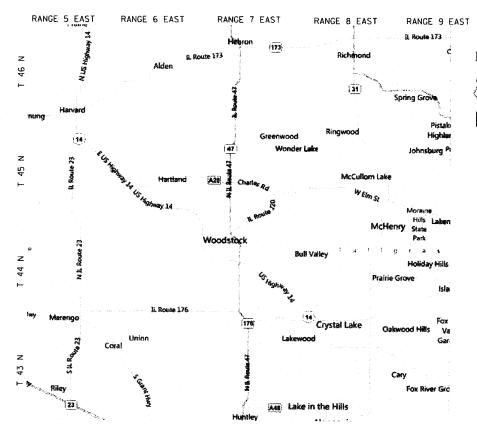
STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

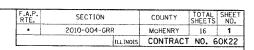
ROUTE VARIOUS LOCATIONS SECTION 2010-004-GRR GUARDRAIL IMPROVEMENTS PROJECT: HSIP-0005 (830) McHENRY COUNTY C-91-449-10



CHEMUNG, DUNHAM, MARENGO, RILEY, HARTLAND, NUNDA, ALGONQUIN TOWNSHIPS

GR8501 W. Higgins Road; Suite 280 Chicago, Illinois 60631 (773) 399-0112

10-25-10







STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

SUBMITTED OCTOBER 26 20 10

Diene M. O'Kerte ge DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 10 20 10

Scott E. Stitt P.E. La costing Engineer of Design and Environment

December 10 20 10

Christing M. Road & DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA

0

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 \circ

IL 176 EXISTING ADT = 7,300 - 12,600 (2007) SPEED LIMIT = 35 - 45 MPH

IL 23 EXISTING ADT = 5,600 (2007) SPEED LIMIT = 35-45 MPH

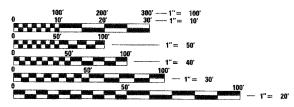
IL 31 EXISTING ADT = 11,200 (2007) SPEED LIMIT = 55 MPH

IL 47 EXISTING ADT = 8,000-15,500 (2007) SPEED LIMIT = 40 MPH

IL 22 EXISTING ADT = 16,500 (2007) SPEED LIMIT = 45 MPH

EXISTING ADT = 6,300 (2007) SPEED LIMIT = 45 MPH

THE PROJECT IS LOCATED IN THE CITIES OF CRYSTAL LAKE, HARVARD MARENGO AND WOODSTOCK AND IN THE VILLAGE OF FOX RIVER GROVE



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E. JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123 OR 811

PROJECT ENGINEER: PETER JOHNSTON (GRAEF) 773–399–0112
PROJECT MANAGER: KEN ENG (IDOT) 847–705–4247

CONTRACT NO. 60K22

INDEX OF SHEETS

SHEET NO. DESCRIPTION ...

1 COVER SHEET
2 INDEX, HIGHWAY STANDARDS, AND GENERAL NOTES
3 SUMMARY OF QUANTITIES
4 LOCATION MAP
5-11 ROADWAY PLAN
12-13 HEADWALL DETAILS
14 WINGWALL DETAILS
15 DETAILS FOR DEPRESSED CURB AND GUTTER AND SHOULDER TREATMENT AT TBT TY 1 SPL (BD34)
16 ARTERIAL ROAD INFORMATION SIGNING (TC22)

HIGHWAY STANDARDS

630001-09 STEEL PLATE BEAM GUARDRAIL
630101-09 GUARDAIL MOUNTED ON EXISTING CULVERTS
630201-06 PCC/HMA STABILZATION AT STEEL PLATE BEAM GUARDRAIL
630301-05 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-09 TRAFFIC BARRIER TERMINAL TYPE 6
635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02 REFLECTOR MARKER AND MOUNTING DETAILS
701006-03 OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701101-02 OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701326-04 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701422-03 LANE CLOSURE, MULTILANE, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701901-01 TRAFFIC CONTROL DEVICES

STD. NO. TITLE

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E."

 AT 800-892-0123 OR "CUAN" (CHICAGO UTILITY ALERT NETWORK), 312-744-7000

 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES

 (48 HOUR NOTIFICATION IS REQUIRED).
- 2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND LOCAL AGENCIES.
- 3. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR
 AT (847) 705-4470 A MINIMUM 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.
- 5. WHEN GUARDRAIL POSTS ARE PLACED BEHIND CONCRETE HEADWALLS, THE POSTS SHALL NOT BE PLACED TO BLOCK THE DRAINAGE OPENING.

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	PLOT DATE = 10/25/2010	DATE	10/25/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL IMPROVEMENTS - MCHENRY COUNTY
INDEX OF SHEETS, HIGHWAY STANDARDS, AND GENERAL NOTES
LE: 50 SHEET NO. 1 OF 1 SHEETS STA. TO STA.

