PLOT DATE = 10/10/2018

DESIGNED - KV
 DRAWN - NG
 CHECKED - KP
 DATE - 10/12/2018

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

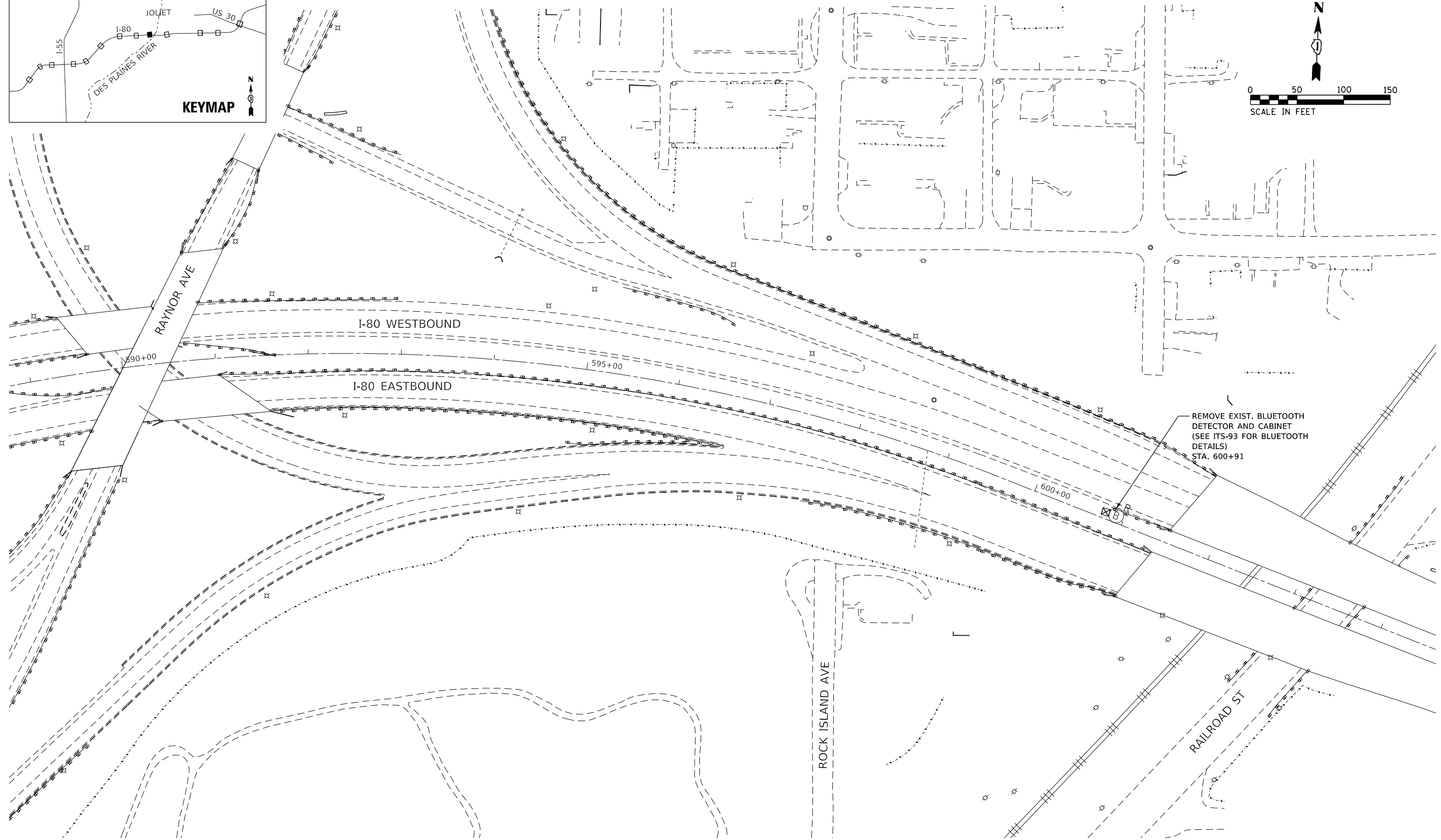
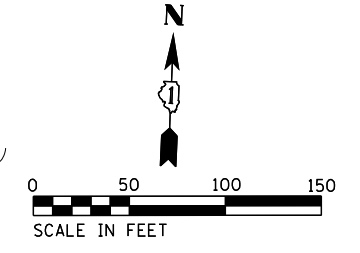
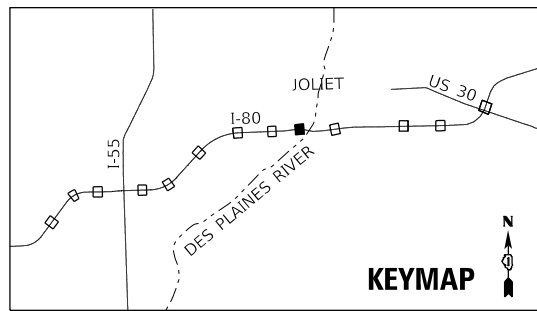
**BLUETOOTH DETECTOR
 REMOVAL PLAN**

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	129
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-86

*I-55, I-80, & I-290



MODEL: Default
 FILE NAME: I:\1060\Task_Order_6004_CADD\CADD_Sheet\10121666-shr-its609-blutooth_removal.dgn



USER NAME = nguoo
 PLOT SCALE = 99.9998 ' / in.
 PLOT DATE = 10/10/2018

DESIGNED - KV_____
 DRAWN - NG_____
 CHECKED - KP_____
 DATE - 10/12/2018

REVISED - _____
 REVISED - _____
 REVISED - _____
 REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

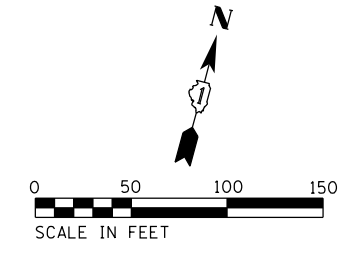
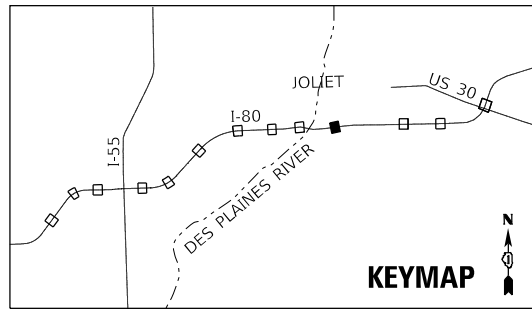
BLUETOOTH DETECTOR
REMOVAL PLAN

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	130
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-87

*I-55, I-80, & I-290



REMOVE EXIST. BLUETOOTH DETECTOR (SEE ITS-93 FOR BLUETOOTH DETAILS) STA. 654+64

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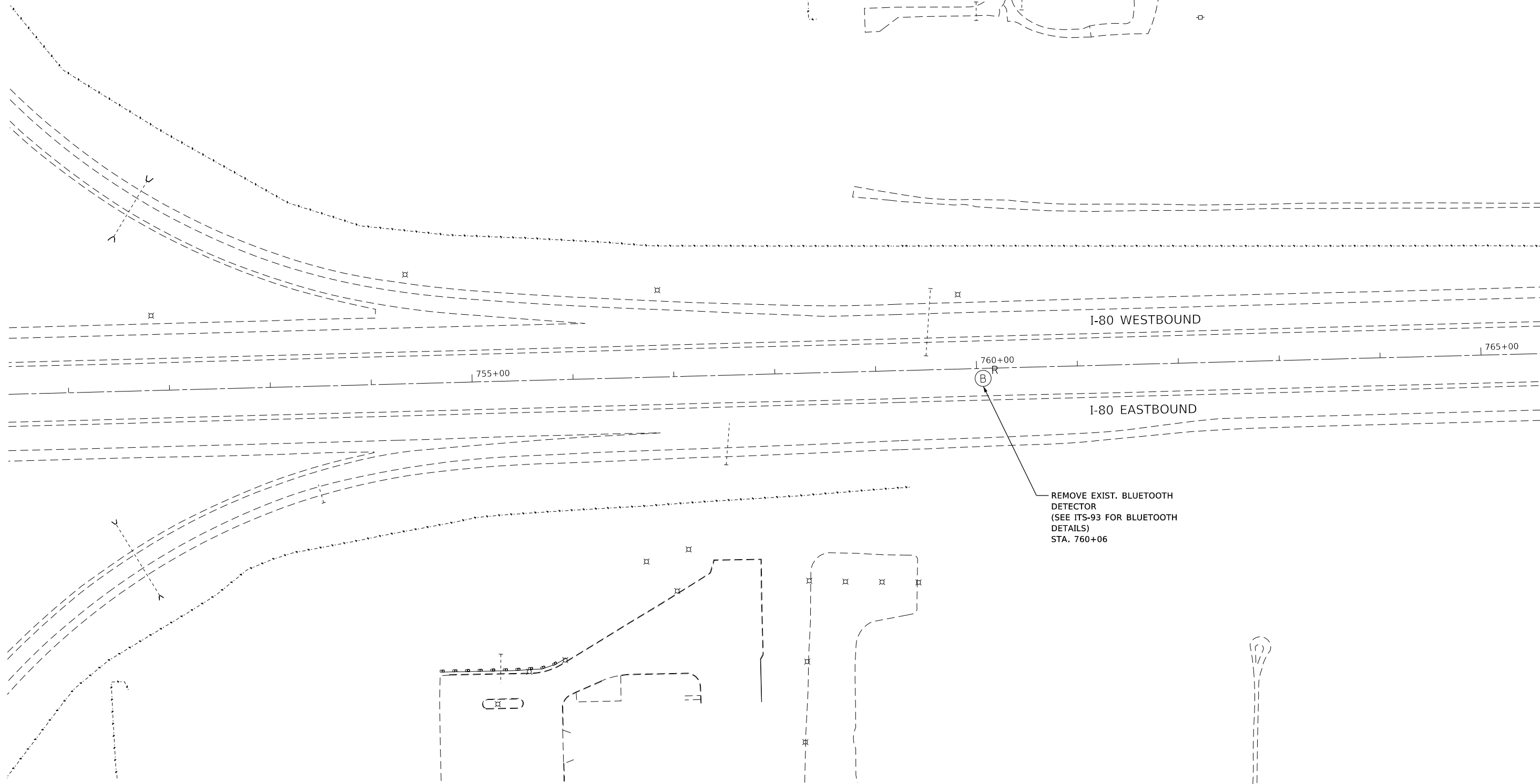
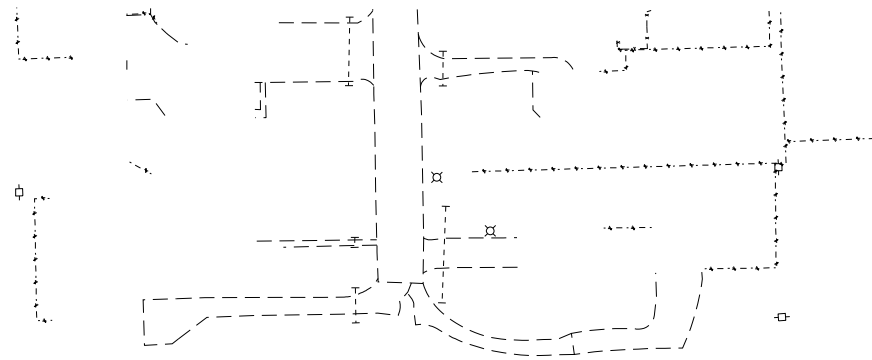
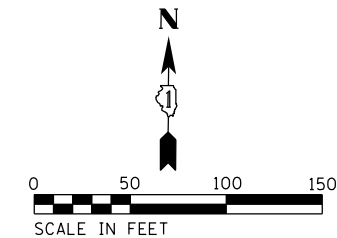
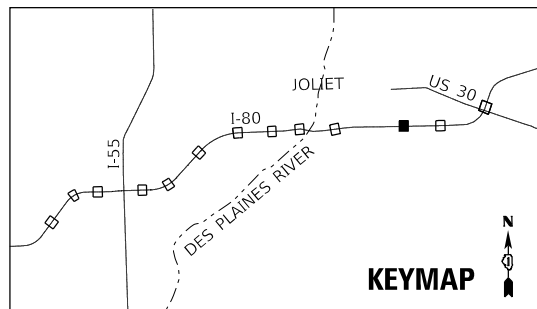
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**BLUETOOTH DETECTOR
REMOVAL PLAN**

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	131
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-88
*I-55, I-80, & I-290



REMOVE EXIST. BLUETOOTH
DETECTOR
(SEE ITS-93 FOR BLUETOOTH
DETAILS)
STA. 760+06

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	DATE - 10/12/2018	REVISED - _____

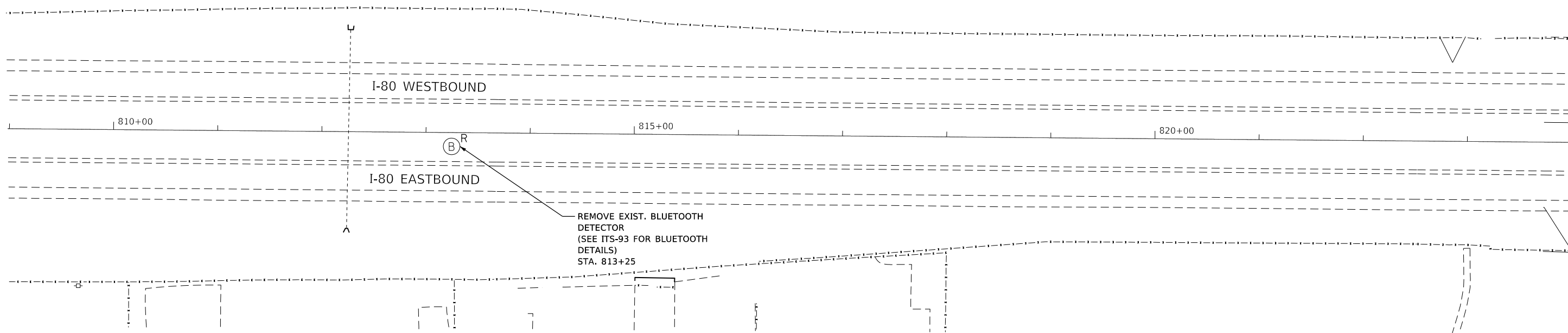
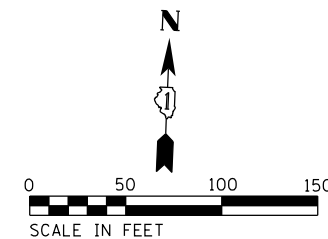
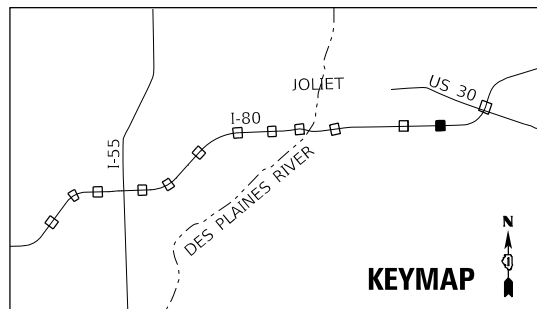
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BLUETOOTH DETECTOR
REMOVAL PLAN

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	132
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-89
*I-55, I-80, & I-290



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PLOT DATE = 10/10/2018	CHECKED - KP	REVISED -
	DATE - 10/12/2018	REVISED -

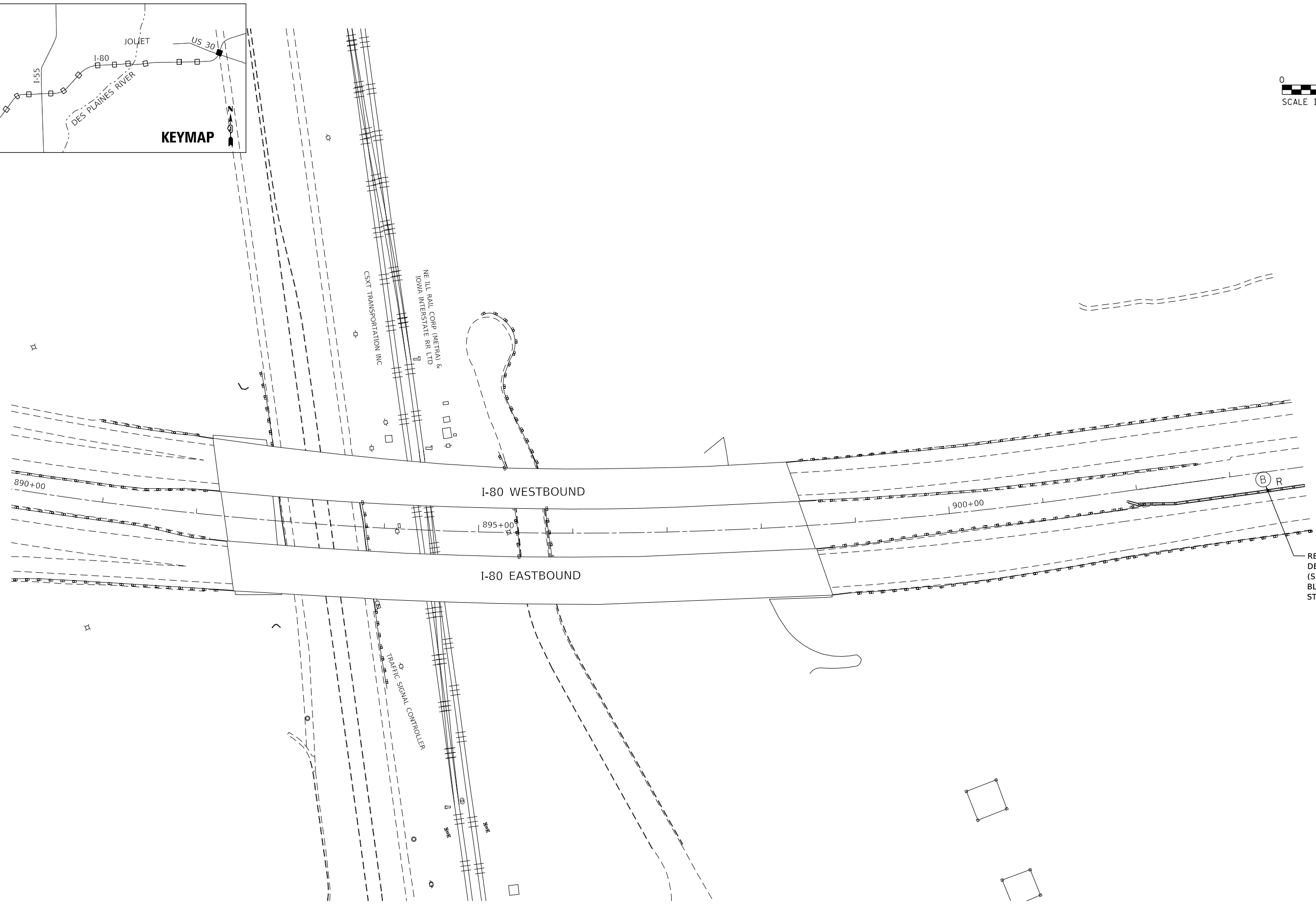
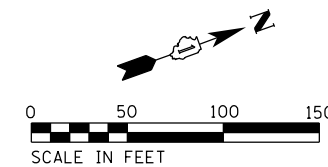
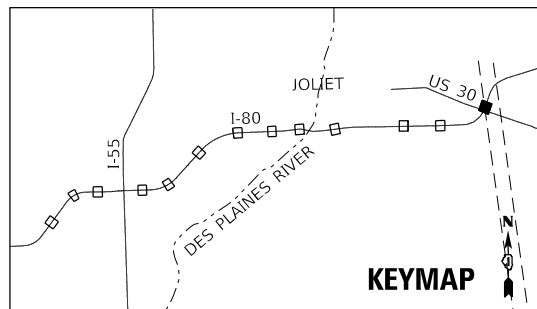
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BLUETOOTH DETECTOR
REMOVAL PLAN

SCALE: 1"=50' SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	133
			CONTRACT NO. 62G66	
		ILLINOIS	FED. AID PROJECT	

ITS-90
 *I-55, I-80, & I-290



REMOVE EXIST. BLUETOOTH DETECTOR (SEE ITS-93 FOR BLUETOOTH DETAILS) STA. 903+35

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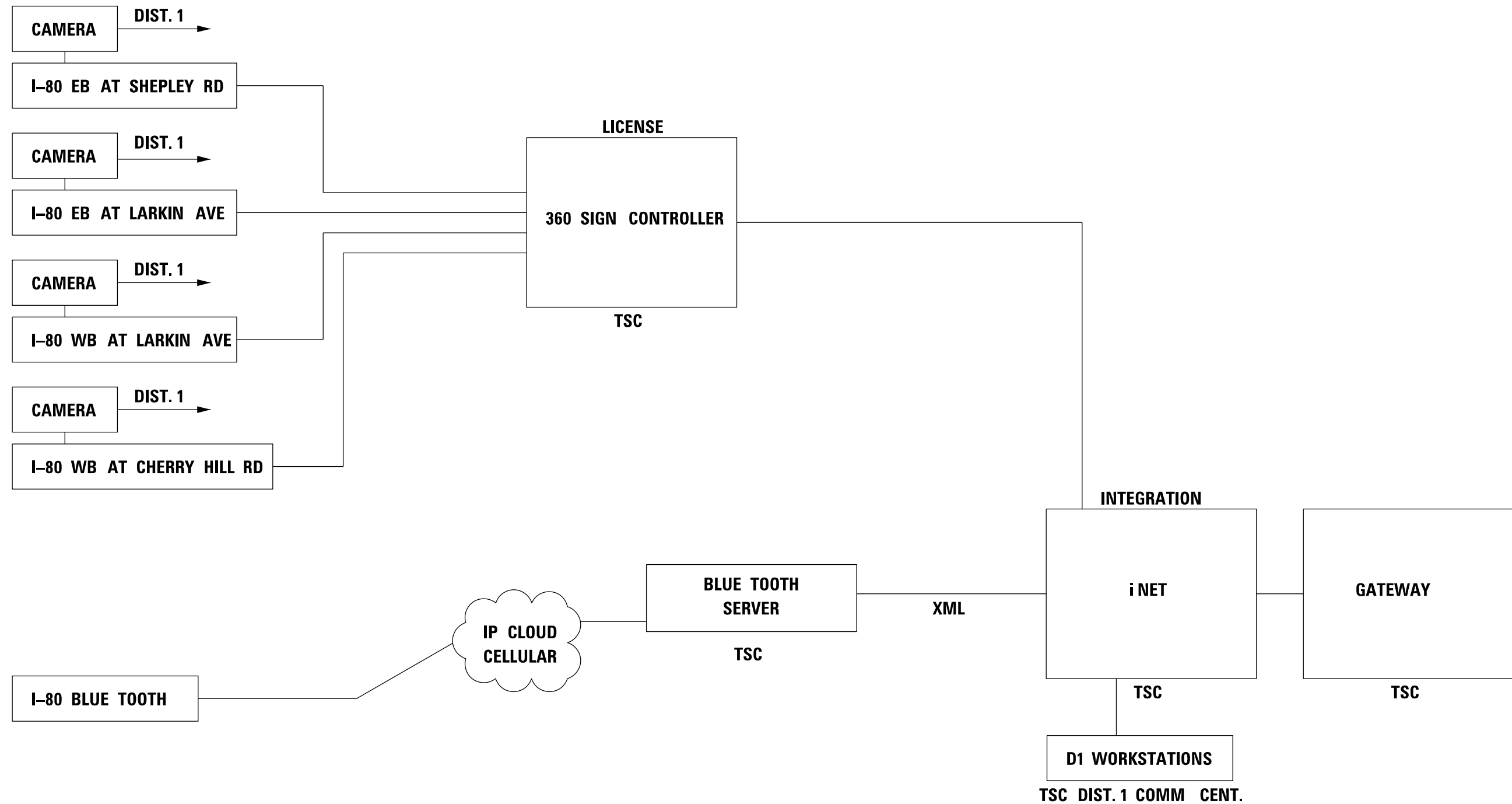
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**BLUETOOTH DETECTOR
REMOVAL PLAN**

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	134
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-91
*I-55, I-80, & I-290



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PLOT DATE = 10/10/2018	CHECKED - KP_____	REVISED - _____
	DATE - 10/12/2018	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1 DMS AND BLUETOOTH DETECTORS
BLOCK DIAGRAM

SCALE: _____ SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

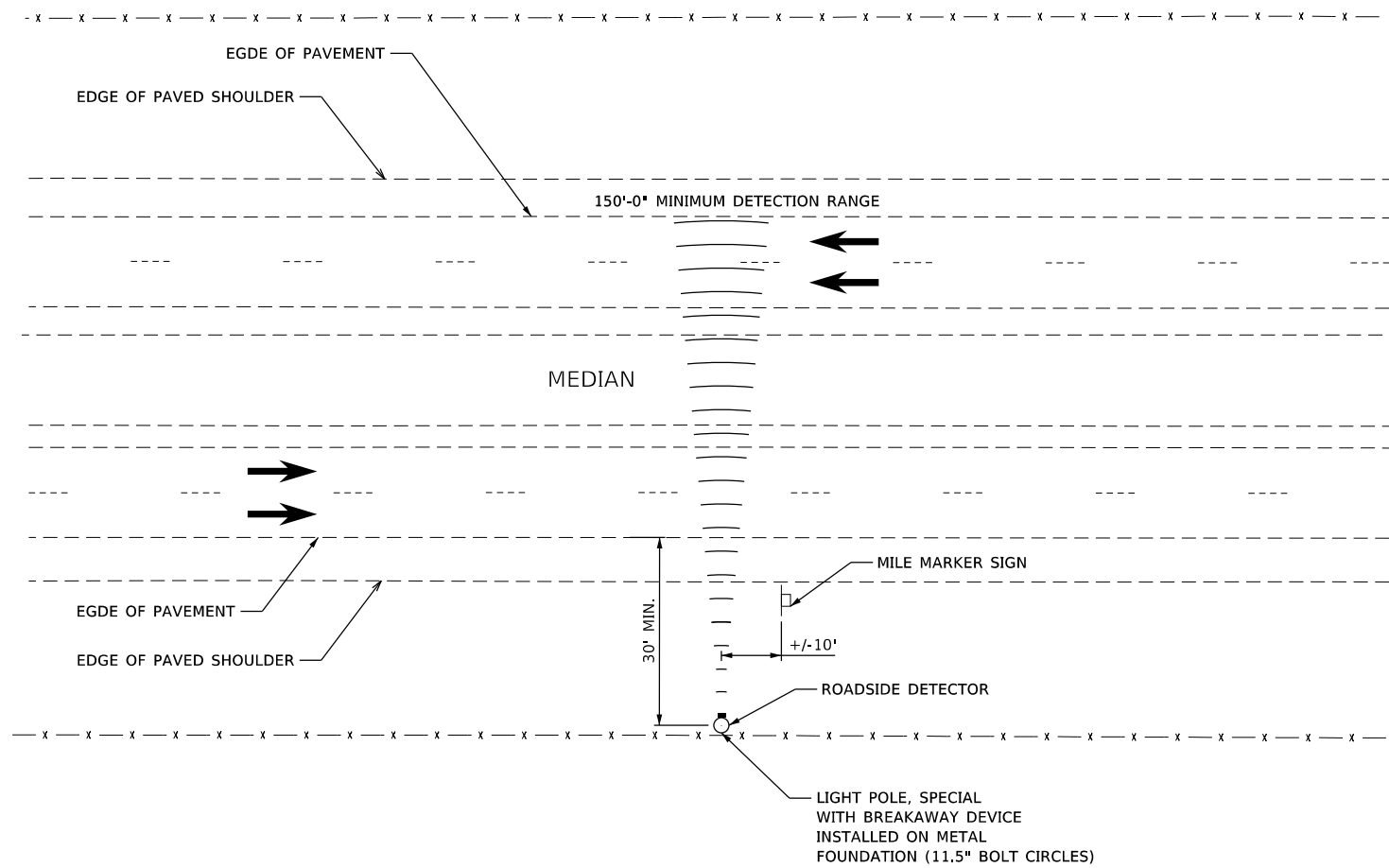
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*	2018-024-I	WILL/DUPAGE	177	135
			CONTRACT NO. 62G66	
		ILLINOIS	FED. AID PROJECT	

ITS-92

*I-55, I-80, & I-290

BLUETOOTH SCHEDULE OF QUANTITIES

ROUTE	MM	STA.	DIRECTION	LIGHT POLE FDN METAL, 11.5" BC	BREAKAWAY DEVICE, T-BASE, 11.5 INCH BC	ROADSIDE DETECTOR	LIGHT POLE, SPECIAL
I-80	123.5	141+33	EB	1	1	1	1
I-80	124.0	167+72	WB	1	1	1	1
I-80	124.5	194+12	EB	1	1	1	1
I-80	125.0	221+55	WB	1	1	1	1
I-80	125.5	246+73	EB	1	1	1	1
I-80	126.0	274+95	WB	1	1	1	1
I-80	126.5	301+00	EB	1	1	1	1
I-80	127.0	327+35	WB	1	1	1	1
I-80	127.5	353+16	EB	1	1	1	1
I-80	128.0	380+66	WB	1	1	1	1
I-80	128.5	405+55	EB	1	1	1	1
I-80	129.0	433+43	WB	1	1	1	1
I-80	129.5	458+72	EB	1	1	1	1
I-80	130.0	485+45	WB	1	1	1	1
I-80	130.5	512+14	EB	1	1	1	1
I-80	131.0	538+54	WB	1	1	1	1
I-80	131.5	564+94	EB	1	1	1	1
I-80	132.0	591+69	WB	1	1	1	1
I-80	132.5	619+63	EB	1	1	1	1
I-80	133.0	647+38	WB	1	1	1	1
I-80	133.5	671+77	EB	1	1	1	1
I-80	134.0	699+27	WB	1	1	1	1
I-80	134.5	722+88	EB	1	1	1	1
I-80	135.0	751+29	WB	1	1	1	1
I-80	135.5	776+59	EB	1	1	1	1
I-80	136.0	803+00	WB	1	1	1	1
I-80	136.5	830+95	EB	1	1	1	1
I-80	137.0	855+69	WB	1	1	1	1
TOTAL				28	28	28	28



BLUETOOTH DETECTOR LOCATION (TYP.)

NOT TO SCALE

NOTES:

1. THE DETECTORS SHALL BE PLACED AT THE ACCESS CONTROL FENCE WHENEVER PRACTICAL OR AS DIRECTED BY THE ENGINEER.
2. THE BLUETOOTH DETECTOR VENDOR SHALL BE INVOLVED IN SITE VERIFICATION FOR EACH LOCATION.
3. THE FINAL LOCATION OF EACH BLUETOOTH DETECTOR SHALL BE DETERMINED BY THE ENGINEER.

REMOVAL SCHEDULE OF QUANTITIES

ROUTE	STA.	OFFSET	LIGHT POLE FDN METAL REMOVAL	BREAKAWAY DEVICE REMOVAL	ROADSIDE DETECTOR REMOVAL	LIGHT POLE REMOVAL	TYPE 3 CABINET REMOVAL	SIGN TRUSS MOUNT REMOVAL	EX. CONCRETE FOUNDATION REMOVAL	RTMS REMOVAL
I-80	154+92	08' RT	1	1		1	1			1
I-80	208+23	07' RT	1	1	1	1				
I-80	246+86	14' RT	1	1		1	1		1	1
I-80	310+82	19' LT			1			1		
I-80	360+73	00' RT			1			1		
I-80	424+31	18' RT	1	1		1	1		1	1
I-80	492+39	09' LT	1	1	1	1				
I-80	546+20	15' RT	1	1		1	1		1	1
I-80	600+95	08' LT			1		1*	1	1	
I-80	654+64	00' RT			1			1		
I-80	760+06	10' RT	1	1		1				
I-80	813+25	13' RT	1	1	1	1				
I-80	903+35	07' RT	1	1	1	1				
TOTAL			9	9	9	9	5	4	4	4

* POLE MOUNTED CABINET

ITS-93

*I-55, I-80, & I-290

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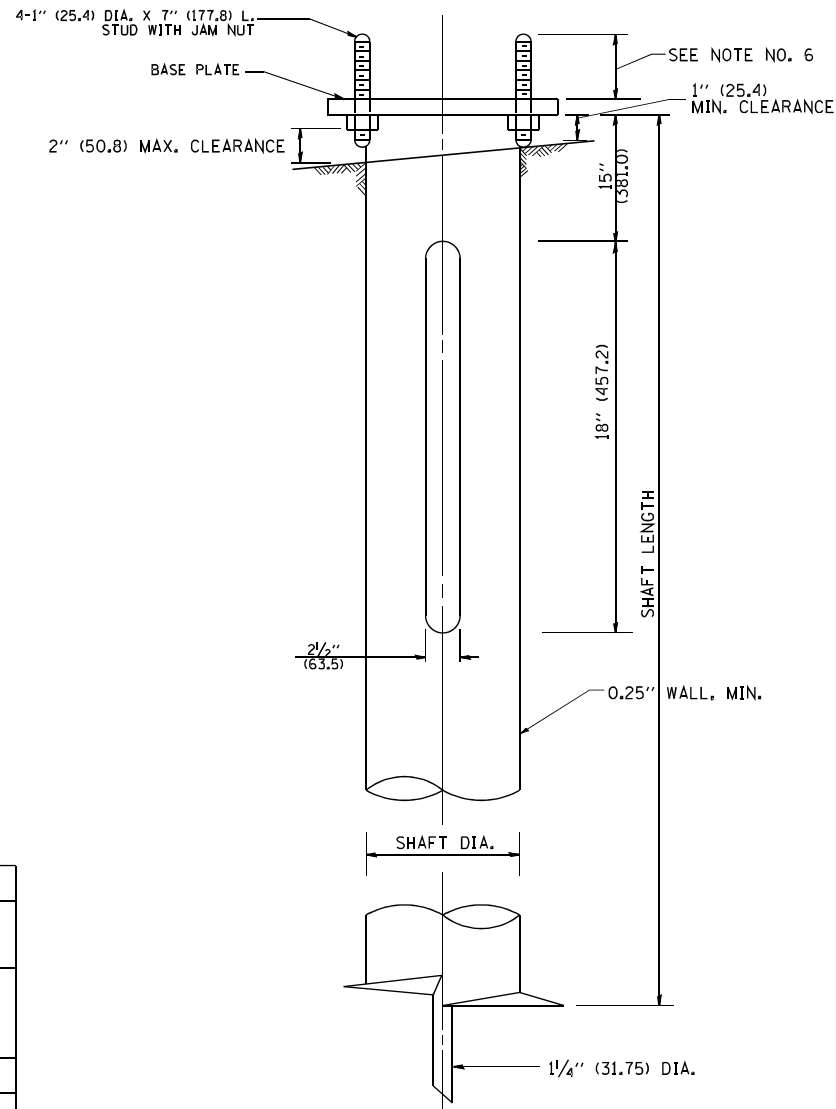
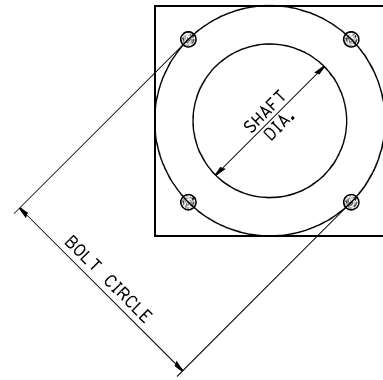
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BLUETOOTH DETECTOR LOCATION DETAIL AND SCHEDULES

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I		177	136
WILL/DUPAGE			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				



HELIX FOUNDATION SIZE

POLE MOUNTING HEIGHT	BOLT CIRCLE	SHAFT DIAMETER	SHAFT LENGTH	BASEPLATE
30 FT.	11 1/2"	8 5/8"	6 FT.	12"x12"x1"
31 FT.-35 FT.	11 1/2"	8 5/8"	6 FT.	12"x12"x1"
36 FT.-40 FT.	15"	8 5/8"	6 FT.	15"x15"x1 1/4"
41 FT.-45 FT.	15"	8 5/8"	6 FT.	15"x15"x1 1/4"
46 FT.-50 FT.	15"	10"	8 FT.	15"x15"x1 1/4"

METAL HELIX FOUNDATION MATERIALS

ITEM	MATERIAL REQUIREMENT
BASEPLATE	AASHTO M 270M, GRADE 36 (M270M, GRADE 250)
SHAFT	ASTM A 252, GRADE 2 (PHOSPHOROUS 0.04% MAXIMUM, SULFUR 0.05% MAXIMUM)
HELIX SCREW	AASHTO M 183 (ASTM A 635)
PILOT POINT	AASHTO M 270 (ASTM A 575)
ANCHOR RODS/STUDS	AASHTO M 314 (ASTM F 1554)
HEXAGON NUTS	AASHTO M 291M (ASTM A 563) GRADE DH, OR AASHTO M 292 (ASTM A 194) GRADE 2H
WASHERS	AASHTO M 293 (ASTM F 436)

NOTES:

- ALL DIMENSION IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- ALL MATERIAL SHALL BE GALVINIZED ACCORDING TO AASHTO M111, UNLESS OTHERWISE SPECIFIED.
- ALL WELDS SHALL BE CONTINUOUS AND NOT LESS THAN 1/4" (6.35 mm) FILLET WELDS. THE WELDED FOUNDATION SHALL BE CAPABLE OF WITHSTANDING 10,000 FT/LBS (13558.18 n.m) OF INSTALLATION TORQUE APPLIED ABOUT THE AXIS OF THE FOUNDATION.
- THE HELIX FOUNDATION SHAFT SHALL BE INSTALLED VERTICAL AND THE BASE PLATE SHALL BE IN LEVEL. THE BREAKAWAY COUPLINGS AND HARDWARE SHALL NOT BE USED TO ALIGN THE POLE INSTALLATION.
- THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE INSTALLATION OF THE LIGHT POLE.
- THE CONTRACTOR SHALL COORDINATE EXTENSION OF ANCHOR BOLTS ABOVE TOP OF THE BASE PLATE WITH THE BREAKAWAY DEVICE MANUFACTURER'S REQUIREMENTS.
- ANY VOIDS WITHIN THE METAL FOUNDATION SHALL BE FILLED WITH FINE AGGREGATE.
- METAL FOUNDATIONS SHALL BE INSTALLED IN UNDISTURBED SOIL. PREDRILLING A PILOT HOLE AND/OR BACKFILLING AROUND THE FOUNDATION IS NOT ALLOWED.
- THE METAL FOUNDATION SHALL NOT BE INSTALLED TO A TORQUE WHICH EXCEEDS THE MANUFACTURER'S MAXIMUM TORQUE RATING NOR SHALL IT BE INSTALLED TO AN INSTALLATION TORQUE VALUE OF LESS THAN 3,500 FT LB (4,750 KNM). METAL FOUNDATIONS THAT ARE NOT INSTALLED TO FULL INSTALLATION DEPTH OR DO NOT ACHIEVE THE MINIMUM INSTALLATION TORQUE SHALL BE REMOVED AND REPLACED WITH A CONCRETE FOUNDATION AT NO ADDITIONAL COST.
- THE BASEPLATE SHALL BE PERPENDICULAR TO THE SHAFT AXIS ($\pm 1^\circ$) AND THE HOLE CENTERLINE SHALL BE CONCENTRIC (± 0.188) TO THE SHAFT AXIS.
- THE PILOT POINT AND SHAFT AXIS SHALL BE CONCENTRIC (± 0.125) AND IN LINE ($\pm 2^\circ$).
- THE BASEPLATE SHALL BE STAMPED WITH THE MANUFACTURERS NAME AND DATE OF MANUFACTURE.

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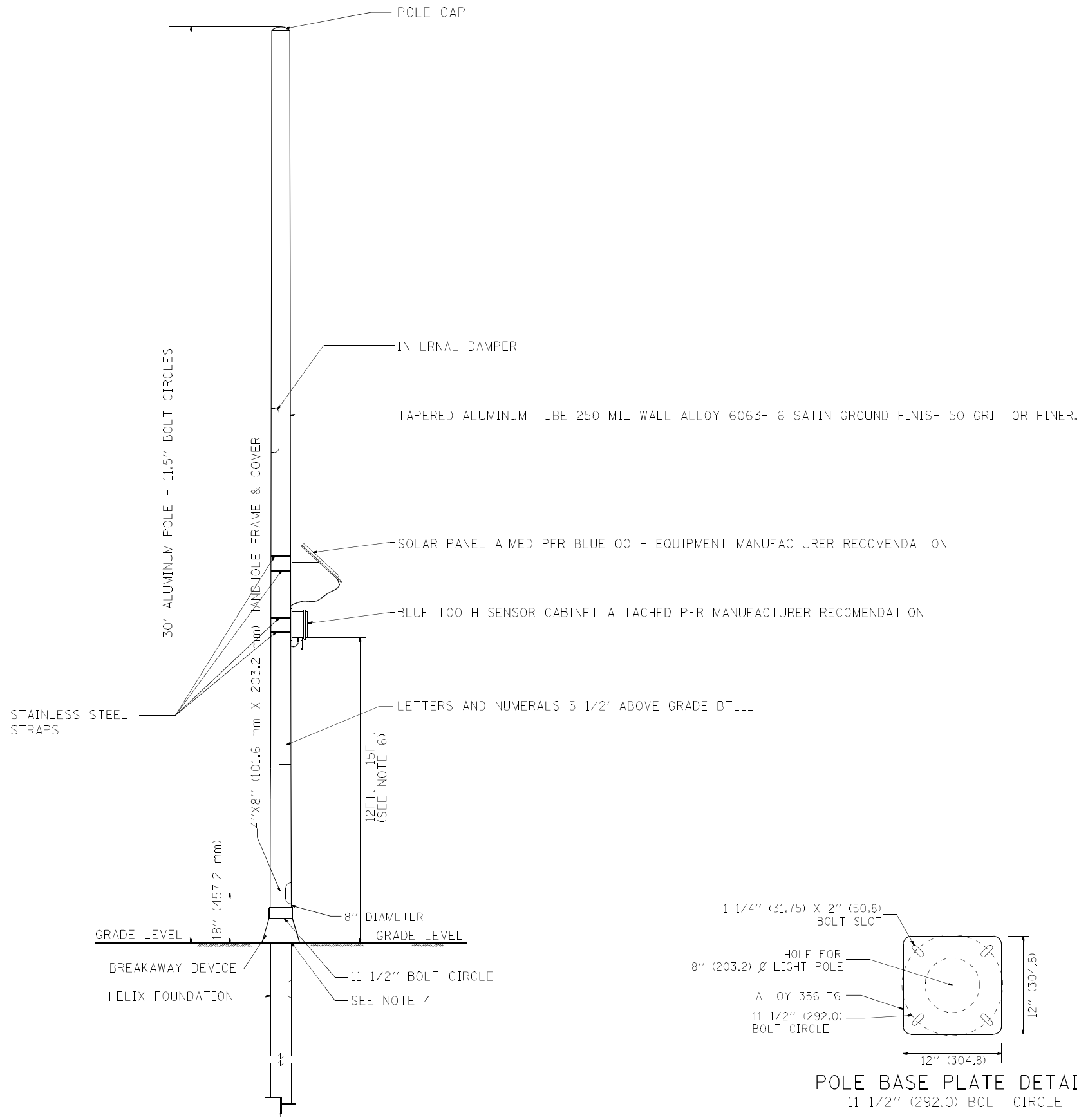
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

LIGHT POLE FOUNDATION, METAL

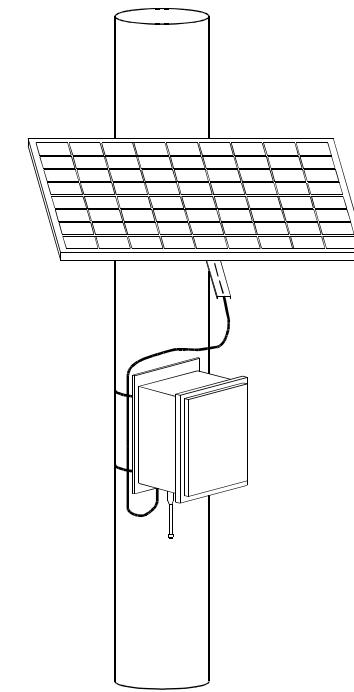
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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BE-305			CONTRACT NO. 62G66	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

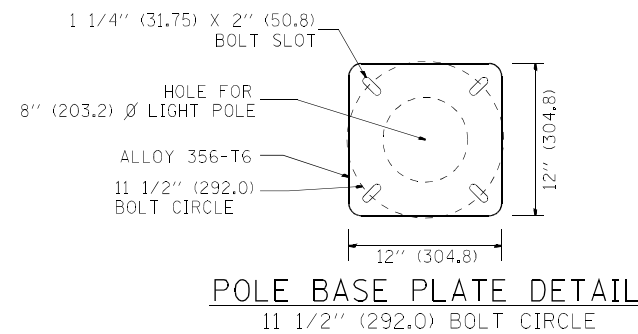
ITS-94
*1-55, I-80, & I-290



SIDE VIEW OF POLE, SOLAR ARRAY AND BLUE TOOTH SENSOR



FRONT VIEW OF POLE, SOLAR ARRAY AND BLUE TOOTH SENSOR DETAIL



POLE BASE PLATE DETAIL
11 1/2" (292.0) BOLT CIRCLE

NOTES:

- 1.- THE POLE WILL MEET AASHTO DESIGN CRITERIA.
- 2.- POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
- 3.- THERE SHALL BE NO PENETRATIONS IN POLE, EXCEPT FOR HANDHOLE.
- 4.- THE HELIX FOUNDATION BASE PLATE SHALL BE COORDINATED WITH THE TRANSFORMER BASE SO THE BOTTOM OF THE TRANSFORMER BASE DOES NOT OVERHANG THE FOUNDATION BASE PLATE.
- 5.- ALL PENETRATION INTO BOX SHALL BE FROM BOTTOM. DRIP LOOPS SHALL BE INCLUDED.
- 6.- BLUE TOOTH DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATION OF 12-15 FT. ABOVE TRAVELLED LANE.
- 7.- BLUE TOOTH POLES SHALL BE LOCATED OUTSIDE CLEAR ZONE, UNLESS APPROVED BY ENGINEER. THEY SHALL BE INSTALLED BEHIND GUARDRAIL WHEN IT IS LESS THEN 500 FT. FROM PLAN LOCATIONS.

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PLOT DATE = 10/10/2018	CHECKED - KP_____	REVISED - _____
	DATE - 10/12/2018	REVISED - _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOLAR POWER BLUE TOOTH POLE DETAIL

SCALE: SHEET ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	138
			CONTRACT NO. 62G66	
ILLINOIS FED. AID PROJECT				

ITS-95

*I-55, I-80, & I-290

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f'_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.

The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

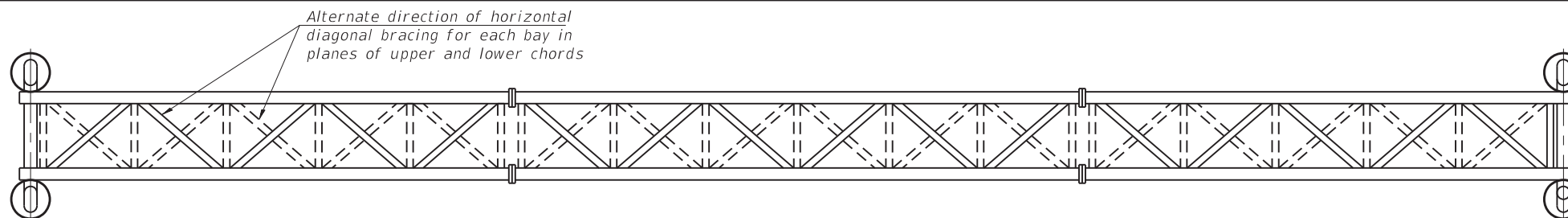
CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

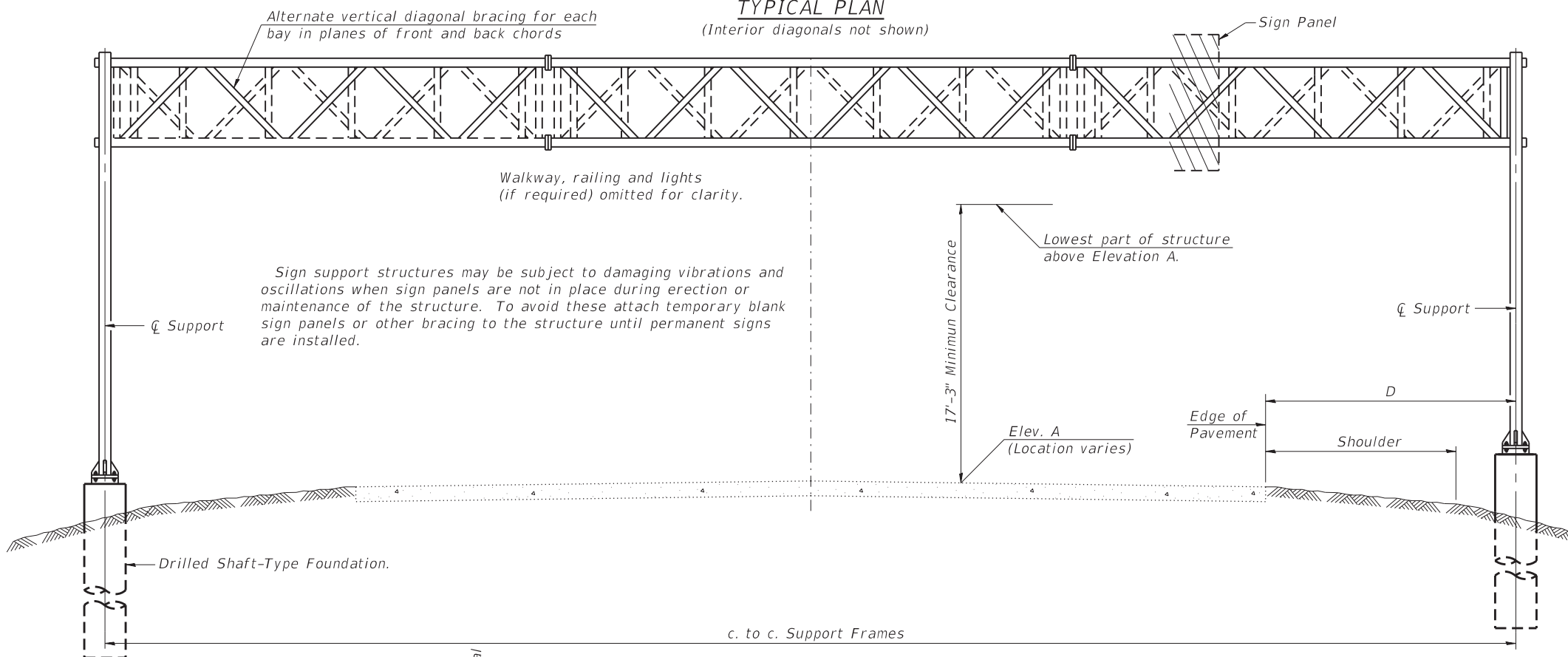
FOUNDATIONS: The contract unit price for Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	115
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	51
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	49.6



TYPICAL PLAN
(Interior diagonals not shown)



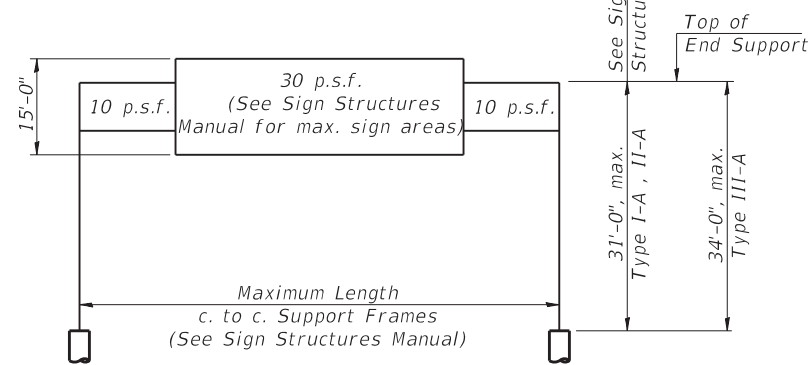
TYPICAL ELEVATION
(Looking at Face of Signs**)

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
1S0991055L247.5	40+50.00	III-A	55'-0"	571.82	17'-3"	7'-11"	230.25 Sq. Ft.
1S0991080R123.5	139+00.00	III-A	60'-0"	599.37	20'-6"	7'-11"	230.25 Sq. Ft.