SUMMARY OF QUANTITIES

URBAN 90%. FEO. 10%. STATE

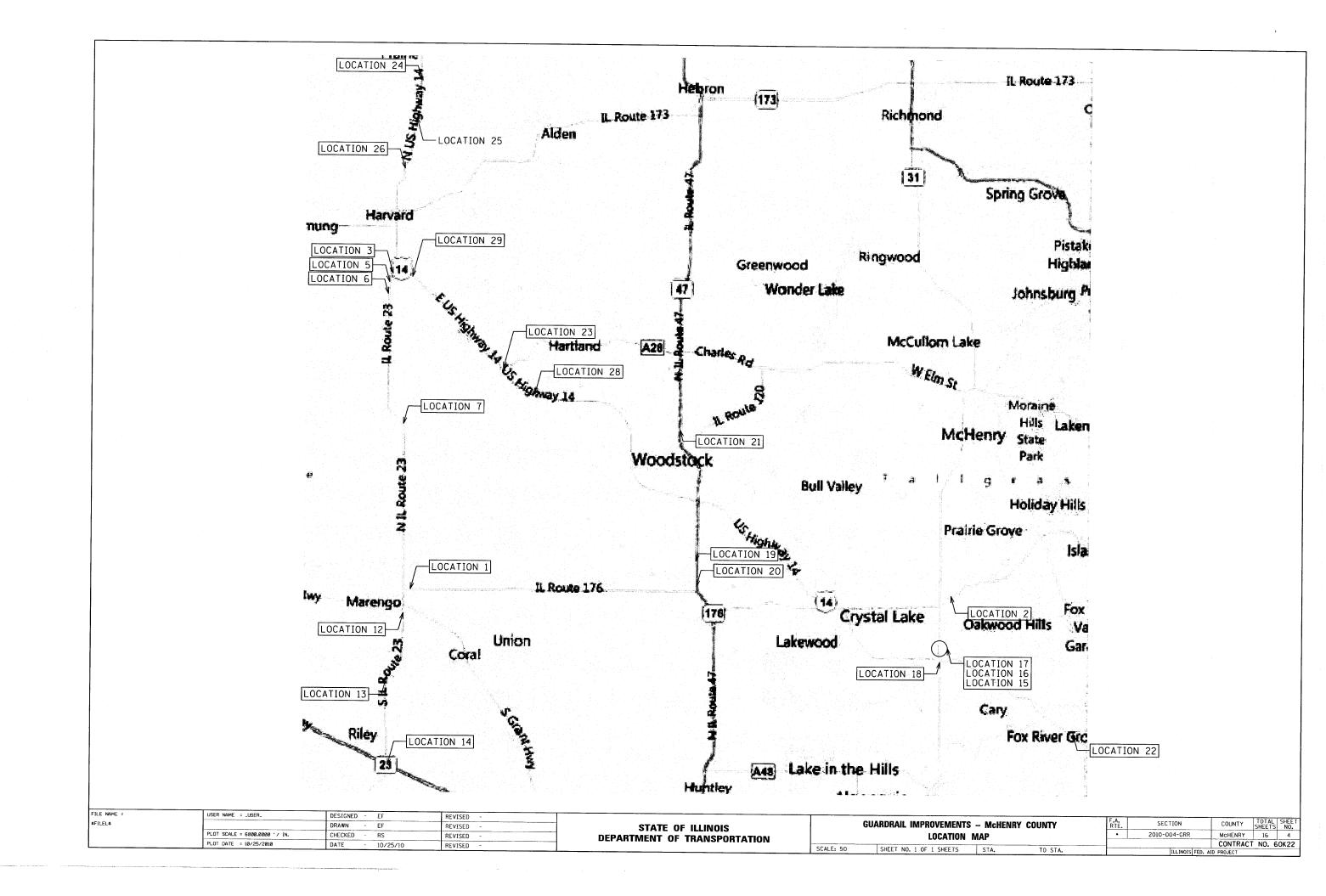
	PAY ITEM NUMBER	DESCRIPTION	UNIT	TOTAL QUANTITY	0021 SAFETY	
	20200600	EXCAVATING AND GRADING EXISTING SHOULDER	UNIT	35	35	1
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	1,536	1,536	1
-	25000210	SEEDING, CLASS 2A	ACRE	0.32	0.32	1
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	29	29	1.
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	29	29	1
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	29	29	1.
	25100630	EROSION CONTROL BLANKET	SQ YD	1,536	1,536	1
	48101620	AGGREGATE SHOULDERS, TYPE B 10"	SQYD	2,734	2,734	1
	50102400	CONCRETE REMOVAL	CU YD	4	4	1
	50104000	BRIDGE RAIL REMOVAL	FOOT	56	56	1
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	10.	10	1
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5,950	5,950	1
	63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A 6 FOOT POSTS	FOOT	288	288	1
	63000025	STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES	FOOT	163	163	
	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	8	8	1
	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	48	48	1
	63200310	GUARDRAIL REMOVAL	FOOT	2,941	2,941	1
	63301000	REMOVE AND REERECT STEEL PLATE BEAM GUARD RAIL	FOOT	88	88	١.
	63301990	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 1	EACH	3	3	1
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
	67100100	MOBILIZATION	L SUM	1	1	ľ
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
	78200420	GUARDRAIL MARKERS, TYPE B	EACH	123	123	
	78201000	TERMINAL MARKER-DIRECT APPLIED	EACH	48	48	1
	X0322194	POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ FT	9	9	1
Δ	X2503100	MOWING	UNIT	138	138	
	Z0030030	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	3	3	1
	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	154	154	

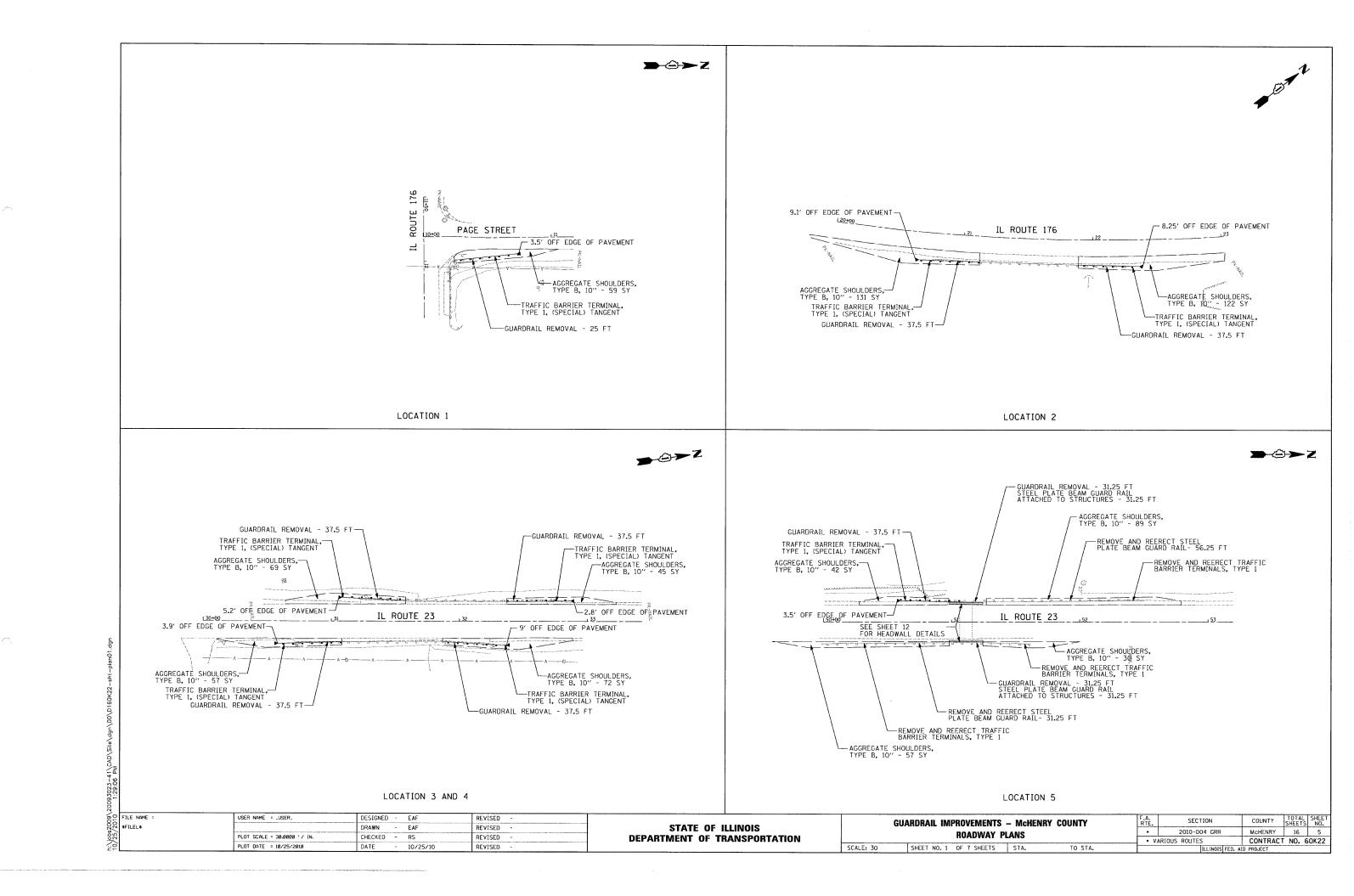
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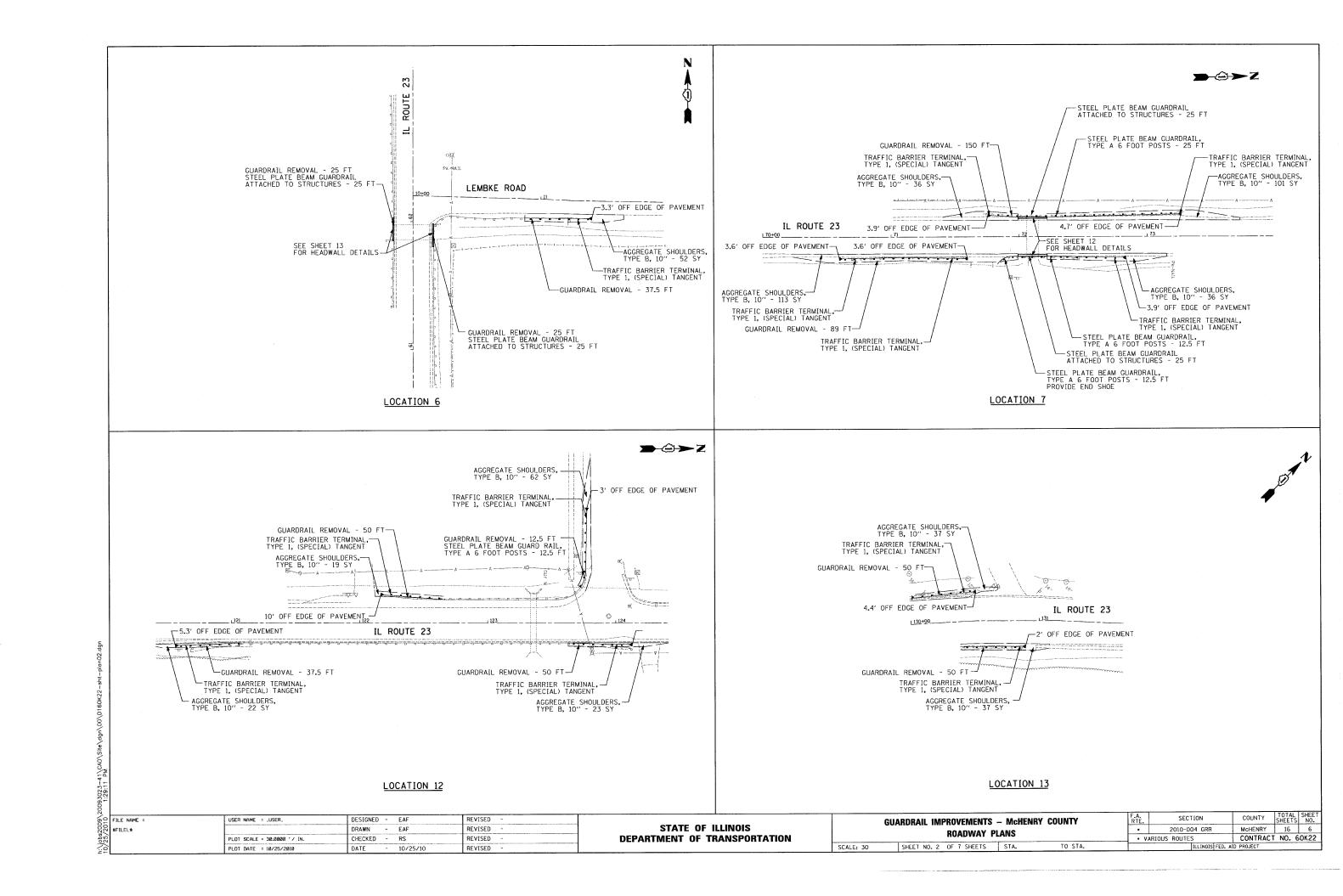
A NON- PARTICIPATING