**Looking upstation for structures with signs both sides.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

FILE PATH = P:\1707-732 - Accurate - P1B194-01\101\15 - Ver. DMS Structures\CAD Sheets\Location 1S-01-DMS Sign.dgn



S-01-DMS Signs.dgn	DESIGNED - MAA	REVISED - MAA 11/29/2018
USER NAME = marlenegamy	DRAWN - MAA	REVISED -
PLOT SCALE =	CHECKED - MI ,JJS	REVISED -
PLOT DATE = 11/15/2018	DATE - 11/20/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF
TRANSPORTATION

OVERHEAD SIGN STRUCTURES - GENERAL PLAN &
ELEVATION - ALUMINUM TRUSS & STEEL SUPPORTS

SCALE: SHEET S-01 OF 5-29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	139
CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				

*1-55, 1-80, & 1-290

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.
The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

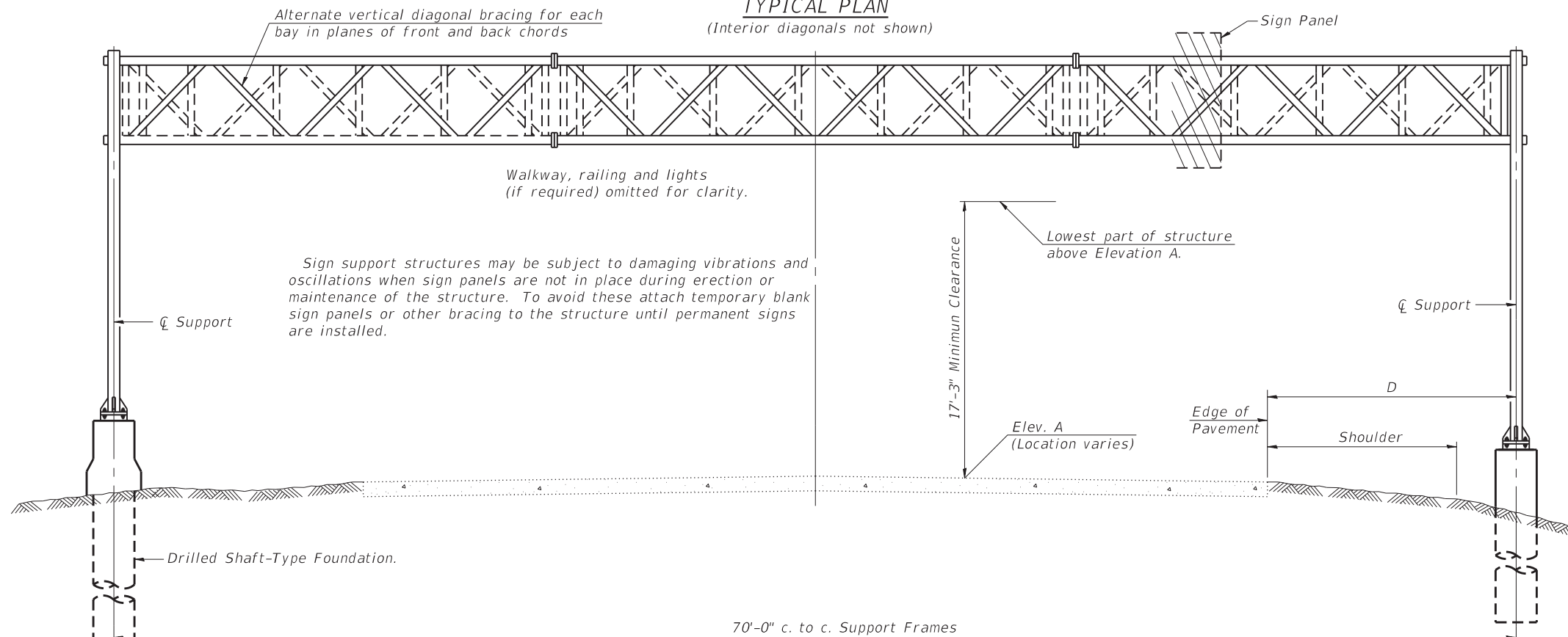
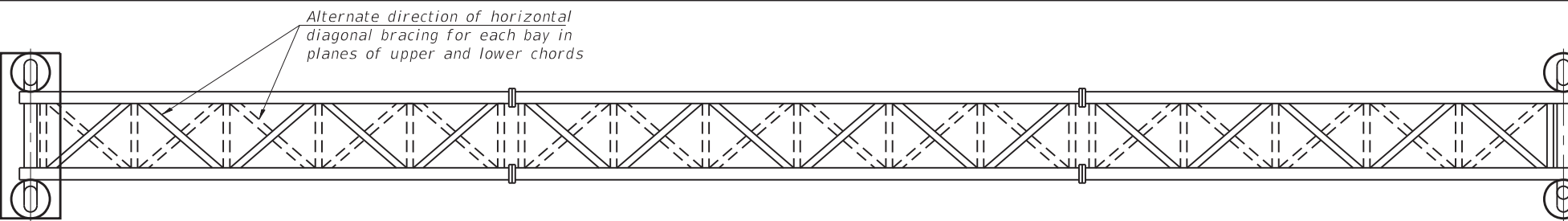
CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	70
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	38
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	32.4



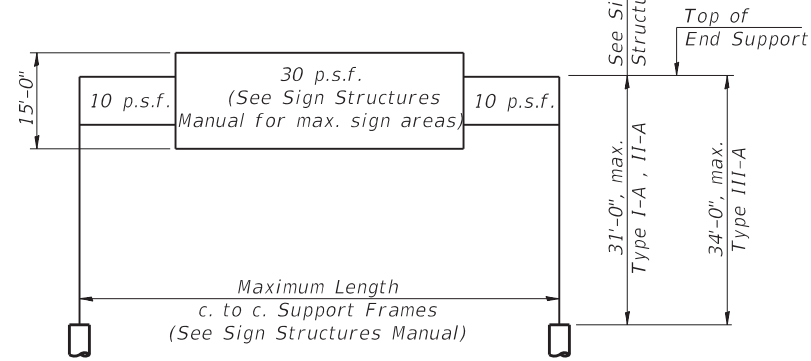
Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

TYPICAL ELEVATION
(Looking at Face of Signs**)

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
1S0991055L255.2	38+00.00	III-A	70'-0"	594.47	25'-10"	7'-11"	230.25 Sq. Ft.

**Looking upstation for structures with signs both sides.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

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PLOT DATE = 11/15/2018

DESIGNED - MAA
DRAWN - MAA
CHECKED - MI, JJS
DATE - 11/20/2018

REVISED - MAA 11/29/2018
REVISED -
REVISED -
REVISED -

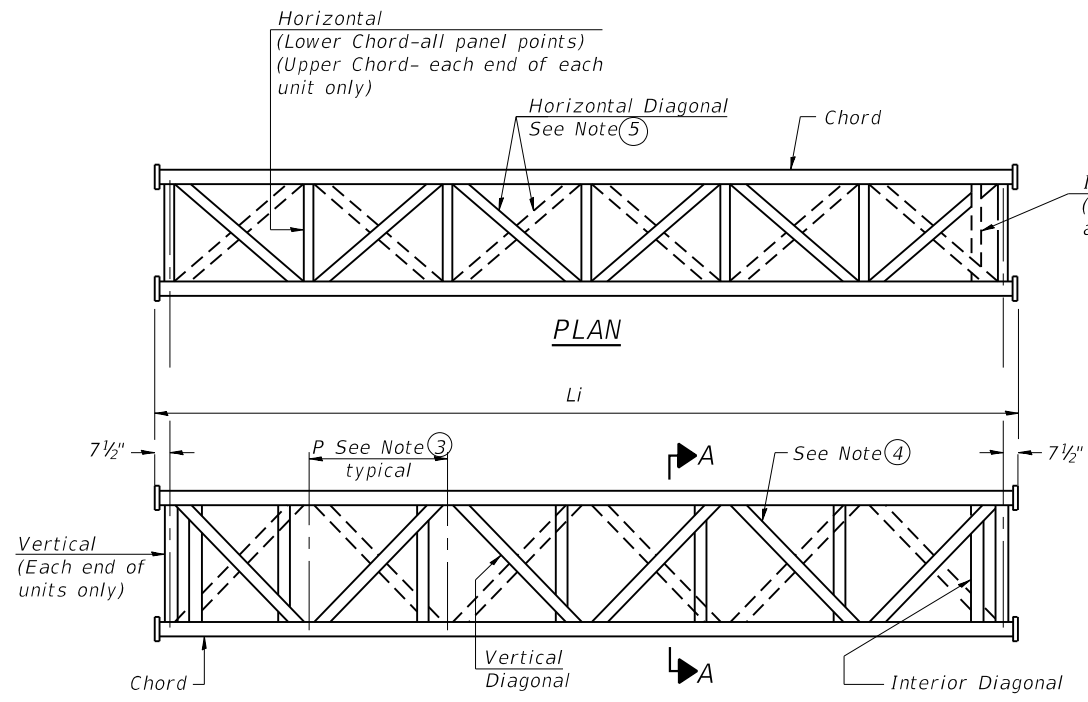
STATE OF ILLINOIS
DEPARTMENT OF
TRANSPORTATION

OVERHEAD SIGN STRUCTURES - GENERAL PLAN &
ELEVATION - ALUMINUM TRUSS & STEEL SUPPORTS

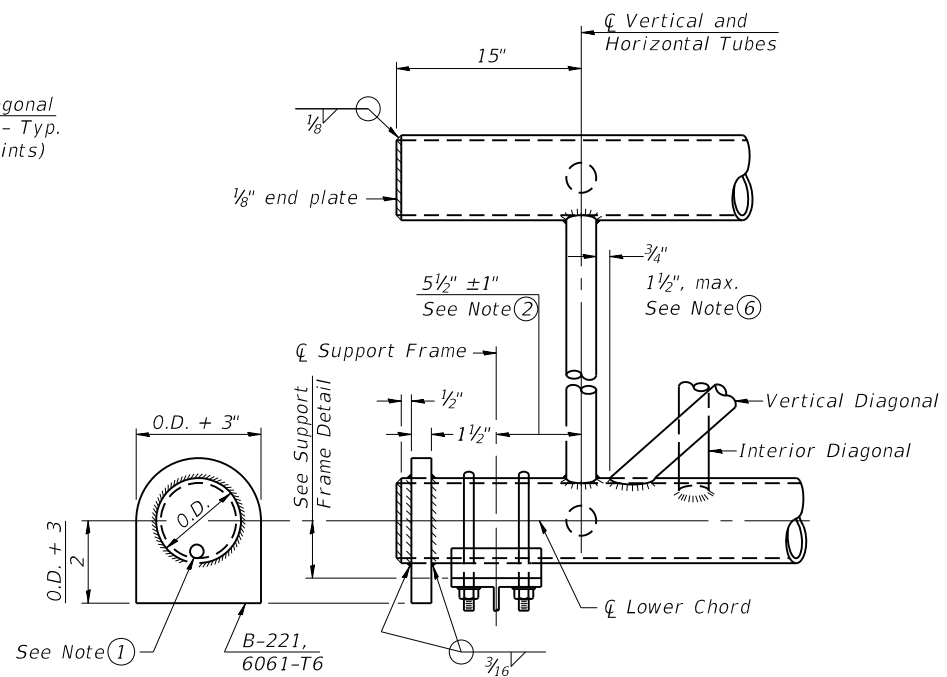
SCALE: SHEET S-02 OF S-29 SHEETS STA. TO STA.

F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
2018-024-I WILL/DUPAGE 177 140
CONTRACT NO. 62G66
ILLINOIS FED. AID PROJECT

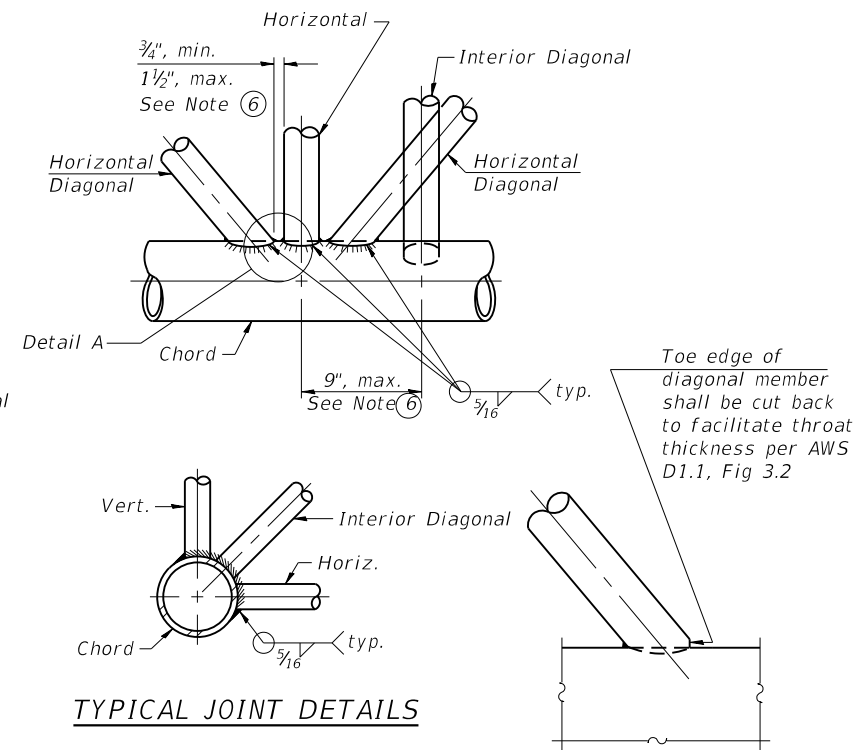
*1-55, 1-80, & 1-290



**ELEVATION
TYPICAL INTERIOR UNIT**
Even number of panels/interior unit required.



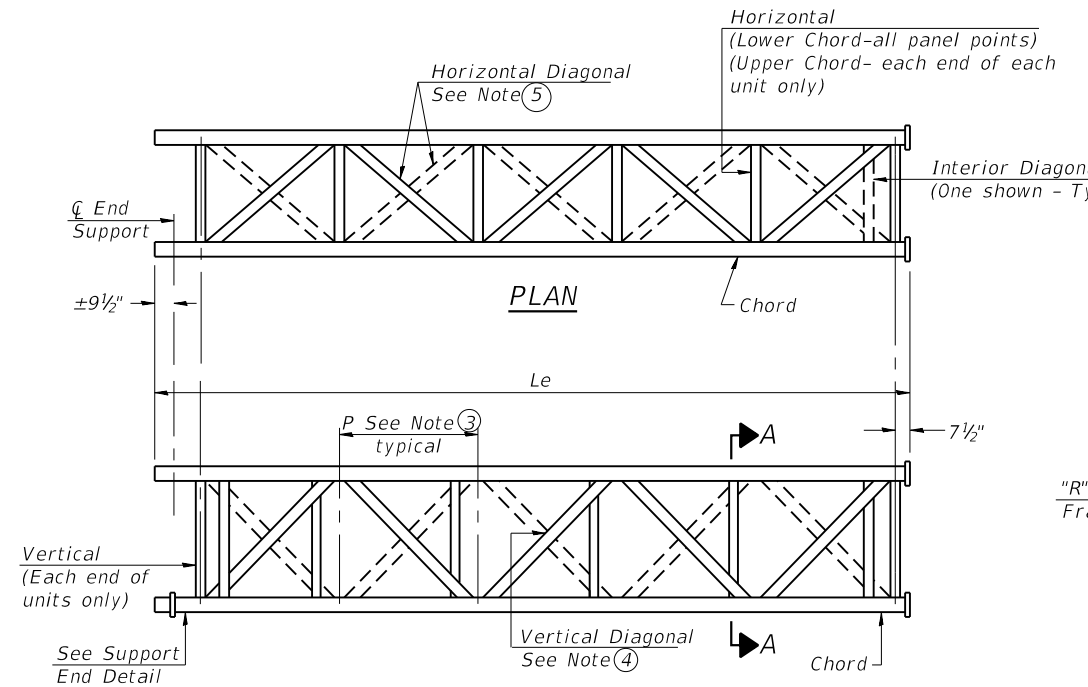
SUPPORT END DETAIL FOR EXTERIOR UNIT



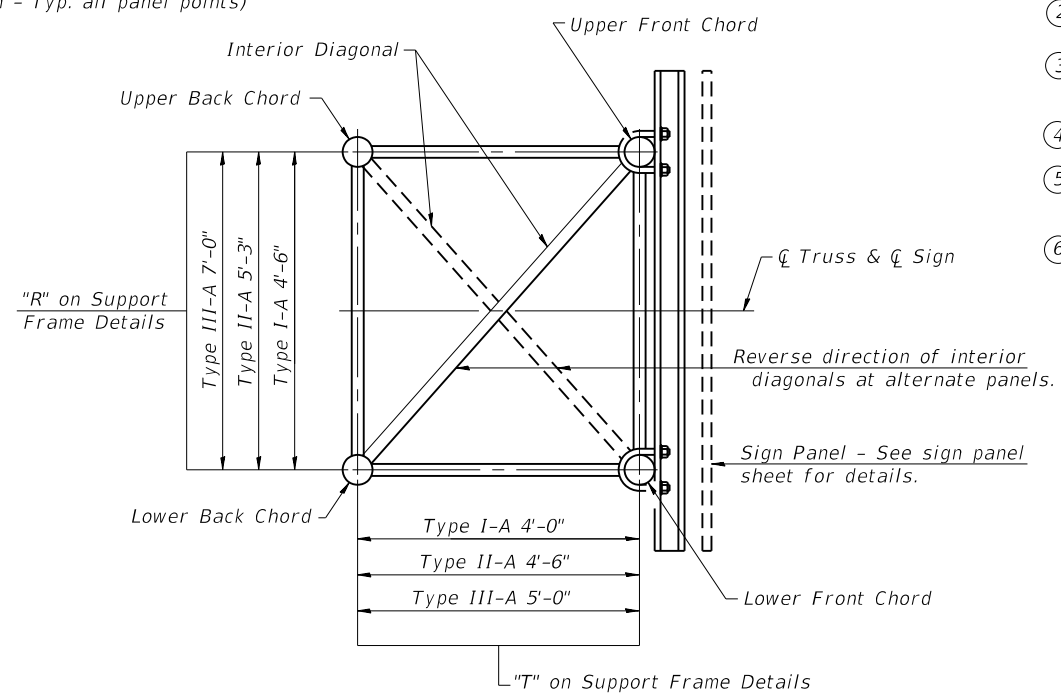
TYPICAL JOINT DETAILS

DETAIL A

- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" Ø drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" end dimension may vary by ±1" to provide uniform panel spacing (P).
- ③ Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
- ④ Vertical Diagonals in front and back face shall alternate.
- ⑤ Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
- ⑥ All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a 3/4" minimum to 1 1/2" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.



**ELEVATION
TYPICAL EXTERIOR UNIT**
Even or odd number of panels/exterior units allowed.



SECTION A-A

FILE PATH = P:\1707-732 Accurate PTB184-010\VD #16 Ver. DMS Structures\CAD Sheets\Location: ILS-03-DMS Signs.dgn

05-A-2

2-17-2017



S-83-DMS Signs.dgn	DESIGNED - MAA	REVISED -
USER NAME = marlan.agamy	DRAWN - MAA	REVISED -
PLOT SCALE =	CHECKED - MI, JJS	REVISED -
PLOT DATE = 10/15/2018	DATE - 10/12/2018	REVISED -

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**OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS
DETAILS FOR TRUSS TYPES I-A, II-A AND III-A**

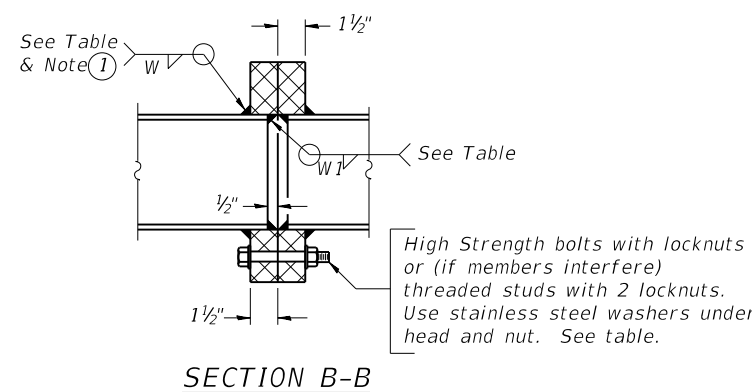
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

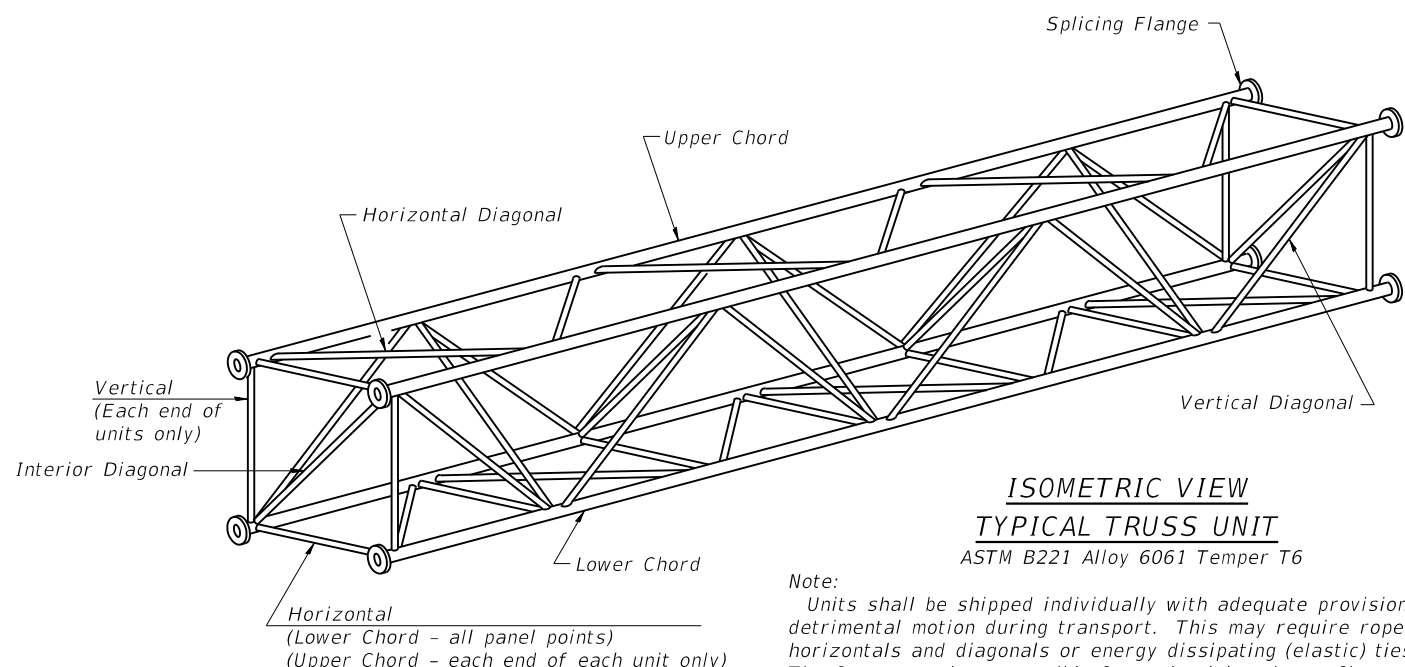
*1-55, 1-80, & 1-290

TRUSS UNIT TABLE

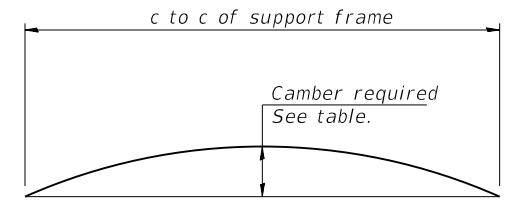
Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontal; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(Le)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(Li)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W1		
1S0991055L247.5	40+50.00	III-A	5	28'-1 1/2"	5'-3"	0	-	-	-	7"	5/16"	3 1/4"	5/16"	1 1/16"	6	1"	7/16"	5/16"	11 1/2"	15"
1S0991080R123.5	139+00.00	III-A	6	30'-10 1/2"	4'-10"	0	-	-	-	7"	5/16"	3 1/4"	5/16"	3/4"	6	1"	7/16"	5/16"	11 1/2"	15"
1S0991055L255.2	38+00.00	III-A	7	35'-8 1/2"	4'-10"	-	-	-	-	7"	5/16"	3 1/4"	5/16"	7/8"	6	1"	7/16"	5/16"	11 1/2"	15"



① Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.

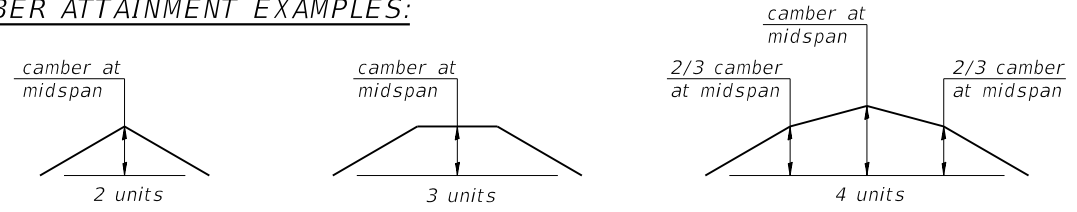


Note: Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection of the units.

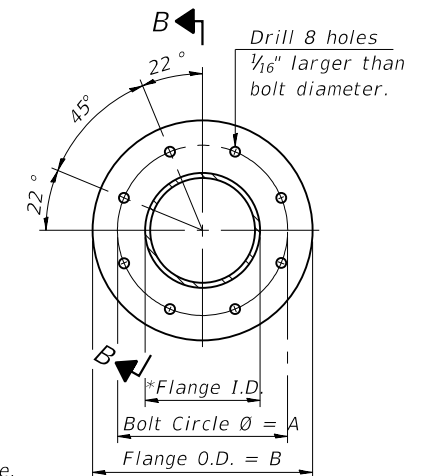
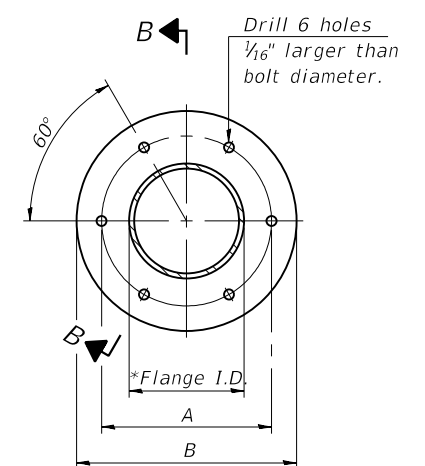


Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

CAMBER ATTAINMENT EXAMPLES:



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)



SPLICING FLANGES

ASTM B221, Alloy 6061-T6 or ASTM B209, Alloy 6061-T651
*To fit O.D. of Chord with maximum gap of 1/16".

054-A-2

2-17-2017



S-04-DMS Signs.dgn	DESIGNED - MAA	REVISED -
USER NAME = marlan.egamy	DRAWN - MAA	REVISED -
PLOT SCALE =	CHECKED - MI, JJS	REVISED -
PLOT DATE = 10/15/2018	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
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TRANSPORTATION

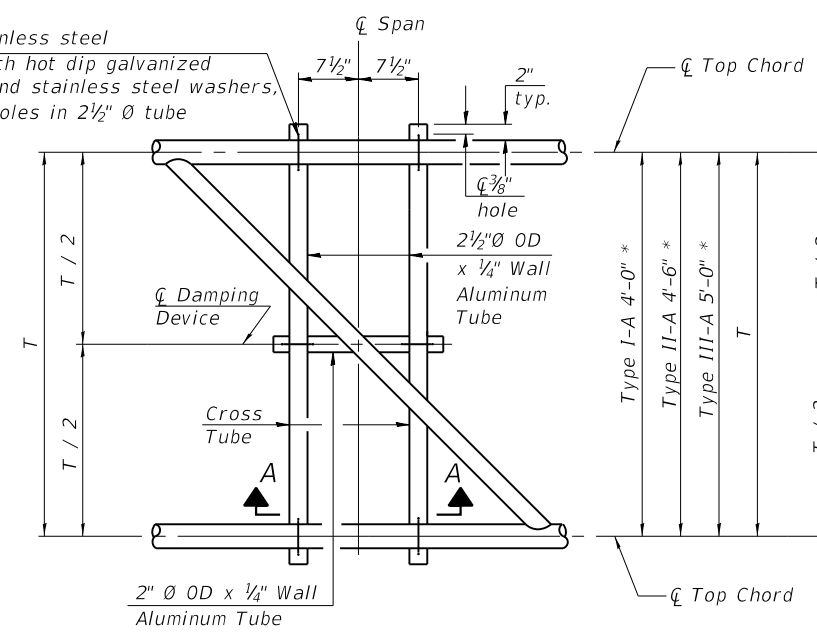
OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A AND III-A

SCALE: SHEET S-04 OF S-29 SHEETS STA. TO STA.

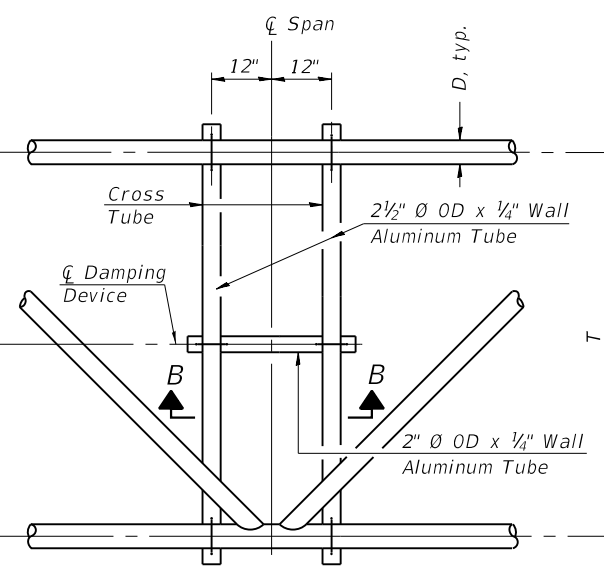
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•	2018-024-I	WILL/DUPAGE	177	142
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

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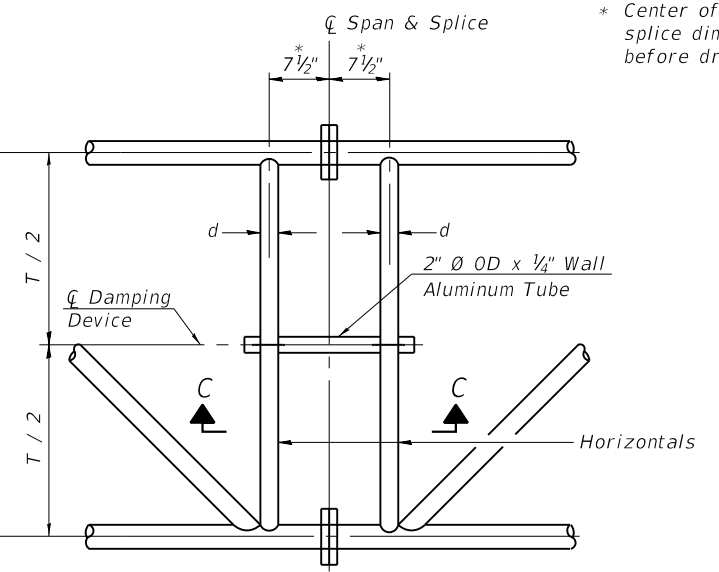
5/16" Ø stainless steel
U- bolt with hot dip galvanized
locknuts and stainless steel washers,
typ. 3/8" Ø holes in 2 1/2" Ø tube



PLAN DETAIL "A"
Span between Panel Points



PLAN DETAIL "B"
Span at Panel Point



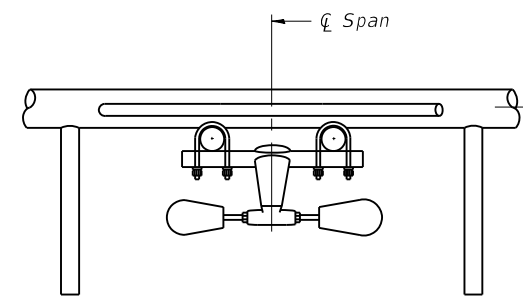
PLAN DETAIL "C"
Span at Chord Splice

* Center of horizontal to center of
splice dimension may vary. Verify
before drilling holes in mounting tube.

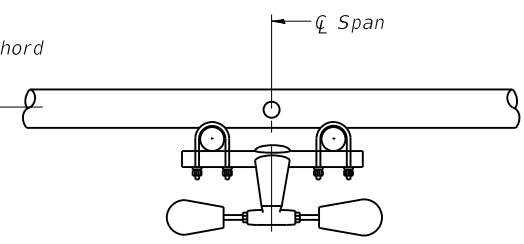
NOTES

Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...

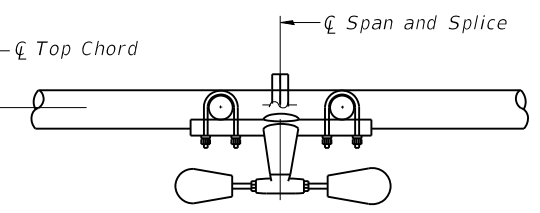
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



SECTION A-A

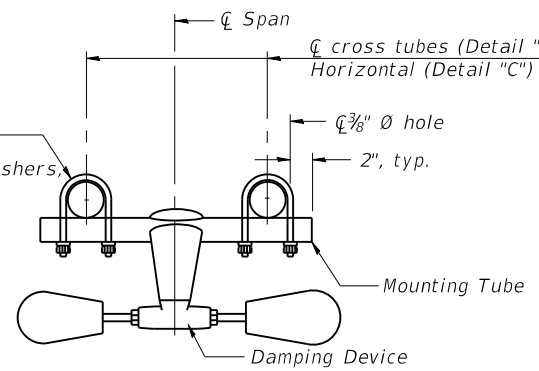


SECTION B-B

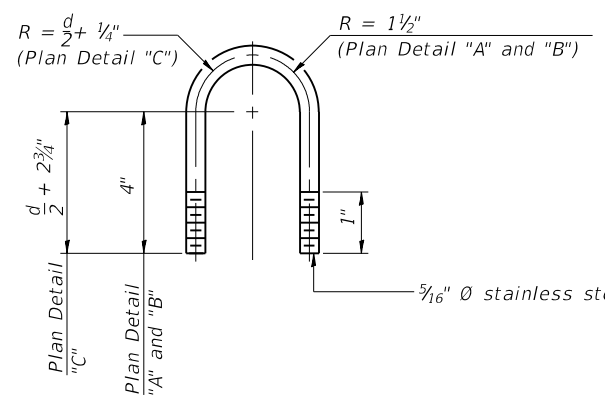


SECTION C-C

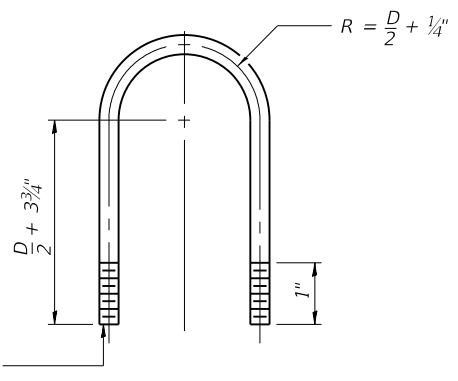
5/16" Ø stainless steel
U- bolt with hot dip galvanized
locknuts and stainless steel washers,
typ. 3/8" Ø holes in mounting tube



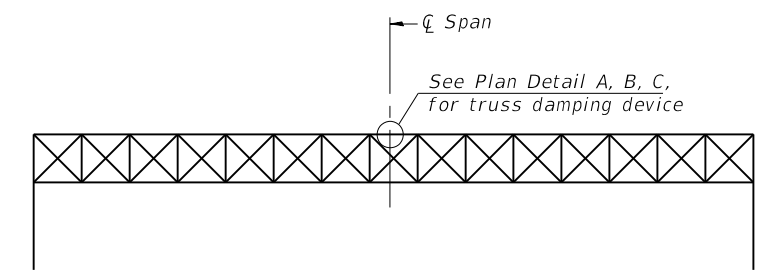
TRUSS DAMPING
DEVICE CONNECTION DETAIL
(Typical)



DAMPING DEVICE MOUNTING
TUBE U-BOLT DETAIL
(Typical)



TOP CHORD TO CROSS TUBE
U-BOLT DETAIL
(Typical - Detail "A" and "B")



ELEVATION
Aluminum Overhead
Sign Truss

FILE PATH = P:\1707-732 Accurate PTB184-010\VD #16 Ver. DMS Structures\CAD Sheets\Location 1\5-05-DMS Signs.dgn



DESIGNED - MAA	REVISED -
DRAWN - MAA	REVISED -
CHECKED - MI, JJS	REVISED -
DATE - 10/12/2018	REVISED -

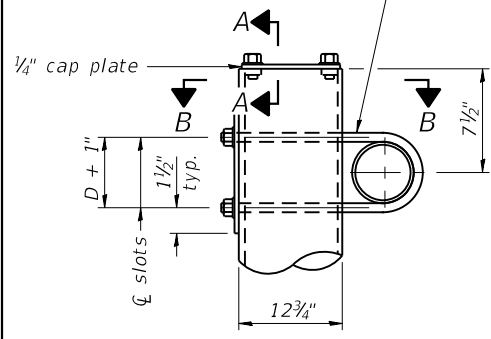
STATE OF ILLINOIS
DEPARTMENT OF
TRANSPORTATION

OVERHEAD SIGN STRUCTURE DAMPING DEVICE	
SCALE:	SHEET S-05 OF S-29 SHEETS STA. TO STA.

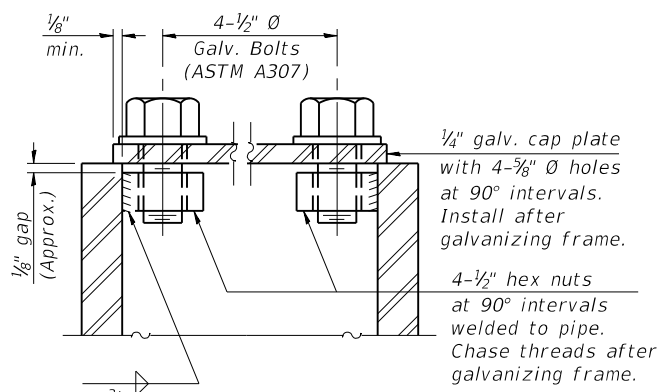
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	2018-024-I	WILL/DUPAGE	177	143
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

*1-55, 1-80, & 1-290

3/4" Ø stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
1 3/16" x 2" slots on 12" Ø pipe.
(4 slots required per pipe)

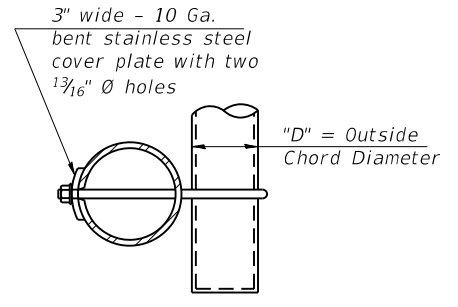


DETAIL A

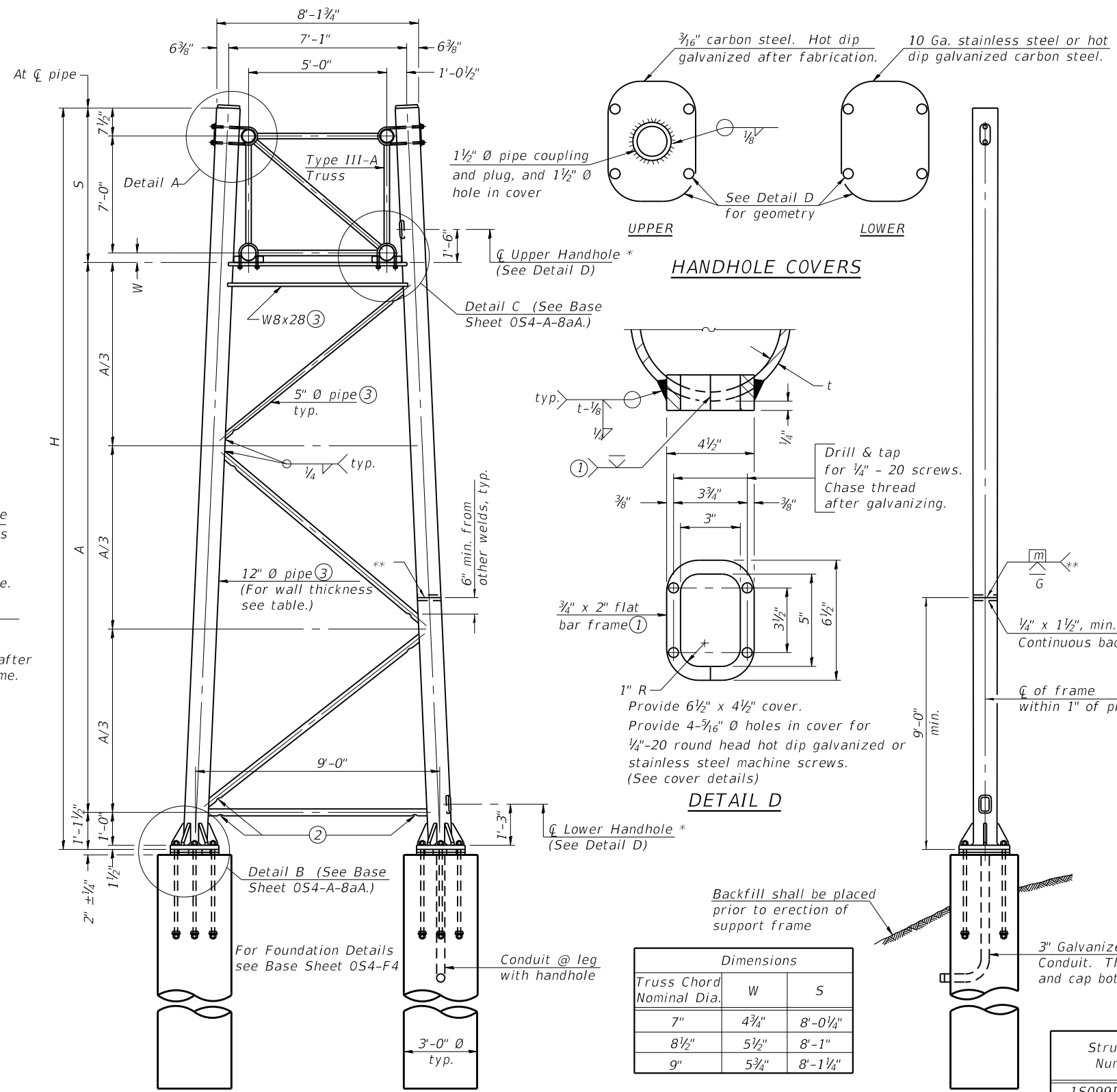


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



SIDE ELEVATION

Dimensions		
Truss Chord Nominal Dia.	W	S
7"	4 3/4"	8'-0 1/4"
8 1/2"	5 1/2"	8'-1"
9"	5 3/4"	8'-1 1/4"

TRUSS SUPPORT DETAILS

(12" Ø Pipe-Type III-A Truss)

** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Support Design Loads: See Base Sheet OS-A-1 for design and loading criteria.
Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

- ① In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 µin or less.
- ② Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- ③ Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-A-1.
- ④ See General Notes for fasteners.
- ⑤ Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- ⑥ "H" based on 15'-0" or actual sign height, whichever is greater.

* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			
1S0991055L247.5	40+50.00	X	X	0.33"	28'-3"	19'-1 1/4"
1S0991080R123.5	139+00.00	X	X	0.33"	28'-9 1/4"	19'-7 1/2"
1S0991055L255.2	38+00.00	X		0.33"	26'-10 1/2"	17'-8 3/4"
			X	0.33"	29'-9"	20'-7 1/4"

FILE PATH = P:\1707-732 Accurate P1B184-010\VD #16 Ver. DMS Structures\CAD Sheets\Location 1\5-06-DMS Signs.dgn

OS4-A-8a 2-17-2017



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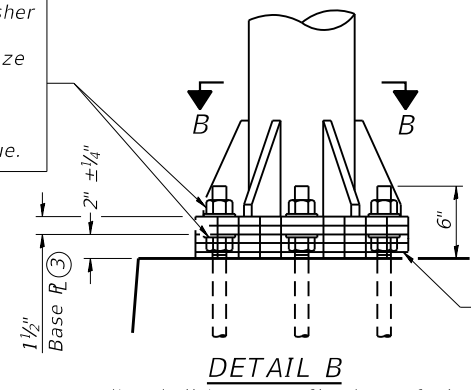
**OVERHEAD SIGN STRUCTURES - SUPPORT FRAME
FOR TYPE III-A ALUMINUM TRUSS**

SCALE: SHEET S-06 OF S-29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				

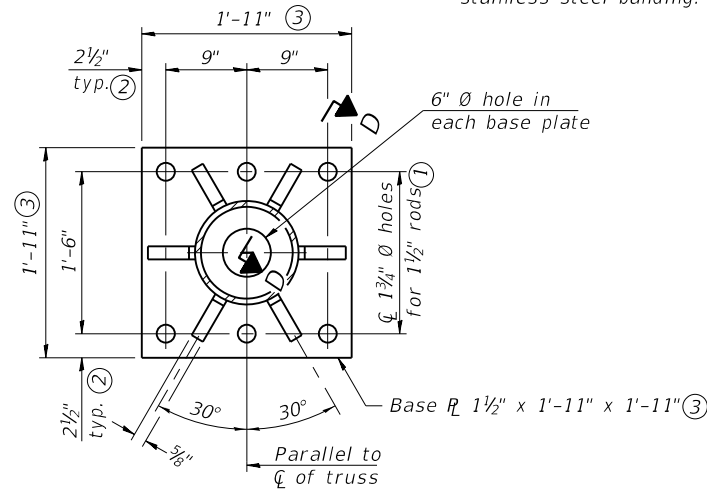
*1-55, 1-80, & 1-290

Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.

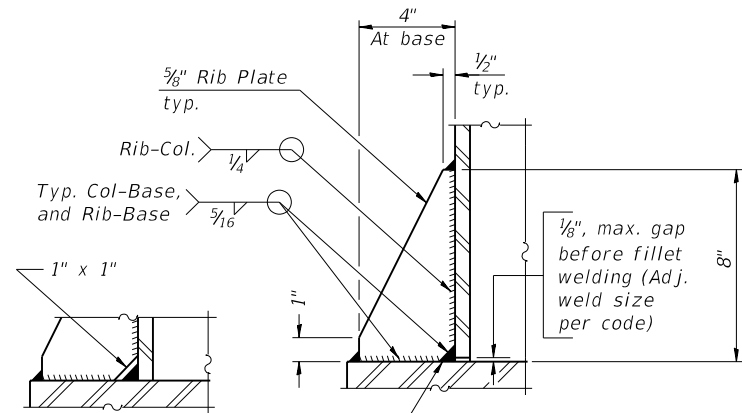


DETAIL B
Ribs shall be cut to fit slope of pipe.

Stainless Steel Standard Grade Wire Cloth, 3" wide, 1/4" maximum opening with a minimum wire diameter of AWG. No. 16 with a minimum 2" lap. Secure to base plate after erection with 3/4" stainless steel banding.



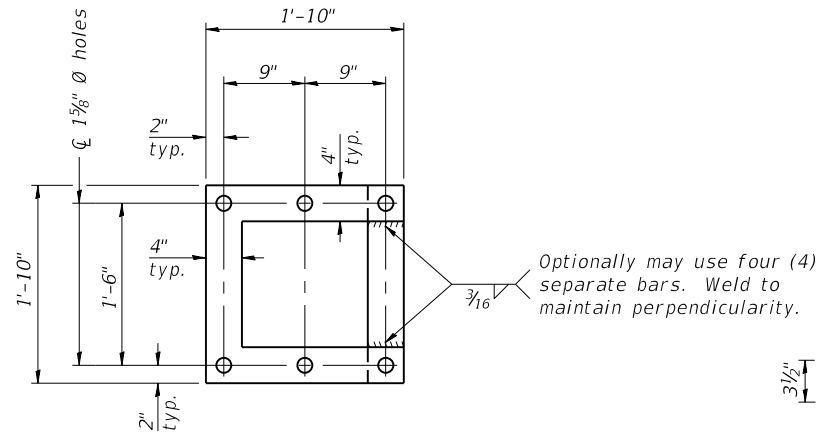
SECTION B-B



SECTION D-D

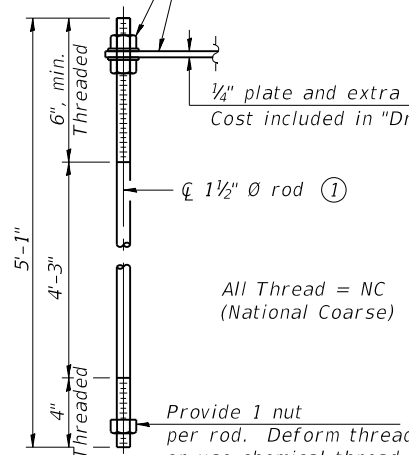
** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.

No snip req'd. at rib inside corner if placed before col. to base plate welding.**



POSITIONING PLATE(S)

At each location, provide 1/4" thick positioning plate(s) and six (6) additional nuts to be used with leveling nuts to maintain anchor bolts position during concrete placement.