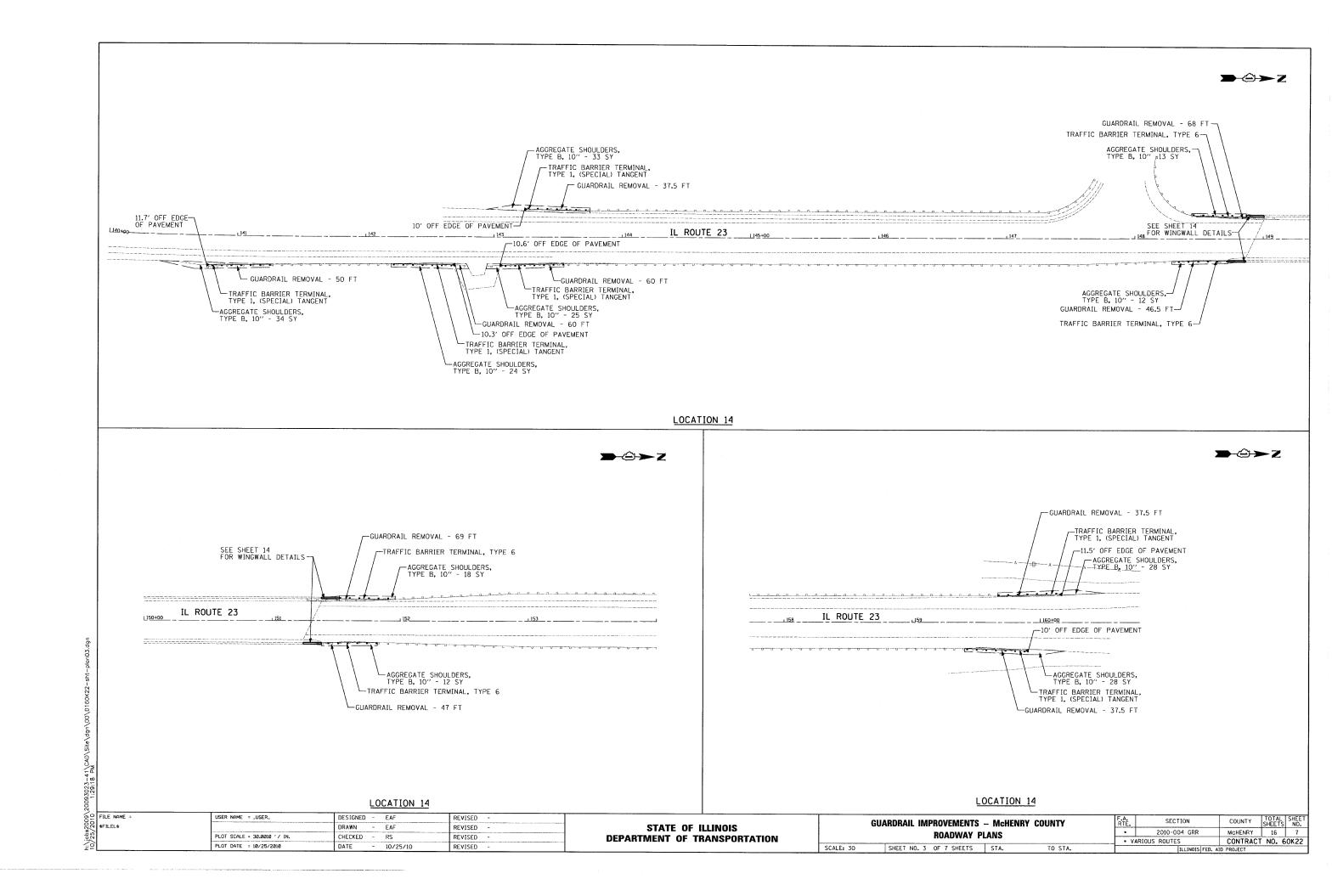
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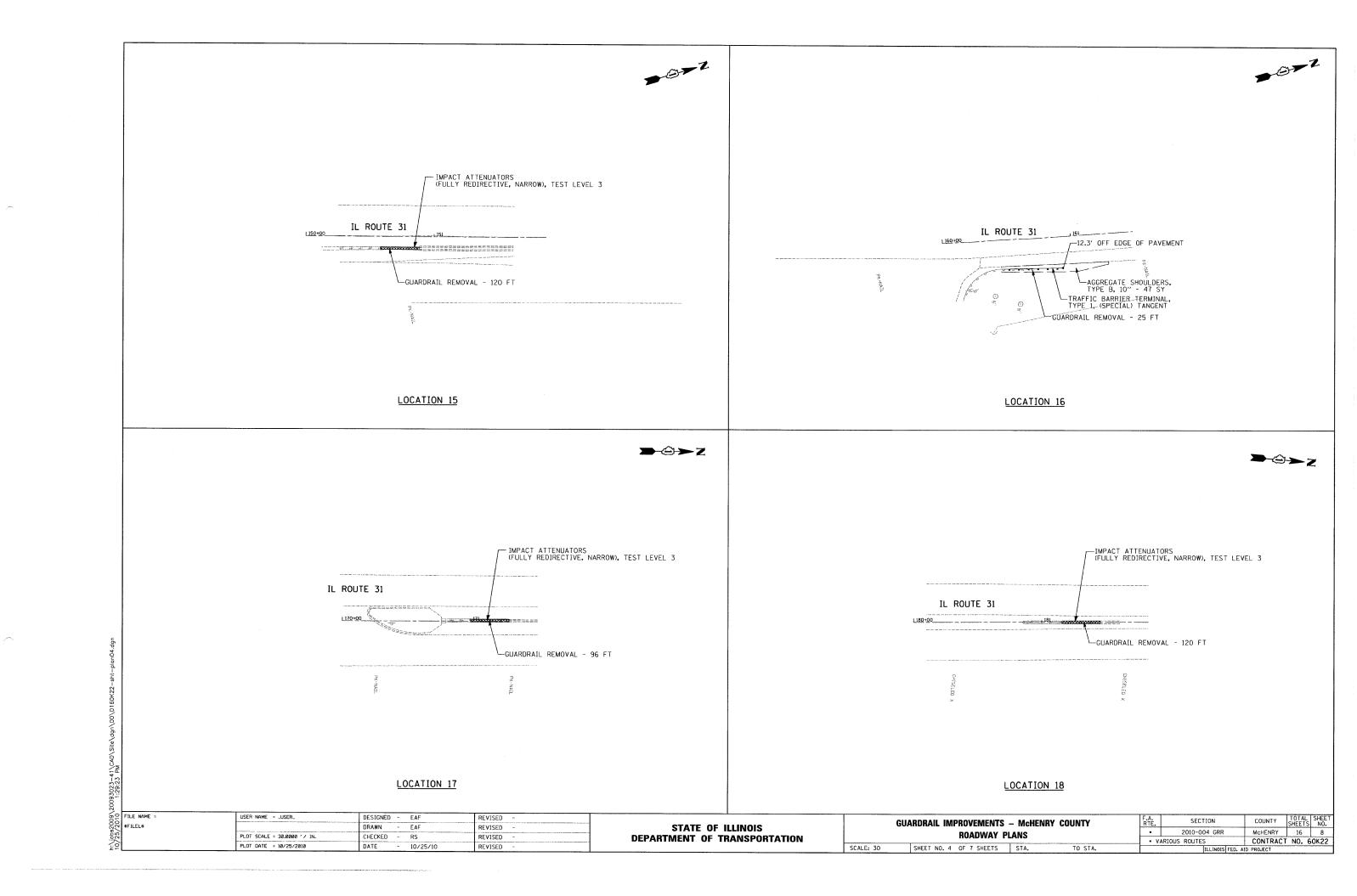
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	GUARDRAIL IMPROVEMENTS - N	ACHENRY COUNTY	F.A. RTE.	SECTION	COUNTY	TOTAL	SHEE NO.