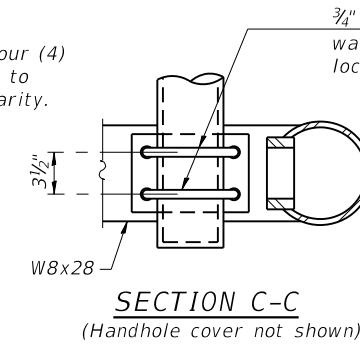
ANCHOR ROD DETAIL

Anchor rods shall conform to ASTM F1554 Grade 105 Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

**TYPE III-A TRUSS
12" Ø PIPE SUPPORT FRAME DETAILS**

Notes:
For Type III-A Truss spans greater than 150 ft. and up to 160 ft.:

- ① 1 3/4" Ø rod, 2" Ø holes
- ② 2 3/4" edge distance
- ③ Base PL 1 5/8" x 1'-11 1/2" x 1'-11 1/2"



SECTION C-C
(Handhole cover not shown)

3/4" Ø U-bolts. Provide washers and hexagon locknuts. (2 required)

Saddle shim

W8x28

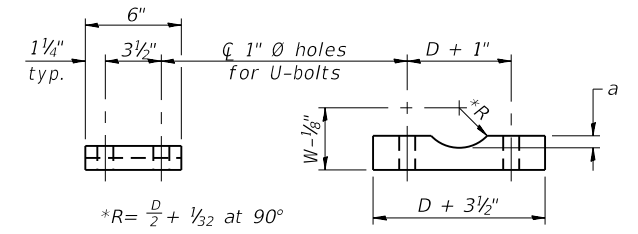
Field drill 1 5/16" Ø holes Touch up holes with galvanizing paint.

Drain hole (See Base Sheet 05-A-2.)

1/8" fabric or neoprene pad.

DETAIL C

1 1/2" Ø pipe coupling for conduit attachment (plug for shipping)



*R = D/2 + 1/32 at 90°

D = Outside Diameter of Chord.
For W, see Base Sheet 05-A-6.

Truss Chord Nominal Dia.	a
7"	1"
8 1/2"	1 1/4"
9"	1 3/8"

SADDLE SHIM DETAIL
ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

054-A-8aA

2-17-2017



S-07-DMS Signs.dgn	DESIGNED - MAA	REVISED -
USER NAME = marian.agamy	DRAWN - MAA	REVISED -
PLOT SCALE =	CHECKED - MI, JJS	REVISED -
PLOT DATE = 10/15/2018	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF
TRANSPORTATION

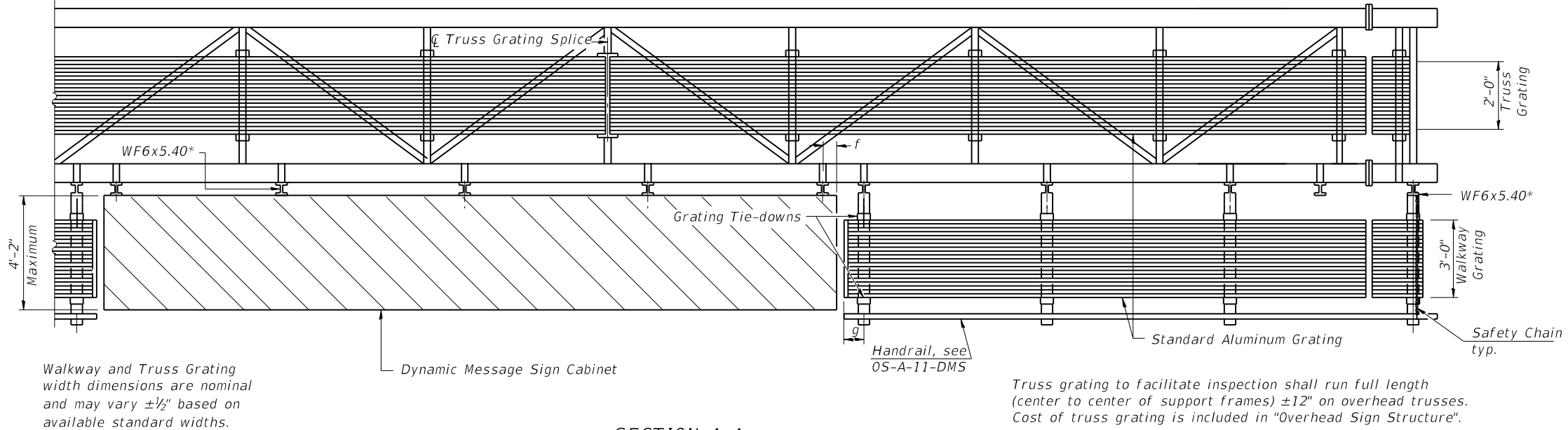
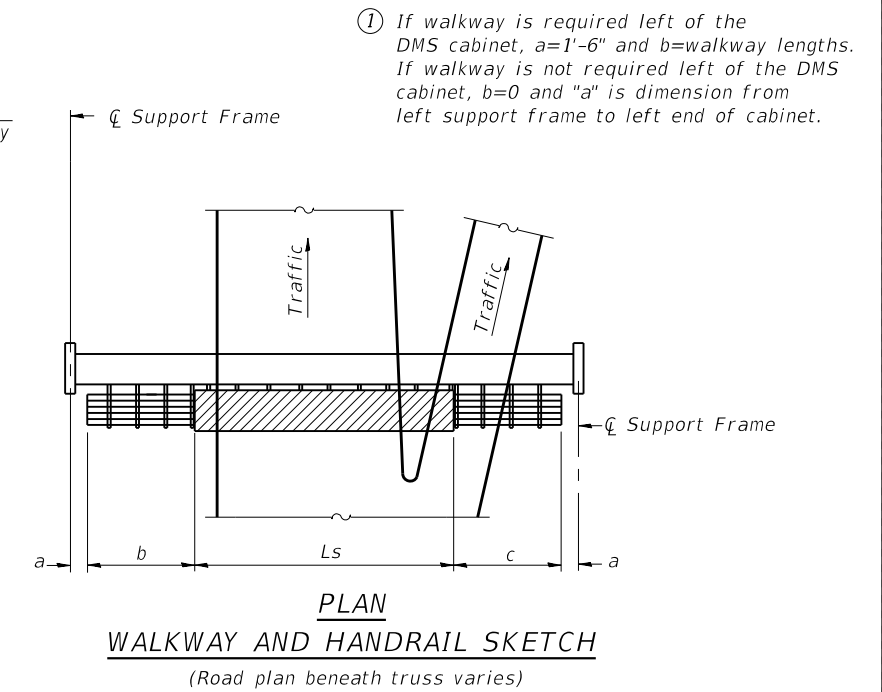
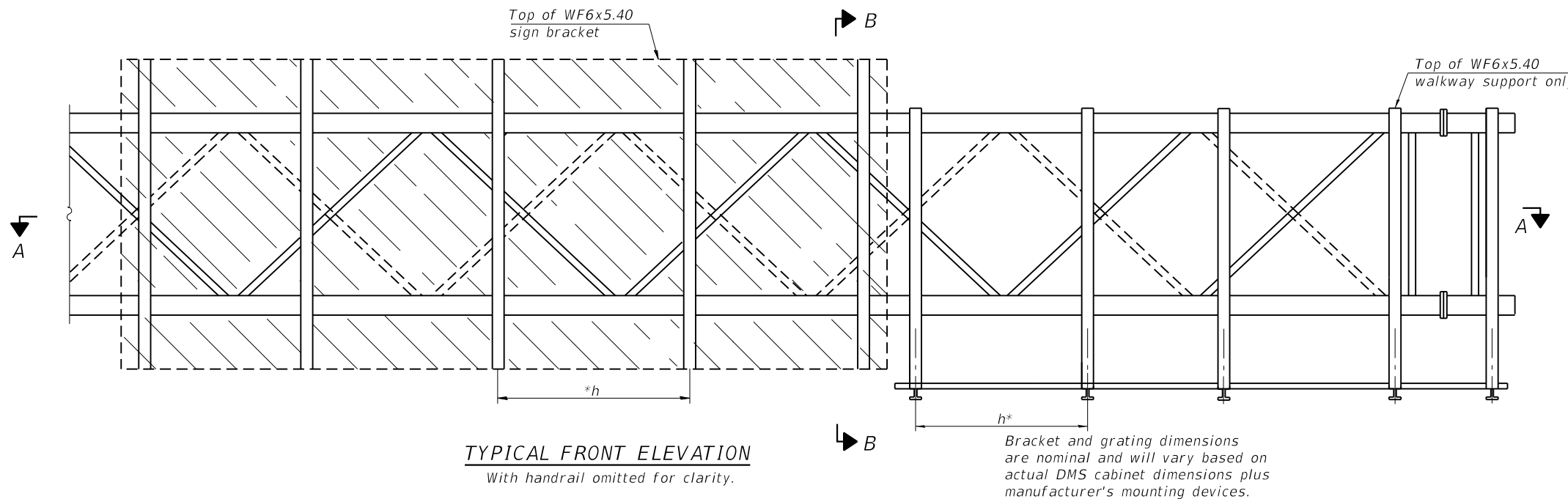
**OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR TYPE III-A ALUMINUM TRUSS**

SCALE: SHEET S-07 OF S-29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	2018-024-I	WILL/DUPAGE	177	145
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

*1-55, 1-80, & 1-290

FILE PATH = P:\1707-732 Accurate PTBIB4-010\VD #16 Ver. DMS Structures\CAD Sheets\Location 1\5-07-DMS Signs.dgn



BRACKET TABLE

WF6x5.40 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

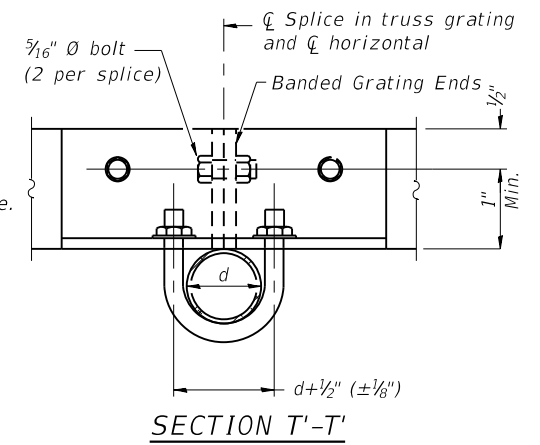
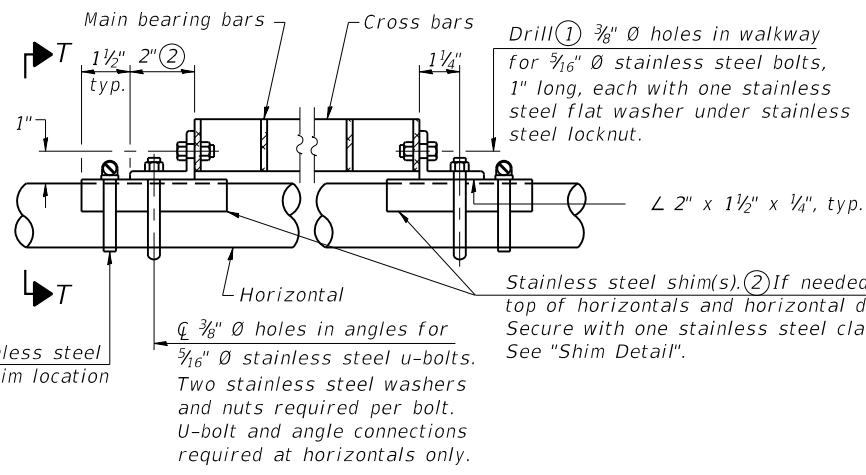
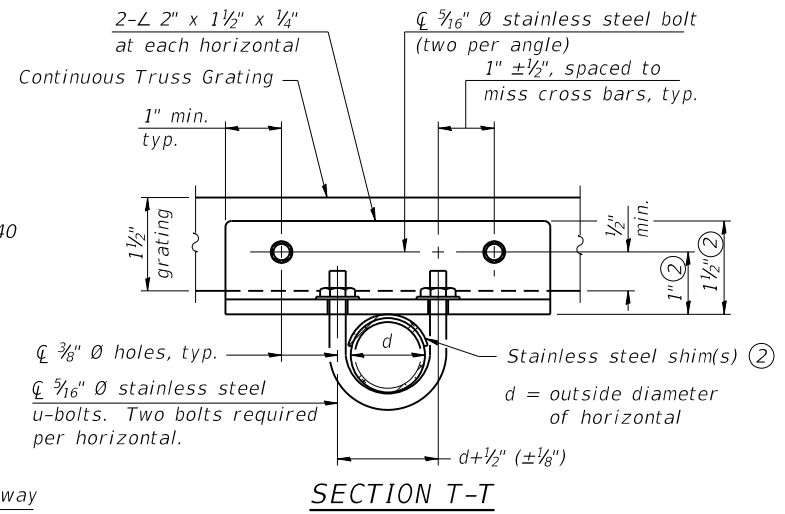
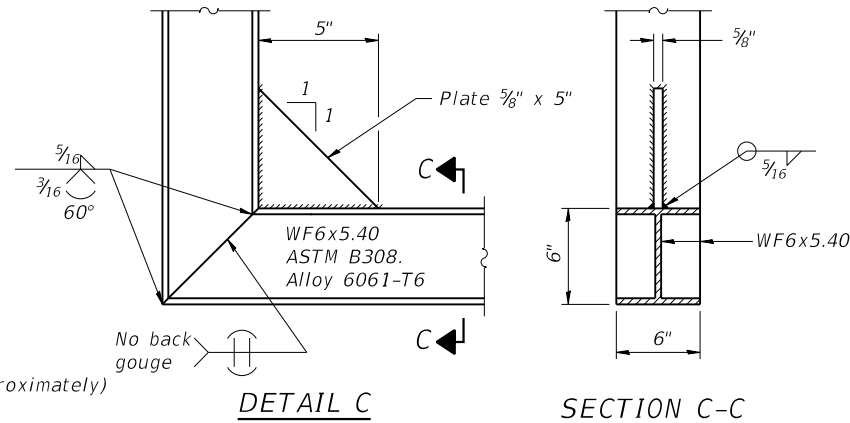
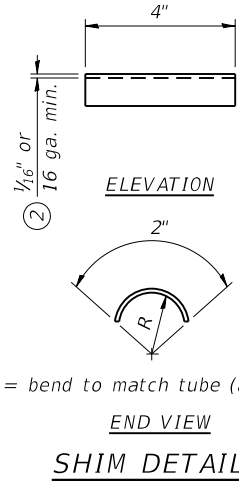
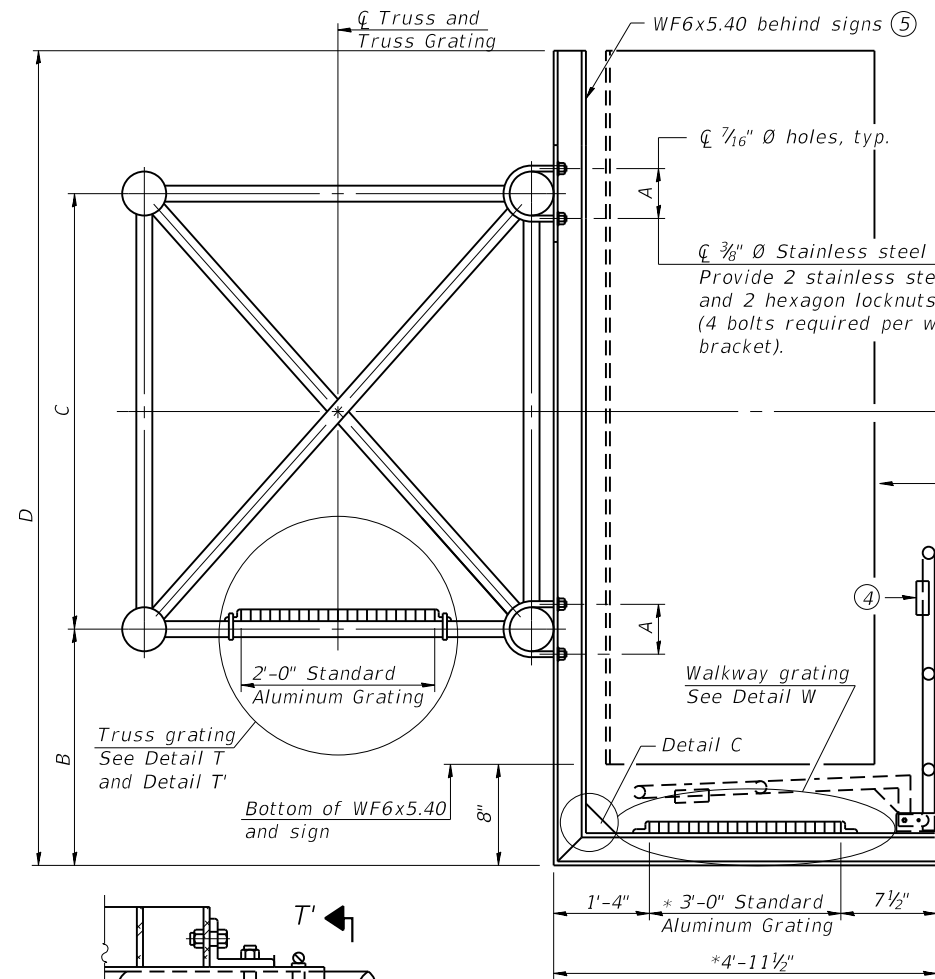
Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Grating and handrail splices placed as needed.

Structure Number	Station	a	b	c	Ls	Walkway Grating and Handrail Lengths
150991055L247.5	40+50.00	1'-6"	14'-2"	8'-9"	29'-1"	22'-11"
150991080R123.5	139+00.00	1'-6"	11'-1"	16'-10"	29'-1"	27'-11"
150991055L255.2	38+00.00	1'-6"	9'-9 1/2"	28'-1 1/2"	29'-1"	37'-11"

Notes:
 * Space walkway brackets WF6x5.40 for efficiency and within limits shown:
 f = 12" maximum, 4" minimum (End of sign to ϕ of nearest bracket)
 g = 12" maximum, 4" minimum (End of walkway grating to ϕ of nearest support bracket)
 h = 6'-0" maximum (ϕ to ϕ sign and/or walkway support brackets, WF6x5.40)

Maximum DMS weight = 5000 lbs. 4'-2" maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40.
 For Section B-B and Grating Splice Details, see Base Sheet 05-A-10-DMS.
 For Handrail Splice Details, see Base Sheet 05-A-11-DMS.

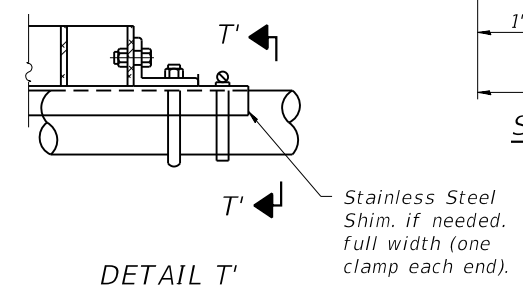
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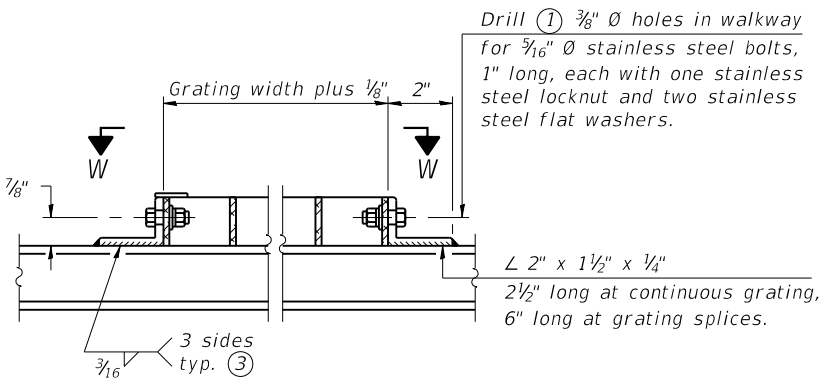
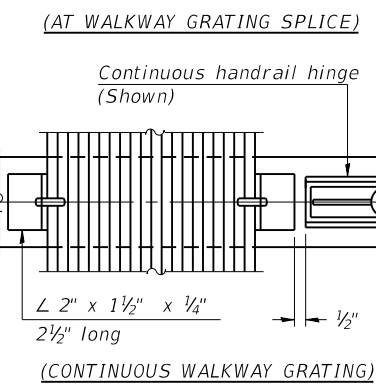
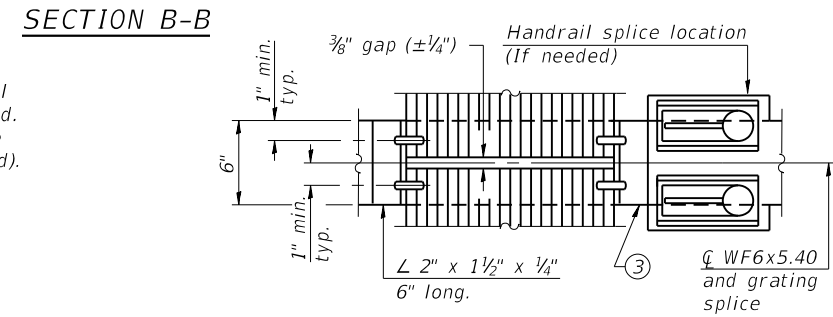
Dynamic Message Sign Cabinet
Place symmetrical about centerline of truss

Handrail
See Base Sheet 05-S-11-DMS.

* Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.



DETAIL T' (Truss grating splice)
Details not shown same as Detail T. Alternate materials may be used subject to the Engineer's review and approval.



SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

Main Bearing Bars shall be 3/8" x 1 1/2" on 1 3/8" centers and conform to ASTM B211 Alloy 6061-T6.
Cross bars shall be 3/8" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR

Aluminum Grating with modified "t" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/8" centers.
Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

Structure Number	Station	A	⑥ B	C	⑥ D
1S0991055L247.5	40+50.00	7 1/2"	1'-1 1/2"	7'-0"	8'-7"
1S0991080R123.5	139+00.00	7 1/2"	1'-1 1/2"	7'-0"	8'-7"
1S0991055L255.2	38+00.00	7 1/2"	1'-1 1/2"	7'-0"	8'-7"

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet 05-A-11.)
- R 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Cabinet manufacturer must design and supply hardware for connection of cabinet to WF6's. Bolts must be stainless steel or hot dip galvanized high strength per IDOT specifications.
- Based on actual height of tallest sign given on 05-A-1.

05-A-10-DMS 2-17-2017



S-09-DMS Signs.dgn	DESIGNED - MAA	REVISED -
USER NAME = marian.egamy	DRAWN - MAA	REVISED -
PLOT SCALE =	CHECKED - MI, JJS	REVISED -
PLOT DATE = 10/15/2018	DATE - 10/12/2018	REVISED -

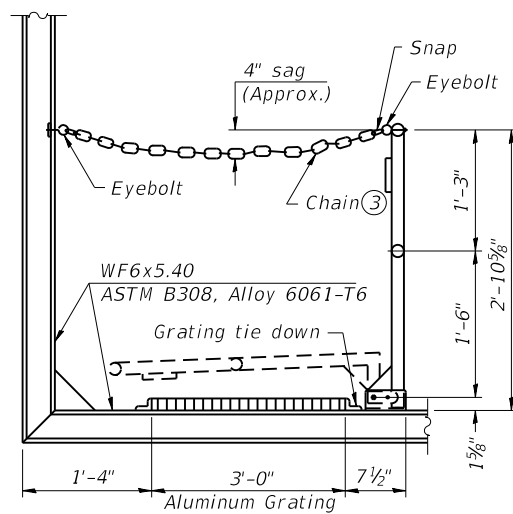
STATE OF ILLINOIS
DEPARTMENT OF
TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS

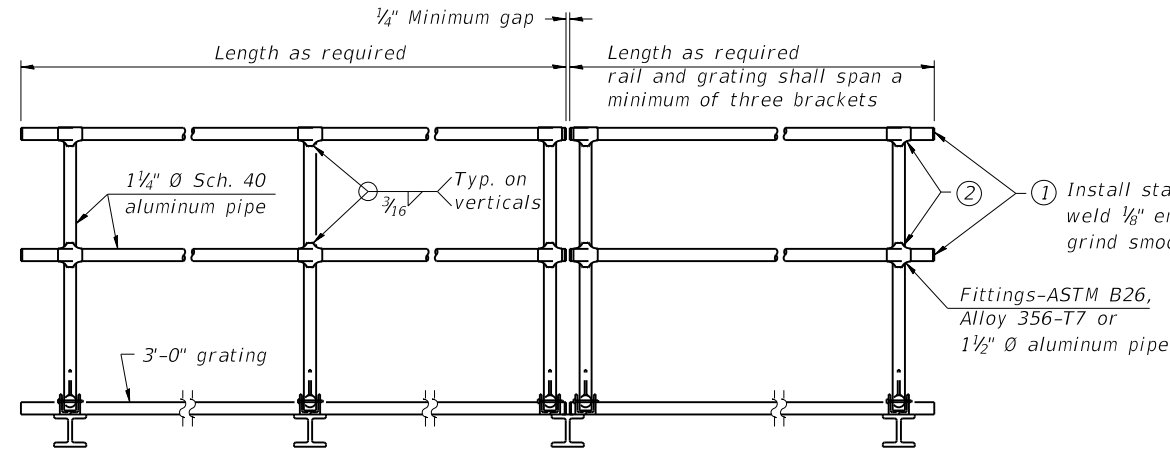
SCALE: SHEET S-09 OF S-29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	2018-024-I	WILL/DUPAGE	177	147
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

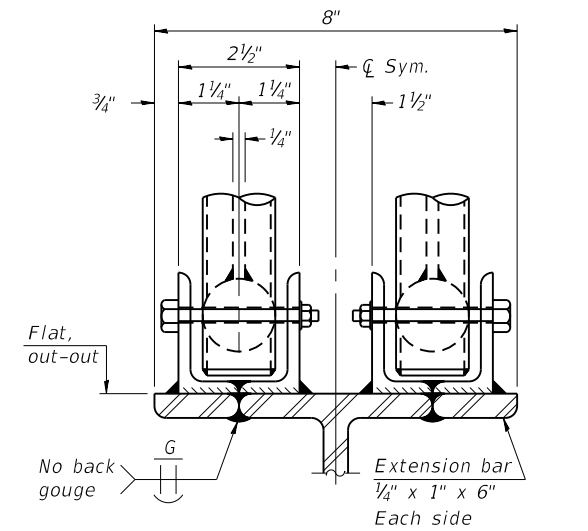
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SIDE ELEVATION
(Showing safety chain w/o sign)



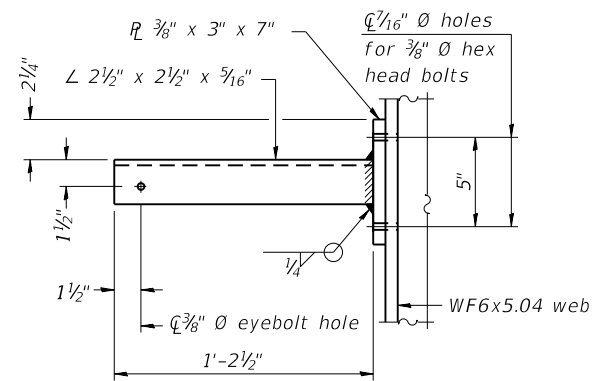
FRONT ELEVATION



ELEVATION AT HANDRAIL JOINT ④

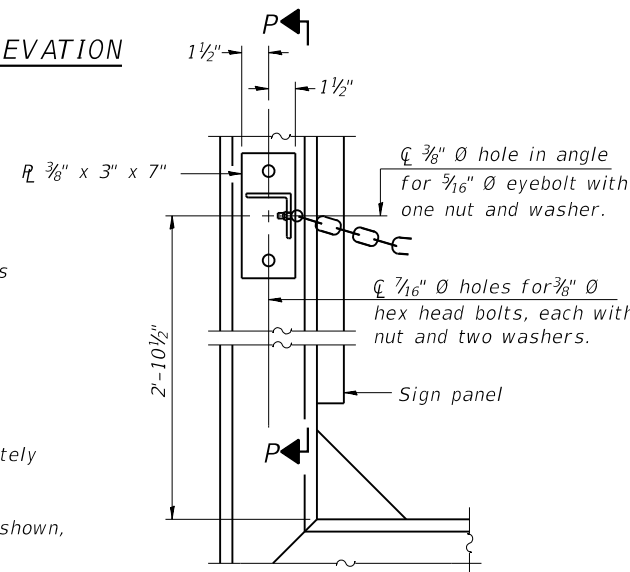
HANDRAIL DETAILS

Handrail pipe shall be ASTM B241, Alloy 6063-T6 or Alloy 6061-T6.

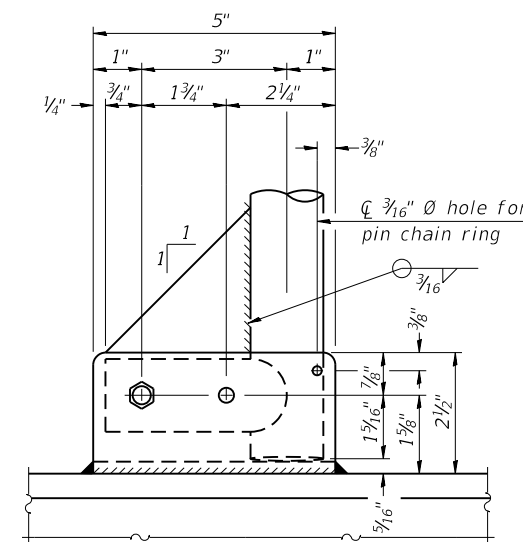


SECTION P-P

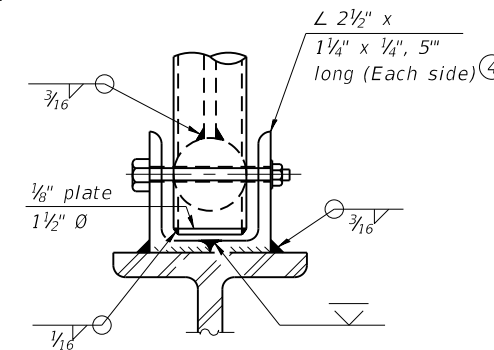
- ② Horizontal handrail member shall be continuous thru fitting. Provide 1/16" diameter hole in fitting for 3/8" diameter bolt. Field drill 7/16" diameter hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5/16" eyebolts in 7/16" diameter holes on top rail at ends only.)
- ③ 3/16" type 304L stainless steel chain, approximately 12 links per foot.
- ④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.



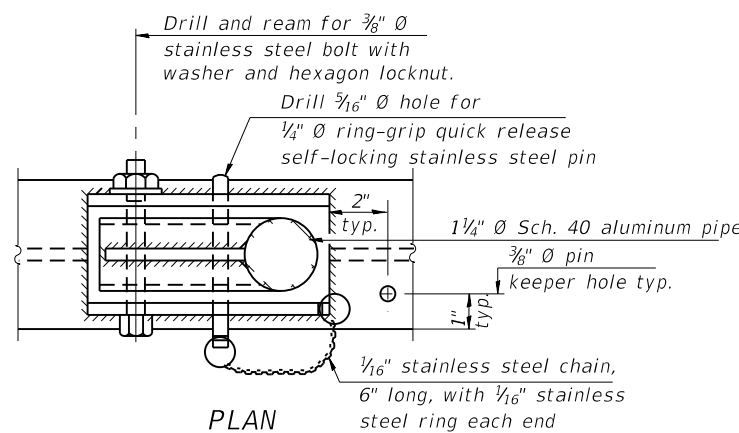
ALTERNATE SAFETY CHAIN ATTACHMENT



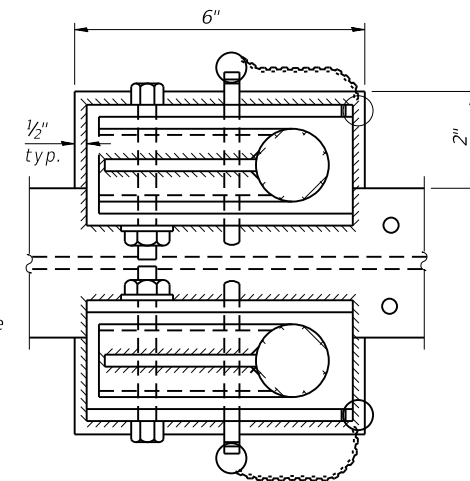
SIDE ELEVATION



FRONT ELEVATION
See "ELEVATION" at right for dimensions.

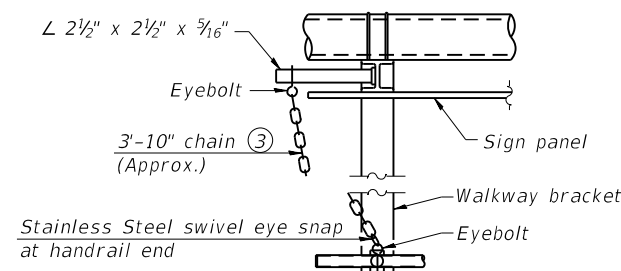


PLAN
DETAIL E HANDRAIL HINGE

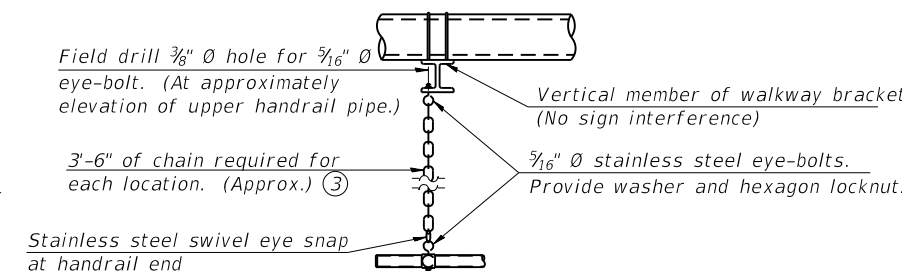


PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"

ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"



ALTERNATE SAFETY CHAIN ATTACHMENT
Details not shown similar to "Safety Chain" Details
(Walkway omitted for clarity)



SAFETY CHAIN
One required for each end of each walkway.

05-A-11-DMS 2-17-2017



S-18-DMS Signs.dgn	DESIGNED - MAA	REVISED -
USER NAME = marlan.egamy	DRAWN - MAA	REVISED -
PLOT SCALE =	CHECKED - MI, JJS	REVISED -
PLOT DATE = 10/15/2018	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF
TRANSPORTATION

OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM HANDRAIL DETAILS FOR DMS

SCALE: SHEET S-10 OF S-29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	2018-024-1	WILL/DUPAGE	177	148
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

*1-55, 1-80, & 1-290

FILE PATH = P:\1707-732 Accurate P18184-010\VD #16 Ver. DMS Structures\CAD Sheets\Location 1\5-18-DMS Signs.dgn

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	24	#9	F less 5"	—
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

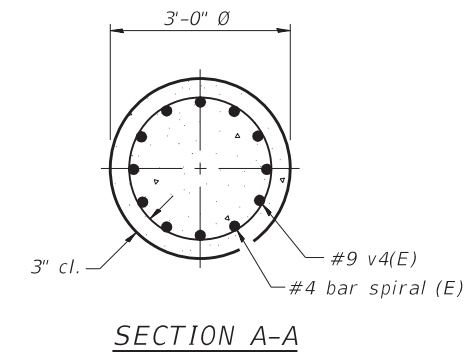
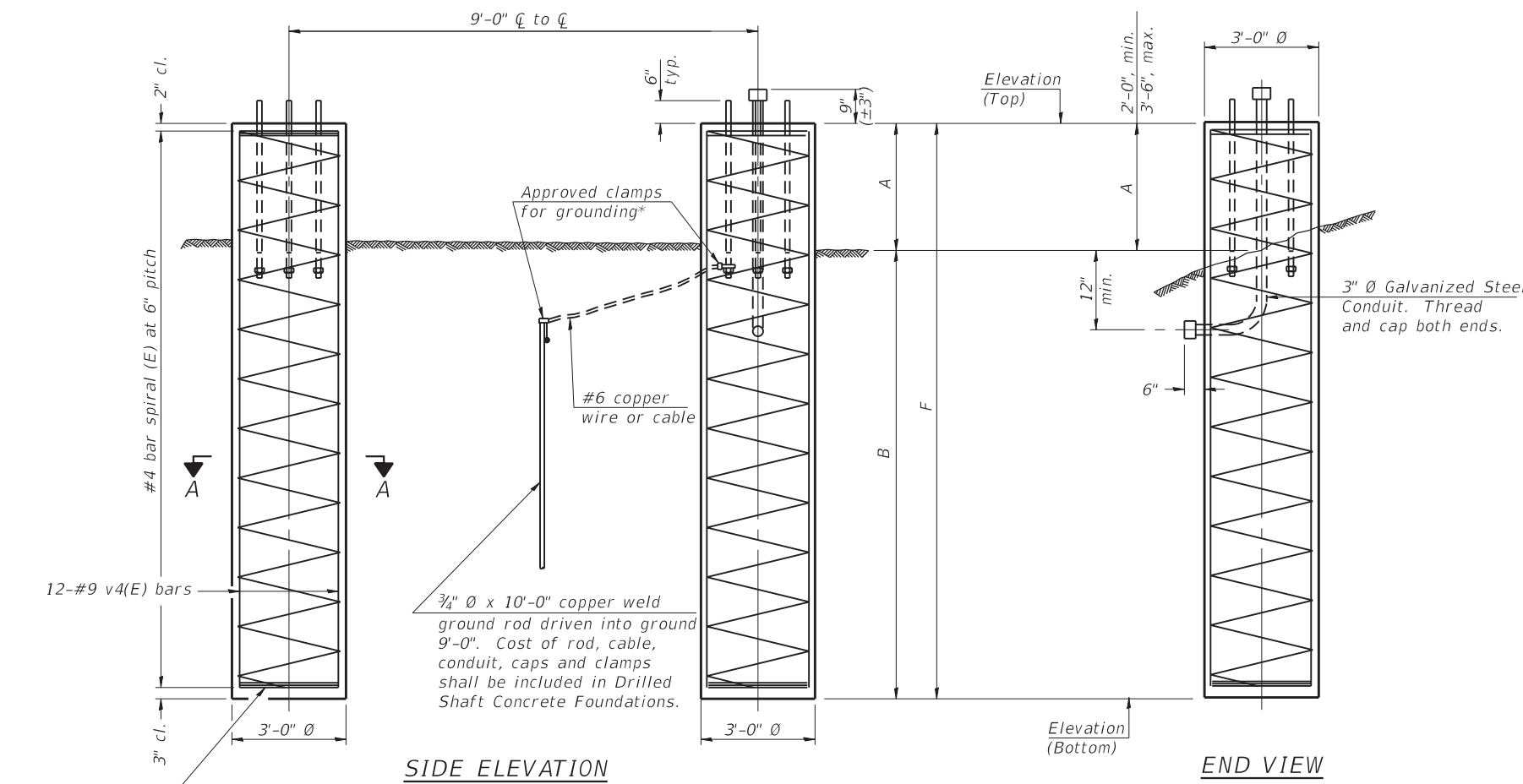
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

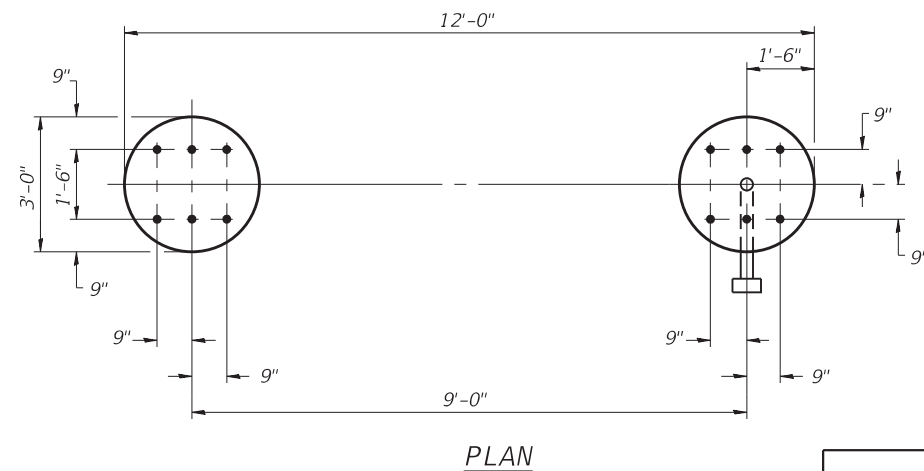
Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



3 hoops minimum top and bottom



For anchor rod size and placement, see Support Frame Detail Sheet.

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

DETAILS FOR 12" Ø SUPPORT FRAME TYPE III-A TRUSS

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
1S0991055L247.5	40+50.00	572.97	547.16	2'-3 3/4"	23'-6"	25'-9 3/4"	572.97	546.6	2'-10 1/2"	23'-6"	26'-4 1/2"	27.6
1S0991080R123.5	139+00.00	599.99	579.49	2'-6"	18'-0"	20'-6"	599.99	579.08	2'-11"	18'-0"	20'-11"	22.0
1S0991055L255.2	38+00.00	-	-	-	-	-	594.10	567.77	2'-4"	24'-0"	26'-4"	13.8

054-F4 2-17-2017



S-11-DMS Signs.dgn	DESIGNED - MAA	REVISED - MAA 11/29/2018
USER NAME = marlen.agamy	DRAWN - MAA	REVISED -
PLOT SCALE =	CHECKED - MI ,JJS	REVISED -
PLOT DATE = 11/15/2018	DATE - 11/20/2018	REVISED -

STATE OF ILLINOIS
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TRANSPORTATION

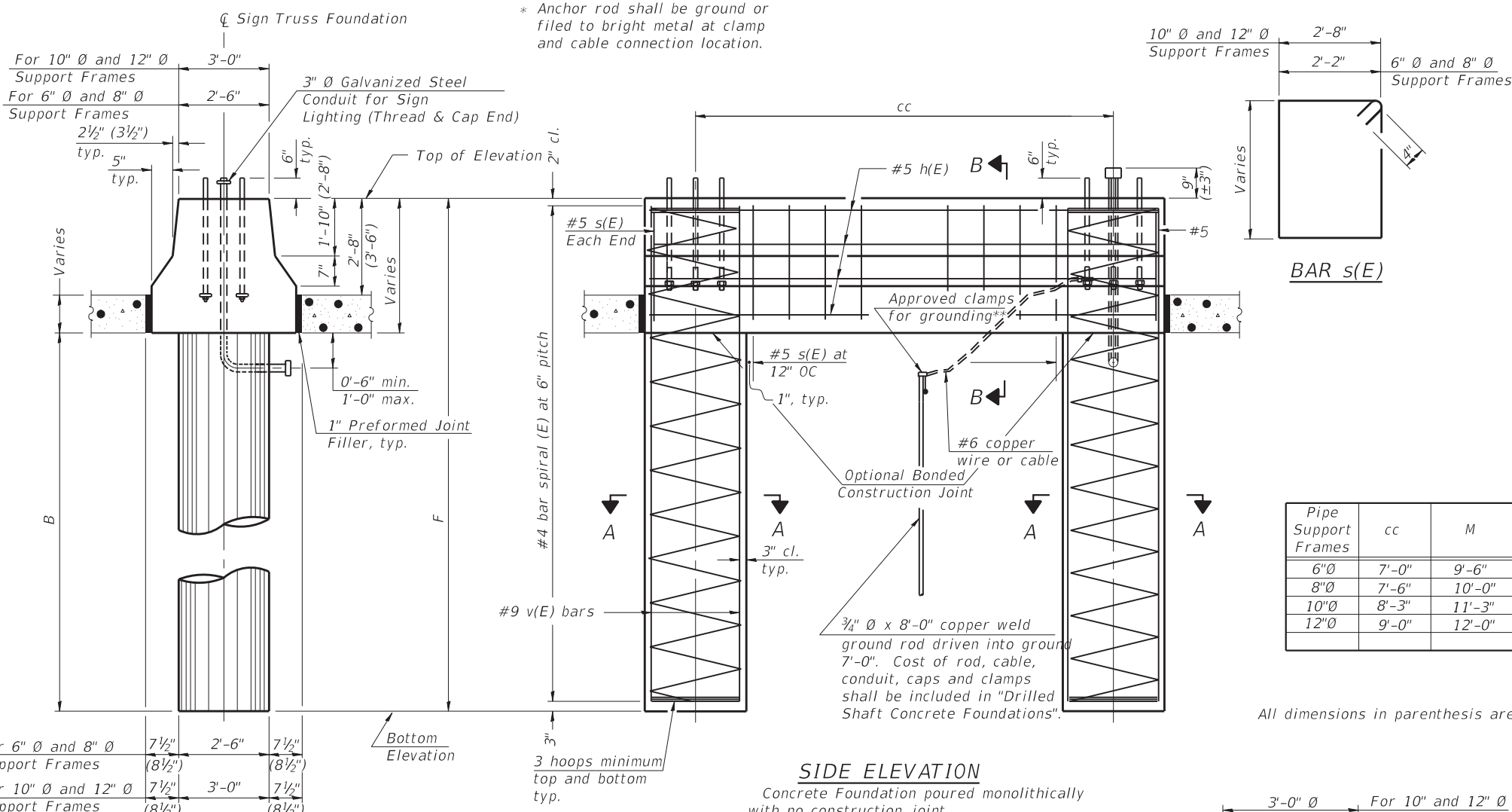
**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS**

SCALE: SHEET S-11 OF S-29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	2018-024-I	WILL/DUPAGE	177	149
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

FILE PATH = P:\1707-732 Accurate PTB\B4-010\VD #16 Ver. DMS Structures\CAD Sheets\Location\1S-11-DMS Signs.dgn

*1-55, 1-80, & 1-290



NOTES:
 The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Q_u) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.
 If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.
 No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.
 Concrete shall be placed monolithically, without construction joints.
 Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.
 A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.

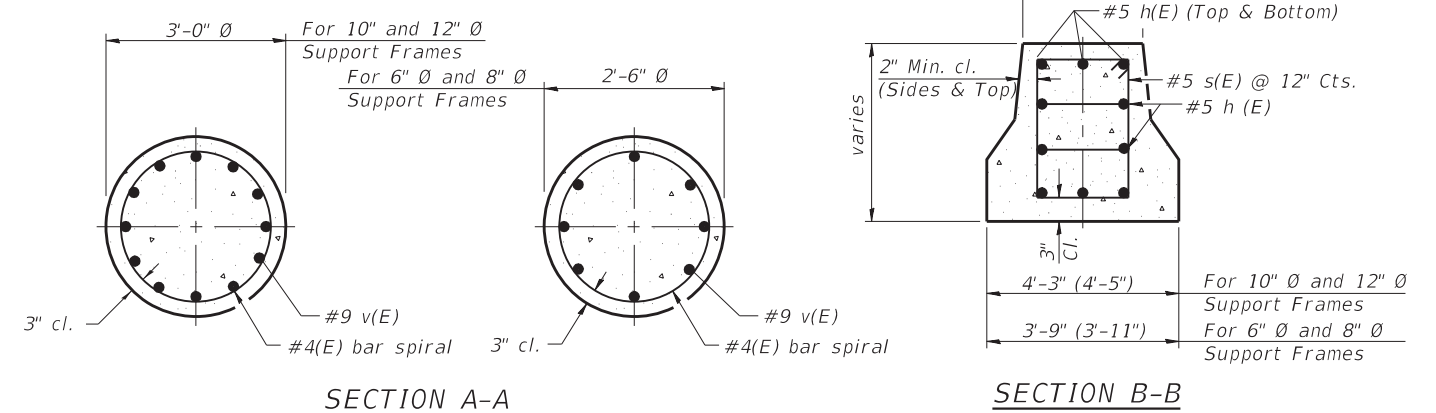
BAR LIST - EACH FOUNDATION

Pipe Support Frames	cc	M	a	a/2
6"Ø	7'-0"	9'-6"	0'-11"	5 1/2"
8"Ø	7'-6"	10'-0"	1'-1 1/2"	6 3/4"
10"Ø	8'-3"	11'-3"	1'-3"	7 1/2"
12"Ø	9'-0"	12'-0"	1'-6"	9"

Bar	Number	Size	Length	Shape
h(E)	10	#5	M less 4"	—
s(E)	Varies	#5	Varies	□
v(E)	16	#9	F less 0'-5"	—
v(E)	24	#9	F less 0'-5"	—

6" Ø and 8" Ø Support Frame
 10" Ø and 12" Ø Support Frame

All dimensions in parenthesis are for 42" high barrier.



Structure Number	Station	Left Foundation				Right Foundation				Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	B	F	Elevation Top	Elevation Bottom	B	F	
150991055L255.2	38+00.00	596.97	570.14	24'-0"	26'-10"	-	-	-	-	18.6

FILE PATH = P:\1707-732 Accurate P1B1B4-010\VD #16 Ver. DMS Structures\CAD Sheets\Location 1\5-12-DMS Stgn.dgn



OS4-MED 2-17-2017
 DESIGNED - MAA REVISED - MAA 11/29/2018
 DRAWN - MAA REVISED -
 CHECKED - MI ,JJS REVISED -
 DATE - 11/20/2018 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF
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OVERHEAD SIGN STRUCTURES
 MEDIAN SUPPORT FOUNDATION DETAILS
 SCALE: SHEET S-12 OF S-29 SHEETS STA. TO STA.

F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
 • 2018-024-1 WILL/DUPAGE 177 150
 CONTRACT NO. 62G66
 ILLINOIS FED. AID PROJECT

Wang Engineering
 wangeng@wangeng.com
 1145 N. Main Street
 Lombard/IL/60148
 Telephone: 6309539928
 Fax: 6309539938

BORING LOG OSB-01
 WEI Job No.: 491-04-02

Datum: NAVD 88
 Elevation: 574.74 ft
 North: 1740487.81 ft
 East: 1022017.86 ft
 Station: 40+62.72
 Offset: 52.18 LT

Client: **Accurate Group, Inc.**
 Project: **I-80 at I-55 Dynamic Messaging Signs**
 Location: **Will and DuPage Counties, Illinois**

Page 1 of 1

Wang Engineering
 wangeng@wangeng.com
 1145 N. Main Street
 Lombard/IL/60148
 Telephone: 6309539928
 Fax: 6309539938

BORING LOG OSB-02
 WEI Job No.: 491-04-02

Datum: NAVD 88
 Elevation: 575.36 ft
 North: 1740486.91 ft
 East: 1022051.73 ft
 Station: 40+60.83
 Offset: 18.35 LT

Client: **Accurate Group, Inc.**
 Project: **I-80 at I-55 Dynamic Messaging Signs**
 Location: **Will and DuPage Counties, Illinois**

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
574.0	9-inch thick ASPHALT --PAVEMENT--														
573.3	3-inch thick, black and gray SANDY GRAVEL --AGGREGATE BASE--		1	2	2	0.90	40				9	24	NP	5	
571.7	Medium stiff, black SILTY CLAY; damp --BURIED TOPSOIL--														
571.0	Medium stiff, brown SILTY CLAY LOAM; damp		2	10	14	NP	6	551.0	--saturated-- Very stiff, brownish gray to gray SILTY CLAY to CLAY --RDR 3 to 5--25		10	9	5	2.38	28
	Medium dense to very dense, brown and gray, damp to saturated SANDY GRAVEL --RDR 2 to 4--		3	16	26	NP	5				11	5	6	2.46	19
								547.2	Strong, light grayish gray, fair quality, vuggy DOLOSTONE; closely spaced, slightly weathered, horizontal, oblique, and vertical joints, with 0-0.2 inch opening, slightly rough walls, and 30 <0.2 inch thick sand infill. --Run 1: 27.5 to 35.0 feet-- --RECOVERY = 87%-- --RQD = 51%--						
	--hard drilling, 5 to 23 feet-- --frequent rig chatter--		4	15	20	NP	4				12				
			5	11	17	NP	5								
			6	13	20	NP	4								
			7	18	29	NP	5								
			8	19	29	NP	5								
								539.7	Boring terminated at 35.00 ft						

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
574.7	8-inch thick ASPHALT --PAVEMENT--														
574.2	6-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--		1	4	3	1.00	31				9	18	12	NP	7
572.4	Stiff, brown SILTY CLAY LOAM --FILL-- --RDR 2--							552.4	Stiff, gray SILTY CLAY, trace gravel --RDR 2--		10	3	4	1.50	27
	Medium dense to very dense, brown, damp to saturated SANDY GRAVEL, some cobble fragments --RDR 3 to 5--		2	11	39	NP	10				11	18	22	NP	8
			3	11	18	NP	6	549.9	Dense, brown SANDY GRAVEL; saturated --RDR 5--		11	18	22	NP	8
			4	7	24	NP	5	547.4	Strong, light brownish brown, very poor to poor quality DOLOSTONE; closely spaced, slightly weathered, horizontal and vertical joints, with 0-0.2 inch opening, slightly rough joint walls, and 0 - 0.2 inch thick clay infill. --Run 1: 28.0 to 33.0 feet-- --RECOVERY = 27%-- --RQD = 0%-- --Run 2: 33.0 to 37.0 feet-- --RECOVERY = 92%-- --RQD = 27%--						
	--hard drilling, 3 to 23 feet-- --frequent rig chatter--		5	7	17	NP	6								
			6	6	9	NP	6								
			7	7	9	NP	4								
			8	17	17	NP	5								
								538.4	Boring terminated at 37.00 ft						

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-18-2018	Complete Drilling	06-18-2018	While Drilling	▽	23.50 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	13CME55T [85%]	At Completion of Drilling	▽	DRY	
Driller	K&R	Logger	M. Ciapas	Time After Drilling		NA	
Drilling Method	3.25" HSA; boring backfilled upon completion			Depth to Water	▽	NA	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-25-2018	Complete Drilling	06-25-2018	While Drilling	▽	20.50 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	▽	18.00 ft	
Driller	N&J	Logger	F. Bozga	Time After Drilling		NA	
Drilling Method	3.25" HSA; boring backfilled upon completion			Depth to Water	▽	NA	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

FILE PATH = P:\1707-732 Accurate P18184-01\10\10 *15 Ver. DMS Structures\CAD Sheets\Location_I-55-13-DMS Signs.dgn



S-13-DMS Signs.dgn
 USER NAME = marlan.agamy
 PLOT SCALE =
 PLOT DATE = 10/15/2018

DESIGNED - MAA
 DRAWN - MAA
 CHECKED - MI, JJS
 DATE - 10/12/2018

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF
 TRANSPORTATION

BORING LOGS (1 OF 3)

SCALE: SHEET S-13 OF S-29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	151
CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				

*I-55, I-80, & I-290

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 wangeng@wangeng.com
 1145 N. Main Street
 Lombard/IL/60148
 Telephone: 6309539928
 Fax: 6309539938

BORING LOG OSB-05
 WEI Job No.: 491-04-02

Datum: NAVD 88
 Elevation: 602.45 ft
 North: 1749433.37 ft
 East: 1009497.54 ft
 Station: 140+13.04
 Offset: 52.74 RT

Client: **Accurate Group, Inc.**
 Project: **I-80 at I-55 Dynamic Messaging Signs**
 Location: **Will and DuPage Counties, Illinois**

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	601.5	11-inch thick ASPHALT --PAVEMENT--													
	599.5	Medium dense, brown SANDY GRAVEL; moist --AGGREGATE BASE--	1	3 5 10	NP	5						9	3 4 6	2.05 B	18
	595.7	Hard, brown and gray SILTY CLAY, trace gravel --FILL-- --RDR 2--	2	6 7 8		6.64 B	15				25	10	4 6 9	1.64 B	19
	592.0	Stiff, brown CLAY to SILTY CLAY --RDR 2--	3	2 3 4	NR							11	3 4 5	1.39 B	17
	587.2	Stiff to very stiff, brown to gray SILTY CLAY, trace gravel --RDR 2--	4	3 3 3		1.56 B	29				30	12	3 5 6	1.39 B	18
	586.7	Stiff to hard, gray SILTY CLAY, trace gravel --RDR 2--	5	3 4 5		1.75 P	19		570.7	--moist silt lenses--		13	5 7 11	3.03 B	16
	587.2	--saturated sand lenses--	6	4 6 8		2.95 B	16		567.5	Boring terminated at 35.00 ft		14	5 6 7	2.79 B	18
	586.7	Stiff to hard, gray SILTY CLAY, trace gravel --RDR 2--	7	4 6 9		3.12 B	15					15	6 7 10	3.53 B	15
			8	4 7 9		4.18 B	17					20	4 6 9	4.43 B	16

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	06-19-2018	Complete Drilling	06-19-2018	While Drilling	15.50 ft
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	32.00 ft
Driller	N&J	Logger	F. Bozga	Time After Drilling	NA
Drilling Method	3.25" HSA; boring backfilled upon completion				
		Checked by	M. Seyhun	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

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BORING LOG OSB-06
 WEI Job No.: 491-04-02

Datum: NAVD 88
 Elevation: 602.33 ft
 North: 1749445.92 ft
 East: 1009467.94 ft
 Station: 140+5.55
 Offset: 21.47 RT

Client: **Accurate Group, Inc.**
 Project: **I-80 at I-55 Dynamic Messaging Signs**
 Location: **Will and DuPage Counties, Illinois**

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	601.1	15-inch thick ASPHALT --PAVEMENT--													
	599.3	Loose, brown GRAVELLY SAND; wet --AGGREGATE BASE--	1	8 4 3	NP	13						9	4 6 8	4.18 B	18
	596.8	Hard, brown and gray SILTY CLAY --FILL-- --RDR 2--	2	4 7 7		5.25 B	18				25	10	4 5 8	2.13 B	17
	595.8	Stiff, black SILTY CLAY LOAM --BURIED TOPSOIL--	3	3 2 3		1.75 P	23					11	3 5 9	1.72 B	19
	589.3	Stiff, brown and gray CLAY to SILTY CLAY --RDR 2--	4	3 2 3		1.56 B	25				30	12	3 5 7	1.48 B	16
	589.3	Stiff to hard, brown to gray SILTY CLAY, trace gravel --RDR 2--	5	2 3 4		1.64 B	24					13	4 5 9	1.97 B	18
			6	6 7 10		3.53 B	15		567.3	Boring terminated at 35.00 ft		14	6 10 10	1.80 B	16
			7	5 6 8		3.36 B	16					15	5 6 8	3.36 B	16
			8	4 6 9		4.43 B	16					20	4 6 9	4.43 B	16

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	06-19-2018	Complete Drilling	06-19-2018	While Drilling	1.50 ft
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	26.00 ft
Driller	N&J	Logger	F. Bozga	Time After Drilling	NA
Drilling Method	3.25" HSA; boring backfilled upon completion				
		Checked by	M. Seyhun	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

FILE PATH = P:\1707-732 Accurate P1B14-010\VD #16 Ver. DMS Structures\CAD Sheets\Location: I-55-14-DMS Sign.dgn



S-14-DMS Signs.dgn	DESIGNED - MAA	REVISED -
USER NAME = marian.egamy	DRAWN - MAA	REVISED -
PLOT SCALE =	CHECKED - MI, JJS	REVISED -
PLOT DATE = 10/15/2018	DATE - 10/12/2018	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF
 TRANSPORTATION

BORING LOGS (2 OF 3)

SCALE: SHEET S-14 OF S-29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	152
CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				

*I-55, I-80, & I-290

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 Fax: 6309539938

BORING LOG OSB-03
 WEI Job No.: 491-04-02

Datum: NAVD 88
 Elevation: 596.51 ft
 North: 1780374.76 ft
 East: 1026039.20 ft
 Station: 40+40.57
 Offset: 49.56 LT

Client: **Accurate Group, Inc.**
 Project: **I-80 at I-55 Dynamic Messaging Signs**
 Location: **Will and DuPage Counties, Illinois**

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	595.7	9.5-inch thick ASPHALT --PAVEMENT--															
	593.5	Medium dense, brown SANDY GRAVEL; damp --AGGREGATE BASE--	1	X	1	7 5 6	NP	10			Strong, light olive gray, poor to very poor quality DOLOSTONE; closely spaced, fresh, horizontal joints, with 0.05 - 0.2 inch opening, rough joint walls, <0.2 inch thick clay infill.						
	587.0	Very stiff, brown, gray, and black SILTY CLAY to SILTY CLAY LOAM, trace gravel --FILL-- --RDR 2--	2	X	2	3 4 6	2.30 B	20			--Run 1: 20.0 to 27.0 feet-- --RECOVERY = 96%-- --RQD = 28%--	25		9			
	587.0	--frequent rig chatter, 9.5 feet--	3	X	3	4 4 8	2.75 P	25			--Run 2: 27.0 to 32.0 feet-- --RECOVERY = 100%-- --RQD = 15%--	30		10			
	587.0	Medium dense to Dense, gray, damp to moist SILTY LOAM, trace gravel and cobbles --frequent rig chatter-- --RDR 3 to 4--	4	X	4	13 12	NR				Boring terminated at 32.00 ft	35					
	582.0	--hard drilling from 14.5 feet--	5	X	5	7 20 21	NP	10				40					
	582.0	Very dense, gray GRAVELLY LOAM, little limestone fragments; wet --RDR 4 to 5--	6	X	6	4 5 30	NP	10									
	576.5		7	X	7	50/5"	NP	13									
	576.5		8	X	8	50/4"	NP	14									

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-21-2018	Complete Drilling	06-21-2018	While Drilling	▽	14.50 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	▽	6.00 ft	
Driller	N&J	Logger	F. Bozga	Time After Drilling		NA	
Checked by	M. Seyhun	Drilling Method	3.25" HSA; boring backfilled upon completion	Depth to Water	▽	NA	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

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BORING LOG OSB-04
 WEI Job No.: 491-04-02

Datum: NAVD 88
 Elevation: 596.36 ft
 North: 1780378.15 ft
 East: 1026083.56 ft
 Station: 40.42.38
 Offset: 5.10 LT

Client: **Accurate Group, Inc.**
 Project: **I-80 at I-55 Dynamic Messaging Signs**
 Location: **Will and DuPage Counties, Illinois**

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	595.0	16-inch thick ASPHALT --PAVEMENT--															
	593.4	Medium dense, gray SANDY GRAVEL --AGGREGATE BASE--	1	X	1	9 9 7	NP	3									
	588.4	Very stiff, dark brown SILTY CLAY LOAM, trace gravel --FILL-- --RDR 3--	2	X	2	3 3 4	NR				--Run 2: 25.0 to 30.0 feet-- --RECOVERY = 100%-- --RQD = 40%--	25					
	588.4	--rig chatter from 8.0 feet--	3	X	3	3 4 8	2.54 B	28				30					
	588.4	Medium dense to very dense, brown, saturated GRAVELLY SANDY LOAM --RDR 3 to 5-- --hard drilling--	4	X	4	5 7 12	NR										
	582.9	Very dense, brown DOLOSTONE fragments --WEATHERED BEDROCK--	5	X	5	6 11 10	NP	14			Boring terminated at 30.00 ft	35					
	581.4	Strong, light greyish gray, very poor to poor quality DOLOSTONE; closely spaced, fresh, horizontal joints, with 0.05 - 0.2 inch opening, slightly rough walls, and <0.2 inch thick sand infill. --Run 1: 15.0 to 25.0 feet-- --RECOVERY = 98%-- --RQD = 13%--	6	X	6	50/2"	NP	11				40					
	581.4		7	X	7												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-25-2018	Complete Drilling	06-25-2018	While Drilling	▽	8.00 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	▽	8.00 ft	
Driller	N&J	Logger	F. Bozga	Time After Drilling		NA	
Checked by	M. Seyhun	Drilling Method	3.25" HSA; boring backfilled upon completion	Depth to Water	▽	NA	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

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S-15-DMS Signs.dgn
 USER NAME = marian.agamy
 PLOT SCALE =
 PLOT DATE = 10/15/2018

DESIGNED -	MAA	REVISED -	
DRAWN -	MAA	REVISED -	
CHECKED -	MI, JJS	REVISED -	
DATE -	10/12/2018	REVISED -	

STATE OF ILLINOIS
 DEPARTMENT OF
 TRANSPORTATION

BORING LOGS (3 of 3)

SCALE: SHEET S-15 OF S-29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2018-024-I	WILL/DUPAGE	177	153
CONTRACT NO. 62G66			ILLINOIS FED. AID PROJECT	

*I-55, I-80, & I-290

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES:
Field Units
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (reinforcement)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specifications.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.

The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All bolts noted as "high strength" must satisfy the requirements of AASHTO M164 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449, ASTM A193, Grade B7, or approved alternate, and must have matching lock nuts. Bolts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All bolts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of bolts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304, 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: Shall conform to ASTM F1554 Gr. 105.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Concrete Sealer in accordance with the Standard Specifications.

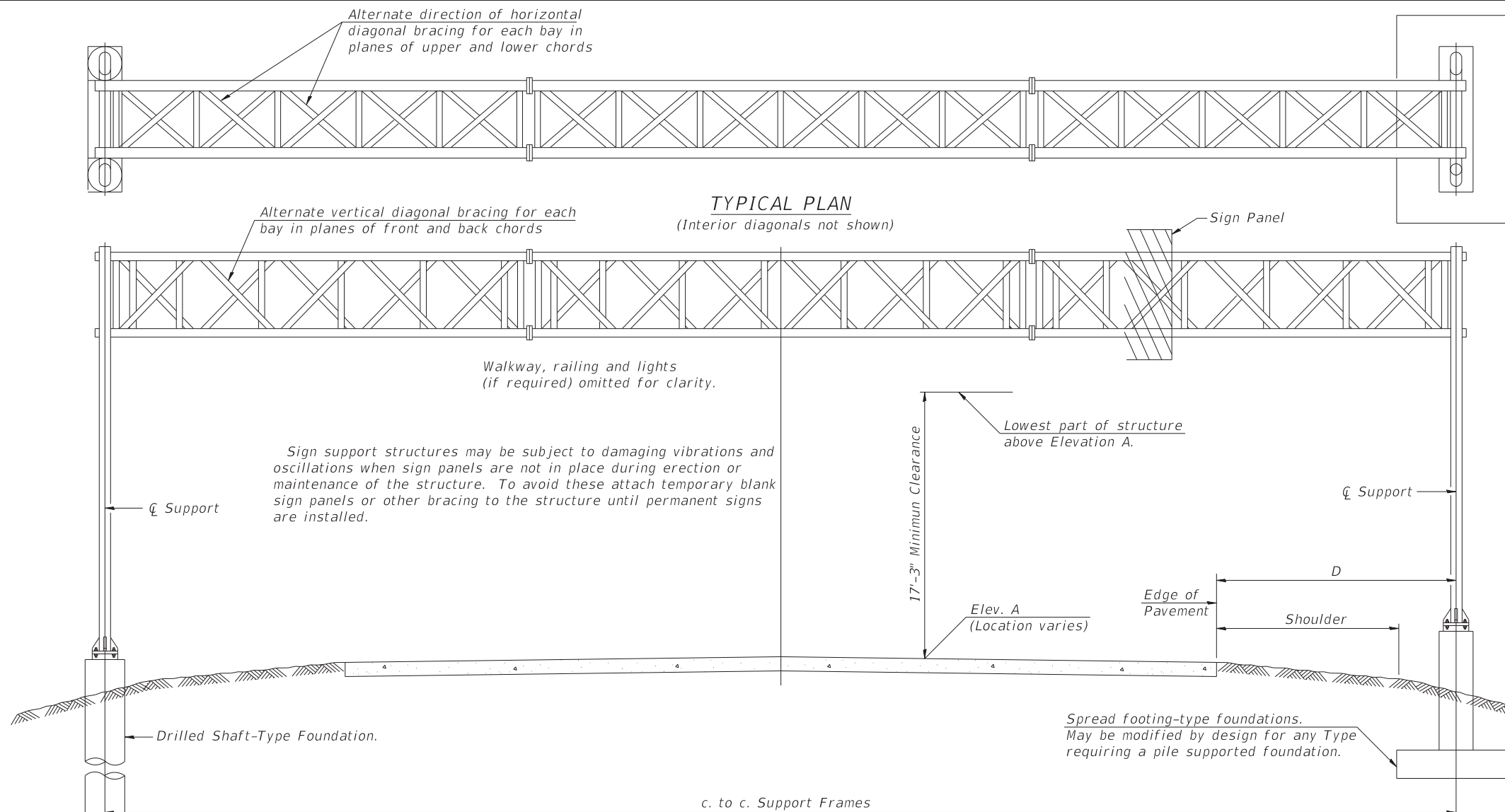
REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Concrete Foundations and Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-A	Foot	-
OVERHEAD SIGN STRUCTURE SPAN TYPE II-A	Foot	-
OVERHEAD SIGN STRUCTURE SPAN TYPE III-A	Foot	331
OVERHEAD SIGN STRUCTURE WALKWAY TYPE A	Foot	54
CONCRETE FOUNDATIONS	Cu. Yds.	-
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	92.4

* I-55, I-80 & I-290



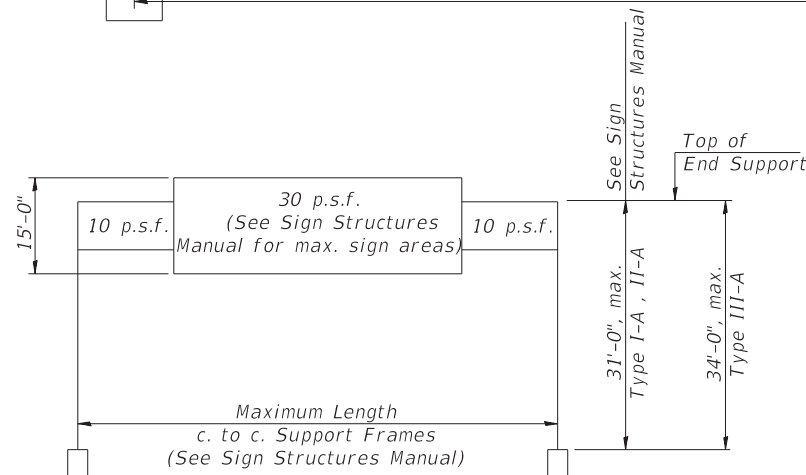
TYPICAL ELEVATION
(Looking at Face of Signs**)

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area
1S0991080R129.0	430+54	III-A	89'	598.05	31.5'	7'-11"	230.25 Sq. Ft.
1S0991080L131.2	548+20	III-A	73'	636.17	15.5'	7'-11"	230.25 Sq. Ft.
1S0991080L136.0	799+25	III-A	73'	646.61	17.5'	7'-11"	230.25 Sq. Ft.
1S0221290R131.2	25+00	III-A	96'	702.19	31.5'	7'-11"	230.25 Sq. Ft.

**Looking upstation for structures with signs both sides.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.



DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

MODEL: Default
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05-A-1 2-17-2017



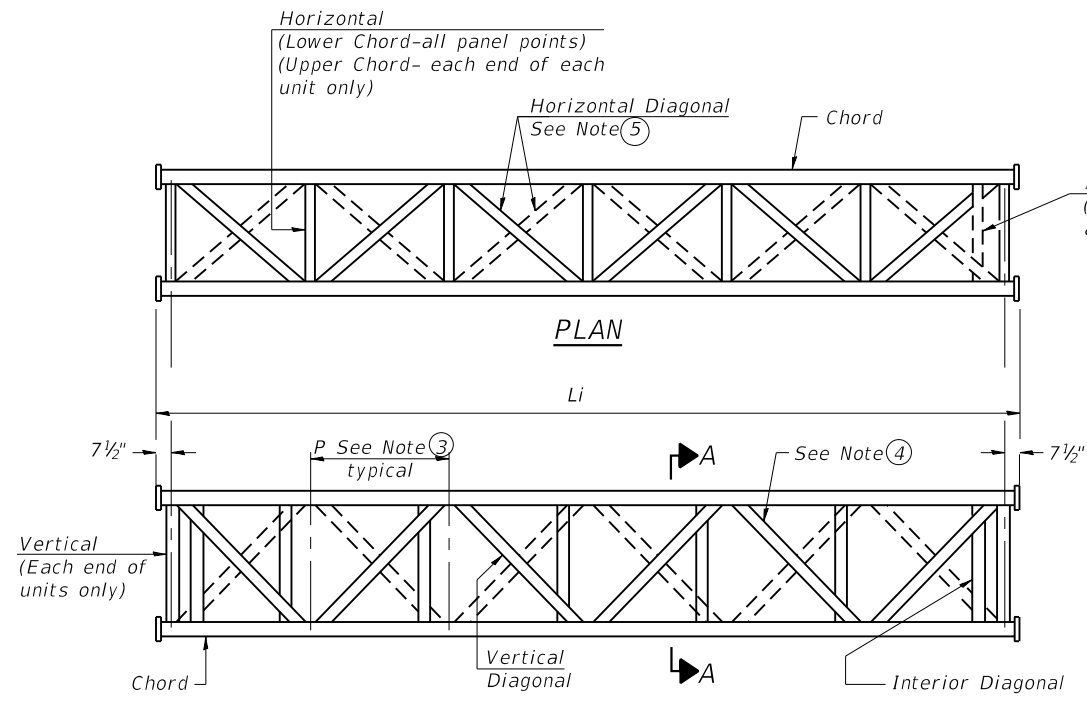
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PLOT DATE =	DRAWN - JN	REVISED -
	CHECKED - SPS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

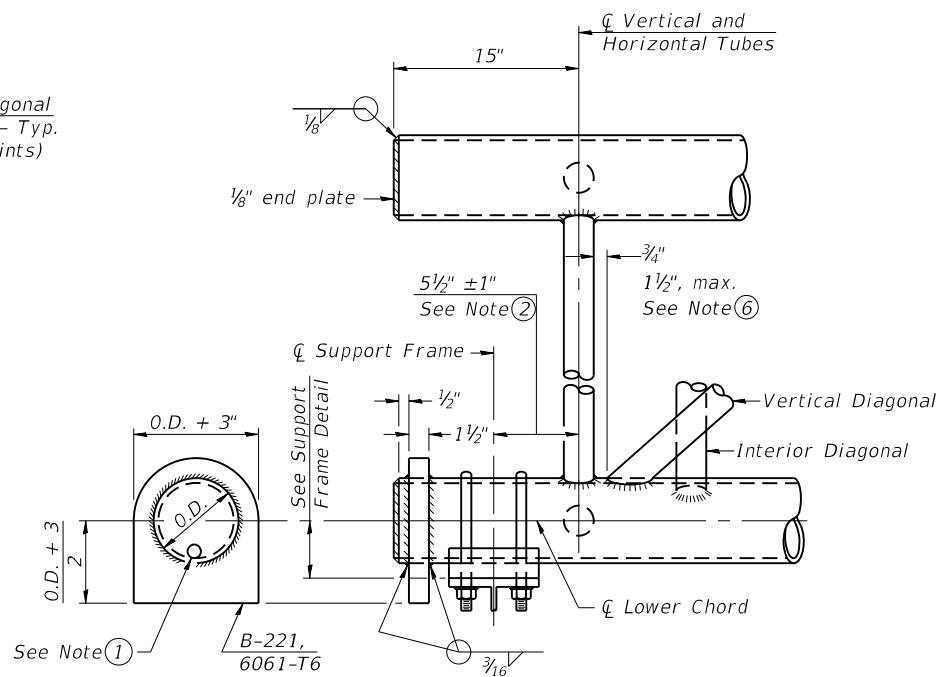
OVERHEAD SIGN STRUCTURES - GENERAL PLAN &
ELEVATION - ALUMINUM TRUSS & STEEL SUPPORTS

SHEET S-16 OF S-29 SHEETS

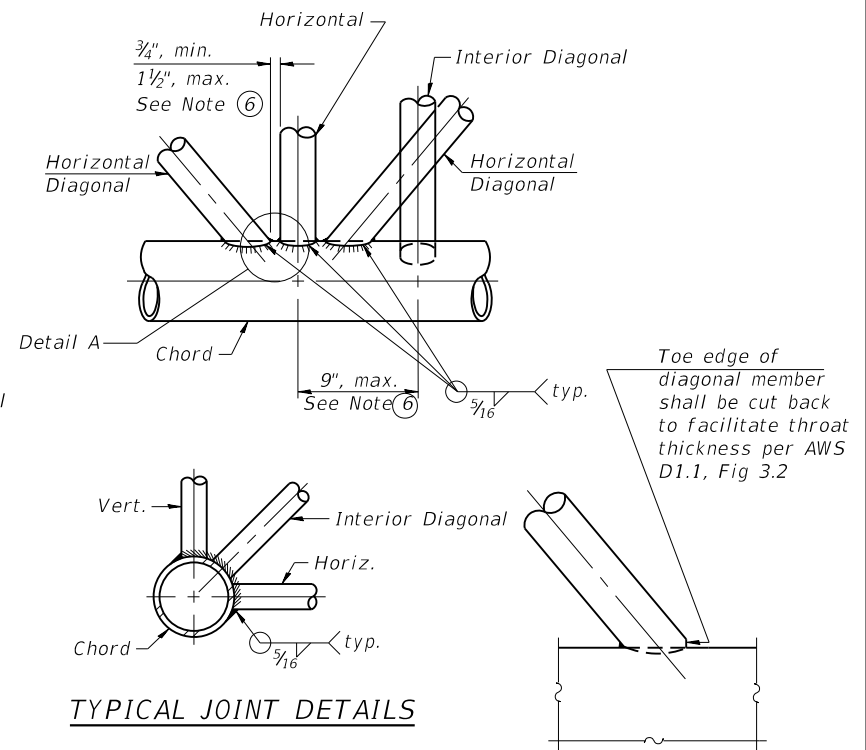
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*	2018-024-4	WILL / DUPAGE	177	154
CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				



**ELEVATION
TYPICAL INTERIOR UNIT**
Even number of panels/interior unit required.

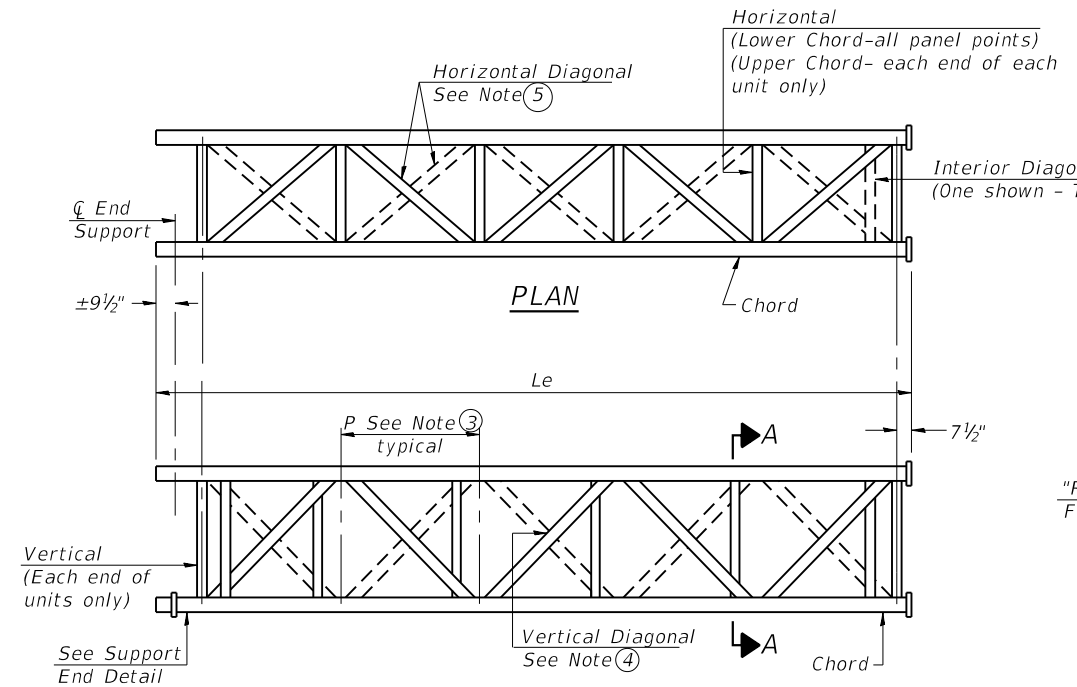


SUPPORT END DETAIL FOR EXTERIOR UNIT

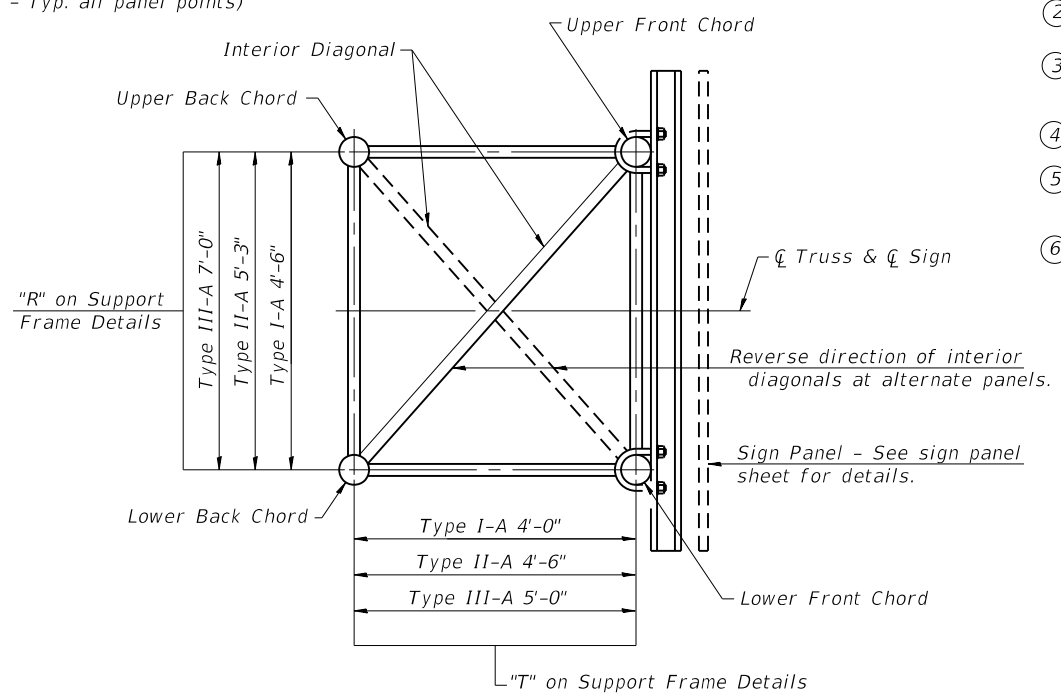


TYPICAL JOINT DETAILS

DETAIL A



**ELEVATION
TYPICAL EXTERIOR UNIT**
Even or odd number of panels/exterior units allowed.



SECTION A-A

- ① Contractor may alternatively use standard aluminum drive-fit cap to close end. 1/2" Ø drain hole in end plate/drive-fit cap. (Typ. at ends of all chords)
- ② 5 1/2" end dimension may vary by ±1" to provide uniform panel spacing (P).
- ③ Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-A or 4'-0" and 5'-6" for Types II-A and III-A.
- ④ Vertical Diagonals in front and back face shall alternate.
- ⑤ Hidden lines show wind bracing alternates direction between planes of top and bottom chords.
- ⑥ All diagonals shall be detailed for minimum offset from the panel point based on the following: Offset shall be such as to provide a 3/4" minimum to 1 1/2" maximum clearance between any diagonal and any horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

MODEL: Default
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05-A-2

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**OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS
DETAILS FOR TRUSS TYPES I-A, II-A AND III-A**

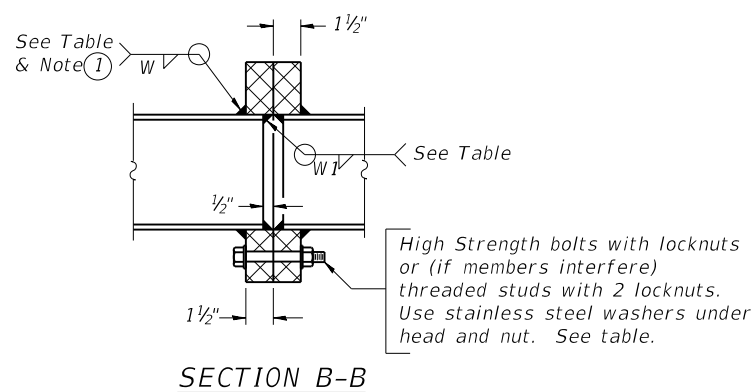
SHEET S-17 OF S-29 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				

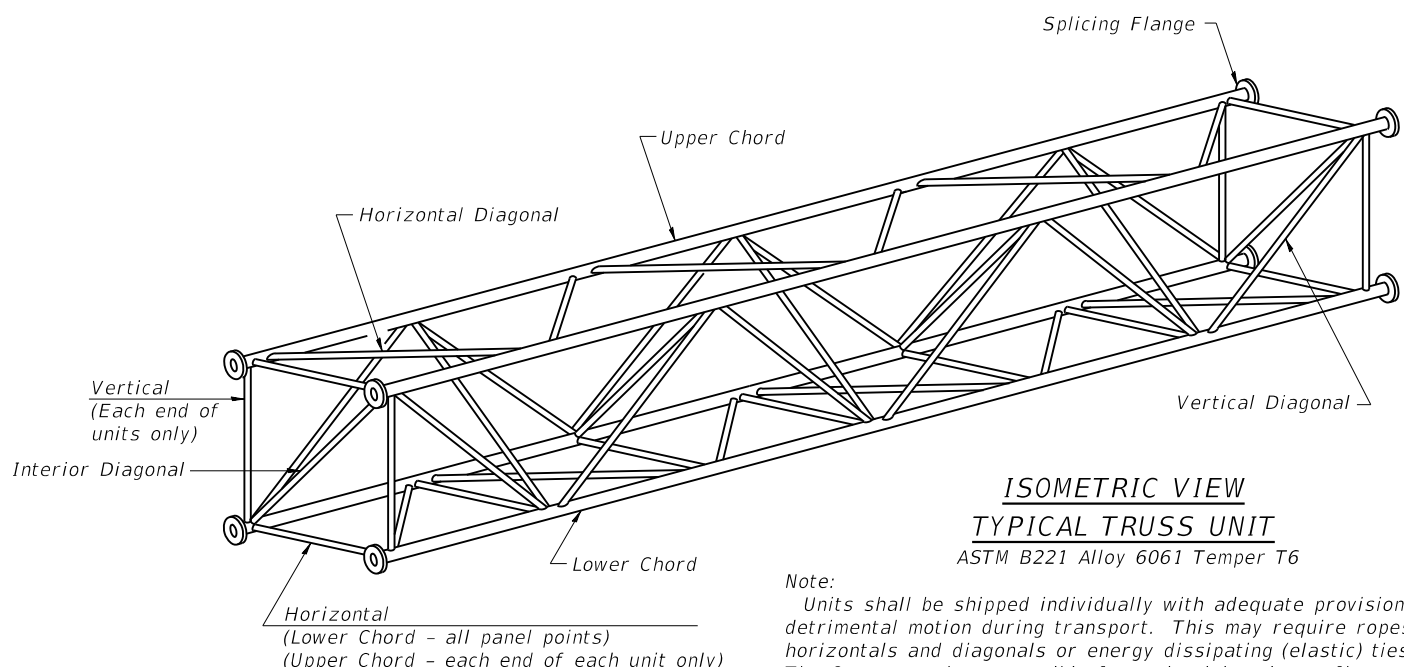
* I-55, I-80 & I-290

TRUSS UNIT TABLE

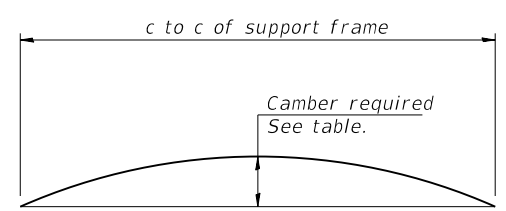
Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontal; and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(Le)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(Li)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	WI		
1S0991080R129.0	430+54	III-A	5	28'-7 ³ / ₄ "	5'-4 ¹ / ₄ "	1	6	33'-4 ¹ / ₂ "	5'-4 ¹ / ₄ "	7"	⁵ / ₁₆ "	3 ¹ / ₄ "	⁵ / ₁₆ "	1 ³ / ₄ "	6	1"	⁷ / ₁₆ "	⁵ / ₁₆ "	11 ¹ / ₂ "	15"
1S0991080L131.2	548+20	III-A	7	37'-3 ³ / ₄ "	5'-0 ³ / ₄ "	0				7"	⁵ / ₁₆ "	3 ¹ / ₄ "	⁵ / ₁₆ "	⁷ / ₈ "	6	1"	⁷ / ₁₆ "	⁵ / ₁₆ "	11 ¹ / ₂ "	15"
1S0991080L136.0	799+25	III-A	7	37'-3 ³ / ₄ "	5'-0 ³ / ₄ "	0				7"	⁵ / ₁₆ "	3 ¹ / ₄ "	⁵ / ₁₆ "	⁷ / ₈ "	6	1"	⁷ / ₁₆ "	⁵ / ₁₆ "	11 ¹ / ₂ "	15"
1S0221290R131.2	25+00	III-A	6	32'-9"	5'-1 ³ / ₄ "	1	6	32'-1 ¹ / ₂ "	5'-1 ³ / ₄ "	7"	⁵ / ₁₆ "	3 ¹ / ₄ "	⁵ / ₁₆ "	2 ¹ / ₈ "	6	1"	⁷ / ₁₆ "	⁵ / ₁₆ "	11 ¹ / ₂ "	15"



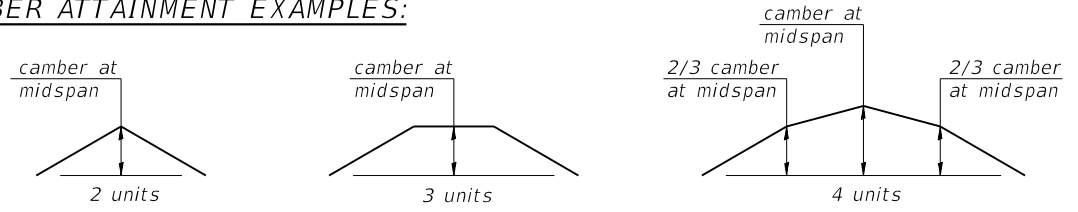
① Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.



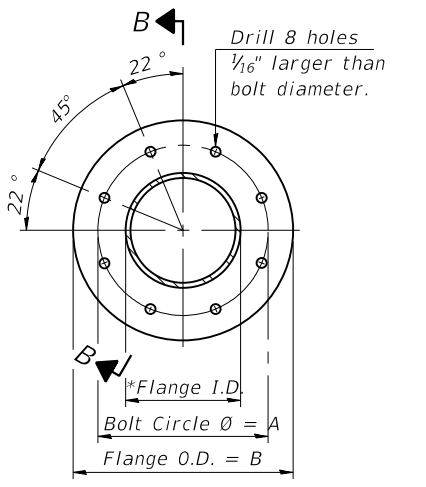
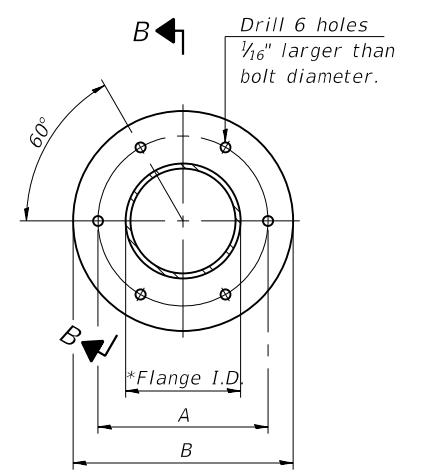
Note: Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection of the units.



CAMBER ATTAINMENT EXAMPLES:



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)



SPLICING FLANGES
ASTM B221, Alloy 6061-T6 or ASTM B209, Alloy 6061-T651
*To fit O.D. of Chord with maximum gap of 1/16".

MODEL: Default FILE NAME: C:\Engineering\Live\Projects\13038 IDOT DUR\Work Order #16-62G66\CADD\Sheets\Structural\62G66-003-TRUSS DET.dgn 10/17/2018 3:39:40 PM

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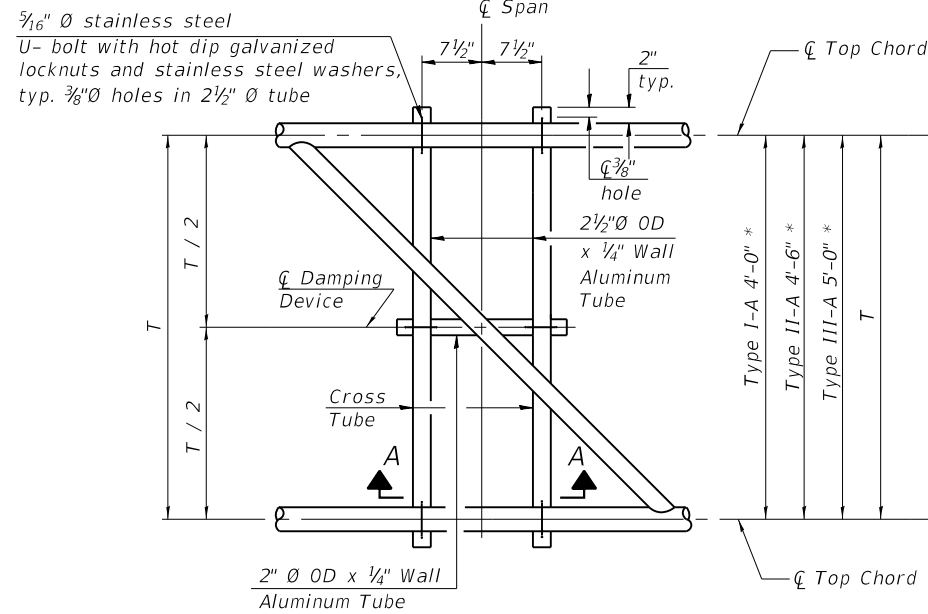
**OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS
FOR TRUSS TYPES I-A, II-A AND III-A**

SHEET S-18 OF S-29 SHEETS

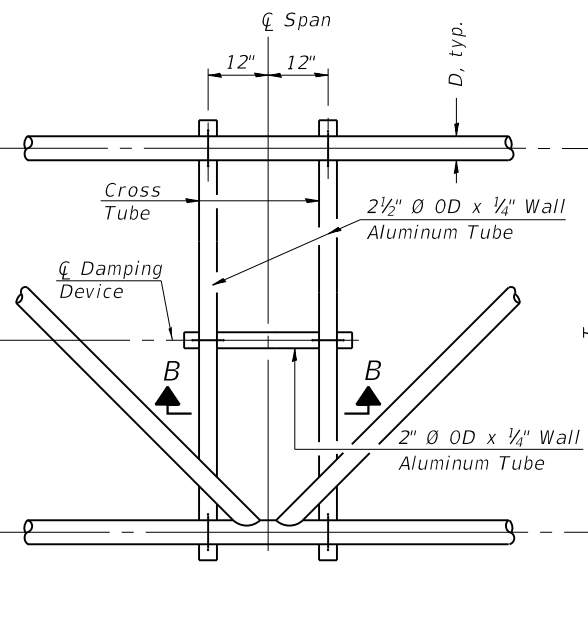
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CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				

* I-55, I-80 & I-290

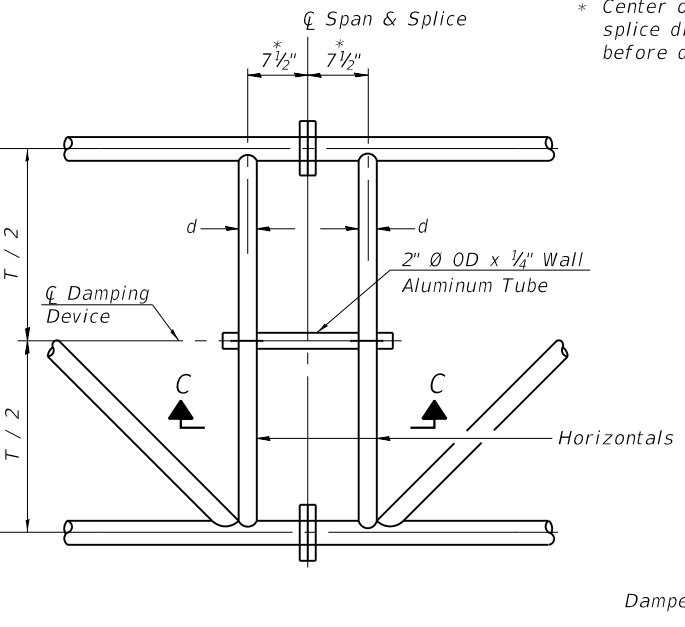
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PLAN DETAIL "A"
 ☐ Span between Panel Points



PLAN DETAIL "B"
 ☐ Span at Panel Point



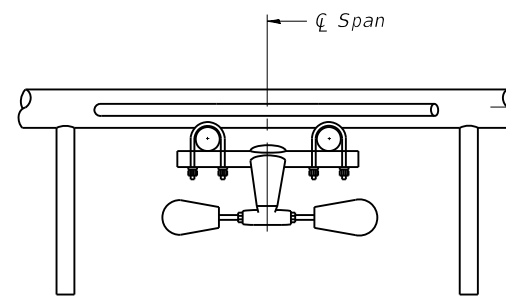
PLAN DETAIL "C"
 ☐ Span at ☐ Chord Splice

* Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

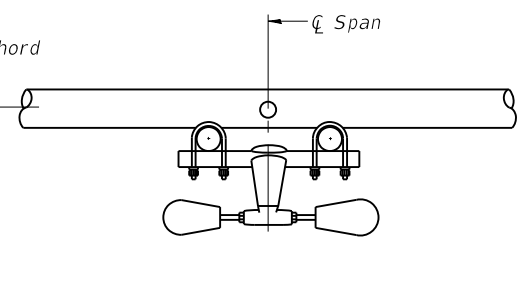
NOTES

Damper: One damper per truss. (31 lbs. minimum Stockbridge-Type Aluminum - 29" minimum between ends of weights) Cost included in Overhead Sign Structure...

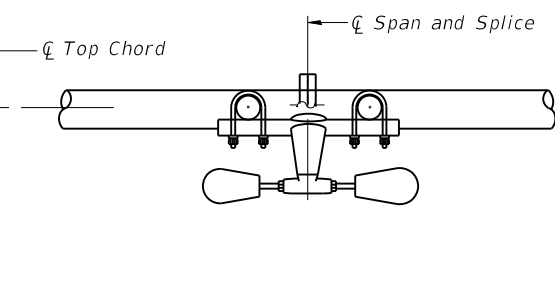
Materials: Materials: Aluminum tubes shall be ASTM B221 alloy 6061 temper T6. Cost included in Overhead Sign Structure...