	SUMMARY OF QUANT	TITIES	•	2010-004-GRR	MCHENRY	16	3
i	SCALE: 50 SHEET NO. 1 OF 1 SHEETS ST				CONTRACT	[NO. 6	OK22
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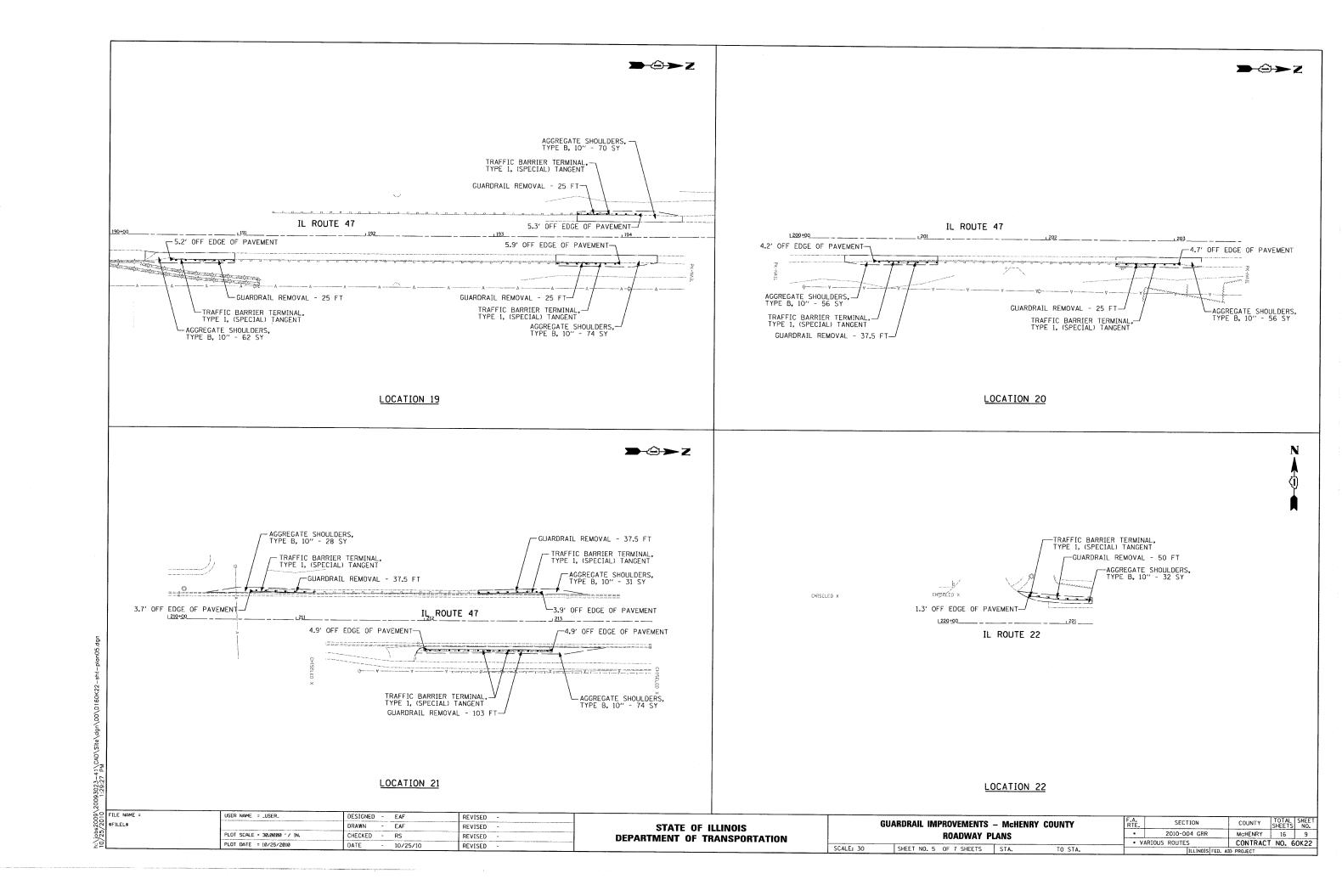


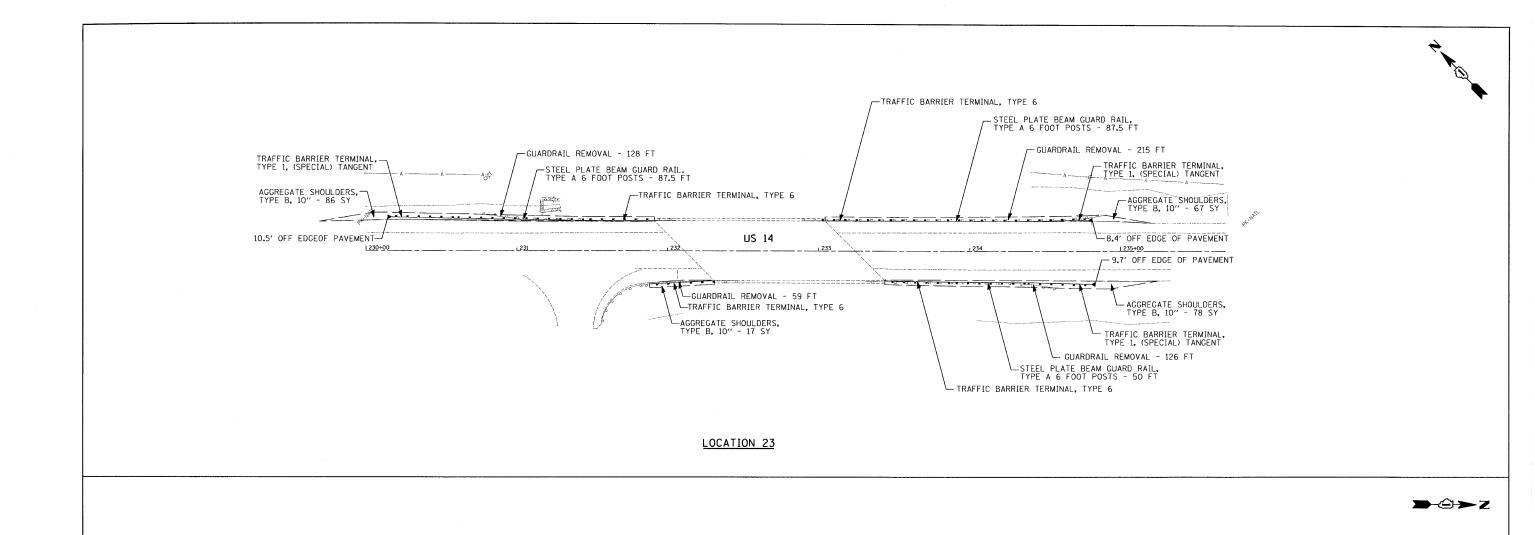


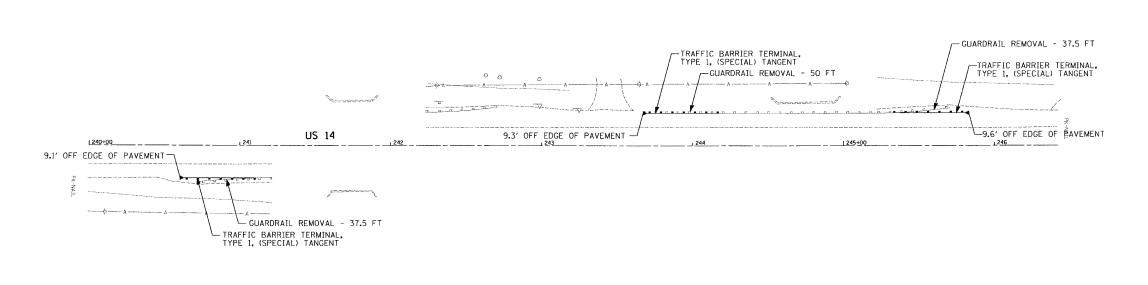






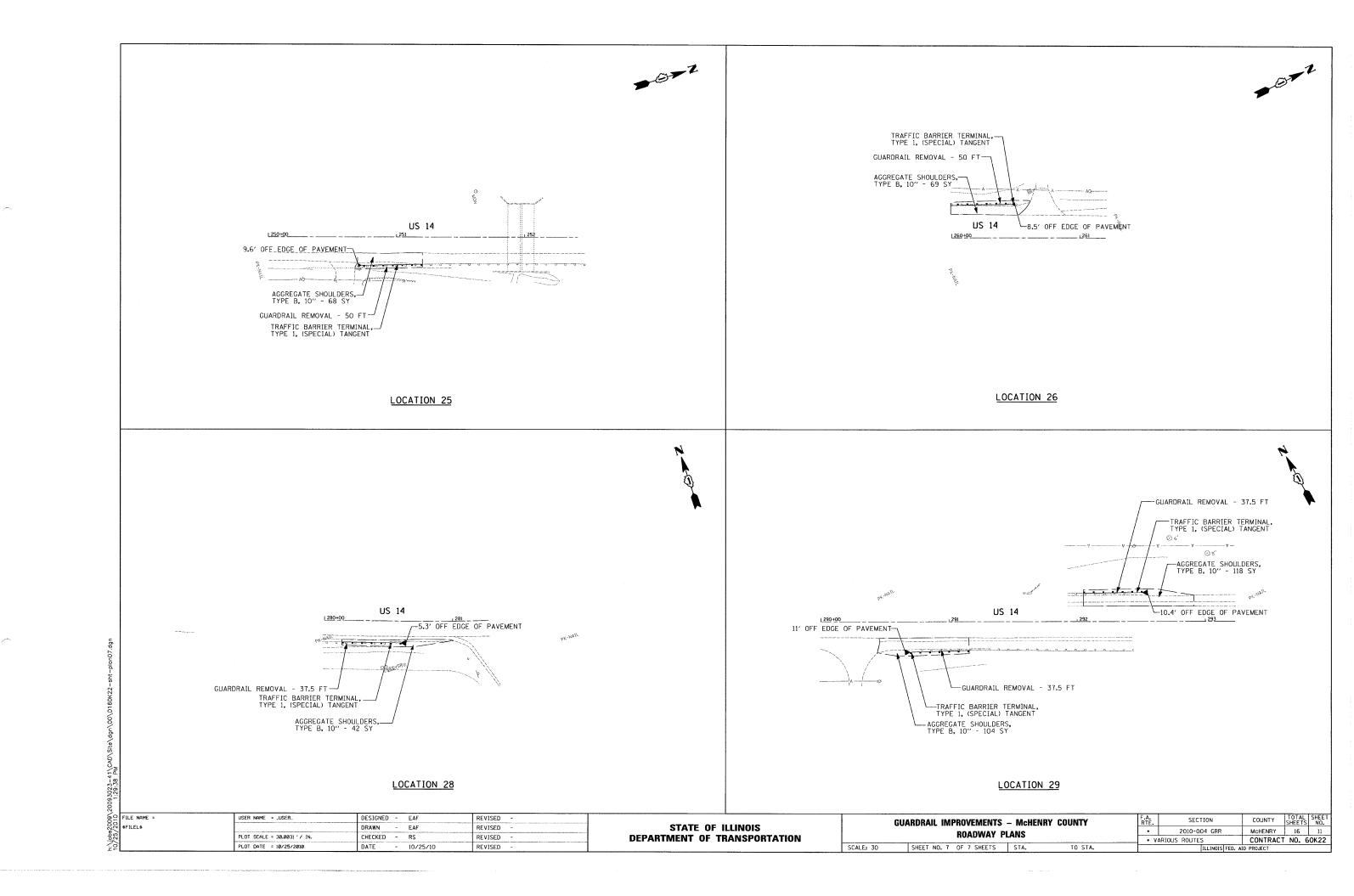


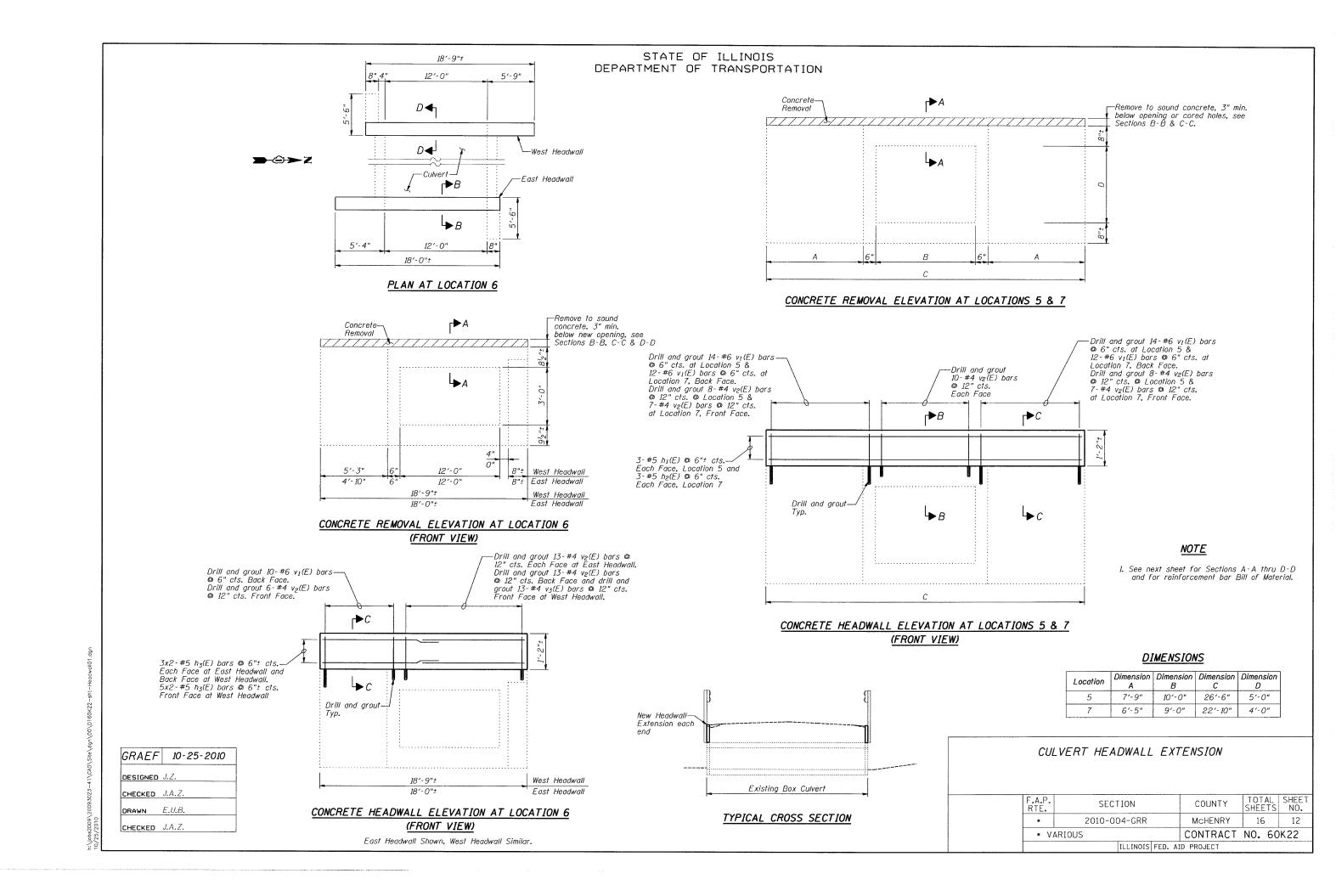


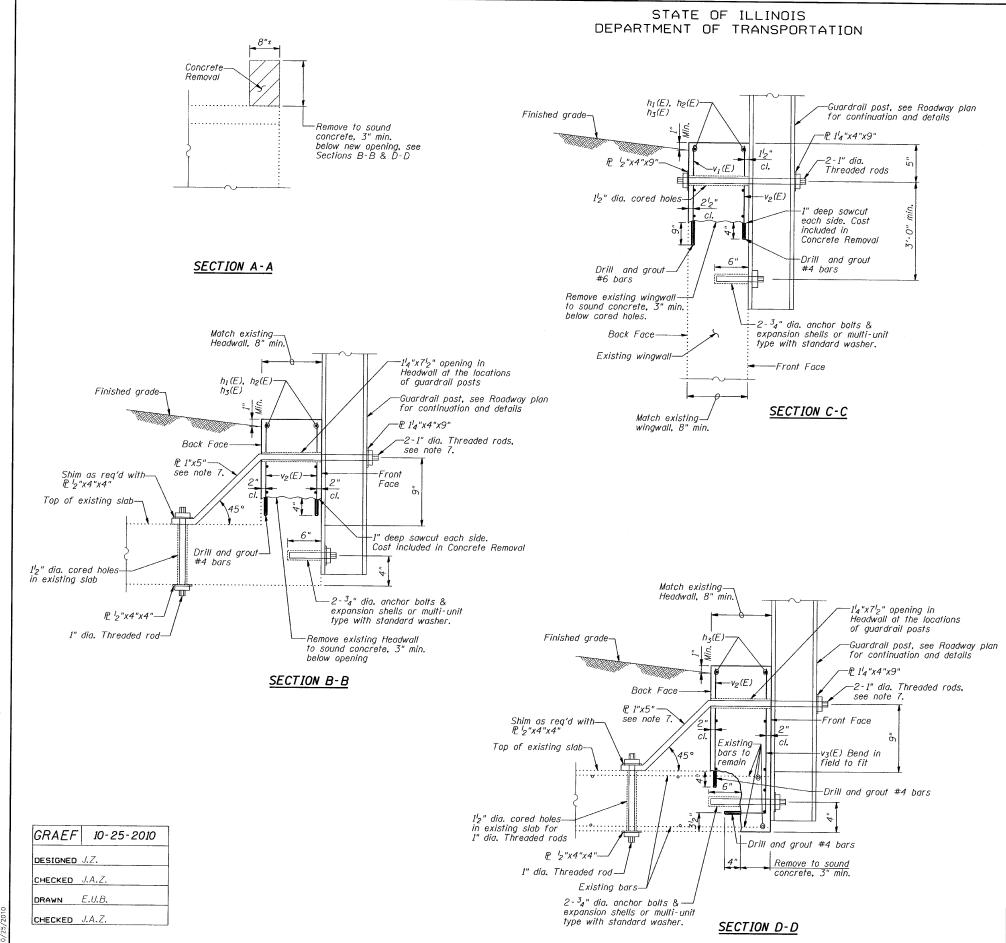


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255		PLOT SCALE = 30.0000 ' / IN.	CHECKED -	RS	REVISED -	DEPARTMENT OF TRANSPORTATION	ROADWAY PLANS			• VAR	IOUS ROUTES		T NO. 60K22
(i.c)		PLOT DATE = 10/25/2010	DATE -	10/25/10	REVISED -			SHEET NO. 6 OF 7 SHEETS STA. TO S	TA.	ILLINOIS FED		ED. AID PROJECT	

LOCATION 24







BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h _I (E) 6 #5		#5	26'-2"	
h ₂ (E)	6	#5	22'-6"	-
h3(E)	28	#5	9'-11"	
v ₁ (E)	124	#6	2'-2"	
v ₂ (E)	191	#4	1'-4"	
v3(E)	13	#4	2'-3"	
Concrete F	emoval	Cu. Yd.	1.0	
Concrete Superstructure			Cu. Yd.	4.0
Reinforcem Epoxy Coai		Pound	1,190	



NOTES

- The Headwall shall be constructed entirely of CLASS SI CONCRETE and in accordance with the applicable portions of Section 503 of the Standard Specifications. Reinforcement Bars shall conform to Section 508.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60. See Special Provisions.
- 3. Reinforcement bars designated (E) shall be epoxy coated.
- 4. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- 5. Drilling and grouting bars shall be in accordance with Section 584 of the Standard Specifications.