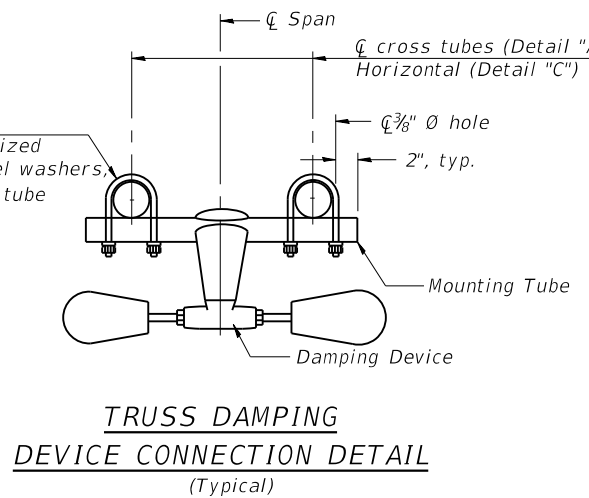
SECTION A-A



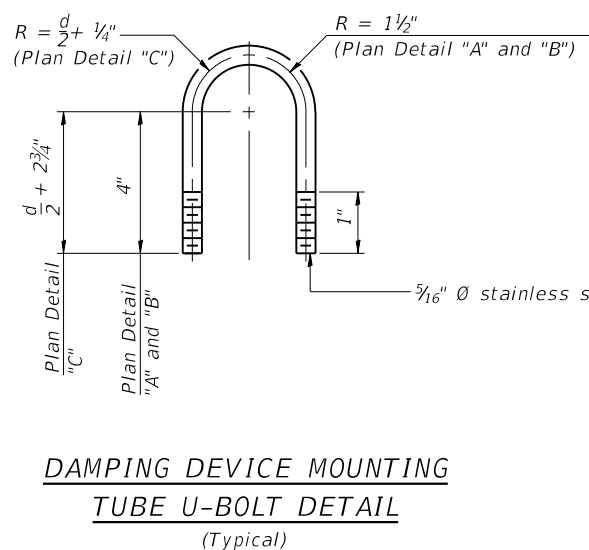
SECTION B-B



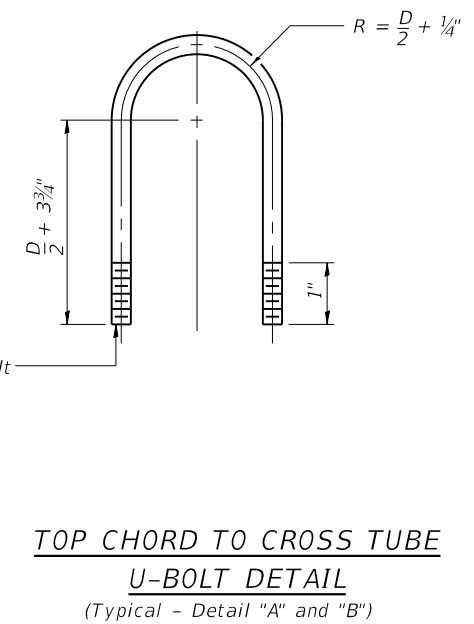
SECTION C-C



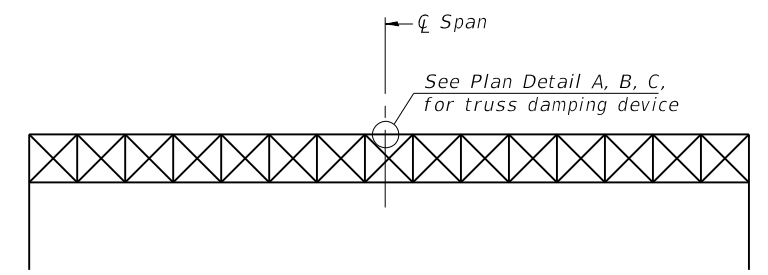
TRUSS DAMPING DEVICE CONNECTION DETAIL
 (Typical)



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
 (Typical)



TOP CHORD TO CROSS TUBE U-BOLT DETAIL
 (Typical - Detail "A" and "B")



ELEVATION
 Aluminum Overhead Sign Truss

05-A-D

2-17-2017



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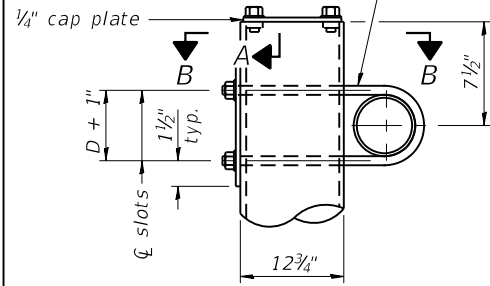
OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

SHEET S-19 OF S-29 SHEETS

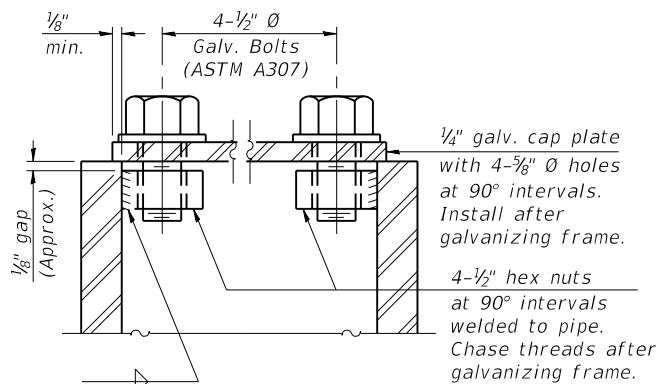
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-0244	WILL / DUPAGE	177	157
CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				

* I-55, I-80 & I-290

3/4" Ø stainless steel U-bolt.
Provide two washers and two hexagon locknuts. (4)
1 3/16" x 2" slots on 12" Ø pipe.
(4 slots required per pipe)

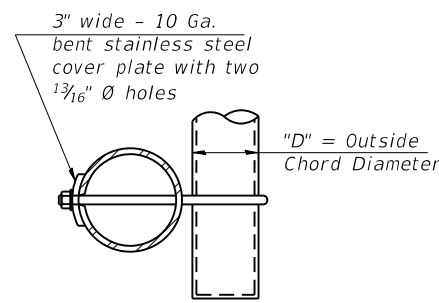


DETAIL A

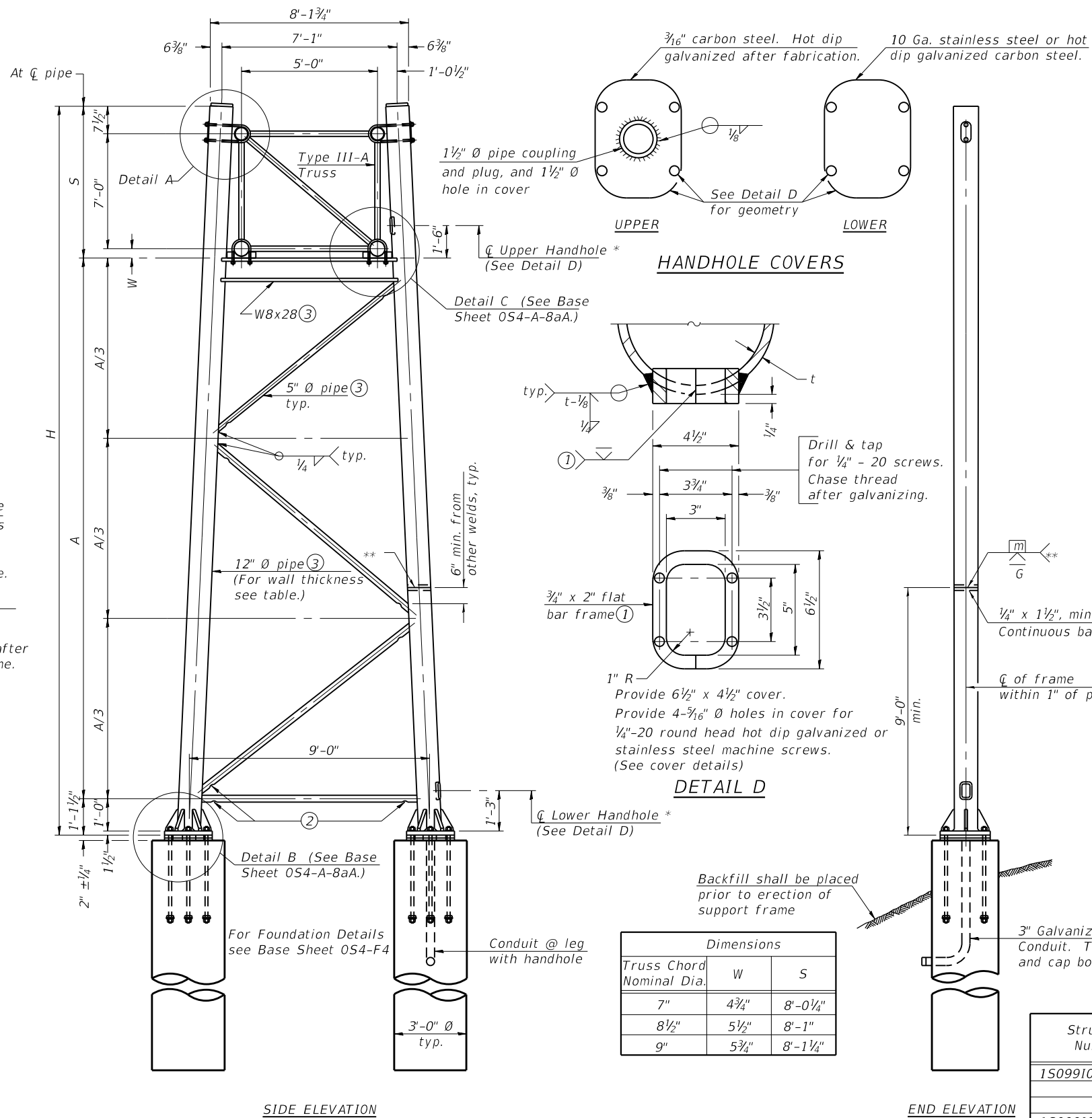


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



SIDE ELEVATION

END ELEVATION

TRUSS SUPPORT DETAILS

(12" Ø Pipe-Type III-A Truss)

** One butt welded joint is allowed only on one post per support frame. If used, weld procedure must be pre-approved by Engineer and joint shall receive 100% RT or UT (tension criteria) at Contractor's expense.

Support Design Loads: See Base Sheet 05-A-1 for design and loading criteria.

Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

- In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 µin or less.
- Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.
- Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet 05-A-1.
- See General Notes for fasteners.
- Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.
- "H" based on 15'-0" or actual sign height, whichever is greater.

* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			
1S0991080R129.0	430+54	X		0.33	31'-9 1/8"	22'-8 1/8"
			X	0.33	31'-1 1/8"	21'-11 3/4"
1S0991080L131.2	548+20	X		0.33	28'-10"	19'-8 1/2"
			X	0.33	29'-1 3/4"	20'-0"
1S0991080L136.0	799+25	X		0.33	31'-8 1/2"	22'-6 3/8"
			X	0.33	28'-7 1/2"	19'-5 3/4"
1S0221290R131.2	25+00	X		0.33	31'-1 1/8"	22'-0"
			X	0.33	28'-6 1/4"	19'-4 1/2"

* I-55, I-80 & I-290

MODEL: Default
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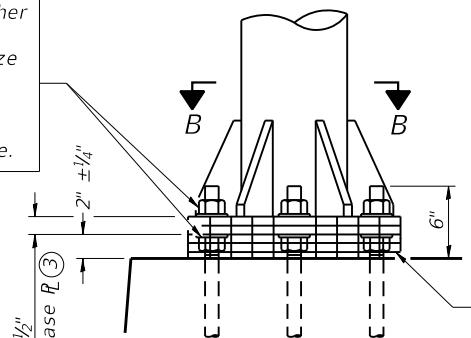
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OVERHEAD SIGN STRUCTURES - SUPPORT FRAME
FOR TYPE III-A ALUMINUM TRUSS

SHEET S-20 OF S-29 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-0244	WILL / DUPAGE	177	158
ILLINOIS			CONTRACT NO. 62G66	
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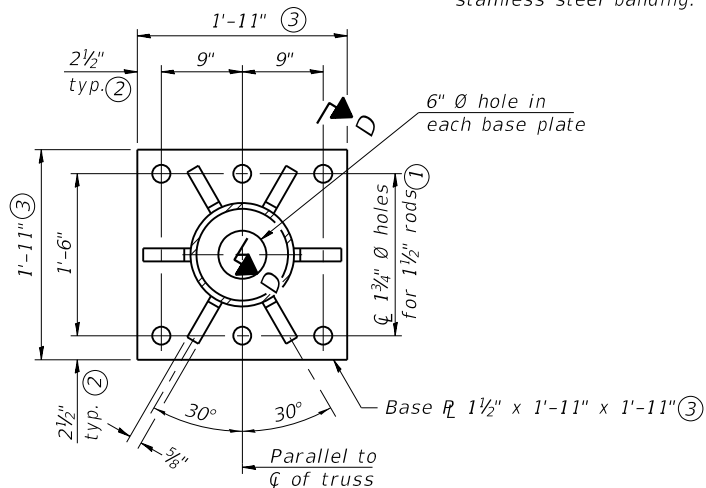
Hexagon locknut and washer (top), leveling nut and washer (bottom). Galvanize per AASHTO M232. Nuts shall each be tightened against base plate with 200 lb.-ft. minimum torque.



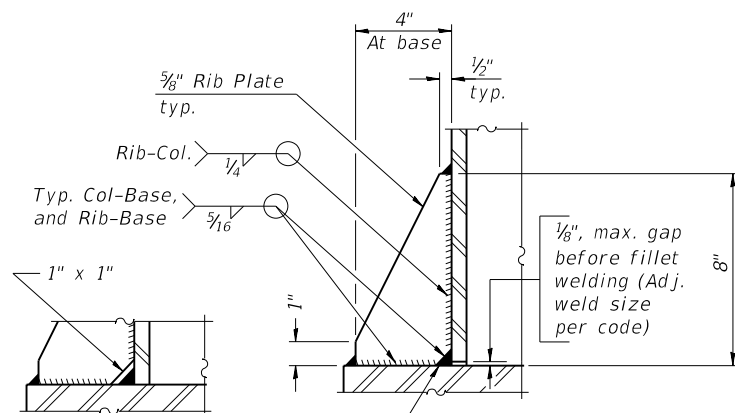
DETAIL B

Ribs shall be cut to fit slope of pipe.

Stainless Steel Standard Grade Wire Cloth, 3" wide, 1/4" maximum opening with a minimum wire diameter of AWG. No. 16 with a minimum 2" lap. Secure to base plate after erection with 3/4" stainless steel banding.



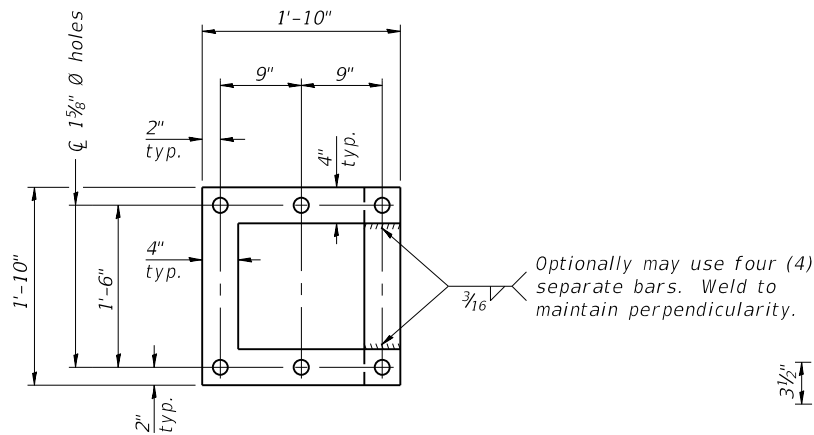
SECTION B-B



SECTION D-D

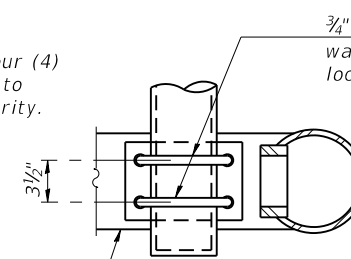
** Alternate detail if welding col. to base plate first, then snip inside corner of ribs. Terminate weld on rib 1/4" from snip.

No snip req'd. at rib inside corner if placed before col. to base plate welding.**



POSITIONING PLATE(S)

Optionally may use four (4) separate bars. Weld to maintain perpendicularity.



SECTION C-C
(Handhole cover not shown)

3/4" Ø U-bolts. Provide washers and hexagon locknuts. (2 required)

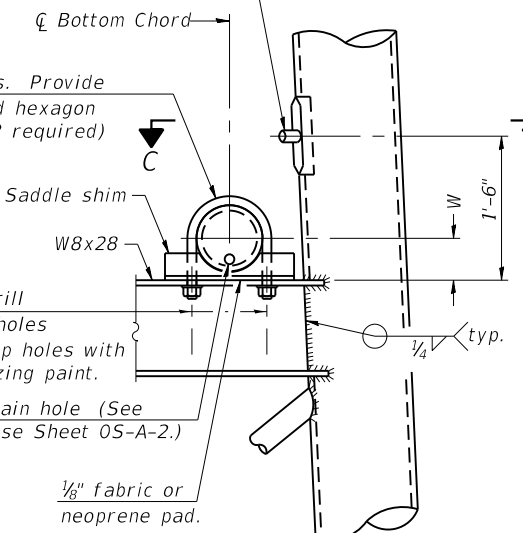
Field drill 1 5/16" Ø holes. Touch up holes with galvanizing paint.

Drain hole (See Base Sheet 05-A-2.)

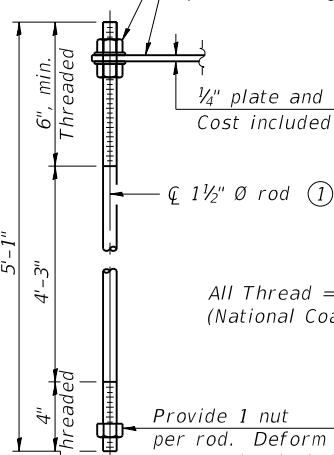
1/8" fabric or neoprene pad.

DETAIL C

1 1/2" Ø pipe coupling for conduit attachment (plug for shipping)



At each location, provide 1/4" thick positioning plate(s) and six (6) additional nuts to be used with leveling nuts to maintain anchor bolts position during concrete placement.



All Thread = NC (National Coarse)

Provide 1 nut per rod. Deform thread or use chemical thread lock to secure.

ANCHOR ROD DETAIL

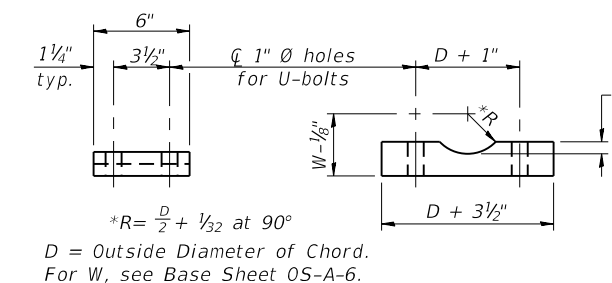
Anchor rods shall conform to ASTM F1554 Grade 105 Galvanize upper 12" minimum per AASHTO M232. No welding shall be permitted on rods.

TYPE III-A TRUSS

12" Ø PIPE SUPPORT FRAME DETAILS

Notes:
For Type III-A Truss spans greater than 150 ft, and up to 160 ft.:

- ① 1 3/4" Ø rod, 2" Ø holes
- ② 2 3/4" edge distance
- ③ Base Pl 1 5/8" x 1'-11 1/2" x 1'-11 1/2"



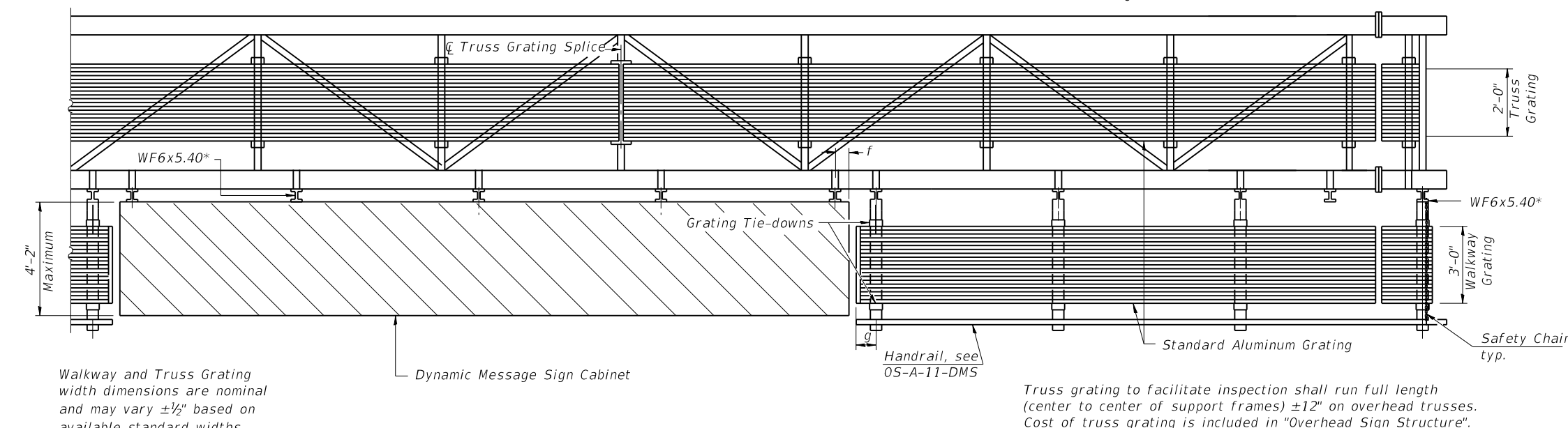
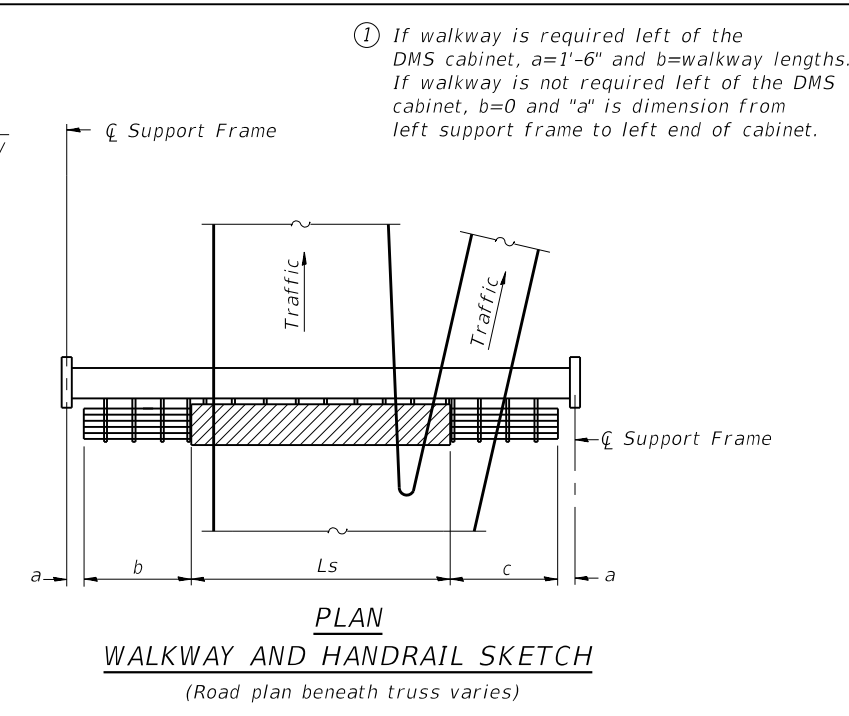
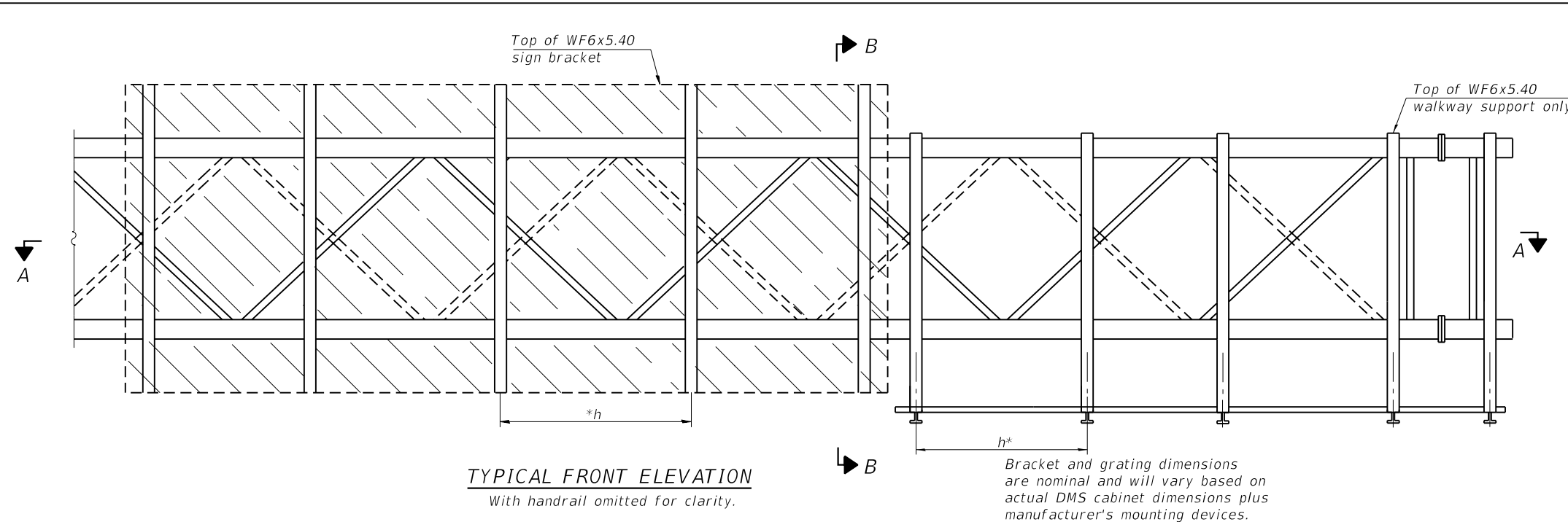
Truss Chord Nominal Dia.	a
7"	1"
8 1/2"	1 1/4"
9"	1 3/8"

SADDLE SHIM DETAIL

ASTM B26 Alloy 356-F
or
ASTM B209 Alloy 6061-T651
(4 required per sign truss)

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-0244	WILL / DUPAGE	177	159
CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				



BRACKET TABLE

WF6x5.40 ASTM B308, Alloy 6061-T6		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Grating and handrail splices placed as needed.

Structure Number	Station	a	b	c	Ls	Walkway Grating and Handrail Lengths
1S0991080R129.0	430+54	23'-11 ⁷ / ₁₆ "	6'	6'	29'-1 ³ / ₁₆ "	12'
1S0991080L131.2	548+20	15'-11 ⁷ / ₁₆ "	6'	6'	29'-1 ³ / ₁₆ "	12'
1S0991080L136.0	799+25	15'-11 ⁷ / ₁₆ "	6'	6'	29'-1 ³ / ₁₆ "	12'
1S0221290R131.2	25+00	24'-5 ⁷ / ₁₆ "	9'	9'	29'-1 ³ / ₁₆ "	18'

Notes:
 * Space walkway brackets WF6x5.40 for efficiency and within limits shown:
 f = 12" maximum, 4" minimum (End of sign to ϕ of nearest bracket)
 g = 12" maximum, 4" minimum (End of walkway grating to ϕ of nearest support bracket)
 h = 6'-0" maximum (ϕ to ϕ sign and/or walkway support brackets, WF6x5.40)

Maximum DMS weight = 5000 lbs. 4'-2" maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40.
 For Section B-B and Grating Splice Details, see Base Sheet OS-A-10-DMS.
 For Handrail Splice Details, see Base Sheet OS-A-11-DMS.

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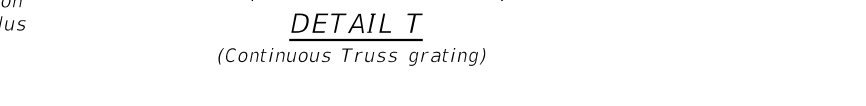
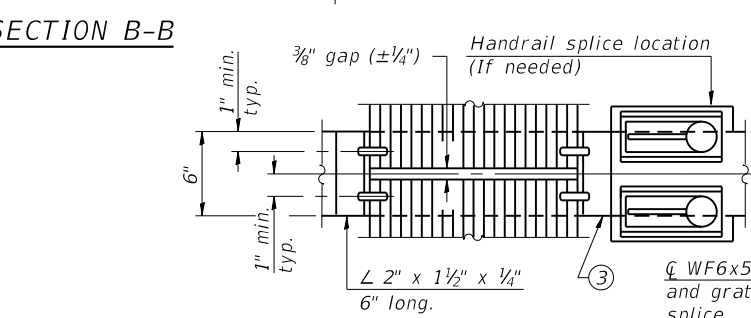
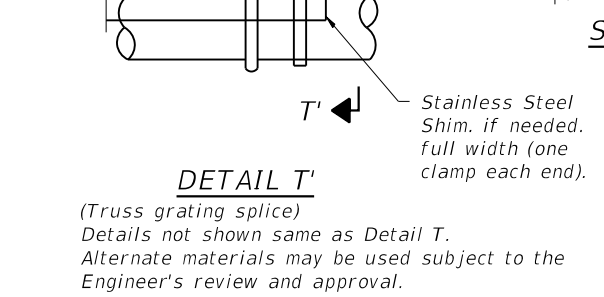
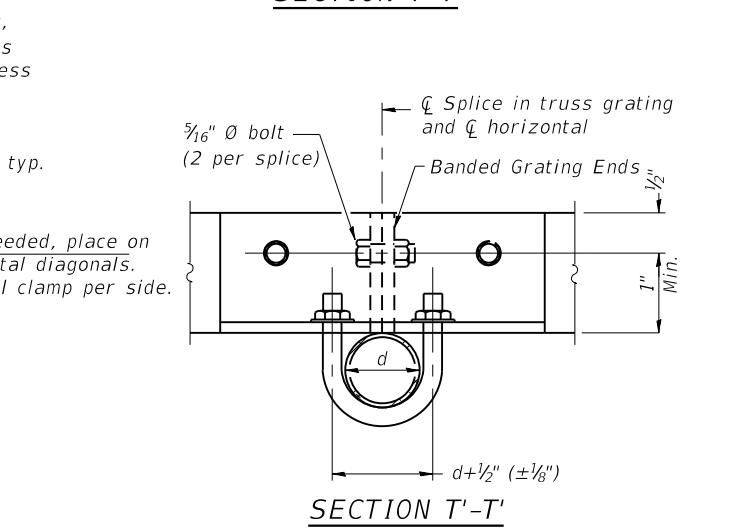
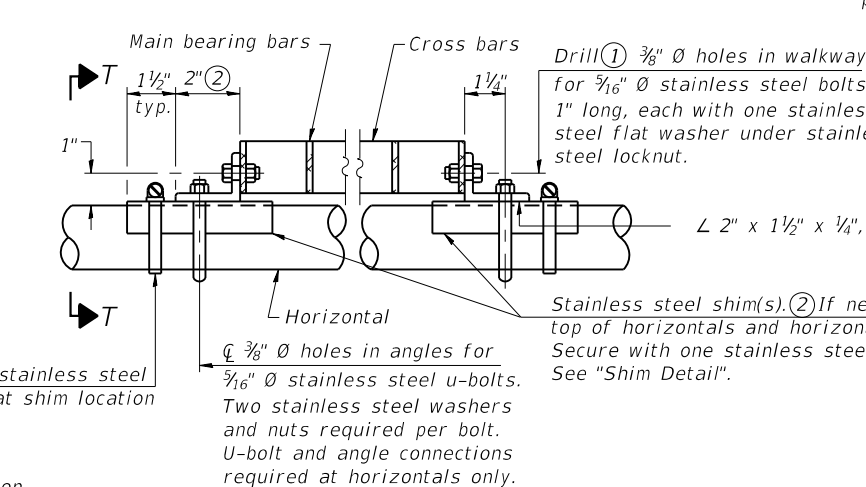
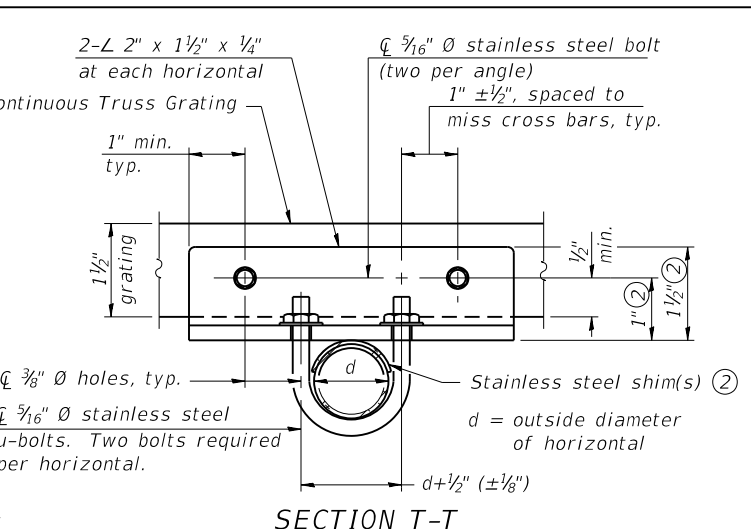
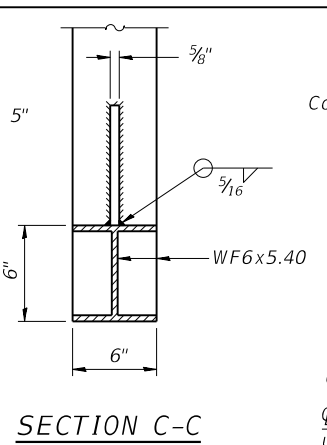
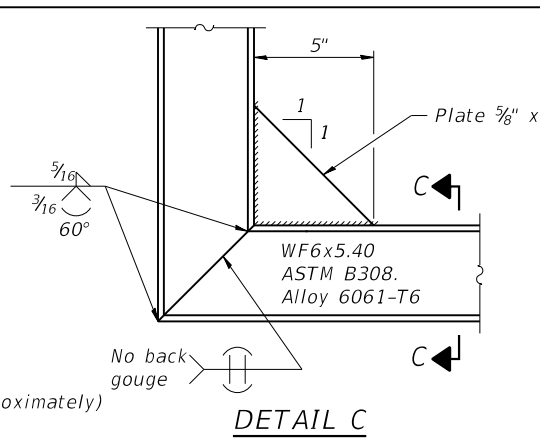
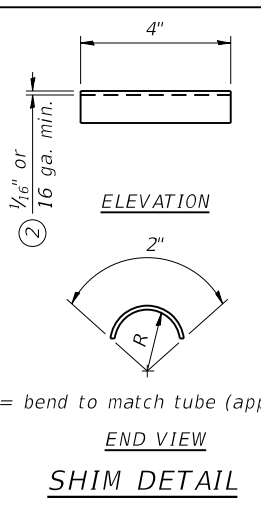
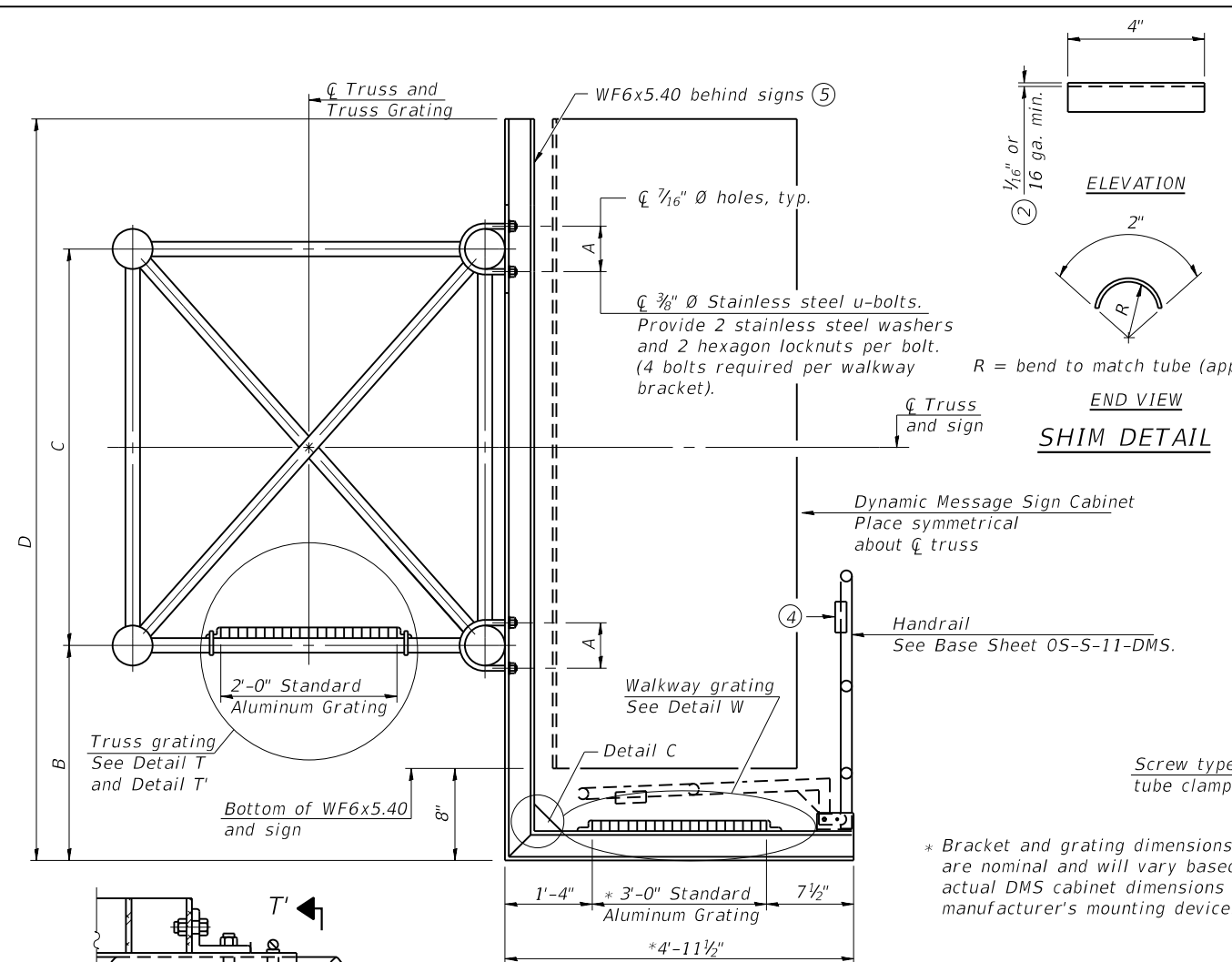
**OVERHEAD SIGN STRUCTURES
ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-0244	WILL / DUPAGE	177	160
CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				

SHEET S-22 OF S-29 SHEETS

* I-55, I-80 & I-290

MODEL: Default
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SPECIFICATIONS FOR STANDARD ALUMINUM GRATING

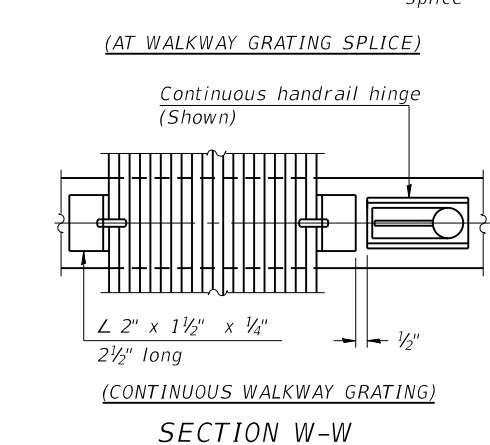
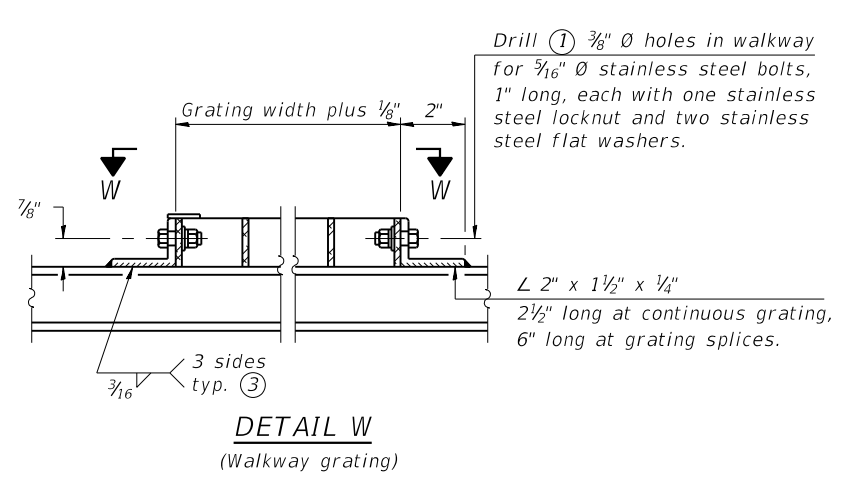
Main Bearing Bars shall be 3/16" x 1 1/2" on 1 3/16" centers and conform to ASTM B211 Alloy 6061-T6.
 Cross bars shall be 3/16" x 1 1/2" on 4" centers and conform to ASTM B221 Alloy 6063-T5 or 6061-T6.

OR
 Aluminum Grating with modified "L" sections for main bearing bars shall meet the following requirements:

Main bars shall conform to ASTM B221 Alloy 6061-T6 and have a minimum section modulus equal to 0.0705 in.³ per bar, a depth of 1 1/2", spaced on 1 3/16" centers.
 Cross bars shall conform to ASTM B221 Alloy 6063-T5 or T-42 and spaced on 4" centers.

Structure Number	Station	A	⑥ B	C	⑥ D
1S0991080R129.0	430+54	7 1/2"	1'-1 1/16"	7'-0"	8'-6 1/8"
1S0991080L131.2	548+20	7 1/2"	1'-1 1/16"	7'-0"	8'-6 1/8"
1S0991080L136.0	799+25	7 1/2"	1'-1 1/16"	7'-0"	8'-6 1/8"
1S0221290R131.2	25+00	7 1/2"	1'-1 1/16"	7'-0"	8'-6 1/8"

- Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.
- Stainless steel shims shall be placed as shown in Detail T if needed to compensate for alignment variations between horizontal and diagonal pipes beyond adjustment provided by angles. Thicker shims may be used subject to shims performing properly.
- If Handrail Joint present, weld angle to WF(A-N)4 and 1/4" extension bars. (See Base Sheet OS-A-11.)
- 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
- Cabinet manufacturer must design and supply hardware for connection of cabinet to WF6's. Bolts must be stainless steel or hot dip galvanized high strength per IDOT specifications.
- Based on actual height of tallest sign given on OS-A-1.



OS-A-10-DMS 2-17-2017



USER NAME =	DESIGNED - SAT	REVISED -
PLOT SCALE =	CHECKED - JMT	REVISED -
PLOT DATE =	DRAWN - JN	REVISED -
	CHECKED - SPS	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

OVERHEAD SIGN STRUCTURES
 ALTERNATE ALUMINUM WALKWAY DETAILS FOR DMS
 SHEET S-23 OF S-29 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-4	WILL / DUPAGE	177	161
CONTRACT NO. 62G66				
ILLINOIS FED. AID PROJECT				

* I-55, I-80 & I-290

BAR LIST - EACH FOUNDATION

Bar	Number	Size	Length	Shape
v4(E)	24	#9	F less 5"	—
#4 bar spiral (E) - see Side Elevation				

NOTES:

The foundation dimensions shown are based on the presence of mostly cohesive soils with an average Unconfined Compressive Strength (Qu) of at least 1.25 tsf, which must be determined by previous soil investigations at the jobsite. When other conditions are indicated, the boring data will be included in the plans and the foundation dimensions shown will be the result of site specific designs.

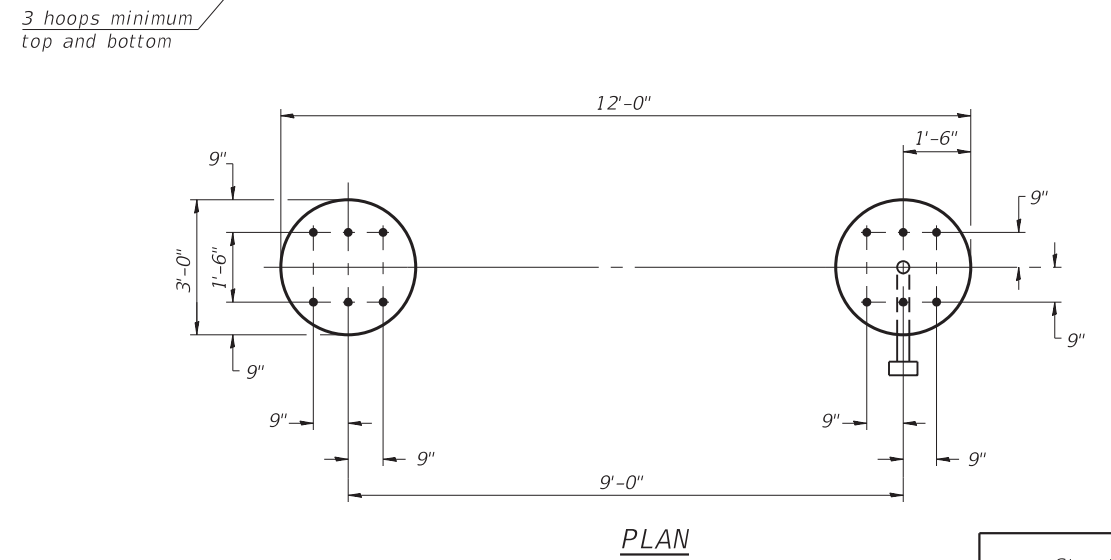
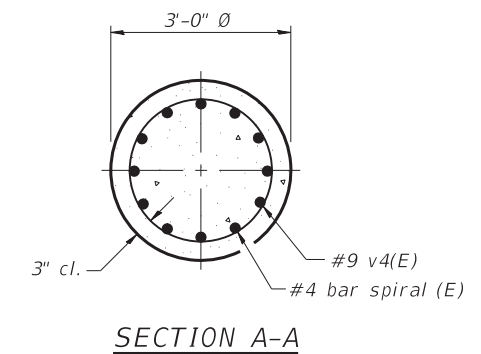
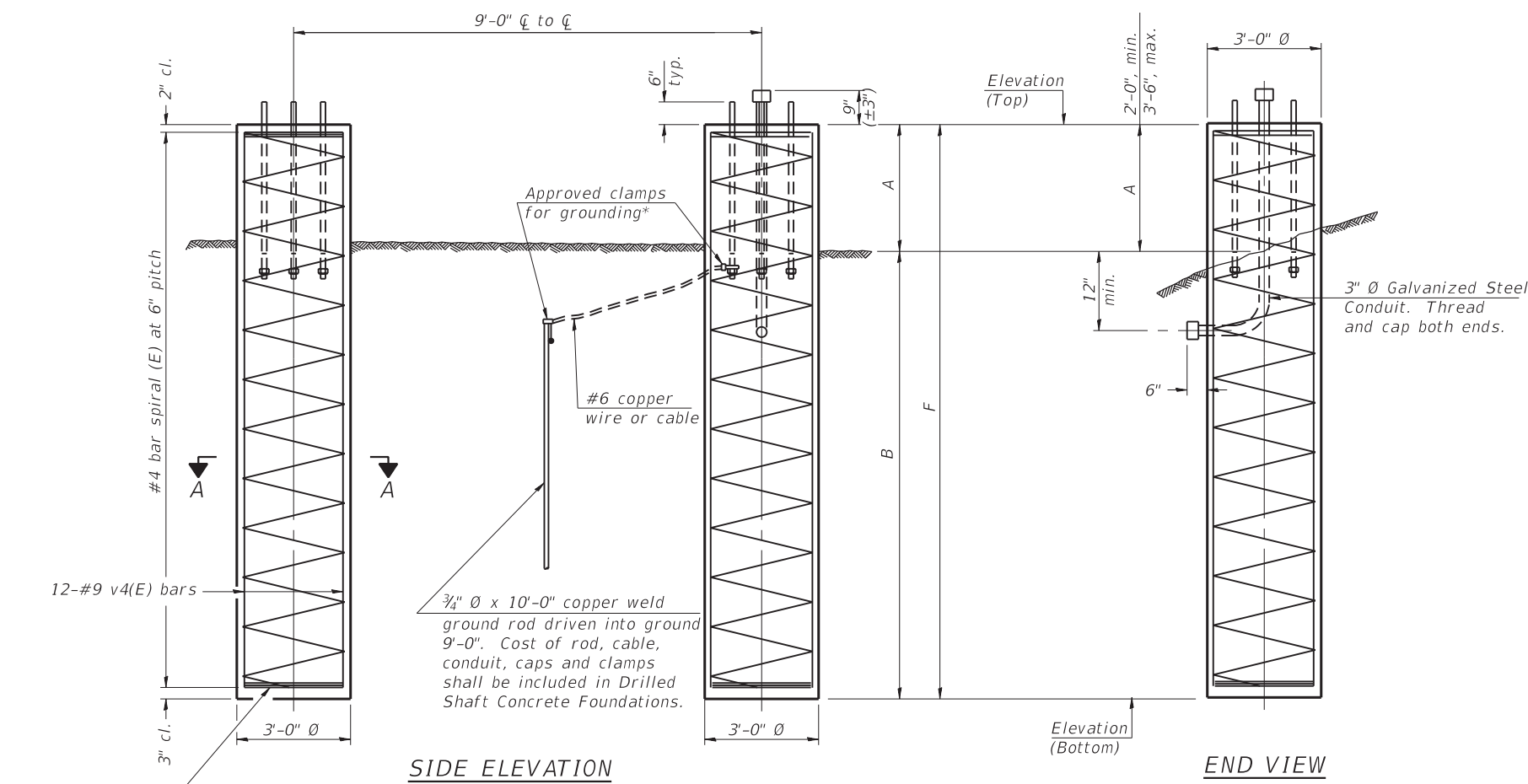
If the conditions encountered are different than those indicated, the Contractor shall notify the Engineer to determine if the foundation dimensions need to be modified. If dimensions "B" or "F" are revised by more than 12" by the Contractor, "as-built" plans shall be prepared and submitted to the District Bureau of Operations for future reference.

No sonotubes or decomposable forms shall be used below the lower conduit entrance. Permanent metal forms or other shielding may not be left in place below that elevation without the Engineer's written permission.

Concrete shall be placed monolithically, without construction joints.

Backfill shall be placed per Article 502 of Standard Specification and prior to erection of support column.

A normal surface finish followed by a Concrete Sealer application will be required on concrete surfaces above the lowest elevation 6" below finished ground line. Cost included in Drilled Shaft Concrete Foundation.



For anchor rod size and placement, see Support Frame Detail Sheet.

* Anchor rod shall be ground or filed to bright metal at clamp and cable connection location.