- 6. Contractor is to locate the existing reinforcement bars in culverts prior to drilling to avoid damaging existing reinforcement bars.
- 7. For the details of guardrail elements not shown, see Roadway Standard "Guardrail Mounted on Existing Culverts" (Standard 630101-09).
- 8. The cost of the hardware and work for the installation of guardrail posts is included in the Pay Item "Steel Plate Beam Guardrail Attached to Structures".
- Existing reinforcement bars to remain shall be blast cleaned to grey metal and incorporated into new concrete. Cost is included in "Concrete Removal".

CULVERT HEADWALL EXTENSION

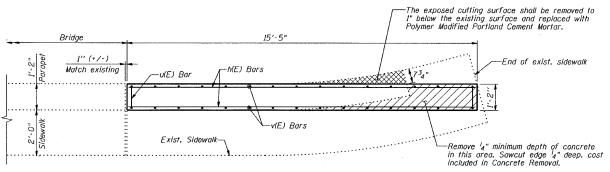
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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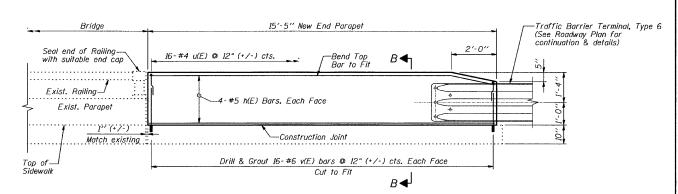
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION € I-90--€ IL 23 10 EXISTING BRIDGE PLAN Bridge 12'-6" (+/-) Exist. End Parapet -Concrete Removal CONCRETE REMOVAL PLAN Existing Bridge Rail to Remain Limit of existing Bridge Rail Removal Exist. Bridge Rail- $A \blacktriangleleft_1$ -Concrete Removal ─Top of Exist. Sidewalk Exist. Exp. Jt.-REMOVAL ELEVATION Varies from Varies from 0'-0" 738" to 2'-0' to 1'-4⁵8" (+/-) h(E) Bars u(E) Bar ·Concrete Top of — Sidewalk -1" deep Sawcut each side. Cost included in Concrete -Drill ⁷8" **¢** holes for #6 Bars GRAEF 10-25-2010 DESIGNED J.Z.

SECTION A-A

-Remove and replace end parapet. Typ. at each corner of the bridge. See details on this Sheet.



NEW END PARAPET PLAN



NEW END PARAPET ELEVATION (FRONT VIEW)

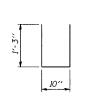
<u>NOTES</u>

- 1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60. See Special Provisions.
- 2. Reinforcement bars designated (E) shall be epoxy coated.
- 3. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scape of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- 4. Drilling and grouting bars shall be in accordance with Section 584 of the Standard Specifications.

BILL OF MATERIAL

Bar	Bar No. Size		Length	Shape
h (E)	h (E) 32 #5		15'-1"	
v (E)	128	#6	2'-10"	
u (E)	64	#4	3'-4"]
Concrete F	Removal		Cu. Yd.	3. 0
Bridge Rai	l Remova	1	LF	56.0
Concrete S	uperstru	Cu. Yd.	6.2	
Reinforcem Epoxy Coa		Pound	4,760	
Polymer Mo Cement Mo		Sq. Ft.	9.0	

The quantities above include 4 new end parapets.



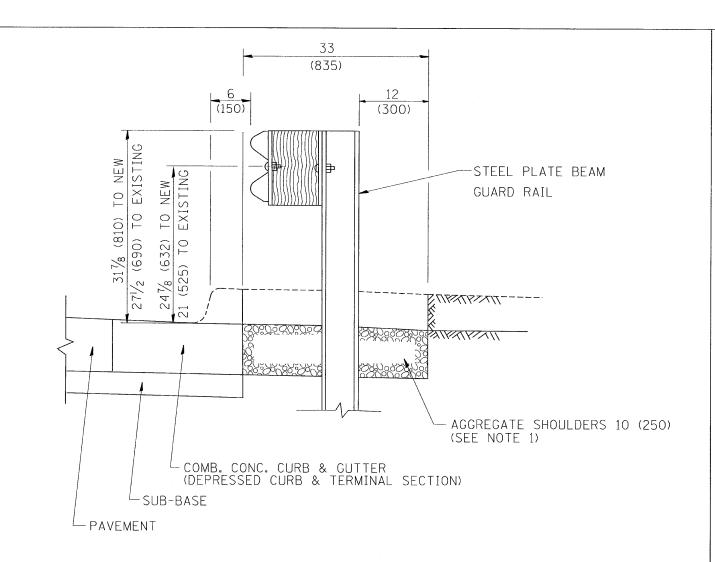
u(E) Bar

SECTION B-B

STRUCTURE 056-0011 IL 23 OVER I-90

 F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.						
*	2010-004-GRR	McHENRY	16	14						
* VA	RIOUS	CONTRACT	NO. 60	K22						
ILLINOIS FED. AID PROJECT										

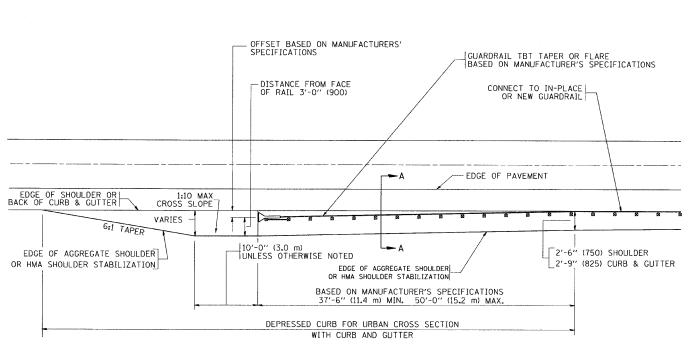
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SECTION A-A

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

DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER [FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



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

SCALE: NONE

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

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

> > TBT = TRAFFIC BARRIER TERMINAL

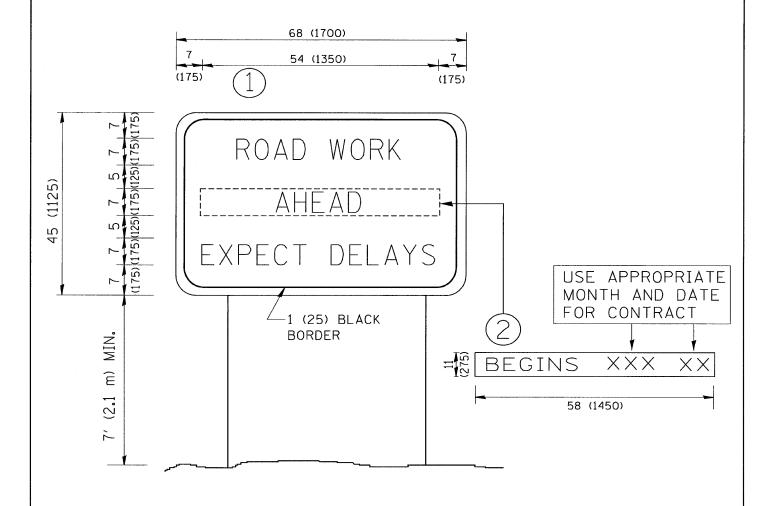
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN. * VARIOUS ROUTES

FILE NAME = USER NAME = drivakosor DESIGNED - M. DE YONG REVISED - E. GOMEZ 08-28-00 A Now work / PWIDOT / DRIVAKOSCIN/ 40108315/ DRAWN REVISED - R. BORO 01-01-07 PLOT SCALE = 49,9999 '/ IN. CHECKED REVISED - R. BORO 12-08-2008 PLOT DATE = 9/21/2009 09-22-90 DATE R. BORO 09-14-2009 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

DETAILS FOR DEPRESSED CURB & GUTTER AND SHOULDER TREATMENT AT TBT TY 1 SPL. SHEET NO. 1 OF 1 SHEETS STA.

COUNTY TOTAL SHEE SHEETS NO. SECTION 2010-004 GRR McHenry 16 15 BD600-10 (BD 34) CONTRACT NO. 60K22



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.

* VARIOUS ROUTES

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Ws\diststd\22x34\tc22.dgn	·	DRAWN -	REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS		INFORMATION SIGN		* 2010-004 GRR	McHenry 16 16
	PLOT SCALE = 50.000 '/ IN.	CHECKED -	REVISED -T. RAMMACHER 02-02-99	DEPARTMENT OF TRANSPORTATION				TC-22	CONTRACT NO. 60K22
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED.	, AID PROJECT