DETAILS FOR 12" Ø SUPPORT FRAME TYPE III-A TRUSS

Structure Number	Station	Left Foundation					Right Foundation					Class DS Concrete (Cu. Yds.)
		Elevation Top	Elevation Bottom	A	B	F	Elevation Top	Elevation Bottom	A	B	F	
1S0991080R129.0	430+54	595.60	575.60	2'-0"	18'-0"	20'-0"	596.29	576.29	2'-0"	18'-0"	20'-0"	21.0
1S0991080L131.2	548+20	636.71	608.71	2'-0"	26'-0"	28'-0"	636.40	608.40	2'-0"	26'-0"	28'-0"	29.4
1S0991080L136.0	799+25	644.31	624.31	2'-0"	18'-0"	20'-0"	647.36	627.36	2'-0"	18'-0"	20'-0"	21.0
1S0221290R131.2	25+00	700.42	680.42	2'-0"	18'-0"	20'-0"	703.05	683.05	2'-0"	18'-0"	20'-0"	21.0

MODEL: Default FILE NAME: Q:\Engineering\Live\Projects\13038 IDOT DUR\Work Order #16-62G66\CADD\Sheets\Structural\62G66-010-FOUND DET.dgn

054-F4

2-17-2017



USER NAME =	DESIGNED - SAT	REVISED - SAT 11/29/2018
PLOT SCALE =	CHECKED - JMT	REVISED -
PLOT DATE =	DRAWN - JN	REVISED -
	CHECKED - SPS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERHEAD SIGN STRUCTURES
DRILLED SHAFT DETAILS**

SHEET S-25 OF S-29 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-4	WILL / DUPAGE	177	163
CONTRACT NO. 62G66				

ILLINOIS FED. AID PROJECT



BORING LOG OSB-09

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WEI Job No.: 491-04-02

Client: **Accurate Group, Inc.**
 Project: **I-80 at I-55 Dynamic Messaging Signs**
 Location: **Will and DuPage Counties, Illinois**

Datum: NAVD 88
 Elevation: 600.84 ft
 North: 1761574.77 ft
 East: 1033502.26 ft
 Station: NA
 Offset: NA

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
599.6	15-inch thick ASPHALT --PAVEMENT--						579.3	SAND --RDR 3--					
	Stiff to very stiff, brown, gray, and black SILTY CLAY, trace to little gravel --FILL-- --RDR 2--	1	1	7 5 5	1.50 P			Stiff, gray SILTY CLAY, trace gravel --RDR 3--	9	9	4 20 10	1.80 B	12
		2	2	4 6 8	3.00 P	18		Very dense, gray, saturated SANDY GRAVEL; trace cobbles --RDR 3 to 4--	25	10	13 16 18	NR	
		3	3	3 5 6	2.46 B	21		--trace silty clay lenses--		11	50/5	NP	9
592.8	Stiff, black SILTY CLAY --BURIED TOPSOIL--	10	4	3 3 4	1.23 B	24		Strong, light grayish white, fair quality DOLOSTONE with shale partings; closely spaced, slightly weathered, horizontal and oblique joints, with 0.05 - 0.2 inch opening, rough and hard walls, and <0.2 inch thick sand infill.	30				
590.3	Stiff, gray and brown SILTY CLAY --RDR 2--	5	5	2 2 3	1.56 B	27		--Run 1: 27.5 to 35.0 feet-- --RECOVERY = 96%-- --RQD = 69%--	35	12			
587.8	Brown, saturated SANDY LOAM							Boring terminated at 35.00 ft	35				
586.8	Medium stiff to very stiff, brown and gray SILTY CLAY, trace gravel --RDR 2--	15	6	0 0 3	0.98 B	27							
581.2	Brown, saturated GRAVELLY	20	8	3 18 18	3.36 B	22							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-19-2018	Complete Drilling	06-19-2018	While Drilling	▽	13.00 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	13CME55T [85%]	At Completion of Drilling	▽	18.50 ft	
Driller	K&R	Logger	M. Ciapas	Time After Drilling		NA	
Checked by	DRAFT	Drilling Method	3.25" HSA; boring backfilled upon completion	Depth to Water	▽	NA	



BORING LOG OSB-10

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WEI Job No.: 491-04-02

Client: **Accurate Group, Inc.**
 Project: **I-80 at I-55 Dynamic Messaging Signs**
 Location: **Will and DuPage Counties, Illinois**

Datum: NAVD 88
 Elevation: 600.74 ft
 North: 1761603.24 ft
 East: 1033470.74 ft
 Station: NA
 Offset: NA

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
600.53	5.3-inch thick, black SILTY CLAY LOAM --TOPSOIL--						579.0	Very stiff, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel --RDR 3--					
	Medium dense, brown SANDY GRAVEL; dry --FILL-- --RDR 3--	1	1	6 14 15	NP	7		--difficult drilling from 24 feet--		10	5 50/5	2.75 P	12
597.7	Hard, brown and gray SILTY CLAY, trace gravel --FILL-- --RDR 2--	5	2	6 6 8	NR	8		Very dense, brown DOLOSTONE fragments --WEATHERED BEDROCK--	25				
		3	3	7 9	5.25 B	24		Strong, light greyish gray, poor quality DOLOSTONE; closely spaced, fresh, horizontal joints, with <0.05 inch opening, slightly rough to rough walls, and 0 - 0.2 inch thick sand infill.	30				
592.7	Very stiff, dark gray CLAY to SILTY CLAY --RDR 2--	10	4	3 3 5	2.05 B	27		--Run 1: 25.5 to 33.0 feet-- --RECOVERY = 96%-- --RQD = 34%--	30	11			
590.2	Brown, saturated SAND lenses							Boring terminated at 33.00 ft	35				
589.5	Very soft, brown SILTY CLAY LOAM --wet sand lenses-- --RDR 1--	1	5	1 1 1	0.16 B	28							
587.7	Very loose, brown SILT; wet --interbedded wet sand lenses-- --RDR 1--	15	6	2 1 2	NP	24							
585.2	Stiff, gray SILTY CLAY --RDR 2--	7	7	2 2 3	1.07 B	22							
582.7	Loose to dense, brown to gray, saturated SANDY GRAVEL --RDR 3--	8	8	15 20 20	NP	11							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-20-2018	Complete Drilling	06-20-2018	While Drilling	▽	10.50 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	▽	11.50 ft	
Driller	N&J	Logger	F. Bozga	Time After Drilling		NA	
Checked by	DRAFT	Drilling Method	3.25" HSA; boring backfilled upon completion	Depth to Water	▽	NA	

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USER NAME = johnn	DESIGNED - LC	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - IH	REVISED -
PLOT DATE = 10/17/2018	CHECKED - JMT	REVISED -
	DATE - 10/17/2018	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BORING LOGS IV
 I-55, I-80 AND I-290 DMS INSTALLATION
 SCALE: 1"=50' SHEET S-26 OF S-29 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	164
CONTRACT NO. 62666				
ILLINOIS FED. AID PROJECT				



BORING LOG OSB-11

Page 1 of 1

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WEI Job No.: 491-04-02

Client: **Accurate Group, Inc.**
Project: **I-80 at I-55 Dynamic Messaging Signs**
Location: **Will and DuPage Counties, Illinois**

Datum: NAVD 88
Elevation: 639.37 ft
North: 1764754.50 ft
East: 1044373.71 ft
Station: NA
Offset: NA

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
638.1	15-inch thick ASPHALT --PAVEMENT--												
	Stiff to hard, brown and gray SILTY CLAY, trace gravel; damp --FILL-- --RDR 2--	1	1	2 3 4	2.46 B				9	9	7 10 15	7.30 B	20
		5	2	2 4 5	3.20 B	19			10	10	7 10 15	6.97 B	20
		10	3	3 5 6	3.12 B	19			11	11	6 9 16	6.15 B	18
		15	4	3 4 5	1.72 B	23			12	12	9 10 15	7.38 B	17
		20	5	2 4 6	3.61 B	24	609.4	--AUGER REFUSAL--	30				
								2-foot thick, brownish gray DOLOSTONE --Boulder--					
							607.4	Very stiff, gray SILTY CLAY LOAM to CLAY LOAM, trace gravel --RDR 2--					
624.6	Very stiff, black SILTY CLAY, trace gravel --BURIED TOPSOIL--	15	6	3 12 8	4.02 B	17			13	13	8 12 13	2.87 B	13
623.9	Hard, brown and gray SILTY CLAY, trace gravel; damp --RDR 2--	7	7	4 7 9	5.49 B	20			14	14			
		20	8	9 12 16	9.92 B	16	602.9	Boring terminated at 36.50 ft					

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-19-2018	Complete Drilling	06-19-2018	While Drilling	▽	DRY	
Drilling Contractor	Wang Testing Services	Drill Rig	13CME55T [85%]	At Completion of Drilling	▽	DRY	
Driller	K&R	Logger	M. Ciapas	Time After Drilling		NA	
Checked by	DRAFT			Depth to Water	▽	NA	
Drilling Method	3.25" HSA; boring backfilled upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			



BORING LOG OSB-14

Page 1 of 1

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WEI Job No.: 491-04-02

Client: **Accurate Group, Inc.**
Project: **I-80 at I-55 Dynamic Messaging Signs**
Location: **Will and DuPage Counties, Illinois**

Datum: NAVD 88
Elevation: 639.41 ft
North: 1764714.94 ft
East: 1044375.58 ft
Station: NA
Offset: NA

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
638.4	12-inch thick GRAVELLY LOAM --AGGREGATE BASE--												
	Very stiff, brown and gray SILTY CLAY, trace gravel --FILL-- --RDR 2--	1	1	3 3 4	2.05 B	21			9	9	7 12 18	7.87 B	19
		5	2	2 3 4	2.05 B	26			10	10	8 13 18	7.13 B	19
		10	3	3 5 5	2.71 B	19			11	11	7 12 15	7.54 B	17
		15	4	3 5 6	3.85 B	26			12	12	6 11 13	5.58 B	20
	--trace brick fragments--								13	13	7 11 12	5.00 B	21
626.4	Very stiff, dark gray to brown and gray CLAY to SILTY CLAY --RDR 2--	6	6	4 6 7	3.53 B	23			14	14	5 8 11	4.76 B	21
		20	7	3 4 6	2.13 B	26	604.4	Boring terminated at 35.00 ft					
621.4	Hard, brown and gray SILTY CLAY, trace gravel --RDR 2--	8	8	6 9 12	4.35 B	14							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-20-2018	Complete Drilling	06-20-2018	While Drilling	▽	DRY	
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	▽	DRY	
Driller	N&J	Logger	F. Bozga	Time After Drilling		NA	
Checked by	DRAFT			Depth to Water	▽	NA	
Drilling Method	3.25" HSA; boring backfilled upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

FILE NAME = Q:\Engineering\LiveProjects\13038 IDOT DUR\Work D-der\16-62066\CADD\CADD_Sheets\Structure\162066-012-BORING 11-14.dgn



USER NAME = johnn	DESIGNED - LC	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - IH	REVISED -
PLOT DATE = 10/17/2018	CHECKED - JMT	REVISED -
	DATE - 10/17/2018	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS V
I-55, I-80 AND I-290 DMS INSTALLATION
SCALE: 1"=50' SHEET S-27 OF S-29 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	165
CONTRACT NO. 62666				
ILLINOIS FED. AID PROJECT				

• I-55, I-80 & I-290



BORING LOG OSB-07

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WEI Job No.: 491-04-02

Client: **Accurate Group, Inc.**
 Project: **I-80 at I-55 Dynamic Messaging Signs**
 Location: **Will and DuPage Counties, Illinois**

Datum: NAVD 88
 Elevation: 650.29 ft
 North: 1765546.58 ft
 East: 1069325.05 ft
 Station: NA
 Offset: NA

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
649.1	14-inch thick ASPHALT --PAVEMENT--												
646.9	3-inch thick, brown SANDY GRAVEL --AGGREGATE BASE--	1	6 4 6	2.75 P					9	3 5 7	1.64 B	16	
646.8	Very stiff, brown, gray, and black SILTY CLAY --FILL--	2	5 8 11	7.46 B	18				10	3 4 7	2.30 B	15	
	Stiff to hard, brown to gray SILTY CLAY to SILTY CLAY LOAM, trace gravel --RDR 2--	5	5 8 11	7.30 B	20				11	4 5 7	1.72 B	15	
		10	4 6 8	5.25 B	21				12	3 5 6	1.56 B	15	
		15	4 7 9	5.33 B	21				13	3 5 7	1.72 B	16	
		20	5 9 12	6.23 B	21				14	8	1.50 P	16	
			3 5 6	2.54 B	21				15	5 9 12	6.23 B	21	
			3 5 6	2.05 B	21				20	3 5 6	2.05 B	21	
							616.0	--some cobbles and boulders fragments-- --SAMPLER REFUSAL-- Boring terminated at 34.25 ft	35				

WANGENGINC 4910402.GPJ WANGENG.GDT 6/29/18

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-18-2018	Complete Drilling	06-18-2018	While Drilling	☐ DRY		
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	☑ DRY		
Driller	N&J	Logger	F. Bozga	Time After Drilling	NA		
Drilling Method	3.25" HSA; boring backfilled upon completion			Depth to Water	☑ NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							



BORING LOG OSB-08

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WEI Job No.: 491-04-02

Client: **Accurate Group, Inc.**
 Project: **I-80 at I-55 Dynamic Messaging Signs**
 Location: **Will and DuPage Counties, Illinois**

Datum: NAVD 88
 Elevation: 650.35 ft
 North: 1765510.70 ft
 East: 1069322.71 ft
 Station: NA
 Offset: NA

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
649.4	12-inch thick, brown and gray GRAVELLY LOAM												
	Very stiff, brown, gray, and black SILTY CLAY --FILL--	1	2 3 6	3.50 P	19				9	4 6 8	2.21 B	21	
647.4	Stiff to hard, brown to gray SILTY CLAY, trace gravel --RDR 2--	2	4 8 11	6.64 B	19				10	7 4 4	NP	25	
		5	5 6 9	5.58 B	20		626.4	Loose, gray, saturated, fine SAND --RDR 1--	25	10	7 4 4	NP	25
		10	4 8 11	6.48 B	21		624.9	Soft, gray CLAY LOAM, trace gravel --RDR 1--		11	1 3 5	0.49 B	12
		15	4 7 8	2.38 B	20		622.4	Very stiff (2.25P), gray SILTY CLAY LOAM, trace gravel --RDR 1--		12	5 10 15	NP	12
		20	3 5 6	2.13 B	20		621.4	Medium dense, gray, moist to wet SILTY LOAM, trace gravel --RDR 2--	30	13	6 10 14	4.59 B	19
		25	3 5 6	1.97 B	21		619.9	Very stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel --RDR 2--		14	6 15 11	2.38 B	15
		30	3 5 6	2.05 B	20		615.4		35				
								Boring terminated at 35.00 ft					

WANGENGINC 4910402.GPJ WANGENG.GDT 6/29/18

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-18-2018	Complete Drilling	06-18-2018	While Drilling	☐ 24.00 ft		
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	☑ 23.00 ft		
Driller	N&J	Logger	F. Bozga	Time After Drilling	NA		
Drilling Method	3.25" HSA; boring backfilled upon completion			Depth to Water	☑ NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

FILE NAME = Q:\Engineering\LiveProjects\13038 IDOT DUR\Work D-der 116-62066\CADD\CADD\CADD Sheets\Structure\162066-013-BORING 7-8.dgn



USER NAME = johnn	DESIGNED - LC	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - IH	REVISED -
PLOT DATE = 10/17/2018	CHECKED - JMT	REVISED -
	DATE - 10/17/2018	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BORING LOGS VI	
I-55, I-80 AND I-290 DMS INSTALLATION	
SCALE: 1"=50'	SHEET S-28 OF S-29 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	166
CONTRACT NO. 62666				
ILLINOIS FED. AID PROJECT				

* I-55, I-80 & I-290



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BORING LOG OSB-12

WEI Job No.: 491-04-02

Client: **Accurate Group, Inc.**
Project: **I-80 at I-55 Dynamic Messaging Signs**
Location: **Will and DuPage Counties, Illinois**

Datum: NAVD 88
Elevation: 701.82 ft
North: 1924740.52 ft
East: 1072940.39 ft
Station: NA
Offset: NA

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
701.3	6-inch thick ASPHALT --PAVEMENT--						681.3	Medium dense, gray SAND; damp					
700.68	5.5-inch thick CONCRETE --PAVEMENT--							--clay seams--		9	8 9 12	NP	11
698.8	Loose, brown GRAVELLY SAND; damp to moist --AGGREGATE BASE--		1	5 3 5	NP		678.8	Hard, gray SILTY CLAY --RDR 2--		10	7 8 8	5.17 B	13
	Medium stiff to stiff, brown to gray SILTY CLAY, trace gravel --FILL-- --RDR 2--		2	3 3 5	1.89 B	23	676.3	Medium dense, gray SILTY LOAM --wet sand seams-- --RDR 2--		11	5 6 8	NP	15
693.8	Hard, brown and gray SILTY CLAY, trace gravel --RDR 2--		4	4 8 10	6.07 B	17	673.8	Medium stiff to stiff, gray SILTY CLAY --wet sand seams-- --RDR 2--		12	4 5 7	1.89 B	15
691.3	Medium dense, gray, wet to saturated SILT --RDR 2--		5	6 8 6	NP	22	671.9 671.3	Saturated SAND lenses Medium stiff, gray SILTY CLAY --RDR 2--		13	2 3 4	0.57 B	19
688.8	Stiff to very stiff, gray SILTY CLAY --RDR 2--		6	2 5 7	2.46 B	18	668.8	Very stiff, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel --RDR 2--		14	3 6 10	3.85 B	13
	--interbedded wet silt seams--		8	3 4 6	1.64 B	16	666.8	Boring terminated at 35.00 ft					

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-24-2018	Complete Drilling	06-24-2018	While Drilling	▽	10.50 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	▽	20.00 ft	
Driller	N&J	Logger	F. Bozga	Time After Drilling		NA	
Drilling Method	3.25" HSA; boring backfilled upon completion			Depth to Water	▽	NA	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							



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BORING LOG OSB-13

WEI Job No.: 491-04-02

Client: **Accurate Group, Inc.**
Project: **I-80 at I-55 Dynamic Messaging Signs**
Location: **Will and DuPage Counties, Illinois**

Datum: NAVD 88
Elevation: 702.15 ft
North: 1924700.02 ft
East: 1072917.99 ft
Station: NA
Offset: NA

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	15-inch thick ASPHALT --PAVEMENT--						680.0	Gray SILT; saturated		9	4 5 8	2.46 B	18
700.9	Stiff to hard, brown and gray SILTY CLAY, trace gravel --FILL-- --RDR 2--		1	4 5 7	4.35 B	16	679.2	Medium dense, gray, saturated, coarse SAND, trace gravel --RDR 2--		10	6 9 10	NP	16
696.9	Possible sand; wet spoon		2	2 3 4	1.31 B	20	676.7	Very stiff, gray SILTY CLAY, trace gravel --RDR 2--		11	3 6 10	3.44 B	18
696.4	Stiff, brown and gray SILTY CLAY LOAM, trace gravel --FILL-- --RDR 2--		3	2 2 2	1.15 B	22	674.2	Medium dense, gray SILTY LOAM; wet to saturated --RDR 2--		12	5 5 6	NP	18
694.2	Loose, brown and gray, wet SILTY LOAM --RDR 1--		4	1 3 3	NP	27	670.6	Medium dense, gray, saturated, fine SAND --RDR 2--		13	4 5 8	NP	28
691.2	Stiff, gray SILTY CLAY --RDR 2--		5	2 3 3	1.80 B	18	669.2	Medium dense, gray, saturated SANDY GRAVEL		14	7 7 5	NP	14
689.2	Loose, gray, saturated SILT --RDR 2--		6	3 4 5	NP	21	667.6 667.2	Very stiff (2.5P), gray SILTY CLAY, trace gravel Boring terminated at 35.00 ft					
685.7	Very stiff, gray SILTY CLAY, trace gravel --RDR 2--		7	4 3 5	2.87 B	19							
			8	3 5 7	2.13 B	19							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	06-24-2018	Complete Drilling	06-24-2018	While Drilling	▽	5.50 ft	
Drilling Contractor	Wang Testing Services	Drill Rig	17B57T [91%]	At Completion of Drilling	▽	13.00 ft	
Driller	N&J	Logger	F. Bozga	Time After Drilling		NA	
Drilling Method	3.25" HSA; boring backfilled upon completion			Depth to Water	▽	NA	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

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WANGENG 4910402.GPJ WANGENG.GDT 6/29/18

WANGENG 4910402.GPJ WANGENG.GDT 6/29/18



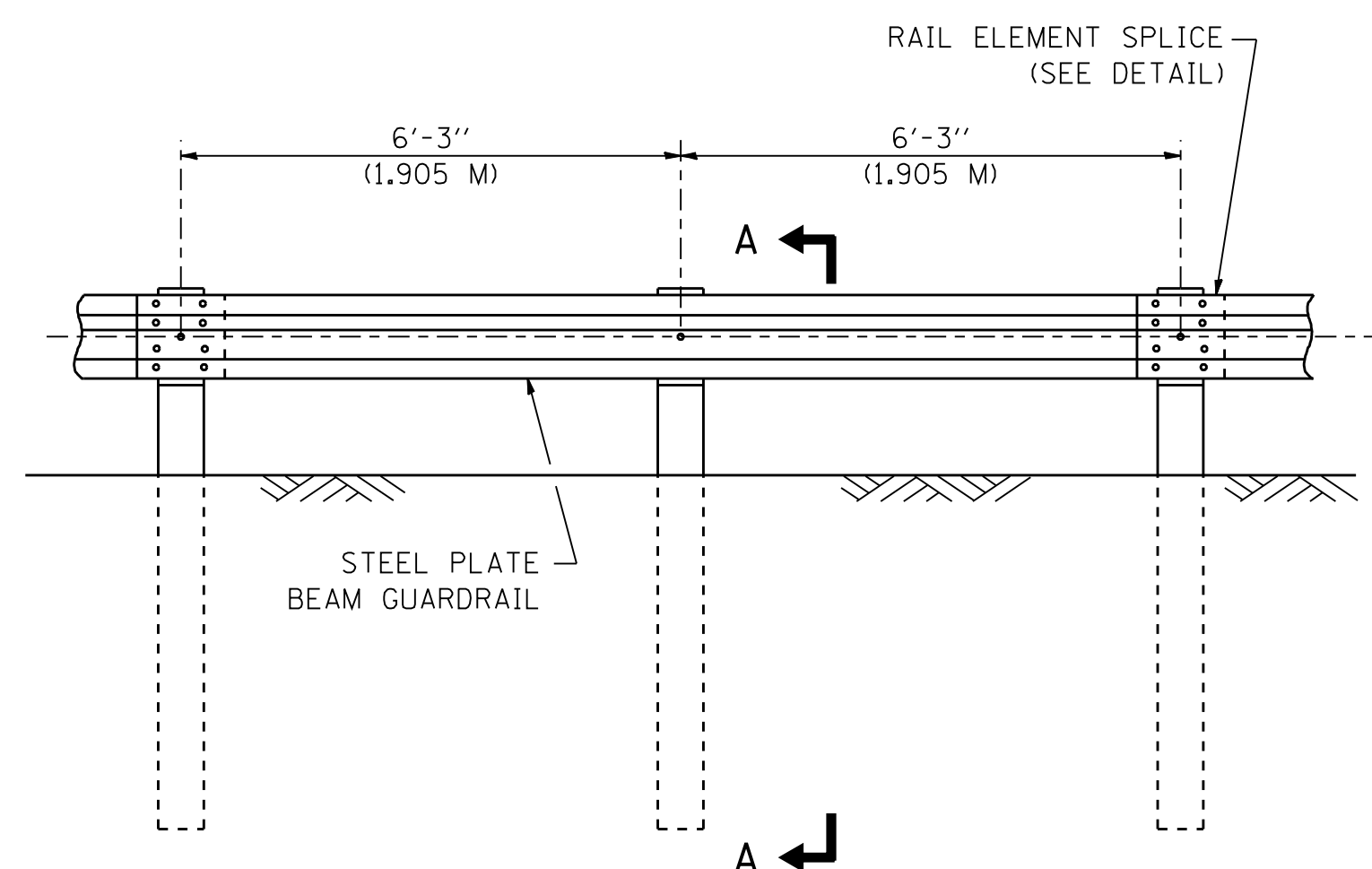
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PLOT SCALE = 2.0000' / in.	DRAWN - IH	REVISED -
PLOT DATE = 10/17/2018	CHECKED - JMT	REVISED -
	DATE - 10/17/2018	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BORING LOGS VII
I-55, I-80 AND I-290 DMS INSTALLATION**

SCALE: 1"=50' SHEET S-29 OF S-29 SHEETS STA. TO STA.

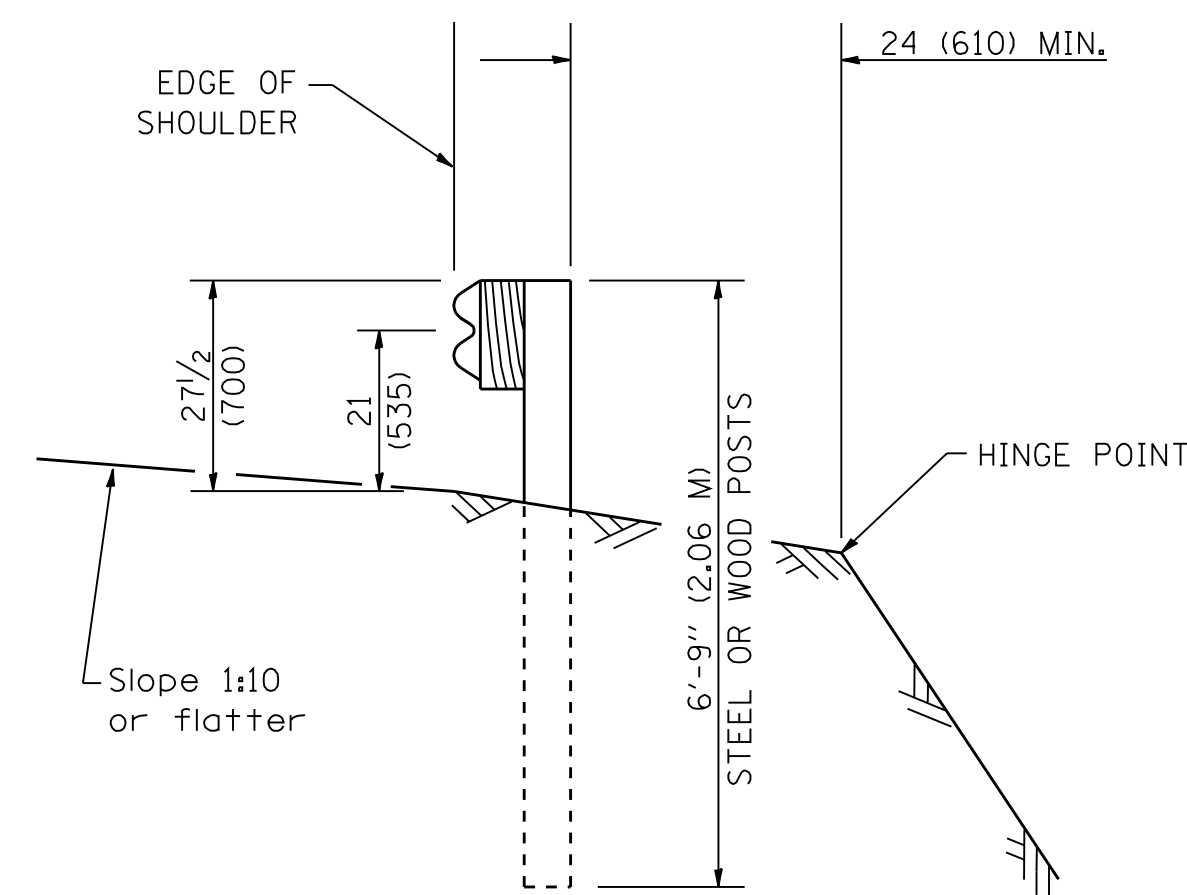
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	167
CONTRACT NO. 62666				
ILLINOIS FED. AID PROJECT				



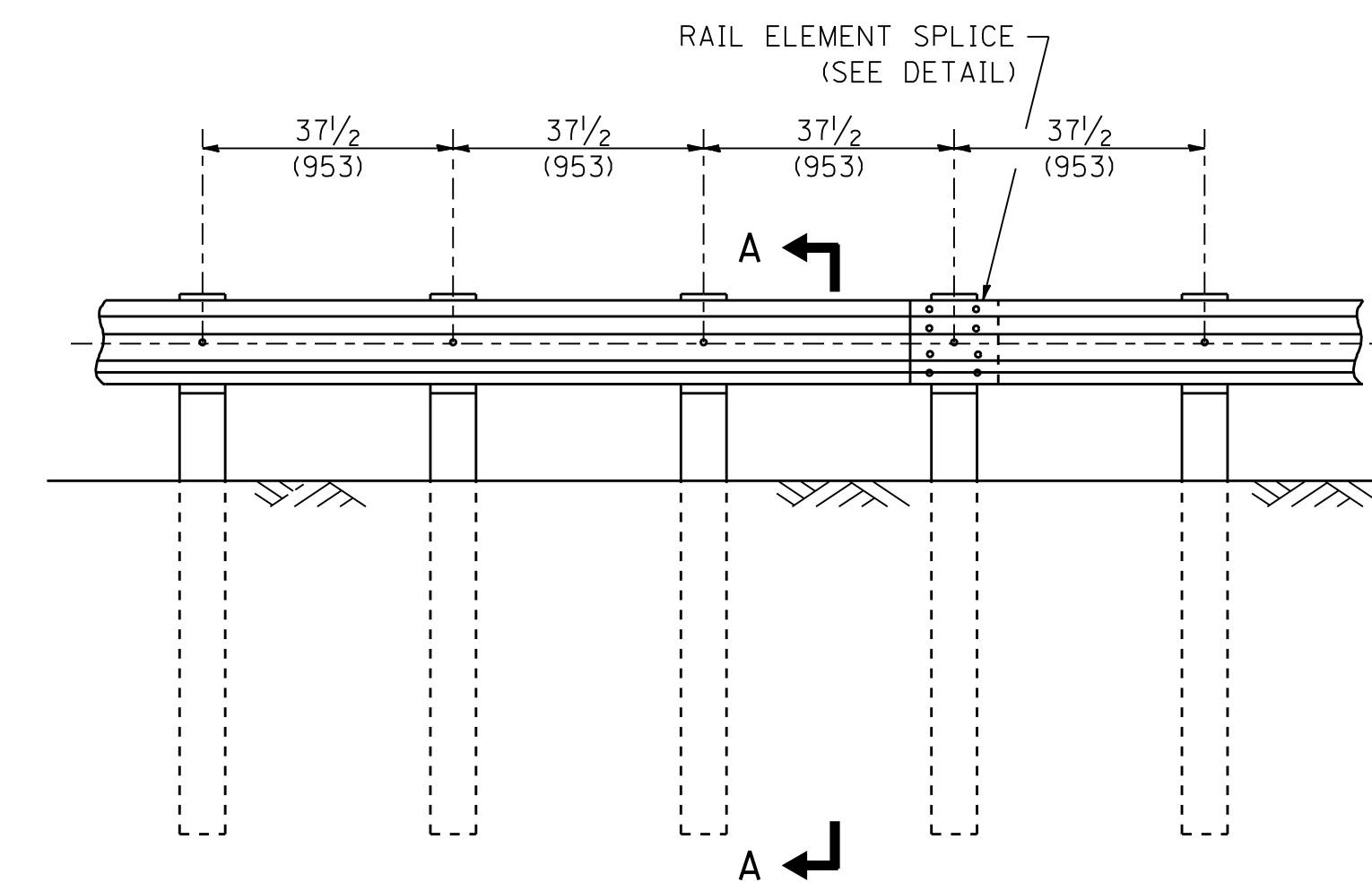
ELEVATION

TYPE A

6'-3" (1.905 M) TYPICAL POST SPACING



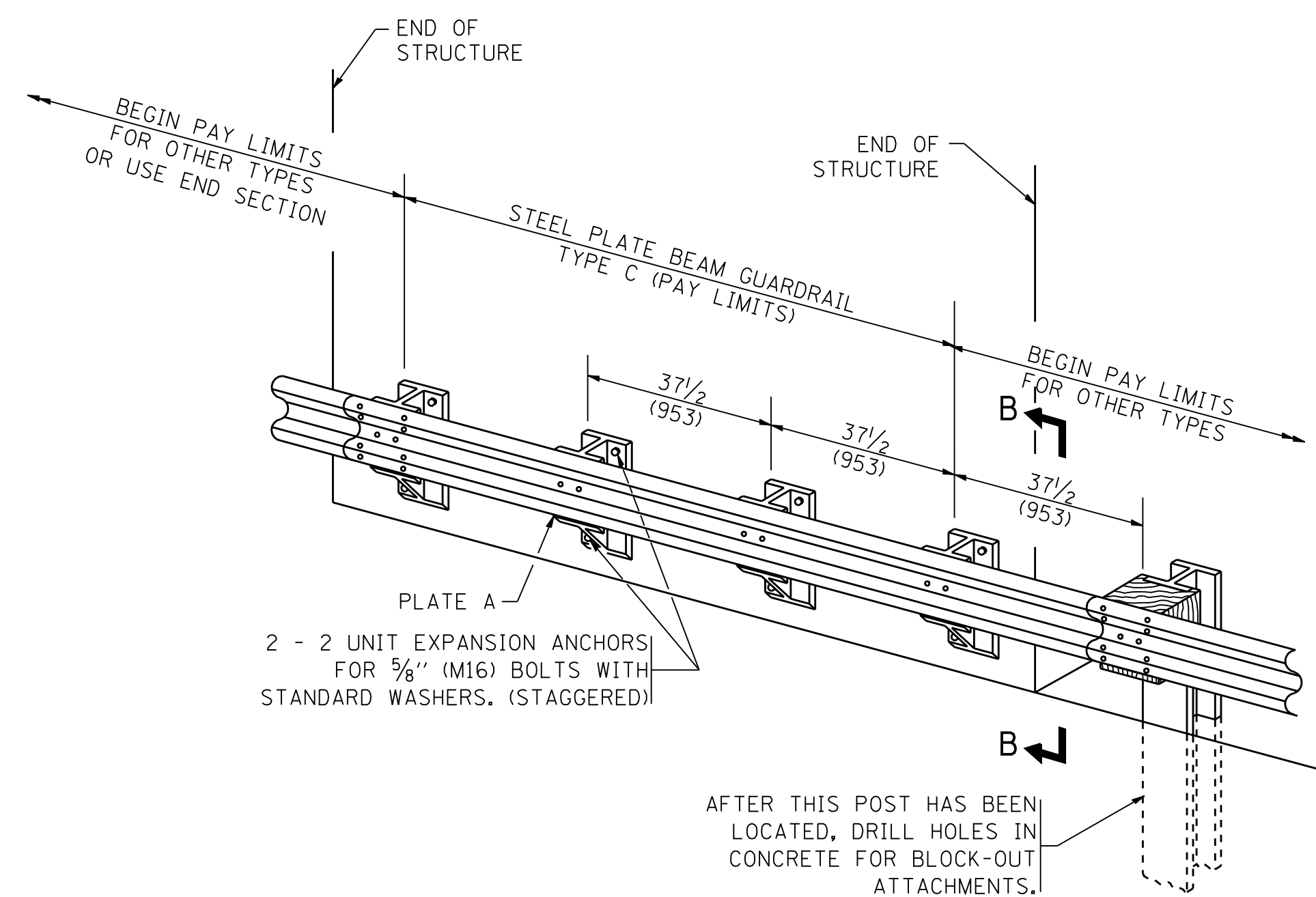
SECTION A-A



ELEVATION

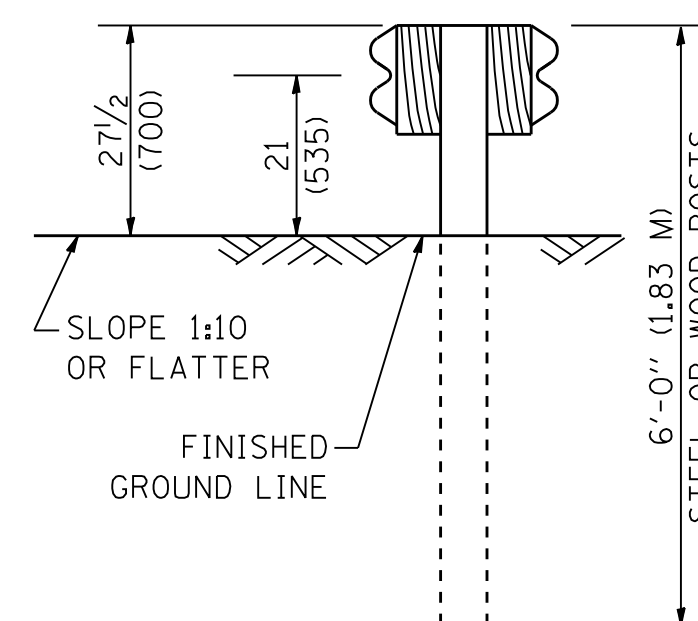
TYPE A

37 1/2 (953) CLOSED POST SPACING

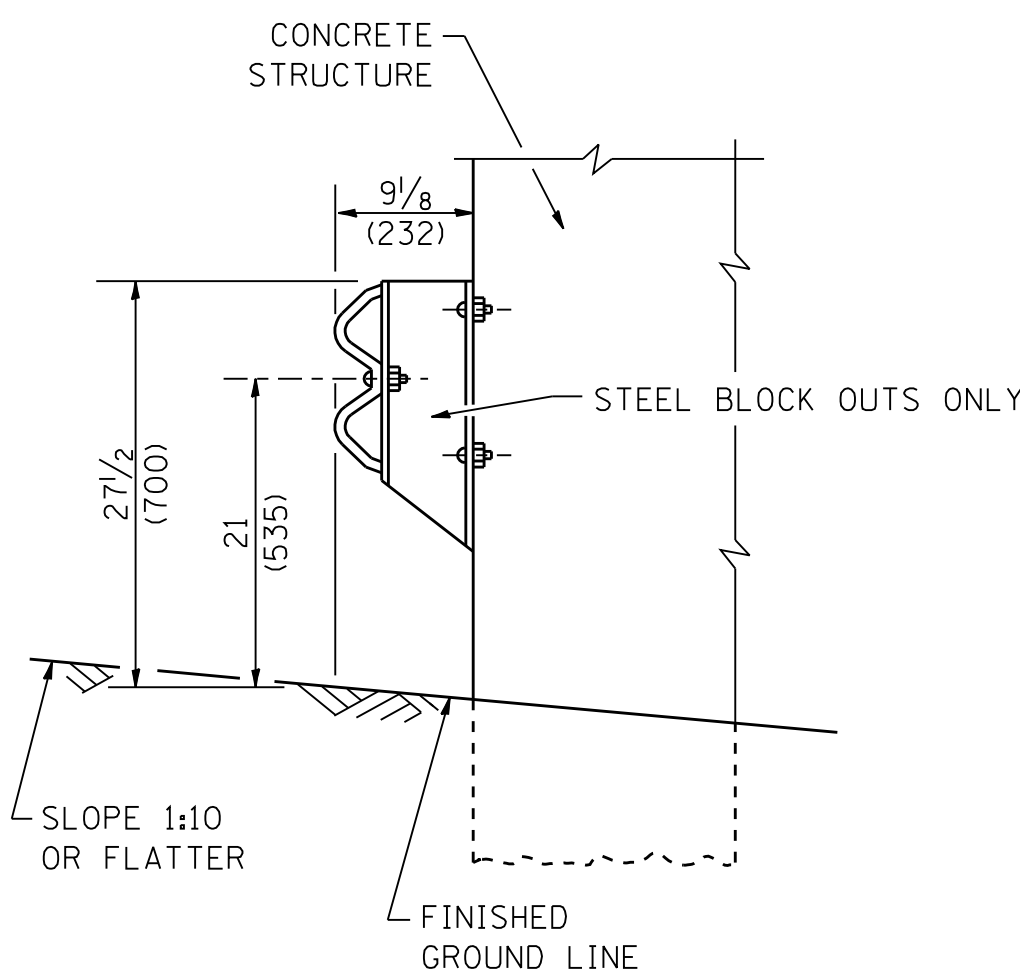


TYPE C

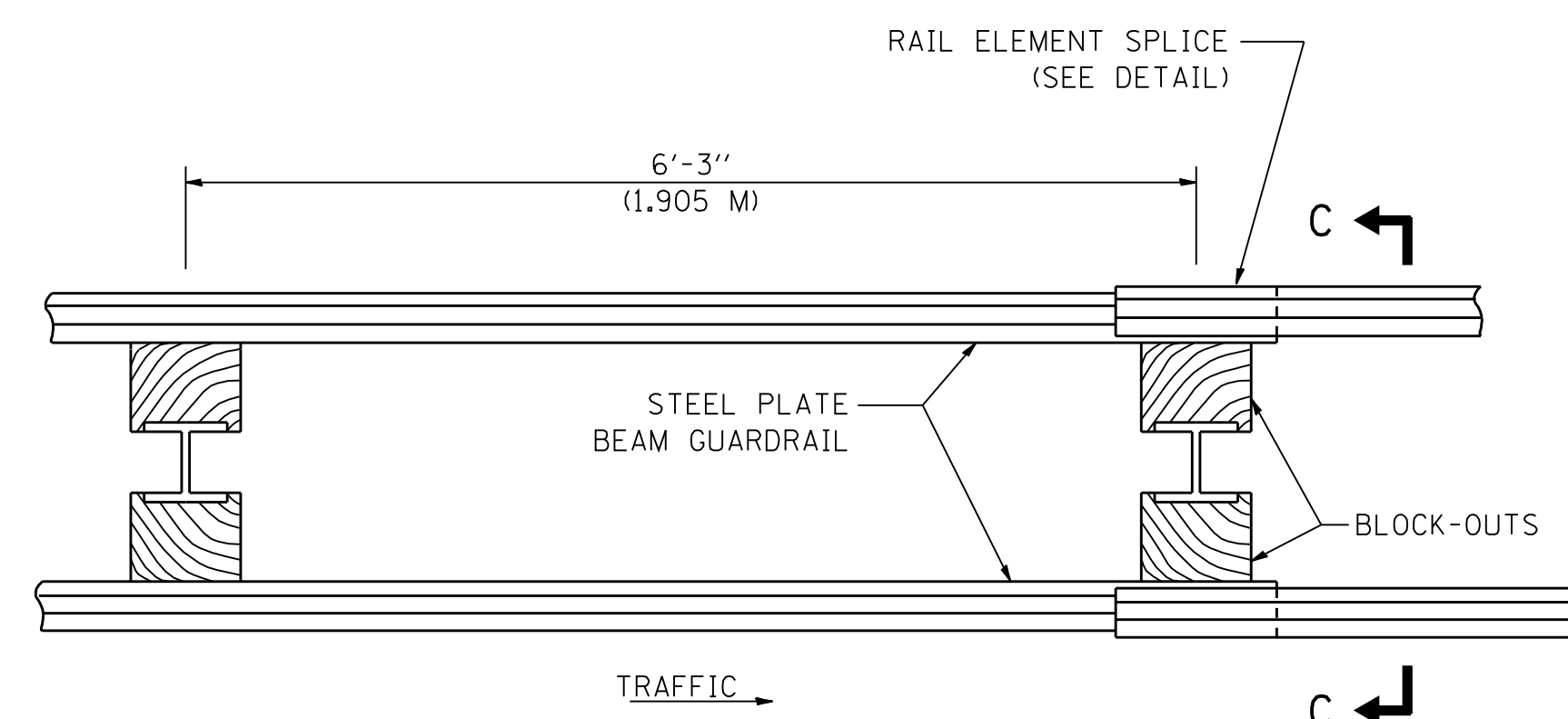
37 1/2 (953) BLOCK-OUT SPACING



SECTION C-C



SECTION B-B



PLAN

TYPE D

DOUBLE STEEL PLATE BEAM GUARDRAIL
6'-3" (1.905 M) TYPICAL POST SPACING

GENERAL NOTES

ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

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

THE EXISTING STEEL POSTS MAY BE DRILLED TO MATCH THE BOLT PATTERN SHOWN HEREIN FOR THE WOOD BLOCK-OUT, OR A NEW STEEL POST SHALL BE PROVIDED.

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL SYSTEM USED PRIOR TO JANUARY 1, 2007. FOR DETAILS ON THE MIDWEST GUARDRAIL SYSTEM, SEE STANDARD 630001.

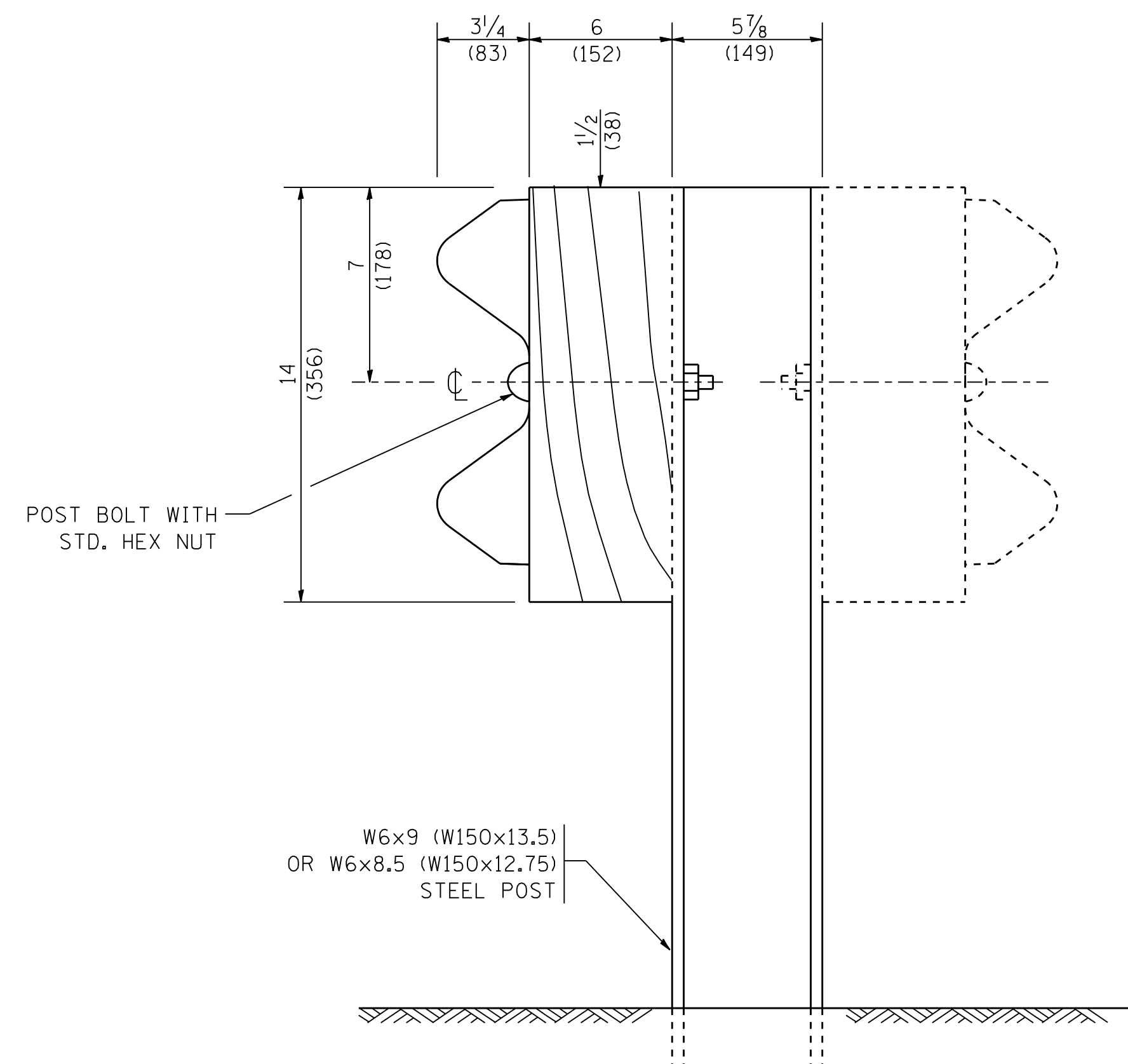
* I-55, I-80, & I-290

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

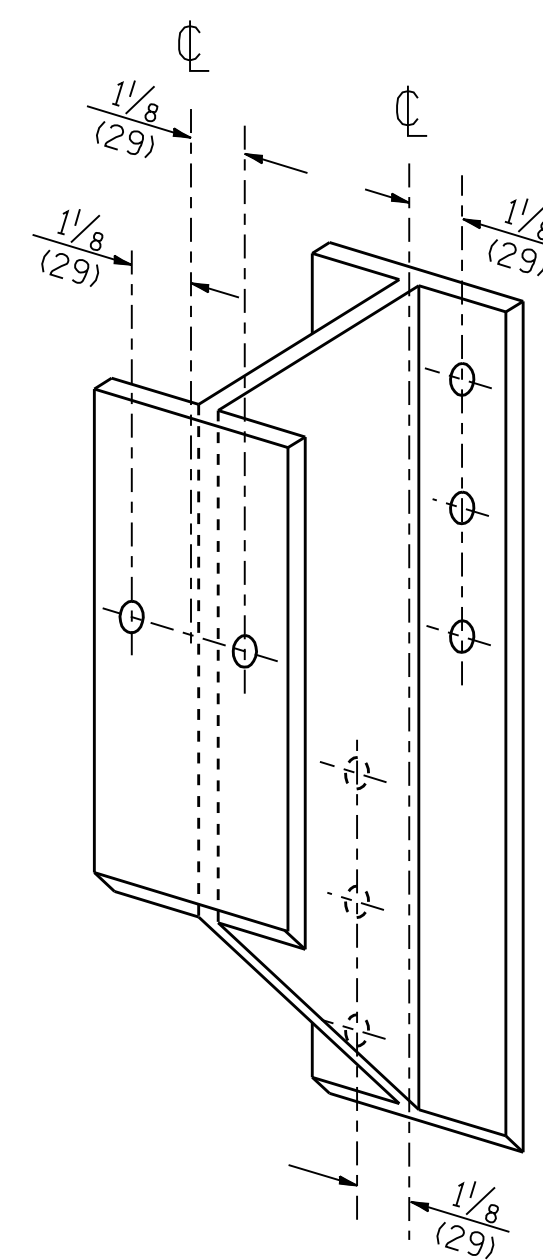
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL			
SCALE: NONE	SHEET NO. 1 OF 4 SHEETS	STA.	TO STA.

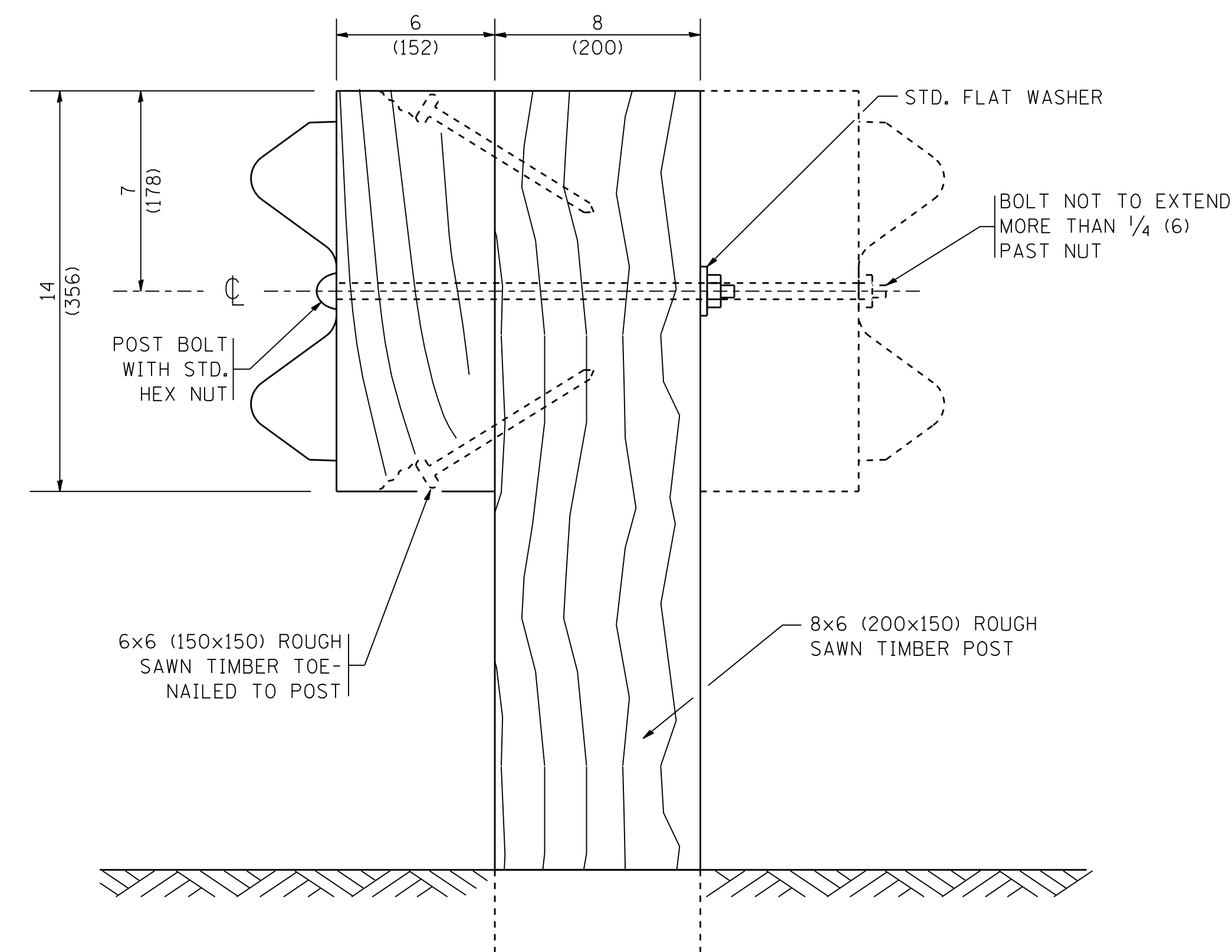
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	168
BM-21			CONTRACT NO. 62G66	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



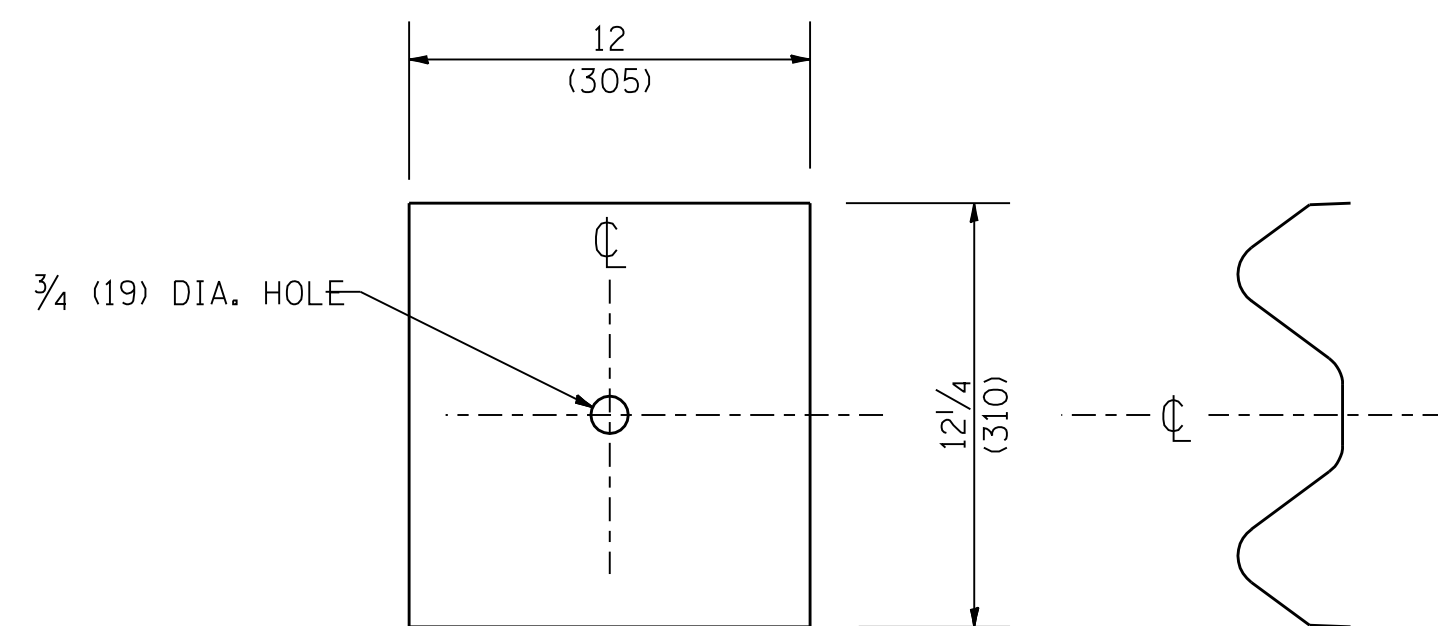
STEEL POST CONSTRUCTION



STEEL BLOCK-OUT DETAIL



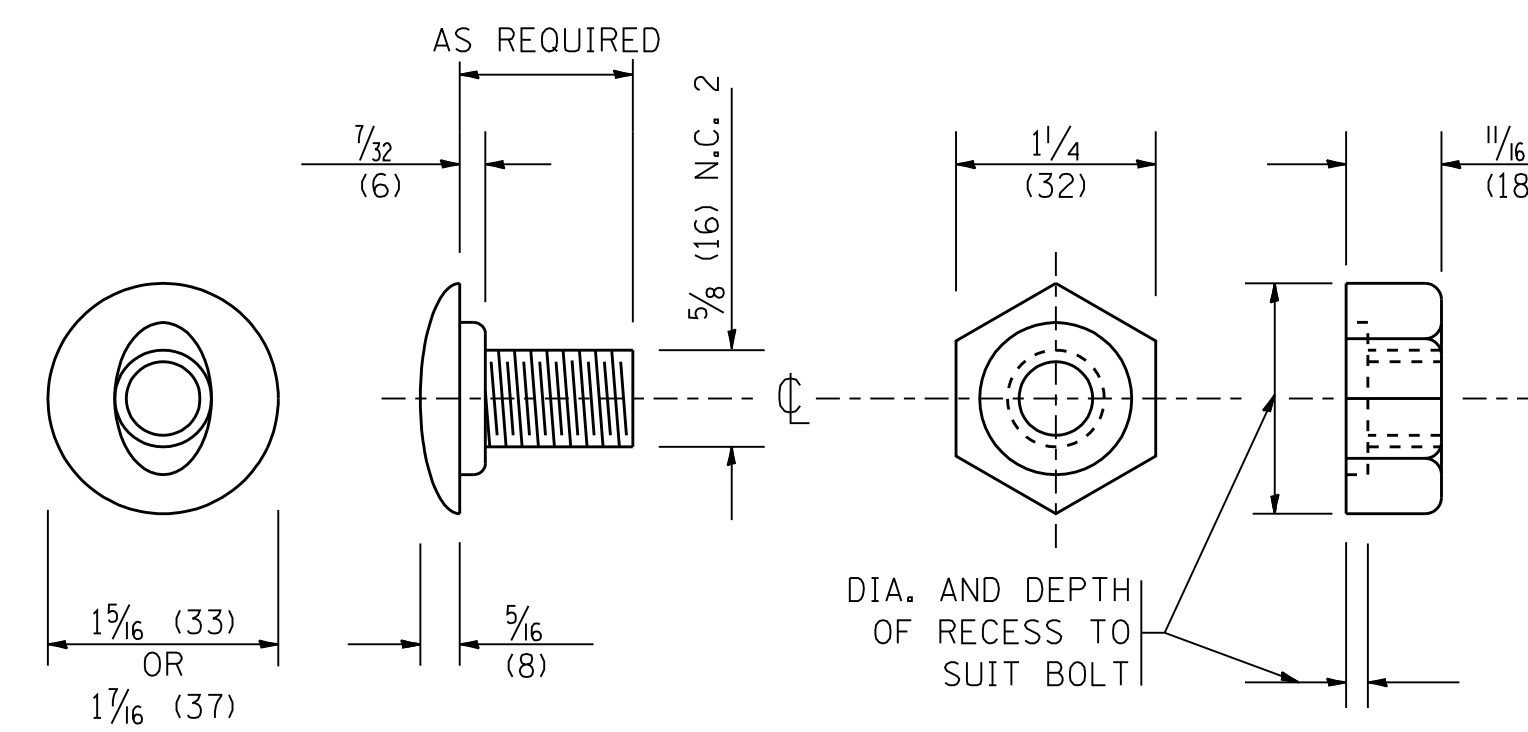
WOOD POST CONSTRUCTION



NOTE:

PLATE A SHALL BE PLACED BETWEEN RAIL ELEMENT AND BLOCK-OUT AT NON-SPLICE MOUNTING POINTS ONLY WHEN STEEL BLOCK-OUTS ARE USED.

PLATE A



POST OR SPLICE BOLT & NUT

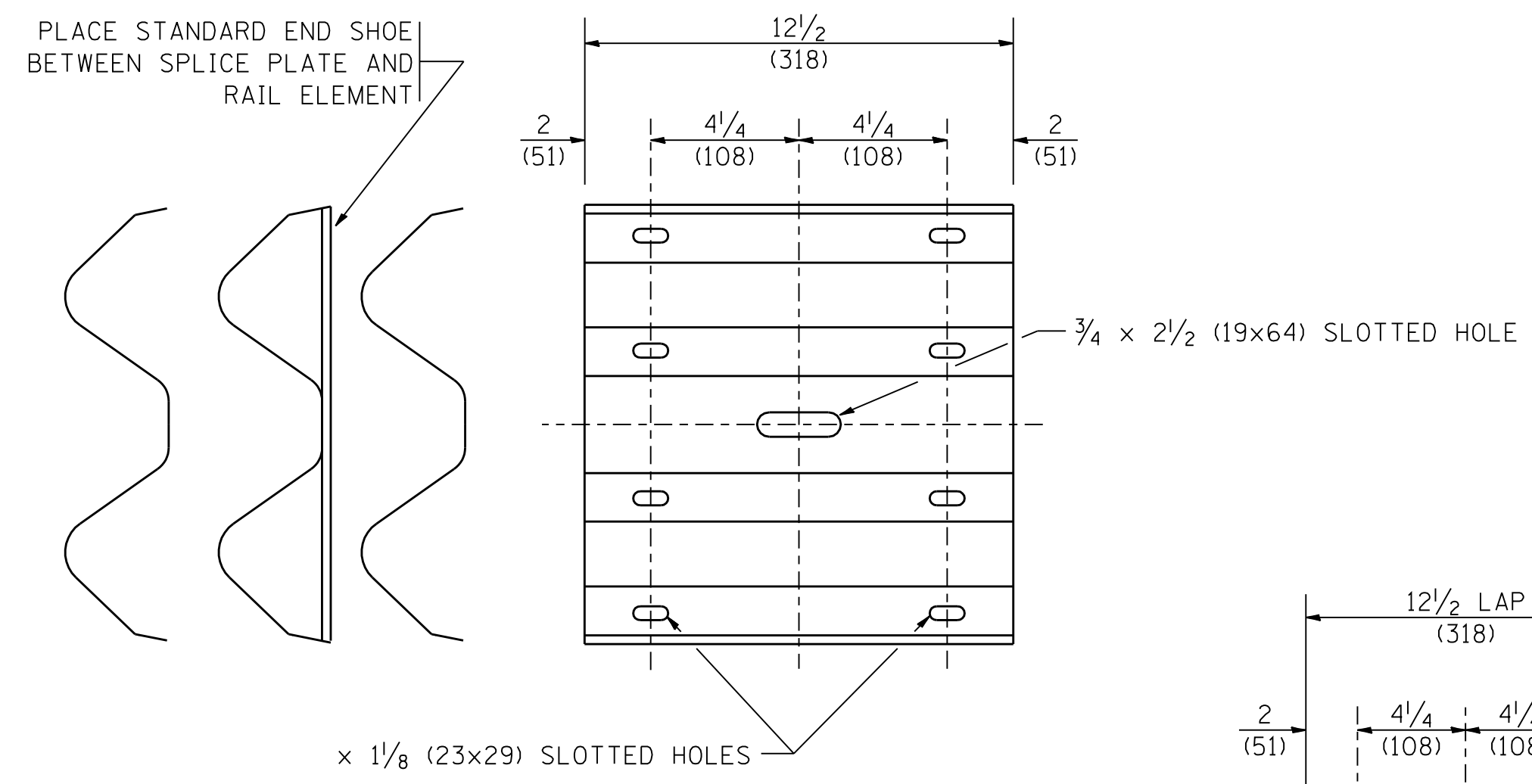
* I-55, I-80, & I-290

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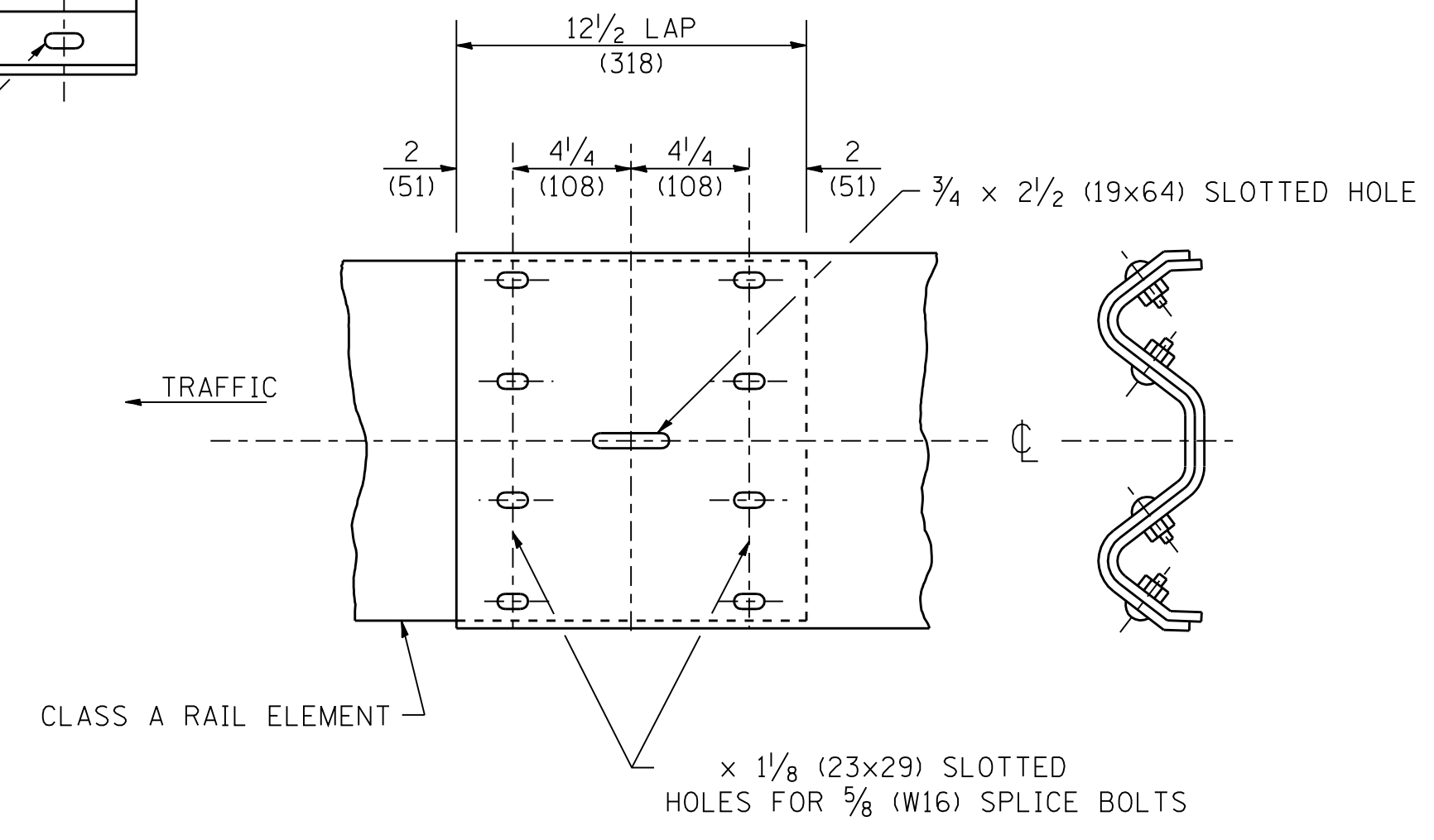
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL			
SCALE: NONE	SHEET NO. 2 OF 4 SHEETS	STA.	TO STA.

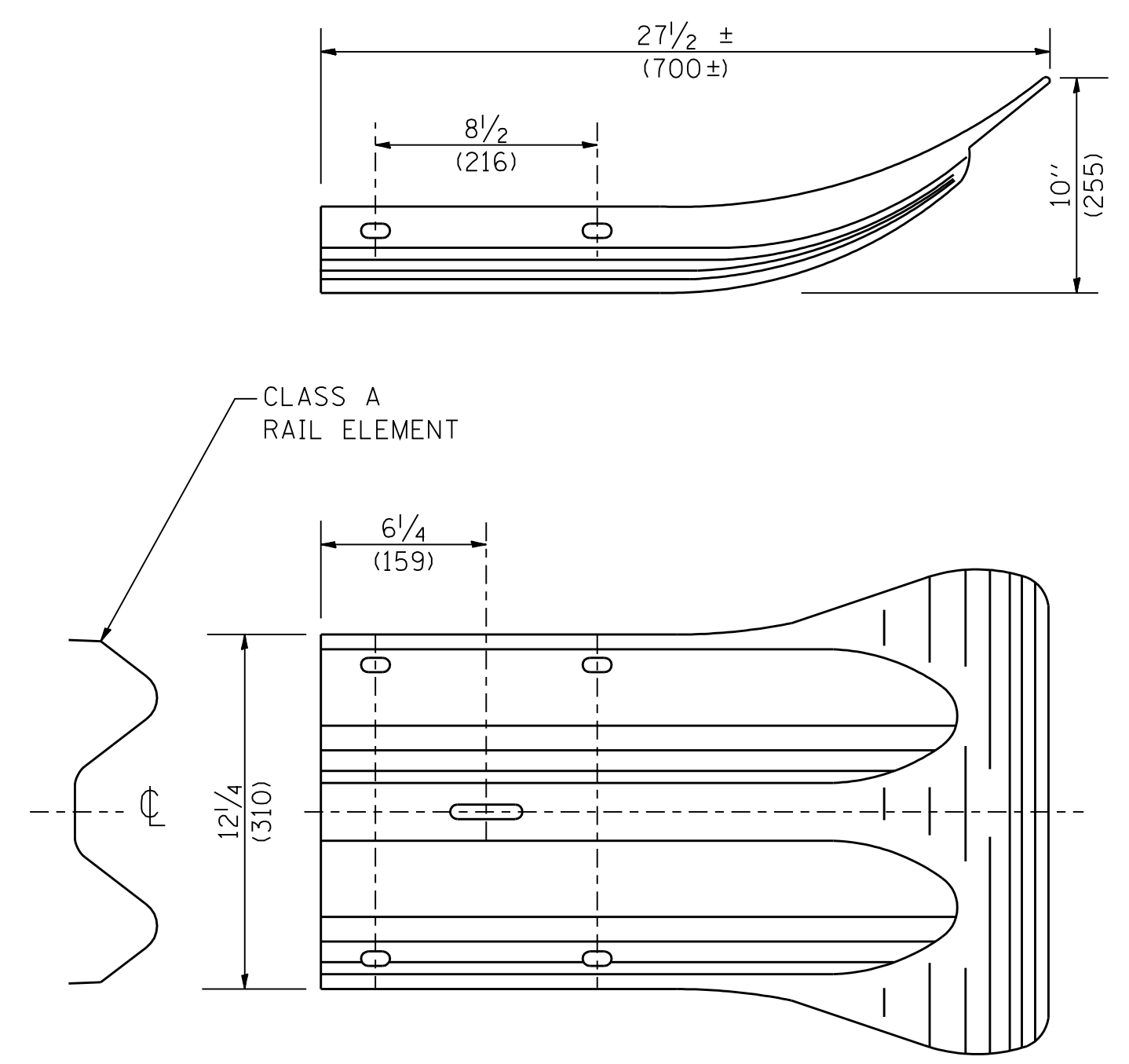
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	169
BM-21		CONTRACT NO. 62G66		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



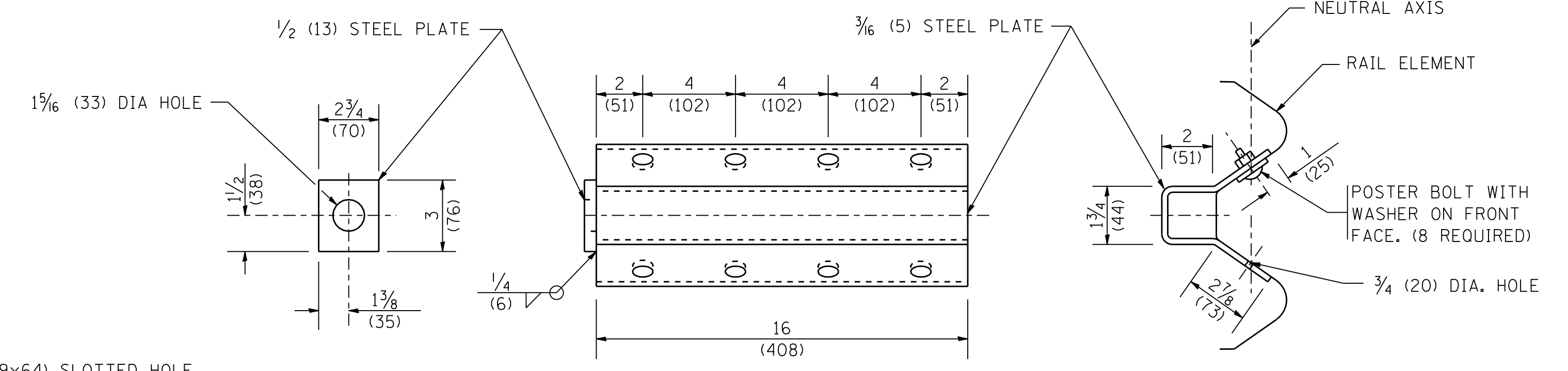
SPLICE PLATE



RAIL ELEMENT SPLICE



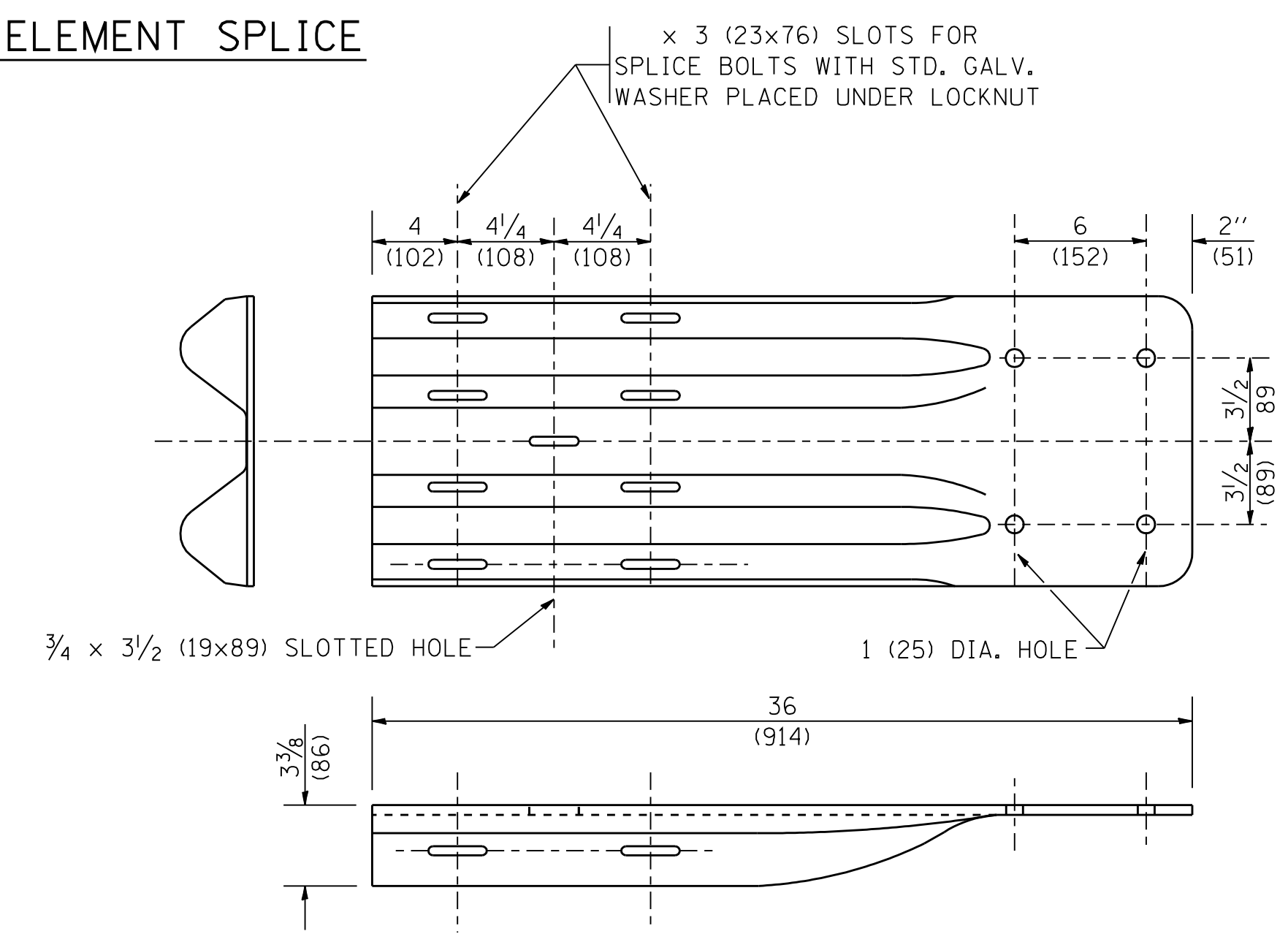
END SECTION



NOTE:

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

ANCHORE PLATE T DETAILS



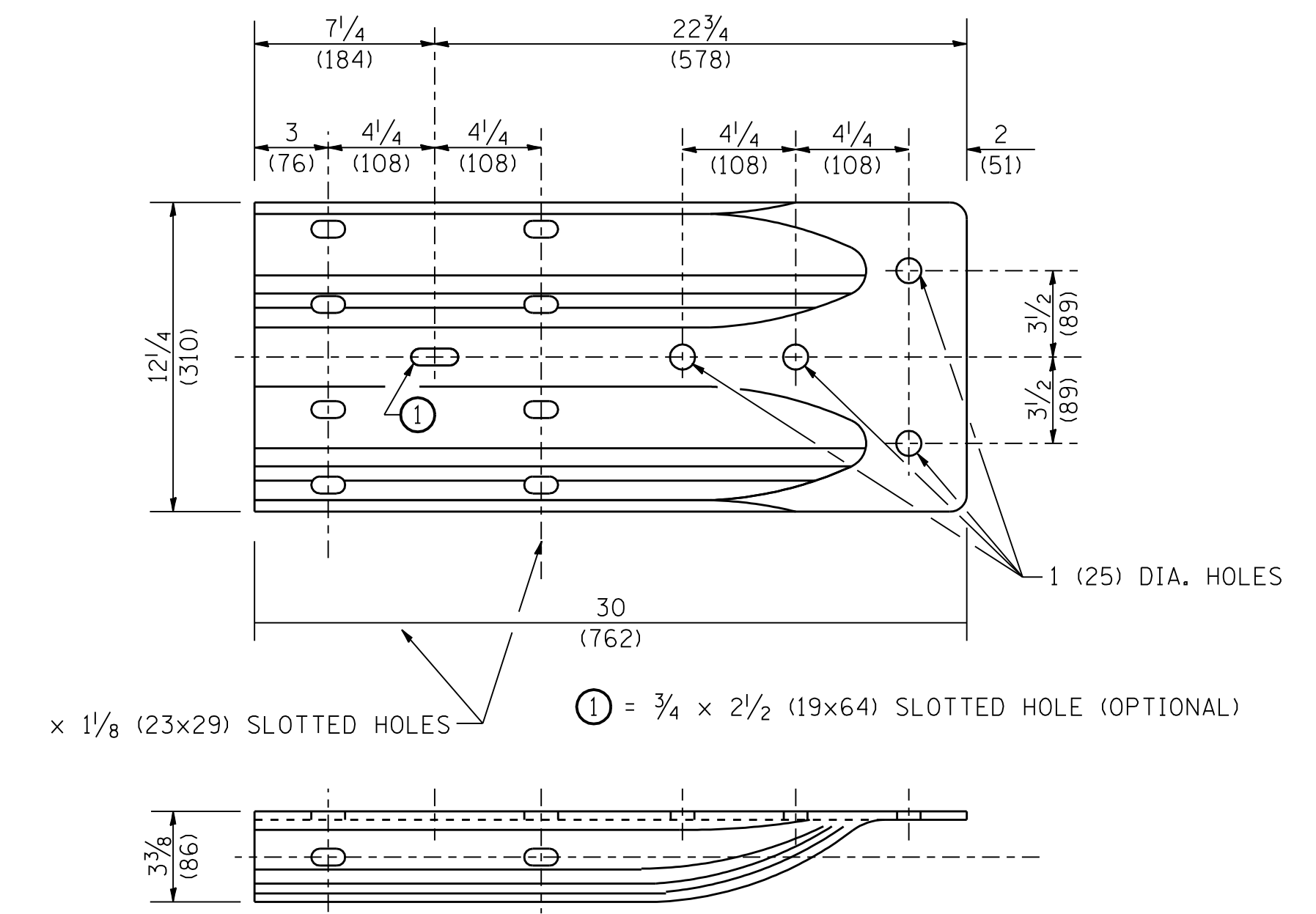
END SHOE

NOTE:

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

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

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



ALTERNATE END SHOE

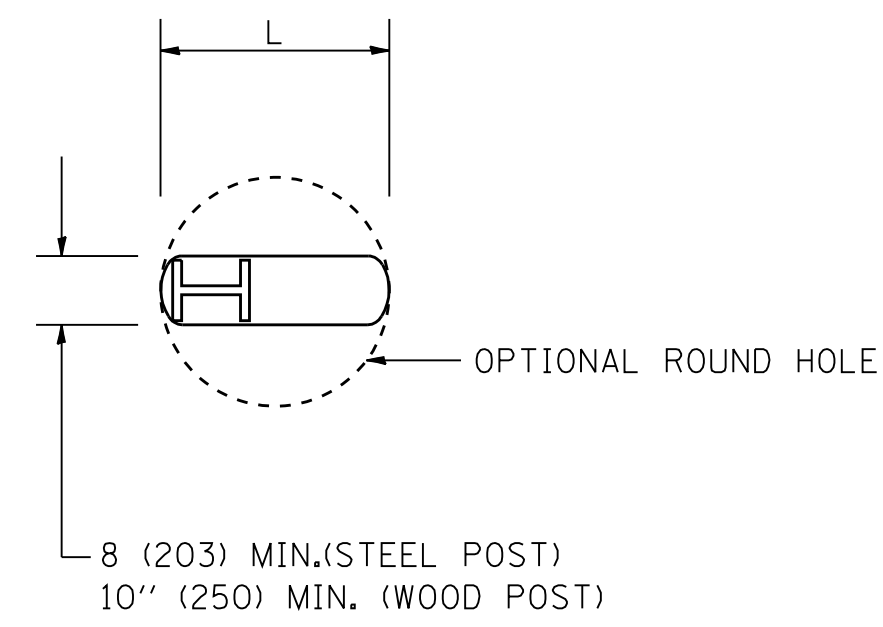
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		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

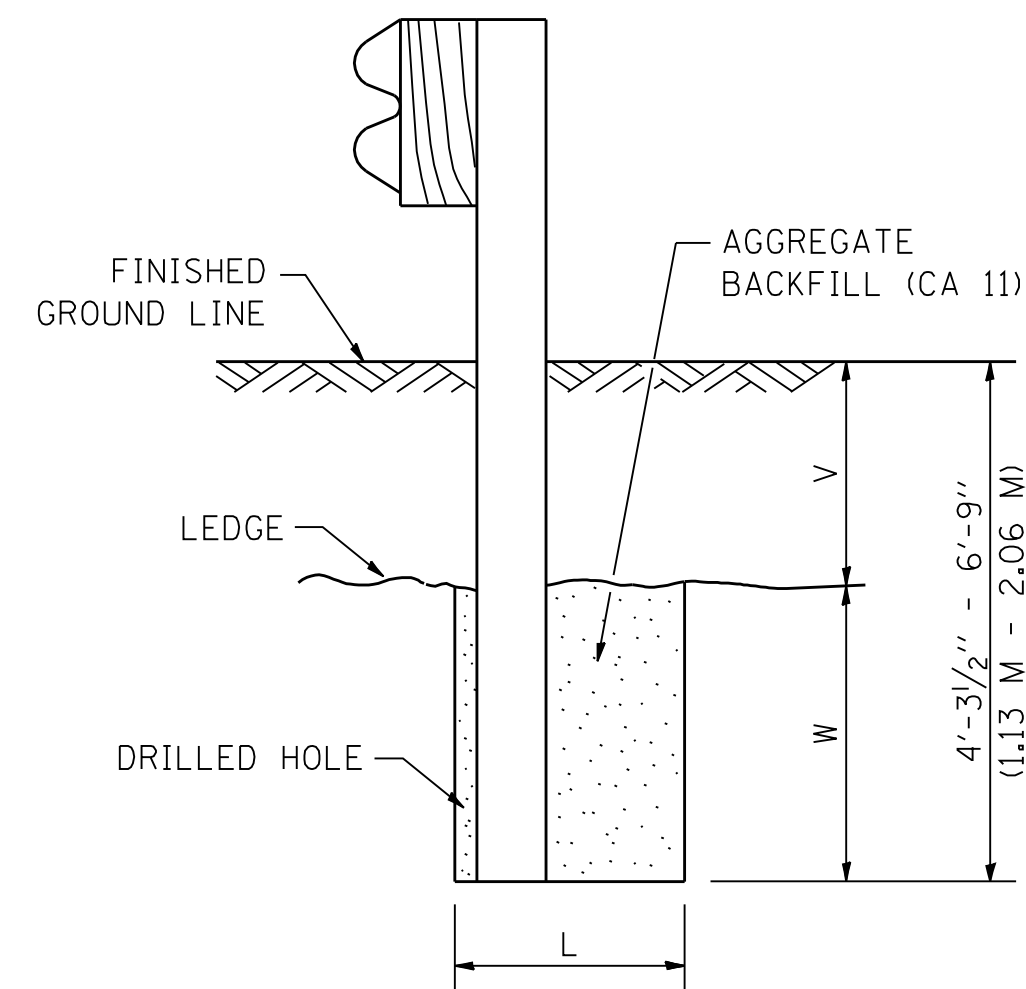
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL			
SCALE: NONE	SHEET NO. 3 OF 4 SHEETS	STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-1	WILL/DUPAGE	177	170
BM-21		CONTRACT NO. 62G66		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

* I-55, I-80, & I-290



PLAN

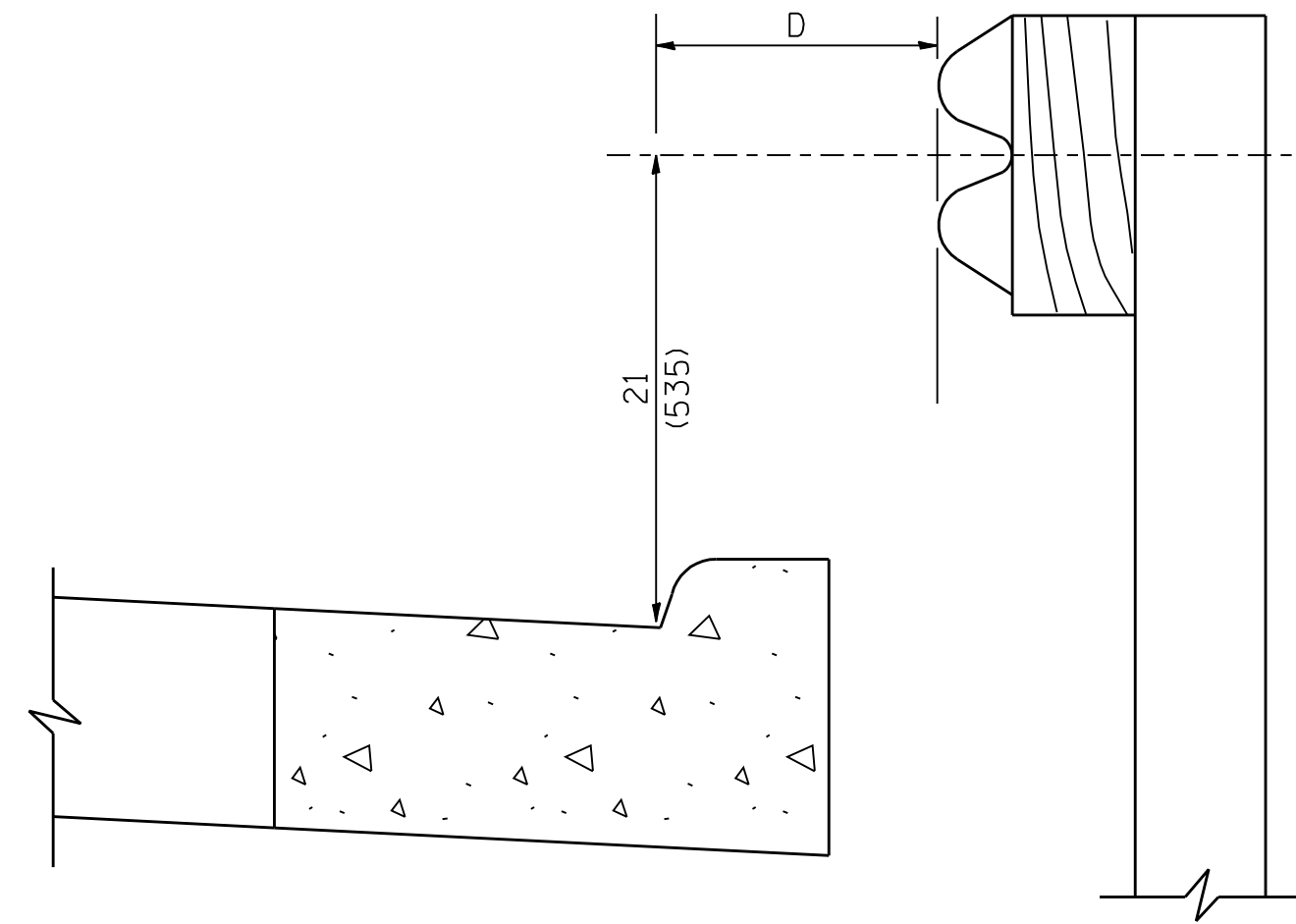


NOTE:

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

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS
MATERIAL IS ENCOUNTERED



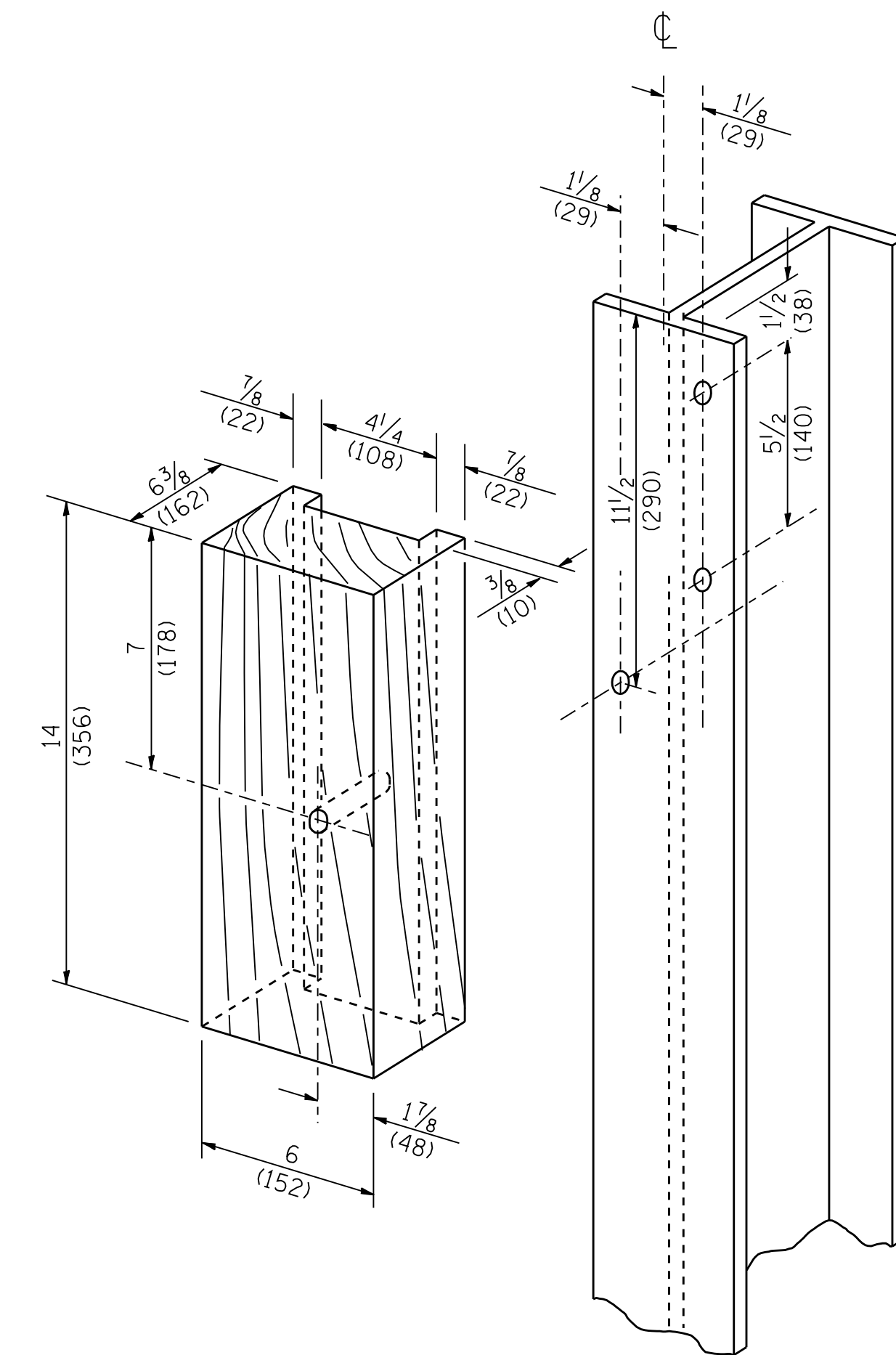
NOTE:

IF IT IS NECESSARY FOR D TO BE MORE THAN 12 (300) AND LESS THAN 10'-0" (3.0 M) TYPE M-2 (M-5) CURB AND GUTTER (STD. 606001) SHALL BE USED IN FRONT OF AND IN ADVANCE OF THE GUARDRAIL.

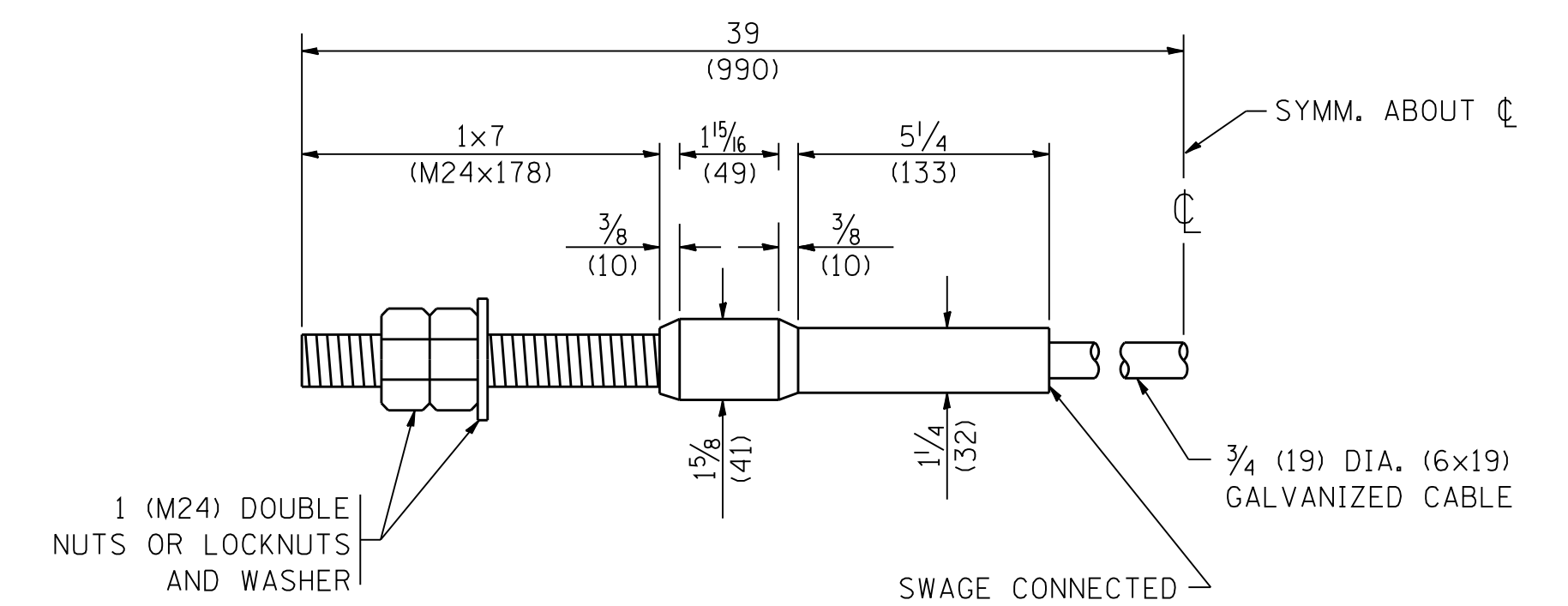
GUARDRAIL PLACED BEHIND CURB

(D = 0 DESIRABLE TO 12 (300) MAXIMUM)

V	W	L	
		STEEL POST	WOOD POST
0 - 18 (0 - 460)	24 (610)	21 (530)	23 (580)
>18 - 41.5 (> 460 - 825)	12 (305)	8 (203)	10 (250)
>41.5 - 53.5 (> 825 - 1.13 M)	12 - 0 (350 - 0)	8 (203)	10 (250)



WOOD BLOCK-OUT AND
STEEL POST DETAILS



CABLE ASSEMBLY

(40,000 LBS (18,100 KG) MIN. BREAKING STRENGTH)
TIGHTEN TO TAUT TENSION

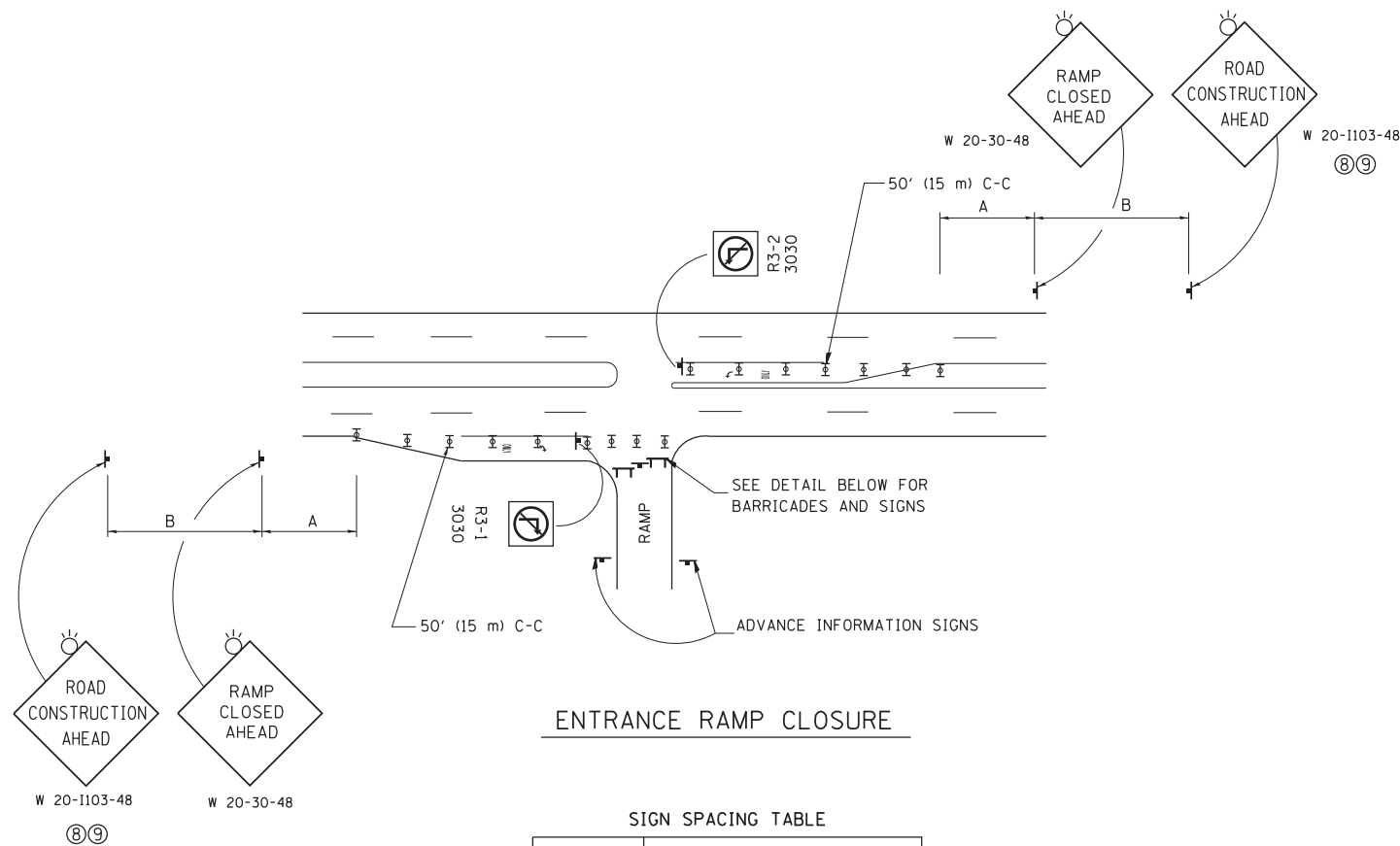
* I-55, I-80, & I-290

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		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL			
SCALE: NONE	SHEET NO. 4 OF 4 SHEETS	STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	171
BM-21		CONTRACT NO. 62G66		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

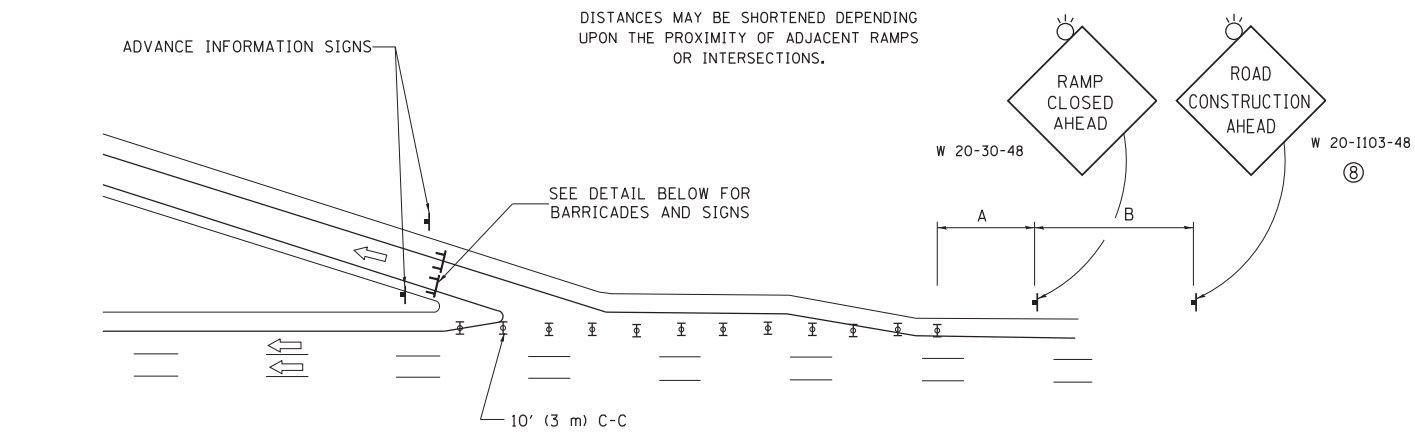


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY <24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

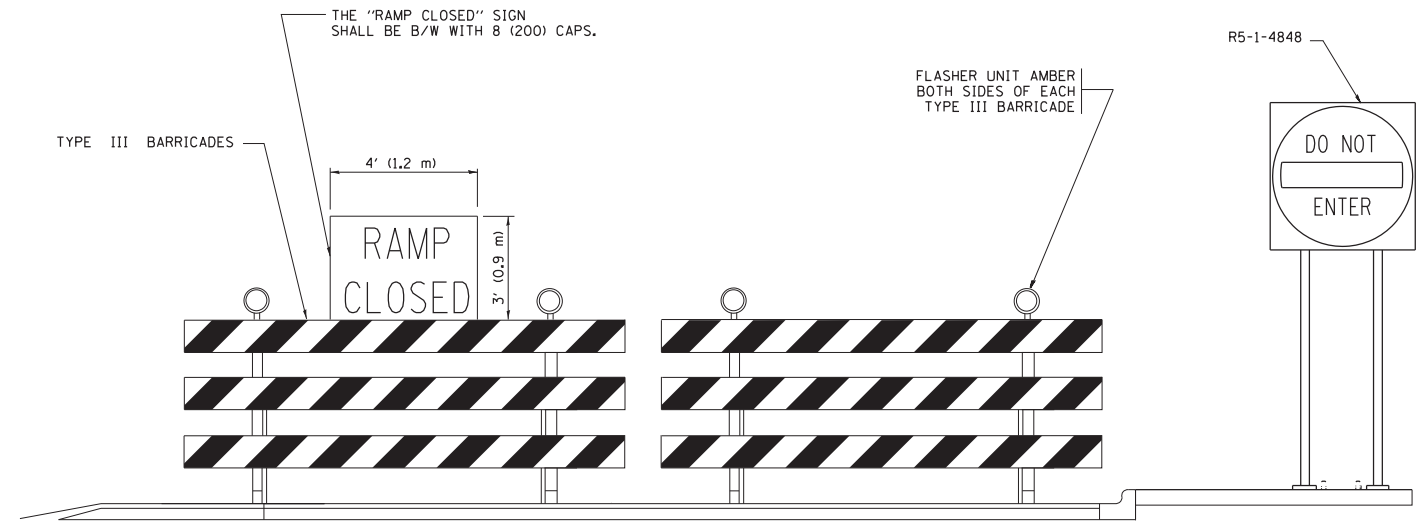
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

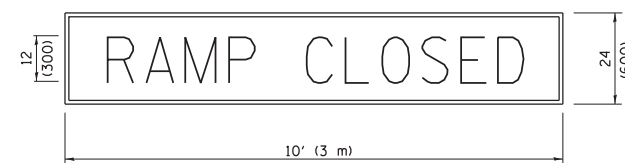
SYMBOLS

- ⊥ TYPE II BARRICADE OR DRUM
- ⊥ TYPE III BARRICADE WITH 2 FLASHING LIGHTS



DETAIL FOR REQUIRED BARRICADES & SIGNS

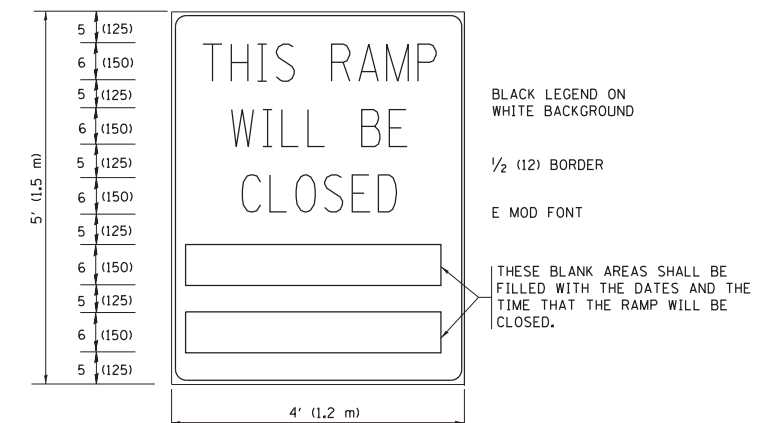
RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER

THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE BACKGROUND

1/2 (12) BORDER

E MOD FONT

THESE BLANK AREAS SHALL BE FILLED WITH THE DATES AND THE TIME THAT THE RAMP WILL BE CLOSED.

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

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② VERTICAL BARRICADES SHALL NOT BE USED FOR RAMP CLOSURES.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH.
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

* I-55, I-80, & I-290

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

FILE NAME =	USER NAME = footemj	DESIGNED - D.W.S.	REVISED - S.P.B. 01-07
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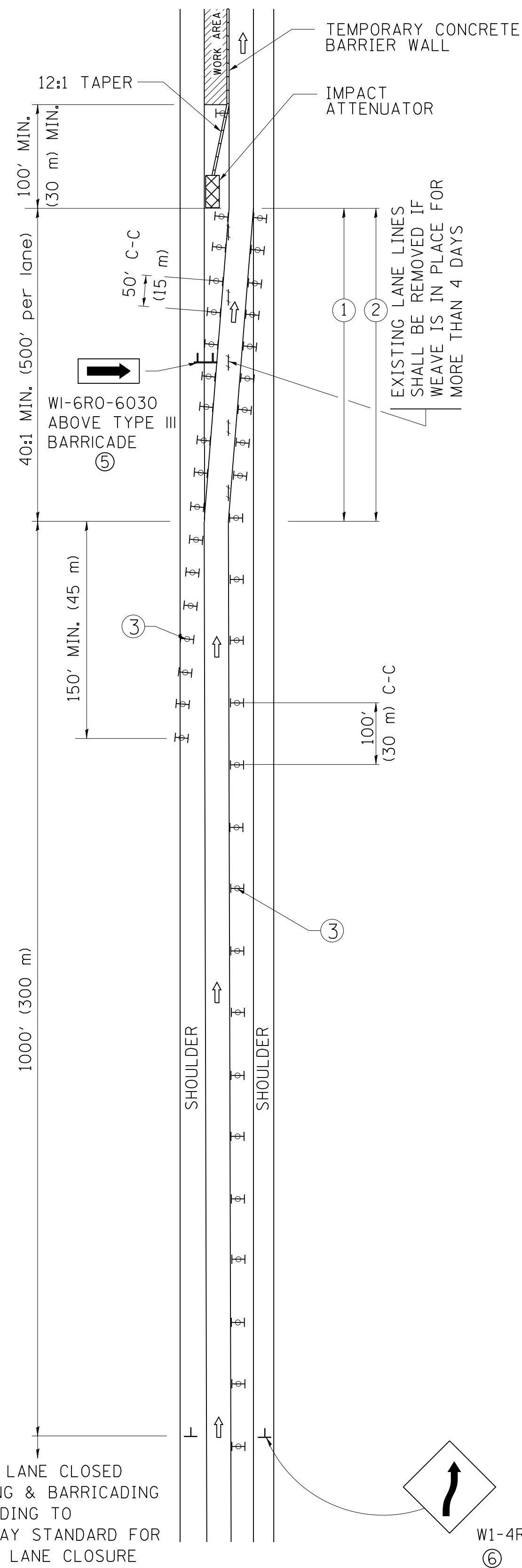
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ENTRANCE AND EXIT RAMP
CLOSURE DETAILS**

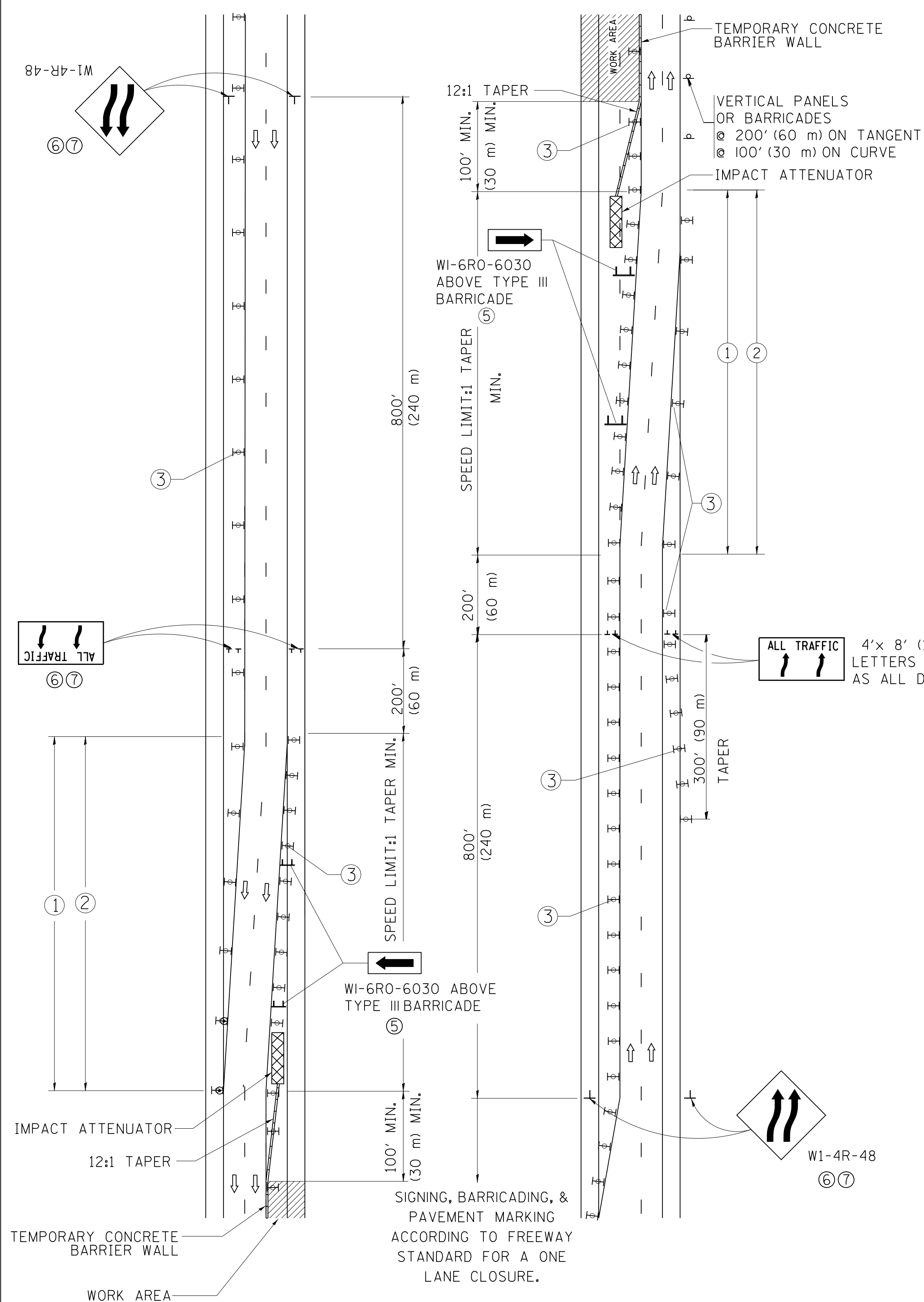
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F.A.I R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-1	WILL/DUPAGE	177	171A
TC-08		CONTRACT NO. 62G66		
ILLINOIS FED. AID PROJECT				

SINGLE LANE WEAVE



MULTI-LANE WEAVE



GENERAL NOTES

- ① EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 4 DAYS IN DURATION.
- ② CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- ③ PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ④ ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ⑤ TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- ⑥ WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- ⑦ THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

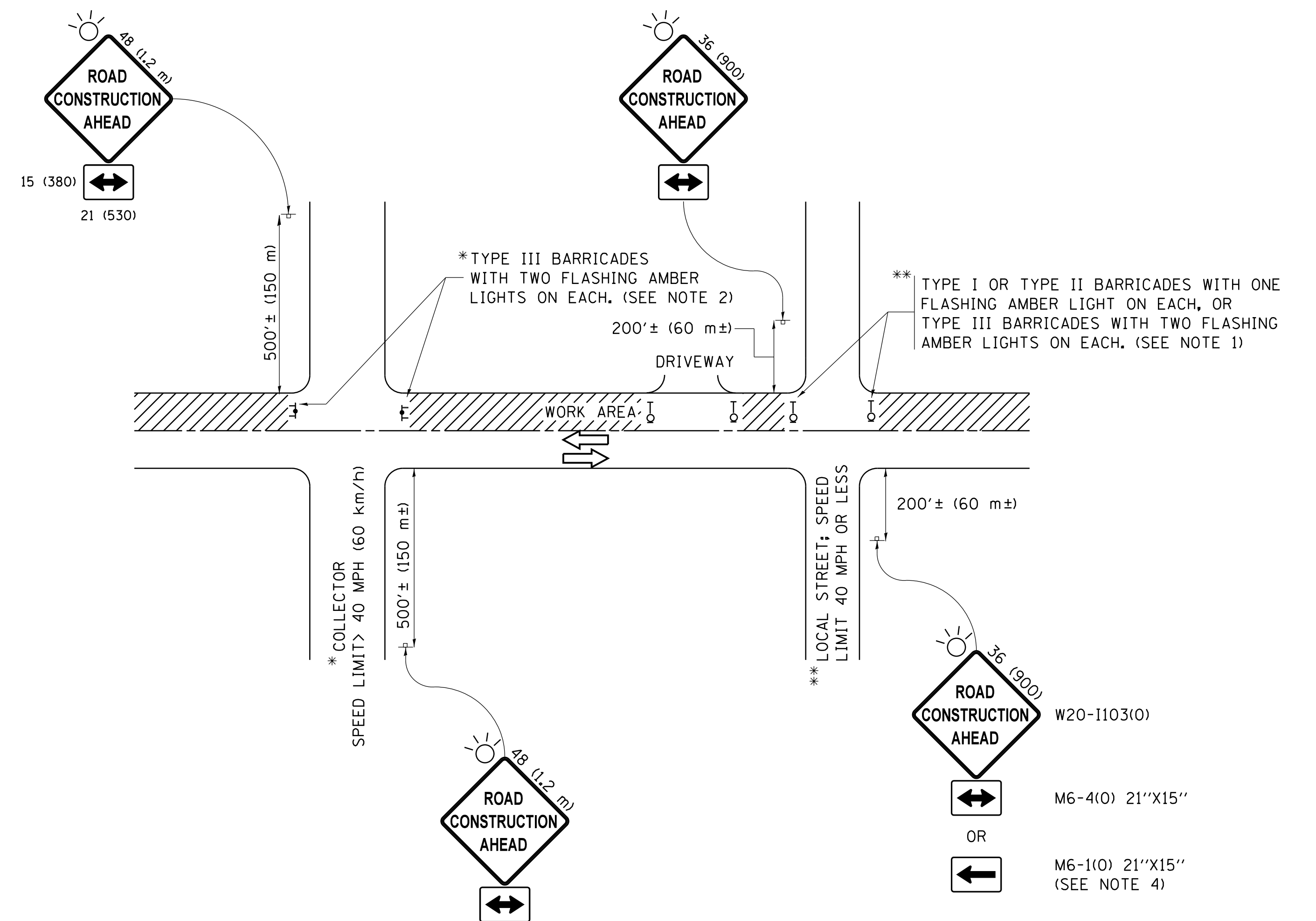
SYMBOLS

- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER WALL
- IMPACT ATTENUATOR
- W1-4R-48 (6, 7)
- W24-1-48 (7)

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

* I-55, I-80, & I-290

FILE NAME = c:\pw_work\pwork\footemj\d0108315\tc09.dgn	USER NAME = footemj	DESIGNED - DWS	REVISED - JAF 02-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED - SPB 01-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	*	2018-024-I	WILL/DUPAGE	177	172
		PLOT SCALE = 50.0000' / in.	CHECKED -		REVISED - SPB 12-09					TC-09		CONTRACT NO. 62G66	
		PLOT DATE = 7/1/2013	DATE - 02-87		REVISED - MD 06-13					FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT		



NOTES:

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
4. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown. * I-55, I-80, & I-290

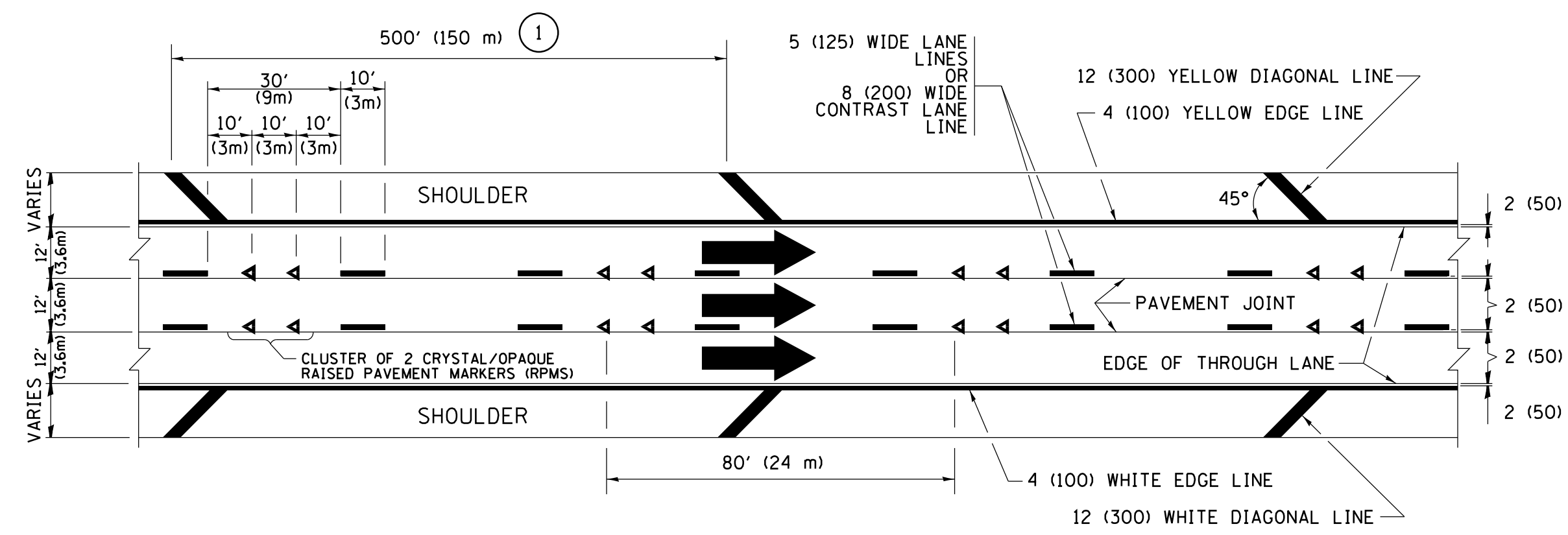
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Default	PLOT SCALE = 50.000' / in.	DATE - 06-89	REVISED - A. SCHUETZE 07-01-13
	PLOT DATE = 9/15/2016		REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

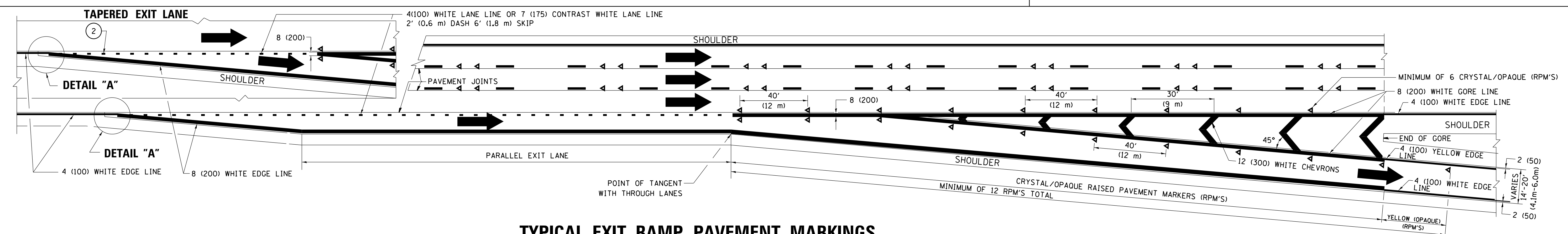
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	173
TC-10		CONTRACT NO. 62G66		
ILLINOIS FED. AID PROJECT				



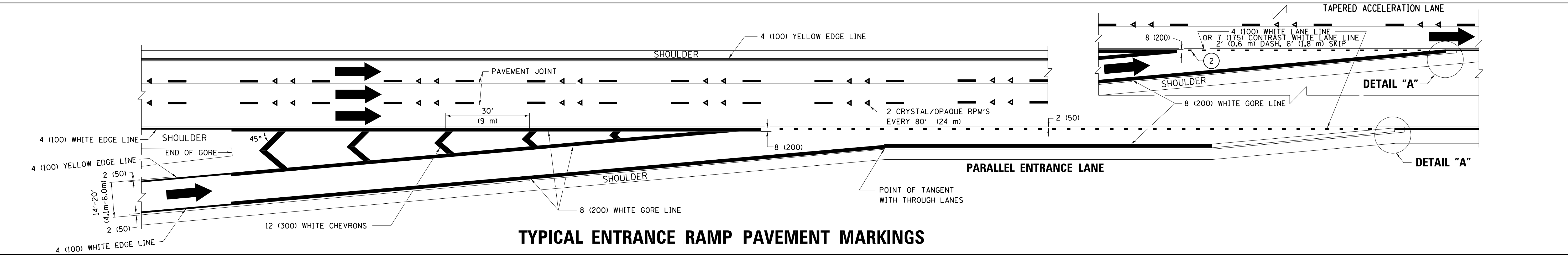
TYPICAL EDGE LINES & LANE LINES

PAVEMENT MARKING MATERIALS

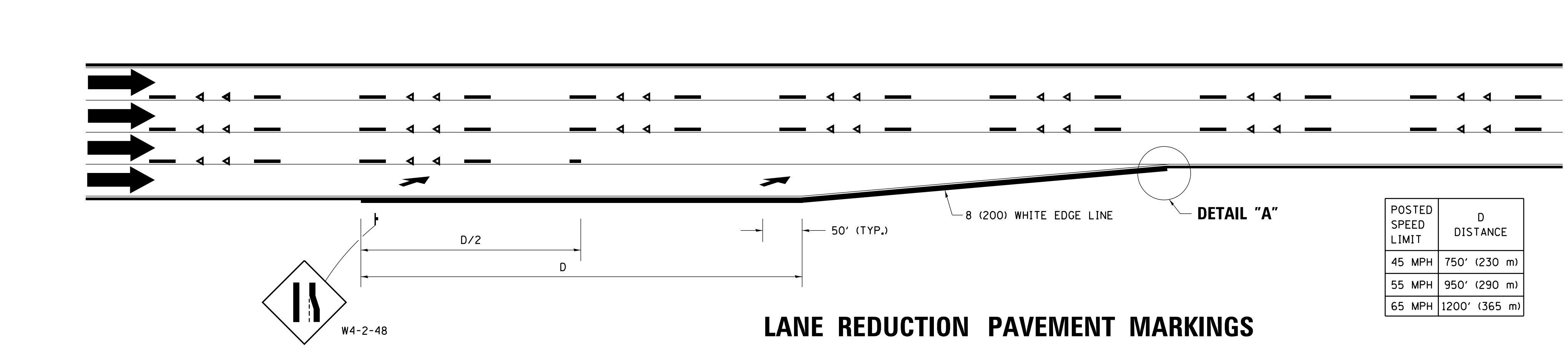
1. THERMOPLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON HMA PAVEMENTS.
2. POLYUREA OR MODIFIED URETHANE PAVEMENT MARKING LINE SHALL BE USED FOR ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON PCC PAVEMENTS.
3. PREFORMED PLASTIC PAVEMENT MARKING LINE TYPE B, INLAID OR GROOVE IN, SHALL BE USED FOR ALL LANE LINES ON HMA PAVEMENTS.
4. CONTRAST PREFORMED PLASTIC PAVEMENT MARKING LINE TYPE B, GROOVE IN, SHALL BE USED FOR ALL LANE LINES ON PCC PAVEMENT.



TYPICAL EXIT RAMP PAVEMENT MARKINGS

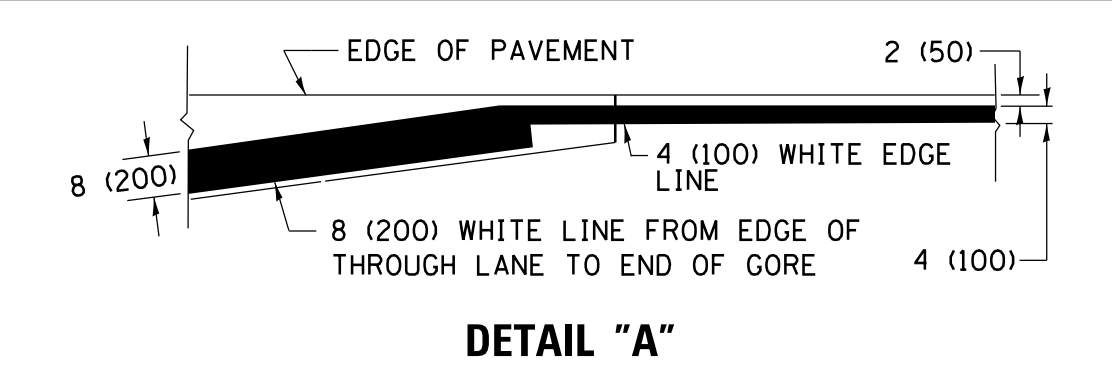


TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS

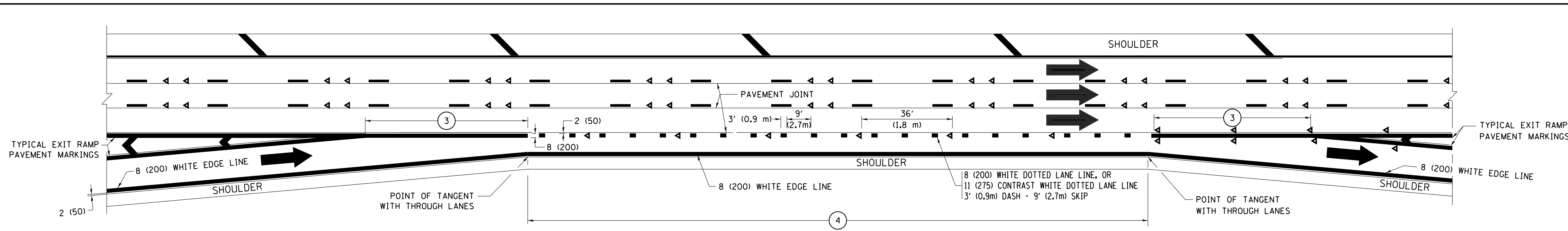


LANE REDUCTION PAVEMENT MARKINGS

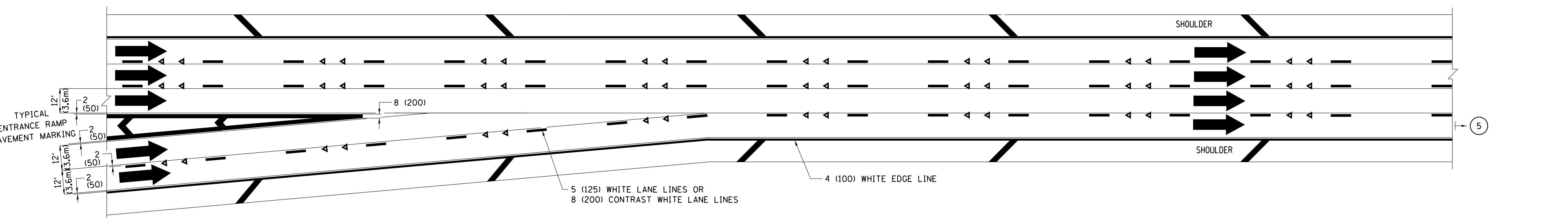
POSTED SPEED LIMIT	D DISTANCE
45 MPH	750' (230 m)
55 MPH	950' (290 m)
65 MPH	1200' (365 m)



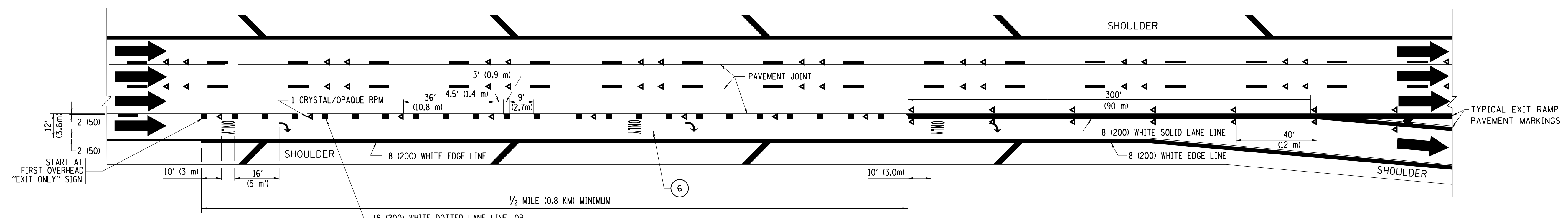
- NOTES:**
- 1 THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH. THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH.
 - 2 4" (2' DASH, 6' SKIP) MARKING ON TAPERED ENTRANCE AND EXIT RAMP SHALL BE OMITTED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



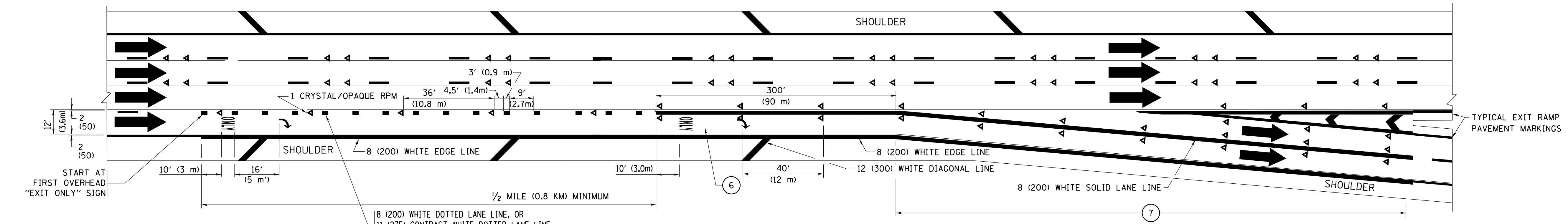
AUXILIARY LANE MARKINGS



TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS



EXIT ONLY LANE MARKINGS



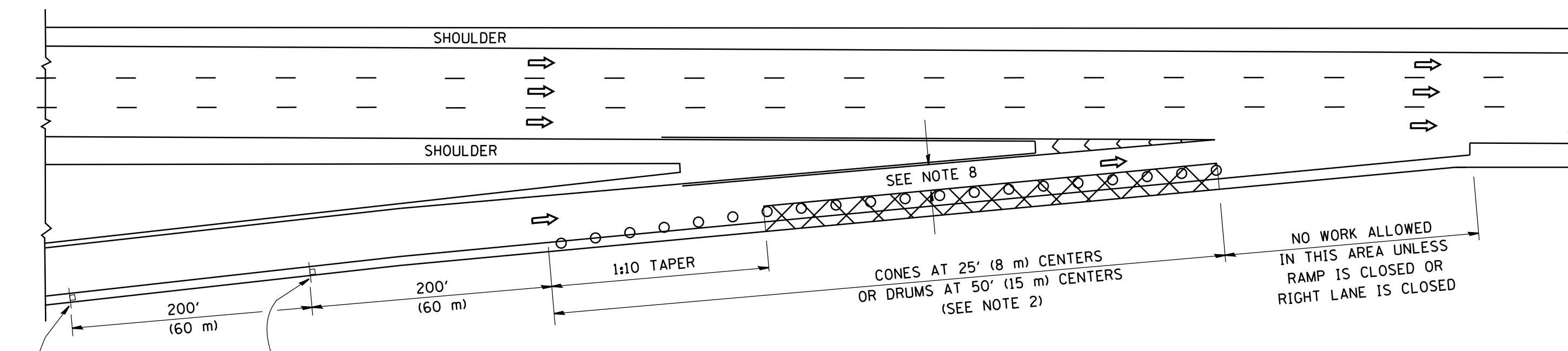
EXIT ONLY WITH OPTION LANE MARKINGS

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

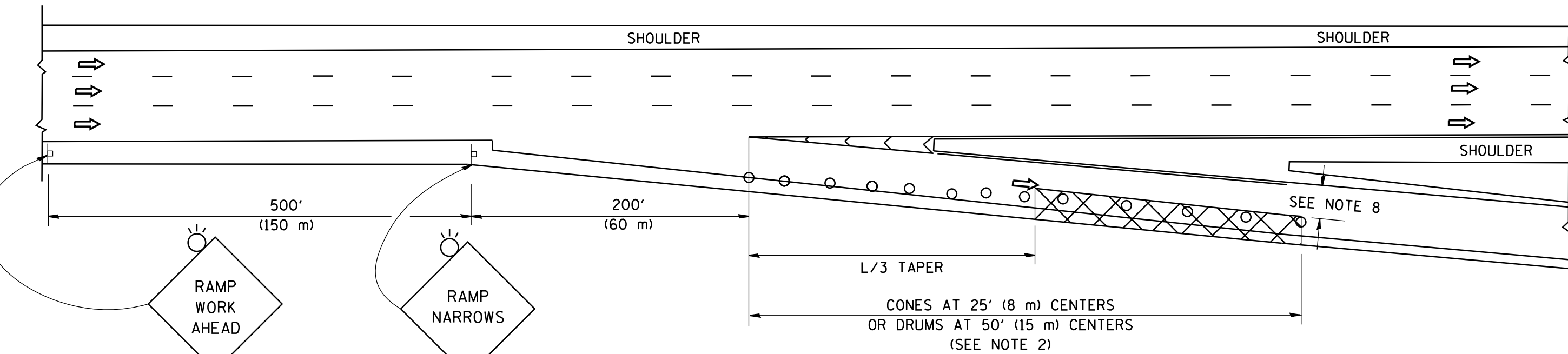
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pw:\IL\084EBID\INTEG\illinois.gov\PIWIDOT\Documents\IDOT Offices\District 1\Projects\Dist... DRAWN\CADData\CADsheets\tc12.dgn		CHECKED -	REVISED - S.P.B. 01-07		SCALE: NONE	SHEET 2	OF 2 SHEETS	STA.	TO STA.	2018-024-I	WILL/DUPAGE	177	175
Default	PLOT SCALE = 50.000' / in.	DATE - 01-90	REVISED - S.P.B. 01-10					TC-12		CONTRACT NO. 62G66			
	PLOT DATE = 9/6/2017		REVISED - M.D. 09-17					ILLINOIS FED. AID PROJECT					

* I-55, I-80, & I-290

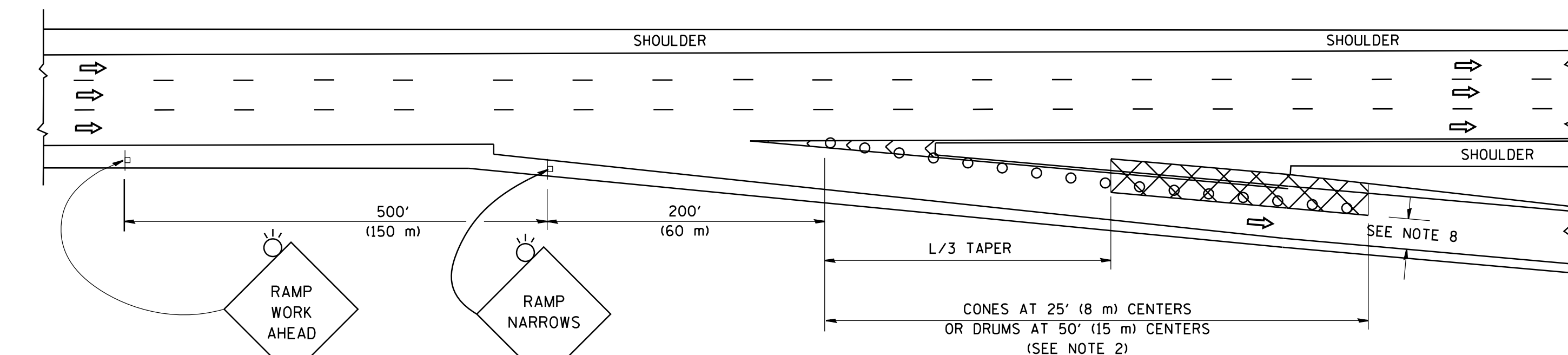
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

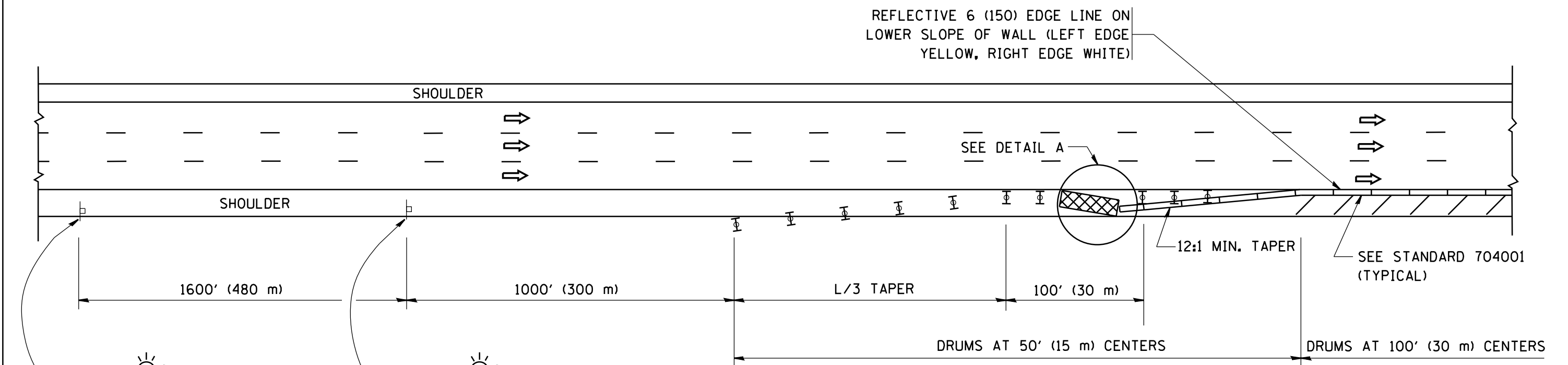
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

GENERAL NOTES

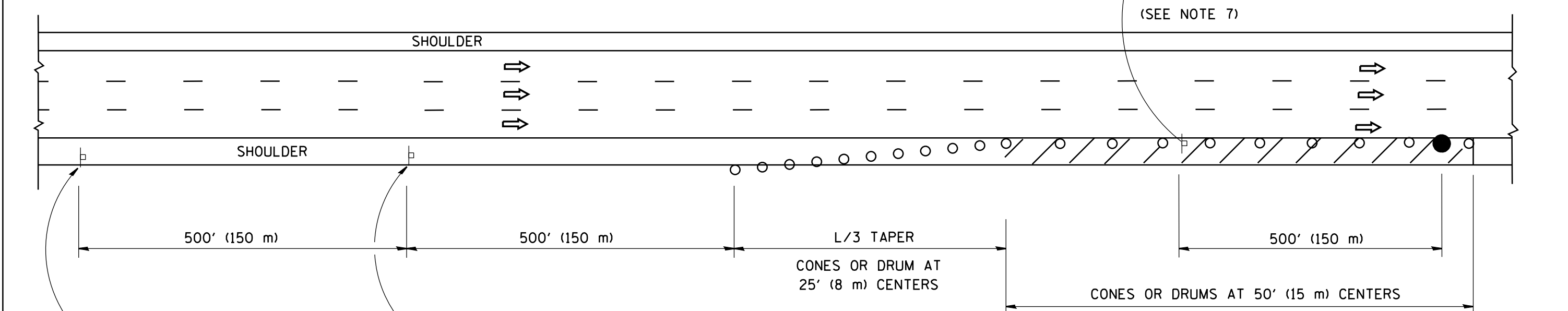
1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC ENGLISH L=0.65(W)(S) L=(W)(S)
W = WIDTH OF OFFSET IN FEET (METERS)	
S = NORMAL POSTED SPEED MPH (KM/H)	
2. TYPE II BARRICADES OR DRUMS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES. TYPE II BARRICADES OR DRUMS WITH MONODIRECTIONAL STEADY BURN LIGHTS ARE REQUIRED FOR DELINEATING OBSTACLES, EXCAVATIONS, OR HAZARDS EXCEEDING 100 FT (30m) IN LENGTH AT NIGHT.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.
5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
 - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
 - b. THE WORK AVTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION
16' MIN. WIDTH CURVE SECTION.

SHOULDER CLOSURE DETAILS

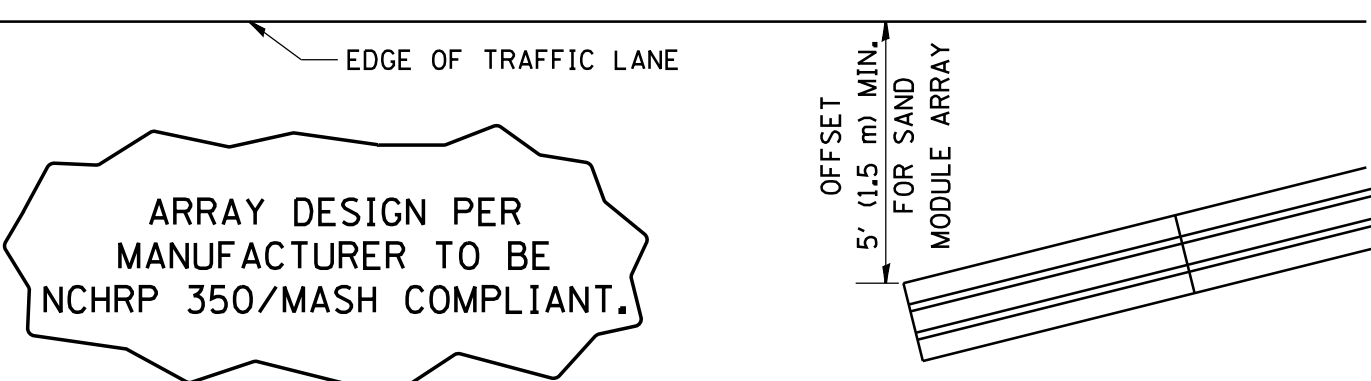


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

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



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

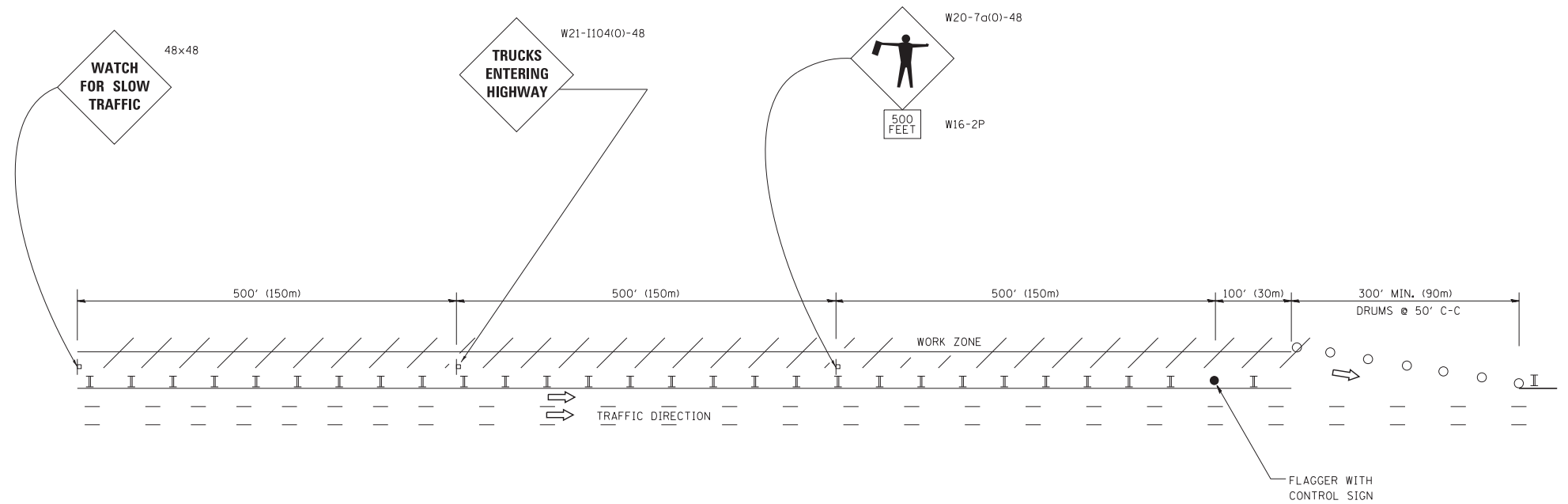
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

* I-55, I-80, & I-290

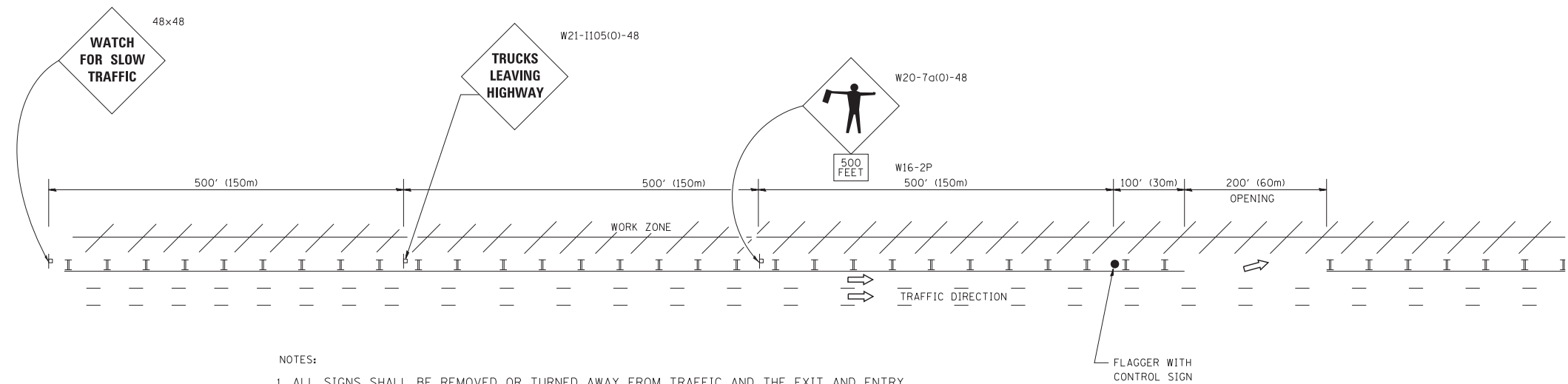
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Default		DRAWN -	REVISED - S.P.B. 12-09			*	2018-024-1	WILL/DUPAGE	177	176	
		CHECKED -	REVISED - M.D. 06-13			TC-17		CONTRACT NO. 62G66			
		DATE - 11-96	REVISED - M.D. 01-18			SCALE: NONE	SHEET 1 OF 1 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT		

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. ALL SIGNS SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE OPENINGS SHALL BE A MINIMUM OF ONE HALF MILE APART AND A MINIMUM OF ONE QUARTER MILE FROM ALL ENTRANCE AND EXIT RAMPS.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS
5. FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.

* I-55, I-80, & I-290

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

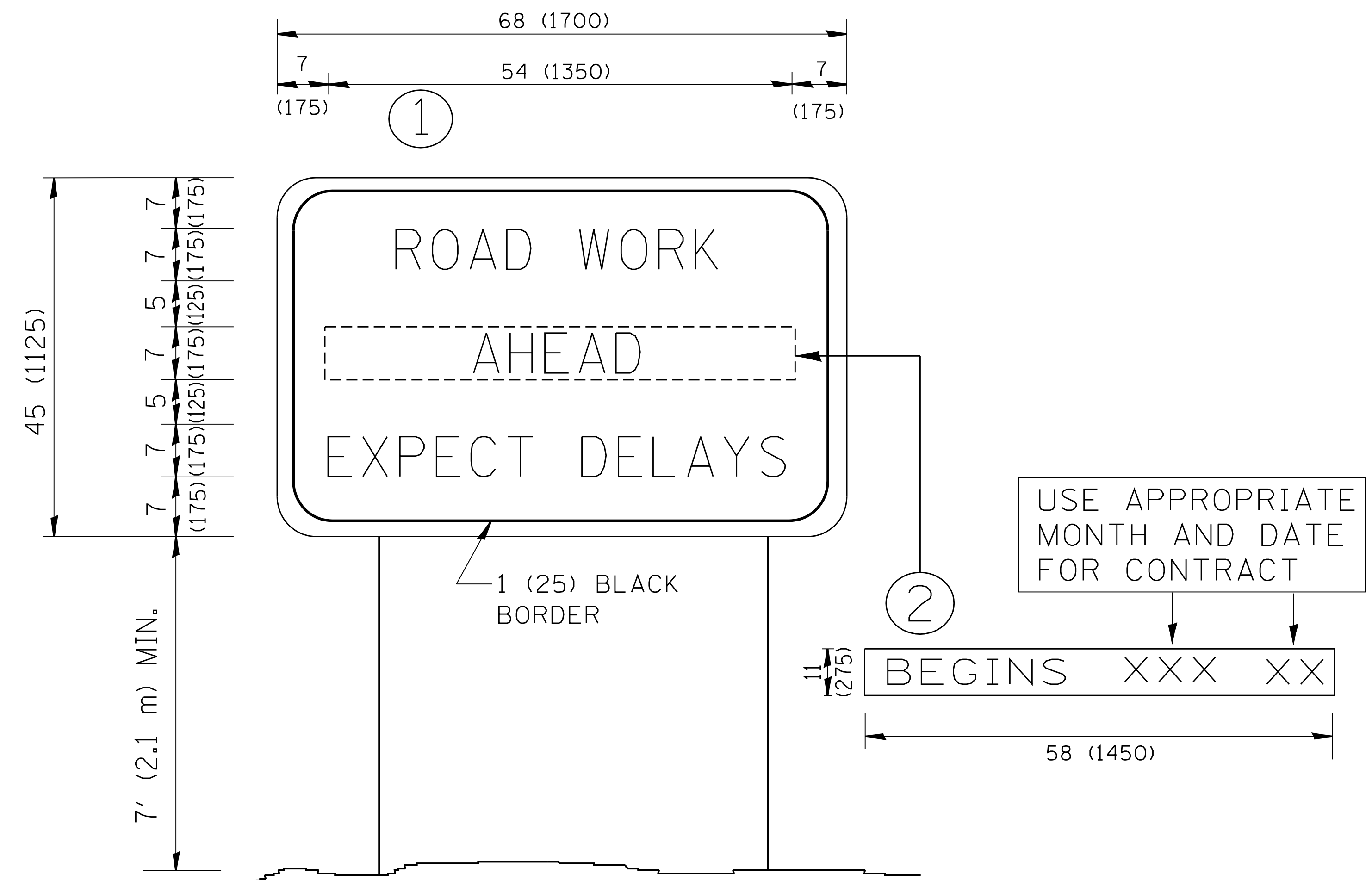
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	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED - S.P.B. 12-09
	PLOT DATE = 7/8/2013	DATE -	REVISED - M.D. 06-13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FREEWAY/EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS
AT WORK ZONE OPENINGS ON FREEWAYS/EXPRESSWAYS

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-1	WILL/DUPAGE	177	176A
TC-18			CONTRACT NO. 62G66	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



NOTES:

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

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

* I-55, I-80, & I-290

FILE NAME = W:\diststd\22x34\to22.dgn	USER NAME = gaglianobt	DESIGNED - DRAWN -	REVISED - REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2018-024-I	WILL/DUPAGE	177	177
TC-22		CONTRACT NO. 62G66		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				